

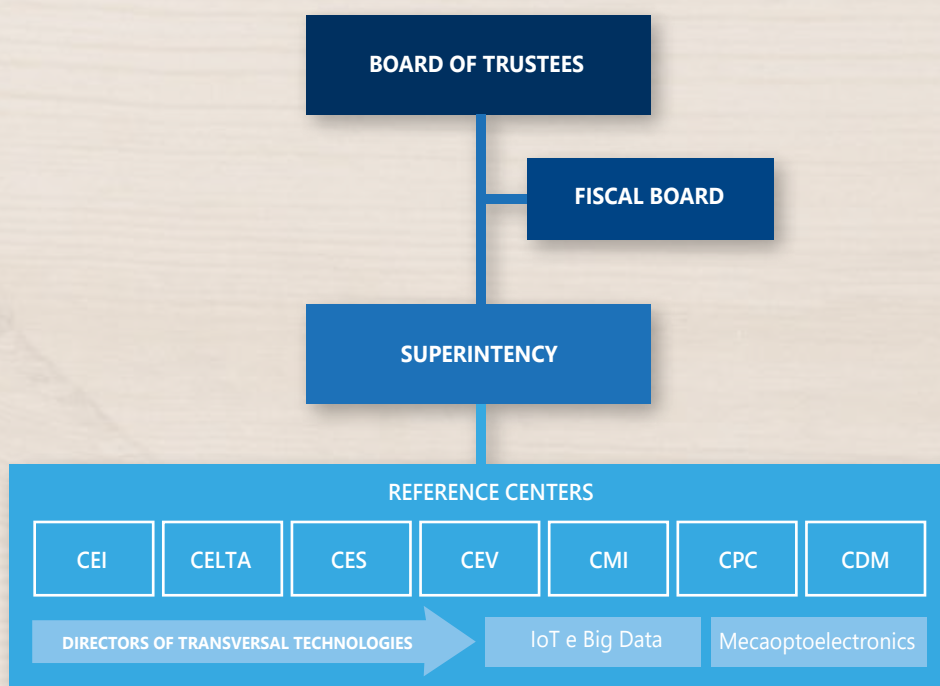


ANUAL REPORT

2016



# MENAGEMENT 2016



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TECHNOLOGY AND INNOVATION

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Mecaoptoelectronics Center | CDM

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Center | CEI

**Cesare Quinteiro Pica**  
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IoT & Big Data

**Manuel Steidle**  
Mecaoptoelectronics

## 2016: Another Year of Lots of Work, Conquests and Opportunities

In 2016 the CERTI Foundation focused strongly on conquering new projects and clients. Its main criteria is an increasing search to establish RELEVANCE, so that it can make a difference in the competitiveness of companies and the sustainable development of Brazil.

Simultaneously, the CERTI staff maintained its focus on the efficient and effective execution of its nearly 100 innovation projects, always seeking to promote the SUSTAINABILITY of the Foundation and the SATISFACTION of clients and partners.

These business and operational actions were strengthened by mobilizing and aligning leaders within the institution, through the analysis and review of the CERTI 2020 Strategic Plan, which established new directions and priorities, seeking to expand the internal SYNERGY among the units of the Foundation, and external synergy with partners. The consequence of this focus on reflection and strategic action led to the creation and redirection of communication, interaction, evaluation and training focused on improving organizational HARMONY.

Naturally, all of this required a lot of work and dedication from staff, as well as an intense and constructive relationship with clients and partners, which resulted in important conquests in the form of new products, systems and solutions in innovation and technology.

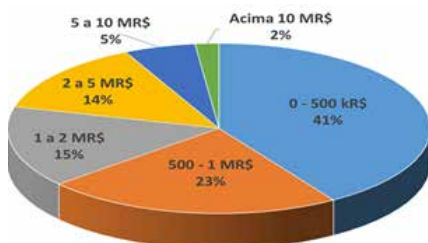
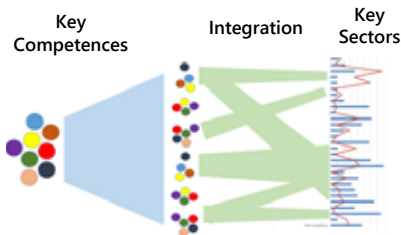
Therefore, the evaluation of 2016 indicates it was a period of consolidation and transformation, executed to prepare the institution to overcome challenges that are still present, take advantage of opportunities offered by technological advances and make concrete the opportunities created by the return to growth that has finally begun to reappear on the country's economy.

José Eduardo Azevedo Fiates  
GENERAL SUPERINTENDENT

Günther Pfeiffer  
SUPERINTENDENT OF OPERATION  
& FINANCE AND ADMINISTRATION

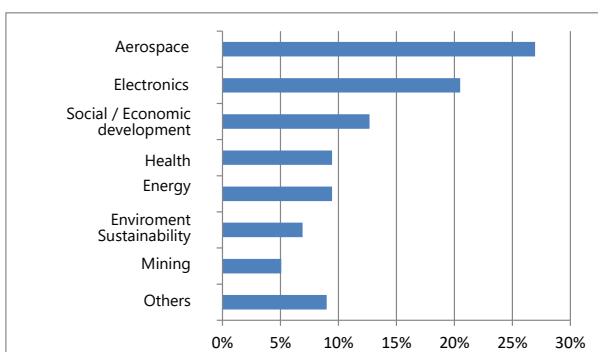
Laercio Aniceto Silva  
SUPERINTENDENT OF BUSINESS  
& SCIENCE, TECHNOLOGY AND INNOVATION

# CERTI 2016



## CERTI Academy

Leadership  
Innovation  
Education  
Technology  
Entrepreneurship



## Institutional Evolution

In a context of limited investments by the business sector and of uncertainty about the maintenance of government policies for development, support and investment strategies, the CERTI Foundation underwent a positive evolution in 2016. It grew in the number and average size of its projects, took on new high complexity challenges and conquered new clients in Brazil and abroad, while its revenues grew 34% over 2015.

## Governance

In 2016, as is customary at the institution, CERTI reviewed its Strategic Planning 2020, involving the Advisory Board, the Superintendencies and the Directorates of the CERTI Foundation. Considering the three key elements - technology, product and market - it made adjustments to its organizational structure, seeking to significantly strengthen and expand its operations in target markets and improve operating performance.

## Technology

CERTI acts with determination to maintain constant development of its technological competency, a key factor for work in projects that are relevant to its clients. It has been intensifying its strategy to integrate the distinct and specialized technological competencies of its various centers, making viable distinct and innovative solutions in strategic segments such as aeronautics, healthcare, agribusiness, energy, fintech, economic-environmental-social development and others. In 2016, more than 20% of revenue was generated in cooperation between centers

## Product and Solutions

CERTI's solutions for its clients include technological services, consulting in product and processes development and training, promoting entrepreneurship and technological development and innovation projects. The action in projects represented 92% of income in 2016, generated through the operation in 123 different projects. The number of large projects around US\$ 3.5 millions grew 58% over the past two years.

## Staff

Considered the main capital of the institution, special attention was given to employees in 2016 through a group of mechanisms designed to strengthen their recognition and incentives. CERTI implemented a complementary private pension program, a system of recognition for results and an incentive program for the formation of leaders known as the CERTI Academy. More than 100 employees participated in the CERTI Academy and more than 60% of employees adhered to the private pension program in the first year.

## Market

With growing dedication, CERTI has sought to identify the needs of clients with the goal of making viable many relevant technology innovation solutions. In addition to the solution itself, CERTI has also been expanding its capacity to identify mechanisms that allow clients to learn about lines of financing for R&D, and to frame projects within incentive and funding programs. As a consequence, in 2016, the composition of CERTI's most focused sectors and markets was partially redesigned, with the aerospace sector coming to be the largest client, with 27% of revenue.



### Administration

Steered by strategic planning and by guidelines and goals, continuity was given to the customized construction of managerial information systems, systematization of processes and provision of information for institutional management at four levels: outside supervision and control entities, upper level administration (the board, superintendencies, directorates) and management of the units and operational processes. The reference model at all levels of the management system is the PDCA concept (Plan, Do, Check, Act), supported by an ERP system integrated to the project management system.

### Infrastructure

With the expansion of the activities, staff and revenue, there has been a growing need to access physical and laboratory infrastructure, sought in particular through cooperation agreements. Highlighted in 2016 by the partnership with the Scientific and Technological Research Support Foundation of Santa Catarina State (FAPESC), CERTI expanded the laboratory base for aeronautic systems. The Darwin Starter company acceleration program began to operate at the Innovation Center of the Santa Catarina Association of Technology Companies (ACATE). At Sapiens Parque, in partnership with the Softplan company, a support program was aligned for innovative companies.



**Recipe - Expense = Results**

### Capital

Important to institutional sustainability and the risks to which a private STI – Science and Technology Institution, such as CERTI is exposed, in 2016 the foundation intensified its asset management. Associated to the economic results of the Index of Production Performance, which had a surplus of 1,04, CERTI successfully converted company assets into real estate and captured credit for cash flow and the financing of investments in corporate innovation, following the strategic guidelines of the institution.



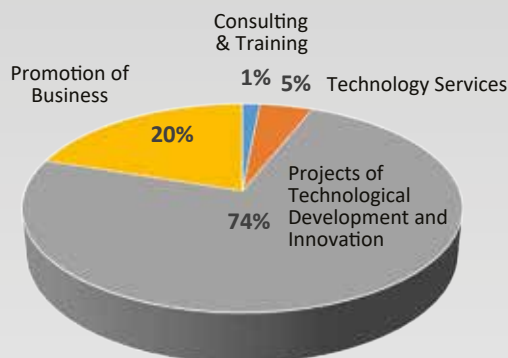
Annual Recipe  
**R\$ 57,3 millions**



Staff Board  
**291**

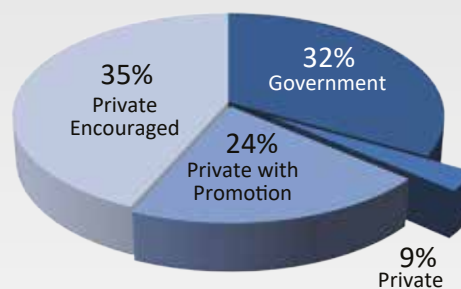


### Revenue by Type of Activity



### Contracted Projects 2016

(Execution extending to 2016)  
**50,5 MR\$**



Attendance at  
**18 Sectors of Market**



Participation in  
**123 Projects**

# Operation

## Incentives

Subvention  
Financing  
Fomentation

## Staff

Regional  
National  
International

## knowledge

University  
ICTIs  
EBTs



## COMPETENCIES

- Digital Convergence & Mechatronics
- Metrology & Instrumentation
- Cooperative Production
- Sustainable energy
- Green Economy
- Business Innovative
- Business Incubation

## CLIENTS



## PARTNERS



## SECTORS SERVED



Aerospace



Energy



Agribusiness



Health



Education



Social and  
Economy  
Development



## CLIENTS



## PARTNERS



## SECTORS SERVED



# Reference Centres

## FOCUS: Relevant Solutions in Innovation to strengthen the competitiveness of clients and partners

### Digital Convergence & Mechatronics

In 2016, CERTI consolidated its technological command in areas such as embedded solutions, the Internet of Things (IoT), big data, aeronautic systems, healthcare systems, organic photovoltaics and collaborative robots. In this way, it expanded its operations in new segments such as aerospace electronics, electro-medical products, point-of-care equipment, ecosystems for digital education, agribusiness and industrial automation. It also strengthened its action in segments it has traditionally operated such as consumer electronics, digital TV, telecommunications and mobile technology. Due to the high quality demanded by these new solutions and their regulations, especially in the healthcare and aeronautic sectors, aspects of technical implementation of the projects were improved such as management of requirements, test plans and adaptation to norms.

#### Competencies

Software Development (Firmware and applications)  
Embedded systems  
Mecha-optoelectronics  
IOT, BIG DATA and Cloud computing

#### Solutions

Digital TV Systems and Equipment  
Mobile Solutions  
Healthcare Devices and Systems  
Hardware and software for education  
Solutions for Smart Cities  
Lighting Applications  
Machinery Design and Robotic Systems



CDM

Digitization & Network Society

### Company Incubation

With accreditation from the Committee from the Information Technology Field (CATI), the CELTA Incubator was considered ready to conduct research, development and innovation in information and communication technologies for the purposes foreseen in § 7º of art. 25 of Decree nº 5.906 of 26 September 2006. This allowed CELTA to intensify the actions of partnerships with large companies, such as the SAMSUNG program for the Promotion of the Creative Economy, whose goal is to identify, select and offer support to innovative companies. Moreover, it has worked more intensely in actions to promote innovation, such as corporate innovation, promoting interaction between TIM and startups from the Technology Ecosystem in Florianópolis. During the year, CELTA absorbed 13 new companies, reaching a total of 44 incubated companies. Five companies graduated, to reach a total of 93 graduated companies.

#### Competencies

The CERNE Model of innovative company incubation  
Business, academic, government and social network  
Infrastructure and technological business and entrepreneurial culture environment

#### Solutions

Incubation of Technology Based Companies  
Virtual incubation of innovative companies



CELTA

Technological Convergence

Ecosystems of Innovation



CER

Estrateg  
theme

### Innovative Entrepreneurship

The CERTI operates in projects to develop innovative environments, entrepreneurship and corporate innovation. The objective is to expand the systemic competitiveness of regions and companies by developing high-impact customized solutions. In 2016, the CEI consolidated its national leadership in the development of projects for technology parks, innovation centers, incubators and ecosystems of innovation throughout Brazil. Moreover, it strongly expanded the impact of its programs for promoting innovative entrepreneurship such as the Synapse of Innovation and InovAtiva Brasil.

#### Competencies

Economy of Innovation and Regional Development  
Management of Innovation and Technology  
Culture of Entrepreneurship  
Conception and Articulation of Ecosystems and Networks

#### Solutions

Development of Innovative Environments  
Programs for the Development of Innovative Companies  
Systems of Entrepreneurship and Corporate Innovation



CEI





### Competencies

Dimensional Engineering  
Intelligent Instrumentation  
Systemic relation between innovation, quality assurance and competitiveness

### Solutions

Technological Services  
Inspection and Monitoring Services  
Systems with Quality and Integrity  
Modeling and Implementation of Technological Networks

## CMI



### Competencies

Integration of the productive chain  
Factory intelligence  
Reliability of products and processes

### Solutions

Advanced manufacturing  
Innovative production environments  
Laboratory-factory  
Optimization of processes and Quality Assurance

## CPC



### Competencies

Distributed generation  
Energy storage  
Energy management  
Electrical mobility  
Modeling of Energy Businesses

### Solutions

Automation in intelligent networks  
Micro-energy networks  
Energy management systems  
Autonomous systems for isolated regions  
EV Charging stations  
Viability study and business models  
Special electrical projects and Consulting

## CES



### Competencies

Technical-economic models for socio-environmental sustainability  
Models of sustainability in production chains  
Territory Management  
Ecosystems of Innovation with Impact  
Monitoring Systems, environmental solutions and support capacity

### Solutions

Development of models, systems and mechanisms for creation of shared value  
Implementation and Support to the operation of innovative experiences in sustainability

Production & Industry 4.0

Sustainable Energy

## CEV



## Metrology and instrumentation

In 2016, the focus of action in metrology and instrumentation was maintained in the petroleum and gas sectors, and in advanced manufacturing and STI. In Dimensional Engineering, in which we have nationally and internationally recognized competence, more than 4,000 calibration certificates were issued and more than 300 people trained. In the field of intelligent instrumentation, various solutions in automation were developed for the sectors and priority given to competencies such as equipment integrity, nanosecurity and network management.

## Cooperative Production

In 2016 CERTI focused on innovative solutions for the complete development of factory units, the improvement and optimization of existing industrial processes and on the customized production of technological products, with a focus on guaranteed quality and the competitiveness of clients, giving priority to simultaneous engineering processes and applying concepts of Industry 4.0.

## Sustainable Energy

CERTI has been consolidating its operation in the energy sector in strategic fields such as: distributed generation and energy storage, energy management systems, electrical mobility and innovative business models. In 2016, the projects executed and the activities initiated focus on the development of solutions for the insertion of products in the market, generating results for society by means of projects for companies in the sector and industrial partnerships. The institution has also been increasingly acquiring knowledge about incentives and financing for the realization of projects in the energy sector.

## Green Economy

In 2016, the commitment of the staff allowed important advances in production capacity and in conquering new projects and partnerships. From the modeling and organization of an Integrated Ecosystems Management system, to support for innovation for public policies for water resources and the promotion of businesses of shared value, CERTI continues to establish itself as a strategic partner of government, companies, multilateral agencies and third sector organization in the construction of a sustainable society

# Outstanding projects



## Intelligent Control Center

Development and implementation of a system for the operation of an intelligent control center based on tele-medical solutions. This center will be responsible for standardizing, monitoring, controlling and improving the use of electro-medical equipment, such as magnetic resonance and computerized tomography, and allow integration with management systems for hospitals, radiology systems and systems linked to patient management.



## Solutions for the Aeronautics Industry

CERTI had its action as an EMBRAPIL Unit in Intelligent systems extended to also support companies from the aerospace and defense industries. In this context, Embraer signed an agreement with CERTI for research and development of technology for aeronautic systems. The experience of CERTI's specialists and their command of technical-scientific competencies in fields such as electronics, software, reliability and manufacturing were key to the decision.



## OPV –Organic Photovoltaic Panels

With financing from BNDES Funtec and active participation of the companies Celesc and Flexsolar, CERTI began in 2016 to develop panels with Organic Photovoltaics - OPV). This state of the art technology has strong potential to generate renewable energy. It is based on the use of organic materials, such as polymers, which can be manufactured by printing and are normally quite thin, flexible or even transparent.



## BIG DATA

A cloud computing platform was developed using protocols such as MQTT, APIs REST and Big Data techniques. In this solution, the data is stored in an unstructured manner, allowing analytics of the information and the inference of patterns, such as the monitoring of vital signs and the anticipation of information to the user. The platform was developed using IBM's Bluemix solution.



## Microdrids

The results of the project were: staff training in infrastructure projects in micro-networks; elaboration and execution of a micro-network project with already operating consumer units; a survey of regulatory restrictions and a proposal of changes to make viable new businesses in the realm of the proposed project; and the development of methods for the design, operation and maintenance of micro-networks connected at mid-level voltage.



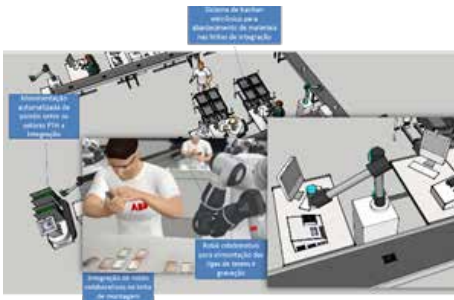
## Smart Power System

This involved the development of an energy storage product in Brazil that integrates components of batteries with national power electronics and energy control and management strategies developed by CERTI. During 2016, activities were realized including a market study, business modeling, development of energy management and initiation of integration of the system.



### Eletroposto Project

The Charging Station Project – Eletroposto Celesc, an initiative of Celesc Distribuição S.A. that is within research and development program of the National Electrical Energy Agency (ANEEL). It is dedicated to studying the charging of electric vehicles, the impact this has on the distribution grid and the form of insertion of charging stations in the Brazilian market. The project also calls for the development of a model charging station, integrated to a stationary storage system, and solutions for mitigation of impacts of charging on the electrical grid and creation of new business. In addition to the project's contribution to Brazil's scientific community, the implementation of the charging stations is an incentive to the insertion of electrical vehicles in the Brazilian fleet, stimulating modernization and sustainability in the automobile industry and the increased efficiency of means of transportation.



### Application of advanced manufacturing concepts to the manufacturing of electronic consumer products:

Based on the mapping of the company's productive processes, and using concepts of advanced manufacturing and industrial quality guarantee, an intelligent system for the collection, recording and evaluation of defects in the wave soldering process was developed. The system allows the company to accompany, in real time, the main quality indexes of that phase of the process, conduct immediate corrective actions and still use the base of information to conduct preventive actions, for the continuous improvement of production processes and the improvement of the design of its products.



### Return to the LABelectron Nucleator Project

This is the main project responsible for the organization of the technical competencies at CERTI in the field of electronic manufacturing. The purpose of the LABelectron Nucleator project is to consolidate LABelectron as a factory-laboratory that is globally recognized in the field of electronic circuit boards. Interrupted in 2011, the project was re-structured and revived in 2016, to allow continuing command of the technology, excellence in small series production of circuit boards, the implementation of advanced cases at the LABelectron and the technological renovation of the factory infrastructure.

### Clothing Factory of the Future / ABDI

Realized with institutional and technical support from the Brazilian Industrial Development Agency (ABDI), the Technology Center of the Chemical and Textile Industry of the National Industrial Learning Service (SENAI/CETIQT) and the Brazilian Textile and Clothing Industry Association (ABIT), the Clothing Factory of the Future project conducted a technical and economic viability study for a clothing sector company in Santa Catarina, characterizing the strategies needed to transform the traditional clothing manufacturing environment at the company into an environment of clothing manufacturing of the future, aligned to Advanced Manufacturing and Industry 4.0 strategies, aggregating concepts such as reconfigurable cellular manufacturing, new information systems, innovative production equipment, process automation and others.

### Factory-Laboratory of Rare Earth Alloys and Magnets

In partnership with Minas Gerais state, through the Minas Gerais Economic Development Company (CODEMIG), CERTI, together with the Brazilian Company of Metallurgy and Mining (CBMM), the Federal University at Santa Catarina and the Institute for Technological Research (IPT), developed the executive project for the first factory laboratory for rare earth alloys and magnets in Brazil. Seeking to provide the conditions essential to making Brazil a global player in the market of rare earth metals, the project, to be constructed at Lagoa Santa, MG, will allow the realization of a broad set of R&D activities in the field of rare earth magnets. The same environment will produce, on industrial scale, up to 100 tons per year of magnets for various applications such as aerogenerators, electrical motors, and others.



# Outstanding projects



## V-CONE Project

The objective of this project is to identify traceability options for V-cone type flow meters, using dimensional metrology methods, and to propose a concept for a portable meter for use on oil drilling platforms.



## SUBSEA - Modeling of the Research Network, Development and Innovation in Submarine Equipment Integrity

The objective of the project, financed by PETROBRAS, is to create an organization based on the concept of networks, which promotes and organizes R&D&I activities to solve integrity problems in submarine equipment. In 2015, the main challenges were the organization of technical knowledge in the field and the proposal of a network business model, which was well received by the client and other stakeholders.



## Santa Catarina State Water Resources Plan (PERH-SC)

The PERH is the public policy instrument for properly sharing supply and demand for water resources in the state. The Santa Catarina government (through the Secretariat of Sustainable Development (SDS) and FAPESC, the state Research Support Foundation) established a partnership with CERTI to develop innovations for this plan, incorporating greater effectiveness, savings, practicality and agility for water resources management. The organization of an Ecosystem of Innovation in Water Resources and the Dynamic Support Capacity approach to the watersheds are the highlights of the preparation of the instrument.



## Technology Parks

In 2016, CERTI reached a total of 26 technology parks developed in various Brazilian states. During the year, in addition to the state and municipal governments, it supported private companies, such as Alphaville Urbanismo and Sequóia 22 Empreendimentos e Participações organize private technology parks. These solutions conciliate the need to generate financial returns for investors with a business model aimed at aspects of science, technology and regional economic development. .



## The Iha Grande Bay Initiative - BIG 2050

Fruit of a partnership between CERTI, the UN Food and Agriculture Organization and the State Environmental Institute of Rio de Janeiro (INEA), the BIG 2050 Initiative was organized through the development of an environmental monitoring system for the Ilha Grande Bay: known as Radar BIG 2050. The purpose of Radar is to identify changes in the region's "environmental health" and based on the response of indicators associated to more relevant ecosystemic services, it presents targets of impact that will guide an incentive project known as the BIG Challenge. In this Challenge, different publics will be stimulated to present and develop solutions by means of a training mechanism and progressive selection will be based on open innovation.



### GINGA-NCL Formatter

This project involves the development of a new NCL module (NCL Formatter) for Ginga Middleware. The challenges of the project range from the complexity, to complying with the Brazilian Digital TV norm (ABNT NBR 15606-2), to the updating and integration based on the existing middleware code. With this solution, new televisions can be manufactured with more advanced technology and an improved version of middleware, allowing Brazilian consumers to have access to a better interactivity experience.



### Synapse of Innovation

The Synapse of Innovation program was consolidated in Santa Catarina with the realization of its 5th edition. In total, it has created the substantial number of 395 innovative companies in its 7 years of operation. The Synapse has expanded its operation into other states such as Amazonas, where it has created 32 companies, and in Espírito Santo, where the creation of 70 companies is planned.



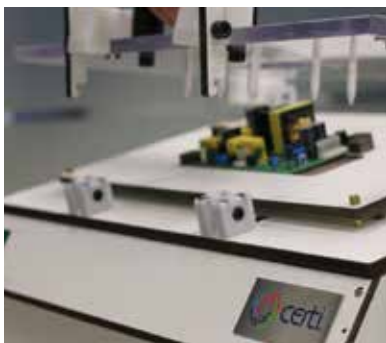
### Inovativa Brasil

CERTI, together with the Ministry of Industry, Foreign Commerce and Service (MDIC) and Sebrae Nacional, operates one of Brazil's largest innovative entrepreneurship projects, InovAtiva Brasil. In 2016, 2,523 projects were submitted to the project, which accelerated 600 startups and organized a network of 1,200 volunteers including mentors, evaluators and agents. In this year, Inovativa was recognized as the Best Accelerator of 2016 by ABstartups.



### Land Ownership Plan for The Serra do Tabuleiro State Park

The purpose of this project is to raise the economic and socio-political sustainability of this park, making it one of the five most visited Conservation Units in Brazil. The project is being developed on five work fronts, including a proposal for a shared administrative model, analyses of models for concessions for the public use of the park and the creation of criteria for prioritization of areas for regularizing land ownership. The project is extremely important, because it involves a model with potential for application in other Conservation Units.



### Jigas Radix – Functional test benches

The Jigas Radix project contemplates three functional test benches for electronic circuit boards of the product KaVo EXPERTsurg LUX, a micro-motor system for odontological surgery. The first bench tests the display board using image processing techniques, guaranteeing the composition of the colors presented to the dentist. The second bench tests the source board, submitting the board to voltages that simulate the real conditions of use of the equipment. Meanwhile, in addition to executing a complex sequence of tests of the CPU board, the third bench will also conduct the recording of the bootloader and the firmware in an automated manner during the tests, reducing product steps and costs.



### ProdSaude and RP2M – Organizing Technological Services Networks

CERTI organized and coordinated two of the 19 technology services networks in the Brazilian Technology System - SIBRATEC. Through agreements with the Ministry of Science Technology and Innovation (MCTIC/FINEP), in 2016 the operating models were established and transversal actions executed for the RP2M network (Mechanical Manufacturing) and ProdSaude (medical products). The innovative operating models generated various invitations for presentations at events, participations on national committees and proposals for new projects in the field of "networks".

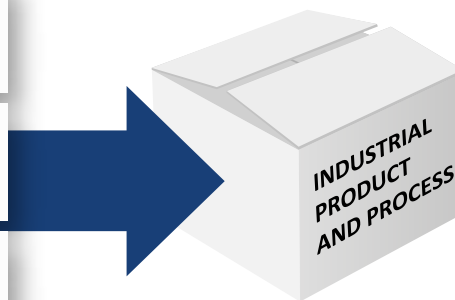
# EMBRAPII Unity



CERTI is an EMBRAPII unit that has been accredited to act in the field of competence of intelligent systems, allowing approved projects to have up to 33% of their total value subsidized.

## INTELLIGENT SYSTEMS

<b>SPECIALIST SYSTEM</b> Artificial intelligence, digital signal processing, algorithms, high-level applications, etc.	<b>CONNECTIVITY</b> Authenticity, security, Internet, cloud computing, M2M, etc.
<b>EMBEDDED SOFTWARE</b> Middleware, operating system, kernel, control algorithm.	<b>HUMAN MACHINE INTERFACE</b> Manipulators, monitors, cameras, registers, interactive displays, biometrics.
<b>ELECTRONIC HARDWARE</b> Electronics, microelectronics, Microsystems (MEMS) firmware,	<b>SENSORS AND ACTUATORS</b> GPS Operation, signal acquisition, electro-mechanical triggering, etc.
<b>EQUIPMENT AND DEVICES</b> Encapsulating, interconnection, cabinets, mechanics, micromechanics, supply, design, optics and special materials, integration to physical system, etc.	



## Fund-raising

- Finep Subvenção
- BNDES Funtec
- FINEP 30 dias
- BNDES crédito
- BRDE Inova

## Laws for Tax Incentives to Research and Development of Technological Innovation Capturing Resources

### LAW 8.248/91 Computing Law

**AT WHOM IT IS AIMED:** Companies that produce in Brazil computing equipment listed in Decree no. N° 5.906/06, of 26/09/2006. Based on the Computing Law (Lei 8.248), companies that invest in R&D and innovation activities internally or with R&D institutes (such as CERTI) for computing and automation goods, can receive reductions of up to 95% of the Industrialized Product Tax (IPI).



### LAW 11.487 The Rouanet Law for Research

**AT WHOM IT IS AIMED:** This law is for companies in any sector that invest in research and development of technological innovation, use the real profit accounting regime and have operating profit during the year.



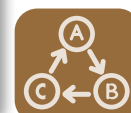
### LAW 11.196/2005 Lei of the Good

**AT WHOM IT IS AIMED:** Brazilian companies, from any sector, that invest in research and development of technological innovation, use the real profit accounting regime and have operating profit during the year can benefit from this law. The law aims to stimulate patents, thus decreasing imports of computing equipment and components, as well as local training and to attract new companies to the country.



### DIRECTIVE 950

**OBJECTIVE:** The purpose of Directive 950 is to define the methodology for recognition of technology developed in the country for goods or products. Advantages to the company: a) right of preferences in public bids for purchasing goods and services. b) the margin of preference can reach up to 25% of the foreign products. They are specifications of parameters so that equipment (product) is considered to be developed in Brazil.



## ECOSYSTEM OF ORGANIZATIONS WITH OPERATIONAL AND STRATEGIC PARTNERSHIPS WITH CERTI

The CERTI Foundation has partnerships with countless organizations and institutions in Brazil and abroad. However, the institutional relationship with the entities mentioned below stand out because of the existence of specific cooperating agreements or because of shareholder partnership in the company.



### INSTITUTO SAPIENTIA – ICTI

Instituição Científica Tecnológica de Inovação [Scientific Technological Institute for Innovation] (ICTI) – is based in Brasília and focuses on the digital technology segment. In 2016, the highlight activity for IS was its move to new, larger and more functional offices.



### INSTITUTO CERTI AMAZÔNIA – ICTI

ICTI operates in Manaus, and is dedicated to the industrial sector and to the environmental challenges in the region. In 2016, ICA expanded its projects in the field of digital convergence.



### CVENTURES

This is a company that manages capital and shareholder participations, operating as a venture capital fund with R\$ 85 million to invest in technology startups. In 2016, Cventures reached 85% of investment of the fund that it manages.



### DARWIN STARTER

This is an accelerator of technology companies that articulates angel investments and corporate venture resources. In 2016, Darwin began its second round of acceleration, in partnership with the companies CETIP, CNseg par, RTM and Neoway.



### SAPIENS PARK

This is an innovation park designed to attract and host innovative companies in the fields of ICT, life sciences, energy and the creative economy. In 2016, Softplan began operations at a new headquarters.



### SINAPSE DA INOVAÇÃO

This program stimulates and supports new projects of innovative companies through universities. There were more than 1,300 proposals for projects in the SINAPSE round in Santa Catarina in 2016.



### INVENT

This is an innovation center that was conceived to operate as an “ecosystem in a building”, especially in the context of technological parks. INVENT was conceived and organized in 2016, and aims to begin operations in 2017.



### LABELECTRON

Factory-Laboratory of the CERTI Foundation that works in the production of high complexity electronic circuit boards in small series. In 2016, LABelectron expanded its client portfolio.

## ELEMENTS OF ORGANIZATIONAL IDENTITY OF THE ECOSYSTEM

### Purpose / Cause

Make important contributions to the competitiveness of companies and the sustainable development of Brazil by helping to develop a consistent and dynamic ecosystem of innovation, technology and entrepreneurship.

### Beliefs and values

Honesty and loyalty  
Innovation and courage  
Results for the client  
Competence and agility  
Shared work in a team  
Continuous learning  
Partnership and cooperation  
Personal and professional prosperity

### Mission

Develop solutions in innovation and technology to promote the competitiveness and importance of clients and partners

### Vision of the future

To be the 1st or 2nd best ICTI in its field of operation to promote competitiveness and relevance of a significant group of large companies, strategic government agencies and outstanding start-ups.

### Strategic guidelines

Importance

Sustainability

Satisfaction

Synergy

Harmony



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