

The background is a complex collage of green-tinted images. It includes a world map in the top left, a city skyline at the bottom left, and several overlapping panels that look like data dashboards or reports. These panels contain various charts, including pie charts, bar charts, and line graphs, as well as some text and icons. The overall aesthetic is high-tech and data-driven.

TECH REPORT 2019

ACATE
OBSERVATORY

© ACATE. All rights reserved

ACATE

www.acate.com.br

Neoway 

TECH REPORT 2019

www.acate.com.br

ACATE
OBSERVATORY

MANAGEMENT 2018-2020

PRESIDENT

DANIEL DOS SANTOS LEIPNITZ

BUSINESS VICE PRESIDENT

IOMANI ENGELMANN GOMES

FINANCE VICE PRESIDENT

MARCOS LICHTBLAU

COMERCIAL VICE PRESIDENT

SILVIO KOTUJANSKY

TECHNICAL TEAM

EXECUTIVE DIRECTOR

GABRIEL SANT'ANA PALMA SANTOS

RESEARCH

HENRIQUE REICHERT

EDILENE CAVALCANTI DOS ANJOS

DESIGN

JAISON HENICKA

FABIO HERNANDEZ

PRESS AND CONTENT ASSISTANT

DIALETTO

TECHNICAL PRODUCTION

CARAVELA SOLUÇÕES

ACATE

TECH REPORT 2019 - Florianópolis/SC
94.p. il. col.; 29,7x21CM

ISBN 978-65-80955-00-8

HOW TO QUOTE

ACATE requires to be indicated as source information in any press release, opinion article, academic paper, editorial or journalistic article that mentions the data collected in its study on Santa Catarina Technology market, naming the source as:
ACATE Observatory: TECH REPORT 2019 Panorama Santa Catarina Technology Sector 2019

The background is a green-tinted image featuring a line graph with an upward trend and several stacks of coins, suggesting a financial or economic theme.

ACATE

OBSERVATORY

www.acate.com.br/observatorio



CONTENTS

08 Letter from the President

10 Introduction

12 Highlights

14 **The evolution and growth of technology professionals**

16 **The greatness of a disruptive industry**

- 18 Companies with history
- 20 Santa Catarina technology
- 22 Revenue in the digital economy
- 24 Average revenue evolution
- 26 Productivity growth

30 **The promoters of technology sector in Santa Catarina**

- 32 The entrepreneur profile
- 36 Connected! The network of the Santa Catarina technology collaborators
- 42 In core: Santa Catarina technology specialization
- 46 Hiring! sector job openings

50 **Building skills for the future of technology**

- 52 College Education's improvement for technology in Brazil
- 55 The profile of Santa Catarina graduates in technology

58 **ACATE Business Verticals**

- 60 Agribusiness
- 62 Connectivity & Cloud
- 64 Construtech
- 66 Creative economy
- 68 Education
- 70 Energy
- 72 Fintech
- 74 Governance & Sustainability
- 76 IoT
- 78 Manufacturing
- 80 Health & Care
- 82 Security
- 84 Retail

85 **Find out about other ACATE Programs**

86 **Methodology**



Letter from the President

The technology sector has bypassed economic crises in a remarkable way. In the last four years, the number of technology companies in Santa Catarina has doubled and 3,200 new jobs were created in 2018. Currently, the sector accounts for 5.8% of Santa Catarina's GDP, corresponding to revenues of R\$ 15.8 billion, and positioning the state as the sixth largest technology hub in Brazil.

The results we achieved in technology are possible because of our people. There are 15.7 thousand entrepreneurs and 51.8 thousand employees who contribute to the success of the Santa Catarina technology sector. Moreover, the number of employees in the technology sector in Santa Catarina places it among the largest participations in Brazil.



DANIEL DOS SANTOS LEIPNITZ
PRESIDENT

Graduated in Business Administration from Universidade Estadual de Santa Catarina - ESAG (1997), MBA in Global Administration from Independent University of Lisbon and Master in Business Administration from Universidade Estadual de Santa Catarina (2002). He is currently Corporate and Human Relations Officer at Visto Sistemas, a nationwide company, and Startup Vigix. He is also president of ACATE - Associação Catarinense de Tecnologia, for 2018/2020 period.

Through the data collected in this research, you will be able to understand how the technology sector in Santa Catarina and in Brazil has been working and evolving and how this reflects in the image that Santa Catarina propagates. Through innovation and disruptive thinking, our entrepreneurs create solutions that solve real issues and excel at the technology sector.

In Santa Catarina, the region of Grande Florianópolis has the greatest representativity in the number of companies, accounting for 32% of the total, followed by Vale do Itajaí (27%), Northern Region (20%), Western, Southern and Serra Catarinense (20%). ACATE has been working with various ecosystem agents to bring more development and innovation to all regions of the state with the creation of Innovation Centers and LinkLab Units.

The capacity of our companies and the dynamism of all players impress me more every year. We have people and companies that stand out in their areas, and nationally we already are in the spotlight, but we want more. We need to show the world Santa Catarina's potential in technology and innovation. This study reinforces this position and the understanding of how the Santa Catarina ecosystem functionated in the last year.

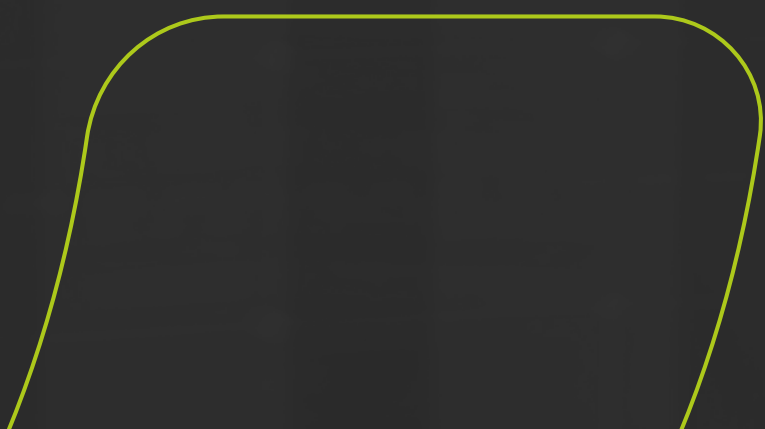


Introduction

Santa Catarina Tech Report

ACATE Observatory has the purpose to understand the context in which Santa Catarina technology sector is placed, in order to evaluate the relevance, growth and the transformations of the sector.

Santa Catarina is in the spotlight regarding technology in Brazil, particularly by the specialization and productivity of our companies. Tech Report 2019 aims to consolidate and analyze these numbers, showing the relevance, growth and challenges of Santa Catarina technology.





With this in mind, this **Tech Report** shows the **Development and growth of professionals in the technology sector**, and the **evolution of a disruptive sector**, showing numbers about the companies' growth and revenue. After that, it is presented the **promoters of technology in Santa Catarina**, highlighting the entrepreneurs and collaborators that drive technology efficiency in the region. **The opportunities and challenges in skills building** are also an important key to sustain competitiveness in the local technology scenario. The initiatives and cases of success that involve several economical areas in the region with innovation and technology are presented in the chapter **Business Verticals**.




Highlights

Santa Catarina's technology sector has revenues of R\$ 15.8 billion and represents 5.8% of the state's GDP. The participation of ACATE member companies is 64% of this total.

11,200 companies contribute to the development of Santa Catarina technology. Half of them were created in the last four years.

Florianópolis has the second highest rate of technology companies per thousand inhabitants, of 4.9, second only to São Paulo, with 5.4.

The productivity of Santa Catarina companies in the technology sector is almost R\$ 100 thousand per worker, while the national average does not exceed R\$ 72 thousand.



With 51,800 employees, Santa Catarina is the 4th largest hub in Brazil's Technology sector, behind only the three most populous states in Brazil (SP, MG and RJ).

Santa Catarina is the only state in Brazil that has more than half of the positions in Core, which shows the high level of expertise in the technology sector.

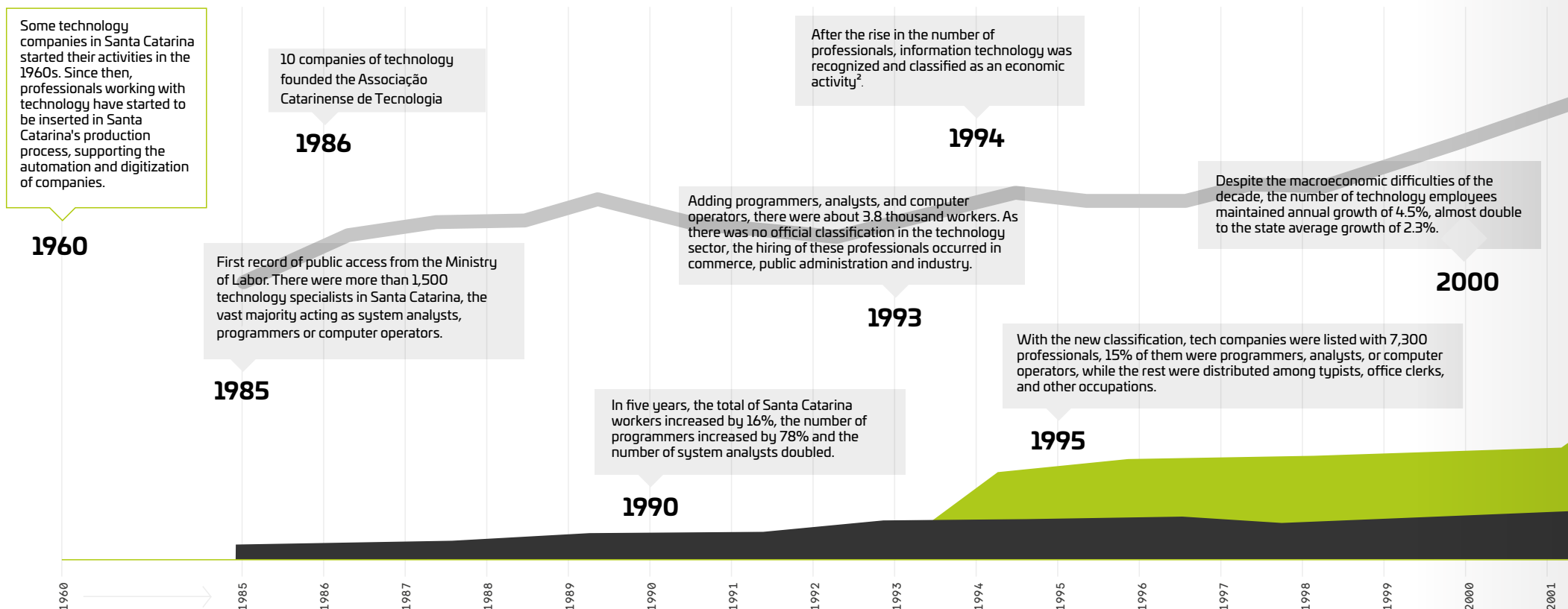
In 2018, Santa Catarina's technology sector generated 3,000 new jobs. Grande Florianópolis region contributed the most to this number, with nearly 1,200 new jobs.

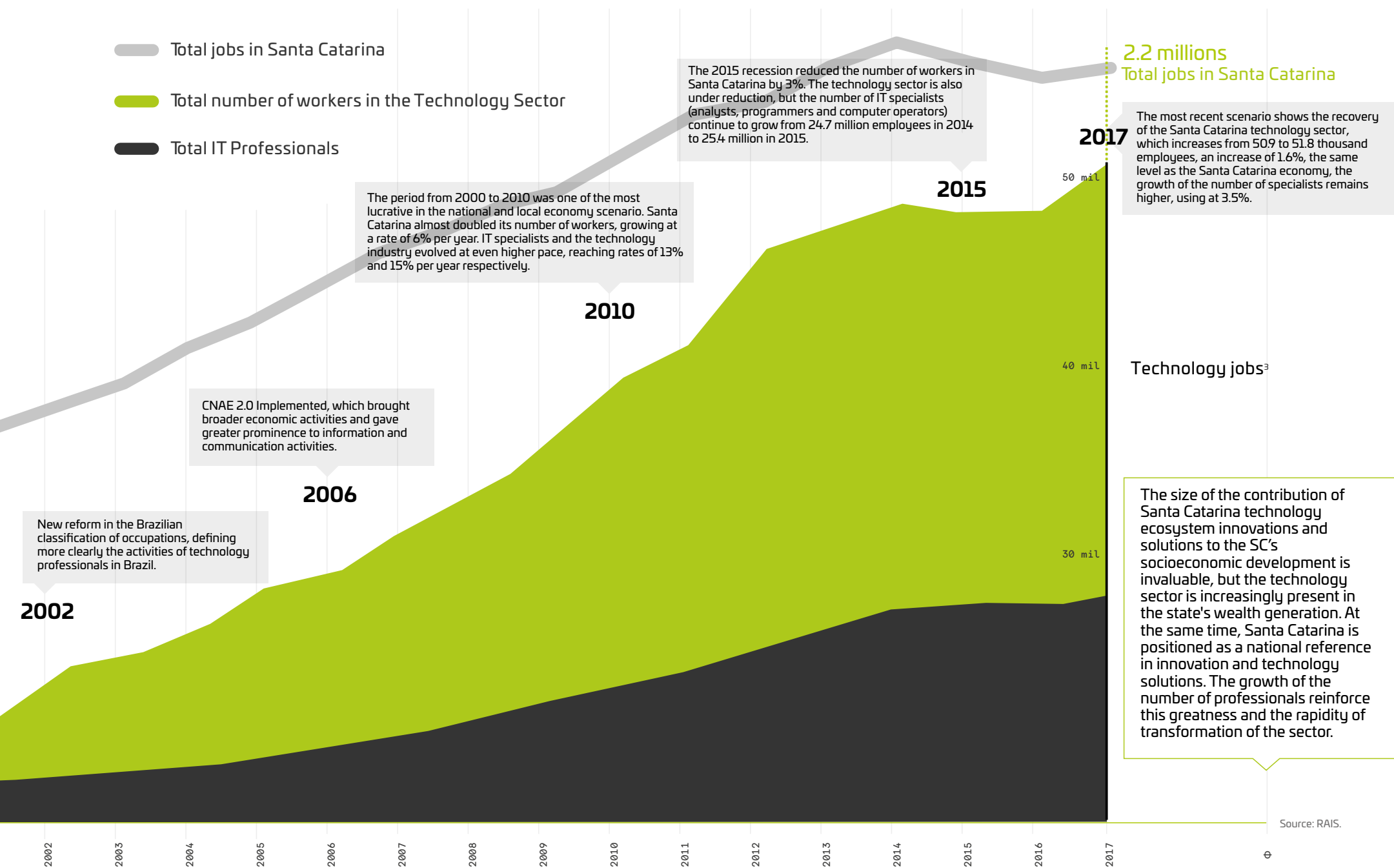
Santa Catarina is the second state in Brazil with the highest percentage of higher education students in technology courses.

DEVELOPMENT AND GROWTH OF PROFESSIONALS IN THE TECHNOLOGY SECTOR

Technical advancement and economic development are related to the emergence of technological paradigms. Whenever new production methods and innovations are created, new skills, knowledge and opportunities are also generated¹.

This is the case of the technology sector, which since the 1980s has been monitored and driven by the Associação Catarinense de Tecnologia. After long years, the sector has gained relevance for official statistics and for the development of the Brazilian and Santa Catarina economy, being one of the most promising activities of the state.





¹ Dosi, 1988. ² IBGE, 2009. ³ Two scales were used in the chart to represent the evolution of technology employees within the total workers of Santa Catarina

The background is a dark charcoal grey. It features several thin, bright yellow lines that form abstract, organic shapes. On the left, a large, vertical, teardrop-like shape curves upwards and then back down. In the upper right, there is a smaller, rounded shape that looks like a partial oval or a drop. In the lower right, another rounded shape is visible, similar in style to the one above it. The overall aesthetic is minimalist and modern.

*The greatness
of a disruptive
industry*



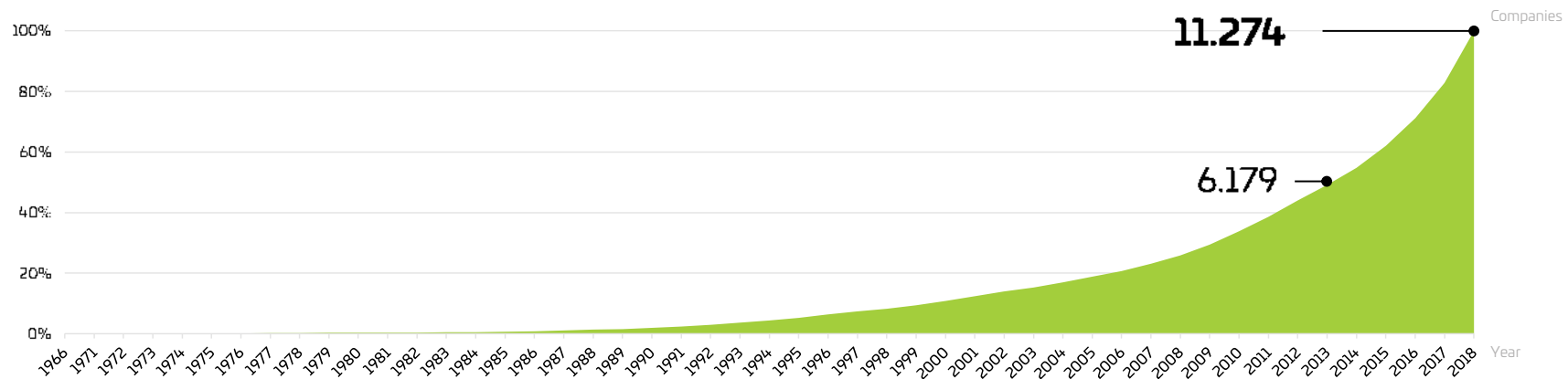
*Santa Catarina's technology sector is made up of **11.2 thousand companies**, which made **R\$ 15.8 billion in revenue**, positioning it as the sixth largest in Brazil. Even in a low growth scenario, the number of companies has doubled in the last 3 years, bringing business opportunities to the state's six mesoregions.*

Besides the greatness, the Santa Catarina sector is shown for its productive efficiency, it has a bigger difference in Brazil, with around R\$ 100 thousand of revenue per employee. As a representative of the Santa Catarina technology sector, ACATE presents itself as cause and effect of this phenomenon, since it has evolved with the sector and, at the same time, promotes actions for the segment that develops more and more.

COMPANIES WITH HISTORY



Technology companies in Santa Catarina



Source: Neoway.

The companies which formed Santa Catarina's technology sector began their journeys in the 1960s, when ACATE was founded, in 1986, they were about 100.

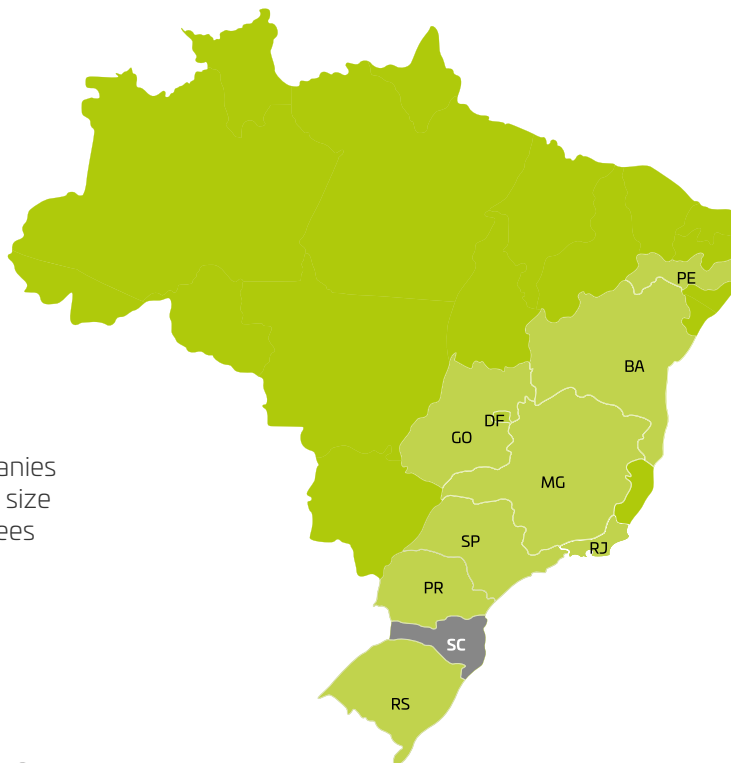
In 2014, the number of companies in the technology sector reached 6,179, just over half of the total units in 2018, when it counted for a total of 11,274 companies.

Even though in a national scenario of low economic growth, 4,284 new companies in the technology sector were created in the last 3 years. This is a big change when compared to the period of 1966 to 2011 when only 4,300 companies were created.

Brazil

The 11,000 companies in Santa Catarina places the state as the sixth largest cluster of technology companies in Brazil, behind São Paulo, Rio de Janeiro, Minas Gerais and other southern states.

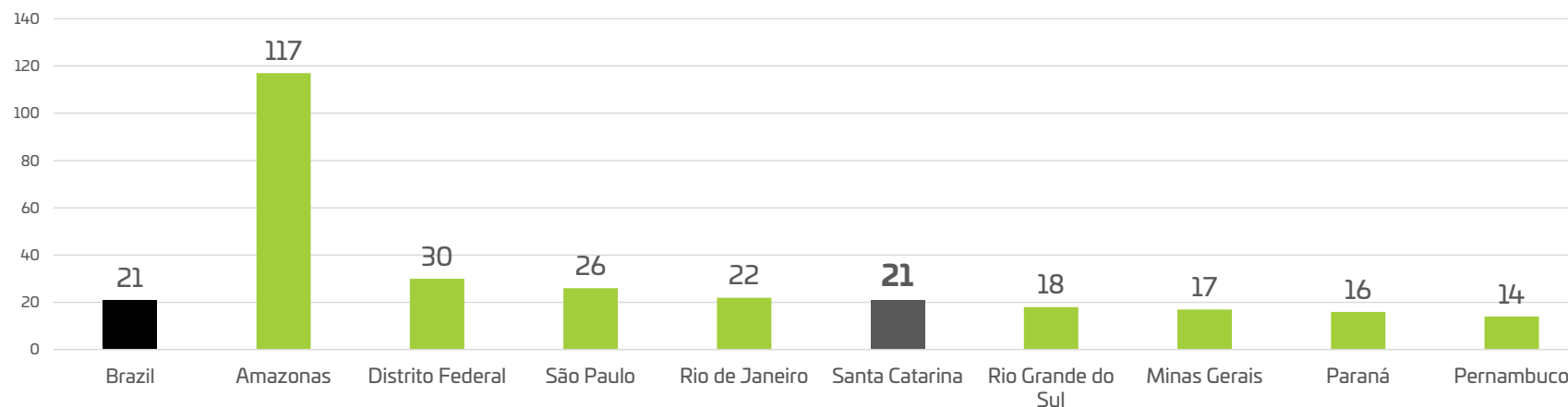
The state of São Paulo gains relevance by concentrating more than 4 out of each 10 companies in the sector, while Amazonas stands out for the size of its companies, with an average of 117 employees per company, driven by the Manaus region.



Percentage Amount of companies

42.4%	São Paulo	126.802
10.3%	Rio de Janeiro	30.752
8.3%	Minas Gerais	24.855
6.3%	Paraná	19.008
5.9%	Rio de Grande do Sul	17.565
3.8%	Santa Catarina	11.274
3.3%	Bahia	9.902
2.4%	Distrito Federal	7.199
2.3%	Goiás	7.035
2.2%	Pernambuco	6.645

Average number of Employees



Source: Neoway.

SANTA CATARINA TECHNOLOGY

According to data from 2018, there are 11,274 companies in the Santa Catarina technology sector that are distributed in all mesoregions of the state. Grande Florianópolis is the region with the largest number of companies with 32% of the total. Following are the regions of Vale do Itajaí, with 27% and Norte, with 20%. Finally, the regions of the Oeste, Sul and Serra Catarinense appear with about 20% of the total companies.

Sector companies by mesoregion



Source: Neoway.

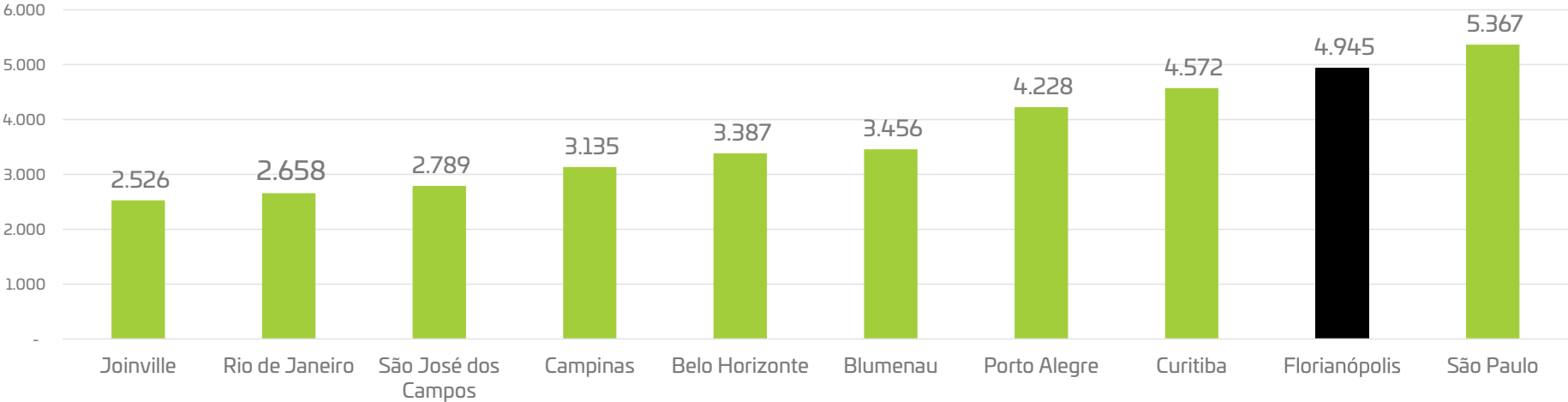
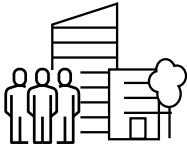
Percentage	Amount of companies
32.4%	Grande Florianópolis 3.656
26.9%	Vale do Itajaí 3.033
19.8%	Norte Catarinense 2.228
10.6%	Oeste Catarinense 1.192
7.8%	Sul Catarinense 885
2.5%	Serrana 280



Among the cities of Santa Catarina, the highlights are Florianópolis (2,438), Joinville (1,473) and Blumenau (1,218) centers, together concentrating 5,129 companies in the Santa Catarina technology sector (45%).

Florianópolis stands out in the national scenario, besides being the 16th city with the largest volume of companies, it has the second highest rate of company per inhabitant, with 4.9 companies per thousand inhabitants, second only to São Paulo, with 5, 4 technology companies per thousand inhabitants.

Companies per thousand inhabitants

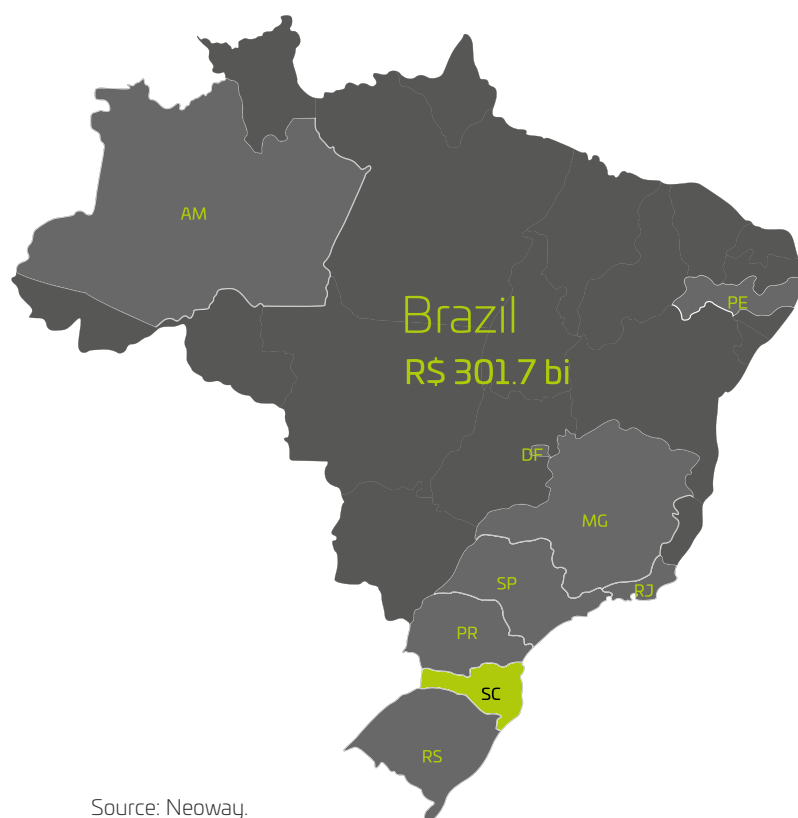


Source: Neoway.

REVENUE IN THE DIGITAL ECONOMY

Revenue from Brazil's Technology sector was over R\$ 300 billion in 2018, which corresponds to 4.4% of the GDP. About half of this is concentrated in the state of São Paulo (47.5%), while Santa Catarina is positioned as the sixth largest economy in the sector, holding 5% of total revenue in the Brazil's technology sector.

BRAZIL



Source: Neoway.

Share	Amount of companies
47.5%	São Paulo R\$ 143.1 bi
10.7%	Rio de Janeiro R\$ 32.2 bi
6.2%	Minas Gerais R\$ 18.8 bi
6.2%	Rio Grande do Sul R\$ 18.7 bi
5.6%	Paraná R\$ 16.8 bi
5.2%	Santa Catarina R\$ 15.8 bi
4.2%	Distrito Federal R\$ 12.6 bi
4.0%	Amazonas R\$ 12 bi
1.6%	Pernambuco R\$ 4.9 bi

How big is the Brazilian technology sector?

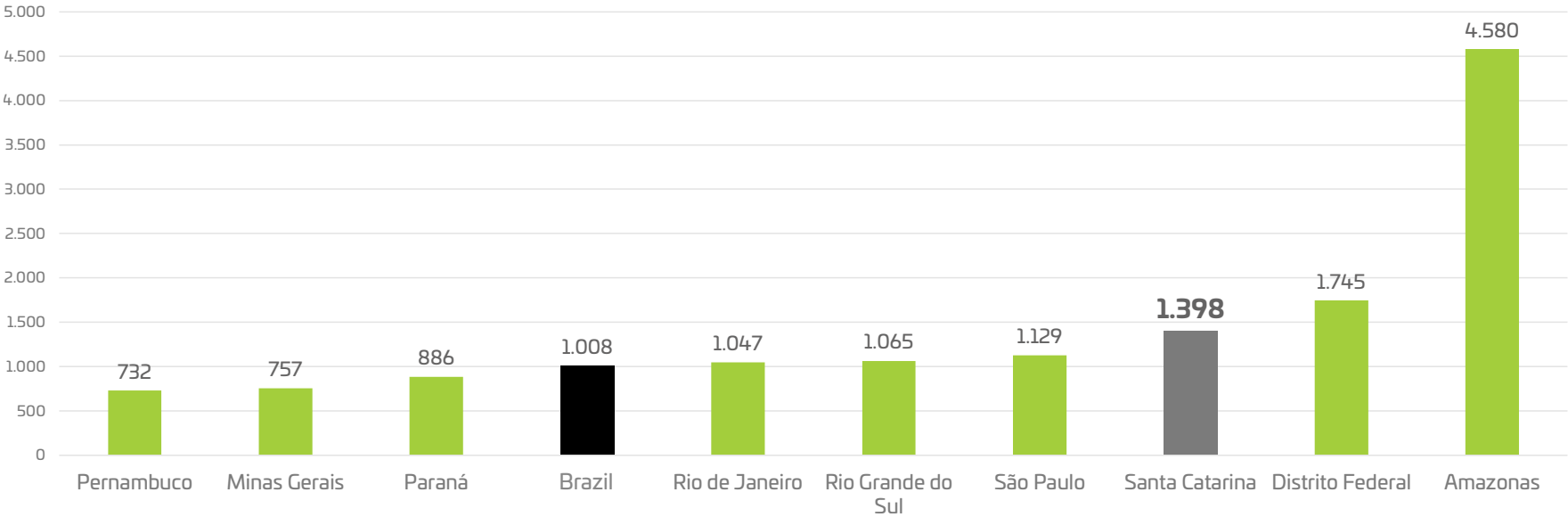
4.4%
of GDP



1.2x
Santa Catarina's
GDP

Taking into account the total revenue by the number of companies, the average revenue for Brazilian companies remains above R\$ 1 million per year. This scenario is driven by the performance of the state of Amazonas, which has an average revenue of R\$ 4.5 million for its 2,600 companies operating in the sector.

Average revenue
(in thousand R\$)

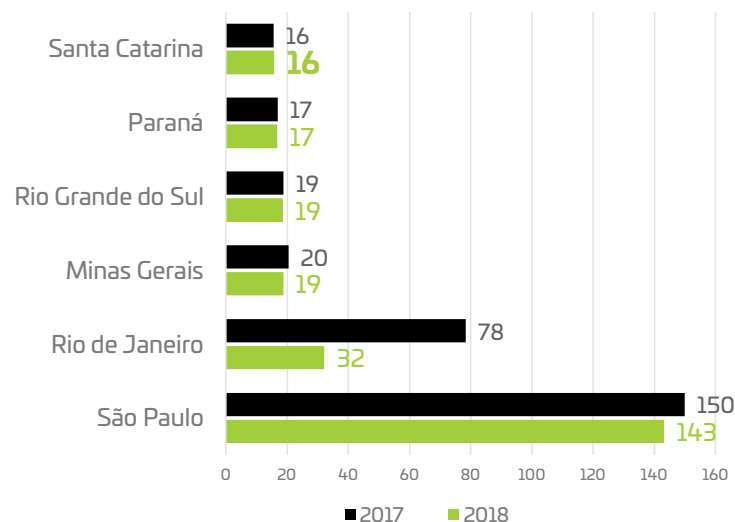


Source: Neoway.

AVERAGE REVENUE DEVELOPMENT

Among the six largest technology hubs in Brazil, Santa Catarina highlights by the positive performance of recent years. In terms of total revenues, it was the only state that showed evolution, while national numbers reached 34% reduction. In part, these figures are driven by the drop in average corporate revenues, which reduces the national level by 22.6%, while is also influenced by the review of active companies by the government last year³.

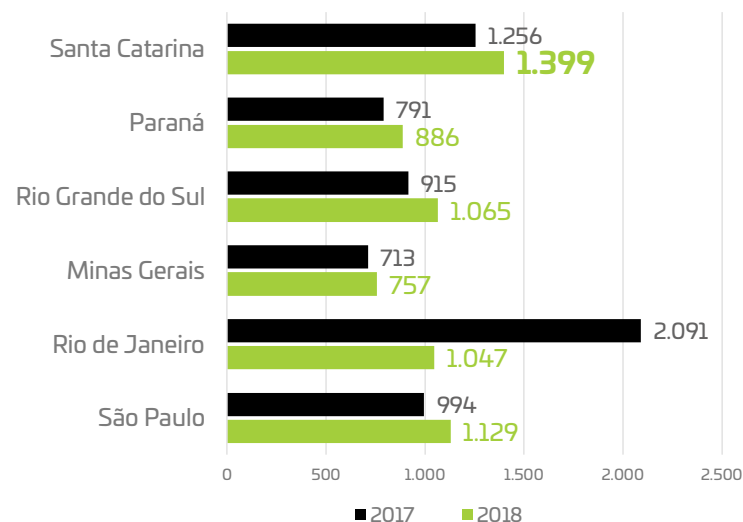
Revenue development in the technology sector



Source: Neoway.

The increase in revenue in the Santa Catarina technology sector is driven by the improvement in the companies' average revenue, which went from R \$ 1.2 million to R \$ 1.4 million, an 11.3% increase. States such as Rio Grande do Sul, Paraná and São Paulo also showed an increase. In 2015, the research on the technology sector included only high-level companies, which explains the average turnover higher than in the other years.

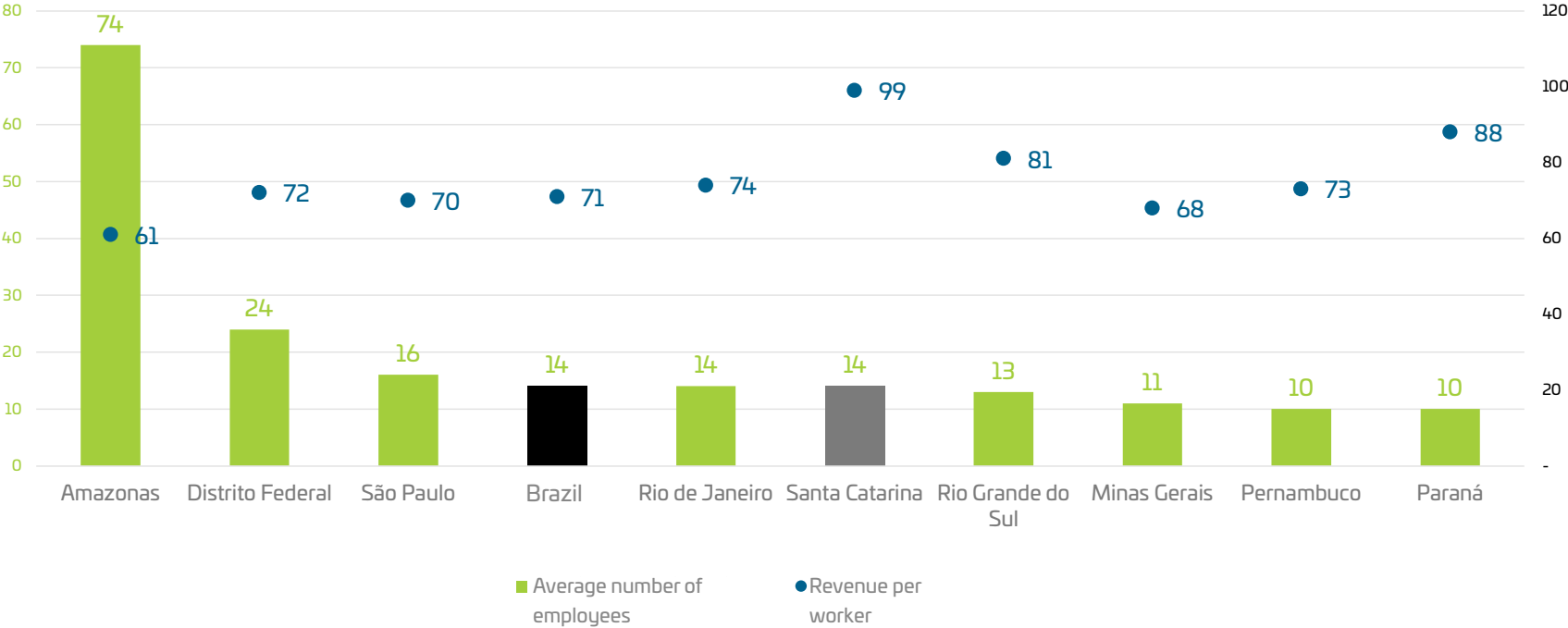
Average revenue development in the technology sector



³For more information, <http://receita.economia.gov.br/noticias/ascom/2018/setembro/receita-federal-declarara-inaptos-3-4-milhoes-de-inscritos-no-cnpj-por-omissao-de-declaracao>.

Considering the average revenue by person, **Santa Catarina stands out as the highest productivity in the country.** Santa Catarina companies' income per worker is nearly R\$ 100 thousand, while the national average does not reach R\$ 72 thousand.

Average size and productivity
(in thousand R\$)

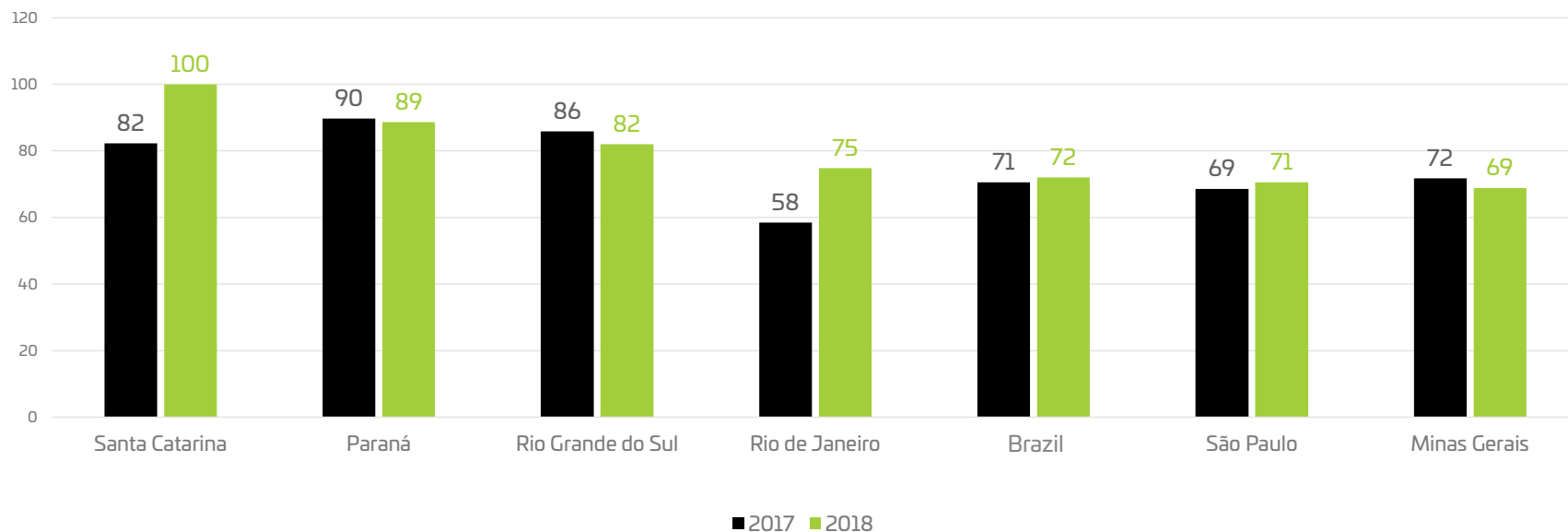


Source: Neoway.

PRODUCTIVITY DEVELOPMENT

Santa Catarina's high numbers on productivity has even more relevance when analyzing the development of this indicator in the last year. While average earnings per employee in Brazil increased by only 2%, it increased by 21% for the state of Santa Catarina, which is a growth lower only than the state of Rio de Janeiro, which, however, had a significant decrease in the number of companies and revenue in the same period.

Productivity development in the main technology hubs of Brazil (in thousand R\$)



Source: Neoway.

SANTA CATARINA

Accounting for more than 5% of Brazil's revenue in the technology sector, Santa Catarina has a **revenue of R\$ 15.8 billion**. The share of the technology sector in Santa Catarina total GDP is higher than the Brazilian average and represents about 5.8% of its economy⁴.

Among the regions within Santa Catarina, the highest percentage of revenue is in Grande Florianópolis, which totals R\$ 6.7 billion (42.5%), Vale do Itajaí (21.4%) and Norte Catarinense (20.5%) follow it.

Technology Industry revenue by Mesoregion



Share	Total revenue
42.5%	Grande Florianópolis R\$ 6.7 bi
21.4%	Vale do Itajaí R\$ 3.4 bi
20.5%	Norte R\$ 3.2 bi
7.7%	Oeste R\$ 1.2 bi
5.3%	Sul R\$ 836 mi
2.6%	Serrana R\$ 414 mi

How much does this revenue represent?

5.8%
of Santa Catarina
GDP



Source: Neoway.

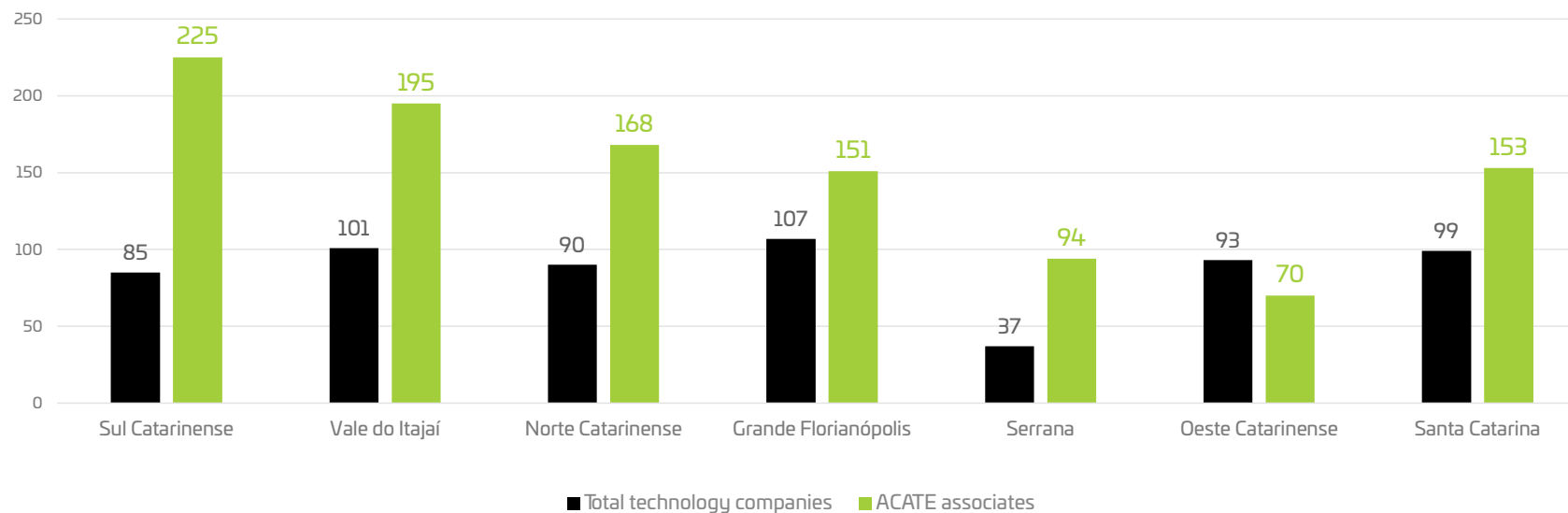
⁴ Considering the GDP value of Santa Catarina of 2016 in 2018 real

ACATE promotes productivity among its partners!

ACATE's representativeness keeps growing, with a share of registered companies in the sector's rising to 64% of the total, which represents an increase of 7 pp compared to a 57% share in the previous year.

Furthermore, the productivity of ACATE member companies is also higher than the average for the sector. Considering the revenue per worker, ACATE's members performance is 54% superior, from a R\$ 99 thousand per worker to R\$ 153 thousand among the ACATE's members. This improvement repeats for five of the six regions.

Productivity by mesoregion (in thousand R\$)



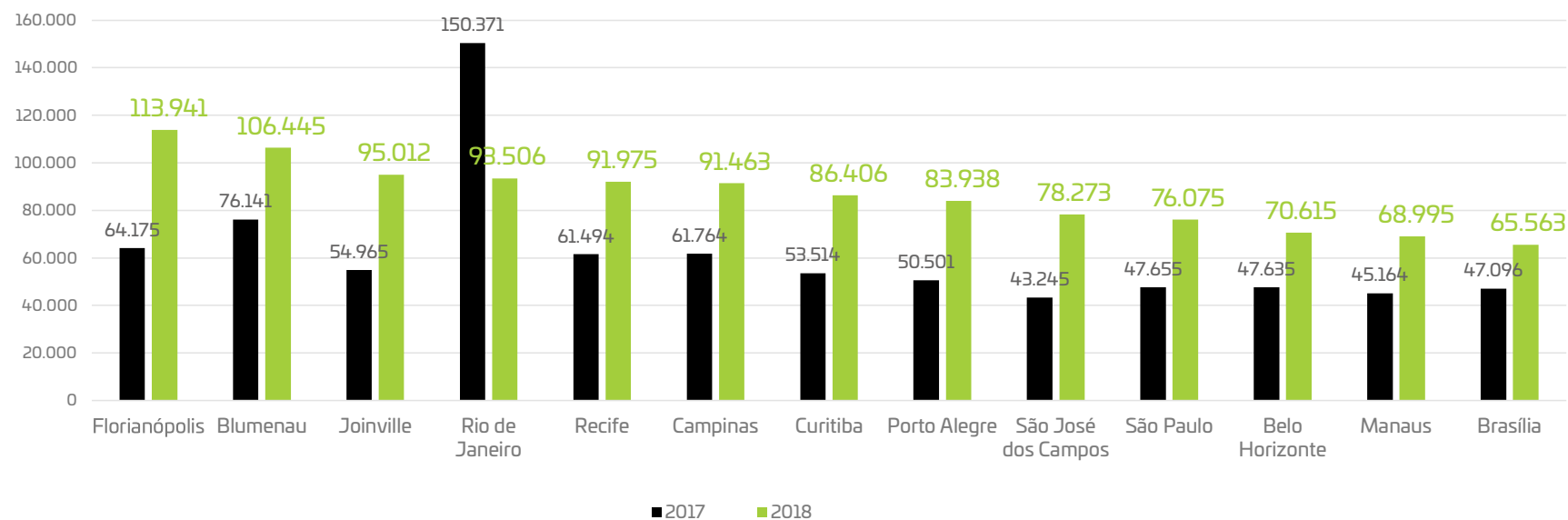
Source: Neoway.

High productivity Technology Hubs

The Technology Centers of Santa Catarina also stand out for their productivity. Considering the average revenues and number of employees by company, the cities of Florianópolis, Blumenau and Joinville stand out for their productive efficiency.

In Florianópolis, each worker counts for about R\$ 114,000 in company revenue, while in Blumenau and Joinville the number is nearly R\$ 100,000 per worker. In São Paulo and Rio de Janeiro, which have higher revenues share, the level of revenue per worker is R\$ 76 thousand and R\$ 93 thousand, respectively.

Productivity in the technology sector in the main cities (in thousand R\$)



Source: Neoway.

The background is a dark, textured grey. It features several abstract, hand-drawn yellow lines. A large, thin yellow line starts from the top left, curves around the left side, and extends towards the bottom. Another yellow line starts from the top center, curves to the right, and then loops back down towards the bottom center. A third yellow line starts from the bottom center, curves to the right, and then loops back up towards the top right. These lines create a sense of movement and frame the central text.

The promoters of technology sector in Santa Catarina



*There are **15,7 thousand entrepreneurs and 51,8 thousand workers** that contribute to the success of the technology sector in Santa Catarina.*

*This is the result of creating opportunities in all regions. There were around **3,2 thousand new jobs** created in 2018, that offer, in average, a **payment 55%** above for the region.*

THE PROFILE OF THE ENTREPRENEURS

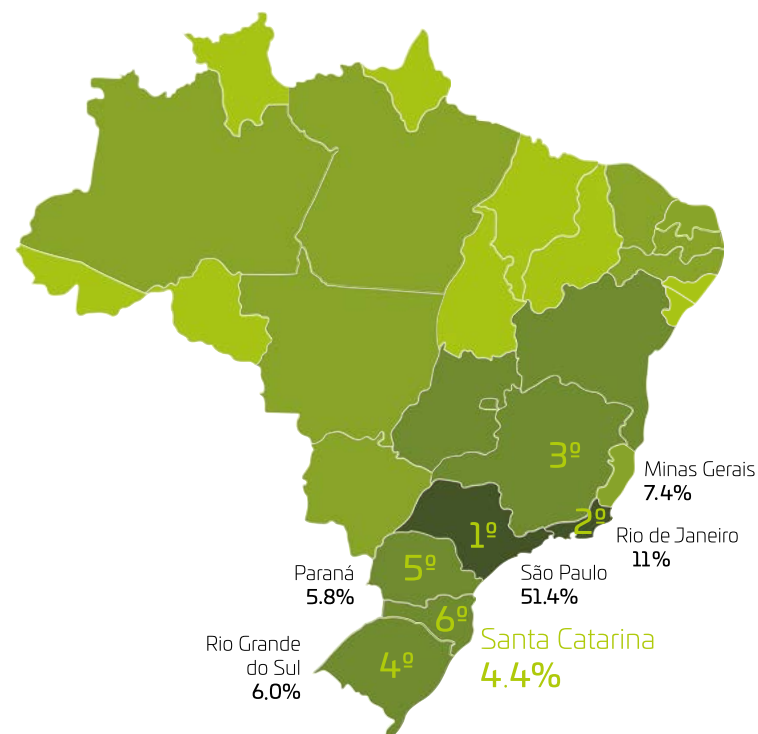


366.7 thousand entrepreneurs believe in the technology sector in Brazil.

Brazilian entrepreneurs are mainly male, around 73.7% of the total number of registered business partners in the country. They are predominantly in the age of 29 to 43 years old which is the same average age for women entrepreneurs.

Half of those entrepreneurs are located in the state of São Paulo (51.4%), followed by Rio de Janeiro (11%), Minas Gerais (7.4%), Rio Grande do Sul (6%), Paraná (5.8%) and Santa Catarina (4.4%).

Number of entrepreneurs in the technology sector, % of Brazil's total



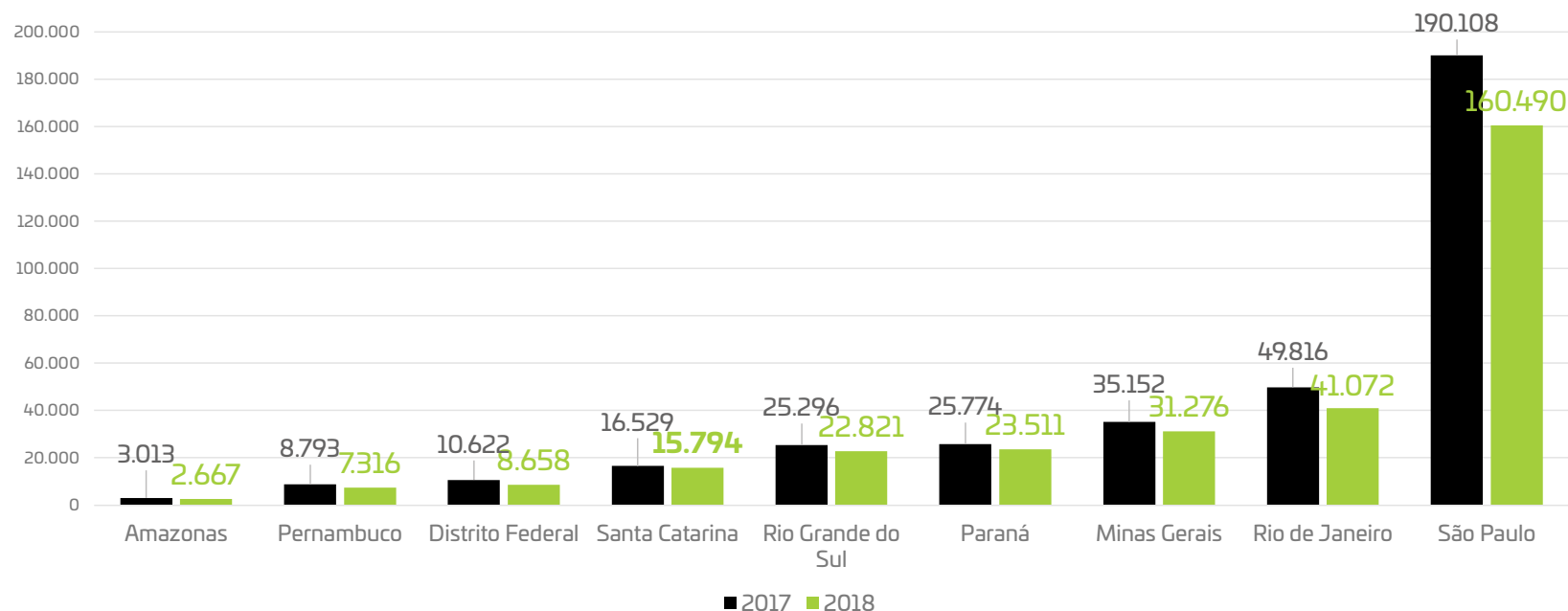
Source: Neoway.

Development in the number of entrepreneurs

Santa Catarina's share in the number of entrepreneurs in the technology sector in Brazil is increasing year by year, rising from 3.7% in 2015 to 4.4% in 2018.

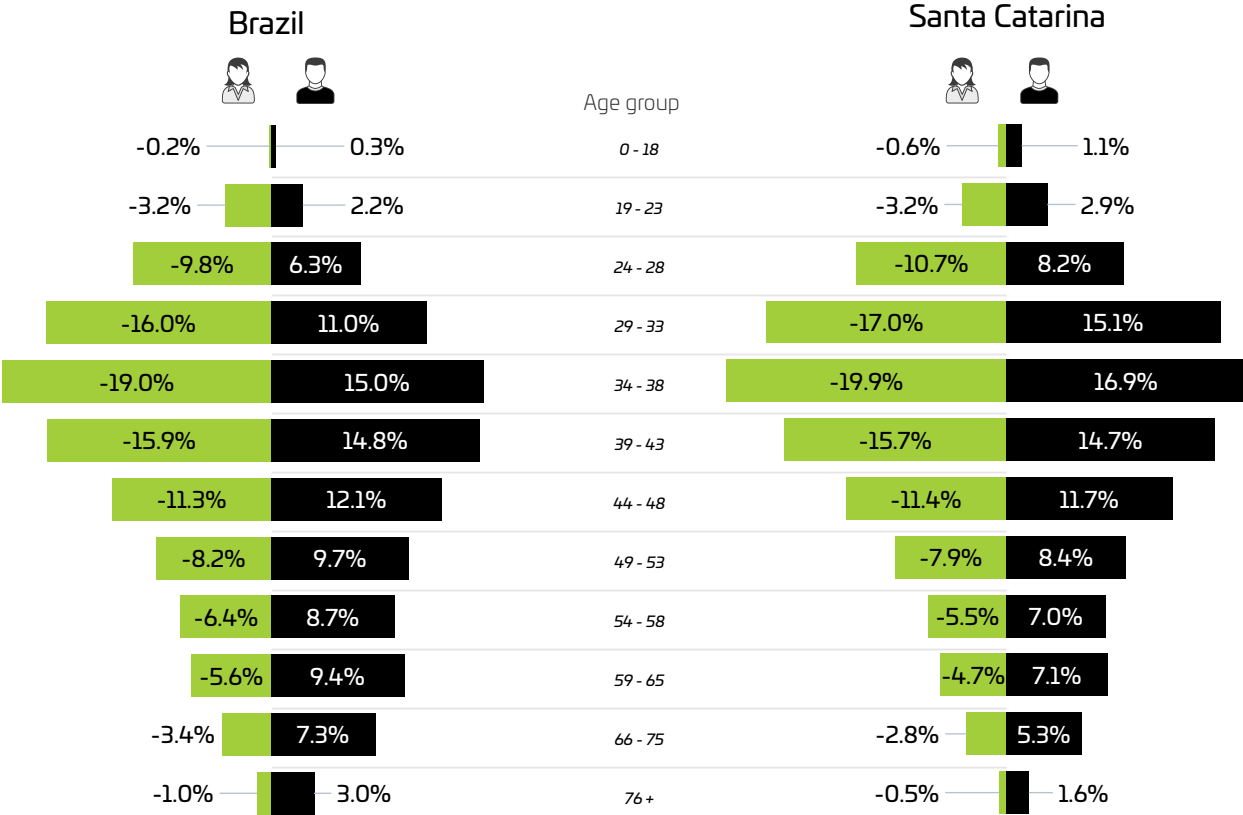
The comparison in the number of entrepreneurs along the last years for the main Brazilian technology hubs confirms Santa Catarina as the only state that showed growth in relation to 2015.

Development in the number of entrepreneurs by State



Source: Neoway.

In Santa Catarina, the 15,794 entrepreneurs are more concentrated in regards of gender. Three out of four are man, predominantly between 29 to 43 years old, as well as in the countrywide scenario, but with an average age of 41 years. The distribution by cities is more equally compared to Brazil's scenario. They are in Florianópolis (15.5%), Joinville (11.8%), Blumenau (8.5%) and São José (4.3%).

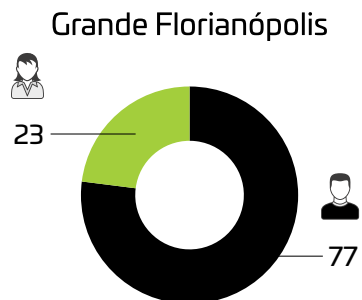


Source: Neoway.

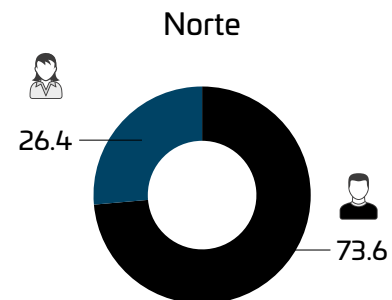
A third of these entrepreneurs are located in the mesoregion of Grande Florianópolis (33%), followed by a quarter in Vale do Itajaí (26%), a fifth in the Norte Santa Catarina (21%). The others are in the Oeste (10%), Sul Area (7.3%) and Serrana mesoregion (2%).

Gender

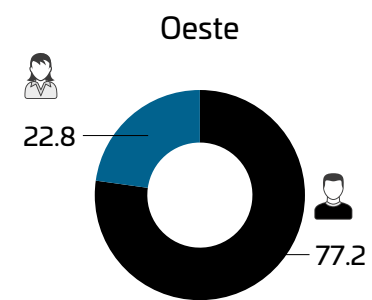
Age



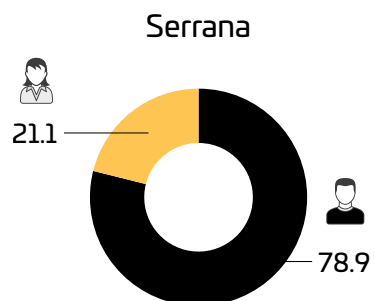
Average age
41 anos



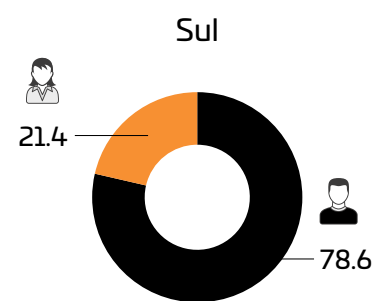
Average age
42 anos



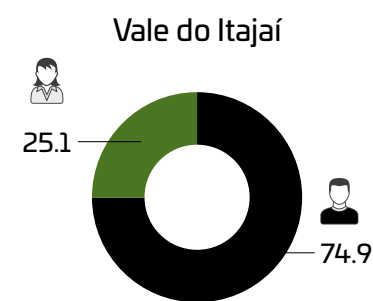
Average age
39 anos



Average age
40 anos



Average age
40 anos



Average age
41 anos

Source: Neoway.

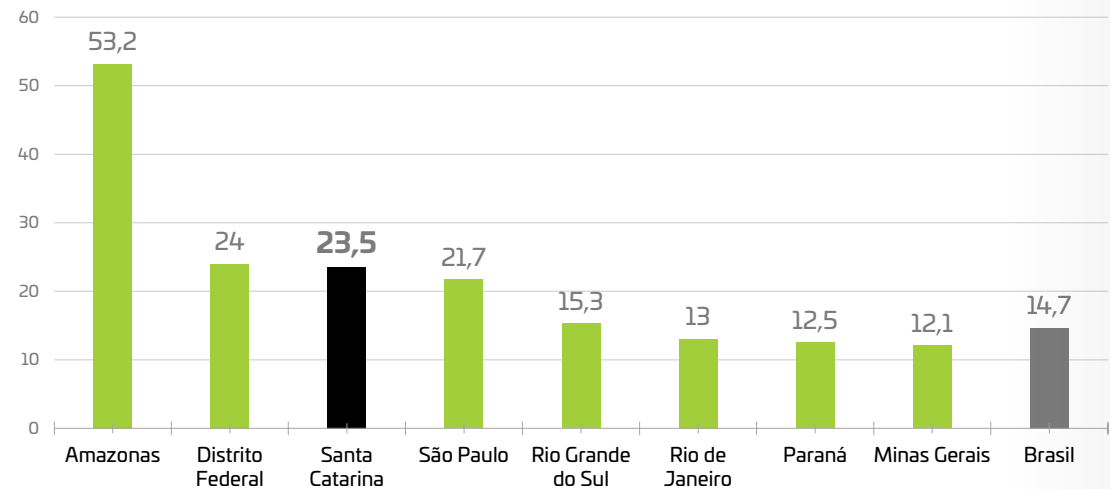
CONNECTED BY THE SECTOR!

THE NETWORK OF WORKERS IN TECHNOLOGY IN SANTA CATARINA

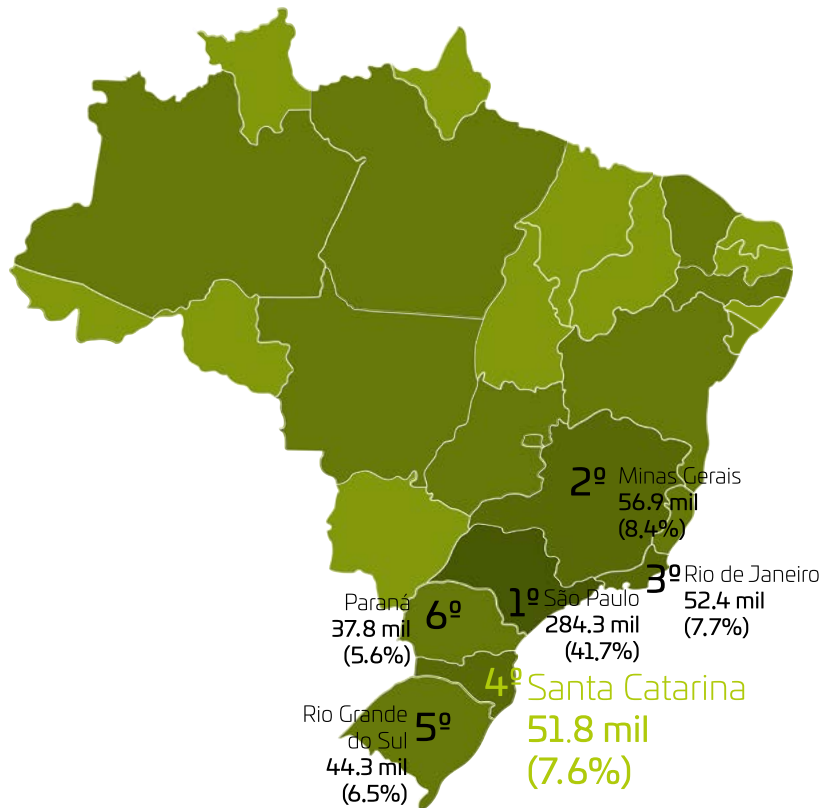
With **51,8 thousand workers**, Santa Catarina is the fourth state in number of workers in the technology sector in Brazil, surpassed only by São Paulo, Minas Gerais and Rio de Janeiro, the three most populated states in Brazil.

With a share of 8% in the national scenario, the technology sector in Santa Catarina has a ratio of 23.5 workers for every 1,000 formal workers, which is higher than the national average number of 14.5.

Workers in the technology sector for each thousand workers



Source: RAIS.

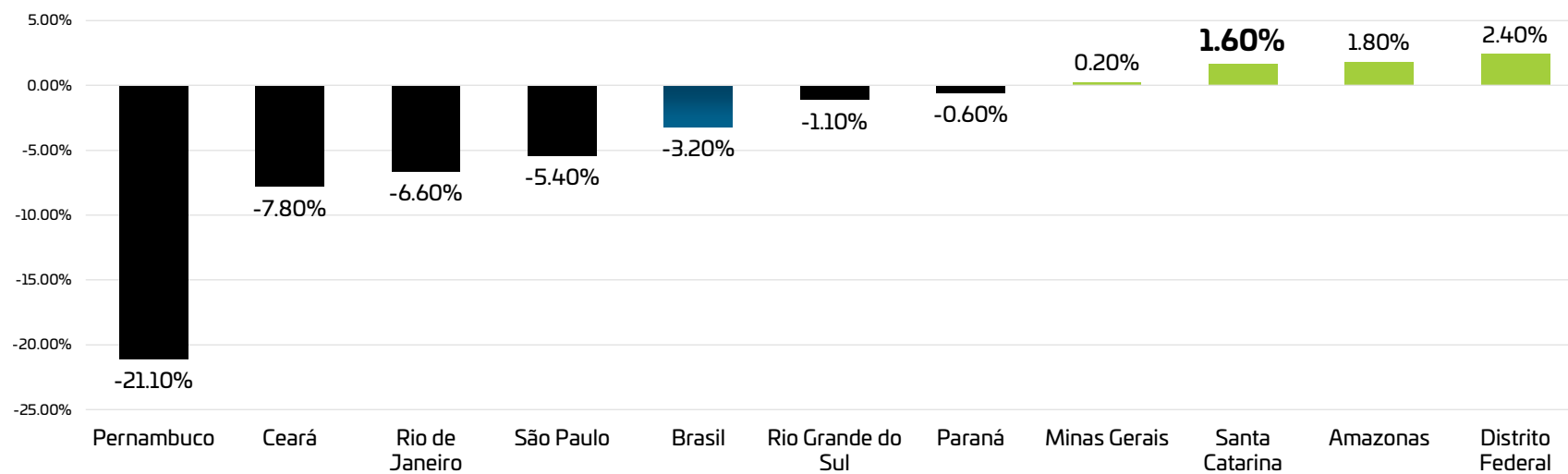


Growth above national average

From 2016 to 2017, the number of workers in the sector increased 1.6%, going from 50.9 thousand to 51.8 thousand. Comparing to Brazil's number which decreased 3.2% in the

same period, it is clear the ability Santa Catarina has in creating new business opportunities and becoming a major player in the country's technology scenario.

Growth in the number of workers in the technology's sector



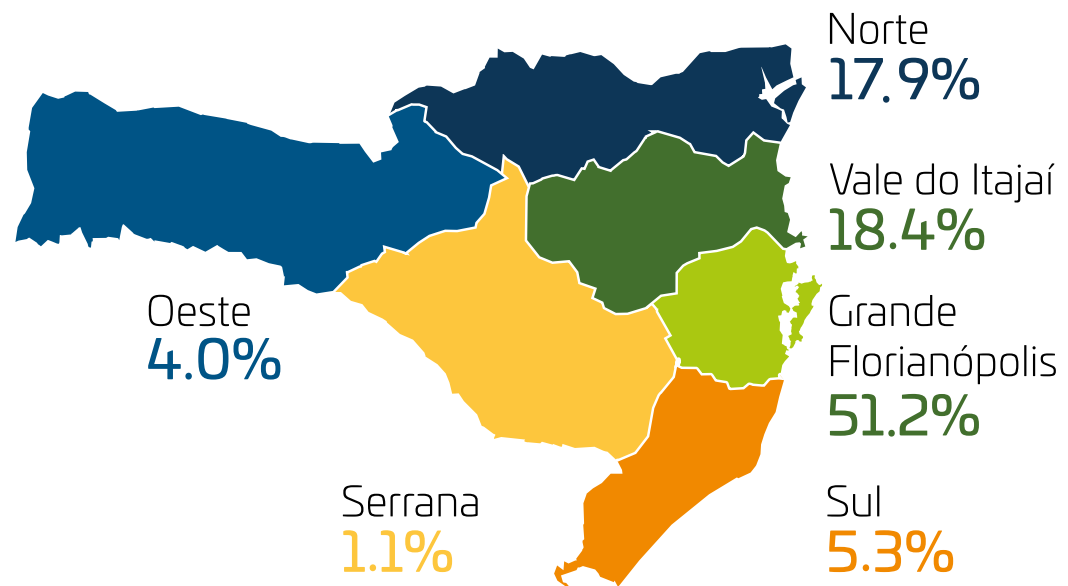
Source: Rais. Dados de 2017.

This positive scenario is the result of important innovations hubs distributed throughout the Santa Catarina state.

Among the mesoregions, Grande Florianópolis concentrates the highest number of workers in the sector (51.2%). Vale do Itajaí (18.4%) and Norte (17.9%) are the second and third in this ranking. Following them is mesoregion Oeste (6%), where the food sector plays an important role, and the Sul (5.3%).

With less participation is the Serra mesoregion which corresponds to 1.1% of the total.

Technology workers by mesoregion



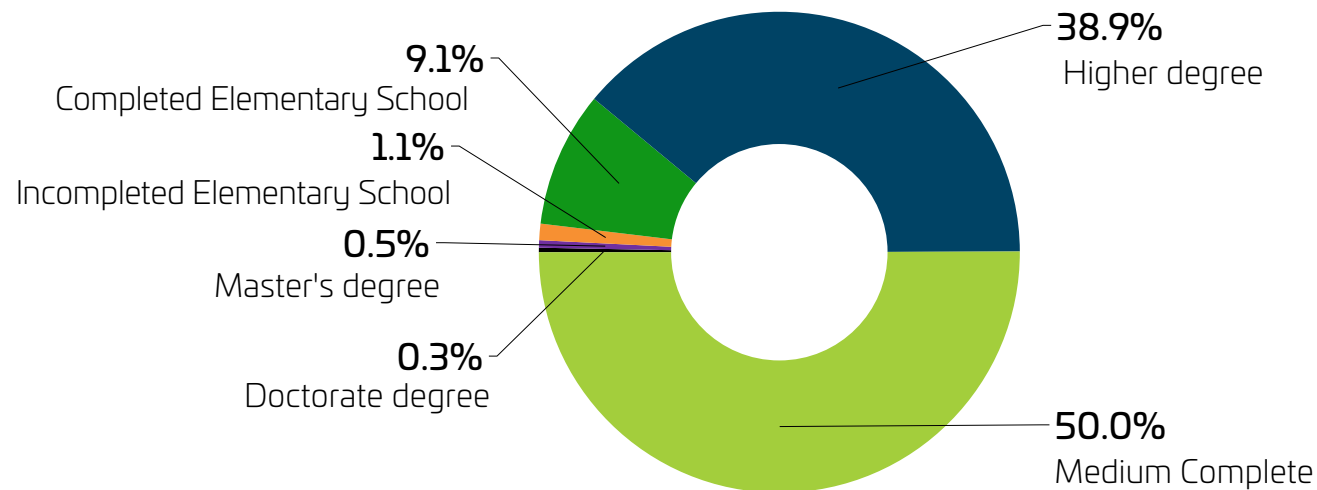
Source: RAIS.

THE PROFILE OF THOSE WHO COLLABORATE TO A SECTOR OF REFERENCE

In Santa Catarina, the worker in the technology sector has an average age of 33 years. They are professionals who already have previous experience in the market and 57.7% of them are men.

Half of them have completed high school while about 40% have a university degree. Less than 1% have reached a master or a doctor degree.

Education Level of workers in the Technology Sector in Santa Catarina

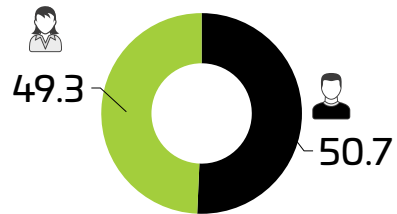


Source: RAIS.

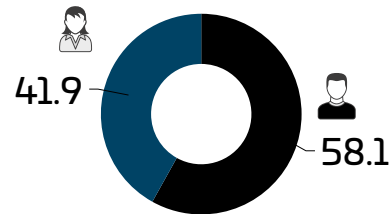
PROFILE BY MESOREGION

Gender

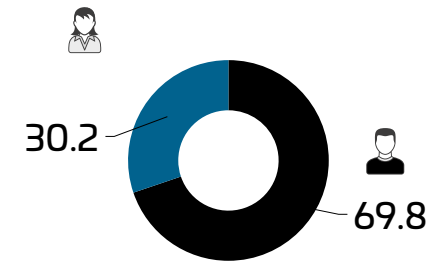
Grande Florianópolis



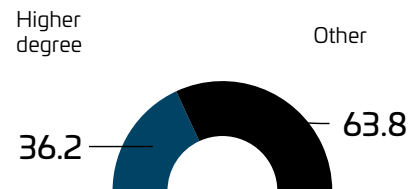
Norte



Oeste



Education Level



Age

Average age
35 anos

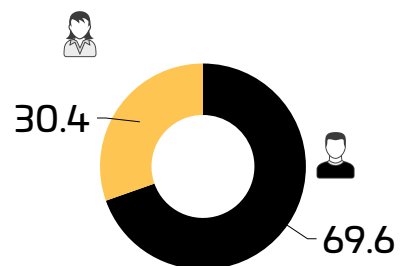
Average age
32 anos

Average age
31 anos

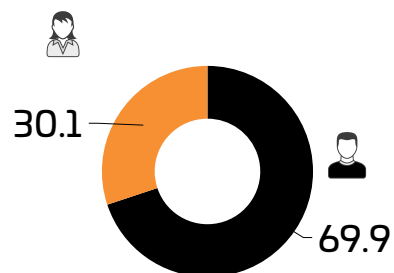
Source: RAIS.

Gender

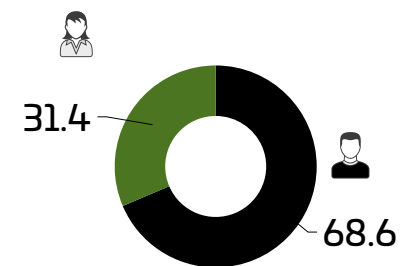
Serrana



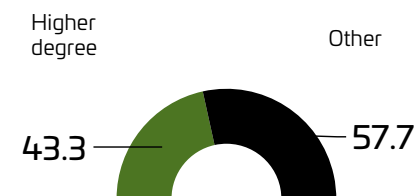
Sul



Vale do Itajaí



Education Level



Age

Average age
30 anos

Average age
30 anos

Average age
31 anos

IN CORE: THE EXPERTISE IN TECHNOLOGY IN SANTA CATARINA



Aligned with the information and communication revolution, the digital transformation is generating several benefits for the economic development. Not only promoting the expansion of connectivity, internet of things and tools for data analysis, it also provides companies with a range of opportunities for cost reduction, creating new business models and giving agility to the productive processes that already exist.

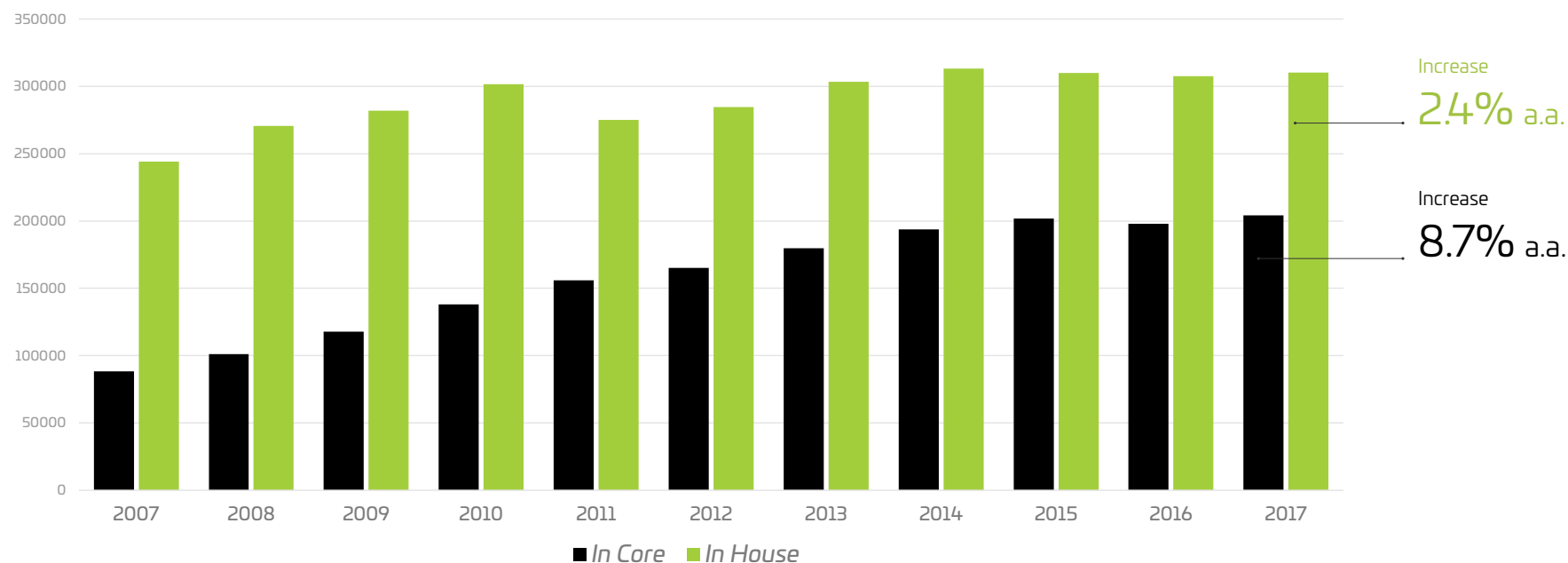
In this scenario, the technology specialist had been incorporated into the corporate structures, in all different areas. Along the time, however, the continuous learning and expertise created opportunities for these professionals to work for companies that work directly offering technology products. By these means, these companies can offer services with quality and scalability, and therefore being more cost-effective than internally hiring programmers and analysts in the sectors of retail, farming and industry.

Understanding the difference between In House and In Core

Professionals of technology are categorized in two ways. The ones that work for companies that don't have core business products or services related to technology are called in house, and the ones that work for companies with core business in technology are called in core.



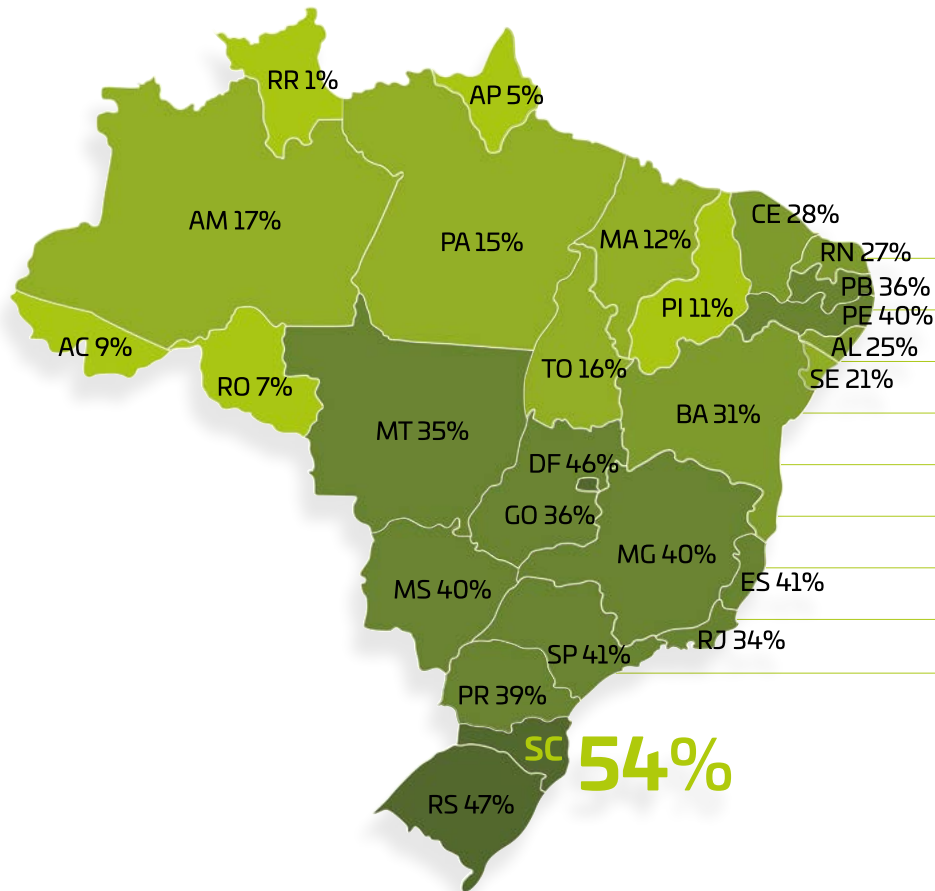
Development of technology professionals in Brazil



Source: RAIS.

The outsourcing of services, which is already a natural move in several other areas, is still a recent thing to the technology sector in Brazil. Ten years ago, only 25% of the IT specialists were working directly for technology businesses, while the rest were occupying roles in companies from other areas. These numbers, however, are rising gradually, having reached 40% in 2017 (more recent data).

Percentage of workers in core by region



In the particular scenario for Santa Catarina, the highest number of professionals working in core can be noted, being the only region in Brazil with more than 50% of all positions being in core.

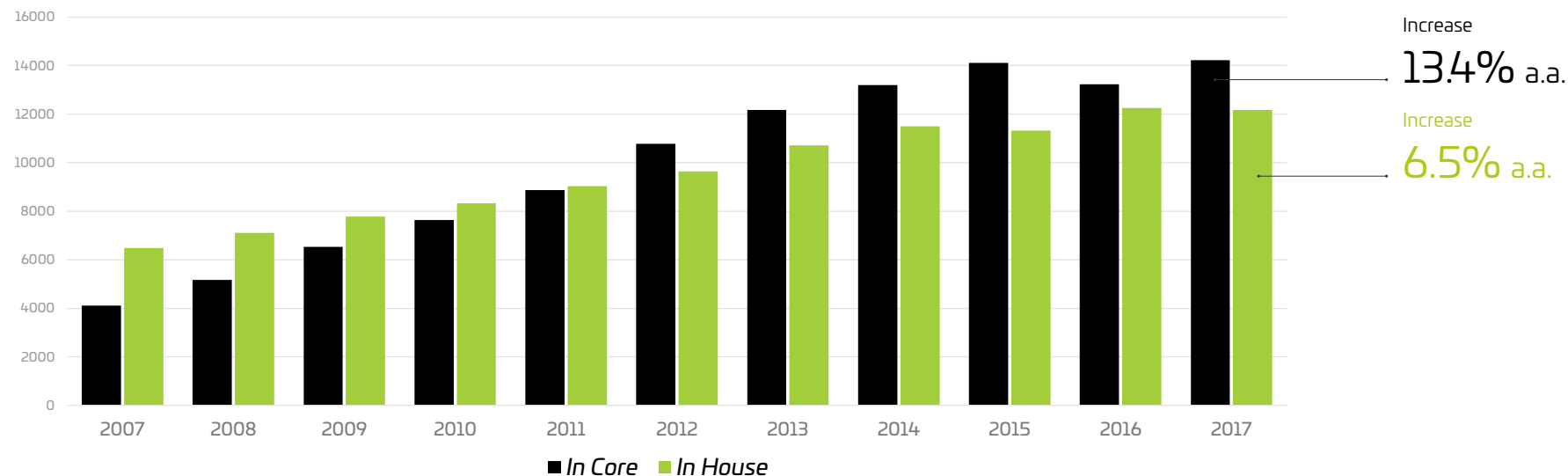
Technology specialist	Santa Catarina	
	Workers	In core %
Computer Systems Analysts	11.974	53
Computer Service Directors	84	32
Computer Engineers	281	46
Computer Specialists	613	39
Information Technology Managers	1.485	47
Computer Operations Technician	5.251	41
Programming Technician	6.705	69
Total IT Specialists	26.393	54

Furthermore, Santa Catarina is not only keeping its position but is also improving even further as in the last ten years professionals working in core increased by 13.2% per year while in house increased by 6.5% by year.

Source: RAIS.



Evolution of the professionals in technology in Santa Catarina



Source: RAIS.

The trend in specialization of the professionals and companies of technology benefits the innovation ecosystem in Santa Catarina, which can count with specialized professionals delivering high quality services.

According to Softex (Associação para Promoção da Excelência do Software Brasileiro), the professional in technology comprehends the following activities of the CBO

1236 Computer service directors
2124 Computer system analysts
1425 Information technology managers
3171 Programming technicians

2122 Computer Engineers
3172 Computer operation and monitoring technicians
2123 Computer specialists

HIRING!

JOB OPPORTUNITIES IN THE TECHNOLOGY SECTOR

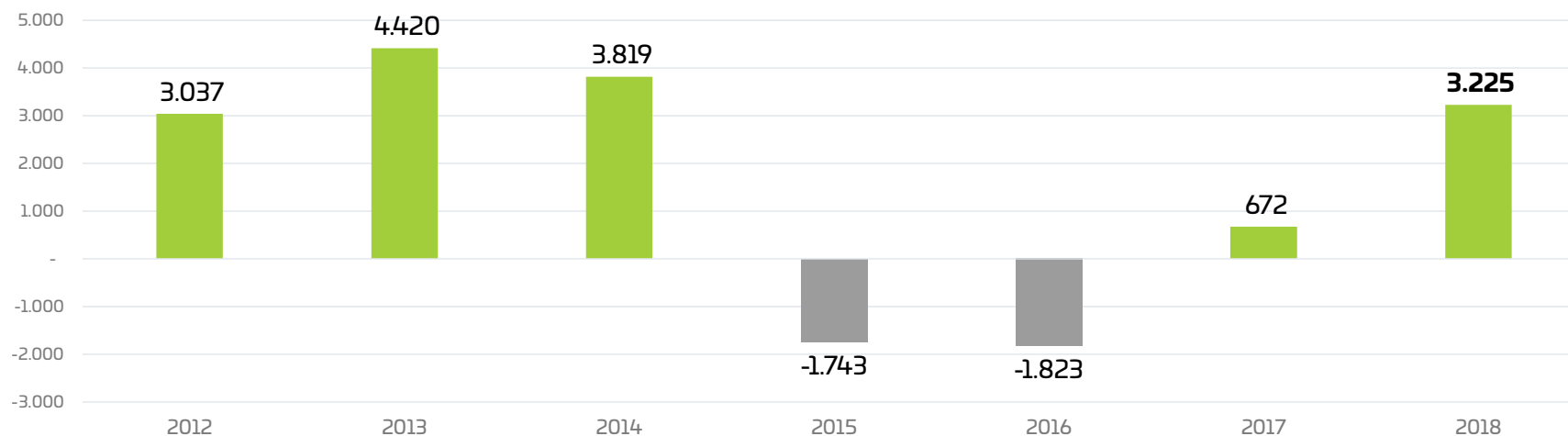
The evolution of the technology sector leaves no doubt about its growing potential and capacity for creating new opportunities. Technology companies in SC are the most specialized in Brazil and are growing in a solid ecosystem.

In 2012 and 2018, there were more than 11 thousands new

jobs created. Only in the last year, this sector added 17 thousands new workers to 14 thousands that were laid off, resulting in a positive final number of 3 thousand new positions.

Only in the first semester of 2019, there have been created 2,581 new jobs, more than in the last year for the same period with 1,924 new jobs.

Job Balance Evolution in the technology sector in Santa Catarina

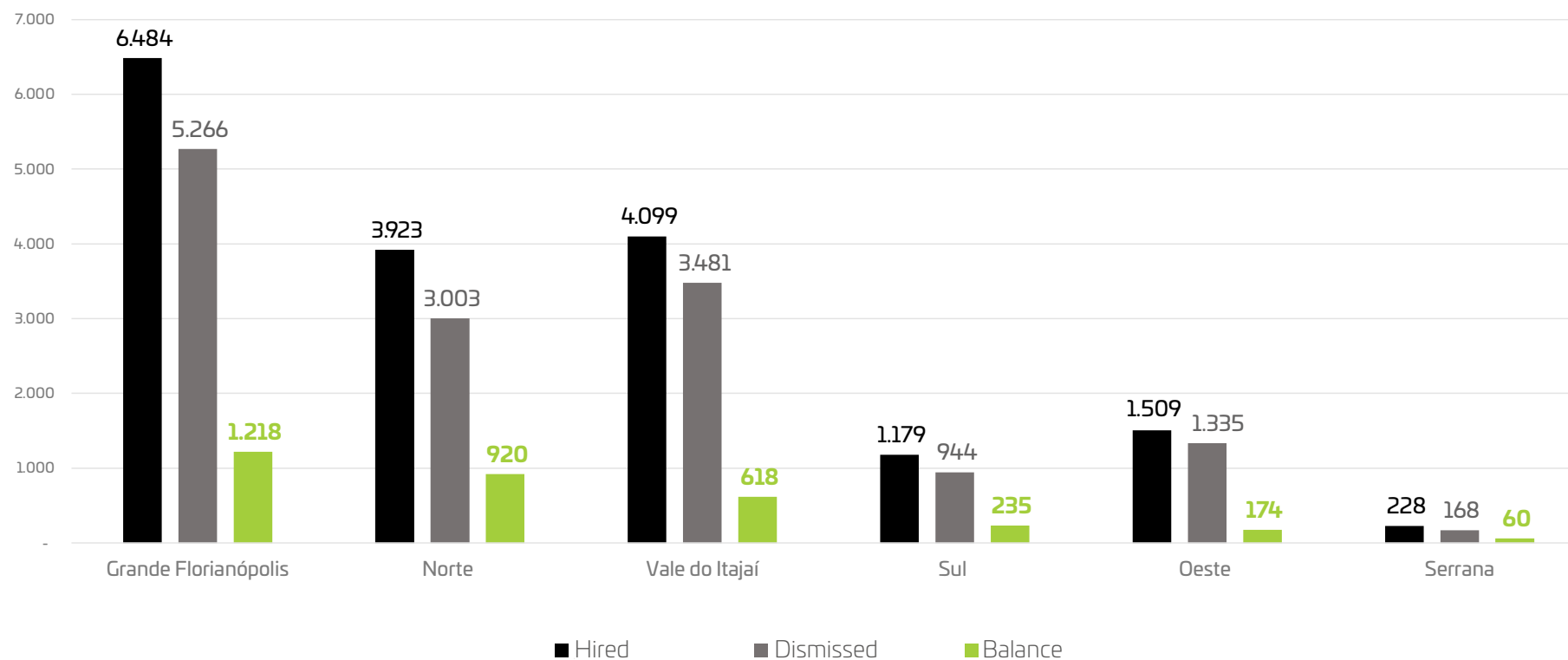


Source: CAGED.

Within the regions of Santa Catarina, Grande Florianópolis is the one that generated more jobs opportunities. Almost 6.5 thousand people were hired in 2018.

All other regions showed positive results, highlighting the Northern and Vale do Itajaí regions, which one of them generating near 4 thousand new jobs.

Employment balance among the mesoregions of Santa Catarina in 2018



Source: CAGED.

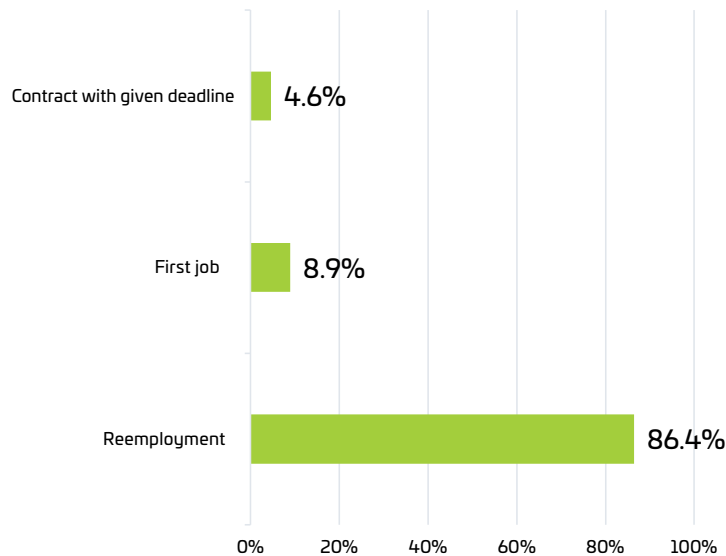
PROFILE OF ADMISSIONS

Of the 17 thousand new admissions, 15 thousand were re-employment and 1.5 thousand were the first admission in their careers. The average monthly salary of these admissions was R\$2,350, 55% higher than the local average in other areas (R\$1,510).

Technicians and IT professionals are the most sought after occupations, counting for about a third of all admissions in the period.

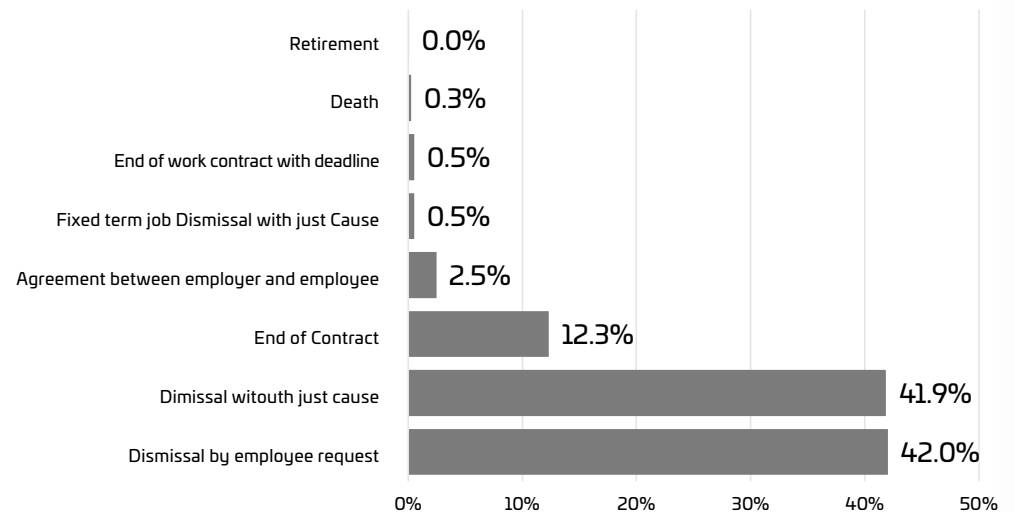
It draws attention to the fact that 42% of the dismissals in the period occurred by the employee request, higher than the local average which is 32.4%.

Types of hiring



Source: CAGED.

Type of dismissal



FOLLOW THE OPEN POSITIONS IN THE TECHNOLOGY SECTOR FOR YOUR CITY / TOWN!

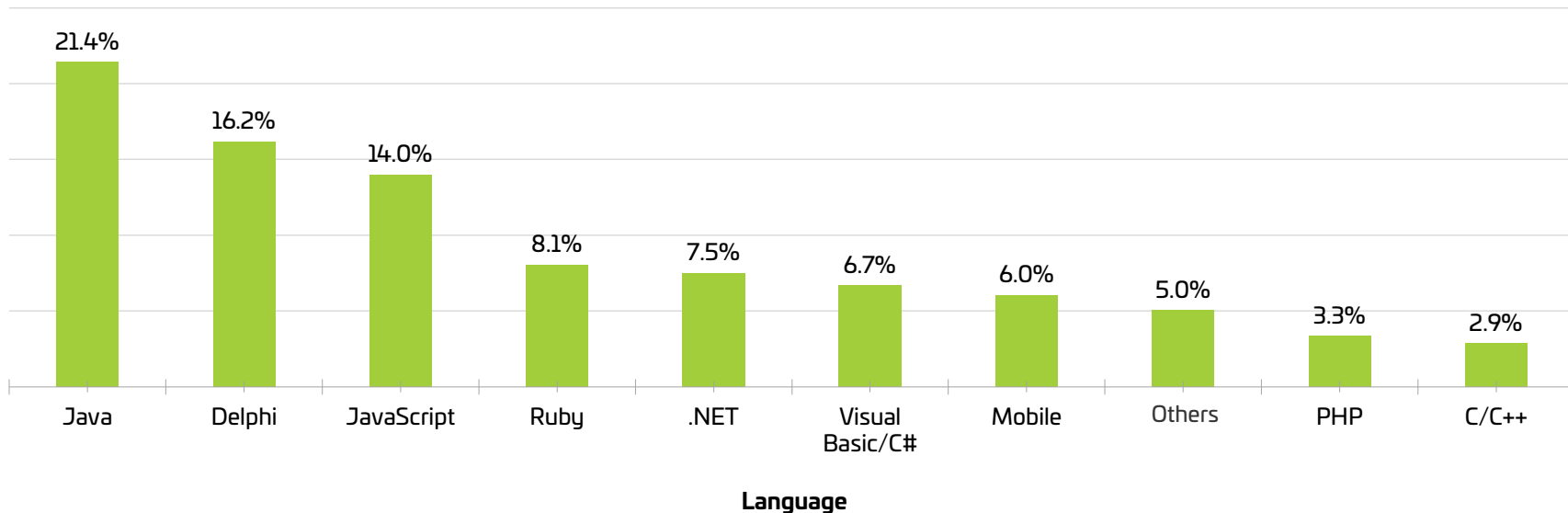


Access this QR code
and follow up job
opportunities in
technology in your
region.

Based on the number of admissions and dismissals in the technology sector of Santa Catarina, ACATE builds up statistics projections to inform the number of job openings for all cities and towns in Santa Catarina.

In addition to showing the potential of technology sector in generating new opportunities, it also identifies the skills that are more requested by the companies. Data from Sin Salary and Enlitz informed from 2.6 thousand developers hired in 2018, more than half had skills in Java (21.4%), Delphi (16.2%) and JavaScript (14%).

Field of expertise in new job opportunities in the technology sector



Source: SinSalarial/Enlitz.

The background is a dark charcoal grey. It features several thin, bright yellow lines that form abstract, organic shapes. On the left, a large, vertical, teardrop-like shape curves upwards and then back down. In the upper right, there is a smaller, rounded shape that looks like a stylized 'U' or a partial circle. In the lower right, another rounded shape is visible, similar in style to the one above it. The overall aesthetic is modern and minimalist.

*Building skills for the
future of technology*

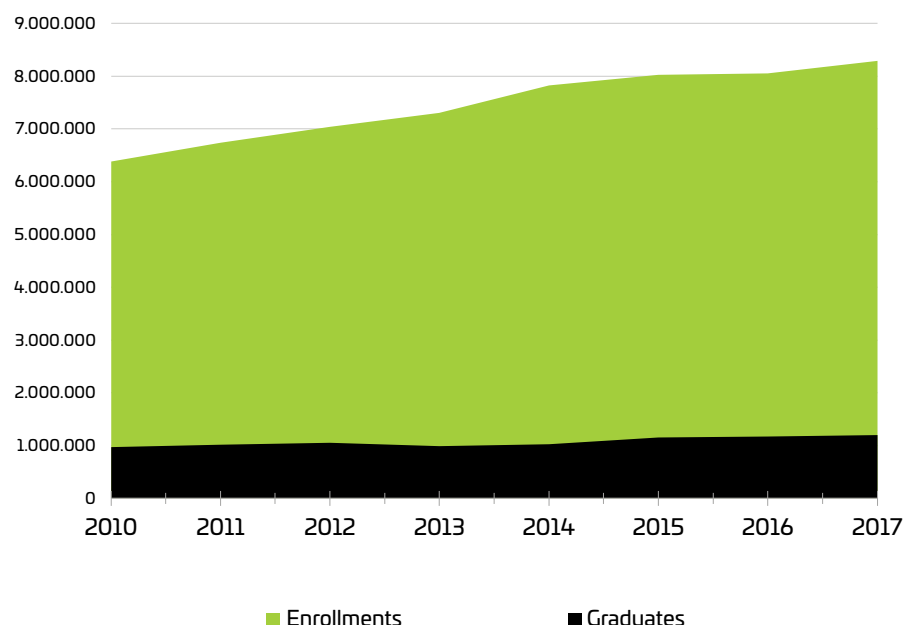


The efficiency in the future of the technology sector relays on continuous developing of new talents. As well in Brazil as in Santa Catarina, however, the number of graduate students in degrees related to technology is lower than the international average.

With students predominantly enrolling in courses such as Business, Law and Health Care degrees, Santa Catarina has 233 thousand students at college. 44 thousand of them (19%) are studying in a technology related degree. This numbers positioned Santa Catarina as the second state in Brazil with more students engaged in technology related degrees in relation to the total number of students.

THE EVOLUTION IN HIGHER EDUCATION FOR TECHNOLOGY IN BRAZIL

Trend in Enrollment and Higher Education Graduates in Brazil



Brazil has had a notable improvement in the number of enrollments in higher education in the last decades. In 2017 (more recent data available), there were 8.3 million students enrolled in a higher degree course. Two decades before, this number would not reach 2 million and, in 2007, only 5 million.

Out of these 8.3 million students, 1.2 million are near graduation, number 56% higher than the figure for ten years before. According to UNESCO data, this improvement is greater than the one found in most developed countries, however, it is smaller if compared with other developing countries such as Colombia (336%), Chile (169%) and China (118%)⁴.

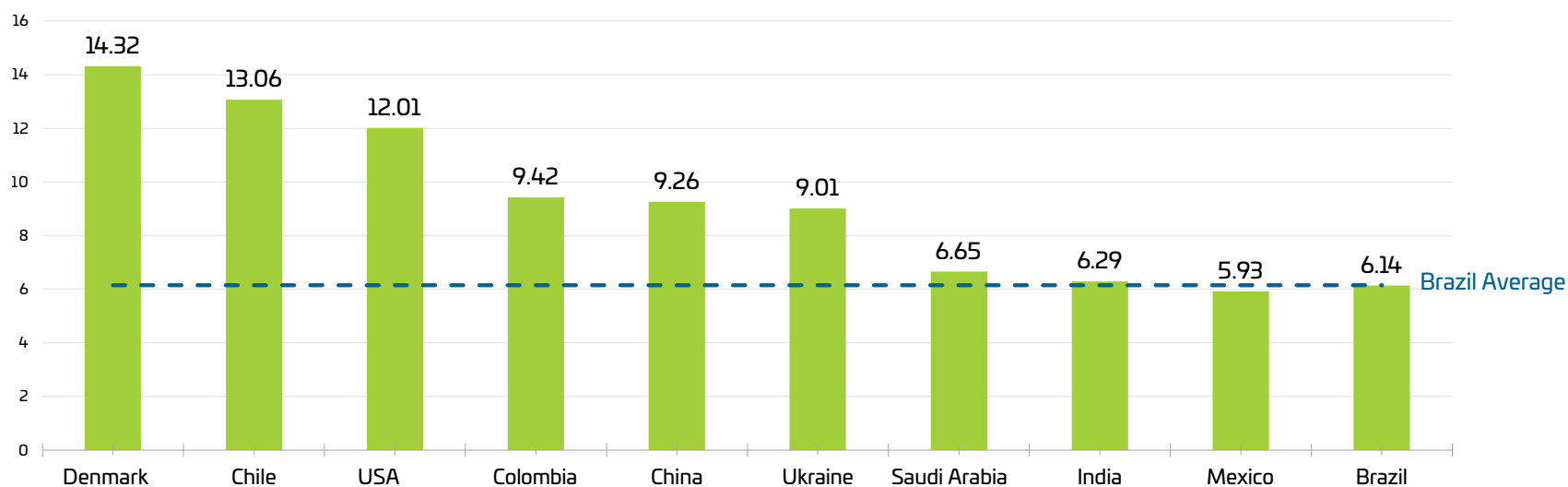
Source: INEP.

⁴ Considering data from 2006 to 2016 as there is no information available for 2017.



Comparing the amount of graduate students to the country's population, it indicates that an expansion in higher education degree in Brazil still needs to take place. The ratio for graduate students for each thousand people is 6.1, while in Colombia it is of 9.4, Chile (13.1) and Denmark (14.3) present even higher numbers.

Graduates per thousand people (selected countries)



Source: Unesco.

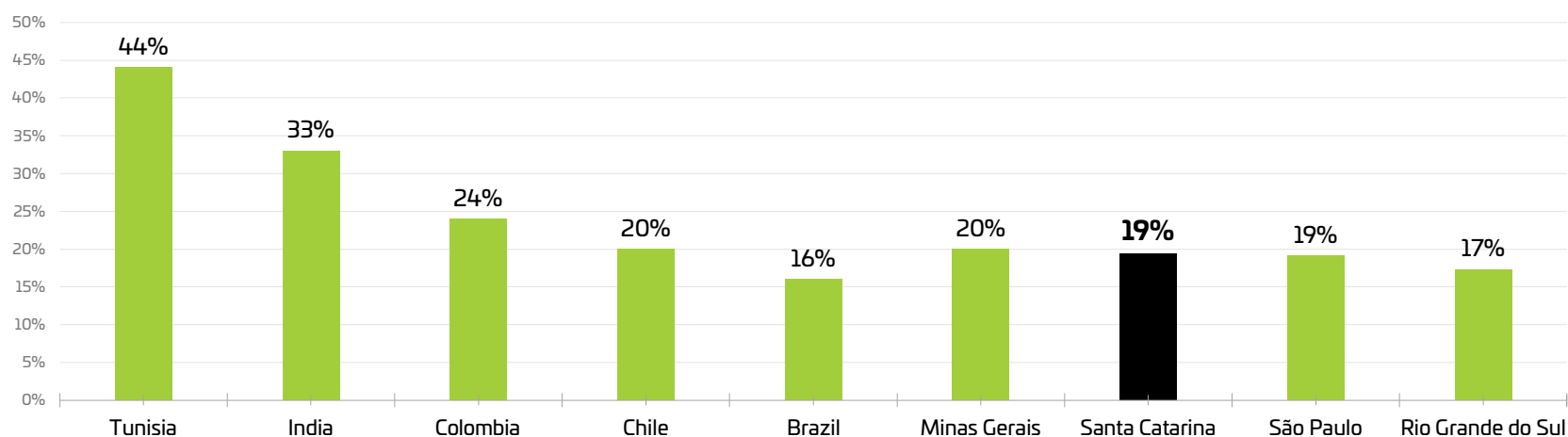
QUALIFICATION IN THE TECHNOLOGY SECTOR IN BRAZIL

Adding to the low number of graduates in Brazil there is a small participation of college students in STEM degrees. This classification refers to college education focused on professional performance in the areas such as computing, science, engineering and mathematics.

Considering only presencial courses, the STEM enrollment ratio in Brazil⁵ is about 16%, while in India it is close to a third of the total⁶ and in Colombia it is 24%.

Comparing in the Brazilian states, Santa Catarina stands out positively in this scenario, 19% of the students are STEM students, behind only to Minas Gerais with 20%. The Distrito Federal and Acre, which stand out for the total number of graduates per capita, have only 10% of them in STEM courses.

STEM Students participation in other countries and regions of Brazil



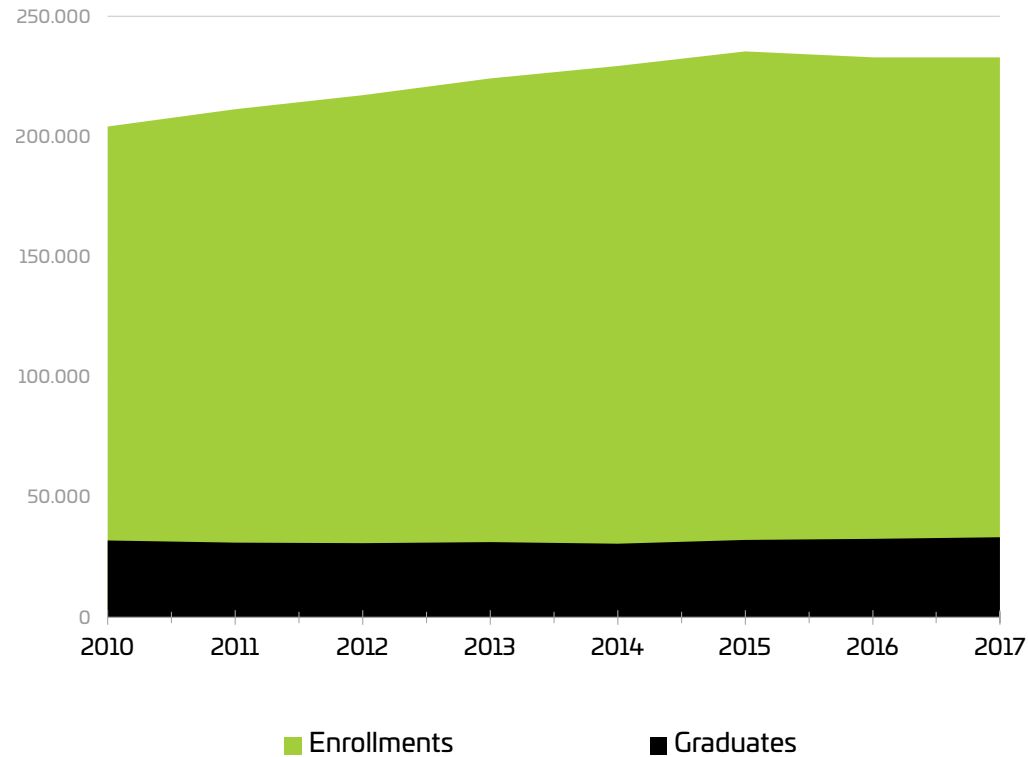
Source: INEP e UNESCO.

⁵ According to the Censo de Educação Superior, INEP, 2017

⁶ According to UNESCO

THE PROFILE OF PEOPLE FROM SANTA CATARINA WHO SPECIALIZE IN TECHNOLOGY

Enrollments and Graduates



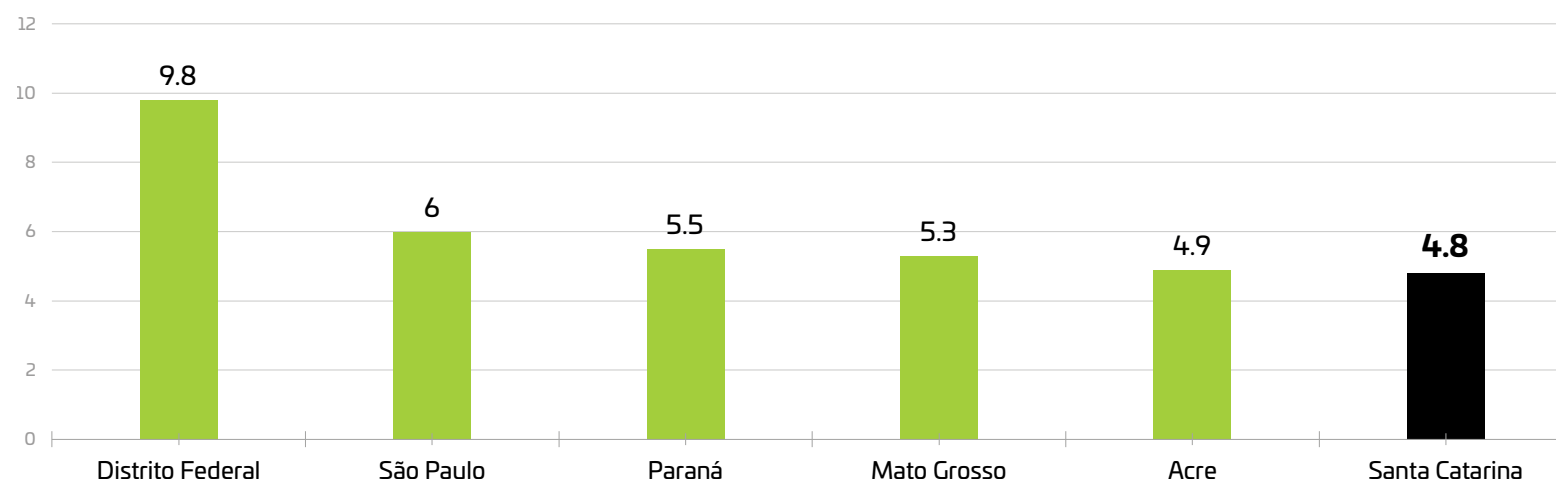
Source: INEP

The state of Santa Catarina has had an increase in the number of enrollment and graduates in higher education, from 200 thousand enrollments in 2010 to 233 thousand in 2017. The graduates number also rise from 31.9 thousand to 33.3 thousand.

Even though there was an increase, these numbers show that Santa Catarina did not follow the national average. In 2010 and 2017, there was a 30% increase in enrollment and 23% in graduates countrywide, while in Santa Catarina the increase was 14% and 4.5% respectively.

For this reason, the number of graduates by every thousand inhabitants in Santa Catarina is 4.8, lower than the national average and less than half of what is found in Distrito Federal, which are 6.14 and 9.8 respectively.

Graduates per thousand inhabitants



Source: INEP.

QUALIFICATION IN TECHNOLOGY IN SANTA CATARINA



Access this QR code and check the scenario of higher education in your region.

Despite not presenting a high number in graduates from higher education, Santa Catarina is one of the places with more students enrolled to a degree related to technology.

The profile for these future professionals is predominantly male (75%), less dependent on student loans (31%) and less participation in university extensions and trainee programs than the local average. This scenario is similar to the one observed in the country.

Even with more students enrolled in degrees such as business, health care and law, STEM students add to 44 thousand students (19% of the total), of which 11% of them are about to graduate, meaning 5 thousand new professionals in the market.



ACATE follows the number of enrollments and graduates in Santa Catarina and provides a data panel with this information.

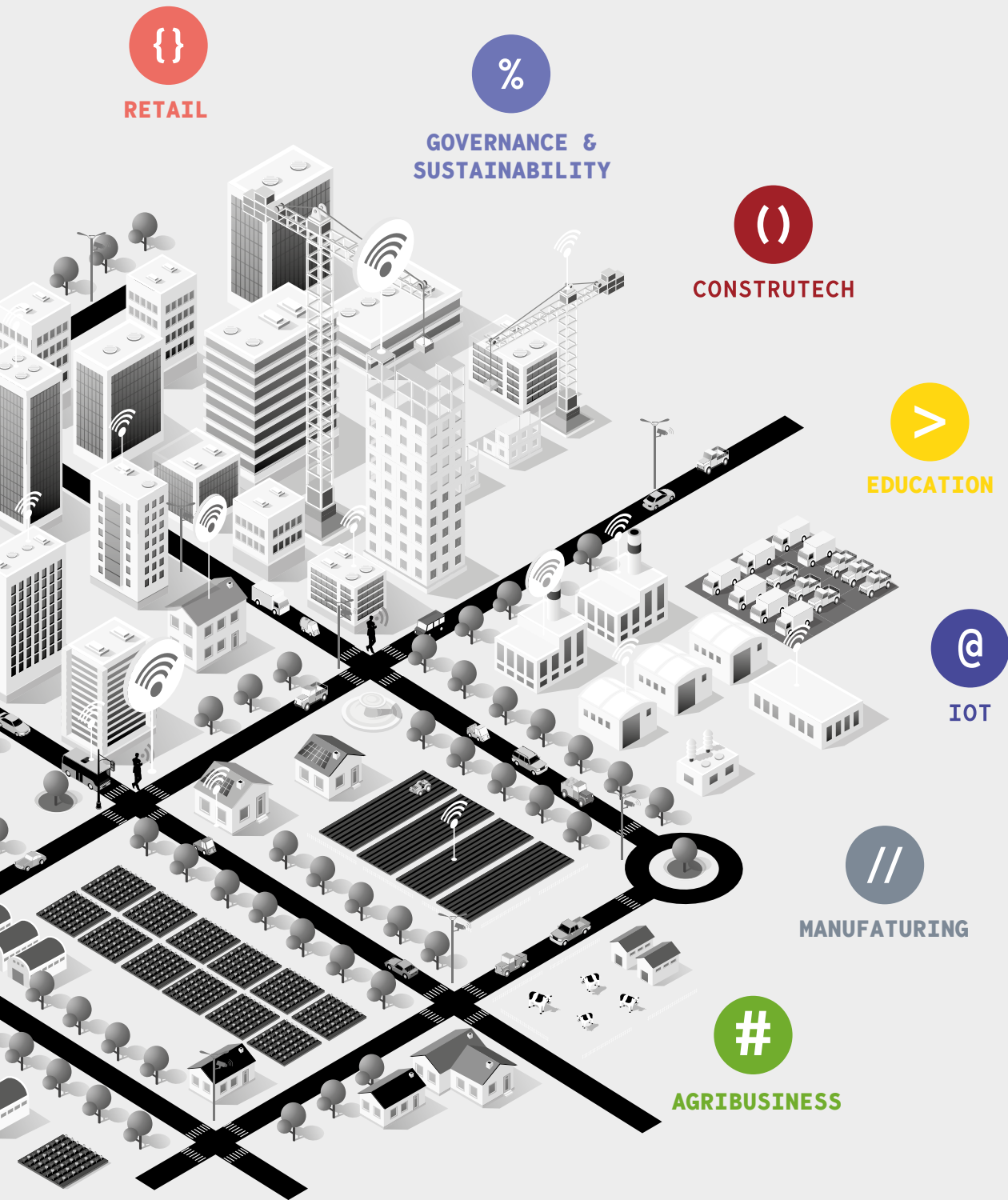
VERTICAL BUSINESS ACATE

*Promoting a sector
in constant evolution*

*The verticals business are groups of technology
companies partners of ACATE which promotes
productive dialogues about the sector, challenge,
trends and opportunities, and develop projects that
have a positive impact on society.*

+ 200 Companies
13 Verticals





The 13 Business Verticals comprise themes and sectors that make the Santa Catarina productive ecosystem more complete. Connectivity & Cloud, IoT and Energy technologies are the driving force for the development of the entire innovation model, enabling the other technologies.

Education, Governance & Sustainability, Health and Safety solutions provide means to sustain the growth of other sectors.

Agribusiness, Construtech, Manufacturing and Retail Verticals drive already consolidated sectors to a new level of growth and improvements in their production processes. Finally, Creative Economy and Fintech are themes that explore new business models.

ACATE#

AGRIBUSINESS

17 companies

Revenue
R\$ 150 millions

545 jobs created

Productivity
R\$ 227 thousand
per worker

What is the Program about?

According to the World Economic Forum, the global population will increase to almost 10 billion people by 2050, which will cause a rise of around 3 billion tons in cereals demand. In Brazil, agribusiness has an important economic share, contributing to 23.5% of the country's GDP, leading the country to soon be the largest food producer in the world.

According to the 2nd Agtech Census Startups Brazil, the number of agrotechs in the country increased from 76 to 184 companies in 2016 and the first semester of 2018, creating more than 1.5 thousand new jobs. At ACATE, a group of 17 companies develop innovations for the agribusiness sector. The Agrotechs offer systems (software and hardware) that assist in management and productivity of rural properties, increasing product quality control, supporting initiatives along with family owned businesses and helping taking farming into innovation and technology. Among the main projects already developed by Vertical are the annual reports Agribusiness & Technology, which gathers information such as public policies, loan programs and dedicated software to develop the sector, besides supporting the participation in the Nucleus of Technological Innovation for Family Farming (NITA), acting as a connection between startups and demands from cooperatives and farmers for innovation and new technologies.

agronegocio.acate.com.br



Source: ACATE, Censo Agtech Startups Brasil, World Economic Forum, Confederação da Agricultura e Pecuária do Brasil (CNA).



Case

NITA: Innovation and technology for family farming

Founded in 2016 from a demand from World Bank, NITA represents a big case of success for Vertical Agribusiness. NITA is an organization formed by public and private institutions that aims to straiten relations between farmers and technology. Through a network that includes sustainable technologies, family farm business and small and medium size companies, NITA aims to connect the real needs of farmers to the technology solutions.

Clovis Rossi, Director of Vertical Agribusiness, says the World Bank has always founded initiatives that support family farming, including the SC Rural project, which subsidized small farmers. "Once we realized that small farmers had no access to technology, the project identified companies in Santa Catarina that develop technology for agribusiness and started to study how these solutions could be used in small farms. Next to that, Vertical Agribusiness coordinated the development of a website to showcase these companies and connect them to the

small farmers", explains Clovis. "In the portal, all startups, projects and technologies related to small scale farming are available for access. Furthermore, the small farmer can submit feedback with technologies he needs, in a way that we managed to build a link between farmers and technology companies", celebrates Clovis.

In addition to ACATE through Vertical Agribusiness, are part of the NITA project other 16 institutions: World Bank, Sebrae/SC, Fundação Certi, SC Rural, Epagri, Sistema ACALE, Deatec, FAPESC, BRDE, OCESC, FEATESC, FAESC, IFSC, Centro Universitário Católico de Santa Catarina, Secretaria de Desenvolvimento Sustentável e Secretaria de Estado da Agricultura e Pesca do Governo de Santa Catarina.

ACATE =

CONNECTIVITY & CLOUD

35 companies

Revenue
R\$ 321 millions

725 jobs created

Productivity
R\$ 338 thousand
per worker

What is the Program about?

In the last 15 years, digital economy has grown twice and a half as fast as the world's GDP. Technologies allow greater gains for businesses and require the incorporation of artificial intelligence and connectivity. Until 2025, digitalization will move more than US\$ 23 trillions, opening doors for a new cycle of economic growth.

At the same time that companies get ready for a new wave of growth, public institutions also benefit from technology solutions that bring more efficiency to services and better opportunities for economic development.

In Santa Catarina, companies that work in the network infrastructure area, cloud based services and smart cities systems, find at Vertical Connectivity and Cloud a place for debating challenges and seeking solutions for the future of connectivity and web access. Vertical, which is formed by 35 companies, is one of the responsables - in addition to Florianópolis City Council, ACIF, Secretariat of Public Security (SSP / SC) and other partners - for the project "Urban Innovations Lab", known as Living Lab , which is developing innovative technologies and services (in the field of security and connectivity) in Florianópolis downtown that may be replicated to other initiatives.

conectividadecloud.acate.com.br



Source: ACATE, Global Connectivity Index



Case

Living Lab: A living laboratory of innovation in Florianópolis

Created as a challenge for urban innovation in Florianópolis, Living Lab is now the biggest case of success of Vertical Connectivity & Cloud. The project aims to transform Florianópolis, “the Silicon Island”, into a living lab of innovation, promoting testing and introducing new technologies into the city problem solving and improving the population quality of life.

The project is an initiative from Rede de Inovação de Florianópolis and is executed by ACATE, with support of Florianópolis City Council (PMF) and Associação Comercial e Industrial de Florianópolis (ACIF). Through partnerships, startups selected for the program have the opportunity to implement their solutions in the real world, testing it and validating the business model. The participation of government entities also collaborates in diminishing barriers for innovations to be implemented.

The initial project of what is today the Living Lab started with the implementation of infrastructure such as

internet, wifi and security cameras on Vidal Ramos street, Florianópolis Downtown, so technologies companies could use it as a way to test their solutions. The initiative gained strength through partnerships and expanded throughout the city. “The project’s main idea is to create and test solutions that can bring closer technology and innovation to people’s everyday life, benefiting the local businesses and addressing real problems of the city,” says Diego Ramos, director of Vertical Connectivity & Cloud.

Currently, Living Lab selects startups through public notices, being in force the selection occurred in 2018, with ten companies participating. “This is a pioneer project in Brazil and has already grabbed attention in other cities, fulfilling our goal of bringing more companies to Florianópolis and strengthening its potential as a cluster for technology and innovation,” comments Diego.



16 companies

Revenue
R\$ 555 millions

1.433 jobs created

Productivity
R\$ 221 thousand
per worker

What is the Program about?

Engineering and construction are responsible for an important share of the global economic activities. The construction sector itself is responsible for 6% of the world's GDP, according to the report Shaping the Future of Construction. Moreover, the estimated investment in infrastructure to keep track of global GDP growth by 2030 is near US\$ 57 trillion.

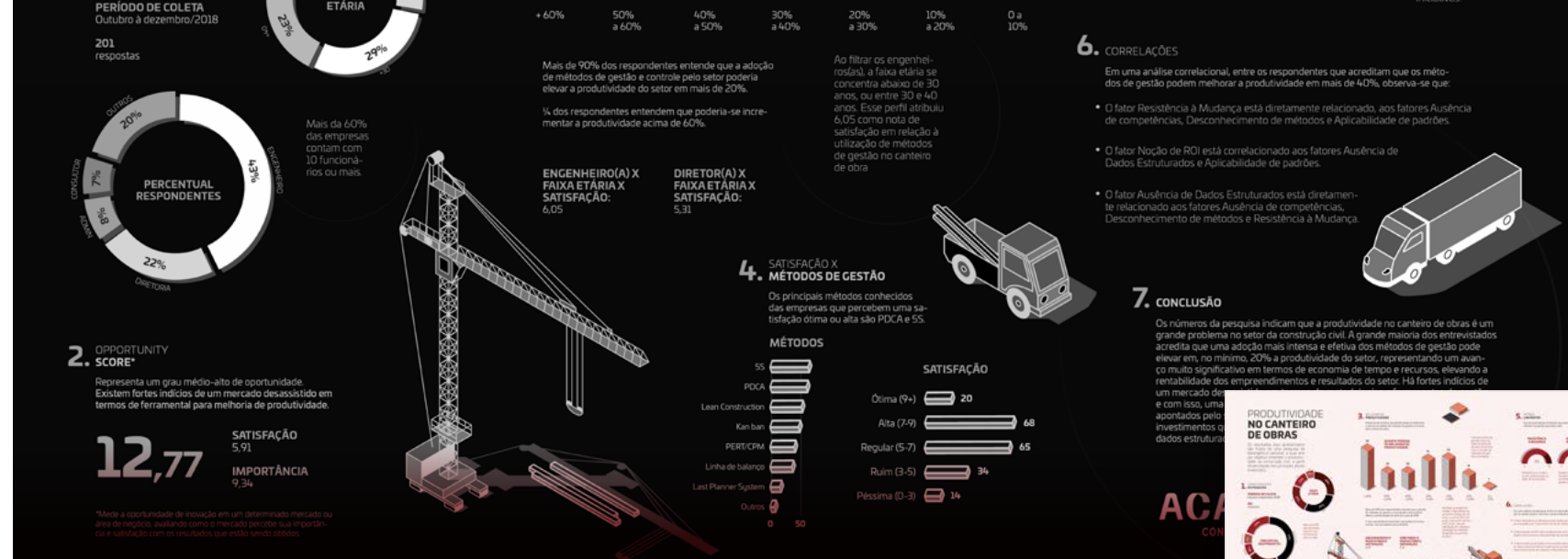
Despite its importance, the population growth and urbanization have challenged the currently conditions of infrastructure. For this reason, applying technology in the building industry has increased considerably in the last years and Construtech is already considered one of the most important technologies trends. The revolution in the construction and real estate chains is happening and Vertical Construtech joins major market players with startups to generate new products and technologies.

At Vertical Construtech meetings, the participants from the 16 companies define the more important subjects to be developed and create research groups that study solutions and proposals for new businesses models. From the constructive issue to the demands of leasing and marketing, Vertical is a laboratory of projects and ideas for the future of one of the most important economic sectors in the country.

construtech.acate.com.br



Source: ACATE, StartSe, CB Insights, Moldando o Futuro da Construção e World Economic Forum.



Case

Productivity: Management tools at the working site

At Vertical Construtech, the main success case created was the organization and development of the Productivity Work Group (GT). The development of GT occurred from the identification of a relevant subject for building construction, in which technology can be an important ally: productivity at the working site. The participants in the project formed a multidisciplinary team - gathering professionals from designers, executives of technology companies, entrepreneurs and even construction technology personnel -, who had a strong engagement, resulting in a consistent work and generating important content.

After a voting among all participants of Vertical Construtech, it was defined that, within the subject “productivity at the working site”, an interesting job to be done would be to focus on understanding the tools of management at the working site to be introduced at

the government constructors. “At the beginning of the research, we identified that a huge part of constructors did not use any management tool that are already being used in the private sector in its working sites”, explains Renan Lecheta, leader of GT. “The best way to validate the possibilities we created around this perception and understand the reason why it leads to research was directly with the market. That’s what we did”, adds Renan.

According to feedback from more than 200 constructors, GT Productivity created an infographic that presents the main reasons why these companies did not use management tools, even when they believe it would generate more efficiency, and the satisfaction levels with the current management model. “During interviews, we gathered opinions from various players in this ecosystem, from personnel to engineers and builders owners, allowing the creation of a comprehensive study” concludes Renan.

ACATE

CREATIVE ECONOMY

8 companies

Revenue
R\$ 26,8 millions

82 jobs created

Productivity
R\$ 218,4 thousand
per worker

What is the Program about?

With more than 2.3 billion gamers around the world, the gaming industry moved around US\$ 138 billion in 2018. According to research conducted by Global Games Market Report, China is the biggest market, both in revenue (US\$ 379 billion) and players (619.5 millions), while Brazil is the 13th largest market in revenue, with more than US\$ 1.5 billion generated, and the third at number of players (75.7 million). Data from the national industry of gaming points out that two out of every three brazilians have access to games through their smartphones and internet.

In order to supply this potential market, the 2nd Census of the Brazilian Industry of Digital Games states that there were 375 game developers in the country in 2018, from which 73% are concentrated in the South and Southeast regions.

At the Creative Economy ACATE vertical, 8 companies promote meetings to debate and generate new ideas for educational games, interactive media, animation and film. Beside that, Vertical has consolidated its presence at the Stun Game Festival, event that gathers hundreds of participants to present successful Brazilian games cases and to debate the development of this market through the eyes of Santa Catarina entrepreneurs.

games.acate.com.br



Source: ACATE, Global Games Market Report, 2º Censo da Indústria Brasileira de Jogos Digitais.



Case

Stun Games Festival:

Event for
the gamer
community

The Stun event, aimed exclusively at an audience of technology enthusiasts and professionals from the most diverse areas of the creative industry, is the most relevant successful case generated by Vertical Creative Economy, having been created internally within the group. According to Arthur Nunes, director of Vertical and one of Stun's directors, the event follows an important market movement towards the creative industry, opening opportunities to embrace companies that work with technology linked to the culture and creativity industry, such as the production of concerts, or even in the sectors of tourism and cuisine, for example.

The Stun Games Festival was first held in August 2018 and gathered 250 to 300 people focused on the production, development, testing and applications of digital games and eSports. "Stun was a super relevant event for its time, highlighting the sector and representing a milestone for several actions and initiatives that unfolded from it", comments Arthur. "Held by the initiative of Vertical

Economia Criativa and with the support of Grupo All, Florianópolis City Council, NSC Comunicação and Floripa Conecta, the second edition of the event, in 2019, adds even more relevance to Vertical, bringing five exhibitors and 20 speakers, and is expected to move about 1,000 participants during the event", he adds.

The Stun Games Festival 2019 will be structured around three pillars: the Knowledge Arena, which consists of in the academic section of the event, offering lectures for the industry; the Trade Fair, focused environment in the presentation of games produced by companies from Santa Catarina, with networking and talents prospecting for hiring; and the eSports section, featuring the final stages of League of Legends, Counter Strike and Super Smash Bros championships by FEESC and the FIFA ACATE Digital Cup.

ACATE >

EDUCATION

30 companies

Revenue
R\$ 170 millions

540 jobs created

Productivity
R\$ 272 thousand
per worker

What is the Program about?

Innovation is fundamentally transforming the skills needed for the contemporary work environment. In Brazil, young people with higher education have a 10% advantage in the occupation rate compared to those with only high school. Still, the country has one of the lowest percentages of young people in vocational education.

At the same time that technologies for education find opportunities to expand access to education in the national market, they also face challenges in adapting education systems. Building future-ready education systems requires new learning solutions that involve gamified and personalized features.

The future of education, professional training, student demands and teaching platforms are at the center of the actions and debates promoted by Vertical Education. Vertical has 30 companies that develop and commercialize innovative solutions for educational institutions or even companies and industries. These are products and services in areas such as virtual learning environment, distance learning content applications, academic assessment and management system, mobile applications, tutoring solutions and various other projects.

educacao.acate.com.br



Source: ACATE, INEP - Education at a Glance, World Economic Forum.



Case

Collaboration: Together we are stronger

Over the three management teams that Vertical Education has had, a common idea guided the various actions taken: the construction of the concept of group and collaboration. For current Vertical director Nadine Heisler, this is the group's great legacy and the most successful case. "The moment when we realize that acting collaboratively, as a group and as an education ecosystem, thinking above the individual interests of each company, everyone comes out extremely strengthened and this is very important for education in our state", declares Nadine.

The construction of the group concept and concept within Vertical Education began with the project of the Education Innovation Cluster, aligned with the Santa Catarina State Government to enable public-private partnerships, through Vertical Education and its associated companies. The main objective of the Cluster is to make Santa Catarina a world reference in innovation in education, bringing together technology companies that develop solutions focused on formal and corporate

education and improve the quality of education. "Through the Cluster, we seek to stimulate interaction between the players of the state's innovation ecosystem, contribute to the strengthening of the technology sector in SC, expand public-private cooperation and foster the use of innovative solutions in the Santa Catarina school system", reports Nadine.

This project led Vertical to pursue partnerships with higher education institutions, which resulted in the pilot partnership project with the Santa Catarina Carboniferous Industry Charitable Association (SATC), and helped to consolidate Vertical's group vision. "We have matured to understand that we as a group are stronger than we are alone. All the actions we are doing this year are part of this larger concept of collaboration between companies that work in the same sector, which could perceive themselves as competitors, but currently identify themselves as co-authors of an innovation ecosystem in education", concludes Nadine.

ACATE ~ ENERGY

20 companies

Revenue
R\$ 125 millions

388 jobs created

Productivity
R\$ 321.6 thousand
per worker

What is the Program about?

Global energy consumption projections for 2040 points Brazil as one of the accelerating economies. Until that year, the country should keep its consumption growth rate at 2.2% per year, while the global average is 1.2% per year. Thus, the Brazilian market share in global energy consumption should reach 3% by 2040.

Meeting this demand requires a transition to a more inclusive, sustainable, affordable and secure energy system so that the global challenges of high consumption are overcome. Like other enabling technologies, energy solutions are able to promote and enhance existing supply chains, making them essential for the development of every technological ecosystem.

Vertical Energy, which has 20 companies, and has as one of its main projects the Energy Show, which discusses relevant market issues, highlights opportunities, selects and presents startups with innovative solutions.

energia.acate.com.br



Source: ACATE, BP Energy Outlook 2019,
World Economic Forum.



Case

Energy Show: Technology and innovation in the energy sector

Aligned with the objective of promoting dialogues between the productive sectors to find innovative solutions to the business, the Energy Show stands out. The event, created in 2010, is heading for its 10th edition next year and is constantly evolving. “We are always updating the word to the public and the needs of the market, bringing more cases and relevant speakers within the energy sector”, celebrates Ricardo Grassmann, Director of Vertical Energy.

According to Ricardo, Energy Show emerged from an event held by a segment company that invited its customers to talk about the state and national scenario, as well as solutions and innovations for the energy sector. “With this, we had the idea of expanding this meeting so that all Vertical Energia associates could gather their clients, present cases, promote networking and debate innovative and sustainable solutions to support the world’s growth”, he explains.

In the latest edition of the Energy Show, held in 2019, the guiding theme was The Future of Energy Today. “The energy sector is facing major transformations, and players of this sector need to be constantly updated to deliver increasingly sustainable solutions for society and progress,” says Ricardo. The event focused on how technology companies that develop energy solutions can innovate and promote the improvement of energy efficiency in our state and country, collaborating with other players and following the main technological trends.

“I believe that the success of the Energy Show is very much related to this idea of bringing exactly what society is looking for to the event, and maintaining the line that represents Vertical: innovative entrepreneurs in the energy segment. And not only big companies, but also startups when gathering their strengths and expertise, can bring the best of each technology to big projects”, concludes Ricardo.

ACATE \$

FINTECH

20 companies

Revenue

R\$ 360.6 millions

1.191 jobs created
Productivity

R\$ 230.6 thousand
per worker

What is the Program about?

The Pulse of Fintech 2018 study shows that investment in Fintech worldwide more than doubled between 2017 and 2018, from US\$ 50.8 billion to US\$ 111.8 billion, signaling positive prospects for financial technology investments in the coming years.

In Brazil, the scenario is also promising, with more than 224 fintechs, it is the South American country that has the largest number of fintechs, and should maintain this position in the coming years, given the prospects for growth of the sector according to Fintech Deep Dive Survey data.

As one of the most innovative markets for business and consumers, financial technology companies find at Vertical Fintech a place to discuss disruptive new services and solutions for the payment market, banking and money management. Vertical has the participation of 20 large companies, startups, accelerators and public companies. Together, participants bring mentoring to startups, discuss regulations and demands, helping to make this space a benchmark in innovation and technology for the domestic financial market.

fintech.acate.com.br



Source: ACATE, The Pulse of Fintech 2018 e
Fintech Deep Dive 2018.



Case

Technical missions: Expanding connections for fintechs

The technological hub of Santa Catarina is a very fertile ground for the installation and development of technology companies. For startups focused on developing solutions for the financial sector, however, one aspect is very important: the connection, dialogue and approach with the largest players in this market, which are located in São Paulo. For this reason, Vertical Fintech highlights as the group's most successful case the accomplishment of technical missions with startups.

The missions were created because of Vertical's heterogeneous array, which has many startups and small businesses, but also large organizations related to the financial sector. "There were two very different universes: from startups, which brings innovation in technology development to the financial sector, to larger companies, which are more traditional but are starting to seek innovation in technologies developed by fintechs", explains Rodrigo Pereira, Director of Vertical Fintech, about identifying the need for technical missions.

The missions have already been held in São Paulo and Joinville, with different focuses, but always taking Vertical fintechs to know, better understand, get closer and make connections with the financial ecosystem, which includes large loan companies, banks, regulators and promoters of the sector and also other fintech startups. "Because it is very traditional and regulated, the financial sector needs to talk more with startups to innovate, and the startups need more access to the big players", says Rodrigo.

"The agenda of the technical missions held in São Paulo included a day of visits, network and exploration of the financial market, through talks with directors and entrepreneurs from institutions such as B3, BTG Pactual, Cubo, Stone, among others. In the mission to Joinville, fintechs visited the Conta Azul and met other startups in the region, always making contacts, networking and strong connections", he concludes.

ACATE %

GOVERNANCE & SUSTAINABILITY

8 companies

Revenue

R\$ 683 millions

1.315 jobs created

Productivity

**R\$ 404 thousand
per worker**

What is the Program about?

Brazil ranks 109th in the Ease of Doing Business Ranking, and even lower in tax payment (184th), open a business (140th) and property registration (137th). For both the public and private sectors, efficiency in governance and the sustainability of production processes can be found via new technologies and new ways of working. This is the challenge that can be found through new technologies in transportation, genetics and blockchain.

ACATE's Vertical Governance & Sustainability brings together 8 technology-based companies, which develop and commercialize solutions oriented to corporate governance and corporate sustainability - covering the economic, financial, social and environmental aspects. In its portfolio, we highlight companies that work with management and corporate governance solutions with greater emphasis on strategic management and indicators, leadership, and social and environmental responsibility. In addition, companies in the areas of process efficiency, waste reduction, and energy efficiency are part of the group.

governancaesustentabilidade.acate.com.br



Source: ACATE, World Economic Forum.



Case

Sustainability indicators: Companies Management

Over the past few years, Vertical Governance & Sustainability has been working on the collaborative process of building a database of performance for technology-based companies. The idea is to present a management model based on KPIs (Key Performance Indicators) that increase the management maturity of Santa Catarina technology companies, especially companies associated with ACATE. These are a set of performance indicators selected and recommended by a group of management specialists working at ACATE's Vertical Governance and Sustainability. This, which is Vertical's biggest success case, came up from the perception that technology companies in Brazil did not have a precise way to measure their level of sustainability.

Vertical then carried out a series of research on market reference tools and indicators, used nationally and internationally, on which the group could base itself to create ACATE's bank of indicators related to sustainable management and the reality of technology-based companies. "Based on the methodologies identified and reference reports such as the Global Reporting Initiative (GRI), we have created a pioneering process in Brazil to extract sustainability indicators for technology companies", says Gerson Zimmer, Director of Vertical Governance & Sustainability.

The following categories of indicators were selected: financial, performance, sustainability, market and customers, internal processes, and learning and growth.

From the formulating the indicators, a training was organized by Vertical in which companies were oriented on how to fill the indicators. "Our goal with the training was not just to explain how to do it, but why. Implementing sustainability indicator analysis within a technology company represents an opportunity to understand the management model and what it really needs to do to be increasingly competitive in the marketplace, understanding that there is a role that goes beyond profit generation", adds Gerson.

The first version of the database generated more than 170 indicators and, after feedback from Vertical companies and the revaluation and validation process, this number was reduced to approximately 70, in the final version. "Our idea is to launch an eBook with these indicators consolidated in 2019", concludes Gerson.



18 companies

Revenue
R\$ 74 millions

330 jobs created

Productivity
R\$ 207 thousand
per worker

What is the Program about?

Internet of Things (IoT)

IoT is a technology that enables the development of various other business segments and solutions. As a result, the number of IoT devices in the world is expected to reach 75 billion by 2025. The impact of this growth, according to the McKinsey Global Institute, could be from 4 to 11 percent of the Gross Domestic Product of the planet by 2025, which represents between US\$ 3.9 and US\$ 11.1 trillion.

According to a survey by BNDES and MCTIC, the potential impact of IoT use in Brazil could range from US\$ 50 billion to US\$ 200 billion by 2025, representing about 10% of the Gross Domestic Product. These figures show the importance and disruptive potential for the IoT.

Nevertheless, the industry of the future and the enormous potential that connectivity between machines and sensors brings on is on the agenda of 18 companies participating in ACATE's Internet of Things Vertical. In an open environment formed by startups and large companies, meetups, lectures, special projects and the approximation of partners that work in the manufacture of equipment and development of systems and applications for IoT are promoted.

iot.acate.com.br



Source: ACATE, IoT Innovation Report 2018, McKinsey Global Institute, BNDES e MCTIC, World Economic Forum.



Case

Meetups IoT: Knowledge and education for the market

The concept of Internet of Things (IoT) is widely debated in Brazil and worldwide by technology companies, but things are not yet so clear to the general population. Therefore, Vertical IoT understood that a way to educate this market, which involves several segments and application chains, is scheduling periodic meetings with varied audiences to align the concept. IoT Meetups are then one of Vertical's most prominent and successful action.

Meetups are events held within the ACATE Business Verticals project and are focused on bringing to the discussions subjects related to each sector. The events consist of pitches, presentations, lectures by members of the Verticals and are open to the public. "Vertical IoT meetings have been taking place for over a year and were intensified in 2019, seeking to bring principles that permeate the concept of IoT into everyday's people routine", explains Hamilton Avinco, director of Vertical IoT.

Behind the events, there is an organization and a promotion plan to reach all those who have potential

interest in the theme. According to Hamilton, it is essential to understand who Meetup wants to gather, what is the most interesting topic for this audience and what is the best way to approach this subject. "We've been trying, through Meetups, to level the audience on IoT understanding, to define hardware application configurations, smart cities, and to use it appropriately from IoT", says Hamilton.

"A very positive result that we had was the increase of the audience in the events, both in quantity and interest in the subject, generating a great repercussion for the Vertical", he adds. For the next few years, an idea of Vertical IoT is proceed the legacy of the project to increasingly foster the dissemination of information, the exchange of experiences and the creation of networks between the group members and other participants.

ACATE //

MANUFACTURING

27 companies

Revenue
R\$ 356 millions

1.359 jobs created

Productivity
R\$ 230 thousand
per worker

What is the Program about?

According to the World Economic Forum, innovations in computing, sensors, mobile connectivity, artificial intelligence, robotics, 3D printing and advanced materials are transforming the world's industrial parks.

According to ABDI, 42% of the companies in Brazil are unaware of the importance of digital technologies for industry competitiveness. Therefore, an annual cost savings estimation with the industry migrating to the 4.0 manufacturing concept will be at least US\$ 73 billion per year. Meeting these demands of the industrial sector involves sophisticated technology solutions that Santa Catarina ecosystem can offer.

For companies that operate with management, automation and control systems, traceability, production control and technologies, Vertical Manufacturing is a space to share knowledge, display trends and seek common solutions to innovate in their markets. The 27 companies that integrate Vertical develop solutions that reduce costs, qualify processes and increase the quality of production in the Brazilian industry.

Vertical Manufacturing also represents ACATE in Cluster 4.0, a program associated with ABIMAQ (Brazilian Association of Machinery and Equipment Industry) and ABII (Brazilian Industrial Internet Association) to disseminate and implement 4.0 industry concepts in the country.

manufatura.acate.com.br



Source: ACATE, ABDI, CNI, IBGE, World Bank, World Economic Forum.



Case

4.0 Immersion: Strengthening the 4.0 industry in Santa Catarina

Santa Catarina has undergone important transformations in all its economic segments for many years, having been consolidated as the fourth largest technological hub in Brazil. In the manufacturing sector it is no different: the holding of Imersão 4.0 event in 2019 materialized a sum of Vertical Manufacturing's actions, becoming its biggest success story and further strengthening the sector.

"Imersão 4.0 achieved rewarding results for participants, from associates of the organizing entities, industries, to educational institutions related to the area: everyone noted value in the published contents and brought very positive feedbacks", celebrates Túlio Duarte, director of Vertical manufacture. Industry 4.0 causes changes in industry mindset and management, and more and more technological trends are incorporated into these routines to produce more efficient results. According to information obtained by the National Confederation of Industry (CNI), it is estimated that the implementation of automation

and artificial intelligence in Brazilian industries should reach 21.8% of companies by 2027, while today is 1.6%, highlighting the importance of the debate on the topic in the country.

"The event was our latest major achievement, and it was built on a number of actions over time, such as Cluster 4.0, which was created to address the difficulties and challenges of science in innovation and the adoption of enabling technologies in the industry. 4.0, and to understand how they can be solved", explains Túlio. "The national representation gained by the Vertical Manufacturing through its actions and positioning opens the way for the listings, enabling their participation in the pitches before the leaders of large industries across the country. Is this a great value created for us over the years and fully consolidated in Imersão 4.0 ", he concluded.

ACATE+

HEALTH

41 companies

Revenue
R\$ 668 millions

1.784 jobs created

Productivity
R\$ 322 thousand
per worker

What is the Program about?

The World Economic Forum estimates that increasing life expectancy will lead to a doubling of people in the world with at least 60 years by 2050. This is causing a number of transformations in the health sector. Data from Breakout Year in Tech Study shows that in 2017, the health sector was the second fastest-growing field of technology in Latin America, with growth of 250% over the previous year.

The healthcare market in Brazil ranks as the 7th largest healthcare area in the world and there are more than 250 startups focused on the innovation sector, the main ones mainly working in clinical and hospital solutions, as well as the exact sciences market, which includes applications in the fields of physics and biochemistry.

In Santa Catarina, Vertical Healthcare companies are in the spotlight in the development of IoT, business intelligence, big data and analytics solutions for application in preventive and personalized medicine. In all, 41 companies and startups periodically exchange information and discussions about new demands and innovations across entire healthcare service chain.

saude.acate.com.br



Source: ACATE, Breakout Year in Tech, Inside Latin America; World Economic Forum.



Case

Terms of Technical Cooperation: Innovation in the Healthcare sector

The Vertical Healthcare activity that most highlights as a success case is the creation and maintenance of Terms of Technical Cooperation, which are partnerships signed by Vertical with healthcare institutions. Some examples of institutions with which there are signed cooperation terms are: Santa Catarina Medical Association (ACM), National Association of Private Hospitals (ANAHP), Medical Students Association of Brazil (AEMED), Federation of Hospitals and Hospital Establishment Services. Santa Catarina State Health Services (FEHOESC), Santa Catarina State Industry Federation (FIESC) and Eretz.bio, startup incubator at Albert Einstein Hospital

Walmoli Gerber, Director of Vertical Healthcare, highlights that the terms of technical cooperation places a very strong position of Vertical in the national scenario. "These institutions are already solid and have a consolidated mass of decision-makers, which ensures that

Vertical companies have greater access to them and their audiences," he says. "I believe this is a major action taken by Vertical over the last few years, giving companies access to vertically-oriented institutions that promote innovation and expand their market quite easily without the need for investment by companies," he adds.

An example of how these partnerships work is the cooperation between ACATE and AEMED, focused on promoting medicine student studies in technology companies at Vertical Health. "Through this partnership, we seek to create professionals with an innovative vision of medicine, linked to technology, adding much more value within healthcare institutions in their daily operation," explains Walmoli. "The world of healthcare and medicine has many opportunities, and the greater the management capacity of those in hospitals, the faster results are generated."

ACATE []

SECURITY

13 companies

Revenue
R\$ 1.3 billions

2.612 jobs created

Productivity
R\$ 425 thousand
per worker

What is the Program about?

The Inter-American Development Bank (IDB) estimates that, among Latin American and Caribbean countries, Brazil is the one that spends the most on violence. About US\$ 75 billion is spent, equivalent to 53% of the entire region. They represent 4.38% of Brazilian GDP, an amount of R\$ 285 billion. In addition to physical security, digital risks also pose serious threats. According to the Digital Security Report in Brazil, some 120.7 million cyber attacks were identified in the first half of 2018. Cyber security threats can only be countered with proactive and control and monitoring actions.

At ACATE, 13 companies participate in Vertical Security promoting new solutions and technologies for property, public, private and information security. Some of the technologies developed involve software and hardware that assist in product access control, intelligent automation, alarm and image monitoring, face recognition, asset tracking and data security. Thus, small, medium and large companies meet periodically to exchange knowledge and seek new business opportunities.

seguranca.acate.com.br



Source: ACATE, Banco Interamericano de Desenvolvimento, Secretaria Especial de Assuntos Estratégicos da Presidência da República, Relatório da Segurança Digital no Brasil.



Case

Security Tech: Integrating the security ecosystem

The ecosystem of companies that develop technology solutions for information security encompasses all sizes of organizations. Focused on integrating this entire branch, Vertical Security highlights as its biggest success case the creation of the Security Tech event. “This event seeks to achieve some of Vertical’s main goals: to provide greater integration between group companies, promote networking between companies and their customers and, as the conversation progresses, even generate new business”, says Reginaldo de Sousa, Vertical Security’s director.

The event, which in each edition has a guiding theme, is closed to an audience composed of members of Vertical, its customers and prospects, and it is organized in this way: each company in the group realizes presentations about its solutions, cases and products to the public. It is also a trade environment, where each company offers a physical

space to shows what the security market offers, allowing a better understanding of the problems to solve. “The event is led by a speaker anchor, preferably a renowned figure in the sector, who talks about the main theme of each edition, brings insights and cases to the public”, adds Reginaldo.

In the latest editions of the event, held in Florianópolis and Curitiba, more than 150 people participated, and the latest industry issues sparked a debate, showing how technology can help different players in the security ecosystem. “We had a very good result, as well as strong integration between companies during moments like the coffee break and happy hour, and the event attracted a lot of attention, causing a positive repercussion within the Vertical. An idea of the project is to take this event to the main capitals of Brazil, bringing topics related to information security for as many people as possible”, concluded Reginaldo.



Established during 2019, Vertical Retail is still in its structuring stage, but already has more than 30 participating companies.

What is the Program about?

Consumption patterns are changing and the retail industry needs to adapt quickly to these consumer profiles. With the Internet and mobile devices, the search for product and service information has advanced rapidly, and in parallel with technological changes, changes in consumer culture and demographics also require adjustment.

According to the study Cenários de Transformação for retail and consumer businesses, about 72% of consumers make their purchases through mobile devices. With consumption rising, the estimated spending by the global middle class by 2030 is US\$ 51 trillion.

For Brazil, many companies still need to reinvent themselves for this new scenario. ACATE Retail Vertical was established to bring together retailers, startups and large technology companies to accelerate industry digitalization by joining technology companies and opening new market opportunities.

Source: ACATE e PWC.

FIND OUT ABOUT OTHER ACATE PROGRAMS

The projects developed by ACATE involve the main demands of the technology sector in the Santa Catarina state. With the common goal of generating connections, supporting new business, and discussing issues of interest to members, each one of ACATE's strategic programs aims to help the ecosystem and find innovative solutions to common challenges.

www.acate.com.br



MIDITEC incubator,
in partnership with
SEBRAE / SC



**Open LinkLab Innovation
Program**
Connects startups to large
companies



Startups
Startups Benefit Program



StartLab
Support program for the
creation and development
of new startups



**Connection and
sharing groups**



The data presented in this document has as its main source ACATE Observatory BI System, developed by Neoway, composed by data set from companies, invoicing, entrepreneurs and workers. In addition to this information, data from National Institute of Educational Studies and Research Anísio Teixeira (INEP), Annual Report on Social Information (RAIS), and General Register of Employed and Unemployed (CAGED) were also used.

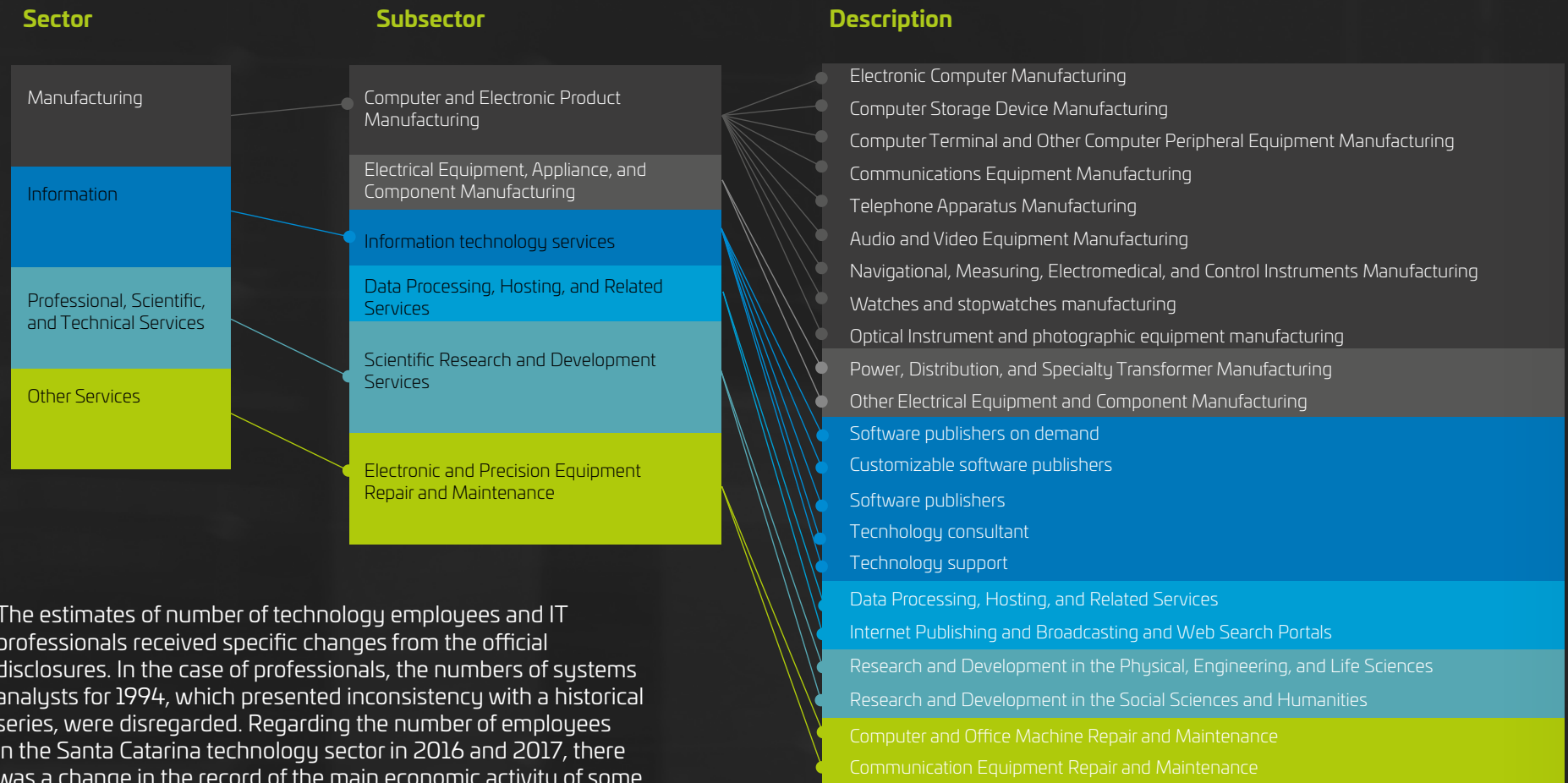
Although both sources show numbers of workers, RAIS data use an annual job survey, while CAGED data monthly monitors the process of employee hiring and dismissal under the CLT regime only. A difference between the hiring and dismissal categories resulting from the job balance, which indicates the variation in the number of full-time employees, but is not the same as that reported by RAIS due to methodological differences.

The economic activities that identify the sector follow the National Classification of Economic Activities (CNAE 2.0), and are divided into Hardware (Manufacturing Industries), and Software and Services (Information and Communication, Professional, Scientific and Technical Activities, Other Services Activities).



The database used in the publication is from Neoway Business Solutions, the SIMM (MultiMarket Intelligence System). A BI on the SIMM database was built through a partnership between Neoway and ACATE. Statistics were compiled on Companies, Partnerships and Employees.

COVERAGE



The estimates of number of technology employees and IT professionals received specific changes from the official disclosures. In the case of professionals, the numbers of systems analysts for 1994, which presented inconsistency with a historical series, were disregarded. Regarding the number of employees in the Santa Catarina technology sector in 2016 and 2017, there was a change in the record of the main economic activity of some companies in the Ministry of Labor's base sector, which had the total number of employees accounted for from Neoway BI.

EXECUTION

ACATE

Associação Catarinense de Tecnologia (ACATE) has represented the interests of Santa Catarina's technology sector since 1986. Its actions increase the recognition of this industry in the state, country and also internationally. To reinforce Santa Catarina innovation ecosystem, Acate manages initiatives such as the MIDITEC incubator, the Link Lab open innovation laboratory, Business Verticals, angel investor network, among many others. Bringing together 1,200 technology-based companies and organizations, it is able to promote a culture of innovation throughout Santa Catarina.

www.acate.com.br



EXECUTION



Neoway develops innovative technologies that help companies to earn more and lose less. Big Data Analytics specialist, working in Market Intelligence, with solution for Sales (lead generation and sales time management), and in the areas of loss prevention, due diligence and asset recovery.

www.neoway.com.br

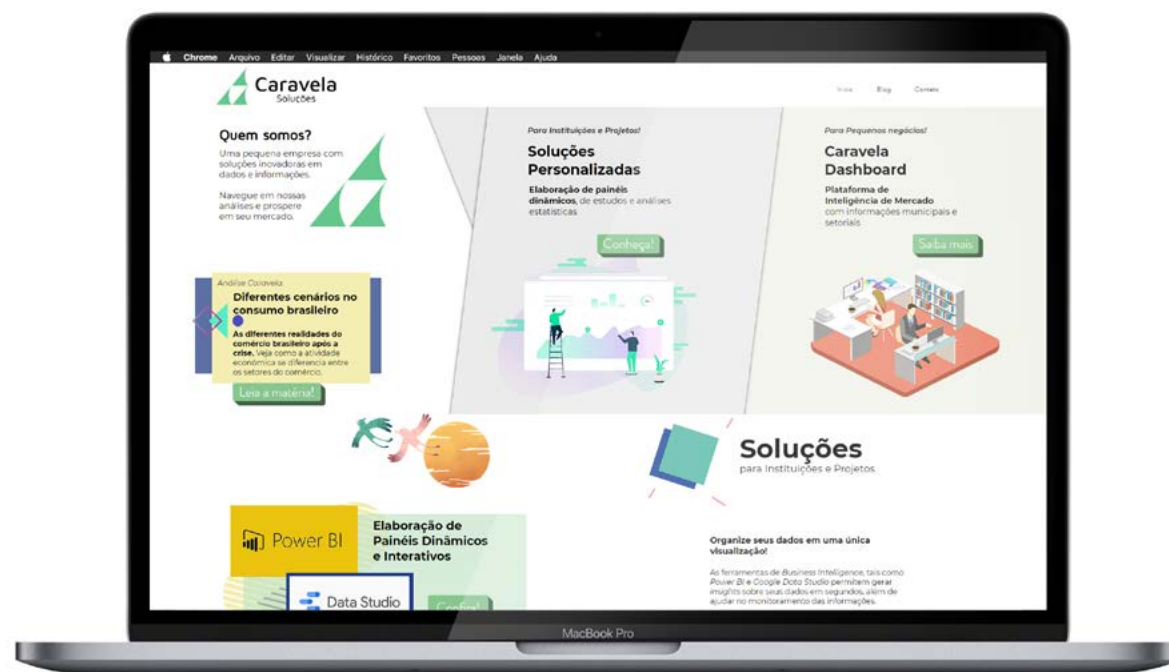


TECHNICAL PRODUCTION



A company with innovative solutions in data and information. Caravela Soluções has a participation in projects of great relevance to the state of Santa Catarina. Specialist in data analysis, Caravela conducts studies, statistical projections and develops platforms of data interaction.

www.caravela.biz

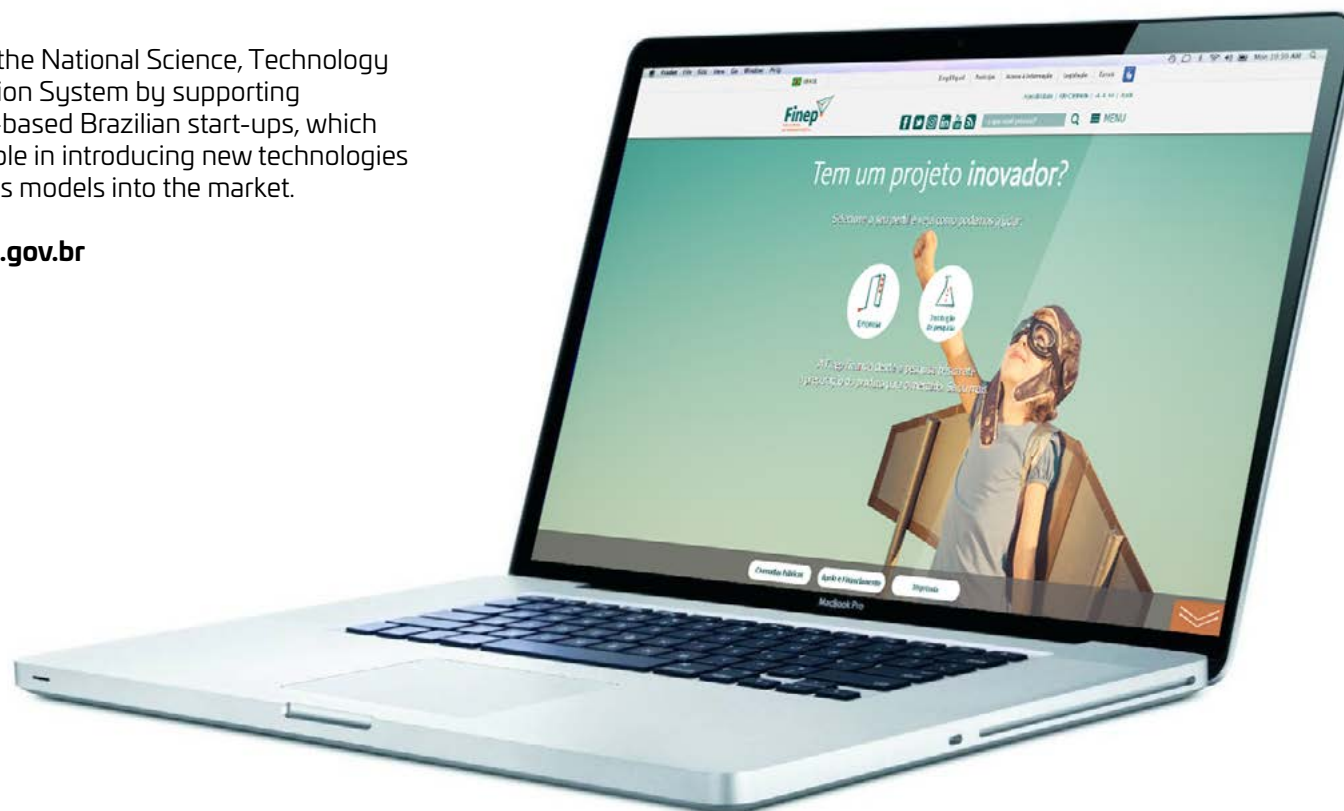


SUPPORT



Strengthen the National Science, Technology and Innovation System by supporting technology-based Brazilian start-ups, which play a key role in introducing new technologies and business models into the market.

www.finep.gov.br



ACATE
OBSERVATORY

www.acate.com.br/observatorio-acate →

The logo for ACATE, featuring the word "ACATE" in a bold, white, sans-serif font. The letter "C" is highlighted in a vibrant yellow-green color. The background of the entire slide is a dark olive green with a subtle grid of dots and lines, and a faint, stylized bar chart with an upward-trending line graph.

www.acate.com.br

contato@acate.com.br
48 **2107 2700**

Centro de Inovação ACATE Primavera
Rodovia SC 401, km 4 - Bairro Saco Grande
Florianópolis/SC - CEP 88032-000
