Market Study on e-government sector in Chile and Costa Rica

Second stage report: market entry opportunities for Baltic countries

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Contents

Executive Summary

This document presents the second-stage report of the ITC Market study on the e-government sector in Chile and Costa Rica, The Market study has been requested by the Ministries of Foreign Affairs of Estonia, Latvia and Lithuania and is carried out within the framework of the ELANBiz Project and with the support of the EU-LAC foundation.

The ELANBiz project is funded by the European Commission and aims to provide EU companies business stakeholders and Member States with demand-driven and updated information about business opportunities and market access requirements in seven Latin American markets: Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico and Peru (www.elanbiz.org).

This in-depth research follows the first stage report that describes macro-environmental factors to be taken into consideration when accessing Chile's and Costa Rica's markets and provides mapping of five e-sectors' situation and development trends in e-government, e-health, e-education, e-logistic and e-financial services. After consultation with the Ministries of Foreign Affairs of the Baltic countries, it has been decided to focus the research on e-government sector as it has a high demand potential for Baltic companies to do business in Chile and Costa Rica.

This stage report has been drafted by the consultant Giedrė Gatelytė with the technical support of the ELANBiz experts in Costa Rica and Chile. This report presents Chile's and Costa Rica's e-government market, possible market entry strategies and key local actors, also recommendations to enter market.

It is expected that this study will help to improve knowledge and to identify market opportunities on e-government sectors in Chile and Costa Rica among companies and business stakeholders from the three Baltic countries.

Main findings:
Both Chile and Costa Rica have a high degree of competition in e-government ICT and a relatively small market size, however there are open business opportunities in e-government and both countries can be valuated as hubs for expanding services in other Latin American and U.S. markets.

CHILE

Considerations to take into account when entering Chile's market:

E-government
• The highest e-government's priorities: smart cities; e-health; availability of e-services on mobile phones; open data, big data and data analytics; interoperability of systems; network infrastructure. • The Ministry General Secretariat of the Presidency (SEGPRES) performs important role in Chile's e-government and is responsible for most of the e-government's projects.

- Chilean Economic Development Agency (CORFO) actively participates in promoting entrepreneurship and innovation through financing schemes and other activities, has various support instruments such as grants, subsidies available to domestic and foreign companies. The main focus of CORFO programs in e-government: smart city, e-logistic and e-health.
- Most of public procurement, including e-government solutions, go through public tendering. Officially European companies are not restricted to participate in public procurement and pre-registration is recommended as it can significantly ease the process. Once a foreign provider has been awarded a contract it must open a corporate structure in Chile.
- Central government has a strong and developed IT division, which actively participates in IT projects, develops its own systems and maintains them. However, it is becoming increasingly popular to outsource these functions to private ICT companies.
- The most popular software licensing and delivery model is On-premise, very rarely Software as a service (SaaS) model is applied.
- Insurance system, Single key (Clave única) platform, e-health systems – projects that currently have the largest allocated budget.
- The most popular technologies/IT products used for information systems in public sector is Oracle, Java, PostgreSQL, C#, Microsoft, IBM WebSphere. For accounting there is a custom developed system used in all government sector (Information System for the Financial Management of the State (SIGFE)), only few organizations in the public sector use SAP Business Suite (ERP) for finance management. The most popular software for data Analytics are IBM Cognos, MicroStrategy, Tableau and Qlickview.

ICT sector

- 1,6% of companies in Chile are ICT companies and this sector generates 3,4% of GBP (it is expected to reach 6% by 2020). There are about 4.700 ICT companies, 85 % are SMEs.
- IT companies usually operate in a few vertical sectors, they are not heavily orientated in one vertical sector, because the market is not large enough in vertical sectors. Therefore, companies lack specialisation in vertical sectors. The private sector lacks IT investment, rarely has its own R&D centres, the main client of IT companies in Chile is the public sector.
- Latin America and the U.S. are the main markets for Chilean ICT companies to export their services and products, the biggest focus in Latin America - Mexica, Brazil and Peru.
- Average hourly rate of an IT specialist is about 40-60 USD; IT architect-80 USD, IT Project manager–100 USD. Price rates are high compared to other countries in the region.
- Chile has well educated, skilled IT specialists, however there is a workforce deficit. Luckily many IT engineers immigrate from Venezuela, Mexico, Colombia and Brazil. Also, Chile provides "Visa Tech" - an opportunity for foreign ICT specialists to work in Chile for an indefinite period.
- There is a lack of skilled English-speaking IT professionals, skilled Project managers and highly experienced IT architects.
- E-government's main projects are executed mostly by very large, international companies, which have strong human resource pools and competencies. Also, these companies use local SMEs as subcontractors.

Recommended market entry scenarios:

Scenario No 1. Partnering

This market entry strategy is highly recommended, considering the sizable cultural differences, lingual restrictions and the fact that by having a domestic partner a company would be able to avoid restrictions when carrying out public procurement contracts. To find a trustworthy partner is the main challenge and would give a big advantage comparing to other market entry strategies.

Find a partner	•Search for an ICT company with residency in Chile to enable participation in public tenders
Participate in public tenders	•Participate in public procurement using portal ChileCompra
Collaborate with Chilean Economic Development Agency (CORFO)	•Supporting grant for strategic projects at the pre-investment stage •Dialogue between the public and private sectors when forming and implementing e-government initiatives
Use "Visa Tech"	•Work in Chile for an indefinite period

Scenario No 2. Setup of an Entity

This market entry strategy has higher risk and requires larger investment comparing it to partnering. This strategy can be selected, if the market is already researched and valuated as having high potential for providing services and if the company can devote high initial investment. It is very important to consider the cultural differences between Baltic and Latin American countries.

Registering a company	•It takes 5.5 days and can be done online
OR participate in the Start-up Chile program	•Competition that selects suitable candidates three times a year. Founders and their teams receive about $33,000 USD, a working visa for a year and access to one of the largest startup communities
Participate in public tenders	•Public procurement portal ChileCompra •Potential suppliers' registry for simplified purchasing procedures
Collaborate with Chilean Economic Development Agency (CORFO)	•Support grant for strategic projects at the pre-investment stage •Dialogue between the public and private sectors when forming and implementing e-government initiatives
Use "Visa Tech"	•Work in Chile for an indefinite period

COSTA RICA

Considerations to take into account when entering Costa Rica's market:

E-government

- The highest e-government's priorities are: a one access portal to all public services; smart cities; e-health; an open data platform; a data centre for governmental institutions; better interoperability (standards and platforms); improvement of current e-services, especially for the use of mobile phones; optimisation of processes in the public sector, including their automatization; development of cyber security.
- Radiográfica Costarricense, S.A. (RACSA) performs a very important role, it initiates and is responsible for many e-government projects in Costa Rica. Therefore, it seems that RACSA will be a leading institution for future e-government vision implementation. This is a state-owned Costa Rican internet provider, is involved as a supervisor and coordinator of outsourced projects, manages the registry of potential suppliers. To participate in public tenders a foreign company needs to be registered in this registry and needs to have a Digital signature, which is issued by RACSA as well.
- All public procurement, including e-government solutions, go through public tendering by using an official portal for public procurement in Costa Rica. The use of this technological platform is compulsory from 2016.
- From the middle of 2017 a foreign company registered as a potential supplier in the potential suppliers' registry is able to participate in the public procurement process and conclude a contract without restrictions (no need of local representative or locally registered company). This is a fairly new thing which has provided more possibilities to foreign ICT companies that wish to carry out contracts without special restrictions.
- Usually the public sector does not have a strongly developed IT division and outsources its IT needs to private ICT companies. Institutions themselves rarely create and develop systems or e-services.
- The most popular technologies/IT products used for information systems in public sector are Oracle, MySQL, Java, SAP Business Suite (ERP), SAP BusinessObjects (BI).

ICT sector

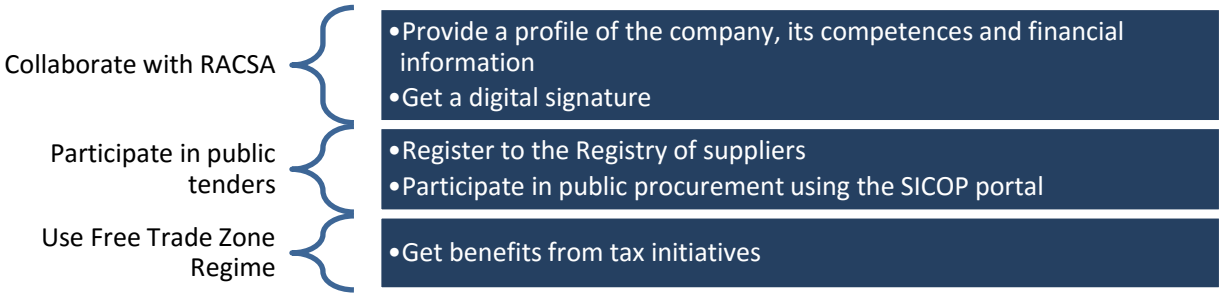
- ICT sector in Costa Rica generates 12,5% of the country's GDP, there are approximately 900 ICT companies, 95 % are SMEs.
- Main international ICT giants such as Intel, IBM, Microsoft, Cisco Oracle, Amazon and about 200 other multinational companies have established themselves in Costa Rica. International, especially U.S. companies came to Costa Rica to open theirs call centers, the main reasons were that Costa Rica is in the same time zone as the U.S., there are well-educated human resources and there is a good proportion of price and value.
- The US market monopolizes the bulk of overseas sales. Central America, headed by Panama, is the most popular destination among exporters of digital goods and services, and is the second largest market in terms of sales volume.
- About 500 Costa Rican companies (most of them SMEs) manufacture hardware and specifically develop software in areas related to technical support, digital animation and engineering, ERP and other solutions. The most ICT companies are vertical sector orientated.

- Costa Rica has well educated, skilled IT specialists, including English-speaking skills, however there is a workforce deficit, although universities are strongly focused on preparing ICT specialists.
- E-government's main projects are executed mostly by very large, international companies, which have strong competencies. To win contracts in Costa Rica a company must demonstrate the experience, know-how and get confidence.

Recommended market entry scenarios:

Scenario No 1. Direct Exporting

The most practical and common market entry strategy, especially for new-to-market exporters. This market entry strategy is attractive and possible to implement, contrary to Chile, because of the recent changes in legal restrictions, where a foreign company is able to participate in the procurement process and conclude contracts. However, because local ICT companies charge lower prices it would be difficult to directly compete with them and also to understand the market's specificity early on. It is also very important to consider the cultural differences between Baltic and Latin American countries. Prior experience and trust are very important in Costa Rica. A new company in the market would have difficulties demonstrating these traits, but once trust is established doors open everywhere. This market entry strategy should be considered as the least risky and expensive.



Scenario No 2. Partnering

This market entry strategy is highly recommended, especially considering the sizable cultural differences and the difficult process of establishing a company. This strategy would be very advantageous, if a company would manage to choose a trustworthy partner, due to the fact that people in Costa Rica make decisions based on past experiences and trust. Good local partners can bring local market knowledge, contacts and customers.

Definitions and Abbreviations

Table 1. Definitions and abbreviations used in the document

Definition	Comment
ACTI	Chilean Association of Information Technology Companies (Asociación Chilena de Empresas de Tecnologías de Información).
CAMTIC	The Chamber of Information and Communication Technologies (La Cámara de Tecnologías de Información y Comunicación).
CINDE	The Costa Rican Investment Promotion Agency.
Chiletec	Chilean Association of Software and Services Companies (Asociación Chilena de Empresas de Software y Servicios).
Comex	Ministry of Foreign Trade.
CORFO	The Chilean Economic Development Agency.
E-government	Also e-gov, electronic government, internet government, digital government, online government, connected government. E-government is defined as utilizing the Internet and the world-wide-web for delivering government information and services to citizens and businesses.
E-government development Index	The E-Government Development Index (EGDI) presents the state of E-Government Development of the United Nations Member States. Along with an assessment of the website development patterns in a country, the E-Government Development index incorporates the access characteristics, such as the infrastructure and educational levels, to reflect how a country is using information technologies to promote access and inclusion of its people.
E – health	Also eHealth. The use of information and communication technologies (ICT) to support the provision of health care, health care surveillance and health education, knowledge, and research.
E-logistics	Also digital transport, e-transport. The use of transport documents in an electronic format and facilitate electronic exchange of information in transport and logistics, with the objective of removing technical, operational and administrative barriers between and within transport modes and thus increasing efficiency of cargo flows.
EHR	Electronic health records.
ICT	Information and communication technologies.
IT	Information technologies.
Market entry strategy	It is a planned method of delivering goods or services to a new target market and distributing them there.
OECD	The Organisation for Economic Co-operation and Development - an intergovernmental economic organization with 35 member countries.
RACSA	Radiográfica Costarricense, S.A., a state-owned Costa Rican internet provider, a subsidiary of state telco ICE.
Procomer	The trade promotion agency of Costa Rica.
SEGPRES	The Ministry General Secretariat of the Presidency in Chile (Ministerio Secretaría General de la Presidencia).

1 Object and Methodology

The purpose of this market study - to understand Chile's and Costa Rica's e-government sector, identify business opportunities, market access requirements and market enter strategies.
Main tasks:

1. define market size and specific business opportunities
2. define possible market entry strategies, their advantages and disadvantages
3. define key local actors and contacts
4. provide recommendations for Baltic companies and institutions interested in doing business in the selected sectors with Chile and Costa Rica

This report is an in-depth research that follows the first stage report that describes macro-environmental factors to be taken into consideration when accessing Chile's and Costa Rica's markets and provides mapping of five e-sectors' situation and development trends in e-government, e-health, e-education, e-logistic and e-financial services.
After consultation with the Ministries of Foreign Affairs of the Baltic countries, it has been decided to focus the research on e-government sector as it has a high demand potential for Baltic companies to do business in Chile and Costa Rica.

This is a qualitative market study, supported by quantitative data from a wide variety of external sources and interviews with key local actors in Chile and Costa Rica.
Primary research method – personal Interview - was used by interviewing directly (face to face) respondents who are key local actors in Chile and Costa Rica in e-government sector. Standardized, open-ended interview type was selected when same open-ended questions are asked to interviewees to ensure that the same general areas of information are collected from each interviewee and the results could be comparable. A list of all the institutions, companies and persons interviewed during this research is provided in this study.

Also, secondary research methods were used – analysing articles, surveys, studies and policy documents.
Additional technical support was provided by the ELANBiz team and, particularly, the ELANBiz Experts in Chile and Costa Rica.

It is expected that this study will help to improve knowledge and to identify market opportunities on e-government sectors in Chile and Costa Rica among companies and business stakeholders from the three Baltic countries.

2 E-government in Chile

2.1 Market size

2.1.1 The Customer

E-government is defined as utilizing the Internet and the world-wide-web for delivering government information and services to citizens and businesses.

The ultimate goal of the e-government is to be able to offer an increased portfolio of public services to citizens and business in an efficient and cost effective manner.

Why is e-government such an attractive and sought out for service, why is there investment allocated for its creation?

- E-government is one the ways to modernise government control and successfully implement government reform. By adapting to public knowledge requirements the government can improve its public relations.
- E-government allows for government transparency: it allows the public to be informed about what the government is working on as well as the policies they are trying to implement.
- E-government helps simplify processes and makes government information more easily accessible for public sector agencies, citizens and business. Simple tasks may be easier to perform through electronic government access.
- E-government is an easy way for the public to be more involved in political campaigns. It could increase voter awareness, which could lead to an increase in citizen participation in elections.
- It is convenient and cost-effective for businesses, and the public by getting easy access to the most current information available without having to spend time, energy and money to get it.

The customers (buyers) of e-government services are government and governmental institutions. The executive power is exercised by the government. Chile is divided into 13 administrative regions, each headed by an administrator appointed by the central government. Each region is divided into 40 provinces, each being administered by a governor also appointed by the central government. The provinces are further divided into municipalities headed by appointed mayors.
There are 23 ministries and about 400 state-owned enterprises institutions in Chile (1).

Table 2. Ministries in Chile

No	Name of Ministries (1)	Performance area	Web page
1.	Ministry of General Secretariat of Government (Ministerio Secretaría General de la Presidencia)	Provide the main government authorities with communication advice.	http://www.msgg.gob.cl
2.	Ministry of General Secretariat of the Presidency (Ministerio Secretaría General de Gobierno)	The highest level governmental advisory body responsible for facilitating and coordinating the development and fulfillment of government's agenda.	http://www.minsegpres.gob.cl
3.	Ministry of the Interior and Public Security (Ministerio del Interior y Seguridad Pública)	Internal policy.	http://www.interior.gob.cl
4.	Ministry of Foreign Affairs (Ministerio de Relaciones Exteriores)	Foreign policy, including Economic International Relations / Treaties, i.e. Association Agreement Chile-EU (www.direcon.gob.cl) and export promotion (www.prochile.gob.cl)	http://www.minrel.gob.cl/minrel/site/edic/base/port/inicio.html
5.	Ministry of National Defense (Ministerio de Defensa Nacional)	External security.	http://www.defensa.cl
6.	Ministry of Finance (Ministerio de Hacienda)	Tax collection and customs control.	http://www.hacienda.cl
7.	Ministry of Economy, Development and Tourism (Ministerio de Economía, Fomento y Turismo)	Productivity and technological development.	http://www.economia.gob.cl
8.	Ministry of Social Development (Ministerio del Desarrollo Social)	Social development policy.	http://www.ministeriodesarrollosocial.gob.cl
9.	Ministry of Education (Ministerio de Educación)	Education policy.	http://www.mineduc.cl
10.	Ministry of Justice (Ministerio de Justicia y Derechos Humanos)	Justice system, public policy.	http://www.minjusticia.gob.cl
11.	Ministry of Labor and Social Previson (Ministerio del Trabajo y Previsión Social)	Occupation policy, pension system.	http://www.mintrab.gob.cl
12.	Ministry of Public Works (Ministerio de Obras Públicas)	Construction and administration of public roads and infrastructure, civil aviation supervision, traffic police and ports.	http://www.mop.cl
13.	Ministry of Health (Ministerio de Salud)	Administration of Public Hospitals and the Social Security Fund, control of health standards in public.	http://web.minsal.cl

No	Name of Ministries (1)	Performance area	Web page
14.	Ministry of Housing and Urban Planning (Ministerio de Vivienda y Urbanismo)	Supervision of the Housing and Urbanism.	http://www.minvu.cl
15.	Ministry of Agriculture (Ministerio de Agricultura)	Agricultural and livestock production.	http://www.minagri.gob.cl
16.	Ministry of Mining (Ministerio de Minería)	Public mining policy.	http://www.minmineria.gob.cl
17.	Ministry of Transportation and Communications (Ministerio de Transporte y Telecomunicaciones)	National policy in matters of transport and telecommunication; supervise public and private companies operating transportation and communications facilities in the country.	http://www.mtt.gob.cl
18.	Ministry of National Assets (Ministerio de Bienes Nacionales)	Manage the fiscal wealth.	http://www.bienesnacionales.cl
19.	Ministry of Energy (Ministerio de Energía)	Development of the country's energy sector.	www.energia.gob.cl
20.	Ministry of the Environment (Ministerio del Medio Ambiente)	Protection of the environment.	http://portal.mma.gob.cl
21.	Ministry of Sport (Ministerio del Deporte)	Development of sport and the physical activity of the population.	http://www.ind.cl
22.	Ministry of Women and Gender Equity (Ministerio de la Mujer y la Equidad de Género)	Policy, plans and programs to promote gender equality, equal rights and to ensure the elimination of all forms of arbitrary discrimination against women.	http://www.minmujeryeg.gob.cl
23.	National Council of Culture and the Arts (Consejo Nacional de la Cultura y las Artes)	Cultural development.	http://www.cultura.gob.cl

MAIN GOVERNMENT INSTITUTIONS

- National Health Fund (Fondo Nacional de Salud, FONASA)
- ProChile (the institution of the Ministry of Foreign Affairs)
- Directorate of International Economic Relations (Dirección de Relaciones Economicas Internacionales)
- General Comptroller of the Republic (Contraloría General de la República, CGR)
- Institute for Social Security (IPS)
- National Defence Pension Fund (Caja de Previsión de la Defensa Nacional, CAPREDENA)
- Public Defender Commission (Comisión Defensora Ciudadana, CDC)
- Directorate of Prevision of Carabineros de Chile (Dirección de Previsión de Carabineros de Chile, DIPRECA)
- Solidarity and Social Investment Fund (Fondo de Solidaridad e Inversión Social, FOSIS)
- Institute of social prevision (Instituto de Previsión Social, ISL)

- Judicial Branch (Poder Judicial)
- Civil Registry and Identification Service (Servicio de Registro Civil e Identificación, SRCeI)
- Electoral Service (Servicio Electoral, SERVEL)
- National Consumer Service (Servicio Nacional del Consumidor, SERNAC)
- Undersecretariat of Social Evaluation (Subsecretaría de Evaluación Social)
- Undersecretariat of Transport (Subsecretaría de Transportes, SUBTRANS)
- Superintendency of Banks and Financial Institutions (Superintendencia de Bancos e Instituciones Financieras, SBIF)
- Superintendency of Social Security (Superintendencia de Seguridad Social, SUSESO)

The Ministry General Secretariat of the Presidency (SEGPRES, Ministerio Secretaría General de la Presidencia) performs a very important role in e-government in Chile. It is the cabinet-level administrative office (equivalent to the president's Chief of Staff) which serves in an advisory role to the President of Chile and her or his ministers in the governments' relations with the National Congress of Chile, the development of the legislative agenda, and keeping track of the bills and other legislative activity in Congress as they pertain to the government. It is the main unit responsible for taking initiatives relevant to spur ICT use within the public sector with the purpose of improving relations between the state and its citizenry and overall efficiency (2).

The presidential advisory commission, called the Interministerial Committee for Digital Development, intended to advise the President in the formulation of the national policy for digital development. The committee is composed of the Minister of SEGPRES (who chairs it) and ministers of: Interior, Finance, Economy, Development and Tourism, Education, Health, Transport and Telecommunications (3).

The main regulatory bodies on ICT services are the Ministry of Transportation and Telecommunications (MTT), the Under Secretariat of Telecommunications ("SubTel"). MTT, through SubTel is responsible for formulating sectoral policy, implementing and enforcing the corresponding legislation (including technical regulations), administering the radio frequency spectrum, deciding on applications for concessions, permits and licenses, and applying administrative sanctions in accordance with the law.

For example, the consumer protection agency checks the compliance of protective provisions on business-to-consumer electronic agreements. The Secretary of Digital Development from the Ministry of Economics designs and executes public policy to promote the use of ICT. The Chilean Economic Development Agency (CORFO) is a government organization that promotes entrepreneurship and innovation through financing schemes and other activities (4).

There is no institution or authority, which prioritises the projects, oversees that the digital agenda is being implemented. SECPRES, though being responsible for the e-services field and the one managing many e-government projects' does not regulate which systems to implement or in which order to acquire or improve them (5), (6).

The Budget which is meant for the digital agenda's projects does not have a centralised management. Each ministry or any subordinate institution of that ministry make a decision on which systems or e-services and in which order to acquire or improve them. This budget is planned and allocated once a year. The systems are financed from the yearly budget of a responsible institution. There are projects which were funded by the World Bank, IDB (Inter-American Development Bank), however this practise is relatively rare (5), (6).

Chilean Economic Development Agency (CORFO) aims to encourage to create an institution or grant authority to an existing institution which would centralise and manage government sector's ICT projects and would ensure dialogue between the public and private sectors when forming and implementing e-government initiatives (5).
Furthermore, the government is criticised that it lacks a long-term view for the development of e-government and projects in the public sector, expensive solutions are acquired, which are soon replaced by others. Moreover, the accountable people change frequently and when they do, priorities for ICT development change with them (6), (7), (8).

SELLING TO THE GOVERNMENT

Most of public procurement go through public tendering, unfortunately not all, e.g., publicly owned companies like Metro S.A. (Santjago metro services) and CorreosChile (Postal services) use other purchasing procedures and channels. The regulatory framework does not apply to state offices, public jobs, or other entities such as Congress, the Central Bank of Chile, and the judiciary system, governed by specific regulations. However, many of these voluntarily participate in the electronic information platform as a criterion of transparency.
The Government of Chile procurement website (www.chilecompra.cl) is an official portal for public procurement, where the 850 public entities of Chile carry out their purchasing processes. It was established in 2000 to increase transparency, enhance opportunities, and reduce government procurement costs. The site serves as a central source for all Chilean government procurement, including the armed forces. About 18% of public procurement is related to ICT (7), (6).
General information on public tenders in Chile is available on the public procurement portal ChileCompra which in turn manages four electronic platforms (9):

- www.MercadoPúblico.cl: procurement platform for government agencies and suppliers.
- www.ChileProveedores.cl: Registry of State suppliers, where companies can keep their information accredited and digitised.
- www.Analiza.cl: Business intelligence platform for natural and legal persons.
- www.ComprasSustentables.cl: website informing about the State's sustainable public procurement policies.

Though officially European companies are not restricted to participate in public procurement and pre-registration is not required, the pre-registration can significantly ease the process. A company must assign a representative, the representative can be Chilean or a foreigner as long as he or she has residency in Chile, which is a requirement for the completion of all formalities and documentation.
All foreign bidders not living in Chile must appoint a proxy residing in the country that is empowered to submit the bid and conclude the contract as well as to represent the individual judicially and extra-judicially. Once the foreign provider has been awarded the contract it must open a corporate structure in Chile (9).
Foreign and local bidders on government tenders must register with the Chilean Bureau of Government Procurement Supplies (Dirección de Aprovisionamiento del Estado) (http://www.chileproveedores.cl). They must also post a bank and/or guarantee bond, usually equivalent to ten percent of the total bid, to ensure compliance with specifications and delivery

dates. Bidding is best done through a local agent who is registered, well connected, and familiar with Chilean government bidding procedures (10). Often a consortium is created for companies to be able to participate in the procurement process and uphold the contract. Often the procurement conditions are very restrictive, which, unfortunately, suit only a few companies (7).

Furthermore, every other year an invitation is published that encourages companies to register to the potential suppliers' registry. This registry is used by the public sector when purchasing products or services above 75.000 USD. Services or products are purchased from this list by using simplified procedures and a lowest price offer survey. At this time, there are roughly 500 IT companies registered. This method is popular and is often used by the public sector to simplify and speed up public procurement. However, only using a lowest price criteria often deters IT companies from participating in these procedures. If a company wishes to participate it needs to provide a company description, resumes of experts and company's experience (experience in foreign countries is valid). A company needs to be registered in Chile to be able to participate (7).

2.1.2 E-government systems

Usually central government has a strong and developed IT division, which actively participates in IT projects, develops its own systems (for example – Tax system, interoperability platform) and maintains them. However, it is becoming increasingly popular to outsource these functions to private ICT companies.

Central government has IT solutions that are better developed than those of the local governments. The most popular software licensing and delivery model is On-premise, very rarely Software as a service (SaaS) model is applied, where the software is licensed on a subscription basis and is centrally hosted. SaaS model is difficult to apply due to the rules of how public budget is formed and other control restrictions (8).

The most popular technologies/IT products used for information systems in public sector is Oracle, Java, PostgreSQL, C#, Microsoft, IBM WebSphere. For accounting there is a custom developed system used in all government sector (Information System for the Financial Management of the State (SIGFE)), only few organizations in the public sector use SAP Business Suite (ERP) for finance management. The most popular software for data Analytics are IBM Cognos, MicroStrategy, Tableau, Qlickview.

There are plenty of e- governmental projects that have already been initiated, in implementation or successfully implemented. The most significant systems/projects in e-government, the responsible institutions and status are provided in the table below (6), (7), (11), (8), (5). Projects are categorised in sections:

- G2C - citizen oriented government e-services/projects;
- G2B – business oriented government e-services/projects;
- G2G – government oriented government e-services/projects.

Insurance system, Single key (Clave única) platform, e-health systems – projects that have the largest allocated budget.

Table 3. E-government systems in Chile (5) (6) (7) (8) (11)

No.	E-service	Web	Description	Responsible institution	Status
E-services and projects (G2C)					
1.	Single key (Clave única)	https://claveunica.gob.cl	Seeks to provide citizens with a single electronic identity (ID and password) for conducting online transactions with the state, eliminating the need for multiple registrations. The goal is that this method of authentication would allow the citizens to carry out procedures in the multiple digital channels offered by State Bodies and Municipalities. A large budget is allocated to this project, many ongoing subprojects are linked to this system. ICT company Morpho supplied e-ID cards and e-passports.	Civil Registry/ SEGPRES	Implemented
2.	Chile Atiende	https://www.chileatiende.gob.cl	This platform allows Chileans quickly access a wide range of government services, including reporting and blocking lost identification documents, searching for jobs, and enrolling in social assistance programs. Special emphasis is placed on the integration with different public services.	SEGPRES	Implemented
3.	Open Public Data portal	www.datos.gob.cl	The aim is to strengthening open data policy to improve citizens' access to information from public institutions. Central government institutions will publish information that is most demanded by the public, the data will be accessible in open formats.	SEGPRES	Implementing
4.	Open Budget	http://observatoriofiscal.cl	The other open data project - a platform that makes the data of the public sector's budget available to the public on a regular basis. The data will be displayed in a user friendly format, will have Interactive visualizations, allowing for various comparisons, e.g.: Which institutions' expenditures were much different comparing to what was expected?; Comparison of 2016's actual expenses versus what was budgeted?; What does the municipality spend its funds on?, etc.	Fiscal Expenditure Observatory in Chile	Implementing
5.	Applications (Apps) of the State	www.apps.gob.cl	The list of created apps in e-government services to use for citizens. All information is promoted through the State applications' website. ICT company Coasin Chile participates in implementation.	SEGPRES	Implementing
6.	Electronic medical record	http://web.minsal.cl	The objective is that the clinical history of each patient would be contained in an electronic medical record, thereby ensuring continuity of care between different levels of healthcare and improve the quality of information for clinical decision making. This is done in a form of a pilot project, which involves a limited sector of the national territory (28 public health institutions; 80% prime and 60% second public health	Ministry of Health	Implemented pilot project

No.	E-service	Web	Description	Responsible institution	Status
			services) to integrate the clinical records with other databases of the ministry. E- prescription prototype is in development phase. HL7, DICOM standards are used. The long-term aim is to computerize all establishments and interconnect 100% of the existing information network, this would include: test results (laboratories), waiting lists, pharmacy fund and other important information. This change would improve the ministry's resource management and make it a more convenient experience for the citizens overall. Currently there is a lack of image integration and test results from laboratories and lack of interconnections with all primary and secondary health service providers. This project is criticised because it lacks common vison. The ministry of Health has a 50 employee ICT department for developing these solutions. Also ICT company InterSystems participates in implementation. Used technologies: Oracle, Java, PostgreSQL, IBM Cognos.		
7.	Remote monitoring of people with complex chronic diseases	n.d.	This is a telemedicine project whose main objective is to improve access to timely diagnosis through the advice of a nephrologist specialist. The monitoring of the health of patient by using different devises will be performed. The second stage will be telemedicine for the diagnosis and treatment of ischemic stroke (VCA). The main challenger in this project is management of big data.	Ministry of Health	Implementing pilot project
8.	Public health surveillance system and health alerts	n.d.	The objective is to implement an integrated information system that supports the timely and efficient management of cases, outbreaks and epidemics of diseases. This system would allow specific actions to be taken with the goal of reducing morbidity, disability, and mortality, as well as improving the health of the population. Currently the main challenges are data integration and ensuring data privacy. This system is developed by ICT company IBM and NISI.	Ministry of Health	Implementing pilot project
9.	Insurance system	www.fonasa.cl	The National Health Fund (FONASA) is implementing a project that, firstly should allow to manage insurance policies by maintaining demographic data. Secondly, to ensure management of insurance transactions - its payment, co-payment, reimbursement and payment to providers. Used technologies: Oracle, Java. There are many ongoing subprojects that are related to this system and a large budget has been allocated for it.	Ministry of Health	Implementig

No.	E-service	Web	Description	Responsible institution	Status
10.	Integral System of Information and Citizen Attention (SIAC)	http://portalsiac.minvu.cl	The objective of this system is to facilitate Health sector's online management services provided to individuals and communities. This will include consultations, complaints and clinical guidance, providing increased coverage throughout the country for better care. It will incorporate all existing communication channels: face-to-face, telephony, e-mail, web and social networks, in order to create a single view that will facilitate citizens' access and ensure compliance with deadlines by law.	Ministry of Housing and Urban Planning	Implemented pilot
11.	Information system for emergency and disaster management	http://www.onemi.cl	The objective is to ensure that the information of all emergencies and disasters with health impact is consolidated in a platform that allows managing the response and registration of events with an emphasis on health risks. This platform will feed on the alerts issued by the National Civil Protection System and other events reported by other communication channels. This will improve coordination and internal communication with public and private health facilities.	Ministry of Interior and Public Security	Implementing
E-services and projects (G2B)					
12.	Services for Enterprise (Escritorio Empresa)	https://www.escritorioempresa.cl/web/escritorio-empresa	Integrated, interactive digital platform that allows companies to access information and complete all administrative procedures and exchanges with the central government. It is planned up to 2018 to integrate 50 services in 100 municipalities. Also this platform will integrate the https://www.empresasenundia.cl/ and will become a one stop gate. It will connect all services that may be relevant to companies, including paying taxes, e-invoicing, etc. The Economic Development Agency has 50 employees dedicated to develop this system. Infrastructure is provided by ICT company SONDA. Used technologies: Oracle, Java, PostgreSQL, IBM Cognos.	CORFO	Implementing
13.	Create business in one day (Tu empresa en un día)	https://www.empresasenundia.cl	A platform that serves as a one-stop gate for entrepreneurs that want to create and register their company. This platform will be integrated with the https://www.empresasenundia.cl/. The platform was developed by ICT company SONDA.	CORFO	Implemented
14.	The Single Window (Ventanilla Unica) of the Registry of Emissions and Transfers of	http://vu.mma.gob.cl	It is an online portal providing access to the different sectorial declaration systems that allows for the collection and standardisation of relevant environmental information. This portal will be integrated with the https://www.empresasenundia.cl/	Ministry of Environment	Implemented

No.	E-service	Web	Description	Responsible institution	Status
	Contaminants (RETC)				
15.	Public procurement system ChileCompra	http://www.chilecompra.cl	An electronic procurement platform where the 850 public entities of Chile carry out their purchasing processes and suppliers offer their products and services. The site serves as a central source for all Chilean government procurement. The System was developed in 2000. Currently it is planned to change platform. The platform was developed by SONDA. This is a custom developed system and used Microsoft technologies for its development.	Ministry of Finance	Implemented
16.	TAX system (Sistema integral de cumplimiento tributario)	http://www.sii.cl	System to collect both individual and corporate taxes in Chile and oversees tax compliance management, including e-invoicing. 98% tax declaration is provided using this system. This system was launched in 1998. The goals were: 1) to reduce the cost and increase the accuracy of tax collection; 2) to equip Chile's tax authority with the resources it needed for the foreseeable future; and 3) to offer taxpayers throughout the country a higher standard of service along with swift, easy access to vital tax information. Individuals were then able to check their tax status online. Later electronic tax filing was added to the SSI service. In filing their taxes online, taxpayers key-in and validate data themselves, thereby reducing queries and input errors. The SII saves money on printing, distribution and processing time. The electronic billing model in Chile is mandatory. There is a schedule that distinguishes 5 different groups of taxpayers that must gradually join the electronic billing scheme between November 2014 and February 2018. In 2015, 77% of all invoices in the country were exchanged electronically. The standard format of the e-invoice is XML. This is a custom developed system, developed using mostly internal resources. Valuated as a success story. ICT company Paperlessla participated in developing an e-invoice system.	Internal Revenue Service	Implementing
17.	The Integrated Foreign Trade System (SICEX)	www.sicexchile.cl	A portal that allows users to electronically complete all the necessary administrative procedures for foreign trade operations. ICT company EVERIS participates in developing this system.	Ministry of Finance	Implementing
E-services and projects (G2G)					
18.	Interoperability system	http://www.guiadigital.gob.cl/artic	The Government of Chile has worked on various initiatives to implement a software and hardware platform to optimize the exchange of information and data between different state institutions. This	SEGPRES	Implemented

No.	E-service	Web	Description	Responsible institution	Status
		ulo/interoperabilidad-y-estandares-de-metadatos	initiative is called the State Electronic Services Integration Platform (PISEE) and has been in operation since the end of 2009. The objective of this platform is to optimize the investment made by the State to obtain interoperability in institutions, optimizing integration processes and offering a single service bus. This is a custom developed system, developed using internal resources. However, the system is not widely used, poorly rated and there are plans to change it. Also, the public sector has no obligation to apply it when integrating systems.		

2.1.3 Roadmaps for development e-government

Chile has invested in the development of an electronic government for years. Chile was ranked 42th out of 193 countries in E-Government Development Index 2016, one of the top three countries from Latin America (the others are: Uruguay ranked 34th and Argentina ranked 41st) (12).
Comparing Chile's and Baltic States countries' results Chile demonstrates lower performance than the Baltic States: Estonia is ranked 13th, Lithuania is ranked 23rd, Latvia is ranked 45th of 193. More about e-government and e-participation indexes, compared to the Baltics see 1st stage report.
The State Modernisation and Digital Government Unit part of the Ministry General Secretariat of the Presidency (SEGPRES) is the main unit responsible for taking initiatives relevant to spur ICT use within the public sector with the purpose of improving relations between the state and its citizenry and overall efficiency (2)**.** At the moment the head, of the unit does not appear to be sufficiently influential to lead the development of digital government policies and to promote the necessary normative changes.
OECD after analysing situation in Chile in 2016 seeks a stronger definition of roles and responsibilities making two alternative proposals (2):

- Establish an Agency for Public Sector Digitalisation. It would have a holistic (whole-of-government) approach and a global view of the entire administration to go beyond digital government and support strategic use of ICTs across the whole administration. This Agency would promote a real change between the society and the public sector. It would streamline design and implementation of policies and service delivery to both citizens and businesses.
- Establish a vice ministry for public sector digitalisation under the SEGPRES, headed by the equivalent of a CIO reporting to the Minister of SEGPRES.

E-government's development is mainly based on Chile's Digital Agenda 2020 and some strategic programs that are mainly managed by CORFO with the aim to transform Chile into a global innovation and entrepreneurial hub.
Also, there are other strategies that are narrower in their scope, these strategies describe the development of digitalisation, e.g.: Digital Health Strategy 2011-2020 (13).

Chile's Digital Agenda 2020 was launched in 2015 by replacing previous Chile's Digital Agenda 2013-2020. Previous agenda was replaced by new elected government. There are five directions included in Chile's Digital Agenda 2020 (14), (5), including Digital Government:

1. **Digital Government** (*Gobierno Digital*). Responsible institution – SEGPRES. The take-off of Chile's digital government rests on a major challenge: reaching a state where the government is able to respond to citizens' demands in a timely and efficient manner; in equal conditions, regardless of their geographical location. It is planned to have a unique digital platform that provides public services where citizens would be able to identify themselves and access personalised services according to their user profiles. This solution would allow equal access to State services, from any part of the national territory and abroad, it would generate greater welfare for Chileans in terms of saving time and money. This establishes that before 2020 Digital Government will be a reality in all the communities across the country. It will result in the online availability of the 150 most demanded municipal procedures and that at least 20 of them would be adopted by the municipalities and used by the citizens. The healthcare sector will extend electronic medical records to all people served in the public system, online appointment booking will be a reality, as will the digitisation of medical licences.
2. **Rights for Digital Development** (*Derechos para el Desarrollo Digital*). Responsible institutions – Ministry of Economy, Development and Tourism and Ministry of Finance. Digital Agenda 2020 states that it is necessary to re-evaluate the established norms that became obsolete with technological advances or those norms that are hindering the innovation and growth of Markets. The Digital Agenda 2020 seeks to reduce the regulatory gaps that make it difficult for ICTs to create inclusive, democratic, participatory and accessible spaces for all.
3. **Digital Connectivity** (*Conectividad Digital*). Responsible institution – Ministry of Communication. The main challenge of digital connectivity is to get all Chile connected to high speed and quality network that is accessible to all by building a digital highway that will enable everyone to fully enjoy the Internet of the future.
4. **Digital Economy** (*Economía Digital*). Responsible institution – Ministry of Economy, Development and Tourism. The Digital Agenda 2020 seeks for greater adoption of digital technology in companies, with emphasis on micro, medium and small businesses. This would also propel and democratise the country's technology-based, research, development and innovation-driven ecosystems.
5. **Digital Competences** (*Competencias Digital*). Responsible institution - Ministry of Education. Chile seeks to improve the employability of those who have a degree in the Information and Communication Technologies sector.

SEGPRES is responsible for digital government. The agenda includes 4 action lines with a total of 18 measures for Digital Government direction:

1. **Increase the use of online services of the State and guarantee their quality**. Online procedures of the state in the whole national territory, especially in the municipalities, will be expanded and its quality will be increased in order to improve the interaction between the state and the citizens. There will be special emphasis on ensuring equality of access and conditions throughout the national territory. In addition, initiatives will be promoted to concentrate systems

in a single platform that delivers services through multiple channels. This action line includes 4 measures:

- **Digital municipalities**. Agenda seeks to strengthen the role of local governments as central elements of the community and deliver services to citizens through municipalities of the country. The goal is that main procedures would be available online. This measure is in process, the progress so far – 66% fulfilled.
- **ChileAtiende (https://www.chileatiende.gob.cl/) digital**. The goal is to strengthen the digital channel of ChileAtiende, advancing towards a channel that is designed from the needs and expectations of the people. Special emphasis will be placed on the integration with different public services. This measure is in process, the progress so far – 46% fulfilled.
- **Increased use of ClaveÚnica (https://claveunica.gob.cl/) as a mechanism of digital identification**. The goal is that this method of authentication would allow the citizens to carry out procedures in the multiple digital channels offered by State Bodies and Municipalities. This measure is in process, the progress so far – 88% fulfilled.
- **Digital State Management: electronic signature**. The goal is to increase the standardized use of electronic signatures in public services by the central government. The goal is that 100% of ministerial authorities would use advanced electronic signatures to streamline processes and to increase efficiency of these institutions. In order for this to be possible, it is planned to update the digital signature regulations applicable to the State. This measure is in process, the progress so far – 47% fulfilled.

2. **Support sectoral policies of the State through the use of technologies**. In order to achieve a rapid change in the way citizenship and the State interact, the provision of public services with greater social impact, such as security, health and social development, will be improved. This action line includes 8 measures:
   - **Development of a cybersecurity strategy**. The Ministry of Interior and Public Security, through the creation of the Interministerial Committee, will be in charge of coordinating the design, implementation and evaluation of a National Cybersecurity Policy. This will allow the consolidation of the country's Digital Development. Likewise, in the short term, a collaborative network will be implemented between the government's security departments to set up an alert system and coordinate mitigation actions. Strategy is developed in 2017 with objectives to 2022. This measure is valuated as fulfilled 100%.
   - **Computerization of the Healthcare Network: Electronic medical record.** The objective is that the clinical history of each patient would be contained in an electronic medical record, thereby ensuring continuity of care between different levels of healthcare and improve the quality of information for clinical decision making. The long-term aim is to computerize all establishments and interconnect 100% of the existing information network, this would include: test results, waiting lists, pharmacy fund and other important information. This change would improve the management of resources administered by the ministry and make it an overall more convenient experience for the citizens. This measure is in process, the progress so far – 56% fulfilled.
   - **Remote monitoring of people with complex chronic diseases**. Telemedicine is a health strategy that seeks to bring specialty care to people, connecting medical specialists with patients through audio-visual devices. Users can access quality care, in a timely manner that is close to their home, avoiding trips to hospitals of and reducing wait times. The

development and implementation of 2 Telemedicine strategies in Chile are prioritized. The first is telemedicine in nephrology, whose main objective is to improve access to timely diagnosis through the advice of a nephrologist specialist. The second strategy is telemedicine for the diagnosis and treatment of ischemic stroke (VCA). This measure is in process, the progress so far – 40% fulfilled.

- **Improvement plan of the FONASA technology platform.** The FONASA computerization project consists of two components. Firstly, it allows to manage insurance policies by maintaining demographic data of the beneficiaries and their health plan. Secondly, it is responsible for insurance transactions - its payment, co-payment, reimbursement and payment to providers. This measure is in process, the progress so far – 74% fulfilled.
- **Integral System of Information and Citizen Attention (SIAC)**. The objective of this system is to facilitate Health sector's online management services provided to individuals and communities. This will include consultations, complaints and clinical guidance, providing increased coverage throughout the country for better care. It will incorporate all existing communication channels: face-to-face, telephony, e-mail, web and social networks, in order to create a single view that will facilitate citizens' access and ensure compliance with deadlines by law. This measure is in process, the progress so far – 31% fulfilled.
- **Public health surveillance system and health alerts**. The objective is to implement an integrated information system that supports the timely and efficient management of cases, outbreaks and epidemics of diseases. This system would allow specific actions to be taken with the goal of reducing morbidity, disability, and mortality, as well as improving the health of the population. This measure is in process, the progress so far – 10% fulfilled.
- **Information system for emergency and disaster management**. The objective is to ensure that the information of all emergencies and disasters with health impact is consolidated in a platform that allows managing the response and registration of events with an emphasis on health risks. This platform will feed on the alerts issued by the National Civil Protection System (Ministry of the Interior, ONEMI) and other events reported by other communication channels. This will improve coordination and internal communication with public and private health facilities. This measure is in process, the progress so far – 72% fulfilled.
- **Selecting social benefit users through technology**. System for a better selection of social benefit users that will gradually replace the use of the social protection sheet. This system will make it possible to characterize the objective population, with a territorial perspective, and establish application requirements, which will inform the design and redesign of programs. This measure is in process, the progress so far – 90% fulfilled.

3. **Strengthen an open and transparent State**. As a member of the Open Government Partnership (OGP) Chile is committed to progress towards greater access to information and dissemination on governmental activities, to support citizen participation through transparency in policy formulation and decision-making. Chile aims to improve the public opinion and promote standards of professional integrity in government by increasing access to new technologies. This action line includes 3 measures:
    - **Open Data Policy**. Strengthening open data policy to improve citizens' access to information from public institutions. Emphasis will be placed on the quality, volume and re-use of data published in the Open Public Data portal (www.datos.gob.cl). Central government institutions

will publish information that is most demanded by the public, the data will be accessible in open formats. This measure is in process, the progress so far – 51% fulfilled.

- **Open Budget**. A platform that makes the data of the public sector's budget available to the public on a regular basis. The data will be displayed in a user friendly format, will have Interactive visualizations, allowing for various comparisons. This measure is in process, the progress so far – 75% fulfilled.
- **Applications (Apps) of the State**. Citizens are highly interested to interact with their government through mobile networks. All information related to this complementary citizen service will be promoted through the State applications' website (www.apps.gob.cl). This measure is in process, the progress so far – 19% fulfilled.

4. **Promote a more dynamic and innovative state**. The strategic use of technologies enables the State to improve public management and boost its capacity to adapt to and anticipate changes in the environment. One of the main objectives in terms of Digital Government is to incorporate innovation in public management and thus improve services, management and, consequently, the well-being of citizens. This action line includes 3 measures:
   - **LabGob: Government Laboratory**. This initiative will promote innovation processes by co-creating solutions to solve public problems. This measure is part of the Productivity, Innovation and Growth Agenda of the Ministry of Economy, Development and Tourism. This measure is valuated as fulfilled 100%.
   - **Strengthening the institutional framework for digital governance**. Design and implementation of an institutional framework that defines and leads the digital government's development strategy. A study will be conducted with OECD to obtain and apply good practices and recommendations to strengthen the leadership and coordination of the digital government policy in Chile. This measure is in process, the progress so far – 96% fulfilled.
   - **Better capacity for public procurement and ICT contracting**. Improvement of skills of public buyers and decision-makers, as well as management tools for public procurement of technology. This measure is in process, the progress so far – 95% fulfilled.

Detailed information of each measure and milestone is provided in:
http://www.agendadigital.gob.cl

CORFO oversees a variety of programs aimed at improving the economic development of Chile, through the promotion of inward investment and the advocacy of competitiveness for domestic companies. CORFO's main areas of focus are: entrepreneurship, innovation, productivity improvement and Investment. CORFO has various support instruments such as grants, subsidies and credit guarantees available to domestic and foreign companies operating in Chile.

The focus of CORFO programs:

- Logistics (including e-logistic)
- Solar systems
- Mining (Industry 4.0)
- Agriculture (Industry 4.0)
- Health (including e-heath)
- Smart city
- Intelligent construction

Ministry of Health (MINSAL) implemented the Digital Health Strategy 2011-2020 (13). The Digital Health Strategy's mission is to improve the health of the population through a timely, efficient and reliable management of standardized information. The Plan seeks to achieve these objectives through an intelligent use of Information Technology. In other words, technologies' development is a necessary condition to ensure patient health care, disease prevention and efficient resource management, in an increasingly complex healthcare environment.
The institutions that are active in this field think that the highest e-government's priorities, and the most immediate development fields will be (15), (16), (6), (7), (17), (8), (5), (18), (19):

- Development of smart cities (network, street sensors, earthquake monitoring and alarm systems. E-transport has already been implemented in the capital, other smart city technologies are planned to be further developed).
- Development of network infrastructure, expand the availability of high-speed internet in all of the country and not only in and around Santiago.
- Development of open data, big data and data analysis, currently there is a lack of competency in this field.
- The transfer of e-services to mobile phones.
- Development of interoperability, to improve the current system which would ensure fast and safe data exchange between institutions and between different applications.
- Further development of e-health, especially integrations of systems, electronic health records and telemedicine.

2.1.4 The Competitors

2.1.4.1 ICT sector

The government has been investing heavily in the ICT and Business process outsourcing (BPO) sectors. Being the world's largest exporter of copper, Chile has been taking advantage of the copper boom and the consequent trade surplus to provide attractive incentives to companies in the IT sector (20). 1,6% of companies in Chile are ICT companies (21) and this sector generates 3,4% of GBP (it is expected to reach 6% up to 2020) (22).

Table 4. ICT market Chile, Costa Rica and Baltic countries

	Chile	Costa Rica	Estonia	Latvia	Lithuania
ICT companies (23) (7) (22) (24) (25) (26)	4.700	900	2.828	5.000	3.442
The number of ICT employees (27) (28) (29) (24) (30) (25)	n.d.	88.300	28.500	19.400	27.900
Percentage of the ICT sector on GDP, % (31) (28) (29) (32) (24) (25)	3,4	12,5	4,91	3,77	2,58

85 % of ICT companies are SMEs. About 30% of ICT companies deal with hardware solutions, 30% – software licenses and 40% - services.
International companies such as Amazon, Google have local centers in Chile. Other world known companies have their development centres in Chile, these include: Synopsys, NISUM and Scalable Path (7).

Chile has 2 active ICT business associations:

- **Chilean Association of Software and Services** (Asociación Chilena de Empresas de Software y Servicios, ChileTech) (http://www.chiletec.org). There are about 1500 members. ChileTech focuses on the interests of SME ICT companies.
- **Chilean Association of Information Technology** (Asociación Chilena de Empresas de Tecnologías de Información, ACTI) (www.acti.cl). There are about 150 members. ACTI focuses on the interests of large and international ICT companies.

Fields of activities

Chile's ICT companies specializes in providing software and services for the mining, industrial, financial, and government markets. Some of the niche areas that Chile's ICT companies have been focusing on are mobile banking and digital marketing, among others (20).

IT companies usually operate in a few vertical sectors, they are not heavily orientated in one vertical sector, because the market is not large enough in vertical sectors. Therefore, companies lack specialisation, they do not have deep knowledge of a vertical sector. The private sector lacks IT investment, rarely has its own R&D centres, the main client of IT companies in Chile is the public sector (7), (15).

Chile has been relying on not just value-addition and specialization but also its inherent advantages to bag IT service and outsourcing contracts from foreign clients, especially those in the U.S.

U.S. ICT sector outsource technology operations to Chilean IT companies (33). This is because Chile has a sophisticated telecom infrastructure, high Internet and broadband penetration rates in Latin America, and, most importantly, a work culture similar to that of the U.S. What's more, the country is in the same time zone as New York and the eastern U.S. The fact that half of Chile's workforce is based in the capital, Santiago, is an added attraction for overseas firms outsourcing their technology operations to Chilean IT companies (33).

Often Chilean IT companies create various prototypes, which they then export to other countries.

Latin America and the U.S. are the main markets for Chilean ICT companies to export their services and products, the biggest focus in Latin America - Mexico, Brazil and Peru.

The U.S. open trade agreement with Chile grants privileges when exporting services, e.g., Chile's IT companies can participate in the U.S. public tendering process and provide services without setting up a company in the U.S. Chile is very attractive as an IT service provider for Peru, Mexico and Colombia (7), (15).

Increased government support is one of the key drivers in the market. The government has simplified various trade policies to increase foreign investment in recent years. It has supported IT start-ups and has initiated several policies to exempt taxes and reduce the burden of regulatory compliances over the past few years.

In a bid to transform Chile into a hub for innovation in Latin America, the Chilean government launched the Start-Up Chile program in 2010. This ambitious initiative, a first in global innovation policy, has attracted considerable global attention. Over 80 % of funded projects related to ICT (30).

Price rates

Average hourly rate of an IT specialist is about 40-60 USD; IT architec-80 USD, IT Project manager–100 USD (6) , (7).

Price rates are high compared to other countries in the region. For example, contact centers in the region are typically outsourced to Colombia and Bolivia due to cheaper labor (21).

Demand in ICT workforce

Thanks to the focus on the education system, Chile produces skilled graduates, especially in subjects such as programming and analytics (20). However Chile has a workforce deficit of 6,000 in ICT restricting the implementation of growth strategies and the capitalisation of sophisticated technologies (21). Chile receives many IT engineers that emigrate from Venezuela, Mexico, Colombia and Brazil.

Also, Chile provides the opportunity for foreign ICT specialists to work in Chile for an indefinite period. They can apply for "Visa Tech". It is a visa that aims to attract foreign ICT professionals to work in Chile, this visa is meant for partners, owners or investors of technology service companies located in Chile or professionals in areas of Science and technology that come to the country to work in technology companies (34).

However the lack of skilled English-speaking professionals is one of the major challenges in the market. Hence, companies have to incur the cost of extra training for new employees, which is not the case for companies in India or the Philippines where employees have a good level of competence in the English language (35).

Strengths of local ICT companies in Chile:

- Well educated, skilled IT specialists
- The price is lower than in EU, but is higher compared to other countries in the region
- Human resource: though Chile has a workforce deficit, IT professionals are coming to Chile´s ICT market constantly: IT engineers immigrate from Venezuela, Mexico, Columbia, Brazil, Visa Tech attracts foreign professionals from other countries

Weakness of local ICT companies in Chile:

- Lack of skilled English-speaking IT professionals
- Lack of skilled Project managers and highly experienced IT architects

2.1.4.1 ICT companies in e-government

The main players in e-government sector provided in table below.

Table 5. Main ICT companies providing services in e-government in Chile (5) (6) (7) (8)

Company	**SONDA**
Web site	www.sonda.com
Head office	Chile, Santiago
Other locations	Present in 10 countries in Latin America including Costa Rica.
Established in	1975
No. of employees	20.000
Products/services	It is a Chilean multinational company, one of the most important companies in sector of IT in Latin America. Service&solutions: IS outsourcing, System integration, IT consultancy and architecture, Data center&Cloud computing, IT infrastructure, IT applications for health, tax management, ID cards, purchasing, public transportation, finance, etc. The company offers IT services and IT infrastructure in different industries: banking, education, health, governance, manufacturing, mining, retail, transport.

	Actively participate in government projects, e.g. developed e-service solution for enterprise registration "Tu empresa en un día"; Public procurement system ChileCompra.

Company	**EVERIS**
Web site	www.everis.com
Head office	Spain, Madrid
Other locations	Present in 15 countries in Latin America including Costa Rica.
Established in	1996
No. of employees	18.000
Products/services	Offers business solutions, development and maintenance of technological applications and outsourcing services. The company operates in Business Consulting, IT Consulting, BPO, Outsourcing, SAP&ES. Sectors: Airline industry, Banking, Chemistry & pharma, Consumer goods, Health, Insurance, Manufacturing, Mining industry, Public sector, Telecom, Tourism, Transport, Utilities&energy. Everis reported 591 million euros in turnover in 2016. Actively participate in South and Central America in providing services for government. Everis developed financial management system of the state (SIGFE). It is used in all governmental institutions. Also implementing Integrated Foreign Trade System (SICEX).

Company	**Paperlessla**
Web site	www.paperlessla.com
Head office	Chile, Santiago
Other locations	Brasil, Peru, Columbia
Established in	2004
No. of employees	180
Products/services	Document management, biometric fingerprint verification process management, e-invoice, e-ticket, e-contract, e-signature, digital certificate, certification service provider. Actively participate in Chile in providing services for government, implemented e-invoice solution, e-tickets.

Company	**InterSystems**
Web site	www.intersystems.com
Head office	USA, Cambridge
Other locations	In 34 locations in Australia, Belgium, Brazil, Chile, China, Czech Republic, Finland, France, Germany, Israel, Italy, Japan, Netherlands, Russia, United Kingdom, Sweden, etc.
Established in	1978
No. of employees	n.d.
Products/services	Software, Database, Integration and development of connectable applications, Composite application, Handles unstructured data, Embedded real-time active analytics, Healthcare information system, Health information exchange Products include: • InterSystems Caché, a high-performance multi-model operational database management system

	• InterSystems Ensemble, a seamless platform for rapidly developing connectable applications • InterSystems HealthShare, a health informatics platform and solution family for connected care • InterSystems TrakCare, a unified healthcare information system • Embedded technologies for analytics and mobile and Web-based applications.) 5 of the top Hospitals on the U.S. use InterSystems technologies. Actively participate in Chile in providing services for government, implemented solutions in e-health.

Company	**Tata Consultancy Services (TCS)**
Web site	www.tcs.com
Head office	India
Other locations	Operates in 46 countries in Asia Pacific, Australia & New Zealand, Europe (closest to Baltic: Poland, Sweden, Finland), India, Japan, LATAM (Chile, Peru, Venezuela, Ecuador, Argentina, etc.), Middle East & Africa, North America
Established in	1968 (from 2002 in Chile)
No. of employees	n.d.
Products/services	IT services and BPO (outsourcing of business processes). With a large presence of outsourcing services to more than 70% of the local banking industry. Services : BI & Performance Management, Business Process Services, Consulting, Digital Enterprise, Engineering & Industrial Services, Enterprise Security & Risk Management, Enterprise Solutions, iON Small and Medium Business, IT Infrastructure Services, IT Services, Platform Solutions. The main business verticals are: banks and financial institutions, pension fund managers, private health insurance companies (Isapres), retail, government, mining and large companies. TCS is one of the largest Indian companies by market capitalization ($80 billion). Some of the main clients are: IT Line, BancoEstado, Latest News, ING, Lan, Santander Santiago. BPO line: Cencosud, BCI, BBVA, Cuprum AFP, Presto. Actively participate in Chile in providing services for government.

Company	**Indra Sistemas, S.A.**
Web site	www.indracompany.com
Head office	Spain, Madrid
Other locations	Operates in 140 countries. In LATAM – Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Mexico, Panama, Peru, USA, Uruguay; In Europe (closest to Baltic: Poland, Czech Republic)
Established in	1993
No. of employees	34.000
Products/services	Information technologies, simulation & automatic test equipment, and defense electronic equipment. The following are among Indra's main business areas: • Air traffic control systems – where it is one of the world's largest suppliers • Indra claims that a third of the world's air traffic is managed by systems developed by the company

	• Ticketing systems developed for underground railway systems – such as those in Madrid, Barcelona, Paris, Lisbon, Shanghai, Athens, Buenos Aires and Santiago de Chile • Financial services • Energy • Electoral technology and processes • Aircraft simulators • Defense • Health information systems Actively participate in Chile in providing services for government.

Company	**Morpho**
Web site	www.morpho.com
Head office	France, Issy-les-Moulineaux
Other locations	Operates in 55 countries.
Established in	2007 (before Morpho Systèmes from 1982)
No. of employees	14.000 (nearly 2,000 in R&D)
Products/services	Automated Fingerprint Identification Systems, Facial recognition system, Iris recognition, Finger vein recognition, Biometric terminals, e-gates, ID cards, ePassports, SIM cards, Biometric Card Readers Speed cameras, Explosives and Narcotics detection systems. Since 2011, Morpho has worked with the Chilean government. As the specialist for ID solutions, it is the supplier of Chile's e-ID cards and e-passports under the country's new identification and ID and travel document issuance system. Winning this contract has ranked Morpho among the top strategic partners working on the Chilean authorities' drive to set up the world's most modern population enrollment system. Morpho also supplies enrollment stations for capturing biometric data (face and fingerprints). Contract in Lithuania: with Ministry of Internal Affairs to deliver 145 MorphoTOP™ optical fingerprint scanners.

Company	**Coasin Chile S.A.**
Web site	www.coasin.cl
Head office	Chile, Santjago
Other locations	Argentina, Peru
Established in	1966
No. of employees	1.000
Products/services	Provides ITC outsourcing services and solutions. It offers data center and virtualization, and desktop virtualization solutions; mobility solutions, which include mobile sales platform solutions, logistics management systems for stores, and mobility solutions for service/utility companies; information security information security solutions, including identification, people management, and logical access solutions; and unified collaboration and communication products and service. Provided mobile application development services for Chile's government; access control platform, network admission control (network access to trusted devices, and restricts access to devices that do not comply with security policies). Also participate in Telemedicine projects.

Company	**Ayesa**
Web site	www.ayesa.com
Head office	Spain, Andalusia
Other locations	Branches in the Americas, Europe (Spain, UK, Poland), Africa and Asia. In South America – Brazil, Colombia, Peru, Chile, Ecuador.
Established in	1966
No. of employees	3.000
Products/services	IT systems to manage public finance, health, education and justice; designs infrastructures; provides engineering for the manufacturing of aircraft; works in the oil & gas, chemicals, biotechnology and mining sectors; provides remote operating systems for prisons; designs apps for tablets; and designs, supervises and computerises state-of-the-art transport, high-speed, irrigation, supply and purification solutions, all in pursuit of a better and fairer world.. Participates in various projects for Ministry of the Secretary-General for the Presidency, the Presidency of the Republic, the Ministry of Public Works and the Ministry of National Assets, as well as other Regional Governments, such as the Regional Government of Valparaíso. For the Ministry of the Secretary-General for the Presidency, an E-Administration Platform is being implemented and consulting services are being provided for the implementation of the Repository for the Administrator of State Schemes and Metadata, as well as for the improvement and evolving maintenance of the Human Resources Management System. In terms of the Presidency of the Republic, the technical migration and implementation of the Human Resources Management System for this institution has been carried out.

Company	**E-certchile**
Web site	www.ecertchile.cl
Head office	Chile, Santiago
Other locations	no
Established in	2002
No. of employees	n.d.
Products/services	The National Electronic Certification Company was created by the Chamber of Commerce of Santiago (CCS) with the support of CORFO. After ten years of operation, it is the national market leader in electronic certification and billing. Fulfills two roles in the field of electronic certification: issuing and managing digital certificates; validating certificate applications.

IBM, Oracle, Microsoft local representatives also participate in public sector, public procurements with subcontracting local ICT companies.

Other well-known ICT companies in Chile (35):

1. **ADEXUS** (www.adexus.com)**:** Chile's Adexus is a privately held systems integrator and e-commerce solutions provider with operations in Peru, Ecuador and Chile as well as the US. The company offers services in the areas of information technology and communications, networking, and Internet. In addition it provides outsourced services, such as telemarketing, customer service, and help desk; computer platforms; and support for biotechnology. Adexus was founded in 1990 and is based in Santiago, Chile.

2. **Grupo GTD** (www.grupogtd.com). It is a holding company for telecommunications providers with a focus on large and small and medium businesses (SME), government institutions and the residential sector. Grupo GTD products and services include dedicated voice links; data and video; local telephone; digital and IP telephony; Internet service; data center; storage and national and long distance; digital television; and residential telephone, television and Internet services.
3. **ENTEL Chile** (www.entel.cl). It is a publicly listed telecommunications company, was formerly Chile's state-run long distance monopoly. In addition to national and international long distance, the company now provides broadband and dial-up Internet, mobile telephony and local telephony services. The company also has a call center and a data center. The company has operations established in Peru through its affiliates Americatel Peru and Servicios de Call Center del Peru.
4. **MOVISTAR Chile** (www.movistar.com). It is a subsidiary of Spanish Telefónica, is a publicly traded telecommunications provider. It offers local, long-distance and international services; data transmission; dedicated lines; broadband and wireless fidelity (Wi-Fi); terminal equipment sales and leasing; public telephone and other value-added services. In October 2009, the company brought all its communications services together, including mobile telephony, under the brand name of Movistar.
5. **VTR** (https://vtr.com). It is a Chilean company that provides services of Internet broadband, TV by subscription and residential telephony through cable and VoIP protocol (Telephony IP). It separately commercializes his services through a Triple format Pack (Internet + telephony + TV by subscription). At the moment, the company is confirmed by 80% pertaining to the Global Liberty (from the United States) through VTR GlobalCom and 20% to the Corp Rec S.A. (Saieh Group Chile). It offers access to high speed Internet for residential and commercial places in Santiago and other 45 cities in Chile.

2.2 Market entry strategies

Chile and EU concluded an Association Agreement in 2002, which included a Free Trade Agreement, which has entered into force in 2003 for the trade provisions. The EU-Chile Free Trade Agreement covers all the areas of EU-Chile trade relations, has led to a significant increase in trade in goods and services between the EU and Chile. In 2015 bilateral trade in goods had more than doubled, from the initial € 7.7 billion in 2003 to € 16.6 billion in 2015. The EU and Chile are currently examining the possibility to modernize the existing FTA pillar, so as to ensure that it addresses all relevant aspects of the trade and investment relationship between the EU and Chile (36).

Today more than 3,000 companies from 60 countries have operations in Chile. Over the last decade, FDI has represented an annual average of around 6.5 percent of Chile's GDP.

The main investors by countries: Canada (59 percent of total implemented FDI in the country), Japan (12 percent), Spain (7 percent), the United States (6 percent) and Australia (4 percent) (37).

Perhaps the greatest challenges to foreign company seeking to export to Chile are the high degree of competition and the relatively small market size.

There are a variety of ways in which a company can enter a Chile market. However no one market entry strategy works for all international markets. There is a number of factors that will influence the choice of strategy, including, but not limited to, tariff rates, constrains in tendering in public sector.

A market entry strategy is the planned method of delivering goods or services to a new target market and distributing them there. (38).

Set-up of an entity, direct exporting, partnering, joint venture, buying a company - those strategies are considered as an entry options open to Baltic countries.

Others market entry strategies as licensing, franchising, greenfield investments are not considered, because they are not relevant to ICT services.

Comparing of different market entry strategies provided in table below.

Table 6. Comparing of different market entry strategies

Market entry strategy	Control	Risk	Investment	Ownership	Flexibility
Setup of an Entity	High	High	High	High	Low
Direct exporting	Medium	Low	Low	Medium	High
Partnering	Low	Low	Low	Low	Medium
Joint Ventures	Low	Medium	Medium	Medium	Medium
Buying Company	High	Medium	High	High	Low

Chile has few initiatives, which could be used when planning to enter the Chilean market:

- CORFO has various support instruments such as grants, subsidies and credit guarantees available to domestic and foreign companies
- Start-Up Chile - a Chilean government programme that is meant to attract world-class early stage entrepreneurs to start their businesses in Chile and use it as a platform to go global.
- Visa "Tech" – new opportunities for foreign ICT professionals to work in Chile for an indefinite period (for more information about these initiatives see 2.2.23.2.3).

By choosing a preferable market entering strategy, it is worth to take into consideration ease of doing business ranking (39), compare it to local market.

Table 7. Ease of doing business rankings (39)

Attribute / Country	Chile	Costa Rica	Estonia	Latvia	Lithuania
Ease of Doing Business Rank	57	62	12	14	21
Starting a Business	59	125	14	22	29
Dealing with Construction Permits	26	53	9	23	16
Getting Electricity	64	27	38	42	55
Registering Property	58	52	6	23	2
Getting Credit	82	7	32	7	32
Protecting Minority Investors	32	165	53	42	51
Paying Taxes	120	62	21	15	27
Trading across Borders	65	71	17	25	19
Enforcing Contracts	66	125	11	23	6
Resolving Insolvency	55	107	42	44	66

The positive aspects of entering Chile's market (40):

- Stable political and social situation
- The economy is open to foreign investment

- High transparency
- Highly educated and efficient workforce, with a high literacy rate
- High coverage of public services
- Welcoming opportunity for foreign ICT specialists to work in Chile: visa “tech”, start-up program
- Potential to use Chile as a stepping stone to commercialise throughout the Latin America

Obstacles to entering Chile’s market:

- Market Size: small market
- ICT sector is highly competitive
- Poor English-speaking proficiency
- Bureaucratisation
- Public projects progress slowly
- Strong presence of the public sector
- Winning contracts takes a considerable amount of time

2.2.1 Direct Exporting

Exporting is the most traditional and well established form of operating in foreign markets. This is the most common overseas entry approach for small companies. Direct exporting is selling directly into the market products and services using in the first instance own resources.
Many companies, once they have established a sales program turn to agents and/or distributors to represent them further in that market. Agents and distributors work closely with the exporter in representing his interests. They become the face of the exporting company and thus it is important that the choice of agents and distributors is handled in much the same way the company would hire a key staff person (41).
In direct exporting the major problem is that of market information. The exporter's task is to choose a market, find a representative or agent, set up the physical distribution and documentation, promote and price the product or services. Control, or the lack of it, is a major problem which often results in decisions on pricing, certification and promotion being in the hands of others.
When services are selling directly to customer, supplier is responsible for:

- Market research
- Marketing
- Delivery of product and/or service
- Customer and after-sales service

As the Chile government is the main buyer of e-government solutions and services, executing these contracts may be of some difficulty for European companies. Bidding is best done through a local agent who is registered, well connected, and familiar with Chilean government bidding procedures. Local representatives usually are lawyers. However, to fulfil a contract the provider might need to establish a company in Chile.

Main advantages and disadvantages by using this market entry strategy:

Advantages:

- easy implementation of strategy comparing to others
- low investing, gives an opportunity to "learn" overseas markets before investing
- minimal risk of operating overseas

Disadvantages:

- limitation to fulfill a public contract because a local company should be established
- less suitable for service products
- not very appropriate because costs of local competitors is lower
- lack of control of overseas agents, if thy will be involved in sales process
- high logistic costs

This market entry strategy is difficult to implement when choosing the public sector as the target audience, because of the legal restrictions to fulfil contracts. Also, local ICT companies have lower fees, making it difficult to provide services directly competing with them.

2.2.2 Partnering

Partnering can take a variety of forms from a simple co-marketing arrangement to a sophisticated strategic alliance for providing services. Partnering could be particularly a useful strategy in Chile where the culture, both business and social, is substantively different than Baltics countries. Good local partners can bring local market knowledge, contacts and customers. However it should be taken into consideration that some ministries (e.g. Ministry of Public works (MOP)) can require that consortia with foreign consultants should include at least one national consultant with a minimum participation of 30% of the contract's value (43).
Partnering, as a market entrance strategy is rated very highly, this strategy is the most popular amongst foreign companies trying to penetrate the Chile market.
Here are some sources, what could be very useful as a starting point when looking for a partner:

1. **Chilean Association of Information Technology Companies** (ACTI, Asociación Chilena de Empresas de Tecnologías de Información) (http://www.acti.cl). Founded in 1984, ACTI includes IT companies specialized in hardware, software, services, systems integration, IT enabled services. There is about 150 members. This organization is the main reference of the private sector in the field of ICT, the main representative of the ICT companies before governmental authorities, academics, foundations and other business sectors. This organization seeks to "promote the development and application of ICT, as well as the generation of internal and external markets for national ICT products and services, fostering free competition and the creation of legislation in order to form an adequate framework for the development of activities of the Technology Industry".
2. **Chilean Association of Software and Services** Companies (Asociación Chilena de Empresas de Software y Servicios, ChileTech (previous GECHS) (http://www.chiletec.org). There is about 1500 members, the most of the software companies.

3. **InvestChile** (www.investchile.gob.cl). Government agency responsible for promoting foreign direct investment, serving as a bridge between the interests of foreign investors and the business opportunities the country offers and providing services that are in line with the country's economic development policies. Provides general information about Chile, its economic and social environment, its legal framework and its policies on foreign investment, offering specific information about how to start a business as well as the procedures and regulation with which all investors must comply in order to bring FDI into the country. Publishs regular reports about Chile's business climate as well as about specific investment opportunities in both public and private projects.
4. **Prochile** (http://www.prochile.gob.cl). The institution of the Ministry of Foreign Affairs is aimed at promoting Chile's exported goods and services. It boosts foreign investment and tourism. For 3 years ProChile focused on IT services and exported these services to 55 countries, mostly to Latin America and the U.S. ProChile has fifty offices established worldwide, 15 of them being in Chile, offering useful information regarding the national export sphere. Prochile has representatives in Russia (Moscow), Poland and Sweden. Prochile has prepared a database that has extensive profiles about Chile's ICT companies and services they provide. This database can help to identify and select the most optimal local partner.
5. **The Santiago Chamber of Commerce** (Cámara de Comercio de Santiago, CCS) (http://www.ccs.cl), set up 1919, has a current membership exceeding 1.900 large, medium-sized and small companies originating from a cross section of main economic sectors. Since its inception the main objective of the CCS has been the staunch support of the trading community interests. CCS has developed its current catalogue of products and services. CCS helps for foreign companies to find a partner, to organize meetings, prepare market researches.
6. **Eurochile Business Foundation** (www.eurochile.cl). It is a private, nonprofit organization created by the State of Chile and the European Union in 1992. It promotes economic, trade and technological cooperation between businesses and institutions both in Chile and the European Union, through business promotion, technology transfer and know-how, also through projects to improve the environment for business competitiveness.

Also there is always a possibility to find partnership opportunities with actual or potential competitors in Chile's market.

Main advantages and disadvantages by using this market entering strategy

Advantages:

- lower investment than the set-up of an entity
- possibility to fulfill a public contract because of local partner
- reduced marketing costs
- opportunities for rapid expansion in a new market
- minimized cultural risk
- access to additional resources
- sharing of risk and ability to combine the local in-depth knowledge with a local partner with know-how in process and technologies
- benefits from local partner's knowledge of competitive conditions, culture, language, politics and business systems and process

Disadvantages:

- less management control
- dependency on partners and complexity
- potential security and confidentiality issues
- potential quality issues

This market entry strategy is very attractive, especially considering the sizable cultural differences and the fact that by having a domestic partner a company would be able to avoid restrictions when carrying out public procurement contracts. This strategy would be very advantageous if a company would manage to choose a trustworthy partner.

2.2.3 Setup of an Entity

Starting a business in Chile by establishing an entity is fairly straightforward, it takes 5.5 days to fully register a company (Lithuania – 5.5, Latvia – 5.5, Estonia – 3.5) (39). Starting a business in Chile some years ago took 3-5 weeks. However, as Chilean government passed down a new law which cut-down much of the bureaucracy associated with a starting a business in Chile, which means it is possible to start a new business online. The online form to start a business in Chile can be accessed via Chile's Ministry of Economy, Development and Tourism website.

However, recent political reforms are impacting economic factors and are making Chile less competitive in the global context. Bankruptcy procedures remain cumbersome and costly. Increases in the minimum wage have exceeded overall productivity growth in recent years.

Ease of Doing Business, Chile is ranked 57th out of 190 countries (Estonia – 12, Latvia – 14, Lithuania – 21). The best ranking is on Protecting Minority Investors (better than the Baltics), the lowest rankings are on the getting credit and paying taxes (39).

Figure 1. Rankings on Doing Business topics (39)

Note: The rankings are benchmarked to June 2016 and based on the average of each economy's distance to frontier (DTF) scores for the 10 topics included in this year's aggregate ranking.

Starting business

Starting a business in Chile requires 7 procedures, it takes 5.5 days, costs 0.7% of income per capita/per person.

Chile made starting a business easier by (44):

- introducing an online system for business registration
- starting to provide an immediate temporary operating license to new companies, eliminating the requirement for an inspection of premises by the tax authority before new companies can begin operations and allowing free online publication of the notice of a company's creation

Main procedure (44):

1. Draft online the statutes of the company and obtain an authentication number. Entrepreneurs can draft the articles of association online through a new online platform (www.tuempresasenundia.cl) and obtain an authorization number. With this number, they will visit the notary to obtain a digital signature. Responsible agency: Notary.
2. Have a notary certify the statutes with a digital signature online. There is an online register (www.tuempresasenundia.cl), this system allows users to register (modify, cancel, etc.) a company online, at zero cost. The system provides the certificate of existence immediately, and it automatically assigns a taxpayer ID number to the company (which is the same as the Company Registration ID). The system will require that all partners subscribing the document have an advanced electronic signature (a token), or that they do the process with a notary that uses his own advanced electronic signature. Responsible agency: Commercial Registry.
3. Give notice of initiation of activities to the Internal Revenue Service online. Registration is a sole procedure to be complied with for all tax purposes in order to obtain a Chilean Tax ID (RUT number). Specially regarding those persons (individual or legal entities) that are going to develop activities in Chile, taxpayers must obtain a RUT number and perform "initiation of activities" ("Inicio de Actividades") before the Chilean IRS, which is a sworn statement submitted to inform that the taxpayer will start to develop economical activities in Chile. Both procedures can be carried out through the Chilean IRS website (www.sii.cl). Responsible agency: Internal Revenue Service.
4. Print receipts/invoices in the authorized printing company. The printed document will acquire tax validity status, provided that it is stamped by the Chilean IRS and only for the period of time authorized by the referred tax authority. Most of the VAT tax documentation shall be issued electronically (invoices, debit and credit notes, among others). Receipt and invoices can be printed in any printed company, with the only requirement that the IRS format for such documents is followed.
5. Seal accounting books, invoices and other documents at the IRS. Invoice and receipt forms can be sealed only after the tax registration number (rol unico tributario, or RUT) has been obtained, because the RUT must appear on them. This procedure is generally carried out once the forms are duly printed. When using electronic invoices, companies are not required to seal accounting books, invoices and other documents at the IRS. Therefore, once electronic invoices are enacted in law and in practice, this procedure will be eliminated. Responsible agency: Internal Revenue Service.

6. Obtain a "patente municipal" working license from the competent municipality. Any profession, activity, industry, commerce, art, or any other profitable activity, independent of its denomination, must obtain a working license from the municipality. Responsible agency: Municipality.
7. Register with the labor-related accident insurance (Seguro Social contra Riesgos de Accidentes del Trabajo y Enfermedades Profesionales) at the Mutuales de Seguridad. it is mandatory for the employer to pay an insurance which covers work related accidents and professional illnesses. Entrepreneurs have the option to pay the insurance to the public Institute of Occupational Safety (Instituto de Seguridad Laboral (ISL), former Instituto de Normalización Previsional) or to private nonprofit entities known as Mutuales. Responsible agency: Mutuales de Seguridad.

Paying taxes

All of enterprises established in Chile declare its taxes according to the Chilean rules.

Chile made paying taxes more costly for companies by increasing the corporate income tax rate. Main taxes provided in table below.

Table 8. Main taxes with rates in Chile (44)

Tax or mandatory contribution	Payments (number)	Notes on payments	Time (hours)	Statutory tax rate	Tax base	Total tax rate (% of profit)	Notes on total tax rate
Employment taxes	1	online	125	3.35%	gross salaries	3.99	
Corporate income tax	1	online	42	22.5%	taxable profits	23.87	
Property tax	1	online		1.2%	property value	1.78	
Municipal tax	1	online		0.5%	capital	0.84	
Vehicle license tax	1			fixed rate	3 UTM	0.02	
Fuel tax	1				included in the price of fuel	0.00	
Employee paid - Social security contributions	0	online and jointly		19.8%	gross salaries	0.00	withheld
Municipal tax on cleanliness	0	online and jointly			fixed fee	0.00	small amount
Value added tax (VAT)	1	online	125	19%	value added	0.00	not included
Totals	7.0		291.0			30.5	

Labor Market Regulation

Labor Code stipulates that at least 85% of the staff hired by one and the same employer must be Chilean, except in the case of firms with less than 25 employees. However, Labor Code includes several provisions under which foreign employees can exceed 25%, independently of the size of the company, e.g. technical staff who cannot be replaced locally are not included when calculating the percentage of foreign employees.

Chile has and generally enforces laws and regulations in accordance to the internationally recognized labor rights of: freedom of association and collective bargaining; the elimination of forced labor; child labor, including the minimum age for work; discrimination in respect to employment and occupation;

and acceptable conditions of work related to minimum wage, occupational safety and health, and hours of work. The maximum number of labor hours allowed per week in Chile is 45. The national minimum wage is nearly 350 USD a month for all occupations, including domestic servants, more than twice the official poverty line. There are no gaps in compliance with international labor standards that may pose a reputational risk to investors (45).
Main conditions regarding working hours are provided in table below.

Table 9. Main conditions regarding working hours in Chile (39)

Working Hours	Data
Maximum number of working days per week	6.0
Premium for night work (% of hourly pay)	0.0
Premium for work on weekly rest day (% of hourly pay)	100.0
Premium for overtime work (% of hourly pay)	50.0
Restrictions on night work?	Yes
Whether nonpregnant and nonnursing women can work the same night hours as men	No
Restrictions on weekly holiday?	No
Restrictions on overtime work?	No
Paid annual leave for a worker with 1 year of tenure (working days)	12.0
Paid annual leave for a worker with 5 years of tenure (working days)	12.0
Paid annual leave for a worker with 10 years of tenure (working days)	12.0
Paid annual leave (average for workers with 1, 5 and 10 years of tenure, in working days)	12.0

Financing

Ease of getting credit, Chile is ranked low compared to regional average.

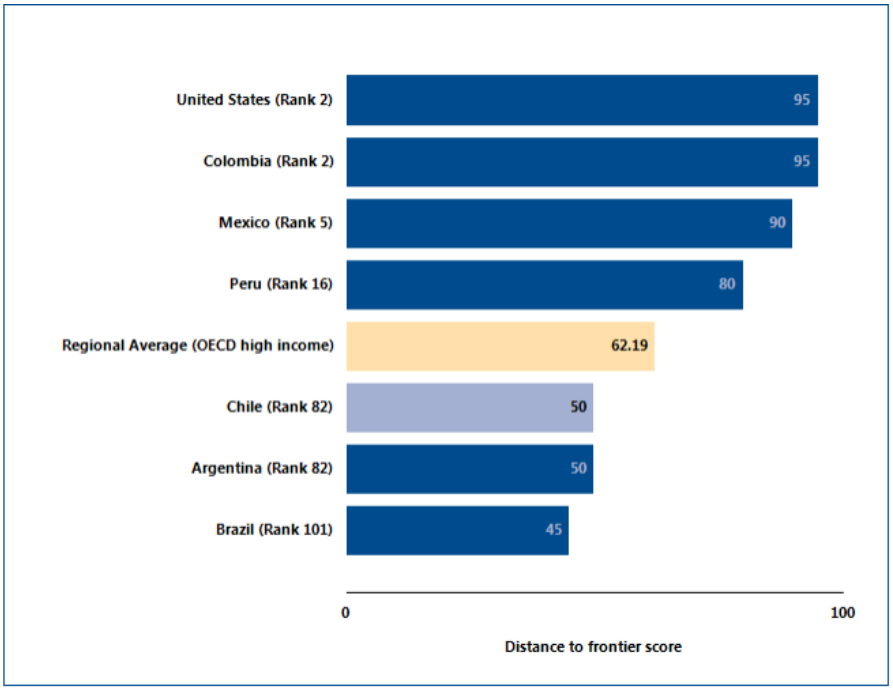


Figure 2. How Chile and comparator economies rank on the ease of getting credit (39)

It is not easy to get credit for a business, this includes companies in the ICT sector. One of the most popular bank used by ICT companies to get credit is BCI (Banco de Crédito e Inversione) (8).

CORFO supporting incentives for investment projects in Chile

CORFO has various support instruments such as grants, subsidies and credit guarantees available to domestic and foreign companies operating in Chile in the areas of Entrepreneurship, Innovation, Productivity Improvement and Investment. With regards to investment projects specifically, there are two supporting instruments available:

1. **Supporting grant for strategic projects at the pre-investment stage (PRAP)**

- **What it is:** The grant involves co-financing of pre-investment studies to enable the information gathering necessary for a company to be able to take a decision on materializing a possible investment in Chile (for example location, market, economical and technical studies).
- **Beneficiaries:** Local or foreign companies with possible investment projects in Chile.
- **Minimum investment:** USD 2 million (This includes fixed assets, intangible assets, set-up costs and working capital)
- **Grant:** Co-financing of up to 70% of the value of the studies, up to a maximum of USD 250,000.
- **Payment:** The payment of the subsidy can be via an advance payment of up to 70% of the total value and the remainder against the rendering of the studies carried out or via an advance payment in its entirety through reimbursement against the studies. In the case of a full advance payment, the company must deliver a guarantee for 100% of the value, in the form of a bank guaranteed check or an immediate execution insurance policy.
- **Guarantee:** Bank Guaranteed Check, payable to CORFO, a stand-by letter of credit or immediately executable insurance policy, equivalent to 3% of the total amount of the subsidy.
- **Admissibility check:** In order to assess the admissibility of the project to apply for the subsidy, a completed project profile form should be submitted to CORFO.

More information: http://lbtest.corfo.cl/programas-y-concursos/programas/programa-de-apoyo-a-proyectos-estrategicos-en-etapa-de-pre-inversion--prap

2. **Supporting grant for integrated development initiatives (IFI)**

- **What it is:** The IFI grant is a set of co-financed activities to support the materialization of new or expanded technological investment projects, the implementation or expansion of Centers of Innovation and the materialization of initiatives in productive and technological sectors with a positive impact on productivity and certain geographical regions.
- **Beneficiaries:** companies of national or foreign origin incorporated in Chile with possible production or technological investment projects in Chile.
- **Minimum investment:** 2 million USD (this includes fixed assets, intangible assets, set-up costs and working capital)
- **Benefit:** Recruitment of a project manager and co-financing the acquisition of technology assets, integration and training of specialized Human Capital and/or activities associated with the implementation of programs to develop supplier companies.
- **Grant:**
    - Co-financing of a Project Manager for up to 60% of the cost, with a maximum of 2,200 USD per month for a maximum period of 36 months.

- Co-financing of up to 30% of the resources committed by the company during the first two years of the project up to a maximum of 5 million USD.
- Investment in technology assets (up to 30% of the grant)
- Hiring and training of specialized Human Capital
- Activities related to the program of supplier development

- **Payment:** The grant can be fully or partially paid upon reaching certain milestones of activities, investments or expenses incurred by the company.
- **Admissibility check process:** In order to assess the admissibility of the project to apply for the subsidy, a completed project profile form should be submitted to CORFO.

More information about programs: www.corfo.cl

Start-Up Chile

Start-Up Chile (www.startupchile.org) is a Chilean government programme that aims to attract world-class early stage entrepreneurs to start their businesses in Chile and use it as a platform to go global. In 2010, Start-Up Chile was created by the Chilean Government (Ministry of Economy, Development and Tourism & CORFO) with two main intentions: to change the nation's culture towards entrepreneurship and to position Chile as the hub of innovation for Latin America. Since 2016, Start-Up Chile's new goals are to ensure that Chile remains a world hub for technological innovation and to be known as drivers of technological enterprises that impact the domestic economy positively. Start-Up Chile was the first program of its nature in the world. Since its inception it has spurred replica models, grown its networks and has been the focus of academic research all over the world. In the past 6 years, Start-Up Chile has received more than 1400 startups across its three programs, each application process we assess applicants from new areas of the world. Start-Up Chile has gained impressive international recognition, having been featured in Forbes, The Economist, BusinessWeek and TechCrunch (among many others) and has inspired spinoffs around the world such as Startup America, Startup Britain, Startup Greece and Startup Italy. Today, Start-Up Chile is the leading accelerator in LATAM, among the TOP 10 globally, and one of the biggest and most diverse startup communities in the world.

Competitions to select suitable candidates are held three times a year, attracting over 5,000 applications from which over 240 projects were selected each year (30).

In 2016 More than 1300 startups applied to Start-Up Chile. The companies selected come from 15 industries, such as Information and communication technologies, Education, Healthcare, amongst others. Founders and their teams will receive about US$ 33,000, a working visa for a year and access to one of the largest startup communities in the world to accelerate their startups in Chile.

One Estonian company is part of this programme - RentMarket (www.rentmarket.eu).

This programme is a great opportunity for Baltic ICT start-up companies.

Visa "Tech"

New opportunity for foreign ICT professionals to work in Chile for an indefinite period, this scheme was created in 2017, there are 3 ways to get this visa:

- Being a company founder and having been awarded the subsidy for the Start-Up Chile programme, for a company that operates in the technological services sector.

- Being an owner, partner or investor of a technology services company in Chile as part of the InvestChile promotion program.
- Being a professional or technician in the areas of science and technology, or having experience working for a technology services company in innovation, as a contractor, as a dependent or independent worker constituted under the programs Start-Up Chile, InvestChile or members of Chiletec (34).

When entering Chile, Visa Tech's application can be submitted via email, along with the general documentation and specific documentation required for this case. Visa applications are resolved within 15 calendar days, counted from the date of filing (46).

InvestChile, Prochile, ElanBiz can provide consultations regarding company establishment (see for contacts 2.3).

Main advantages and disadvantages by using this market entry strategy

Advantages:
- Independence of partner or local agent
- New workplace
- Relatively low investment if participate in Start-Up Chile program

Disadvantages:
- Lack of information about new market
- High initial investment fund and potentially a long period to recoup investments
- Difficulty of entering the market because of cultural specificity and differences

This market entry strategy poses higher risk and usually requires larger investment comparing it to the other discussed strategies. This strategy can be selected if the market is already researched and valuated as having high potential for providing services and if the company can devote high initial investment. It is very important to consider the cultural differences between Baltic and Latin American countries.

2.2.4 Joint Ventures

Joint ventures (JV) are a particular form of partnership that involves a third independently managed company. This is a business arrangement in which two or more parties agree to pool their resources for the purpose of accomplishing a specific task. This task can be a new project or any other business activity. Two or more companies agree to work together in a particular market and create a third company to undertake this. This strategy is similar to partnering, but in this case a Baltic company and a local company in Chile or Costa Rica could combine their knowledge and resources and establish another local company. Risks and profits are normally shared equally. In a joint venture, each of the participants is responsible for profits, losses and costs associated with it. However, the venture is its own entity, separate and apart from the participants' other business interests.

Once the JV has reached its goal, it can be liquidated like any other business or sold. For example, in 2016, Microsoft Corporation sold its 50% stake in Caradigm, a JV had created in 2011 with General Electric Company (GE) to integrate Microsoft's Amalga enterprise healthcare data and intelligence system, along with a variety of technologies from GE Healthcare. Microsoft has now sold its stake to GE, effectively ending the JV. GE is now the sole owner of the company and is free to carry on the business as it pleases.
Sony Ericsson is another famous example of a JV between two large companies. In this case, they partnered in the early 2000s with the aim of being a world leader in mobile phones. After several years of operating as a JV, the venture eventually became solely owned by Sony (47).

Main advantages and disadvantages by using this market entering strategy:

Advantages:

- Sharing of risk and ability to combine the local in-depth knowledge with a local partner with know-how in process
- Joint financial strength, the local partner contributes to the new business venture, provides an additional financial source
- May be only used for entry or supply of some services
  Minimized cultural risk

Disadvantages:

- Less management control
- Dependency on partners and complexity
- Potential security and confidentiality issues
- Potential quality issues

This market entry strategy could be valuated similarly to partnering. This strategy is attractive, however it can be difficult to find a trustworthy partner, there could be issues regarding organisational, marketing or financial matters, the same as when choosing partnering as a market entry strategy. If the partners carefully map out in advance what they expect to achieve and how, then many problems can be overcome. It is important to remember that a partner that works in a local market together with the newly established company can have more influence. Statistics show that 80% of joint ventures fail within the first five years. The local company acquires the know-how and technology and ends the partnership shortly after. Therefore, it is recommended to first of all partner with a local company and later, when there is trust between the two companies think of a joint venture.

2.2.5 Buying a Company

Buying an existing local company from Chile or Costa Rica may be one of the most appropriate entry strategies, especially, if the company that is being purchased has created an attractive product and not just provides IT services. This option could be also taken into consideration due to government's regulation and difficulties to participate in public tenders.

This strategy is certainly the most costly and determining the true value of a firm in a foreign market will require substantial due diligence. On the plus side this entry strategy will immediately provide the status of being a local company and will receive the benefits of local market knowledge, an established customer base and be treated by the local government as a local firm.

Main advantages and disadvantages by using this market entering strategy

Advantages:

- A quick takeover of the acquired structure's (company's) capital and control
- There is no need to form a new team, take care of patents, licences or other documents
- Minimised cultural risk
- Benefits from knowledge of competitive conditions, culture, language, politics and business systems and processes

Disadvantages:

- High initial investment fund
- There might not always be comprehensive information about the country's macro and micro environment
- Can be difficult to adjust to local business conditions
- Long search period for a suitable company
- Possible conflicts with the acquired company's personnel

This strategy is suitable if the goal is to acquire a specific product a local ICT company has created.

2.3 Key local actors

The list of key local actors that could support in entering the Chilean market:

Institutions/company	**CORFO,** the Chilean Economic Development Agency
Activities	Government agency responsible for promoting foreign direct investment, serving as a bridge between the interests of foreign investors and the business opportunities the country offers and providing services that are in line with the country's economic development policies.
Web site	www.corfo.lcl
Contacts	Francisco Mardones, President of National Strategic Program of Intelligent Industries e-mail: fm@mardonet.com tel. +56 9 8529 1877 Marcelo Soto, Manager of Advanced Manufacturing Program e-mail: marcelo.soto@transformamanufactura.cl tel. +56 9 9224 7546 Aisen Etcheverry, Manager of the National Strategic Program for Health Technologies and Services. e-mail: aisen@saludmasdesarrollo.cl

Institutions/company	**InvestChile**, foreign investment promotion agency
Activities	Government agency responsible for promoting foreign direct investment, serving as a bridge between the interests of foreign investors and the business opportunities the country offers and providing services that are in line with the country's economic development policies.
Web site	https://investchile.gob.cl
Contacts	Salvatore Di-Giovanni, Investment promotion officer sdigiovanni@investchile.gob.cl tel. +56 22 663 9200

Institutions/company	**Prochile**
Activities	ProChile is the institution of the Ministry of Foreign Affairs of Chile in charge of promoting exports of products and services. ProChile contributes to dissemination of foreign investment opportunities and tourism promotion.
Web site	www.prochile.gob.cl
Contacts	Claudio Vargas Garcia, Product Manager in Department of Trade in Services cvargas@prochile.gob.cl Phone +56 22 827 5178

Institutions/company	**The Santiago Chamber of Commerce** (CCS, Camara de Comercio de Santiago)
Activities	Support of the trading community interests, helps foreign companies to find a partner, organize meetings, prepare market researches.
Web site	www.ccs.cl
Contacts	George Lever, Research Manager e-mail: glever@ccs.ci tel. +56 22 360 7021

Institutions/company	**Chiletec**, Chilean Association of Software and Services Companies (Asociación Chilena de Empresas de Software y Servicios)
Activities	Chilean Association focuses on the interests of SME ICT companies, including 1500 members.
Web site	http://www.chiletec.org
Contacts	Ubaldo Taladriz Truan, Vice-president e-mail: vicepresidencia@chiletec.org tel. +56 9 9885 7259 Roberto Merida Zamora, Project Manager e-mail: roberto.merida@chiletec.org tel. +56 9 9661 5338

Institutions/company	**ACTI,** Chilean Association of Information Technology Companies (Asociación Chilena de Empresas de Tecnologías de Información)
Activities	Chilean Association of Software and Services focuses on the interests of SME ICT companies, including 1500 members.
Web site	www.acti.cl
Contacts	Represent the interests of private ICT sector before governmental authorities, academics, foundations and other business sectors. Includes 150 members (large and medium size ICT companies)

Institutions/company	**ElanBiz**
Activities	ELANBiz is a EU funded programme in which a network of experts provides market access information to European companies wishing to export or invest in seven Latin American countries, including Chile and Costa Rica.
Web site	www.elanbiz.org
Contacts	Carlos Stark Rausseo, Key expert Chile e-mail: c.stark@elanbiz.org tel. +56 9 58454536

Institutions/company	**Eurochile Business Foundation** (Fundación Empresarial Eurochile)
Activities	It promotes economic, trade and technological cooperation between businesses and institutions both in Chile and the European Union.
Web site	http://www.eurochile.cl
Contacts	e-mail: info@eurochile.cl

Contacts	**Alejandro Barros** Ex Executive Secretary of Digital Strategy of Chile 2007-2008 http://www.alejandrobarros.com e-mail: abc@alejandrobarros.com tel. +56 9 8259 6860 Expert in e-government development.

The main CT events

1. **E-commerce day** (April, 2018, Santjago, Chile) (http://www.ecommerceday.cl). It is the largest annual event of the ICT sector, more than 75,000 professionals from Latin America (12 countries), more than 20 plenary sessions and thematic workshops.
2. **Digital Latin American Congress of Business & Technology** (05-06 of July 2017, Santjago, Chile) (https://congreso.chile-digital.com):
    - +200 Exhibitors from Latin American and global companies providing products, technologies and services.
    - + 800 business meetings.
    - Seminars on the latest trends and strategic keys in Technology, Innovation IoT, M2M, Big Data, Cloud Computing, Mobile, Information Security, e-Commerce, Digital Marketing.
3. **The eCommerce Innovation Summit** (19 October 2017) (http://www.eisummit.cl/). It is an event organized by the Chamber of Commerce of Santiago and its eCommerce Committee, with the aim of bringing together the most important in terms of innovation, new technologies and e-commerce trends at global, regional and local level.
4. **ENEXPRO 2017 "From Chile to the world" (**May, 2017) (http://www.prochile.gob.cl/pagina-minisitio/enexpro). It is the most important exporter meeting in Chile, where ProChile invites more than 3,000 exporting companies to have a unique experience of meeting more than 220 new importers and buyers from more than 40 countries.
5. **Connect** - ICT association ChileTech and ProChile once a year organise networking meeting between ICT importers and suppliers (previous on May, 2017). (https://app.gurucontact.com/saas/temp/user_as3/777/filemanager/upload/programa%20con%C3%A9ctate.pdf)

3 E-government in Costa Rica

3.1 Market size

3.1.1 The Customer

There are 19 ministries and about 300 state-owned enterprises institutions in Costa Rica (48). The Executive Power in Costa Rica is composed by the President of the Republic, two Vice presidents and a Cabinet of Government (15 member) chosen by the President. The President of the Republic is, simultaneously, Head of Government and Head of State. Costa Rica is divided into seven provinces, which are further subdivided into 81 cantons and 429 districts. The governor of each province is appointed by the president and is responsible to the minister of government. There are no provincial legislatures (49).

Table 10. Ministries in Costa Rica

No	**Name of Ministries** (49)	**Performance area**	**Web page**
1.	Ministry of the Presidency (Ministerio de la Presidencia)	Inter-institutional and interministerial coordination, dialogue between the President and the State powers and civil society.	http://www.presidencia.go.cr
2.	Ministry of Foreign Affairs (Ministerio de Relaciones Exteriores)	Foreign policy.	http://www.rree.go.cr/
3.	Ministry of Agriculture (Ministerio de Agricultura y Ganadería - MAG)	Agricultural and livestock production.	http://www.mag.go.cr
4.	Ministry of Economy, Industry and Commerce (Ministerio de Economía, Industria y Comercio - MEIC)	Economic, commercial and country management.	http://www.meic.go.cr
5.	Ministry of Science, Technology and Telecommunications (Ministerio de Ciencia, Tecnología y Telecomunicaciones - MICITT)	Scientific research and technological development.	http://www.micit.go.cr
6.	Ministry of Foreign Trade (Ministerio de Comercio Exterior - COMEX)	Export and international trade treaties.	http://www.comex.go.cr
7.	Ministry of Culture and Youth (Ministerio de Cultura y Juventud)	Conservation of historical heritages, administration of theaters, museums and state artistic groups (national theater and dance company, national symphony orchestra, etc.), cultural and artistic activities, Youth area and	http://www.mcj.go.cr

No	Name of Ministries (49)	Performance area	Web page
		management of public policy for young people.	
8.	Ministry of Public Education (Ministerio de Educación Pública)	Basic education (kindergarten, preschool, primary and secondary)	http://www.mep.go.cr
9.	Ministry of Public Security (Ministerio de Seguridad Pública)	Public security	http://www.seguridadpublica.go.cr/
10.	Ministry of Finance (Ministerio de Hacienda)	Tax collection and customs control	http://www.hacienda.go.cr
11.	Ministry of Justice and Peace (Ministerio de Justicia y Paz)	Control of penitentiary population, relation of the Executive Power with the Judicial Power	http://www.mjp.go.cr
12.	Ministry of Government and Police (Ministerio de Gobernación y Policía)	Migration, borders and preventive police	http://www.mgp.go.cr
13.	Ministry of Environment and Energy (Ministerio de Ambiente y Energía - MINAE)	Protection of the environment, management of national parks and protected areas and natural energy sources	http://www.minae.go.cr
14.	Ministry of Public Works and Transport (Ministerio de Obras Públicas y Transportes - MOPT)	Construction and administration of public roads and infrastructure, civil aviation supervision, traffic police and ports	http://www.mopt.go.cr
15.	Ministry of Public Health (Ministerio de Salud Pública - MINSA)	Administration of Public Hospitals and the Costa Rican Social Security Fund (CCSS), control of health standards in public establishments and activities through permits and inspectors, control of epidemics	http://www.ministeriodesalud.go.cr
16.	Ministry of Labor and Social Security (Ministerio de Trabajo y Seguridad Social)	Monitoring compliance with labor laws, negotiating strikes and combating unemployment.	http://www.mtss.go.cr
17.	Ministry of National Planning and Economic Policy (Ministerio de Planificación Nacional y Política Económica - MIDEPLAN)	Inter-institutional planning and coordination	http://www.mideplan.go.cr
18.	Ministry of Housing and Human Settlements (Ministerio de Vivienda y Asentamientos Humanos)	Supervision of the Housing and Urbanism Institute (INVU) and the National Housing Bank (BANVI)	http://www.mivah.go.cr
19.	Ministry of Communication (Ministerio de Comunicación)	Ministry without portfolio that serves as a link between government and the media.	http://www.presidencia.go.cr

MAIN GOVERNMENT INSTITUTIONS

- Costa Rica Social Security System (C.C.S.S., Caja Costarricense de Seguro Social)
- Costa Rican Institute of Tourism (ICT, Instituto Costarricense de Turismo)
- The Superintendency of Telecommunications (SUTEL)
- National Commission of Prevention of Risks and Attention of Emergencies (C.N.E., Comisión Nacional de Prevención de Riesgos y Atención de Emergencias)
- Public Register of Properties (Registro Nacional)
- Costa Rican System of Legal Information (Sistema Costarricense de Información Jurídica)
- The Learning Institute (INA, Instituto Nacional de Aprendizaje)
- Institute of the Coffee (ICAFE, Instituto del Café)
- Institute of Cooperatives (INFOCOOP, Instituto Nacional de Fomento Cooperativo)
- National Council for Scientific and Technological Research (CONICIT, Consejo Nacional para Investigaciones Científicas y Tecnológicas)
- National Council of Production (CNP, Consejo Nacional de Producción)
- National Tourism Chamber (*CANATUR)*

For the last 15 years the institution responsible for e-government was the Technical Secretariat which was directly dependent on the Presidential office. In 2015 the President put the Technical Secretariat on standby. The Ministry of Science, Technology and Telecommunications is responsible for the matter. Meanwhile, structural and organisational changes within the Ministry are expected to be made throughout 2017 (48), (50), (51).

Mrs. Alicia Avendano Rivera, ex-Director of the Technical Secretariat of Digital Government currently is a Business development and Innovation Manager in RACSA.

Radiográfica Costarricense, S.A. (RACSA) performs a very important role, it initiates and is responsible for many e-government projects in Costa Rica. This is a state-owned Costa Rica internet provider, a subsidiary of state telco ICE that offers internet and voice services. It manages subscriber connections to ADSL internet while ICE provides connectivity via its frame-relay ATM network. Also this organization is in charge of developing digital solutions that improve the infrastructure of Information and Telecommunication Technologies of State and corporate companies implementing services that institutions provide to citizens. This is as a Digital Integrator, it proposes that institutions do not have to invest in technological equipment, RACSA will provide services that integrate applications, virtual versions of technological resources, security, capacity for information systems to share data, connectivity and human resources. RACSA is focused on being the Innovation Company of Costa Rica, providing "specialized solutions" to the Government sector and municipalities.

ICT companies from the Baltic region can approach RACSA directly with any proposed projects in the field of e-government. RACSA works through public/private partnerships by creating an alliance with it directly or suggest other private companies to fulfill projects. The involvement of RACSA in the projects is supervision and coordination of outsourced, as there are only 12 people for carrying out more than 30 projects.

SELLING TO THE GOVERNMENT

The sales process to government institutions is fairly long, an ICT company needs to prove its competencies and experience. In some cases, a solution can be considered: ICT companies use their own funds to create solution prototypes, install them and consult on behalf of these solutions for them to be considered, if after all this the solution is deemed useful and relevant a public procurement process is initiated (52).

However, as the Costa Rica's government is the main buyer of e-government solutions and services, winning these public contracts until the year 2017 was of some difficulty for European companies. All the public procurement in Costa Rica – whether from the State, the City Hall, or public institutions were required to go through public tendering. Until the year 2017 European companies without legal presence in Costa Rica could participate in public tenders, but had to appoint a local agent with a legal address in Costa Rica to present their offer. The local agent must have been authorized to submit the proposal and sign the contract, as well as have representation in court and extra-judicially. Once awarded the contract, the bidder was required to open a corporate structure in Costa Rica according to the law of Commercial Code (53).

However, the situation is changing. In 2015 the Integrated System of Public Procurements (SICOP) was developed as an official portal for public procurement in Costa Rica (www.sicop.go.cr) (54). The use of this technological platform is compulsory from 2017 because of the change in public procurement which is outlined in the Law on Administrative Contracting Regulation's recent reform. This Regulation requires the use of SICOP for:

1. Publicising procurement programs
2. Managing administrative files
3. Verifying the prohibitions regime
4. Issuing warranty bonds
5. Sending out the invitations to participate, among others (55)

The requirements for foreign companies that wish to participate in the public procurement process has changed since the middle of 2017. If a company is registered as a potential supplier in the potential suppliers' register (it is managed by the RACSA) then, the company is able to participate in the public procurement process and conclude a contract without restrictions. A company must have a Digital signature, which is also issued by the RACSA, after providing specific documents and filling out some forms. This is a fairly new thing which has provided more possibilities to foreign ICT companies that wish to carry out contracts without special restrictions (50), (56). For more *information see section 3.2.1.*

3.1.2 E-government systems

Usually the public sector does not have a strongly developed IT division and outsources its IT needs to private ICT companies. Institutions themselves rarely create and develop systems or e-services. The exception of this trend is the Costa Rican Social Security System (C.C.S.S) which has a large division and develops its own solutions with external assessment. However, it is also thinking of moving more towards service outsourcing.

The Software as a service (SaaS) model is becoming more popular, when IT companies get money not for an installed system, but for every occurred transaction (50).

There are plenty of e- governmental projects that have already been initiated, in implementation or successfully implemented. Still the latest Digital Government Master Plan is overdue, the initiated, current implementations or already finished implementations were based on this plan. In total, a portfolio of 22 projects is proposed in the previous Digital Government Master Plan, 20 of them are implemented or in initiation, implementation phase (50), (52), (48), (51).

RACSA is responsible for many of projects regarding e-government and actively participate in implementation.

The most popular technologies/IT products used for information systems in public sector is Oracle, MySQL, Java, SAP Business Suite (ERP), SAP BusinessObjects (BI). All 20 projects (e-government systems), including the responsible institutions and status are provided in the table below. Projects are categorised in sections:

- G2C - citizen oriented government e-services/projects;
- G2B – business oriented government e-services/projects.

Table 11. E-government systems in Costa Rica (31) (50) (52) (48) (51)

No.	E-service	Web	Description	Responsible institution	Status
E-services and projects (G2C)					
1.	Government's Single Portal (Portal de servicios ciudadanos)	http://gob.go.cr	It is one-window or one-gate portal for access to e-government services for citizens. The Government's Single Portal is aimed at improving effective and efficient services for citizens, with a lower requirement of documents and visits to the different institutions of government. It also promotes transparency by offering integrated and online services through a one-window. Currently the web page is created but framework is still in developing phase. Planed investment: total – 6.9 million USD: software 761.000 USD, hardware 997.000 USD, implementation services 5.1 USD.	RASCA	Initiating/ in early phase
2.	Personal identification services (Sistema Nacional de Identificaciones)	www.migracion.go.cr	Services for obtaining passport, national ID card, visas. It will facilitate the migration process for users. With the chip that will use, it seeks greater international confidence towards the country, because it reduces falsifications and alterations. As well this system will be used as a basis for establishing national policies because of population statistics. Currently, ID cards still do not use Chips. Planed investment: total – 9.3 million USD: software, hardware, implementation services 6.5 million USD, ID cards with chips – 2.8 million USD.	General Directorate of Migration and Aliens/ RACSA	Implementing

No.	E-service	Web	Description	Responsible institution	Status
3.	Digital signature (Sistema Nacional de Firma Digital)	www.firmadigital.go.cr	Services for obtaining a digital certificate and creating a digital signature. This project started almost 10 years ago. Now the system is fully developed. System was developed by IT company - SOIN S.A.	Ministry of Science and Technology	Implemented
4.	National registers (Registro Nacional)	www.rnpdigital.com	Online access to information recorded in the National Registry and obtaining certified documents from the National Registry. Information provided in portal: real estate property (generally real estate related documents), movable property (such as cars, motorcycles, boats and planes), corporate registrations, intellectual property, survey map (for searching information on a survey map number). Some registers are already implemented, some in progress.	National Registry to the Ministry of Justice/ RACSA	Implementing 2 phase
5.	Social Security Information System (Sistema de Información del Seguro Social)	https://www.ccss.sa.cr/	There are different systems that collaborate, although not all services are available to the citizens. The Social Security Information System seeks to improve the quality of the service and the efficiency of the social security administration operating system by reducing redundant reporting and inefficient processes, to prevent crime through the monitoring 24x7x265 service. Planed investment: total – 13.7 million USD: software 450.000 USD, hardware 300.000 USD, implementation services 13 million USD.	Department of Social Security (CCSS)	Implementing
6.	E-health services (Servicios Electrónicos de Salud)	https://www.ministeriodesalud.go.cr/ http://www.saludaunclic.com	e-health services systemt covers: • E-prescribing (prescription entry, decision support, reporting) • E-diagnostic (diagnostic monitoring, history management, integrated Information) • E- registering (registration, standardisation of e-forms, digital images) • E- treatment (empirical remedy, prophylactic remedy, Guidance) • E-training (intern training, medical practical guide) The CCSS implement the electronic health record (EHR) in all the country, 100% implementation in Primary Care. E-prescribing (prescription entry, decision support, reporting) – implemented in 2016 may. E- registering (registration, standardisation of e-forms, digital images) - – implemented The CCSS are developing “ARCA” like HIS (health information system) software.	Committee e-health/ Ministry of Health/CCSSA	Implementing

No.	E-service	Web	Description	Responsible institution	Status
			Social security (CCSS) and the Ministry of health use eLearning platforms for education. There is a gap in standards implementation like HL7, DICOM and others. Planed investment: total – 10.7 million USD: software 1.2 million USD, hardware 3.1 million USD, implementation services 6.4 million USD.		
7.	Electronic Tax Payment (Pago Electrónico de Impuestos)	https://tribunet.hacienda.go.cr	It allows taxpayers to declare and pay taxes, as well as apply for certifications and receive tax advice via the internet and mobile devices. It is also includes e-invoicing. The DGT, Costa Rica's tax authority, enlisted Servicios Publicos de Heredia (ESPH), a state-owned company providing public services like telecommunications, to develop, implement and operate its official electronic invoicing system.	Ministry of Economy	Implemented
8.	E-education (Educación Electrónica)	n.d.	Provides educational administration services through the internet. It issues academic certifications and leads standardization and process improvement, increasing efficiency and allowing educators to focus on the educational work itself.	Ministry of Public Education/ Fundation Omar Dengo	Initiating
9.	Electronic Driver License System (Sistema Electrónico de la Licencia de Conducir)	https://www.csv.go.cr	Implemented system helps to manage the issuing / renewal / loss / disuse / remission of driving licenses.	The Road Safety Council (COSEVI)/ RACSA	Implemented
10.	Public security (Seguridad Pública)	http://www.seguridadpublica.go.cr	Provides monitoring 24 hours, 365 days a year. Allows the exchange of information from relevant agencies in support of criminal investigations. App is created that is available on Android and Apple Store. Planed investment: total – 10.7 million USD: software 1.2 million USD, hardware 3.1 million USD, implementation services 6.4 million USD.	Ministry of Public security/Police	Implementing
11.	Immigration Management System	http://www.migracion.go.cr/	Advanced immigration service for residents and foreigners entering Costa Rica, to expedite the administration of immigrants.	General Directorate of Migration and Aliens	Implemented
12.	Products registering system "Register it" (Sistema de Registro de productos)	https://registrelo.go.cr	Online registration of food, beverages, drugs, cosmetics and biomedical materials. Implementation has reduced registration times from 12-14 months to 2 months, with the ultimate goal of 20 days. System was developed by IT company - SEA S.A.	Ministry of Health/ RACSA	Implemented

No.	E-service	Web	Description	Responsible institution	Status
13.	Gun Control and Private Security Control System (Sistema de Control de Portación de Armas y Seguridad Privada)	www.controlpas.go.cr	A portal for registration and permits for carrying weapons. ControlPas allows institutions, companies and inhabitants to carry out the entire process digitally, from requests and their previous and subsequent procedures, to the physical issuance of permits or authorizations by the competent authorities. Manage requests for the sale, registration and issuance of arms-carrying permits, as well as the regulation of companies and private security agents. System was developed by IT company - SEA S.A.	Ministry of Public Security/ RACSA	Implemented
14.	Open data portal (Portal de datos abiertos)	http://datosabiertos.presidencia.go.cr	This project is in initiation phase. Regulation alignment is in process as data identification.	Ministry of the Presidency	Initiating
E-services and projects (G2B)					
15.	Create entity – system for registering entity (Sistema de Registro de Entidades Legales)	www.creareempresa.go.cr	A portal that facilitates the establishment and operations of companies in Costa Rica. This portal allows to register a company from a single window by simplifying the procedures. Improvement in the World Bank's index illustrates progress on this front.	Ministry of Economy	Implemented
16.	Public digital procurement system (Sistema Integrado de Compras Públicas)	https://www.sicop.go.cr	A single, digital procurement system for a more efficient government purchasing process. A simpler, digital procurement process facilitates bids from both local and international suppliers. According to data on contracts held by the Comptroller, in 2015 almost half of purchasing processes (46.5% of awarded contracts) were managed in a direct way, they did not first go through the entities control processes, which goes against transparency. Planed investment: total – 11 million USD.	Ministry of Economy / RACSA	Implemented
17.	Banks e-guarantees for public procurement procedures	https://www.sicop.go.cr/index.jsp	Banking entities provide the guarantees of participation and fulfillment, necessary in public tenders, through the platform for state purchases SICOP. It eliminates the cost of carrying papers by the supplier and eliminates documents in custody, on the institutional side. The banks' offers may include participation guarantees, which only concern the bidding process and compliance, which support the operation in case of disrespect of obligations. If one is close to expiration, because the service has been extended, or must be executed, the	Ministry of Economy / RACSA	Implemented

No.	E-service	Web	Description	Responsible institution	Status
			system automatically notifies the supplier of the condition of its guarantee.		
18.	E-tourism (Turismo Electrónico)	http://www.ict.go.cr/es/	It consists of a web platform of services to support the tourist business. Provides reliable information and services for the tourist, for example, book accommodation and accommodation and know sights.	Tourism Institute	Implementing
19.	Recruitment and Employment Information System (Sistema de Información de Reclutamiento y Empleo)	https://rrhh.ccss.sa.cr	It is a network of job information, provides updated information on the supply and demand of jobs, unifying isolated networks and distributing updated information.	CCSS/ The National Institute of Learning/ Omar Dengo Fund	Implemented
20.	E-custom services (Servicios aduanales electrónicos)	http://www.hacienda.go.cr/contenido/284-servicio-nacional-de-aduanas	Electronic "one stop" import and export windows, known as single windows, have significantly reduced the time required for customs processing. E-customs procedures became completely online by using the Information Technology System for Customs Control (TICA). This system came into operation in 2005 and by 2007 all customs offices were integrated into it. Electronic "one stop" import and export windows have significantly reduced the time required for customs processing, reducing the average time of procedures from 48 hours to 20 minutes.	Ministry of Finance	Implemented

The information about the progress of projects in e-government can be found on the official web site - *http://www.experienciapublica.org*.

3.1.1 Roadmaps for development e-government

The Costa Rican government has clearly identified the ICT sector as a priority that affects the economic development of the country. Costa Rica was ranked 53rd out of 193 in E-Government Development Index 2016 Comparing Costa Rica's and Baltic States countries' results Costa Rica demonstrates lower performance than the Baltic States (Estonia is ranked 13th of 193, Lithuania is ranked 23rd, Latvia is ranked 45th) (57). More about e-government and e-participation indexes, compared to the Baltics see 1st stage report.

The country's digital government planning began in 2006. Digital government planning is mostly based on South Korea's and Singapore's good practice (50). The latest Costa Rica's Digital Government Master Plan (Plan Maestro de Gobierno Digital de Costa Rica) (58) was launched in 2011 and was up to 2014. Costa Rica's Digital Government initiatives addressed four main goals:

- G2C: Government to Citizen – citizen oriented services;
- G2B Government to Business – rapid and transparent business services;

- G2G: Government to Government – efficient and interconnected services;
- Infrastructure – favorable ICT infrastructure and legal framework.

For the last 15 years the institution responsible for e-government was the Technical Secretariat which was directly dependent on the Presidential office. However, in 2015 the President put the Technical Secretariat on standby. The Ministry of Science, Technology and Telecommunications (Micitt) is responsible for developing a proposal on digital government there is no evidence of a new ICT strategy or e-Government plan until the new election of president at the beginning of 2018 (50), (51). Meanwhile, structural and organizations changes within the Ministry are expected throughout 2017. Mrs. Alicia Avendano Rivera, ex-Director of the Technical Secretariat of Digital Government currently is a Business development and Innovation Manager in RACSA.

The only actual strategic document is the Second National Development Plan for Telecommunications (PNDT) 2015-2021 (59). PNDT establishes the main goals that the state will promote in the coming years to ensure that the country makes Telecommunication and ICT, one of the pillars of economic growth and social welfare for its inhabitants. However this plan is more related to telecommunications rather than to e-services. By 2021 it is expected:

- To increase the use and appropriation of the Internet by the population, so as to reach at least the OECD country average of Internet users.
- To reach 100% of homes with Digital Television (in tis expected to reach by 2017).
- To improve the quality of broadband connection by enabling 80% of the population to have broadband availability and reach the OECD speed average.

Although there is a lack of e-government road map representatives, who represent the interests of the state, the development of e-government has not stopped. The institutions that are active in this field think that the largest e-government's priorities and the closest development fields will be these (60), (50), (52), (51):

- Develop a one access portal to all public services. This is already initiated, however it is in a very early phase (responsible RACSA).
- Create a smart city (firstly e-transport, and other community services). Costa Rica seeks to implement two smart cities over the next six years to serve as a demonstration model of "replicable and scalable technologies" for other locations on a national scale (responsible RACSA).
- Develop Open data platform. This is already initiated, however is in a very early phase. (responsible RACSA)
- Develop data centre for governmental institutions (responsible RACSA). This project was mentioned in previous Digital Government Master Plan, however it was not initiated.
- Integrate systems by creating a standard and platform for data exchange between institutions and between different applications. There are standards and an integration platform that are used exclusively in banking sector. The public sector does not use any integration platforms (responsible RACSA).
- Improve current e-services, especially for the use of mobile phones. It is expected that 4% of e-services will be provided with access of mobile platforms by 2021. Also, it is expected that the popularity of digital signatures will increase.

- Optimise processes in public sector, including their automatization. It is expected that 18% of procedures that are carried out by Ministries and their bodies will be automated by 2021.
- Further develop e-health, especially the National EHR system, e-learning in health, integrate current systems and create an m-health system. The interoperability is the main challenge of this point. There is a gap in standards implementation like HL7, DICOM and others (responsible Ministry of Health, CCSS).
- Develop cyber security. Currently a national cybersecurity strategy is in preparation phase (responsible MICITT).

Therefore, it seems that the RACSA will be a leading institution for future e-government vision implementation.

3.1.2 The Competitors

3.1.2.1 ICT sector

ICT sector in Costa Rica generates 12.5% of the country's GDP (61), (62), there are approximately 900 ICT companies in Costa Rica and 88300 employees (62).

In comparing the size of the ICT market in Baltic countries: over 12.500 ICT companies and over 84 700 ICT employees (***Table 4***) in Baltic countries.

About half of the ICT companies were formed after 2005 and the average panel age is 10 years. In relation to the location of the participating companies, San José is the province that shelters most of the entities with 73.5%, followed by the city of San Carlos. The most ICT companies are vertical orientated sector.

Geographical position, cultural proximity, democratic stability and quality of its human resources have motivated international companies such as Intel (engineering services group in Costa Rica, employing 3,500 people), IBM, Microsoft (innovation laboratory of Central America in Costa Rica), Cisco Systems (headquarter for operations in the Caribbean, Central and South America), Oracle and Amazon and about 200 other multinational companies to establish themselves in Costa Rica.

International, especially U.S. companies came to Costa Rica to open theirs call centers, the main reason was the same time zone as U.S., well-educated human resources, good price and value proportions (51), (63) , (64).

The Chamber of Information and Communication Technologies (CAMTIC) and the Costa Rican Trade Promotion Agency (PROCOMER) prepared ICT sector study (Sectoral Mapping of Digital Technologies 2014) that allows in deep information about companies of digital technologies located in the Costa Rican territory. CAMTIC classified ICT into nine subsectors and collect information regarding those subsectors. More than half of the companies are identified as software developers. 34% of companies are identified as part of a single sub-sector, while the remaining 66% are active in two or more subsectors. Depending on the size of their workforce, the vast majority of companies can be classified as SMEs.

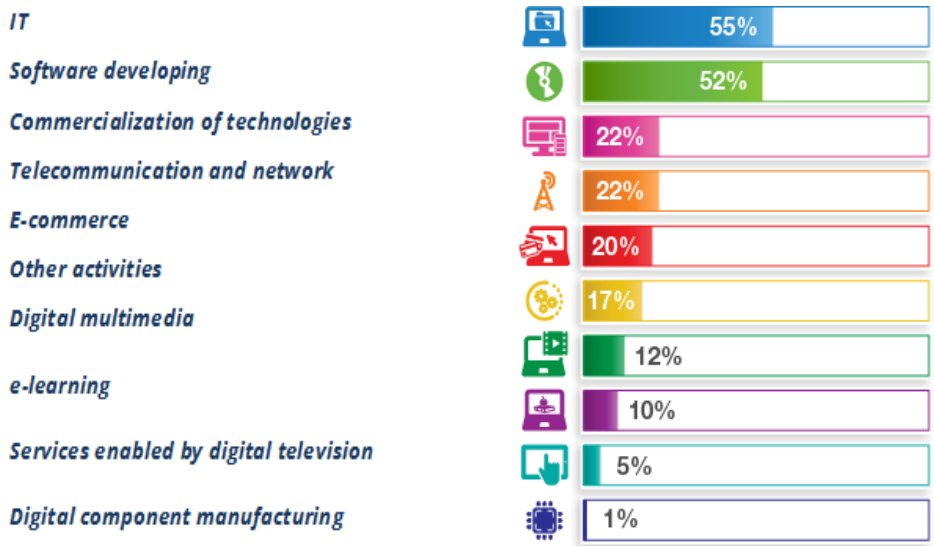


Figure 3. Presence of companies in the digital activity subsectors (65)

ICT companies are oriented primarily to the domestic market. In addition, there is evidence of a growing tendency to venture into the foreign market by all of the companies.

The subsectors of Software Development, Telecommunications and Networks, Information Technology and Technology Marketing represent the bulk of the total sales volume. The US market monopolizes the bulk of overseas sales. Central America, headed by Panama, is the most popular destination among exporters of digital goods and services, and is the second largest market in terms of sales volume (65).

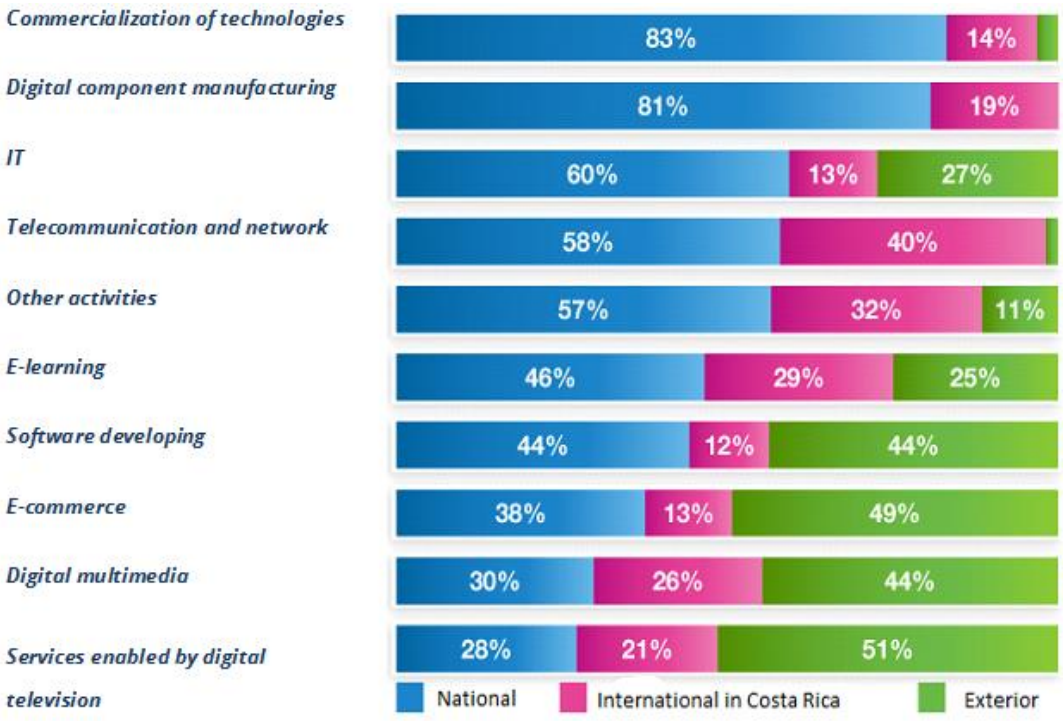


Figure 4. Sales by ICT subsector (65)

Software manufacturing: Costa Rica's IT sector is a leading exporter of software to other Central American countries (about 55% of Costa Rican software manufacturers who export to neighboring countries).

Hardware manufacturing: Costa Rica was the leading exporter of computer and information services in the region until Intel decided to concentrate manufacturing in Asia, leaving in Costa Rica a research department which holds 200 engineers. The principal exports were computer processing chips, from Intel's large manufacturing plant as well as business process outsourcing. Successfully attracting Foreign Direct Investment, mostly located in Free Trade Zones, there is a cluster of IT companies manufacturing hardware components which accounts for the majority of Costa Rica's exports. About 500 companies (most of them SMEs) manufacture hardware and specifically do software development in Costa Rica in areas related to technical support, digital animation and engineering, ERP and other solutions.

In telecommunication subsector, until the 2009, a state monopoly was controlled by ICE (Costa Rican Electricity and Telecom Institute). ICE has improved by introducing new technologies (3G, prepaid phone, mobile internet, BlackBerry services and improved wired and internet connectivity). In 2011, Spanish Telefonica (Movistar) and Mexican America Movil (Claro) entered the Costa Rican mobile phone telecom market offering attractive packages which motivated Costa Rican to demand increased levels of broadband connectivity and added services. For the assigned frequencies, Claro and Movistar paid US$170 million which are to be used in bringing telecom services in health, education and connectivity to less develop areas (FONATEL project).

Currently, as mobile communications in Costa Rica is rapidly developing, there is a considerable interest from local companies on communications infrastructure (4G LTE networks, telecom towers, equipment), digital content for converging technologies, VoIP, e-health and telemedicine, online payment systems.

In other ICT sub-sectors there is continuous interest for IT security (all kinds of security cameras, software, systems, public surveillance, CCTV, and new technologies). These products are demanded by industries and government. Although a strong software developer, there is opportunity for software (ERP, SCM, CRM, BI) and for partnerships with local ICT developers (66).

Based on the size of their workforce, the vast majority (almost 95%) of companies can be classified as SMEs. More than half of ICT companies are identified as software developers. Main activities of software companies - standardized horizontal market software for use by private companies and business mobile applications.

ICT companies in Costa Rica have 93.6% domestic clients, 47.0% clients abroad and 46.6% sell to transnational companies located in Costa Rica. Of these same companies, 32.4% sell exclusively to the national market, while 4.6% sold exclusively to the foreign market. The US market monopolizes the bulk of overseas sales. Central America, headed by Panama, is the most popular destination among exporters of digital goods and services, and is the second largest market in terms of sales volume. Commercial opportunities, the search for contacts abroad and commercial promotion are the main incentives that companies need to initiate exports or increase sales abroad.

More than half of the revenue comes from domestic customers (56.6%). While the remaining proportion is distributed almost equally in sales abroad (22.6%) and sales to transnational companies in the country (20.7%).

Table 12. Main activities of software companies' in Costa Rica (65)

Main activities of software companies	Total subsector	Clients		
		National	International, in Costa Rica	Exterior
Standardized horizontal market software [1] for use by private companies	62.8%	97.2%	35.2%	42.3%
Standardized vertical market software [2] for use by private companies	57.5%	93.8%	40.0%	38.5%
Business mobile applications	47.8%	88.9%	42.6%	63.0%
Standardized software for personal use	28.3%	84.4%	46.9%	53.1%
Individual mobile applications	28.3%	87.5%	37.5%	46.9%
Technical consulting	23.9%	92.6%	40.7%	40,7%
Database management software	23.0%	84.6%	46.2%	50.0%
Development tools and programming languages	15.9%	83.3%	55.6%	44.4%

79.5% of the organizations reported sales of less than one million dollars. While the remaining 20.5% have sales in excess of one million dollars.

67% of sales abroad went to North America, 20% to Central America, 8% to South America, 4 % to Europe and 2% to the rest of the world.

41% of the exporting companies affirm that their main channel of export are the partners abroad.

Table 13. Main industries that purchase ICT products and services in Costa Rica (65)

Main activities of software companies	Total subsector	Clients		
		National	International, in Costa Rica	Exterior
Commercial industry	57,1%	96.0%	42.4%	39.2%
Private financial sector	50.7%	91.9%	44.1%	33.3%
Informatics	46.1%	88.1%	36.6%	41.6%
Government (Costa Rica)	44.7%	98.0%	18.4%	15.3%
Public financial sector	39.7%	97.7%	31.0%	29.9%
Education in private sector	36.1%	88.6%	36.7%	35.4%
Telecommunication in private sector	36.1%	86.1%	50.6%	38.0%
Manufacturing	34.7%	94.7%	48.7%	38.2%
Health in private sector	32.9%	90.3%	41.7%	33.3%
Services related to ICT	32.0%	85.7%	42.9%	51.4%
Tourism	31.1%	98.5%	38.2%	26.5%
Pharmacy	31.1%	85.3%	57.4%	39.7%
Telecommunication in public sector	30.6%	94.0%	29.9%	26.9%
Transport	30.1%	90.9%	40.9%	42.4%

[1] Application software that is useful in a wide range of industries

[2] Application software that is limited to few industries

Main activities of software companies	Total subsector	Clients		
		National	International, in Costa Rica	Exterior
Education in public sector	29.7%	96.9%	29.2%	24.6%
Construction	29.2%	96.9%	35.9%	32.8%
Food industry	28.3%	93.5%	45.2%	31.7%
Health in public sector	26.9%	94.9%	32.2%	27.1%
Entertainment	26.0%	78.9%	50.9%	56.1%

Own resources are the only startup capital of most companies. As their life cycle progresses, companies aspire to diversify their sources of financing by targeting primarily private and public banks. The use of government funds as a source of sector financing seems limited. 18.7% of the ICT companies use bank financing to start their operations.

53% of ICT companies have formal alliances with some international company as Microsoft, HP, Cisco, Dell, WM Ware, IBM, Intel, SAP.

Microsoft (53%), Oracle-Sun (26%), IBM (18%), CISCO (17%) y SAP (16%) – the main technology brands compatible with the products and services of ICT companies in Costa Rica.

94% of the ICT companies have a website - 89% has in Spanish, 37% in English and 4% in other languages. 32% have a site in both Spanish and English (65).

Based on the national survey of science, technology and innovation in the business sector, it was found that 90% of firms are making efforts to innovate, but only 20% reported producing something really new to the market (67).

Price rates

Average hourly rate of an IT specialist, depending on competencies is about 30-50 USD; high experienced IT specialist, IT architect or Project manager can cost more.

Strengths of local ICT companies in Costa Rica:

- Well educated, skilled IT specialists
- Skilled English-speaking IT professionals
- IT specialists are creative, they are likely to not only complete a given task, but also to find a better way of doing things, they have an “out of the box” way of thinking.
- A constant replenishment of human resources: though Costa Rica has a workforce deficit, the universities are strongly focused on preparing ICT specialists.
- The prices are lower than they are in the EU, but higher compared to other countries in the region

Weakness of local ICT companies in Costa Rica:

- Lack of IT specialists

3.1.2.2 ICT companies in e-government

The main players in e- government sector provided in table below.

Table 14. Main ICT companies providing services in e-government in Costa Rica 50, (52), (51), (63)

Company	SOIN S.A.
Web site	http://www.soin.co.cr/
Head office	San José, Costa Rica.
Other locations	no
Established in	1987
No. of employees	180
Products/services	Costa Rican IT company provides business solutions, especially in verticals of ERP, business intelligence, integration, mobile applications, consultancy. Developed Digital signature system www.firmadigital.go.cr (Sistema Nacional de Firma Digital) for Ministry of Science and Technology. Actively participate in other government projects.

Company	SEA S.A.
Web site	http://www.sea.co.cr/
Head office	San Jose, Costa Rica.
Other locations	no
Established in	1976
No. of employees	n.d
Products/services	SEA Servicios Múltiples S.A. is a Costa Rican company that specializes in providing consulting and outsourcing services in administrative, legal, financial and information technology matters to private and public organizations in Central America. SEA is part of the El Angel Group. Since 2007, SEA has expanded its scope, offering services to local and international companies outside the El Angel Group. Provides e-invoicing solutions, document transactions, e-signature solutions for the secure exchange of electronic documents, Enterprise Content Management (ECM) product. Developed registering system "Register it" (Sistema de Registro de productos), Gun Control and Private Security Control System ControlPas. Actively participate in other government projects.

Company	Fiserv Costa Rica, S.A. operates as a subsidiary of Fiserv, Inc.
Web site	https://www.fiserv.com
Head office	Brookfield, Wisconsin, United States
Other locations	San Jose, Costa Rica
Established in	1987 (10 years of operations in Costa Rica)
No. of employees	Develops more than 21.000 employees from 155 offices located around the globe
Products/services	Global provider of information management and electronic commerce systems for the financial services industry. Have more than 16,000 clients worldwide, including banks, credit unions and thrifts, billers, mortgage lenders and leasing companies, brokerage and investment firms and other business clients. In Costa Rica there is a Financial Shared Services Center and a Software Development department.

Company	Codisa
Web site	http://www.codisa.com
Head office	San Jose, Costa Rica
Other locations	Panama
Established in	n.d.
No. of employees	n.d.
Products/services	Costa Rican company that offers products and services of information technologies for the financial, government and private sectors. Specialization in Data Center Services, Cloud Computing and Software. It is a Data Center hosting some governmental systems, participate in projects with RACSA.

Company	GBM
Web site	http://www.gbm.net/
Head office	Miami, USA
Other locations	Costa Rica, Honduras, Panama, Dominican Republicm, Guatemala, Nicaragua
Established in	1991
No. of employees	200 (in services)
Products/services	Company was created to manage IBM's Brand in the region, with IBM keeping a stockholder share. GBM is The exclusive distributor of IBM in Central America, Panama and Dominican Republic. GBM's main product lines are: Services: technical and maintenance service, printing, datacenter, Education, managed services, software services. Hardware: servers, personal computers, network products, point of sale, among others. Participate in projects with RACSA. Software: middleware, applications, business intelligence, core banking, SAP. Consulting: in the areas of Change Management, BPO. GBM represents also, officially and with support of leader industry brands, such as CISCO and DIEBOLD. GBM has 7 data centers distributed in the region of Central America and the Caribbean. GBM is one of he leader in the Central American and Caribbean region. Participate in projects with RACSA.

Company	Grupo CESA
Web site	http://www.grupocesa.com
Head office	Costa Rica
Other locations	Panama, Guatemala and Honduras
Established in	n.d
No. of employees	150
Products/services	Consultancy and computer architecture, planning, implementation, Data center management. Provides solutions for smart city, cloud computing, integrations. Participate in projects with RACSA.

Company	SONDA
Web site	www.sonda.com
Head office	Chile, Santiago
Other locations	Present in 10 countries in Latin America including Costa Rica.

Established in	1975 (from 2003 in Costa Rica)
No. of employees	20,000
Products/services	IS outsourcing, System integration, IT consultancy and architecture, Data center&Cloud computing, IT infrastructure, IT applications for health, tax management, ID cards, purchasing, public transportation, finance, etc. In Costa Rica in Finance Ministry - virtualization and server consolidation, storage and backup. The HP central storage unit for this project is the largest in Costa Rica, and is one of the five largest installed Central America.
Company	Grupo Soluciones Informáticas, S.A. GSI
Web site	www.e-gsi.net
Head office	Panama
Other locations	Costa Rica, Nicaragua, El Salvador Guatemala, República Dominicana, Honduras
Established in	1997
No. of employees	300
Products/services	Document, image, and business process management (BPM), content administration, secure document issuance systems, electronic follow-up management systems, digital signature and encryption.

Company	Avantica
Web site	www.avantica.net
Head office	Costa Rica
Other locations	Panama,Canada, U.S
Established in	1993
No. of employees	600
Products/services	Have software engineering centers, software design, development, QA Testing and professional service.

Company	TecApro
Web site	www.tecapro.com
Head office	Costa Rica
Other locations	no
Established in	1985
No. of employees	n.d
Products/services	Information systems, software (specially for financial administration), mobile security applications and regional and global corporate networks, has telephone administrator system for the management and control of telephone operations to monitor up to 250 telephone exchanges, regardless of brand or architecture, or the number of extensions.

Company	Aura Interactiva
Web site	www.shiftelearning.com
Head office	Costa Rica
Other locations	USA, Canada, Mexico, Peru, Chile, Panama
Established in	1996
No. of employees	n.d.
Products/services	E-learning platform, customized learning games, audio recordings, customized simulations, hosting, installation and LMS Administration (Moodle and Totara).

3.2 Market entry strategies

Costa Rica has ratified the Association Agreement between Central America and the EU, which has entered into force in October 2013 for the trade provisions (68). It is a region-to-region agreement that the Central American countries negotiated as a block, sharing the same vision and position. One of the objectives of the EU in its policy to Central America is to foster Central American regional integration and reduce barriers to intra-regional trade, thereby strengthening their competitiveness and ability to attract investment. This will facilitate and give legal certainty to international transactions between operators of Member states of the EU. The agreement opens new opportunities for European products to access the Central American market, which is estimated to save EU exporters about 87 million euros annually in customs duties at the end of the transitional period due to the withdrawal of tariffs (69).

The Agreement requires that European companies are given equal treatment and domestic companies in public procurement. New integrated system of public procurements (SICOP) also provides grate opportunities to participate in public purchasing without any restrictions.

In 2007 Costa Rica ratified the Dominican Republic-Central America-United States Free Trade Agreement (CAFTA -DR). In the high-technology sector, most multinational companies come from the United States and the CAFTA agreement is expected to strengthen Costa Rica's attractiveness as a destination for foreign investors. European SMEs that establish strategic alliances with Costa Rican companies can enjoy these benefits (64).

The positive aspects of entering Costa Rican market (70) (64):

- Stable political and social situation
- The economy is open to foreign investment
- English widely spoken
- Highly educated and efficient workforce, with a high literacy rate
- International standards for Intellectual Property (IP) protection
- High coverage of public services
- Free zones with significant incentives for investment and trade
- Good image of Costa Rica abroad
- Good image of European companies in Costa Rica and interest in partnering
- Use as a platform for commercializing throughout the Americas

Obstacles to entering Costa Rica’s market are basically the following (70):

- Market Size: small market
- ICT sector is highly competitive
- Bureaucratization / strong need for guarantees
- Corruption and lack of transparency
- Strong presence of the public sector
- Winning contracts takes a considerable amount of time
- Public projects are progressing rather slowly

3.2.1 Direct Exporting

Direct exporting is selling directly into the market products and services using in the first instance own resources or local agents. About direct exporting definition and specifics see section 2.2.1.
This strategy should be considered as the less risky and expensive marketing entry strategy.
All the public procurement in Costa Rica from 2016 – whether from the State, the City Hall, or public institutions – are required to go through public tendering. As the Costa Rica's government is the main buyer of e-government solutions and services, all new public procurement should go through public tendering using integrated system SICOP. To participate in these tenders a foreign company needs to be registered in the registry of potential suppliers, which is managed by RACSA and needs to have a Digital signature, which is issued by RACSA as well, when a company provides specific documents and fills out required forms.

What RACSA requires to provide?

1. General Information:

A) A letter from a company's representative indicating interest.

B) General information of the company (name, type and identification number, date of incorporation, country of domicile, contacts, corporate profile).

C) Legal entity in force, specifying the representation or power that has the legal representative of the company. In the case of foreign companies, legal entity or similar document with the same legal validity.

D) Copy of the certificate of the legal representative of the company. In case of foreign companies, copy of the identity document of the legal representative of the company.

E) Affidavit before a notary public where they prove that they have not been in force in the last year. In case of having them, attach the detail corresponding to each particular case.

F) Affidavit before a notary public that they are up to date with the payment of taxes (only for domestic companies).

G) Certification that the company is up to date with its obligations to the Social Security Institution (only for domestic companies).

2. Technical information:

A) Detail of the portfolio of services and technological solutions the service provider offers.

B) A list of the most relevant clients with whom the potential service provider has worked with, indicating the projects carried out and also indicating contact names of those companies, e-mail addresses and telephone numbers. It remains to RACSA's discretion to verify the provided information.

C) Authenticated certification of years of experience in the installation of Managed Services and / or purposeful projects. If the potential service provided does not offer these types of services it needs to be indicated.

D) Certification of years of experience in the sale and support of the brands the company represents, issued by the manufacturer of the equipment.

E) Authenticated certification copy of the potential service provider's company and its personnel, issued by the manufacturer of the equipment they offer, stated in the portfolio services provided to RACSA. In case the potential service provider is a direct manufacturer of the equipment, include the certification copy as clarification of the information supplied.

F) In order to assess management aspects, the potential service provider needs to indicate the infrastructure available to the person represented by him / her to deal with faults, for example, the type of call center and / or management centers.

G) Detail of human resources available.

3. Financial information: Audited Financial Statements of the last 2 years, including a Balance Sheet, Statement of Income and Expenses, Statement of Changes in Equity, Statement of Cash Flows, as well as the notes to the Financial Statements.

The same information will be required in case of partnering with RACSA (see 2.2.2).

Although it could be considered as the less risky and expensive market entry strategy, it would have some constrains regarding provision of services for public sector. Although according to new regulations the public procurements system (SICOP) needs to be incorporated into administrative procurement procedures, some exceptions through direct purchasing could be expected. That means that winning these contracts may be of some difficulty for European companies, if these tenders are not performed using the integrated system of public procurements (SICOP). In this case, European companies without legal presence in Costa Rica can participate in public tenders, but have to appoint a local agent with a legal address in Costa Rica to present their offer. The local agent must be authorized to submit the proposal and sign the contract, as well as have representation in court and extra-judicially. Once awarded the contract, the bidder will be required to open a corporate structure in Costa Rica according to the law on Commercial Code (71).
Local representatives usually are lawyers.
Finding a lawyer is not difficult, this service is thoroughly developed in Costa Rica. However, to fulfil a contract the provider might need to establish a company in Costa Rica, which would cause additional risks and expenses.

Main advantages and disadvantages by using this market entering strategy:

Advantages:
- easy implementation of strategy comparing to others
- low investment, gives an opportunity to "learn" the overseas markets before investing
- minimal risk of operating overseas

Disadvantages:
- less suitable for service products
- less appropriate when costs of local competitors are lower (hour rate cost is lower than in the Baltics)
- lack of overseas agents' control, if they will be involved in sales process
- high logistical costs
- at first it is difficult to figure out the cultural differences and the "unwritten" rules

This market entry strategy is possible to implement, because of the recent changes in legal restrictions where a foreign company is able to participate in the procurement process and conclude contracts. However, because local ICT companies charge lower prices it would be difficult to directly compete with them and also to understand the market's specificity early on. It is very important to consider the cultural differences between Baltic and Latin American countries. Prior experience and trust are very important in Costa Rica. A new company in the market would have difficulties demonstrating these traits, but once trust is established doors open everywhere.

3.2.2 Partnering

Partnering involves as a simple co-marketing arrangement, as a sophisticated strategic alliance for providing services. More about partnering definition and specifics see section 2.2.2.
Partnering could be a particularly useful strategy in Costa Rica where the culture, both business and social, is substantively different from the Baltic countries. Good local partners can bring local market knowledge, contacts and customers.

Partnering, as a market entrance strategy is rated very highly, this strategy is the most popular amongst foreign companies trying to penetrate the Costa Rican market.

1. **The Chamber of Information and Communication Technologies** *(CAMTIC, La Cámara de Tecnologías de Información y Comunicación) (www.camtic.org)* could be a valuable start point for looking for a partner. This is private non-profit ICT industry association, operating since 1998. It includes more than 200 companies and works to strengthen and support the ecosystem of digital technologies under the slogan "Costa Rica Verde y Inteligente". This organisation seeks the development, promotion and use of digital technologies, as well as the development of consensual actions between industry, government and academia. CAMTIC organise specialized sales programs how to perform sales in digital sector. Also, CAMTIS participate in ICT studies, the latest "The Sectorial Mapping of Digital Technologies 2014" (Mapeo Sectorial de Tecnologías Digitales 2014) carried out by the Costa Rican Trade Promotion Agency (PROCOMER) and CAMTIC. This is the largest study of the general characterization of the ICT industry to date in the country. The initiative aims to build the profile of the Costa Rican digital company from different angles: representative products and services, internationalization, human resources, sales and financing are just some of the topics included.
   CAMTIC has three chapters: Chapter of the Costa Rican Audiovisual Industry (CAIAC), Chapter of Women in Digital Technologies and the Free Software and Open Source Chapter. In addition, CAMTIC collaborates with several working commissions: Affiliate Service, Internationalization, Electronic Commerce, National and International Cooperation, Human Talent, Training, Telecommunications, Digital Government and Transversality and Innovation.
2. **The Costa Rican Investment Promotion Agency** (CINDE) (http://www.cinde.org) - a private, non-profit, non-political organization declared of public interest in 1984, responsible for the attraction of Foreign Direct Investment (FDI) into Costa Rica. During its 35 years, CINDE has attracted more than 280 high-tech companies to Costa Rica, including worldwide leaders such as: Intel, Procter and Gamble, Hospira, Baxter, St. Jude Medical, Western Union and many others. CINDE centralizes, standardizes, customizes, generates, and analyses crucial, objective information for RFIs regarding FDI statistics, population and labour force data, salaries, labour law, operation costs, availability of qualified HR, tax subsidies, multinational companies, amongst others, acts as a key mediator between public and private sector, with companies leveraging our services. CINDE has a very strong and well-established working relationship with Multinational companies, Ministries, organizations, chambers, government, universities and schools. Also, there is a cluster of software companies managed by CINDE - CENTRAL GATE with over 30 top local and multinational companies servicing over 100 clients.
3. **PROCOMER** (www.procomer.com) is the trade promotion agency of Costa Rica. One of its strategies is to help Costa Rican companies search partners abroad through cluster support.

PROCOMER in May 2017 surveyed ICT companies in Costa Rica to identify who of them are interest in partnership with ICT companies in the Estonia, Latvia, Lithuania in e-government projects. The following companies who are VERY interested in partnership:

- La Creativería (contact: Maikol Araya, maraya@lacreativeria.com)
- Techniagro (contact: Freddy Alvarez, falvarez@techinagro.com)
- Imagineer (contact: Esteban Cordero, ecordero@imagineercx.com)
- Outcoding (contact: Robert Wolf, robert@outcoding.com)
- QXD (contact: Carolina Araya, carolina.araya@qxdev.com)
- Wow Emotions (contact: Jendy Varela, jendy@wowemotions.com)
- Movil Multimedia (contact: Milena Schroeder, milena.schroeder@movilmultimediasa.com)
- Flecha roja (contact: Rodrigo Arias, pato@flecharoja.com)
- Proximity (contact:. Adolfo Cruz, adolfo.cruz@proximitycr.com)

4. **Radiográfica Costarricense, S.A. (RACSA**) (http://www.racsa.co.cr). RACSA initiated and is responsible for many e-government projects in Costa Rica. This is a state-owned Costa Rican internet provider, a subsidiary of state telco ICE that offers internet and voice services. RACSA provides services that integrate applications, virtual versions of technological resources, security, capacity for information systems to share data, connectivity and talent Human resources. RACSA attracts ICT companies to work on e-government projects as partners. To collaborate with RACSA a company needs to provide full background information and fill out some RACSA's forms (it is a similar process to getting approved as a potential supplier for the public procurement register on the SICOP system, which is managed by RACSA). See chapter 3.2.1.

Also there is always a possibility to find partnership opportunities with actual or potential competitors in Costa Rica's market.

Main advantages and disadvantages by using this market entering strategy

Advantages:

- lower investment than the set-up of an entity
- reduced marketing costs
- opportunities for rapid expansion in a new market
- minimized cultural risk
- access to additional resources
- sharing of risk and ability to combine the local in-depth knowledge with a local partner with know-how in process and technologies
- benefits from local partner's knowledge of competitive conditions, culture, language, politics and business systems and process

Disadvantages:

- less management control
- dependency on partners and complexity
- potential security and confidentiality issues
- potential quality issues

This market entry strategy is very attractive, especially considering the sizable cultural differences and the difficult process of establishing a company. This strategy would be very advantageous if a company would manage to choose a trustworthy partner, due to the fact that people in Costa Rica make decisions based on past experiences and trust. Moreover, a partnership would help avoid the restrictions of public procurement.

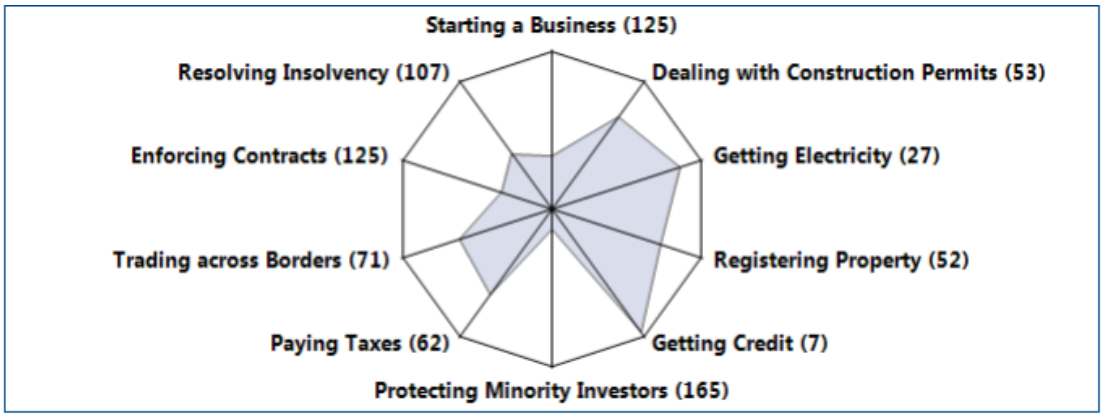
3.2.3 Setup of an Entity

Starting a business in Costa Rica by establishing an entity remains an arduous process. It takes roughly 22.5 days to start a business in Costa Rica (Lithuania – 5.5, Latvia – 5.5, Estonia – 3.5). The nonsalary cost of employing a worker remains high. The growing financial sector functions relatively well, nevertheless, banking remains dominated by state-owned institutions, though they have given up a considerable portion of the market to private-sector banks (73), (39).

However, there are no controls on capital flows in or out of Costa Rica or on portfolio investment in publicly traded companies, but companies are subject to local taxes. Foreigners can own property with no title restrictions (74).

The Ease of Doing Business index ranks Costa Rica 62 nd out of 190 countries (Estonia – 12, Latvia – 14, Lithuania – 21). However, Costa Rica stands at 125th place out of 190 economies on the ease of starting a business and 165th on the strength of minority investor protection index (39).

Figure 5. Rankings on Doing Business topics (39)



Note: The rankings are benchmarked to June 2016 and based on the average of each economy's distance to frontier (DTF) scores for the 10 topics included in this year's aggregate ranking.

Starting a business

Starting a business in Costa Rica requires 9 procedures, it takes 22.5 days, costs 9.1% of income per capita/per person.

Recently Costa Rica made starting a business easier by creating an online platform for business registration, eliminating the requirement to have accounting books legalized and simplifying the legalization of company books.

Main procedure (44):

1. Check the availability of the proposed company name. The company name can be verified online (www.rnpdigital.com) free of charge. In addition, the company can request a name certificate for a cost of 5 euros at the registry. Responsible agency: National Registry (Registro de Personas Jurídicas).
2. A public notary drafts and notarizes public deeds of the incorporation charter for registration before the Mercantile Section of the Public Registry online. Responsible agency: Public Notary.
3. Deposit capital in the company's bank account, pay registration fees and stamp duties. Responsible agency: National Banking System.
4. Register the incorporation charter in the mercantile section of the public registry and obtain authorization to legalize the company books; send the notice of constitution of the company (edicto). Responsible agency: National Registry (Registro de Personas Jurídicas).
5. Register the firm as a taxpayer. Costa Rican citizens or corporations with a Costa Rican legal representative can register electronically as taxpayer (www.haciendadigital.go.cr/inscriptipopersona.jsp) Responsible agency: Registro Unico de Contribuyentes, Dirección General de Tributación Directa.
6. Register for labor risk insurance with the National Insurance Institute (Instituto Nacional de Seguros). The National Insurance Institute is the only insurance at the moment that only offers labor insurance. The annual premium for this type of insurance is about 2.17% of reported payroll.
7. Register the company as an employer with Social Security Institution (CCSS, Caja Costarricense de Seguro Social). After submitting the documents required, the CCSS issues a registration form (inscripción ante CCSS de persona jurídica) that allows the company to start operations. Within 15 days after registration with the CNSS, the company will receive an ex-post inspection from an officer, which consists of a simple verification of the information provided by the company about the business activity and the employees. Responsible agency: Social Security (Caja Costarricense de Seguro Social).
8. Apply for sanitary permit. Responsible agency: Health Department (Ministerio de Salud)
9. Apply for the business license (patente municipal) from the municipality. Responsible agency: Local municipality.

Free Trade Zone Regime

European companies interested in establishing a subsidiary or carrying out a project in Costa Rica may choose to enjoy the exemptions offered by the Free Trade Zone Regime (FTZR) as a set of incentives and benefits granted by the country to companies making new investments and complying with local requirements and obligations.

Companies that may benefit from this regime must be included in one or several out of the categories established by law, namely handling, processing, manufacture, production, repair and maintenance of goods, repackaging and redistribution of goods, and the provision of services for exportation or re-exportation.

For projects, for example, with only an investment of $ 150,000 in 3 years, the European company can enjoy a series of tax incentives and benefits granted by the Costa Rican government, as well as tax incentives. This regime is regulated by the Law of Free Zones No. 7210 and its regulations (64). Requirements for service companies (75):

Fiscal Incentives	Period of Time	Tax
Income tax (statutory income tax = 30%)	8 years*	0%*
	4 years	15%
Remittances repatriation tax	No limit	0%
Local sales tax (13%)	No limit	0%
Import, export, excise taxes	No limit	0%

Requirements	Time Frame
Fixed assets investment of US $150,000 within FTZ Park or $2,000,000 outside FTZ Park	Within the first 3 years of operation

* Additional 6 / 12 year renewal may be granted if significant reinvestment is made

Export requirement	At least 50% of the services must be exported
PROCOMER [a/] monthly fee	0.30% of the total monthly sales (in US$)[b/]
Environmental Guarantee Deposit [c/]	1% of the total investment
PROCOMER Guarantee Deposit	Minimum US$5,000

Notes: a/: The Costa Rican Foreign Trade Corporation.
b/: In any case the PROCOMER monthly fee minimum is US$200
c/ It applies for companies with transformation process with production residues as part of the operation; for example sterilization and chemical services.

Paying taxes

Costa Rica online payment of social security contributions is now widespread and used by the majority of taxpayers. Costa Rica made paying taxes easier for companies by implementing an electronic system for filing corporate income tax and VAT, also introduced a registration flat tax. Main taxes with rates are provided in table below.

Table 15. Main taxes with rates in Costa Rica (39)

Tax or mandatory contribution	Payments (number)	Notes on payments	Time (hours)	Statutory tax rate	Tax base	Total tax rate (% of profit)
Municipal patent license	1	online		0.3%	sales	5.30
Employer paid - Social security contributions	1	online	59	26.33%	gross salaries	29.70
Employer paid - Worker's compensation insurance	1			between 1.5% and up to 4%	gross salaries	2.98
Corporate income tax	1	online	18	30%	taxable profit	19.17
Property transfer tax	1			1.5%	sale price	0.45
Tax on land property	1	online		0.25%	registered value	0.37
Tax on interest	1	online		8%	interest income	0.20
Highway tax/Vehicle tax	1			various rates		0.11
Stamp duty	1			various rates	transaction value	0.00
General sales tax (GST)	1	online	74	13%	value added	0.00
Employee paid - Social security contributions	0	jointly		9.34%	gross salaries	0.00
Totals	10.0		151.0			58.3

Labor Market Regulation

When employee is hired the written agreement (Employer-Employee relationship) is required. Main conditions regarding working hours are provided in table below. Maximum length of probationary period (months) – 3 (44), (76).

Table 16. Main conditions regarding working hours in Costa Rica (39)

Working Hours	Data
Maximum number of working days per week	6.0
Premium for night work (% of hourly pay)	0.0
Premium for work on weekly rest day (% of hourly pay)	100.0
Premium for overtime work (% of hourly pay)	50.0
Restrictions on night work?	Yes
Whether nonpregnant and nonnursing women can work the same night hours as men	No
Restrictions on weekly holiday?	No
Restrictions on overtime work?	No
Paid annual leave for a worker with 1 year of tenure (working days)	12.0
Paid annual leave for a worker with 5 years of tenure (working days)	12.0
Paid annual leave for a worker with 10 years of tenure (working days)	12.0
Paid annual leave (average for workers with 1, 5 and 10 years of tenure, in working days)	12.0

Financing

Ease of getting credit, Costa Rica is ranking high comparing to regional average.

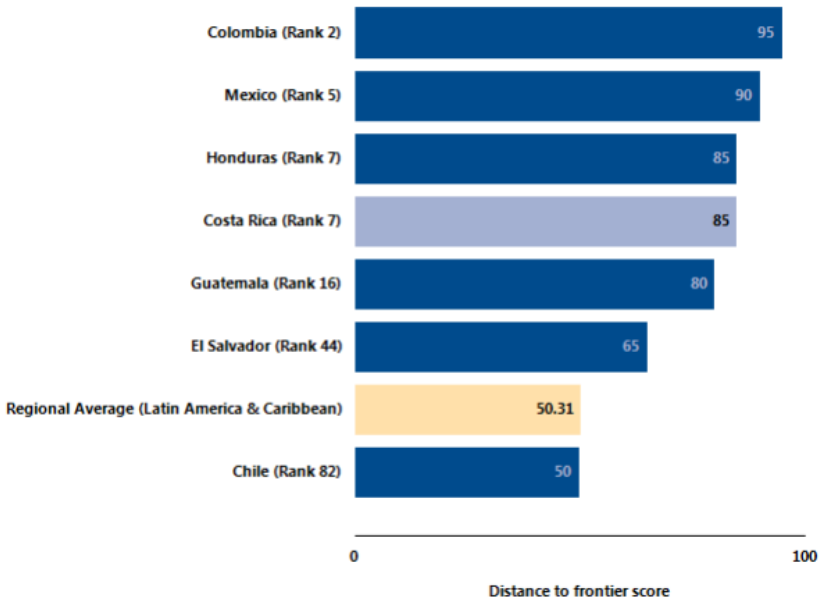


Figure 6. How Costa Rica and comparator economies rank on the ease of getting credit (39)

The most popular banks used by ICT companies in Costa Rica for the financing of their initial operations are Banco National and BAC (65) .

Table 17. The most popular banks used by ICT companies for the financing of their initial operations (65)

Main advantages and disadvantages by using this market entering strategy

Advantages:

- Independence of partner or local agent
- New workplace
- Relatively low investment for free trade zone incentives

Disadvantages:

- Lack on information about new market
- High initial investing fund (except of using free trade zone opportunity) and potentially a long period to recoup investments
- Difficulty of entering the market because of cultural specificity and differences
- Human capital (there is a high demand for IT specialists),

This market entry strategy poses higher risk and requires larger investment comparing it to the other discussed strategies. This strategy can be selected if the market is already researched and valuated as having high potential for providing services and if the company can devote high initial investment. It is very important to consider the cultural differences between Baltic and Latin American countries. Costa Rican people value prior experience and trust, a new participant in the market would have trouble displaying these traits.

The other market entry strategies such as Joint Ventures and Buying a Company are analysed together with Chile in chapters 2.2.4 and 2.2.5, because there are no significant differences when applying them in Chile or Costa Rica.

3.3 Key local actors

The list of key local actors that could support in entering market:

Institutions/company	**Radiográfica Costarricense, S.A. (RACSA)**
Activities	A state-owned Costa Rican internet provider, a subsidiary of state telco ICE. It initiate and is responsible for many e-government projects in Costa Rica.
Web site	www.racsa.co.cr
Contacts	Alicia Avendano Rivera, Business development and Innovation Manager in RACSA alicia.avendano@racsa.co.cr tel. + 506 2287 0364 Marcel Retana Rodriguez, Business development mretana@racsa.co.cr tel. + 506 2287 0159

Institutions/company	**Procomer**
Activities	A trade promotion agency of Costa Rica, helps Costa Rican companies search partners abroad through cluster support.
Web site	www.procomer.com
Contacts	Mariana Borbon, Export promoter mborbon@procomer.com tel. + 506 2525 4848

	Representative close to the Baltics: Netherlands Alexander Román, Director Comercial aroman@procomer.com tel. + 31 0 282 1200

Institutions/company	**The Chamber of Information and Communication** Technologies (CAMTIC, La Cámara de Tecnologías de Información y Comunicación)
Activities	A private non-profit ICT industry association, development of consensual actions between industry, government and academia. Includes more than 200 companies.
Web site	www.camtic.org
Contacts	info@camtic.org, tel. +506 2283-2205

Institutions/company	**Ministry of Foreign Trade Comex)**
Activities	Responsible for defining and directing the foreign trade and foreign investment policy of the Costa Rica. Its mission is to promote the linkage of Costa Rica to the global economy, by opening up new opportunities in international markets, supporting expansion, diversification and sophistication of domestic exportable supply and attracting foreign investment to the country.
Web site	www.comex.go.cr
Contacts	Dennis Cespedes, Director of Directorate of capacities development for foreign trade dennis.cespedes@comex.go.cr tel. + 506 2505 4094 Isabel Cristina Contreras, Advisor in Human Talent and Services Sector cristina.contreras@comex.go.cr tel. + 506 2505 4089

Institutions/company	**The Costa Rican Investment Promotion Agency** (CINDE)
Activities	A private, non-profit, non-political organization responsible for the attraction of Foreign Direct Investment (FDI) into Costa Rica.
Web site	http://www.cinde.org
Contacts	invest@cinde.org tel. +506 2201-2800

Institutions/company	**ElanBiz**
Activities	ELANBiz is a EU funded programme in which a network of experts provides market access information to European companies wishing to export or invest in seven Latin American countries, including Chile and Costa Rica.
Web site	www.elanbiz.org
Contacts	Gabriela Couto, Key expert Costa Rica g.couto@elanbiz.org tel. +560 83220420

Institutions/company	**National Center of High Technologies** (CeNAT, Centro Nacional de Alta Tecnología)
Activities	The CeNAT is established as an interuniversity meeting space between academia, government and the country's productive sectors in different fields of high

	technology. For start-ups it is a possibility to have a working space, to perform R&D activities.
Web site	www.elanbiz.org
Contacts	Allan Campos G, Director acampos@cenat.ac.cr tel. +506 2519 5835

Contact	Anton Zamora Ilarionov, independent external consultant to Ministry of Health, also director of Salud a un Clic www.saludaunclic.com azamora@saludaunclic.com Tel. + 506 8842 1300

The main ICT event in Costa Rica:

1. **The eCommerce Innovation Summit** (November 2017) (http://expoitcomm.cr). It is an annual event carried out by a private initiative where there are conferences, business rounds and networking for all sectors of the ICT industry of Central America.

4 Business customs in Chile and Costa Rica

Here are some observations about the business behavior and cultural aspects which should be taken into account when entering the Chilean or Costa Rican markets. These observations can prove useful when trying to establish contacts with local business and government officials:

- Despite Chile's and Costa Rica's openness to new technologies and innovations, local business people tend to be far more conservative and cautious than the average Baltics business person.
- Relationships with Costa Rican businessmen lead to a high level of trust in the other person, as well as the personal knowledge of the other person. So you should not be surprised if they ask you a few questions the first time they introduce you and have a conversation. It may be necessary to make more than one presentation to achieve your goals. In the first moments of contact, trips to Costa Rica will be more frequent than in later occasions.
- In Costa Rica the most commonly used language is Spanish, although most employers speak English. The two languages can be used without any problem, as a rule. Chilean businesspeople are well-educated and speak English. However, not all speak English, and foreigners will often find the ability to speak Spanish very useful, because it is possible to run across a meeting where there will be no English speaking participants. Product marketing or company promotional literature should be in Spanish.
- It is useful to have business cards. Generally, cards are presented to everyone in a meeting. Business cards should be presented clearly specifying the position held within the company.
- All appointments in Chile and Costa Rica must be arranged in advance, and should be reconfirmed on the previous day since the culture is quite informal in the sense that often people forget their commitments and excusing themselves saying more important issues came up or having to leave town. In the best case, meetings are delegated to someone else, but most times it does not happen.
- The punctuality in the terms agreed, both for the fulfillment of obligations as the payments, may be delayed in some occasions.
- Chileans and Costa Ricans are quite conservative, formal, try to avoid topics outside their comfort zone. Avoid pressure tactics publicly or open criticism because they will backfire. Build your business relationships over time, based on trust and mutual respect. Start conversations with polite social chat, ask about their family, show interest for their culture and their country's natural beauties and without taking too much politics.
- When negotiating be sensitive, reliable and persistent, Chileans Costa Ricans need to be persuaded, but not pressed.
- The Chileans and Costa Rican nature is friendly and dislikes confrontation, e.g. in Costa Rica the word "no" is avoided, saying instead "maybe" or other evasive forms. If you cannot get an answer, it is possible it was a negative one from the very beginning.

5 Recommendations

Both Chile and Costa Rica have a high degree of competition in e-government ICT and a relatively small market size, however there are open business opportunities in e-government and both countries can be valuated as hubs for expanding services in other Latin American and U.S. markets.

CHILE

Considerations to take into account when entering Chile's market:

E-government
• The Ministry General Secretariat of the Presidency (SEGPRES) performs important role in Chile's e-government and is responsible for most of the e-government's projects. • Chilean Economic Development Agency (CORFO) actively participates in promoting entrepreneurship and innovation through financing schemes and other activities. CORFO is trying to ensure a dialogue between the public and private sectors when forming and implementing e-government initiatives. Also, CORFO has various support instruments such as grants, subsidies available to domestic and foreign companies. The main focus of CORFO programs in e-government: smart city, e-logistic and e-health. • Most of public procurement, including e-government solutions, go through public tendering. Officially European companies are not restricted to participate in public procurement and pre-registration is recommended as it can significantly ease the process. Once a foreign provider has been awarded a contract it must open a corporate structure in Chile. • The highest e-government's priorities: smart cities; e-health; availability of e-services on mobile phones; open data, big data and data analytics; interoperability of systems; network infrastructure. • Central government has IT solutions that are better developed than those of the local governments. Usually central government has a strong and developed IT division, which actively participates in IT projects, develops its own systems and maintains them. However, it is becoming increasingly popular to outsource these functions to private ICT companies. • The most popular software licensing and delivery model is On-premise, very rarely Software as a service (SaaS) model is applied, where the software is licensed on a subscription basis and is centrally hosted. SaaS model is difficult to apply due to the rules of how public budget is formed and other control restriction • Insurance system, Single key (Clave única) platform, e-health systems – projects that currently have the largest allocated budget. • The most popular technologies/IT products used for information systems in public sector is Oracle, Java, PostgreSQL, C#, Microsoft, IBM WebSphere. For accounting there is a custom developed system used in all government sector (Information System for the Financial Management of the State (SIGFE)), only few organizations in the public sector use SAP Business Suite (ERP) for finance management. The most popular software for data Analytics are IBM Cognos, MicroStrategy, Tableau and Qlickview.

ICT sector
• 1.6% of companies in Chile are ICT companies and this sector generates 3,4% of GBP (it is expected to reach 6% by 2020). There are about 4.700 ICT companies, 85 % are SMEs. • IT companies usually operate in a few vertical sectors, they are not heavily orientated in one vertical sector, because the market is not large enough in vertical sectors. Therefore, companies lack specialisation in vertical sectors. The private sector lacks IT investment, rarely has its own R&D centres, the main client of IT companies in Chile is the public sector. • Latin America and the U.S. are the main markets for Chilean ICT companies to export their services and products, the biggest focus in Latin America - Mexica, Brazil and Peru. • Average hourly rate of an IT specialist is about 40-60 USD; IT architect-80 USD, IT Project manager–100 USD. Price rates are high compared to other countries in the region. • Chile has well educated, skilled IT specialists, however there is a workforce deficit. Luckily many IT engineers immigrate from Venezuela, Mexico, Colombia and Brazil. Also, Chile provides "Visa Tech" - an opportunity for foreign ICT specialists to work in Chile for an indefinite period. • There is a lack of skilled English-speaking IT professionals, skilled Project managers and highly experienced IT architects. • E-government's main projects are executed mostly by very large, international companies, which have strong human resource pools and competencies. Also, these companies use local SMEs as subcontractors.

Recommended market entry scenarios:

Scenario No 1. Partnering

This market entry strategy is highly recommended, considering the sizable cultural differences, lingual restrictions and the fact that by having a domestic partner a company would be able to avoid restrictions when carrying out public procurement contracts. To find a trustworthy partner is the main challenge and would give a big advantage comparing to other market entry strategies.

- **Find a partner** with residency in Chile, who can help to complete all formalities and documentation that are required to participate in public tenders. Often procurement conditions are very restrictive, having a local partner can greatly increase the chances of winning a public tender.

  Partner search resources:

- ChileTech (Chilean Association of Software and Services) has a current membership of 1500 ICT companies.
- Prochile (The institution of the Ministry of Foreign Affairs). Has prepared a database that has extensive profiles about Chile's ICT companies and services they provide. This database can help identify and select the most optimal local partner. Prochile has representatives in Russia (Moscow), Poland and Sweden.
- The Santiago Chamber of Commerce has a current membership exceeding 1.900 large, medium-sized and small companies originating from a cross section of main economic sectors. CCS helps foreign companies to find a partner, to organize meetings and prepare market research.

Also, there is always a possibility to find partnership opportunities with actual competitors in Chile's market (a top list is provided in this study's 2.1.4.1 section).

- **Participate in public procurement** through portal ChileCompra:
  - www.MercadoPúblico.cl: procurement platform for government agencies and suppliers.
  - www.ChileProveedores.cl: Registry of State suppliers, where companies can keep their information accredited and digitised.
  - www.Analiza.cl: Business intelligence platform to analyse procurement information.
  - www.CompasSustentables.cl: State's sustainable public procurement policies.
- **Collaborate with Chilean Economic Development Agency (CORFO)** and take advantage of CORFO's supporting incentives for investment projects in Chile, CORFO provides a support grant for strategic projects at the pre-investment stage. Also, use CORFO's initiative to ensure dialogue between the public and private sectors when forming and implementing e-government initiatives.
- **Take advantage of "Visa Tech" –** an opportunity for foreign ICT professionals to work in Chile for an indefinite period.

Scenario No 2. Setup of an Entity

This market entry strategy has higher risk and requires larger investment comparing it to partnering. This strategy can be selected, if the market is already researched and valuated as having high potential for providing services and if the company can devote high initial investment. It is very important to consider the cultural differences between Baltic and Latin American countries.

- **Register a company.** Starting a business in Chile by establishing an entity is fairly straightforward, it takes 5.5 days to fully register a company. It can be done online. It should be considered that it is not easy to get credit for a business in Chile. Consultations regarding company establishment can be received by:
    - InvestChile. Government agency responsible for promoting foreign direct investment, serving as a bridge between the interests of foreign investors and local businesses. Offering specific information how to start a business as well as the procedures and regulations with which all investors must comply.
    - Prochile (The institution of the Ministry of Foreign Affairs). See more in Scenario No1.
    - ElanBiz. A network of Experts that provide market access information to European companies wishing to export or invest in seven Latin American countries, including Chile and Costa Rica.
- **Participate in Start-up Chile program.** Start-Up Chile is a Chilean government programme that aims to attract world-class early stage entrepreneurs to start their businesses in Chile and use it as a platform to go global. Competitions to select suitable candidates are held three times a year, attracting over 5,000 applications from which over 240 projects are selected each year. Founders and their teams receive about $33,000 USD, a working visa for a year and access to one of the largest startup communities in the world to accelerate their startups in Chile.
- **Participate in public procurement** through portal ChileCompra and use the opportunity to offer services using Potential suppliers' registry. This registry is used by the public sector when purchasing products or services above $75.000 USD. Services or products are purchased from this list by using simplified procedures and a lowest price offer survey. A company needs to be registered in Chile to be able to participate in this procedure.
- **Collaborate with Chilean Economic Development Agency (CORFO).** See more in Scenario No1.
- **Take advantage of "Visa Tech".** Take advantage of visa "Tech" - an opportunity for foreign ICT professionals to work in Chile for an indefinite period.

COSTA RICA

Considerations to take into account when entering Costa Rica's market:

E-government

- For the last 15 years the institution responsible for e-government was the Technical Secretariat which was directly dependent on the Presidential office. In 2015 the President put the Technical Secretariat on standby. The Ministry of Science, Technology and Telecommunications is responsible for the matter. Meanwhile, structural and organisational changes within the Ministry are expected to be made throughout 2017.
- Radiográfica Costarricense, S.A. (RACSA) performs a very important role, it initiates and is responsible for many e-government projects in Costa Rica. Therefore, it seems that RACSA will be a leading institution for future e-government vision implementation. This is a state-owned Costa Rican internet provider, a subsidiary of state telco ICE that offers internet and voice services. RACSA is involved only as a supervisor and coordinator of outsourced projects, as there are only 12 people who are responsible for carrying out more than 30 projects. Also, RACSA manages the registry of potential suppliers. To participate in public tenders a foreign company needs to be registered in this registry and needs to have a Digital signature, which is issued by RACSA as well.
- All public procurement, including e-government solutions, go through public tendering by using an official portal for public procurement in Costa Rica. The use of this technological platform is compulsory from 2017.
- From the middle of 2017 a foreign company registered as a potential supplier in the potential suppliers' registry (managed by the RACSA) is able to participate in the public procurement process and conclude a contract without restrictions (no need of local representative or locally registered company). A company must have a Digital signature, which is also issued by the RACSA. This is a fairly new thing which has provided more possibilities to foreign ICT companies that wish to carry out contracts without special restrictions.
- The highest e-government's priorities are: a one access portal to all public services; smart cities; e-health; an open data platform; a data centre for governmental institutions; better interoperability (standards and platforms); improvement of current e-services, especially for the use of mobile phones; optimisation of processes in the public sector, including their automatization; development of cyber security.
- Usually the public sector does not have a strongly developed IT division and outsources its IT needs to private ICT companies. Institutions themselves rarely create and develop systems or e-services.
- The most popular technologies/IT products used for information systems in public sector are Oracle, MySQL, Java, SAP Business Suite (ERP), SAP BusinessObjects (BI).

ICT sector

- ICT sector in Costa Rica generates 12.5% of the country's GDP, there are approximately 900 ICT companies and 88300 employees, 95 % are SMEs.
- Main international ICT giants such as Intel, IBM, Microsoft, Cisco Oracle, Amazon and about 200 other multinational companies have established themselves in Costa Rica.

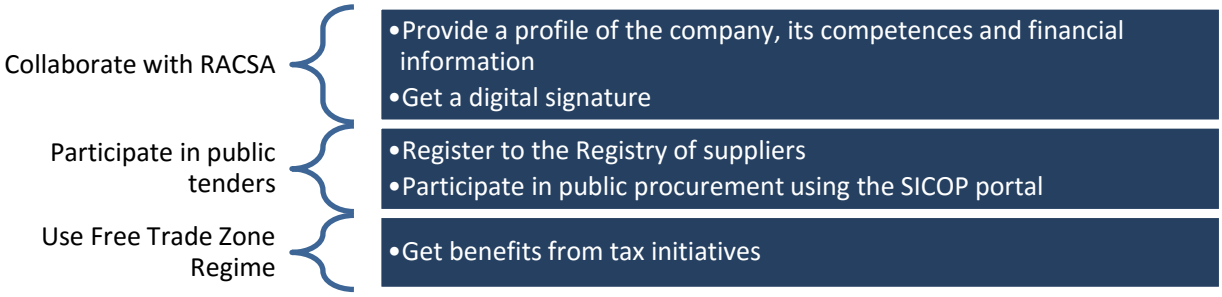
- International, especially U.S. companies came to Costa Rica to open theirs call centers, the main reasons were that Costa Rica is in the same time zone as the U.S., there are well-educated human resources and there is a good proportion of price and value.
- 53% of ICT companies have formal alliances with international companies like Microsoft, HP, Cisco, Dell, WM Ware, IBM, Intel, SAP. Microsoft (53%), Oracle-Sun (26%), IBM (18%), CISCO (17%) and SAP (16%) are the main technology brands compatible with the products and services of ICT companies in Costa Rica.
- About 500 Costa Rican companies (most of them SMEs) manufacture hardware and specifically develop software in areas related to technical support, digital animation and engineering, ERP and other solutions. The most ICT companies are vertical sector orientated.
- Average hourly rate of an IT specialist, depending on competencies is about 30-50 USD; high experienced IT specialist, IT architect or Project manager can cost more. Price rates are high compared to other countries in the Central America.
- 93.6% of ICT companies in Costa Rica have domestic clients, 47.0% have clients abroad and 46.6% sell to transnational companies located in Costa Rica.
- The US market monopolizes the bulk of overseas sales. Central America, headed by Panama, is the most popular destination among exporters of digital goods and services, and is the second largest market in terms of sales volume. 67% of sales abroad went to North America, 20% to Central America, 8% to South America, 4 % to Europe and 2% to the rest of the world.
- Costa Rica has well educated, skilled IT specialists, including English-speaking skills.
- There is a workforce deficit, although universities are strongly focused on preparing ICT specialists.
- E-government's main projects are executed mostly by very large, international companies, which have strong competencies. To win contracts in Costa Rica a company must demonstrate the experience, know-how and get confidence.

Recommended market entry scenarios:

Scenario No 1. Direct Exporting

The most practical and common market entry strategy, especially for new-to-market exporters. This market entry strategy is attractive and possible to implement, contrary to Chile, because of the recent changes in legal restrictions, where a foreign company is able to participate in the procurement process and conclude contracts. However, because local ICT companies charge lower prices it would be difficult to directly compete with them and also to understand the market's specificity early on. It is also very important to consider the cultural differences between Baltic and Latin American countries. Prior experience and trust are very important in Costa Rica. A new company in the market would have difficulties demonstrating these traits, but once trust is established doors open everywhere.

This market entry strategy should be considered as the least risky and expensive.



- **Collaborate with RACSA**. Radiográfica Costarricense, S.A. (RACSA) performs a very important role, in many e-government projects in Costa Rica. ICT companies from the Baltic region can approach RACSA directly with any proposed projects in the field of e-government. RACSA works through public/private partnerships by creating an alliance with companies directly or suggesting other private companies to fulfil projects. A company must have a Digital signature, which is also issued by RACSA, after providing specific documents and filling some forms.
- **Participate in public procurement** through the SICOP portal. Integrated System of Public Procurements (SICOP) was developed as an official portal for public procurement and is compulsory from 2016 for all public institutions and for all public tenders. It is necessary for a Baltic company to register as a potential supplier in the potential suppliers' registry (it is managed by RACSA) then, the company is able to participate in the public procurement process and conclude a contract without restrictions. Also, a company must have a Digital signature.
- **Use Free Trade Zone Regime**. European companies interested in establishing a subsidiary or carrying out a project in Costa Rica may choose to enjoy the exemptions offered by the Free Trade Zone Regime, (FTZR) is a set of incentives and benefits granted by the country to companies making new investments and complying with local requirements and obligations. For projects, for example, with an investment of only $ 150,000 throughout 3 years, a European company can enjoy a series of tax incentives and benefits granted by the Costa Rican government.

Scenario No 2. Partnering

This market entry strategy is highly recommended, especially considering the sizable cultural differences and the difficult process of establishing a company. This strategy would be very advantageous, if a company would manage to choose a trustworthy partner, due to the fact that people in Costa Rica make decisions based on past experiences and trust. Good local partners can bring local market knowledge, contacts and customers.

- **Find a partner** with residency in Costa Rica and experience in particular e-government projects. A consortium could be created to be able to participate in the procurement process and uphold the contract.
  Partner search resources:
  - The Chamber of Information and Communication Technologies (CAMTIC) could be a valuable start point when looking for a partner. This is a private non-profit ICT industry association, it has a current membership of 200 ICT companies. CAMTIC also organises specialized sales programs on how to perform sales in the digital sector.
  - The Costa Rican Investment Promotion Agency (CINDE) - a private, non-profit, non-political organization responsible for the attraction of Foreign Direct Investment (FDI) into Costa Rica. CINDE has a very strong and well-established working relationship with multinational companies, ministries, organizations, chambers, government, universities and schools. Also, there is a cluster of software companies managed by CINDE - CENTRAL GATE.
  - PROCOMER - the trade promotion agency of Costa Rica, helps Costa Rican companies search for partners abroad through cluster support. In May of 2017 PROCOMER surveyed ICT companies in Costa Rica to identify who of them are interested in partnering with ICT companies in the Estonia, Latvia, Lithuania for e-government projects. The list is provided in this study in 0 section.

  Also, there is always a possibility to find partnership opportunities with actual competitors in Costa Rica's market (a top list is provided in this study in 3.1.2.2 section).

- **Collaborate with RACSA**. See more in Scenario No 1.
- **Participate in public procurement.** See more in Scenario No 1.
- **Use Free Trade Zone Regime.** See more in Scenario No 1.

6 List of interviewed institutions, companies and persons

6.1 Interviewed in Chile

1. **InvestChile**, foreign investment promotion agency
   Salvatore Di-Giovanni, Investment promotion officer
   e-mail: sdigiovanni@investchile.gob.cl; tel. +56 22 663 9200

2. **CORFO,** The Chilean Economic Development Agency
   Marcelo Soto, Gerente Programa Manufactura Avanzada
   e-mail: marcelo.soto@transformamanufactura.cl; tel. +56 9 9224 7546

   Francisco Mardones, President of National Strategic Program of Intelligent Industries e-mail: fm@mardonet.com; tel. +56 9 8529 1877

   Aisen Etcheverry, anager of the National Strategic Program for Health Technologies and Services
   e-mail: aisen@saludmasdesarrollo.cl

3. **Prochile, Ministry of foreign affairs**
   Claudio Vargas Garcia, Product Manager in Department of Trade in Services
   e-mail: cvargas@prochile.gob.cl; tel. +56 22 827 5178

4. **Chiletec**
   Ubaldo Taladriz Truan, Vice-president
   e-mail: vicepresidencia@chiletec.org; tel. +56 9 9885 7259

   Roberto Merida Zamora, Project Manager
   roberto.merida@chiletec.org; tel. +56 9 9661 5338

5. **Camara de Comercio de Santiago**
   George Lever, Research Manager
   e-mail: glever@ccs.ci; tel. +56 22 360 7021

6. **Ministry of Health**
   Soledad Munoz Lopez, Head of the ICT department, Cabinet of Minister
   e-mail: soledad.munoz@minsal.cl; tel. +56 22 574 0773

7. **Ministry of Economy**
   Mauricio Valdés Cotrone, Advisor of Digital Economy
   e-mail: mvaldesc@economia.cl
   Sebastian Rivera A. Advisor of Digital Economy
   e-mail: srivera@economia.cl

8. **Ariba, Inc. (ICT company, SAP system)**
   Iván Braga, Regional Vice President of
   tel. +56 9 95995086

9. **Alejandro Barros**
   Ex Executive Secretary of Digital Strategy of Chile 2007-2008
   e-mail: abc@alejandrobarros.com; tel. +56 9 8259 6860

6.2 Interviewed in Costa Rica

1. **Ministry of Science and Technology**
   Dr. Marcelo Jenkins Coronas, the Minister
   e-mail: marcelo.jenkins@micit.go.cr

2. **RACSA,** Radiográfica Costarricense, S.A.
   Alicia Avendano Rivera, Business development and Innovation Manager in RACSA
   e-mail: alicia.avendano@racsa.co.cr; tel. + 506 2287 0364

   Marcel Retana Rodriguez, Business development
   e-mail: mretana@racsa.co.cr; tel. + 506 2287 0159

3. **Procomer**, trade promotion agency of Costa Rica
   Mariana Borbon, Export promoter
   e-mail: mborbon@procomer.com; tel. + 506 2525 4848

4. **CAMTIC,** The Chamber of Information and Communication Technologies
   Otto Rivera, Executive Director
   e-mail: info@camtic.org

5. **Comex**, Ministry of Foreign Trade
   Dennis Cespedes, Director of Directorate of capacities development for foreign trade
   e-mail: dennis.cespedes@comex.go.cr; tel. + 506 2505 4094

   Isabel Cristina Contreras, Advisor in Human Talent and Services Sector
   e-mail: cristina.contreras@comex.go.cr; tel. + 506 2505 4089

6. **CeNAT**, National Center of High Technologies
   Allan Campos G, Director
   e-mail: acampos@cenat.ac.cr; tel. +506 2519 5835

7. Anton Zamora Ilarionov, independent external consultant to Ministry of Health, also director of Salud a un Clic
   e-mail: azamora@saludaunclic.com; tel. + 506 8842 1300

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6. Interview with Alejandro Barros, Ex Executive Secretary of Digital Strategy of Chile 2007-2008. May 2017.

7. Interview with Ubaldo Taladriz Truan, Vice-president of ICT companies' association Chiletec. May 2017.

8. Interview with Iván Braga, Regional Vice President of IT Company Ariba, Inc. May 2017.

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16. Interview with Salvatore Di-Giovanni, Investment promotion officer in InvestChile, foreign investment promotion agency. May 2017.

17. Interview with the Soledad Munoz Lopez, Head of the ICT department in Cabinet of Minister in Ministry of Health. May 2017.

18. Interview with Claudio Vargas Garcia, Product Manager in Department of Trade in Services, Ministry of foreign affairs (Prochile). May 2017.

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