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## UFRJ SCIENCE PARK SUSTAINABILITY REPORT

2017





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### **I** EXECUTIVE SUMMARY

The Sustainability Report presents the main indicators of economic, financial, social and environmental performance of the Park from January 1 until December 31, 2017. In an attempt to achieve the best international practices on sustainability, the report follows the guidelines provided by of the Global Reporting Initiative (GRI) version G4 (Core option).

The document begins with an interview with the Park's CEO, José Carlos Pinto, where he offers the reader a panoramic view about the topic that either influenced or were influenced by the Park in 2017. On a complementary basis, he also presents the highlights of the year, including the figures registered in the Park.

In the section called "Science Park", the organization is described as an innovation and entrepreneurship environment within the Federal University of Rio de Janeiro, which gathers 57 research centers of both national and multinational companies, as well as 10 laboratories and one business incubator. Besides giving a detailed description of the services provided to the community, this section presents the major aspects related to governance and management (people, finance, eco-efficiency, transparency and integrity), mainly the concrete actions aimed at improving operational performance.

The section "Park and Local Development" presents the main results achieved in four different areas: UFRJ students; the university; relations among companies; the economy and the area. Following, some highlights about these areas.

As far as UFRJ students are concerned, the main highlights correspond to the support given to the UFRJ Hub of innovation, training opportunities and social investment, which, through the Park Invests Program, fostered 11 institutional projects, in a total of R\$ 323.000,00 in sponsorships in 2017. As far as the university is concerned, the companies contracted 55 projects in a total amount of R\$ 63,287,623.00 in a partnership with the university, among which R\$ 61,400,905.00 in research and development investments. The variety of topics covered in these projects reinforces the multi-thematic nature of the Park,

a characteristic which positions the Park as a Project open to all academic departments of the university.

The relationship among the resident companies and the attraction of new organizations, were also highlighted. Companies such as GE Suez, Superpesa, Senai and TWIST, this latter so far part of the COPPE/UFRJ Business Incubator, became residents of the Park. Aiming at reinforcing the strategy of promoting diversity of economic sectors and sizes of the companies, the report registers dozens of networking activities carried out, such as the programs Meetings at the Park (Encontros no Parque) and OpenTalk.

As far as the economy and the region is concerned, the highlight is the creation of 983 Jobs, the generation of more than R\$ 1,6 million in taxes in 2017; the deposit of 18 titles of intellectual property as a result of researches carried out in the Park; and the entry of five companies in the Coppe/UFRJ Business Incubator, reaching the number of 25 residents with a revenue of approximately R\$ 9 million in 2017. To conclude the section "Park and Local Development", the institutional representativeness and visibility in 2017 are highlighted, emphasizing the networks in which the Park participate; the visitation of 648 people; and both traditional and social media appearances, which totaled 345 reports throughout the year of 2017 in newspapers, online vehicles, radio and TV stations all around the country, as well as 15 reports or references of companies either incubated in or graduated from the Incubator.

Finally, the chapter "About the Report" is presented, which provides a detailed description of the methodology used to produce this report of sustainability, followed by the "GRI Summary", a thorough description of the "Park's team" in 2017 and the "Technical Records" of the document. We wish you all a pleasant reading.



### **MESSAGE FROM THE CEO**

(G4-1)

2017 was the year of the kickoff of a new phase in the history of the UFRJ Science Park. In April, the Strategic Plan of the institution was launched, which defined actions, projects and priorities for the next 30 years. Two new research centers started their activities within our innovation environment beginning a cycle of actions in new areas of the economy. The Park was the local organizer of the greatest event of innovation and entrepreneurship in Latin America and actively participated in different discussions about the legal milestone for the sector. The year of 2017 was also the starting point of the consolidation of the investment in different sustainability projects and in activities to approximate companies and the university. There were many activities, but different challenges as well, which determined the action to be taken in 2018. The CEO of the UFRJ Science Park, José Carlos Pinto, tells, in the interview below, a little more about what we did in 2017 and we intend to do in the next year.

How do you evaluate the year of 2017 for the UFRJ Science Park? Could you draw up an analysis of the activities and major achievements of the past year?

In 2017, there were many significant events for the Park's near future. In April, we launched the Strategic Plan of the Park for the next 30 years, a very relevant activity that designed the future of the institution, considering the directions of the research and the technological development, as well as the relationship with the university and the contribution to the Brazilian socio-economic development. Some axes appeared as fundamental for the next years; among which the humanization of the Park. And in 2017 we took several actions in this direction. In this line, the highlight was the opening of the Short Circuit Gallery, which was the starting point of a more expressive occupation of the Park by our colleagues who do not belong to the technological areas. These activities also approximated the resident companies of the Park, many of which are responsible for sponsoring these cultural activities.

In 2017, some operations of the research centers of L'Oréal and Ambev started, and some of which were also highlights of the past year. Despite the country's crisis, we were able to continue establishing a path of development for the Park's project and to increase the number of resident companies. This shows that the UFRJ Science Park has organically developed as a project. This way, another highlight was the CrowdRio project launched in June. This program for accelerating the

startups acting in several different fields came from a partnership with Telefônica Open Future and was an extremely successful project for widening our field of work because it helped reach different kinds of companies as well as attract new actors to our innovation environment. In 2018, other companies are going to participate in this project as collaborators.

Another important event occurred in October. The 27th Anprotec Conference is the largest event for innovation and entrepreneurship in Latin America and it was organized by the UFRJ Science Park in Rio de Janeiro. The highlight of the event was when all people involved gathered together for a celebration at the Museum of Tomorrow.

In addition to the positive actions, the year of 2017 also presented some challenges. From your point of view, which were the main critical points of the year?

The main critical point was and still is the economic crisis that Brazil and the state of Rio de Janeiro, in particular, are enduring. From a quantitative point of view, the university has also suffered from the reduction in investments and in the number of partnerships between the companies and the UFRJ. However, a recovery was noticed in the end of 2017 and that is why we hope that 2018 will be better.

The crisis in the oil industry is not over yet, which tremendously affects the research activities in the UFRJ and in several resident companies that act in that field. Therefore, this is still a challenge for the coming years but we are optimistic that a renewal in that field will happen soon. In fact, it seems that the year of 2018 will be a better year for investments. So, we sincerely hope that proves to be true.

Debates about specific legislation for the field of innovation were an important part of the activities held by several innovation environments in Brazil in 2017, namely by the UFRJ Science Park. How do you take stock of the progress in that area?

From a legal point of view, 2017 can be considered a good year and I believe that in 2018 Brazil will be in the right place for getting an innovation landmark that is more suitable for those people who work in that area.

In 2017, the Bill 5752/2016, which was drafted by the representative of the Lower House Otavio Leite (PSDB/RJ), has made significant progress and now is waiting for the approval of the city council. This project, on which we have worked together with several other actors, introduces the centers of research and innovation that companies have into the Brazilian legal landscape for the first time.

Another important advancement was a decree-law that regulates the National Code of Science and Technology. Throughout the year, several

debates occurred that discussed the decree-law that regulates pending and dubious questions that exist in that Code.

Two other points that should be mentioned here are the efforts made by the Rio de Janeiro municipality to enact its own Municipal Code for Innovation as well as the actions taken by the government of the state of Rio de Janeiro to boost initiatives for innovation in the state.

The motto of our 2017 report is called "innovation through diversity".

Why was this motto chosen?

That is one of the strategic objectives of the Park that were established in our long-term planning. The focus of the Park in 2018 as well as for the coming years will be all about working the pillar of diversity. We believe that the arrival of the Senai Institute for Innovation as well as the acceleration project of the national reference center for pharmo-chemistry of the Technology Institute in Pharmaceuticals of Farmanguinhos/Fiocruz correspond to the beginning of a process of acceleration of actions directed at that motto.

With the arrival of the Senai Institute for Innovation in Biosynthetics as well as with acceleration of the Fiocruz project, we hope that 2018 brings about a process of acceleration of the number of companies that focus on the areas of biotechnology and health science. This is a process that we will be accelerating in 2018 and that will continue in the coming years of the Park's life.

In which ways the motto and sustainability actions were visible in 2017 in the Park? The year of 2017 consolidated our investment in several sustainability projects. What is more, the sustainability actions were also an important part of our Strategic Plan. An example is the Park Recycles (Recicla Parque) project launched together with the CCS Recycling Program and the Laboratory of Applied Ecology of the Biology Institute. The project is about the adoption of internal practices of sustainability and of environment-friendly disposal of residues. What we did went further than what is required by the law. The project subsidizes the elaboration of research at the Center for the Selection and Processing of Recyclable products at the Science Park, such as the remanufacturing, repairing and reuse of products.

Which are the priorities and focal points for the Park in 2018?

In 2018, we will prioritize the humanization and the service offer of the Park. One of the types of services that we wish to offer in a call is the operation of sea transportation services, which corresponds to a kind of mobility often demanded by the users of Park. In 2018, the efforts for the opening of the Cube will be intensified. This is a space for promoting the interaction between different types of audience, especially resident companies and the UFRJ community. It can be used for meetings, social interaction, network expansion, exhibitions and many other activities. We believe that these initiatives can promote, in a very significant way, the settling of people at the Park. The beginning of the operation of Cubo will be one of the most important steps for the process of humanization and occupation of the Park. We hope that it stimulates the arrival of new people that do not usually visit the Park but that will find good reasons to stay here with us.



# HIGHLIGHTS OF THE

### 01 NBR ISO 9001:2015 CERTIFICATION

Pursuing the strategic guideline of reaching excellence in its management, the UFRJ Science Park obtained the Self-Audit Coppe UFRJ certification in the Silver category. This certification concerns the process of elaboration of this Sustainability Report complying with the norm NBR ISO 9001:2015 (quality). (Ver página XX)

#### 03 THE PARK'S GASTRONOMIC AND CULTURAL FAIR

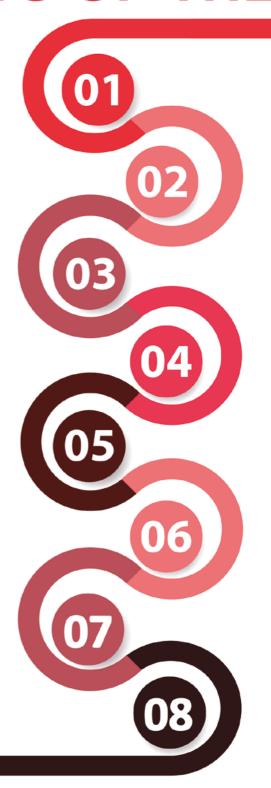
Integration Event started by the Science Park in 2016, the Park's Gastronomic and Cultural Fair had its 4th edition in 2017 during an event made up solely by UFRJ Students' projects. (Ver página XX)

### RECICLA PARQUE (PARK RECYCLES)

Guided by its Sustainability Policy, this program aims to transform the Park into an environment of circular economy and a live laboratory through innovation researches on wastes. The project, designed to have three stages, started to implement the first in 2017 with a pilot project for selective collection and concrete destination of wastes from administrative buildings of the UFRJ SciencePark. (Ver página XX)

### 07 STRATEGIC PLAN

In April, the Strategic Plan for the next 30 years of activity was launched publicly. It is an ambitious project that established the lines of action and priorities and defined the concepts of vision, mission and value of the institution.



# **YEAR**

# 02

#### **OPENING OF THE SHORT CIRCUIT GALLERY OF PUBLIC ART**

Art, culture and technology were the topics of the Gallery of Short Circuit of Public Art of UFRJ Science Park, open in 2017. Its first cycle had the participation of works of five artists from the School of Fine Arts (Escola de Belas Artes - EBA), one urban intervention work from the School of Architecture (Faculdade de Arquitetura - FAU) and six nationally and internationally renowned artists. Twenty four works created for the exhibition "Memórias do Boto" (Memories of the River Dolphin) in 2015 were also part of the gallery. (Ver página XX)

## 04

#### **ANPROTEC CONFERENCE**

In 2017 the UFRJ Science Park was the local organizer of the 27th ANPROTEC Conference of Entrepreneurship and Innovation environments. Brazilian and experts from around the world participated in debates about the impact of innovation on the transformation of the cities with an audience of more than 800 people from the Brazilian innovation and entrepreneurship sector. The event celebrated ANPROTEC's 30 years (National Association of Science Parks and Business Incubators) and presented cases of Brazilian innovating entrepreneurship. (Ver página XX)

## 06

#### INSTITUTIONAL RELEVANCE IN THE SECTOR

In 2017, we worked jointly with other actors. The Bill 5752/2016, authored by the Lower House Representative Otavio Leite, has moved forward and, at this moment, waits to be approved by the Lower house. This bill creates the research and innovation centers of companies at the Brazilian legal landmark. Two more relevant advances were the proposal of the decree that regulates the National Code of Science and Technology and the joint works with Rio de Janeiro municipality to enact its own Municipal Innovation Code.



#### **ENTRANCE OF NEW COMPANIES IN THE PARK**

The companies GE SUEZ, Superpesa, SENAI and Twist joined the Park, contributing for the diversity of companies size and economic sectors of the Park.

# **HIGH NUMBERS**



# R\$ 63.287.623,00

INVESTED IN PARTNERSHIPS BETWEEN COMPANIES AND THE UNIVERSITY VALUES CONTRACTED, FROM WHICH R\$ 61.400.905,00 INVESTED IN R&D WITHIN THE UNIVERSITY

IN AN INTERACTION WITH THE PARK'S COMPANIES

• 1

07 CENTERS 12 UNITS

INVOLVED IN COOPERATIVE PROJECTS
BETWEEN THE PARK'S COMPANIES AND UFRJ

# R\$ 323 THOUSAND

INVESTED BY THE PARK TO
SPONSOR UFRI PROJECTS, WITH DIRECT
PARTICIPATION OF 1126 STUDENTS

• 26 EVENTS
TO INTEGRATE THE COMPANIES

•18 DEPOSITS

• 55 PROJECTS

R\$ 6.800.007,28

GENERATED FROM RESOURCES FOR THE UFRJ ORIGINATED FROM LAND USE IN THE PARK

R\$ 1,6 MILLIONS

IN TAXES COLLECTED

- PARK'S GASTRONOMIC AND CULTURAL FAIR WITH THE PARTICIPATION OF 1 THOUSAND PEOPLE
- BLOOD UNITS COLLECTED DURING 2 CAMPAIGNS FOR BLOOD DONATION
- 30 EMPLOYEES BENEFITED BY THE AUDIENCE EDUCATION PROGRAM



**APPROXIMATELY** 

# R\$ 280 MILLION

INVESTED IN COOPERATION BETWEEN THE COMPANIES AND THE UNIVERSITY IN CONTRACTED VALUES <sup>1</sup>

# **R\$ 30 MILLION**

OF TAXES COLLECTED 3

AROUND

# **R\$ 31 MILLION**

TRANSFERRED DIRECTLY TO UFRJ AS FINANCIAL RESOURCES BY THE COMPANIES INSTALLED IN THE PARK BY ASSIGNMENT OF LAND USE <sup>2</sup>

# **R\$ 900 MILLION**

INVESTED BY THE COMPANIES TO CREATE AND OPERATE THE 14 R&D CENTERS INSTALLED AT THE PARK (ACCUMULATED FIGURE SINCE THE OPENING OF THE PARK)

# **R\$ 1.9 MILLION**

INVESTED BY THE PARK TO SPONSOR UFRJ PROJECTS

# 130 DEPOSITS

OF INTELLECTUAL PROPERTY

**ACCUMULATED 2003 - 2017** 

<sup>1</sup>THIS FIGURE MAY BE ALTERED POSITIVELY ANNUALLY DUE TO
THE FACT THAT THE COMPANIES ARE ABLE TO INCLUDE PROJECTS
WITH UFFJ ANY TIME, EVEN THE ONES FROM PREVIOUS YEARS.

<sup>2</sup>THIS NUMBER REFERS TO THE YEARS OF 2009 AND 2017.
IN 2009 THE FIRST COMPANY OPENED AT THE PARK.

<sup>3</sup>THIS NUMBER REFERS TO THE PERIOD FROM 2013
(WHEN INFORMATION STARTED TO BE COLLECTED)
TO 2017. IN 2017 THE COMPANIES INCUBATED IN THE
COPPE/UFRI BUSINESS INCUBATOR AND ONE RESIDENT
COMPANY AT THE PARK DID NOT PROVIDE THE DATA.



### THE UFRJ SCIENCE PARK

(G4-56)

MISSION | TO REINFORCE THE INNOVATION CAPACITY OF THE ECOSYSTEM FOR THE CREATION OF WEALTH AND SOCIAL WELFAREIN AN ENVIRONMENT OF CONNECTION OF ENTREPRENEURIAL INITIATIVES AND GENERATION OF KNOWLEDGE

#### VALUES |

## COMMITMENT WITH

We generate innovation which has an impact on entrepreneurial, social and academic improvement

#### COOPERATION

We connect the links of the innovation networks generating knowledge and technology

#### **ENTREPRENEURIAL ATTITUDE**

We are proactive and persevering in reinforcing the innovation ecosystem

VISION FOR 2045 | THE SICENCE PARK IS A DYNAMIC AND DIVERSE ENVIRONMENT THAT GENERATES RELEVANT INNOVATIONS FOR THE ECONOMIC, SOCIAL AND -ENVIRONMENTAL DEVELOPMENT

#### **PROTAGONISM**

Active and anticipatory attitude to boost the global innovation networks.

#### DIVERSITY

Environment with cultural diversity made up of national and international companies of different sizes connected to UFRJ research groups and articulated with entreoreneurs and investors.

#### **DYNAMISM**

Environment with great capacity for renovation, full of life, characterized by its dynamism and lightness.

### WHO WE ARE

On December 31, 2017, the Park was home to 57 companies and 10 laboratories. A 19% growth if compared to the previous year. The UFRJ Science Park (G4-3) is an innovative and entrepreneurial environment within the Federal University of Rio de Janeiro which gathers research centers of both national and multinational companies, as well as laboratories and one business incubator. With the interaction between the companies and the University, students and academic personnel, it is possible to turn knowledge into Jobs and income offering innovative products and services to society.

The Park, opened in 2003 in an area of 350 thousand square meters on Fundão Island university campus (G4-5), is a UFRJ project, without legal personality (G4-7), directly linked to the Rector's Office. On December 31, 2017, the Park was home to 16 research centers of large companies, 9 small and medium-sized companies, 9 UFRJ laboratories, as well as 25 startups in the COPPE/UFRJ Business Incubator and 6 Crowd Rio acceleration programs. The Park is also home to the UFRJ Innovation Hub, an



initiative that connects hundreds of entrepreneurial initiatives. Compared to the same period in 2016, the number of resident organizations increased in 19%. It is important to highlight the beginning of the operation, in 2017, of research centers of two large companies, Ambev and L'Oréal, the latter located on Bom Jesus Island, which is part of the UFRJ innovation environment and is also home to the GE research center. The Park' organic growth was also due to the establishment of programs of cooperation and investment in activities that brought closer the university, the companies, and society in general. Among them, the Crowd Rio, a startup acceleration program in a partnership with Telefônica Open Future, which has been helping the management of enterprises of significant impact.

A Business Incubator is also part of the Park's structure – the COPPE/UFRJ Business Incubator, designed to encourage the creation of new companies based on technological knowledge, a result of the work of research groups located at UFRJ. Founded in 1994, the Incubator constitutes the basis of the professionals who developed all the structure of the UFRJ Science Park. During more than 20 years of activity, the Incubator has supported the development of 110 companies, responsible for generating more than 1380 highly qualified jobs. On 12/31/2017, the Incubator was home to 25 startups.

The Park also follows up the management of the small and medium-sized companies installed and carries out activities which foster the relationship between the resident organizations and other interested public. Our actions also aim at expanding the networking of the companies and stimulating entrepreneurship through activities of business management and fundraising.

The Park has also a coworking space, areas for events and places for students' and professors' entrepreneurial projects. As mentioned before, the Park is home to the UFRJ Innovation Hub. More than just providing physical structure, the Park supports the Hub and the other entrepreneurship-oriented activities through management activities and integration with the interested public.

During the past years, the UFRJ Science Park has been strongly investing in two work fronts: attracting new companies from different economic sectors and expanding its activities beyond its physical borders. To this end, the Park has been establishing partnerships with other national and international

innovation environments. Among them, are the partnership with the Scientific and Technological Park of the Catholic University of Rio Grande do Sul (Tecnopuc) and the Digital Port (Porto Digital), in Recife (PE), for the exchange of resident organizations and the partnership with TusPark (Tsinghua University Science Park) of the University of Tsinghua, China, which allowed the Park to have a permanent physical base in that country (G4-6, G4-8).

5 GENDER FOULLITY





### **Supporting Programs to the companies**







(G4-4)

The logos above are graphic representations of the Objectives of Sustainable Development (ODS), key part of the 2030 Agenda for the Sustainable Development promoted by the UN. Topics related to those objectives are highlighted in this report in different sections.

**Mentoring:** action with the COPPEAD/UFRJ Institute for strategic guiding and expansion of the resident *startups networking*.

**Trajectory X**: fosters professional and personal development aiming at leadership formation in the feminine universe.

**National and International Softlanding:** partnership with innovation environments in Brazil and abroad, for the exchange of resident companies, allowing the expansion of relationship networks and increasing business opportunities.

**CROWDRIO**: acceleration program for the development of digital businesses and IoT in a partnership with Telefônica Open Future. The program, organized in three four-month eliminatory stages, enables the ideas to be validated and, during the program, they can be transformed into companies in commercial training.



Based on Mission, Vision and Values concepts, in 2017 the services provided by all the management offices of the Park were systematically designed for the resident institutions.

Support to potential resident companies, identifying of interaction opportunities with UFRJ, through meetings and workshops with research groups.

Establishment of direct and continuous channels to foster the company-university interaction:

Connection with UFRJ research groups;

Connection with entrepreneurial initiatives of the UFRJ student body (UFRJ Innovation Hub);

Connection with other resident companies of the Park and of the Incubator.

Organization of events that aim at fostering the relationship between the resident organizations of the Science Park and the other interested publics:

Monthly series of events and workshops;

Series of open events for non-resident experts to explore certain fields of knowledge.

Development of qualified networking, fostering the integration of companies in the innovation ecosystem, rapprochement of large, medium and small-sized companies of the Park, as well as of other interested institutions.

Release of information about events, tenders, programs and other subjects of interest for the companies.

Specifically, according to the size of the company, the following services and activities are offered:

#### Large companies

Support to the development and implementation of plans of investments in R, D & I of the large companies in a partnership with different actors: university, government and other companies (including startups).

Management follow-up of the portfolio of R, D & I projects of the research centers installed.

Promotion and encouragement of the sharing of experiences gained by the resident companies during the partnerships based on assessment of project performance.

#### Small and medium-sized

Follow-up and management of small and medium-sized companies installed in the Park, offering access to the partners' network to contract consultancy and to qualify the resident companies.

Image management, press agency, content production and consultancy for digital media for the small and medium-sized companies installed in the Park.

Matchmaking with investors of venture capital and guiding for an efficient relationship with this community.

#### Startups

Support to the creation of new businesses based on the technological knowledge generated from the relationship with UFRJ:

Utilization of the lean startup methodology;

Offer of guidance and follow-up of the development of each business in communication and marketing, finances and other management areas;

Offer of training for business capacitation of resident entrepreneurs.

Development of professional networking.

Sharing of experiences among resident startups, encouraging the maturing process of the entrepreneurs.

All the organizations of the Park have access to the following infrastructure services:

24-hour security;

Electronic Surveillance System with 24-hour monitoring;

Landscape gardening;

Public cleaning services;

Cleaning of common areas of the shared buildings;

Garbage collection;

Public Street Lighting;

Access to the Park's auditorium, which holds up to 70 people, and to the meeting rooms.

The companies that reside in the shared buildings have access to the following services:

Lighting of common areas of shared buildings;

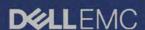
Maintenance and operation of central air-conditioning;

Civil and electrical maintenance of common areas;

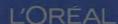
Maintenance and operation of the telecommunication system;

Reception and administration of the Park.

# LARGE COMPANIES









SIEMENS HALLIBURTON





Schlumberger

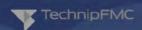
















# SMALL AND MEDIUM-SIZED COMPANIES



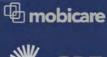
















# STARTUPS OF THE COPPE/UFRJ BUSINESS INCUBATOR



# STARTUPS OF THE CROWDRIO PROGRAM



### **GOVERNANCE OF THE PARK**

(G4-34)

The governance systems of the UFRJ Science Park consist of a combination of governance and management mechanisms which mainly aim at ensuring the full achievement of its mission in a participatory manner.

The reference instruments that control the actions are: (i)
Regulation approved by the UFRJ University Council in 1997;
(ii) Regulation for Land Use and Occupation; (III) Operational
Regulations; (iv) Strategic Plan of the UFRJ Science Park 2016-2045;
(v) Public Tenders (including selection criteria); (vi) Contracts; (vii)
Sustainability Policy of the Park; and (viii) Support and Sponsorship
Policy.

The Board of Directors is the highest decision body of the Park. In addition to nominating and approving the CEO and his/her management plan, the Council also evaluates the companies that apply to become part of the Park and permanently assesses the different impacts generated by the Park's performance. The CEO is responsible for the strategic decisions and performance concerning the economic, environmental and social sustainability of the Park. It is a four-year term and the main requirement is that the CEO be a member of the academic or administration staff of UFRJ.

For the accomplishment of the Park's mission, there are two other mechanisms of governance support: (i) UFRJ Management Committee of Articulations – Company/Science; and (ii) Consulting Committee for Architecture and Urban Planning. The former supports the Park defining guidelines for prioritizing actions and initiatives that are of interest of UFRJ and that are economically and financially supported by the companies installed in the Park. The committee is also responsible for the assessment of the investments made in UFRJ concerning the return made by companies installed in the Science Park, as provided in the respective concession agreements. This committee is formed by members of the academic or administration staff of UFRJ, aiming at better accounting for the interests of the University. On the other hand, the Consulting Committee for Architecture and Urban Planning defines the parameters for land use and analyzes the companies' projects according to these parameters. It is a mixed committee, with representatives from different bodies of UFRJ.

### MANAGEMENT OF THE PARK

Attainment of the Self-Audit certification in the Silver category, launch of the Strategic Plan of the Park 2016-2045, approval of the Sustainability and Support and Sponsorship Policies were the management instruments highlighted in 2017.

In 2017 the Science Park participated in the Self Audit program of the Counseling for Quality Management (Coppe-Q) of Coppe/UFRJ. Through this program, the facilities are certified by Coppe-Q in compliance with the norms of the International Organization for Standardization (ISO), grouped in the following manner: NBR ISO 9001:2015 (quality), NBR ISO 14001:2015 (environmental standards), BS OHSAS 18001:2007 (security and health at work). The main development of this participation was the attainment of the certification in the Silver category, the result of the implementation of a quality management system, NBR ISO 9001:2015, whose scope is the Sustainability Report production.

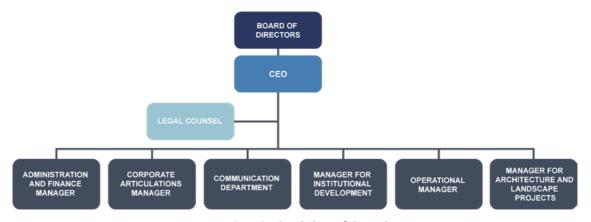
In the end of March, the Park's Sustainability Policy was approved by the Board of Directors, thus reaffirming the commitment to construct socially-just society, environmentally responsible, diversity friendly and free of all forms of oppression or class, gender ethnicity or nationality discrimination.

In April, the Strategic Plan for the next 30 years of activity was launched publicly. It is an ambitious project that established the lines of action and priorities and defined the concepts of vision, mission and value of the institution. Dynamism, diversity and protagonism were the major long-term goals and attributes established to ensure the continuity and success of the Park as a relevant innovation project for Rio de Janeiro and the country. (G4-56).

In November, the Board of Directors approved the Support and Sponsorship Policy of the Park, which, as of 2018, will guide the social investment actions for programs, projects and actions. The intention is to encourage cooperation between the university, companies and the society, aiming at the production of Science, technology and innovation to overcome social, economic and environmental challenges. In addition, the objective of the action is to strengthen the Science Park as an institution, promoting interdisciplinary interactions between the

UFRJ communities (more broadly and including the resident entities of the Park) and of the Science Park (more strictly).

To transform these policies and the planning into effective actions, on December 31, 2017, the Park was supported by a team formed of 48 employees, (G4-9) organized in one CEO, six management areas and one legal counsel. Out of the total, 92% work full time and have a permanent contract. The remainder is part of the group of temporary employees, with a 30-hour work week (G4-10).



**Areas Organizational Chart of the Park** 

The Science Park team is complemented by 25 outsourced employees (G4-9, G4-10) that work in the property security and landscape gardening areas and that work through a provision of services agreement.

#### HUMAN RESOURCE MANAGEMENT

One of the strategic actions of the Park's Strategic Plan - 2016-2045 is people's development. Until the end of 2017, the Park did not have a systematized policy for this action, even though it carried out a series of activities related to the topic, which will be detailed in the section "People's Engagement". Within this context, in 2018 the Park intends to develop a human resource management policy which will include a plan for job posts and wages and one of engagement of its insourced employees, according to the

guidelines from COPPETEC Foundation.

To approach the human resource issue, we present below the profile of the employees from the Park's Administration and the life quality program developed for its community (administrative employees and the public that frequently comes to the Park, such as, employees from the resident companies and members of the academic or administration staff of UFRJ).









# Profile of the employees from the Park's administration in December, 2017

(G4-10)

Throughout 2017 the Park had 73 employees (48 insourced and 25 outsourced) (G4-9, G4-10).



Employees classified by gender (total value/percentage)

To increase transparency and fidelity to the daily working reality at the Park, we chose to account for, as of 2016, the number of outsourced employees working at the Park's administration. On December 31, 2017, the organization had 48 insourced employees (29 women and 19 men), 25 outsourced (all of them men) and one volunteer scholarship holder.

On December 31, 2016, the total number of employees was the same, both the insourced and outsourced ones. However, due to people's turnover among the existing job posts, the number of insourced female employees increased in 16% (4 women).

Concerning the gender issue, by analyzing the number of insourced employees of the Park, it is possible to observe that 40% of them are women. Out of this total, 17% occupy management and coordination positions. Among the men (which represent 60%), the occupation percentage for these positions is of 10%.

The turnover rate<sup>5</sup>, in 2017, was of 14%, when three men and four women were admitted and six men and one woman left. Among the people admitted, two occupied new positions (G4-LA1). The other admissions were made to substitute pre-existing functions.



Employees that guit the Park in 2017 (G4-LA1)



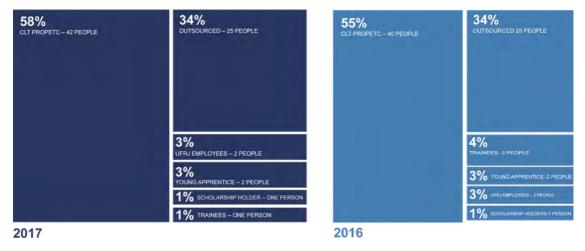
Employees that started working in the Park in 2017 (G4-LA1)

<sup>&</sup>lt;sup>4</sup> In 2017 there was a reformulation in the measurement method of this information. If applied the new methodology, the percentage referring to men that had management and coordination positions in 2016 (23%) becomes 9%. (G4-22)

<sup>&</sup>lt;sup>5</sup> Concerning the value of the turnover rate related to 2016 informed in the report of the previous cycle, a percentage of R\$ 4.6% was informed. The data analysis was correct, but the real value was of 17%.

### Employees classified by type of contract

Of all the administration staff of the Park, including the insourced and outsourced ones, 58% are hired from outside the ranks of the civil service by COPPETEC Foundation and 34% are outsourced ones who work in security and landscape maintenance.



Employees classified by type of contract

### Employees classified by age<sup>6</sup>

A média de idade dos funcionários próprios do Parque é de 39 anos (dois anos a mais que em 2016), com idades variando de 22 a 66 anos.

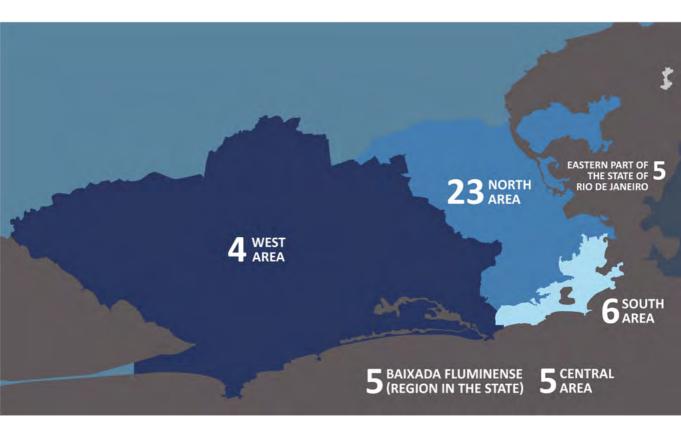


Employees classified by age

<sup>&</sup>lt;sup>6</sup> The data available refer only to the insourced employees of the Park.

### Employees classified by place of residence<sup>7</sup>

By analyzing the geographical distribution of the Park's insourced employees, it can be observed that 48% live in the North area of the city (4 live in the Maré community and 2 in Vila Residencial, popular community located in the surrounding area of the Park).



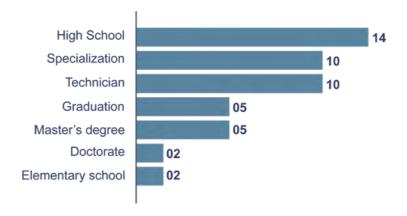
Employees classified according to their Academic Degree<sup>8</sup>

After analyzing the educational level of the insourced Administration employees of the Park, we observed that 61% (32) have either gone to technical schools, have a Bachelor degree or have completed a post-graduation course and 29% have only finished high school. In

<sup>&</sup>lt;sup>7</sup> The data available refer only to the Park's insourced employees.

<sup>&</sup>lt;sup>8</sup> The data available refer only to the Park's insourced employees.

addition, it must be observed that 35% (17) of the total of the Park's administration employees have studied at the Federal University of Rio de Janeiro.



**Employee according to Academic Degree** 

#### Average training time by employee (G4-LA9)

The insourced employees of the Park are encouraged to search for courses, qualifying and post-graduation programs to improve their careers. In 2017, 7 employees benefited from the training, which accounted for 1312 hours of activities. The average time per employee was of 187 hours, 143 hours for the men and 221 hours for the women.



Average training time per employee

### Employees classified by the variation of the lowest wage proportion, discriminated by gender, compared to the minimum wage

(G4-EC5)

If compared to the current minimum wage in 2017 (R\$ 937), the lowest wage in the Park was R\$ 1169.00 (25% above the minimum). This information is valid for both genders.

### Life quality in the Park

Studying, working, having fun, taking care of your health, establishing new social networks and being sure that the time invested is being properly used is what we understand by "life quality" at the UFRJ Science Park. That is the reason why, in 2017, the humanization process of the Park was intensified. Following, we present the actions carried out to promote this.









photography: Jady Louise



In 2017, the Park community planted 37 seedlings from native trees in its territory.

### THE PARQUE VERDE (GREEN PARK) PROGRAM





photography: Beatriz Corrêa

Responsible for permanently maintaining and preserving the biodiversity of the Park, the Parque Verde (Green Park) Program aims at improving the microclimate of the environment, preserving the natural resources, contributing to decrease global warming, offering an environment of cohabitation and approximation with nature, and providing a sense of well-being and health.









The program consists of the Park's landscape design, which is fed back by the following projects: the Environment Week, the Park's Vegetable Garden, the Day of the Tree and the UFRJ Agroecological Fair.



The Environment Week, which has been happening annually since 2014 during the first or second week of June, was created to celebrate the World Environment Day. In 2017 it consisted of the following activities:

Lecture about energy efficiency and sustainability and production of an interactive newspaper of augmented reality (produced by Siemens);

Opening of the Park's Community Vegetable Garden;

Orientation Sport, partnership with the Physical Education School (EEFD/UFRJ);

Planting of 15 seedlings of native tree species (species Syagros);

Cine Recicla (Cine Recycle) with the film "Lixo Extraordinário" (Extraordinary Garbage);

Hubeer#6 integration Event, organized by the UFRJ Innovation HUB about the topic "Urban Agriculture"



The Park's Vegetable Garden meets the requirements and internal demands of production and of landscape design of all the Park's green areas, establishing itself as the main supplier of seedlings and fertilized land of the Park (produced with composting of pruning waste). In 2017, after the opening of the community vegetable garden, lettuce, arugula and spices started to be produced and are destined to the volunteers themselves who are responsible for the planting and maintenance of the activity.

In Brazil, the day of the tree is celebrated on September 21, just before the beginning of spring. To highlight the relevance of the trees for the retention of the excess of carbon dioxide, the Park started to celebrate the Day of the Tree. The first edition of this event took place in 2017 when there was the planting of 22 seedlings of Ipê species.

The UFRJ Agroecological Fair is an extension course project that involves farmers, craftmen, students, UFRJ professors, the UFRJ Innovation agency, the Department of Integration University/ Community (Divisão de Integração Universidade/Comunidade – DIUC/PR5) and the UFRJ Central Administration. Every Thursday, at UFRJ, it gathers farmers and cooperatives of the State of Rio de Janeiro that commercialize agroecological products grown through the family agriculture, turning the Science Park and other UFRJ departments into a hub of consumption and direct sale of these products. The Park has participated in the circuit of the UFRJ Agroecological Fair since December, 2016.





In 2017, the 27th Anprotec Conference happened in the city of Rio de Janeiro and the UFRJ Science Park was the local organizer. The theme of the event was "Innovation and Entrepreneurship Transforming Cities". The Conference, which attracted 800 people from different Brazilian States and from foreign countries, offered an activity for carbon neutralization. The action took place at the Science Park in a partnership with Fluxo Consultoria, a junior company from the Federal University of Rio de Janeiro.







Conferência Anprotec

Fluxo Consultoria is a junior company from UFRJ that carries out engineering Consulting projects for society as a whole. The vast majority of the students come from the Polytechnic School and from the Chemistry School of the Federal University of Rio de Janeiro. All the activities are carried out under the supervision of UFRJ professors and with the mentorship of large company of the market.

The initiative aims at calculating and neutralizing carbon footprint generated with the transportation of the participants and the energy used during the conference. According to data from Fluxo Consultoria, the event emitted 205,62 tons of CO2 equivalent, which will be neutralized within 10 years as of the planting of 1234 seedlings of native species from the Atlantic Rainforest. During the event 1000 envelopes containing seeds were given to the participants and 144 seeds were planted in the place. These seeds are in the greenhouses of the Park's Vegetable Garden and will be planted on the University campus as soon as they are ready to be planted.

Another factor that should be highlighted is the implementation of the Parque Verde Program (Green Park) that encouraged the return of birds and mammals from the Brazilian fauna to the Park's territory. This fact contributes even more to the understanding that the urban revitalization of certain areas that were deteriorated before is also part of the institutional mission of innovation environments.













M PEOPLE'S ENGAGEMENT

The existence of a successful Science Park presupposes the existence of a committed, active and connected community. When people identify with a place, a project or even an idea and, somehow, work towards strengthening them, we can say that they are engaged.

For this reason, during 2017 the Park promoted a series of engagement actions and maintained others already taken in the past years. The major actions carried out were:

Photography: Jady Louise







#### Short Circuit Gallery of Public Art

The Short Circuit Gallery of Public Art is an initiative of the UFRJ Science Park in a partnership with the School of Fine Art (EBA/UFRJ) and the School of Architecture and Urban Planning (FAU/UFRJ). Its first phase was sponsored by Vallourec, a resident company in the Park.

Opened on September 21, 2017, it is an outdoors exhibition which aims to turn the Park de into an area of art experimentation combined with technology and innovation. The first phase consisted of five works of art made by students and professor from EBA, six works by nationally and internationally renowned artists, as well as a pavilion created by the School Architecture and Urban Planning (FAU/UFRJ). In addition, 24 sculptures made for the exhibition (Memories of the river Dauphin (Memórias do Boto), which opened in 2015, were also part of the gallery.

The Tornado Pavilion, an urban intervention that was part of the Gallery, made by FAU, was awarded with an Honorable Mention by the Prize Tomorrow's Architect (Arquiteto do Amanhã), from the Institute of the Brazilian Architects (Instituto de Arquitetos do Brasil - IAB).

For 2018, of two new cycles of Works of art and urban interventions are scheduled.











Photography: Beatriz Corrêa

The project Gastronomic and Cultural Fair of the Park started in 2016 with the propose of establishing interdisciplinary interactions and creating a more pleasant environment for the Park's community with an event that would include gastronomic culture of street food, cultural activities, topic workshops, exhibitions of UFRJ extension projects. The Fair, result of a partnership between the Gastronomy Department of UFRJ (Josué de Castro Nutrition Institute), has also the objective of being a teaching environment, since it is a practical extension of the classroom for the entrepreneurs who participate in it. Most of the entrepreneurs are students from the Gastronomy Course and have the opportunity to produce and sell the food they create, following the instructions of the professors, who supervise them from the beginning until the end of the event.

In 2017, the fourth edition of the Fair took place on October 04 - 05 and the UFRJ students were the only ones responsible for the food. During the two days of the fair 600 people were served. For 2018, three editions of the event are scheduled.

#### Program for Audience Education

The Program for audience education was created in 2015 in a partnership with Rio de Janeiro State Department of Culture and aims at stimulating different audiences to experience artistic performances and/or cultural spaces.

In 2017, the audience attended three shows, among which classical and contemporary music. The total of 30 people participated in the program, among them 24 employees of the Park and 6 of resident companies, with an average number of 10 people per show.

Date	Date Show	
08/07/2017	JUVENILE ACADEMY OF PETROBRAS SYMPHONIC ORCHESTRA	109
06/10/2017	Petrobras Symphonic Orchestra celebrates Children's Day with "Balão Mágico Sinfônico" ("Symphonic Magic Baloon")	1010
27/10/2017	OLINDA CONTEMPORARY ORCHESTRA and VOADORA ORCHESTRA, PART. OTTO	10

# PARQUE SANGUE BOM



Photography: Beatriz Corrêa

#### **Blood Donation Campaign**

In 2017, the Park carried out two editions of the Project Parque Sangue Bom, blood donation campaigns, in a partnership with HEMORIO and COPPETEC Foundation. A total of 137 units of blood were collected.



Among the donors, there are UFRJ professor and students, employees of the Park's resident companies and of the Coppe/UFRJ Business Incubator, researchers of the university laboratories and collaborators of the Park's and Incubator's Administration. In 2018, the goal is to carry out three editions of the project.

<sup>&</sup>lt;sup>9</sup> Only administration employees of the Park.

<sup>&</sup>lt;sup>10</sup> Only administration employees of the Park.

#### Photography: Beatriz Corrêa







#### Trajectory X

The Program Trajectory X consists of monthly meetings to discuss different topics related to the female universe. Issues about the crossover between the woman and work, body, affection and many other challenges are covered in the group. In 2017 the meetings happened every month at the auditorium of the Science Park.

Some of the topics developed in 2017 and that are going to be developed in 2018 are listed below, although new contents are constantly being included by request of the participants themselves.

Life Planning

Dresscode

Aging

Clear communication

Affectivity/Relationship

Mentoring

Violence against women

Disease and prevention

Women on social perspectives (historical, anthropological, psychological perspectives, etc.)

#### Yoga at the Park

On December 2017, one more action of life quality was implemented in an experimental manner in the Park: Yoga practice. The activity is carried out by a student from UFRJ and can be done by any person willing to develop body and mind or prevent and treat occupational diseases, stress and bad behavioral habits.





The Park Mobility Program (Parque Mobilidade) aims to facilitate the movement of people between the Park, the university campus and its connections with the city of Rio de Janeiro.

The actions that integrated the program in 2016 were: free transportation to carry people around and the beginning of the implementation the of water transportation in the Park.

For free transportation, the following modalities were used:

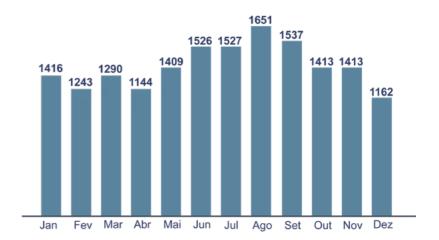
The UFRJ Mayor UFRJ provided 13 bus lines to move people around within the campus and intercampus (leaving the Fundão campus and going to other UFRJ units and strategic places, at the end of the night classes);

The Fundo Verde (Green Fund), one of the laboratories located in the Park, provided a van for the internal transportation from Monday until Friday, from 8 AM to 5:30 PM, driving from the BRT line to the Park;

The Science Park provided two jardineira electric trucks which drove from the Park to the Incubator and the University Rectory Building. In 2017, around 17 thousand people were carried in these jardineiras.

Photography: Jady Louise





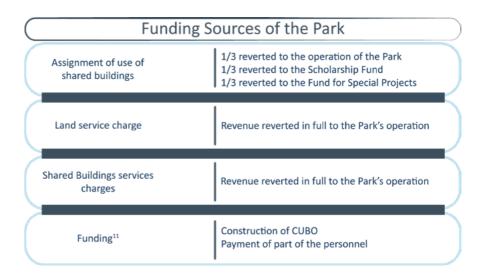
Monthly frequency of the Jardineira Electric trucks

In 2016 a feasibility study was carried out to implement waterway transportation in the Park. In 2017, we advanced with the construction of tenders to launch the service. The goal is, in 2018, to bid and to implement the waterway transportation system, a strategic Project for the UFRJ Science Park.

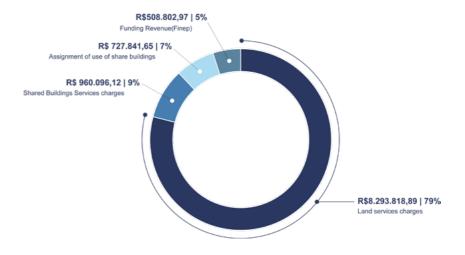
#### FINANCIAL MANAGEMENT OF THE PARK

The financial management of the Science Park consists of a number of actions and administrative procedures that aim at maximizing the economic and financial results of the organization. This management is carried out by a support foundation to the university, the COPPETEC Foundation, which acts as a managing body in compliance with the Law nº 8.958/94 regulating the performance of these institutions.

The funding sources of the Park derive from four modalities: assignment of use of shared buildings; land services charges; shared buildings services charges and funding.



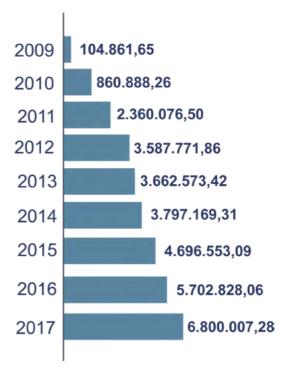
The distribution of the fundings that afford the services and operations of the Park in 2017 took place according to information presented in the following table (G4-9).



Funding Sources of the Science Park - 2017

<sup>&</sup>lt;sup>11</sup> The resources of the funding modality derived from FINEP (Studies and Projects Financial Supporter) and are used according to the project approved.

The Park also generates financial resources through land assignment. As foreseen in the process of creation of the Park, these resources are fully passed on to the UFRJ administration, constituting an extra revenue source for the university. From 2009 until 2017 the following resources were passed on to UFRJ<sup>12</sup>:

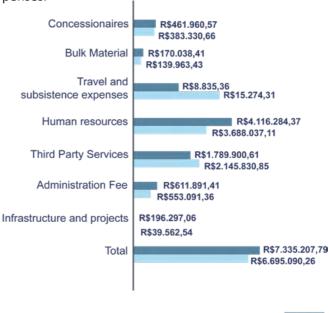


Revenues from land use assignment

For 2017, one of the goals of the Park was to reduce the operational costs by revising the contracts of service providers. The activity was successful, considering that the services contracts directed to security, urban maintenance, landscaping and mobility had their figures reduced in 17%, and this was the second year of reduction in costs of services provision. The raise in personnel costs was mainly caused by salary increase, after two years in a row of salary increases close to 0%.

<sup>&</sup>lt;sup>12</sup> The updated information of the assignment use value of the large companies paid directly to UFRJ is not available. For updating purposes, we used accumulated IGP-M (General Index of Market Prices) rate at the end of every year, according to contractual provision.

The Park's financial result in 2017 was positive in R\$ 3,889,048.46, reflecting the increase in the occupation rate of the Park and the effort made to reduce the operational costs. On December 31, 2017 the Park's project had R\$ 2.131.980, 68 to invest in infrastructure and projects and contingency expenses.



2017 2016

Operational Costs of the Park in 2016 and 2017 (G4-EC1)13

For 2018 the goal is still the reduction of costs. However, now the expenses with the concessionaires are being prioritized.









# ECOEFFIENCY MANAGEMENT OF THE PARK (G4-14)

TThe Park has been promoting the reduction of environmental impacts and of consumption of natural resources (energy and

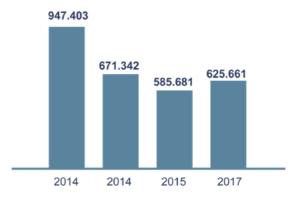
 $<sup>^{13}</sup>$  Due to the adjusting of the follow-up tool of the Park's financial management, we are modifying the data referring to 2016. (G4-22)

water consumption, correct disposal and reuse of solid wastes) through the Parque Ecoeficiente program (Ecoefficient Park). Following are the results of this program.

#### Energy (G4-EN3)

The energy consumed by the UFRJ Science Park is from an electrical source and is provided by the Light concessionaire. The methodology used to measure the consumption of the Park's buildings (entrance building, administration building, CETIC<sup>14</sup> and MP<sup>15</sup>) and of street lighting was adjusted in 2017<sup>16</sup> (G4-22) and started to be done by a monthly controlling tool with performance curves.

In 2017, the energy consumption of the administration buildings of the Park was of 625.661 kW/h, recording a 7% increase in the energy consumption, when compared to the previous year. This increase is explained by the increase of the occupation average rate of the shared buildings, which was higher than the consumption increase. The data, however, requires that action be taken to maintain the decrease of the energy consumption.



Energy consumption of the administration buildings of the Park in kW/year

Excellence Center of Studies on Information and Communication Technologies (CETIC) – Shared or multi-use building that is home to the following small and medium-sized companies in 2017: Aquafluxus, GPE, Manserv, Mobicare, Neopath, PROMEC, Twist, Festa4, FoodDivine, Physiconnect, SPL, Umclub and Xemex; as well as the UFRJ Innovation Hub.

<sup>&</sup>lt;sup>15</sup> Prototyping Module (MP) – Shared or multi-use building aimed at housing small and medium-sized companies that need place for prototyping. The companies housed by the MP are: Pam Membranas, GE Suez, Stratura, Petrobras and OceanPact.

<sup>&</sup>lt;sup>16</sup> Due to the adjusting of the follow-up tool and the inclusion of street lighting in the report, we are modifying the data of 2014, 2015 and 2016. **(G4-22)** 

The large companies of the Park that informed the energy<sup>17</sup> had a total consumption of 7,171.392 Megawatt-hour, showing an average consumption reduction of 12% a year.

		Energy (kW/h)	
Company	2017	Consumption reduction compared to 2016	Motive
Vallourec	180.200	6%	Consumption Internal Awareness.
Superpesa	260.859	8%	Reduction in the number of electrical energy operated machines and raising awareness of the professionals about the importance of energy saving.
TechnipFMC	1.871.010	4%	Installation of LED lighting fixtures in all facilities (e.g. Administration, laboratories, light posts, etc.).
Dell EMC	732.592	12%	Energy management, switching off and automatic switching on of equipment.
Siemens	937.000	28%	Chiller maintenance, optimizing electric energy consumption. Installation of motion detectors in the common use areas.
Halliburton	2.825.731	Not informed	Internal campaigns with the users. Installation of a capacitor bank to correct the power factor.
Tenaris	364.000	12%	Decrease the operating hours of refrigeration equipment, re-adequating the working schedule to avoid consumption at the consuming extremity.

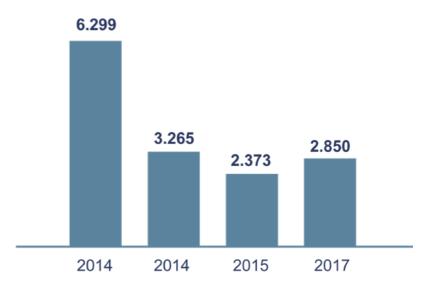
#### Water (G4-EN8 e G4-EN10)

Water in the Park is provided by CEDAE/RJ. The methodology used by the Park's Administration to measure the consumption of the Park's buildings (entrance building, administration building, CETIC

<sup>&</sup>lt;sup>17</sup> The large companies that provided data about energy consumption were: Vallourec, Superpesa, TechnipFMC, Dell EMC, Siemens, Halliburton and Tenaris. The ones that did not provide data: Baker Hughes, GE, L'Óréal, Petrobras and Schlumberger.

and MP) is the daily consumption follow-up through its own meter, and then compare with the register sent by the concessionaire.

In 2017, the water consumed in the Park's administration buildings was 2.850 m³, revealing a 17% consumption increase¹8 if compared to the previous year. This increase, as well as the energy consumption, can be justified by the average occupation rate of the shared buildings, as well as by the carrying out of the project Vegetable Garden in the Park. The data, however, requires that actions should be taken to maintain the reduction story of water consumption.



Water consumption in the Park's Administration buildings in m<sup>3</sup>

The large companies that provided data of water consumption<sup>19</sup> presented a total of 18.936,9 m³, revealing a 19% reduction average rate in the year.

Siemens, Halliburton and Tenaris. Baker Hughes, GE, L'Óréal, Petrobras and Schlumberger did not provide data.

<sup>&</sup>lt;sup>18</sup> Due to the adjusting of the follow-up tool of water consumption and the revision of data from the previous years, we are modifying the data of 2014, 2015 and 2016. (G4-22) <sup>19</sup> The large companies that provided energy data were: Vallourec, Superpesa, TechnipFMC, Dell EMC,

Water (m³)				
		Consumption reduction compared		
Company	2017	to 2016	Motive	
Vallourec	1.176	1%	Internal consumption awareness.	
Superpesa	238	0%	The average consumption was maintained due to the number of employees which is occasionally modified.	
TechnipFMC	7.214	17%	There was a leak in March 2016 that took long to be fixed.	
Dell EMC	1.633	29%	Water consumption control and greater utilization of reuse water.	
Siemens	3.488	22%	Installation of control of flow and pressure valves of the bathroom faucets.	
Halliburton	3.171	45%	Action of "leak hunt" aiming at reducing water waste.	







#### Discharge of effluents and wastes

#### **Disposal of common waste**

The Park's collection system comprises all the solid wastes classified as Class II wastes (not dangerous) - A (not inert), according to NBR 10.004/2004. The system is supported by an outsourced company, duly licensed by INEA, which carry out daily common waste collection that is transported to a waste transshipment station (estação de transbordo de resíduos - ETR), also licensed. For common waste, the assessment is done per volume, because the number of 1,2m3 containers is counted, as shown in the following table.

Volume of Common Waste	2016		2017	
Months	Total of Containers	Volume (m²)	Total of Containers	Volume (m²)
January	136	163,2	88	105,6
February	118	141,6	93	111,6
March	132	158,4	105	126
April	125	150	84	100,8
May	109	130,8	112	134,4
June	115	138	108	129,6
July	116	139,2	94	112,8
August	93	111,6	126	151,2
September	74	88,8	135	162
October	89	106,8	133	159,6
November	100	120	121	145,2
December	94	112,8	114	136,8
Total	1301	1561,2	1313	1575,6

Comparing 2017 with the previous year, it can be observed that in May and from August to December there was an increase in the number of containers collected in the Park. In May there was a systematic increase in the waste production in two resident companies. In August, AMBEV started its activities and in September the Park began to house temporarily the Pro-Rectory for Planning, Development and Finances (PR3), Pro-Rectory for Personnel (PR4), Pro-Rectory for Extension (PR5), and Pro-Rectory for Management and Governance (PR6), after a fire that happened at the Rectory building this year.

### Sustainable destination for the wastes derived from landscape maintenance (composting)

The daily maintenance process of the Park's green areas produces large quantities of organic matter derived from pruning, rubbing and trees and bush leaf fall. Five years ago composting furrows were implemented, avoiding monthly hiring of waste disposal companies, which favored the use of this material as raw material of excellent quality to restore degraded soils during the planting period e a and to maintain tree species and mulching.



Photography: Paulo Chaffin

#### **Park Recycles**

The UFRJ Laboratory of Applied Ecology (LEA) has been located at the Department of Ecology of the Institute of Biology of UFRJ since 1980. It has an active role in conservation and preservation of ecosystems to protect and manage biodiversity and natural resources, carrying out researches on ecological processes in their interface with man and society.

Implemented in July 2017, the program Park Recycles was idealized to contribute to the Park's Sustainability Policy and to the development of innovations related to the topic. Aiming at progressively implementing the selective collection in the Park, internalizing environmentally correct practices, the Park Recycles was structured in a partnership with the UFRJ Laboratory of Applied Ecology and placed its pilot project in the four Park's administration buildings.

Analysis of needs, training courses, electronics campaign, dissemination of materials, planning and acquisition of infrastructure led to a successful implementation of the selective collection based on a participatory methodology. In five months, 273,60Kg of different types of recyclable wastes were sent to garbage collectors cooperatives, observing the decree 5940/06, the guidelines established by the UFRJ Recycle Commission and the Park's Sustainability Policy, as shown in the following table.

Materials Destined	Volume Destined (Kg)	Conversion Factor Energy	Energy Consumption Avoided (Gj/t)	CO2 Conversion Factor	CO2 Emission avoided (tCO2/t)
Paper/Cardboard	134,4	32,9	4421,76	2,27	305,09
Plastic	83,8	87	7290,6	2,27	190,23
Glass	18,9	3,5	66,15	2,27	42,9
Metals	0	18,6	0	2,27	0
Total	237,1	142	11778,51	9,08	538,22

The destination of the recyclable materials is monitored on a weekly basis. For the wastes control a collection form of recyclable materials (GRMR) is used, and this form is attested by members of the Campus administration department, of the recipient Cooperative and of the Park's technical team. Currently, the CCS Recycles, a project of the Center for Health Sciences of UFRJ, receives the recyclable wastes of the Park and it carries out the whole sorting and processing procedures in its sorting center.

The perspectives for 2018 are the expansion of the selective collection system to the whole area of the Science Park, thus facilitating the construction of a Sorting and Processing Center, which will enable the interface of the companies with research groups of wastes, reinforcing the circular economy and the Park's mission.

### MANAGEMENT OF TRANSPARENCY AND INTEGRITY IN THE PARK

The Park develops the Transparent Park program (Parque Transparente), a series of actions that make publicly known the data of relevance and public interest of the Park and its management. On the Park's electronic website there is a page called Transparent Park (Parque Transparente), which includes documents related to its operation as an innovation environment of the University, such as: Process of Creation; Resolutions of the Board of Directors; Conventions and Tenders.

Besides acting as channels to disseminate information, the electronic page as well as the social networks used by the Park are featured as a channel of online communication and accountability.

With the purpose of respecting the publicity constitutional principle, in 2017 the aim was to improve and add information and documents that appear on the website, so as to increase access to the data related to the performance of the UFRJ Science Park. For example, the inclusion of the

Park's process of creation in the University Council and the Self-Audit Certification, related to the compliance with the international management norms.

In 2018, the purpose is to include the possibility that requirements to access information, based on the Law 12.527/11, be made directly on the website, thus facilitating the sending of documents and access to information. We also wish to facilitate the access to information about the governance of the Science Park, giving adequate publicity to the actions carried out. These measures are part of a planning focused on mechanisms of transparency, governance and management, in compliance with the law and the principles that rule the activities within innovation environments such as the UFRJ Science Park, giving more publicity to the actions carried out.













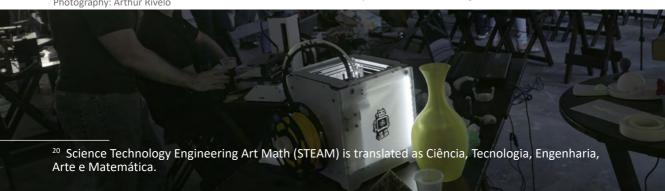
The Park contributes to the development of the UFRJ students in different ways: by creating qualified job opportunities; by providing students with the opportunity of getting in contact with real challenges faced by the private sector and bringing up the innovation theme to the daily activities of the university; and by contributing for the third mission of the universities (to build up an entrepreneurial university that faces social challenges).

#### **UFRJ INNOVATION HUB SPACE**

The HUB is a space for those academics that are interested in experimenting, prototyping and interacting with different areas of expertise. The UFRJ Innovation HUB is located in the UFRJ Science Park, and is a place of interactions between the industries and the university. Its mission is to foster innovation through university entrepreneurship by implementing a physical environment that can concentrate agents and promote interaction, integration, articulation, facilitation and acceleration of dynamic activities.

The major goals of the HUB are:to establish connections - networks within the networks - with laboratories, universities, companies, museums, etc.; to encourage and support innovation in STEAM<sup>20</sup> teaching and learning; to be a catalyst for transforming changes and a support system for local, regional and state efforts; and to promote an integrated ecosystem that is dynamic, synergist and that is in a continuous process of learning.

Photography: Arthur Rivelo





The target audience stays beyond the borders of UFRJ, offering access to its physical space to students, artists, small companies, researchers, entrepreneurs and any person willing to create or do something tailored.

In 2017 the main activities developed were:

#### Workshop Financial Planning

Workshop Cognitive Map: Support through development tools of visualization of Universidade das Quebradas network

Workshop Hacking Public Data: articulated activity with reference in the country in data scraping and with Rio de Janeiro Municipality for use of the Knowledge Spaceship (Nave do Conhecimento)

Workshop of maker culture for ISMART

Workshop BioMinas – Entrepreneurship and Life Sciences: activity carried out at the auditorium of the UFRJ Science Park

Workshop 3D Printing: activity carried out for 8 people

Workshop of Digital Production: activity carried out for 8 people

II Workshop of 3D Technology & Innovation for Health

Lecture: Rethinking Science and Innovation at UFRJ

Lecture: Annual Colloquium of Chemical Engineering at UFRJ

Lecture: About Innovation HUB during Chemistry Academic Week at UFF

Lecture: UVA Entrepreneurship Week

Lecture: Symposium of Biotechnology (UFRJ Xerém)

Workshop

ectures.

Lecture: About the Innovation HUB for Freshmen at the School of Chemistry -UFRJ

Lecture: About the Innovation HUB for the subject Innovation

Management at the School of Chemistry - UFRJ

Lecture: About the Innovation HUB during the event No Budget Science - UFRJ

Lecture: About the Innovation HUB during the event Impactus Day - UFRJ

Lecture: About the Innovation HUB for the AGIR - Agency of Innovation from UFF

Lecture: About Biohacking and entrepreneurship in Biotechnology at the Biophysics – UFRJ

Lecture: About the Innovation HUB for the Enactus Week - UFRJ

Lecture: About the Innovation HUB for the Minerva Rockets Week at UFRJ

Courses

Course on Arduino: activity carried out with com arduinos purchased with the support of LabFuzzy from Coppe

Course on Biohacking and Maker entrepreneurship focusing on Biotechnology: Offered for the first time at a university, the course was an initiative of the Graduate Program on Vegetal Biotechnology

Course on Arduino: activity carried out with arduinos purchased with the support of LabFuzzy from Coppe

Course LIEQ: Zero to Investor (financial market)

HUBeer

HUBeer: Event dedicated to activating the network of entrepreneurial movements. The purpose is to encourage interaction and sharing of scientific and technological, always with good food and beer "Made in UFRJ". Nine editions of the HUBeer were carried out thorughout 2017.

Hackathon

Hackathon NanoBio: Supporter of the first hackathon on the UFRJ campus in Xerém

Legal Hack: Supporter of the first Legal Hackathon of the country.

Smart Cloud Hackathon: Supporter and promoter of the Hackathon in IoT and Cloud Computing – Sponsored by Neopath – Inovax

RioDevDay 2017: support and articulation

Beginning of the operations in the social media (Facebook, Instagram, Linkedin, Medium)

**UFRJ Circuit of sweets** 

Diverse

UC Berkley Lean Startup Program: Strong dissemination of the program for the network of entrepreneurial movements.

UFRJ Social Innovation Map: Result of the HUB map focusing on Social Innovation in the UFRJ ecosystem. Product for the UFRJ Innovation Agency

WyExperience: immersion organized by Wylinka focusing on innovation and entrepreneurship with com 2 people from our network and supported by the HUB

Challenge: Accenture Innovation Lovers

Startups Germinator: proposal of the Group New Businesses - Gn2 to accelerate startup and validate the business model

Varanda ITS: carried out with the cooperation and the presence of 2 lecturers from our community

Class: Subject of the Gastronomy Course "Entrepreneurship in Sustainable

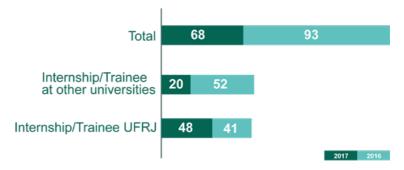
Laboratory of Citizen Innovation: offering of workshops, support with

#### **■** INTERNSHIPS

Organizations"

mentors and dissemination

The creation of internships in the Science Park is important to make the environment more dynamic and to the development of the UFRJ students. The total number of internships in 2017 at the resident companies of the Park was 68. This number decreased 27%, if compared with 2016. However, the number of interns/trainees coming from UFRJ increased 17%, filling71% of the posts. The decrease in the total number of interns/trainee can be explained by the political-economic crisis of the country and by the downturn of investments in all the areas of the economy.



Number of internships in the Park

#### SOCIAL INVESTMENT

Theory + Practice = More thorough academic background The Program "Parque Investe" (lit. The Park Invests) is a social investment program which aims at stimulating the institutional development of UFRJ, bringing direct benefits for people and communities. The program is developed through funding for programs, projects and actions that value experimentation and multiple ways of knowledge and expression that exist at UFRJ. Support consists of direct funding, institutional support or aid in getting funds from resident companies, according to the Support and Sponsorship Rules of the Park.

Projects financed in 2017:

Projects approved in 2017	Partners	Number of students included	Number of students directly involved	Costs
Participation in the Cannes Film festival	School of Communication (ECO-UFRJ)	2	8	R\$ 8.000,00
Course "Special Topics on Science and Culture in Society" <sup>21</sup>	Pro-Rectory of Post-Graduate Studies and Research (PR2)	87	202	R\$ 6.000,00
UFRJ HUB: High impact student entrepreneurship <sup>22</sup>	UFRJ Agency for Innovation	06	3.000	R\$ 38.000,00
Affirmative Actions Prize <sup>23</sup>	Pro-rectory of Post-graduate studies and Research (PR2)			R\$ 14.000,00
University Sports Program	Superintendency for student policies (SUPEREST), Department for Sports, Culture and Leisure (DECULT) and the School for Physical Education and Sports (EEFD)	320	200	R\$ 75.000,00
Park Recycles <sup>24</sup>	Applied Ecology Lab (IB/UFRJ)	3	Nota <sup>25</sup>	R\$ 50.000,00

<sup>&</sup>lt;sup>21</sup> The Project involves 10 professors and one technician, and it indirectly impacts over 50 other professors, 35 technicians and over one thousand people, according to the data gathered from the coordinators of the project.

<sup>&</sup>lt;sup>22</sup> Information about this project can be found on page xxx.

<sup>&</sup>lt;sup>23</sup> The project began in October 2017 and the papers that are going to compete for the prize are still being evaluated.

<sup>&</sup>lt;sup>24</sup> Information about this project can be found on page xxx.

<sup>&</sup>lt;sup>25</sup> The project not only impacts the university students, but it also impacts users of the Park.

UFRJ Challenges: Competitions of the Polytechnic School <sup>26</sup>	Polytechnic School (Poli - UFRJ)	250	2500	R\$ 42.000,00
Assistance for Students	Rectory, Superintendency for student policies (SUPEREST)	70	0	R\$ 25.000,00
CEU Lab - Open Sky Laboratory of Architecture and Urban Planning	School of Architecture and Urban Planning (FAU)	70	200	R\$ 15.000,00
COPPE/UFRJ Business Incubator <sup>27</sup>	COPPE	142	3.000	R\$ 50.000,00
PIBIC-EM (Scientific Initiation Scholarship Program for High Schools)	Pro-rectory of Post-graduate studies and Research (PR2)	176	Nota <sup>28</sup>	R\$ 233.273,46
Total		1126	9110	R\$ 323.000,00





Disclosure: Directors of short films

#### Financing of participation in the Cannes film festival

Two students received funding to participate in the Short Film Corner of the Cannes Festival because their short films were selected in 2017. The short films called "Merchandise" and "Post" were produced by students of Media Studies at UFRJ during the course they took on executive management for cinema.

In addition to the presentation of the short films, the students had the opportunity to participate in workshops, debates and meetings with the representatives of the international movie industry.

<sup>&</sup>lt;sup>26</sup> The project involves 15 professors and 25 technicians, and it indirectly impacts over 50 other professors, 35 technicians and over one thousand people, according to the data gathered from the coordinators of the project.

<sup>&</sup>lt;sup>27</sup> Information about this project can be found on page xxx.

<sup>&</sup>lt;sup>28</sup> According to the project coordinators, it is not possible to calculate the exact number of people.

## Course "Special Topics on Science and Culture in Society"

The Pro-Rectory of Post-Graduate Studies and Research (UFRJ – PR2) is now offering a new course about transdisciplinarity. For the first time, in the first semester of 2017, the Post-graduate studies department offered a course called "Special Topics on Science and Culture in Society". The course was taught at the Colégio Brasileiro de Altos Estudos (CBAE) which is part of the Forum for Science and Culture of the university. The Park participated in this action by funding the course offered in the first semester of 2017 to the post-graduate students of UFRJ from many different subject fields. The goal here was to promote interdisciplinarity, which plays an important role in the search for scientific development. This action is directly linked to the organizational strategy of promoting diversity at the UFRJ.

#### Affirmative Actions Prize

The Affirmative Actions Prize was created in 2017 and it is the result of a partnership between the Park and the Pro-Rectory of Post-graduate studies and Research of UFRJ. The prize involves selecting five papers about affirmative actions produced by students of the post-graduate programs of UFRJ. This initiative is linked to two main pillars: a) the growing implementation of affirmative actions by the post-graduate courses of UFRJ; b) reaction to the directives imposed by the Ministry of Education, by means of the ruling n. 13 issued in 2016, according to which all federal teaching institutions need to establish an ongoing discussion about and improve the affirmative actions that they propose to develop.

The selection tender was launched in October 2017 and the prize will be announced in 2018. The Park has supported the initiative financially and participated in the selection of the papers. It is worth mentioning that this action is directly linked to the organizational strategy of promoting diversity at UFRJ.

Disclosure: Representational Sport



#### **University Sports Program**

The University Sports Program is an institutional program of competition sports for students of the Federal University of Rio de Janeiro. It establishes a partnership with the Department for Sports, Culture and Leisure (Divisão de Esporte, Cultura e Lazer - DECULT) as well as with the School for Physical Education and Sports (Escola de Educação Física e Desportos - EEFD). The objective of this program is to offer students competitive sports practice in the teams representing UFRJ and combine that with the educational/pedagogical aims of university sports. The teams play several different sports (basketball, futsal, judo, karate, korfball, football, field hockey, guidditch, rugby, tennis, chess, jiu-jitsu, swimming and beach volleyball) at local, regional and national championships. The activities take place at the School for Physical Education and Sports and the practice schedules of each team are announced at the beginning of the school year, but may change during the year.

With the resources that the Park offered this program, students were able to attend the following championships: Brazilian University Championship, State University Championship, University Beginning Tournament, 30th Unisinos Cup, Rio Handball Open, ADIERJ Cup, Juvenile Carioca Championship, Korfball State Championship, and the Fraternity Tournament Without Borders 2017.

Some teams achieved the first ten places at the end of the championships. Men's basketball was first in the State University Championship and seventh in the first league of the Brazilian University Championship. Both the women's and men's handball came second in the University Beginning Tournament. Women's handball also won the Rio Handball Open. Both women's and men's futsal came third in the State University Championship.

#### PIBIC-EM - (Scientific Initiation Scholarship Program for High Schools)

The institutional program of scholarships for scientific initiation for high school students (PIBIC-EM) is about helping high school students of public, vocational and military schools do activities in the UFRJ labs so as to disseminate scientific and technical knowledge.

With resources from the Park, the program could double the amounts covered by the scholarships (from R\$ 100 to R\$ 200) as well as the number of scholarships. In 2017, a total of 176 scholarships were offered and 37 of them began this year only.

The main results of the program are a greater integration between high school students and the scientific method, motivation and meeting of expectations, direction about academic career choices and the development of research in the under-graduate studies. In 2017, students gave presentations in scientific events at the national and local levels: Jornada de Iniciação Científica, Tecnológica, Artística e Cultural (JICTAC) and Semana de Integração Acadêmica.

#### **Assistance for Students**

The Park has financially supported the emergency assistance of 70 students that were in a fire that occurred in Block B of the Students Dormitories in August 2017. The support of the Park helped the Rectory buy personal care material, mattresses, bed sheets, covers, bath towels and pillows for the students.

#### **UFRJ** Challenges

The Project called "UFRJ Challenges" corresponds to a group of technical teams of the Polytechnic School of the Federal University of Rio de Janeiro. The teams come together to improve their own performance and overcome challenges in technology competitions that are becoming more and more multidisciplinary. The university teams compete in challenges worldwide, which also offers students and teachers an ample space for practicing and for interdisciplinarity. The Park has supported financially each team that is part of the UFRJ Challenges as detailed in the table.

#### **UFRJ Challenges** Teams Objective Produced technology Competitions To idealize, project and build a The team has projected and used pieces generated by 3D printers in the aircrafts since 2013. In 2018, small airplane capable of carrying the largest amount of the team will do flight tests with telemetry SAE Aerodesign Brasil Minerva Aerodesign load with a minimal weight of equipment on board in order to obtain precise and real time data about in flight cargo, accelerations the aircraft. and stability. It develops automotive technology by means of project and production of baja model vehicles To produce the prototype that (off-road). Latest activities in the team's constant will be used in the competition hosted by Baja process of evolution include: the creation of the motor's coxim using a composite of silicone; Hall SAE Brazil. A design and Sensor testing for measuring the vehicle's rpm; Baja SAE Brasil production study as well as Minerva Baja other testing will be coefficient testing of friction among different types of soil by means of extensometers and pressure performed. relief tests in the brake disc. Communication between sensors, data DUNA (University To build nautimodels based on interpretation and decision making algorithms in the main pillars of addition to controlling systems. The project Challenge of Nautidesign) and IRSR (Internationa technological, social, contributes to advancing autonomous navigation Minerva Náutica Robotic Sailing considered the technological future for environmental and personal Regatta) development. transportation systems in the world, including sea Application of mechanics of metal materials, polymers and composites to the following areas: To support quality training for impact mitigation, admission collectors, cooling arus UFRJ de Formula SAE Formula SAE future engineers. systems, noise mufflers, aerodynamic equipment. braking systems. MinervaBots is a team of robotics formed by UFRJ To align theoretical knowledge students that search knowledge and learning with practical knowledge, the outside the schoolroom. For the next two years the team aims to offer skills to its team wants to reach an important position in the Winter Challenge and members, such as teamwork, UFRJ MinervaBots competitions in which it participates, by winning planning for excellence and Summer Challenge Sumô top categories, by becoming the top 10 best completion of projects on time and by participating in new categories of weight in and with limited funding. combat. Solar Brazil team, formed by different UFRJ To build solar-powered students, won the 2017 challenge in the monohull Solar Challenge Brazil (DSB) Solar Brasil (ESB) vessels category. The focus on material composites is what and Dutch Solar Challenge will bring technological development. The Technical Aerial Student Group of UFRJ will develop concepts for space exploration as well as To build satellites, rockets, space vehicles. Brazilian Festival of Mini Minerva Rockets drones and rovers. rockets Categories. Satellites and rockets are what will bring technological development.

# CEU Lab – Open Sky Laboratory of Architecture and Urban Planning

CEU Lab is a platform created by the UFRJ Science Park together with the School of Architecture and Urban Planning (FAU) for tactical urban design interventions. Generative design and digital production are used to propose innovative solutions for existing problems and for improving the physical, human and cultural space of the UFRJ Science Park.

The first intervention was the Tornado Pavillion, opened in September 2017, that was created during the course called "Use(ful/less) Architecture: Temporary Intervention, Digital Generation and Production", which established a partnership between the PROURB-FAU/UFRJ and the School of Architecture of the University of Lisbon supported by the UFRJ Science Park. The course was coordinated by Professors Adriana Sansão, Andrés Passaro and Gonçalo Castro Henriques and involved two laboratories of the PROURB-FAU/UFRJ: the Laboratory for Temporary Interventions and Tactical Urban Design (LabIT) and the Laboratory of Models and Digital Production (LAMO 3D).

The students were challenged to link the themes of the temporary interventions to ruled surfaces in order to build a permanent place at the Park. The Tornado Pavilion is part of the Short Cut Circuit Gallery of Public Art and has won an honorable mention from the Tomorrow's Architect Prize offered by the Brazilian Architects Institute in 2017. A new edition of the project is planned for 2018.





Photography: Jady Louise



# **DEVELOPING THE UNIVERSITY**INTEGRATION OF COMPANIES-UNIVERSITY



The integration of companies-university is one of the main objectives of the Science Park and it serves to strengthen the mission of the Federal University of Rio de Janeiro. The relationship between the university, the government and the companies is a key element for advancing Brazil's innovation capacity because it helps create a development model based on science, technology and innovation. In the innovative environment of the Park, we try to unite the university's capacity for creation with the capacity for

innovation of the companies in order to develop solutions and the generation of value for society.

The actions that took place in the Park to promote the integration of resident companies and the university were:

Creation of direct and ongoing connections for the promotion of the integration of companies-university:

After the meetings for individual monitoring of the resident organizations called Cells of Interaction, the companies report on the challenges they find when doing Research & Development and Innovation (R&D, I) and the team of the Park then suggests potential partners within the university that can help the companies. The links created here can involve UFRJ research groups, entrepreneurial initiatives taken by UFRJ students (Innovation Hub- UFRJ) and other resident companies of the Park. Negotiations occur within companies-UFRJ.

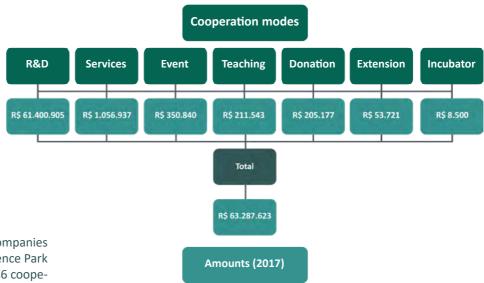
It should be noted that the Park has stimulated and promoted several interdisciplinary interactions that helped improve the quality of life at the Park. The outcome of this was the establishment of two partnerships: the Short Cut Circuit Gallery of Public Art and the Contest for Panel Ideas at the Ambev's Research Center.

As a result of the connections that happened between the companies and the university in 2017, 55 projects were hired amounting to R\$ 63.287.623,00 in cooperation with the university, of which R\$ 61.400.905,00 involve research related to the following areas:

<sup>&</sup>lt;sup>29</sup> Read about the Short Cut Circuit Gallery of Public Art on page xxx. The aim of the Contest for Panel-Ideas of Ambev's Research Center was to select an intervention Project of an artistic and visual nature within the company's Research Center. Students of the School of Fine Arts (EBA-UFRJ) participated in this contest.

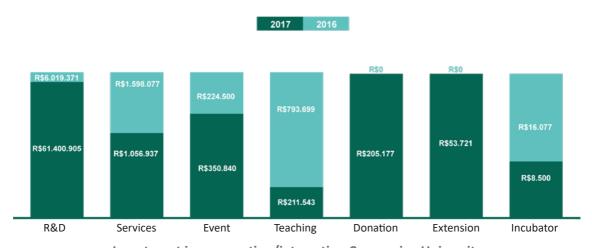
It should be noted that there is an interaction between the companies and UFRJ that does not directly involve financial support. In 2017, they were: 1) supervision of dissertations and thesis of UFRJ students; 2) supervision of UFRJ students' final papers; 3) promotion of training for employees in academic activities in the university (under-graduate and post-graduate studies); 4) technical contributions (senior staff) that are not financial to research performed in the university; 4) conferences and lectures in the university; 5) technical visits and the welcoming of students and teachers for pedagogical purposes.

Formation Evaluation (Oil and Gas)	Computational Mechanics
Big Data	Fluid mechanics
Biotechnology	Membranes
Nutritional science	Molecular microbiology
Carbonates	Environmental modelling
Materials science	Sysmic modelling
Cloud Computing	Nanotechnology
Cloud Native Infrastructure	Consumers' perception
High Performance Computing	Drilling
Premium connections	Chemistry
Energy conversion	Reuse of by-products
Corrosion	Recharge
Data quality	Robotics
Deep Learning & Analytic	Sanitation
Packaging Design	Sensors and telemetry
Risers dynamics	Sentiment analysis
Flexible pipes	Computational simulation
Alternative energy	Communication systems
Subsea engineering	Treatment systems
Fatigue	Welding
Sensorial physiology	Process technology
Geoscience	Termodynamis
Artificial Intelligence	Chemical transformation
Computational Intelligence	Scientific visualization
Internet of Things (IoT)	WIFI
Machine Learning	



The resident companies of the UFRJ Science Park have hired 486 cooperation projects with the university since 2010 and they have invested a total amount of R\$ 221.202.323,00 over the last eight years. By 2017 they had spent R\$ 147.824.562,00.

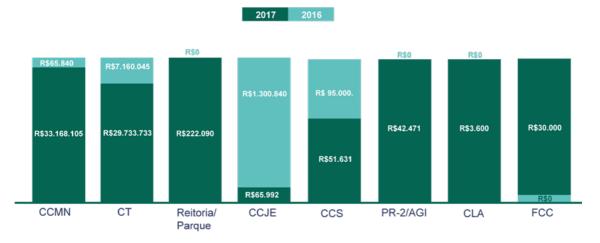
The total amount (R\$ 61.400.905), invested in research and development, represents 97% of the cooperation that took place throughout the year. The other interactions with the university included investment in services, an event, teaching, university extension and Coppe/UFRJ Business Incubator.



**Investment in cooperation/interaction Companies-University** 

of the university
were involved
as coordinators
of projects of
cooperation with the
resident companies
in the Park.

It should be added here the increase in the amounts spent with cooperations as well as the widening of the areas that research projects tackled, as shown in the graph.

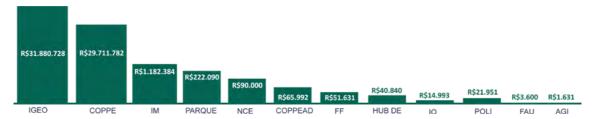


Investment in cooperation/interaction by UFRJ centers

The amount hired in the cooperation is not always spent in the year of hiring. Until December 31, 2017, a total of R\$ 9.073.992 was spent in the cooperation projects.

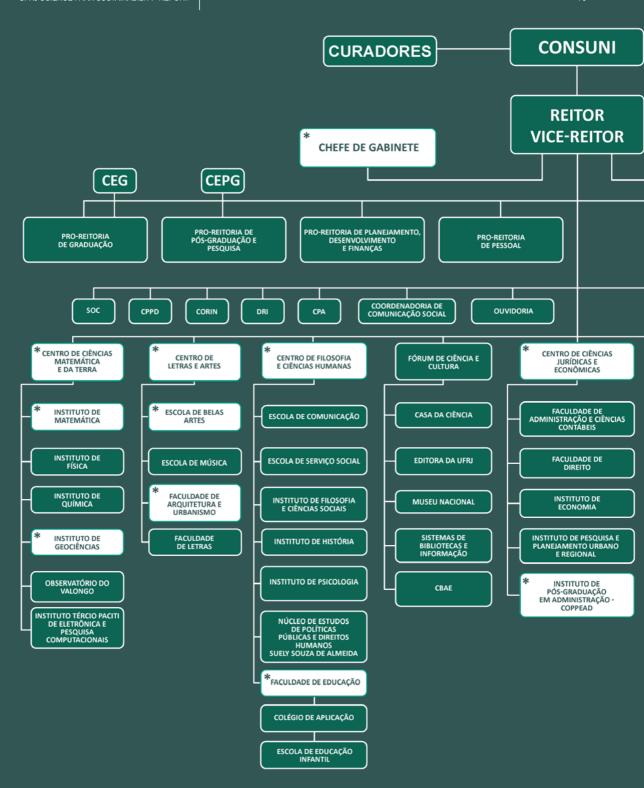
The most part of the hired investments (52%) was directed at the Center for Mathematics and Natural Sciences (CCMN). The Center for Technology (CT), which was up to then number one in receiving financing, received 47\$ of the hired investment. The remaining 1% was received by the Center for Law and Economic Sciences (CCJE), the Center for Health Sciences (CCS), the Rectory/Park, the Pro-rectory of Post-graduate studies and Research (PR-2) and the Center for Letters and Arts (CLA).

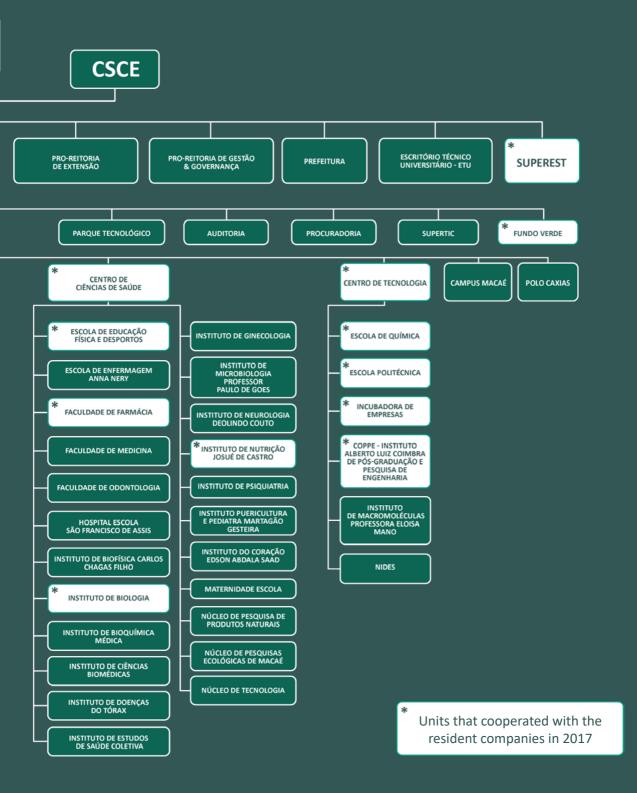
Considering the investment in each center of the university, it can be observed that half of the amount hired went to the Geoscience Institute (IGEO) in the Center for Mathematics and Natural Sciences (CCMN), and 47% went to COPPE:



Investment in cooperation/interaction in each center

The maps of the interactions between the UFRJ Science Park and the university in 2017 is illustrated in the figure.





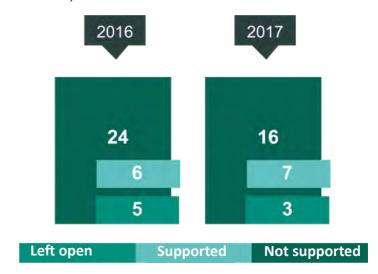
Initiatives taken by
UFRJ correspond
to projects sent by
the university to
attract funding. It
is necessary that a
Committee for the
Management of Articulation approves
the projects and that
these are considered
projects of cooperation between a given
company and UFRJ.

#### Presentation of the initiatives taken by the University

In 2017, thirty-five proposals of initiatives were sent by UFRJ to the Committee for the Management of Articulation (UFRJ-Companies/Park). Compared to 2016, the number of requests for funding decreased 26%.

Of the total of proposals, 49% belong to the category of events, 29% belong to the category of infrastructure, 17% are extension projects, and the remaining 9% correspond to R&D projects and scholarships.

Twenty-six proposals were approved and sent to the resident companies who supported three initiatives with a total of R\$ 149.931,23.



Establishment of connections between innovative companies/ institutions that are not residents at the Park and the university centers:

In 2017, the Park took several actions for connecting nonresident companies and the university. As an example, it hosted an important program for training entrepreneurs.

The specific actions for the connection of non-residents and the university were:

#### Der Panther Institute

The Science Park made a connection happen between the "Der Panther Institute", a spin-off of the Frauenhofer Institute in Germany, and UFRJ professors by organizing a workshop about renewable energy, energy efficiency and storage, and intelligent energy. UFRJ had several representatives from different departments, including: COPPE (Mechanical Engineering Program, Metals and Materials Engineering Program, Ocean and Naval Engineering Program, Chemical Engineering Program, Transport Engineering Program, Energetic Planning Program), Polytechnic School (Department of Electrical and Electronic Engineering), the School of Chemistry, the Institute for Chemistry and the School of Architecture and Urban Planning. In addition, representatives of the following institutions also participated: Technology Council of the Federation of the Industries of the State of Rio de Janeiro (FIRJAN), Brazilian Service of Support to Micro and Small Companies (Sebrae), the Department for Development, Employment and Innovation, the Civil House of the government of the state of Rio de Janeiro, the German-Brazilian Chamber of Commerce and Industry, as well as Siemens and Radix.

#### Lean Launchpad Program

The Lean Launchpad methodology was developed by the University of California in Berkeley and it helps technology-based startups develop and accelerate innovative projects in large companies.

The Park supported the Lean Launchpad Program which took place in Rio de Janeiro. Coppead Administration Institute helped organize it.

Thirty teams of entrepreneurs from several areas of expertise (biotechnology, internet of things, sustainable development, among others) participated in a seven-week training during the months of May and July 2017.

Oi

The Science Park supported the organization of "Oi Telecommunications Week", which covered the theme "Experience and Design" from the viewpoints of the companies, products, services and clients. The circuit included lectures about the anthropology of consumerism, the user's experience, the

client's journey, design of services, design of experiences and design thinking. Professors and researchers from the Production Engineering Program (COPPE, Coppead Administration Institute-UFRJ) as well as from the Agency for Innovation were involved.

#### **Fuzzy Logic Seminar**

The Science Park supported the Fuzzy Logic Seminar, a week of conferences, lectures, roundtables, working groups, workshops and masterclasses about the topic of fuzzy logic. The event was promoted by the Lozzica Fuzzy Laboratory (COPPE-UFRJ).

Course on Genomic Data Analysis using High Performance Computing - Fiocruz

The Science Park supported the theoretical and practical course organized by Fiocruz and by the AMT company called "Genomic Data Analysis using High Performance Computing".

#### **Tudus and VTEX**

The connection of the companies Tudus and VTEX with relevant research centers working for the technological development.

### **Rufus**

The connection of the Rufus company with undergraduate students for the validation of a business model and search for talents.



## **DEVELOPING A RELATIONSHIP WITH** THE COMPANIES

The Meetings at the Park are events that occur on a monthly basis and include lectures, workshops. Open Talk is a series of events open to experts that are not residents of the Park in which they can explore certain areas of knowledge.

An ecosystem of innovation only becomes effective when the several actors which it includes interact and become strong together. This way, by promoting the interaction among companies of different sizes and laboratories, the UFRJ Science Park plays an important role in contributing to the innovation as well as to the attraction of new companies to the Park.

## ■ ■ INTERACTION AMONG COMPANIES OF **DIFFERENT SIZES**

In order for the Park to be an environment of development and innovation, it is important that the companies settled here interact not only with the university, but also among themselves. When this happens, one can say that we are getting closer to a consolidated innovation ecosystem. To reach this goal, 26 events took place during the year of 2017.

In addition to the Meetings at the Park and Open Talk, which began in 2016, the Science Park and Coppe Business Incubator have founded an oratory club called PitchMasters, a space for learning and practicing oratory techniques in a self-taught manner by using the toastmasters methodology. The club also allows for the widening of the contact network of the participants.

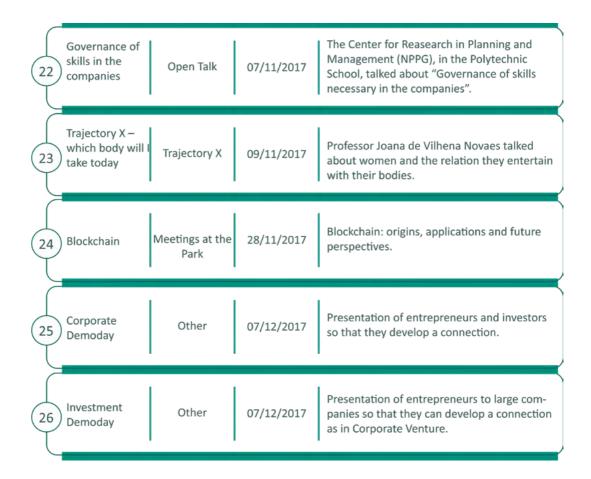
2017 was a year marked by the increase in the number of programs stimulating the relationship between large companies (not necessarily residents) and startups. This way, the Park promoted several initiatives of Corporate-Startup Engagement (CSE), such as: Call for Industry Startup, FINEP Startup, Energy Start Program and Fibria Insight Program. The presentation of the initiatives in the Park is relevant not only for the startups that wish to become partners of larger organizations, but also for the large companies to exchange experiences and to create open innovation programs inside the companies.

Resident company Vallourec launched an open innovation program called Vallourec Open for the mentoring and development of startups specialized in data science. Vallourec was interested in receiving proposals for solutions for online monitoring and bid data analysis, such as machine learning, pattern recognition, data visualization, and decision-making support. One of the selected companies was the resident company Twist.

Event	Program	Date	Summary
ABDI Presentation - Industry Startup Call	Release	04/04/2017	Presentation of the National Industry Connection Startup Program
Lean Launchpad Program	Release	10/04/2017	Release of the Lean Launchpad Program of the University of California in Berkeley together with COPPEAD Administration Institute (UFRJ)
03 World IP Day	Encontros no Parque	26/04/2017	Symposium about intellectual property: the role of intellectual property in the promotion of innovation and creativity, by changing problems into progress and life quality. Participants included representatives of INPI, USPTO, OMPI, American Consulate, OAB, ABPI, and other relevant actors.
04 Hacking Health	Release	04/05/2017	Promotion of the Hacking Health program, part of the movement for the strengthening of the innovative ecosystem of health and wellbeing.
Stimulating innovation for more competitive companies	Open Talk	03/05/2017	The KPMG company and other partners discussed incentives to innovation for a more competitive type of company.

=			
O6 Circular Economy	Meetings at the Park	05/07/2017	The Center for Circular Economy (NEC), a study group created with Exchange 4 Change Brasil, debated circular economy "9th International Knowledge Exchange Meeting: Achieving sustainable growth through circular economy".
07 Trajectory X	Release	06/07/2017	First meeting of the Trajectory X program in which a group dynamics was done to map the main challenges that women have to face in their areas of expertise.
Presentation BNDES Technological Solutions	Release	13/07/2017	The National Bank for Economic and Social Development (BNDES) presented the Technological Fund (FUNTEC).
FINEP presentation	Release	14/07/2017	Presentation of the program for investment in innovative startups - Finep Startup
10 Pintec	Encontros no Parque	26/07/2017	Panorama of innovation in Brazil based on the Research about innovation done by IBGE - PINTEC.
CAE engineering	Open Talk	01/08/2017	Lecture "How can Computer Aided Enginee- ring (CAE) help small and medium compa- nies", by ESSS.
Digital Catapult	Open Talk	07/08/2017	Lecture by Filipe Martins, representing Digital Catapult, about cooperation opportunities between the United Kingdom and Brazil.
Trajectory X – Compulsive times	Trajectory X	10/08/2017	Sandra Edler lectured about depression and its growth in the modern world.

Cognitive computation	Meetings at the Park	23/08/2017	A group of researchers from UFRJ and resear- chers of the companies Microsoft and Twist (Park resident) debated "Cognitive compu- ting".
Energy Start Program- ENEL	Release	28/08/2017	ENEL presented its program for open innovation, Energy Start, which has a direct investment of one and a half million reais for up to 5 startups.
The Dawning of the Hydrogen Energy in the World Economy	Release	18/09/2017	COPPE's Hydrogen Laboratory promoted an event called The Dawning of the Hydrogen Energy in the World Economy.
Money Morning	Meetings at the Park	27/09/2017	Several types of venture capital investments were presented namely corporate venture.
Trajectory X – Editora Leya	Trajectory X	05/10/2017	Presentation of the personal and career trajectory of Marta Ribas.
19 Fibria Insight	Release	05/10/2017	Presentation of the open innovation program Fibria Insight.
Management of Innovation Projects	Open Talk	17/10/2017	Presentation of the International Project Management Association (IPMA) and of the Institute for the Development and Management of projects (IDGP) about managing projects about innovation.
The power of communication	Open Talk	31/10/2017	Heloisa Fischer, a researcher and collaborator at the UFRJ Agency for Innovation talked about "The power of communication".

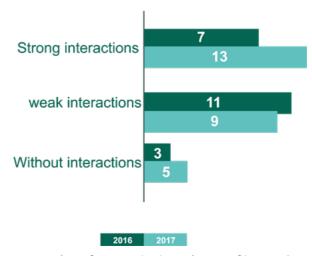


A survey was carried out in order to evaluate the interactions that took place throughout the year between the resident companies, the incubated companies and the labs settled in the Park.

Of the total number of respondents<sup>31</sup> (21 large, medium and small companies), 16 companies have established some kind of interaction with a resident company (business or laboratory). Most interactions were strong and meant that they closed some kind of deal or performed any joint action.

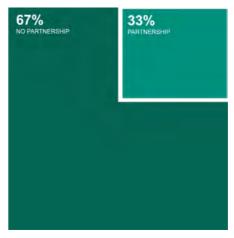
<sup>&</sup>lt;sup>31</sup> The companies that answered the survey were: Ambev, Aquafluxus, Baker, Dell, GE Suez, GPE, Halliburton, Manserv, Mobicare, Neopath, PAM, PROMEC, Schlumberger, Shell, Siemens, Stratura, Superpesa, TechnipFMC, Tenaris, Twist and Vallourec

Five companies declared that they did not establish any kind of interaction with another company resident in the Park in 2017. One can see that the number of interactions of companies in 2017 was greater than in 2016, as illustrated in the graph.



Number of companies in each type of interaction

Another important aspect to evaluate the innovation ecosystem is the relationship between the Park's companies and their respective productive chains. To assess this matter, the companies were asked if they had supplied any product, service or whether they had established any technical cooperation to Petrobras in 2017.



Companies that supplied a product, services or technical cooperation to Petrobras in 2017

In 2016, 47% of the companies that answered the survey<sup>32</sup> had supplied some kind of product, service or established some kind of technical cooperation. In 2017, the number fell to 33%, which shows that the country was living amidst an economic crisis.

# DIVERSIFICATION OF ECONOMIC SECTORS AND COMPANIES' SCALE

The search for diversity in the companies' activity sectors is essential for the Park to keep its sustainability in the long run. Therefore, several activities took place in 2017 to attract new companies to the Park: events, support to candidates, promotion of the Park's activities in social media and other media vehicles, participation in fora and networks for innovation and entrepreneurship.

As a result, the companies GE Suez, Superpesa and Senai became residents at the Park in 2017, which increases the diversity in the economic areas that characterize our innovation environment. The areas covered in the Park by 2017<sup>33</sup> are: information and communication technology, oil & gas, engineering, chemistry, facilities, foods and beverage, logistics and construction industry.

In addition, the Park has taken the challenge to diversify the companies' scale in order to increase the number of startups and Small & Medium companies and to stimulate the development and insertion of the companies in the chains of value of the big companies.

In 2017, we concentrated on the attraction of Small & Medium companies and, as a result, TWIST, a company that was incubated in the Coppe/UFRJ Business Incubator, as well as six other companies that are part of the CrowdRio program became residents at the Park. CrowdRio is a program for the acceleration of new businesses that is developed with Telefônica OpenFuture and it aims to support the development of startups in the areas of Digital Business and the Internet of Things (IoT).

The acceleration process lasts one year and it is divided in three stages of four months that follow the development of each startup. The three cycles are: Get a Product, First Sales and Get Traction. In each stage the participant startups are assessed by an Acceleration Committee and, depending on that assessment, they are deemed fit or unfit to enter the following stage.

<sup>&</sup>lt;sup>33</sup> This analysis does not include the areas covered by the startups of the Park.



In each stage, startups participate in a series of activities, such as workshops, group discussions, meetings with investors, sharing of experience with entrepreneurs, mentorship, among others. All the activities are programed according to the current stage of the companies and their aim is to develop specific skills and actions.

During the year of 2017, twenty-five activities took place targeting the first two stages that we discussed. The activities of the first stage were directed at developing prototypes and at validating the business model of the companies. They include design thinking, business model canvas, MVP, metrics for new business, fast development. The second stage covered topics related to communication, pitch, press office, monetization, market analysis, first sales and digital marketing.

Ten posts were opened in 2017. Twenty-four startups applied and nine were selected for CrowdRio. After the first stage six startups moved to the second stage (until February 2018). The six companies were Cartão Umclub, Xemex, Fest4, FooDivine, Physiconect and Portal SPL.













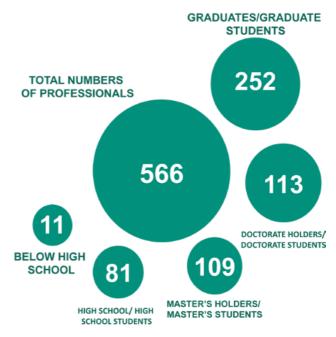


(G4-9)

In 2016, the Park had a total of 986 employees working at the administration of the Park, in the resident companies, in the labs and in the incubator. In comparison to 2016, there was an 8% decrease in employment, which is a consequence of the political and economic crisis that reached national and global scales.

	2016	2017
Administration of the Park	73 <sup>34</sup> ) (	73 <sup>35</sup>
Administration of the Incubator	13) (	13
Coppe/UFRJ Incubator	159) (	154
Companies and Labs settled in the Park	841) (	743
Total	1.073	983

The qualification of the employees working at the resident companies, in the labs settled in the Park and in the Incubator, is listed below. We could verify that 17% of these employees have a Master's or a Ph.D. degree and 14% have an academic degree.



Profile of the workers

<sup>&</sup>lt;sup>34</sup> 48 employees and 25 are outsourced.

<sup>35</sup> Idem.

#### TAXES DIRECTED TO THE CITY

The resident companies of the Park are centers for research and development, therefore, the provision of services or sales are not part of their priorities. However, sometimes selling products and services do relate to research and development activities. In 2017, the companies settled in the Park generated R\$ 432.778,69 in state taxes (ICMS) and R\$ 1.218.107,09 in municipal taxes (ISS), a total of approximately R\$ 1,6 million in state and municipal taxes.

## KNOWLEDGE (INTELLECTUAL PROPERTY)

The amount of requests filed for intellectual property titles is one of the indicators used to evaluate the innovative activity in the organizations. As to the Park, there are companies that prefer working with the concept of industrial secret instead of working with patents.

With this in mind, we have analyzed a research conducted with the resident companies. In 2017, out of the respondent companies<sup>36</sup>, 3 (representing 14%) stated having filed requests for titles whereas most declared not having filed any. These 3 companies had 17 titles in the patent category and 1 in the trademark<sup>37</sup>. Gathering all numbers, 130 intellectual property files were awarded due to the researches carried out in the Park.

## SUPPLIERS (G4-12, G4-13)

Our suppliers are selected according to the best public purchasing practices, including the Law 8,666 (Bidding Law). All procedures (registration, verification as to whether they follow the legislation and hiring standards) are carried out by COPPETEC Foundation, which is the sector in charge of the Park's financial management. In order to promote local development, the Park informs its

<sup>&</sup>lt;sup>36</sup> The following companies did not answer: Ambev; Baker Hughes e Siemens..

<sup>&</sup>lt;sup>37</sup> To conduct the survey with the companies, we required the number of requests for intellectual property titles not only from Brazil but also from other places.

purchase demands to local suppliers, so that they can take part in the public competition process (G4-12, G4-13). In 2018, the Park is following a new suppliers policy by making sustainable purchases.

In regard to the Park's total resources in 2017, 36% were invested in hiring suppliers. Throughout the year, 441 contracts were signed with the suppliers for service deliveries, material for the conservation of buildings and landscape, office supplies, computer graphics service, consulting, licenses and software, waste collection, communication, telephony, among others (G4-12, G4-13).

As to the suppliers' location, it is estimated that 59% of suppliers are located around Bom Jesus Island (6% are located at Maré and on the island) whereas 69% are located in the north area of Rio de Janeiro (G4-12, G4-13).

#### SOCIAL RESPONSIBILITY

The UFRJ Science Park and its resident companies<sup>38</sup> supported about ten projects in 2017 that benefitted different audiences around the campus on Bom Jesus Island.

The following projects should be mentioned here:

### Maré Olímpica

The project aims to stimulate the students of the public schools of Maré to participate in the Brazilian Public Schools Olympics of Mathematics (OBMEP). Seventeen resident companies as well as a local coordination for education (4ª Coordenadoria Regional de Educação - CRE) helped create the project in 2017. As a result 1764 students applied to the first stage of the Olympics and 62 passed to the second stage. The prize awarded to the students who passed to the second stage consisted of a visit to the Science Park and of a demonstration of the relevance of mathematics for society. We welcomed 15 students of Maré who had the opportunity to meet large companies such as DELL, EMC and Siemens, as well as small companies such as PROMEC, Aquafluxus, TWIST and Neopath.

<sup>&</sup>lt;sup>38</sup> The companies that provided information were: Dell EMC, Halliburton, Siemens, Superpesa, Technip-FMC and Vallourec.

<sup>&</sup>lt;sup>39</sup> The participant companies were: Ambidados, Aquafluxus, Couve flor, Dell EMC, GPE, Halliburton, UFRJ Innovation Hub, Manserv, Mobicare, Neopath, Promec, Schlumberger, Shell, Siemens, TechnipFMC, Tenaris, Twist.

#### Children's Day and Christmas party at Vila Residencial

Every year, Vila Residencial organizes Children's Day and a Christmas Party for children. In 2017, Siemens sponsored Children's Day by donating paradidactical books and comic books. TechnipFMC sponsored the Christmas Party by donating 81 toys for the children.

#### June Party and Christmas

Dell EMC donated toys for the June party as well as Christmas toys for the children of the Association for the Children's Health.

#### Show: Traffic and I

TechnipFMC hosted the show "Traffic and I" for the children of the Tenente Antônio João school located on Bom Jesus Island.

#### Clothes campaign and Christmas

Halliburton donated clothes to the Lar de Maria kindergaten and items for personal hygiene to the Centro de Atendimento Fraterno located on Leocádia Island.

#### Sponsoring the studio of the School of Animation

Halliburton sponsored the studio of the School of Animation which presented short films produced by the students participating in the project to the high schools of the metropolitan zone of Rio de Janeiro. The goal was to stimulate interest in theoretical and practical courses about animation techniques. Each group produced a short film of about three minutes.

## Institutional Representativity (G4-16)

The Science Park plays a relevant role in the activities for scientific, social and economic development of Rio de Janeiro and Brazil. It is currently a member of the Governance Council in the Rio de Janeiro Federation of Industries (FIRJAN) as well as in the Federal Association of Incubated Businesses and Science Parks (ANPROTEC). It also participates in the following projects: committee for the promotion of relations between large, micro, small and medium Companies to leverage innovation (ANPEI - National Association for Research and Development of Innovative Companies); executive team of the Industrial Site for Life Sciences – GECIV RJ- Government of the municipality of Rio de Janeiro; consulting committee for the Brazilian Agency for Industrial Development (ABDI/Inmetro) in the "Environment for demos of technology for intelligent cities".

The UFRJ Science Park is a member of the International Association of Science Parks and Areas of Innovation (IASP), of the Federal Association of Incubated Businesses and Science Parks (ANPROTEC) and of the National Association for Research and Development of Innovative Companies (ANPEI). In addition, its main partners are the Ministry for Science, Technology and Innovation, the Government of the state of Rio de Janeiro, Rio Negócios, Sebrae, Faperj, the municipality of Rio de Janeiro, Finep and CNPq.

#### VISIBILITY

The UFRJ Science Park is known nationally and internationally as one of the most important innovation environments in Brazil. It includes, in its structure, organizations from several economic areas; it takes initiatives and generates products and services that attract the attention of trendsetters, the press as well as other



actors in the area of innovation, entrepreneurship and in society, in general.

In 2017, 648 people visited the Park, which corresponds to a decrease of 10% when compared to 2016. The decrease is most likely linked to the end of the cycle of big events in Rio de Janeiro, such as 2014 World Cup and the2016 Olympic Games. Among the 648 visitors, 521 were Brazilian. Guatemala, the United States and Germany were the countries who sent the greatest number of visitors.

Another means for assessing the visibility of the Park is the appearance of the Park in traditional and social media. In 2017 the Park was mentioned in 345 news articles, online articles, radio and TV shows across the country. Coppe/UFRJ Business Incubator is part of the Park and it also helped promote the image of the Park. From January until December 31, 2017, 115 news articles and press releases about the incubated companies as well as graduate companies were published.







In 2017 the Park actively participated in events and actions for stimulating growth in Rio de Janeiro, such as the "Movimento Reage, Rio!" (React, Rio Movement), a series of debates organized by O Globo newspaper to discuss the future of Rio de Janeiro.







weletter de Parque Técnotógico é uma publicação mensal que traz intermação para atendades desenventedas na institución o mentres de intermedia.

AMBEV E L'ORÉAL, EMPRESAS DO PARQUE, ESTÃO TRE AS 100 MAIS INOVADORAS DO PAÍS



i ciertos da peisginas instalados no ambiento de hovação do Para oligio das UFLI, sa companhas CIL, Cividia de Ambre codio certe as 4 reseas mais terrisdentes do país, sequendo e amaito: Vider terrorição Bizas mortida amaistemes pará jornal Vider Econômica, vertarias jas selezadas em passo a sometima finamença ha PAC. O renhíng feveração finada ten soma palvalga tenta de la companha del la companha de la companha de la companha del la companha de la companha del la c To disseminate and spread information about the activities that take place at the Park and in Coppe/UFRJ Business Incubator, a bilingual newsletter has been published monthly since 2015. The newsletter has 965 yearly entrants. This tool has a broad reach: the UFRJ audience, representatives of the federal government, trendsetters, representatives of the innovation area, among others. Another tool for promoting the activities internally is "Inova Parque", a Youtube channel created at the end of 2016, which reached 38 000 views in 2017.

For 2018, the focus of our actions will consist in the fine-tuning of the branding strategy, in the investment in new media, in the restructuring of the website and other tools for increasing the Park's visibility.

## RISMO UE TECNOLÓGICO ABRIGA SUPERCOMPUTADOR SURADO NO DIA 13 DE JULHO



sugurado no día 13 de Julho, no Parque Tecnológico de U emputador Loba Cameiro, de Niciolor Avunquelo de Cemputação, seño (Nacad). Localizado no Laboratório de Meldodos Computação. JERJ (Lamco), o equiparemento, que é um dos mais potentes do p senhar um papel importante em diversas áreas de petaplica como engo gão de petidos, biotecnológia e estudo de mudanças climáti emputador podor as unilizado por peospulsadores da Universidade de pesquisa das empresas instaladas no Parque.

## **COPPE/UFRJ BUSINESS INCUBATOR**

MISSION, VISION AND VALUES

Mission: To promote the transformation of knowledge in innovative business that are technology-oriented, by strengthening the entrepreneurial cultural of the university and the country.

Vision: To be a reference among the incubators settled in the state of Rio de Janeiro, in Brazil and in the world because we are professionals, pro-active, skilled in identifying business with a high potential for innovation, capable of offering infrastructure, training and services that effectively contribute to the development and success of the companies.

Malaina

Values: visibility, ethics, independence, transparence, entrepreneurship and innovation, meritocracy in the management team, institutional affiliation with UFRJ, university in the society, incentive and support to the incubated companies without paternalism, self-evaluation.

Founded in 1994, Coppe/UFRJ Business Incubator is a specially designed environment to stimulate the creation of new companies based on the technological knowledge generated in research groups of UFRJ. Throughout its more than 14 years of existence, Coppe/UFRJ Business Incubator was responsible for creating and developing over 90 companies. In December 31, 2017, the Incubator had 25 resident startups in its portfolio. The startups

made over nine million reais and employed 157 people, including the partners, of which 67 held Master's and Doctorate degrees. Last year, four companies graduated from the Incubator and one of them, Twist, is now part of the Park'a portfolio of small and medium companies.

Coppe/UFRJ Business Incubator plays an important role in consolidating the position of the Science Park as a key element in the entrepreneurial culture of the university and of the technological development of the country. In 2017, the integration of activities between the Park and the Incubator was stronger. Training, lectures, programs, events and capacitation offered to the Incubator's entrepreneurs were offered not only to the resident, small and medium companies but also to the companies of the post-incubation programs and of the acceleration programs (CrowdRio).

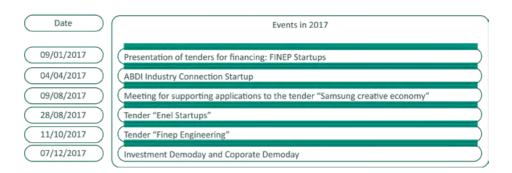
Based on the trainings it offers, individual consulting and ongoing support, the Incubator manages to focus on five pillars: the market, management, capital, technology and the entrepreneur. The "Decolar Program" includes this range of services for developing the incubated businesses. Training is offered on a monthly basis in the Incubator's auditorium and each meeting welcomes lecturers that talk about relevant subjects in the area of entrepreneurship as well as in the five key pillars (best practice suggested by the center for Reference for Supporting New Entrepreneurial Initiatives): the market, management, capital, technology and the entrepreneur. Eight meetings of the Decolar program took place in 2017.

By means of partnership with renowned institutions, the Incubator also offers a series of programs for developing business strategies. Together with COPPEAD, it offers the Mentoring Program for developing the startups' strategic skills that involves a team of experienced professionals graduated from the COPPEAD Institute of Management. Together with SEBRAE, the Sebrae Business Program consists in analyzing the business models in order to understand the challenges and limits that companies face in the Market.

On a permanent basis, Coppe/UFRJ Business Incubator offers consulting services to the resident companies, such as marketing, communication and the press, visual, financing, accounting, business and legal programs. What is more, the Incubator develops the Technological Radar Program that consists of looking for technologies developed in the laboratories of the university that have the potential for becoming promising businesses. Since 2008, over 60 technologies were mapped and studies were done to understand

the feasibility of the identified businesses. The objective of the program is to stimulate the appearance of new academic spinoffs and to support them in the Incubator.

Another relevant area of 2017 was the investment that the Incubator made in activities for developing the capital of the startups. In 2017, six events took place with activities that promoted the connection of entrepreneurs and the institutions or programs about investment in innovation and entrepreneurship. The Incubator organizes, on a yearly basis, a Demoday that consists in presenting the most developed companies with businesses capable of attracting investment to the community of venture capitalists (investment funds, angel investors, large companies interested in getting closer to startups). The group of entrepreneurs is previously selected for the valuation and pitch stages. The companies that presented in Demoday 2017 included resident companies of the Incubator as well as startups of the Post-Incubation Science Park.





## I ABOUT THE REPORT

The process of reporting information has been developing each year in a collaborative manner.

The 2017 Sustainability Report is the third consecutive publication in which the Science Park used the guidelines produced by the Global Report Initiative (GRI). Since 2015<sup>40</sup> the report has been edited yearly **(G4-30)**, and it has followed the G4 version in this essential form since 2016 **(G4-32)**.

This report showed the major economic, financial, social and environmental performance indicators of the organization in the time period of January 1 until December 31 2017<sup>41</sup> (G4-28). It also described the role it plays in Brazil and internationally due to institutionalized partnerships with the Science Park of the Pontifical Catholic University of Rio Grande do Sul (Tecnopuc), with the Science Park Porto Digital in Recife (Pernambuco) and with the Tsinghua University Science Park Tinsinghua (Tus Park) in China (G4-6, G4-8).

## **I** SCOPE

The concept of materiality refers to the relevant topics for an organization because they reflect the economic, social and environmental impacts or because they influence the decisions of the interested audience.

The information presented in this report refers mainly to the UFRJ Science Park Management, including the Coppe/UFRJ Business Incubator. Whenever possible, the results of the resident companies are presented, as in the case of the indicators about energy, water, waste disposal, jobs and social responsibility (G4-18; G4-20).

## ■ MATERIALITY (G4-18, G4-19 E G4-26)

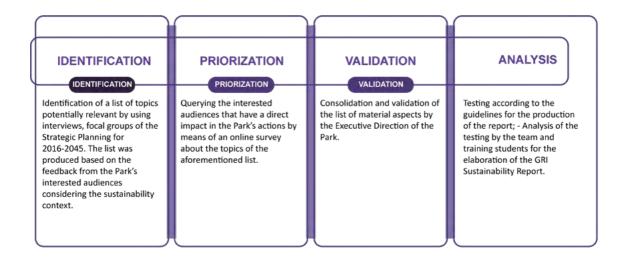
In 2016, the Park consulted its audiences of interest and defined the matrix of materiality that orientated the sustainability actions for 2016 and 2017.

The process of defining the materiality considered the principles

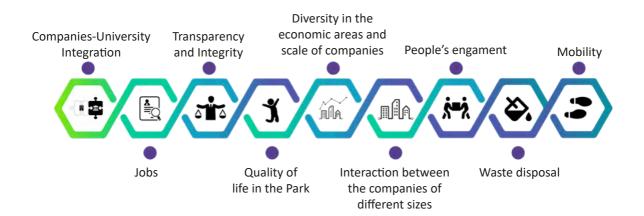
<sup>&</sup>lt;sup>40</sup> In 2015, the sustainability report of the Park presented the standard content of the guidelines.

<sup>&</sup>lt;sup>41</sup> The last report published (2016 Sustainability Report) took place in June 2017 and it covered the time period of January 1 until December 31, 2016. **(G4-29)** 

for the content of the Report, i.e. the context of sustainability, materiality, fullness and inclusion of interested audiences as illustrated:



As a result, nine material topics were defined and covered in this report:



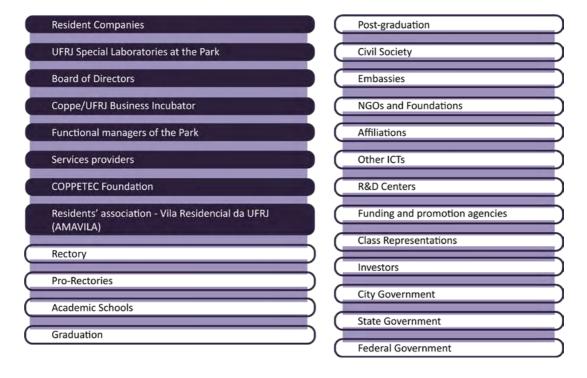
To learn more about the list of the material topics identified in the process of preparing the content of the report, access the 2016 Sustainability Report (G4-19) on our website: http://www.parque.ufrj.br/wp-content/uploads/2016/12/versao\_web.pdf

We also highlighted the topics of the report that are related to the Objectives of Sustainable Development, which is part of the 2030 Agenda for Sustainable Development promoted by the United Nations Organization.

## INTERESTED AUDIENCE OF THE PARK

(G4-24, G4-25, G4-26 E G4-27)

Below, we present the interested audiences of the Park (G4-24). In 2016, the featured audiences were the people prioritized and engaged in the process of defining the creation of the Park's materiality. The prioritization process was based on the GRI guidelines. Once identified, its impact on the Park's economic, social and environmental performance was analyzed, the same way as this group is influenced by the economic, social and environmental performance of the Park (G4-25).



In 2017, the interested audience were the resident companies and functional managements. Both received feedback about the sustainable materiality of the Park and they concluded that the concerns they have about sustainability are compatible with the material topics that were selected. (G4-26 e G4-27).

## LIMITS OF THE REPORT

(G4-20, G4-21, G4-23 E G4-31)

			Limi	ts
	Sustainability Categories	Materiality	Direct control of the Park	Indirect control of the Park
1		Integration companies-university	Х	
	Economic	Transparency and integrity	Х	
	Economic	Diversity of economic sectors and size of the companies	Х	
L		Interaction between companies of different sizes	X	
		Jobs	Х	х
	Social	Life quality in the Park	X	
L		People's engagement	Х	х
	Environmental	Effluent and waste disposal	Х	х
U	Liviloiiilelitai	Mobility	Х	
				I

There was no significant change when compared to other reports from previous years as far as the Scope and Limits (G4-23). More information and questions about this report can be sent by email to sustentabilidade@parque.ufrj.br (G4-31).



#### **GENERAL BASIC DISCLOSURES**

DISCLOSURES	SECTION	PAGE	Whether reported fully or partially	Reasons for omission	Objectives	ODS	External Assurance
STRATEGY AND ANALYSIS							
G4-1	Message of the CEO	Message of the CEO 12 - 15	Fully	<u></u>			
DRGANIZATIONAL PROFILE							
G4-3	Name of the organization	21	Fully				
G4-4	<ul> <li>Primary brands, products and/or services</li> </ul>	23 - 27	Fully		,	Objective 05 Objective 08 Objective 09	·
G4-5	Organization headquarters	University campus in the city of Rio de Janeiro 21	Fully				
G4-6	Countries where the organization operates, countries that are specifically relevant to the sustainability topics covered in the report	The Park operates in Brazil and it established an exchange partnership for companies with Tus Park in China in 2016. 23 and 102	Fully	) 1 minut 4 minut 2 minut			
G4-7	<ul> <li>Ownership and legal form</li> </ul>	The Park is a project directly linked to the UFRJ rector's office and it does not have legal personality.	Fully	·			
G4-8	Markets served	23, 28-29, 102	Fully				,
G4-9	Scale of the organization	31-34, 48 and 49, 90-91	Partially	The Park does not control to number of operations nor to amount of products and serv- it offers.	the.		
G4-10	Profile of employees	31-38	Fully			Objective 04 Objective 08	
G4-11	Percentage of employees  covered by collective bargaining agreements	The Park does not have a collective bargaining agreement.	Not applicable				
G4-12	<ul> <li>Description of the organization's supply chain</li> </ul>	92	Fully				
G4-13	Significant changes regarding the organization's size, structure, ownership and supply chain	92	Fully				

G4-14	Precautionary principle or approach	51-58	Fully			Objective 06 Objective 12	
G4-15	Charters, principles and other external activities	The Park does not endorse any	Not applicable				
G4-16	Membership of associations	94 and 95	Fully	<del></del>			
IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES							П
G4-17	Entities included in the organization's consolidated financial statements and entities not covered by the report	Not applicable	Not applicable				
G4-18	Process for defining the report content	102-105	Fully				<u>,</u>
G4-19	• List of material aspects	102-105	Fully				
G4-20	Aspect boundary within the organization for each material aspect	102 and 105	Fully				
G4-21	Aspect boundary outside the organization for each material aspect	105	Fully				
G4-22	Restatements of information provided in previous reports	34,51 and 52, 54	Fully	·			
G4-23	Significant changes from previous reporting periods in the scope and aspect boundaries	105	Fully	·—··—·			
STAKEHOLDER ENGAGEMENT							
G4-24	List of stakeholder groups engaged by the organization	104 and 105	Fully				,
G4-25	<ul> <li>Identifying and selecting stakeholders</li> </ul>	104 and 105	Fully				
G4-26	Approach to stakeholder engagement	102-105	Fully	,———)	d many of many a summer		

G4-27	Key topics and concerns raised			104 and 105	Fully	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<del></del>		
REPORT PROFILE									
G4-28	• Reporting	g period		102	Fully				
G4-29	G4-29 • Date of most recent report		t Rep	ark's Sustainability oort of 2016 was shed in July 2017.	Fully	· <del></del>			
G4-30	• Reporting	g cycle		102	Fully				
G4-31	Contact point for questions regarding the report		is	105	Fully		,		
G4-32	Claims of reporting in accordance with the GRI Standards			102	Fully				
G4-33	G4-33 • External Assurance			There was no ernal assurance	Not applicable				
GOVERNANCE									
G4-34 Governance structure of the organization		he	30	Fully		·			
ETHICS AND INTEGRITY									
Organization's values,  o principles, standards and norms of behavior			21 and 31-32	Fully					
PECIFIC STAND	OARD DISCLOS				THE WALL	PEASONS 50P			
MATERIAL	ASPECTS	DMA/ INDICATORS	MISSIONS	PAGES	FULLY OU PARTIALLY	REASONS FOR OMISSION	OBJECTIVES	ODS	External Assurance
HIGHLY REI	LEVANT								
Integra Companies-		72-82		72-82	Fully			Objective 09	
Job	os	33		33-38 64 90-91	Fully			Objective 04 Objective 08 Objective 09	
Transpare		58-59		58-59	Fully	-		Objective 04 Objective 08	

Life Quality in the Park	33	 33 38-48	Fully			Objective 02 Objective 04 Objective 05 Objective 10 Objective 12 Objective 13 Objective 15	
Diversity in economic areas and size of companies	88	 88-90	Fully			Objective 09	
Interaction among ompanies of different sizes	83	 83-88	Fully		·	Objective 09	
People's engagement	33	 33 42-46	Fully	,		Objective 04 Objective 05 Objective 10	1
Disposal of effluents and waste	50-58	 55-58	Fully			Objective 06 Objective 12	
Mobility	47-48	 47-48	Fully			Objective 11	
ECONOMIC							
ECONOMIC PERFORMANCE	DMA, GA-EC1, G4-EC5	 48-51 38	Fully				
ENVIRONMENT							
WATER	DMA, G4-EN3, G4-EN6	 53-55	Fully		·	Objective 06 Objective 11 Objective 12	
ENERGY	DMA, G4-EN8, G4-EN13	 52-53	Fully			Objective 07 Objective 11 Objective 12	
SOCIAL							
EMPLOYMENT	G4-LA1	 33-34	Fully	(		Objective 08	
TRAINING AND TEACHING	DMA, G4-LA9	 37	Fully	4		Objective 04	





## THE PARK'S TEAM

### **CEO**

José Carlos Pinto

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Produced and originated by UFRJ Science Park
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<sup>\*</sup> This report was elaborated based on non-confidential information provided by all functional managers and UFRJ Science Park companies.

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