

***FAPESP: supporting research  
for technological innovation in  
small business in the state of  
São Paulo***

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# *FAPESP – The São Paulo Research Foundation*

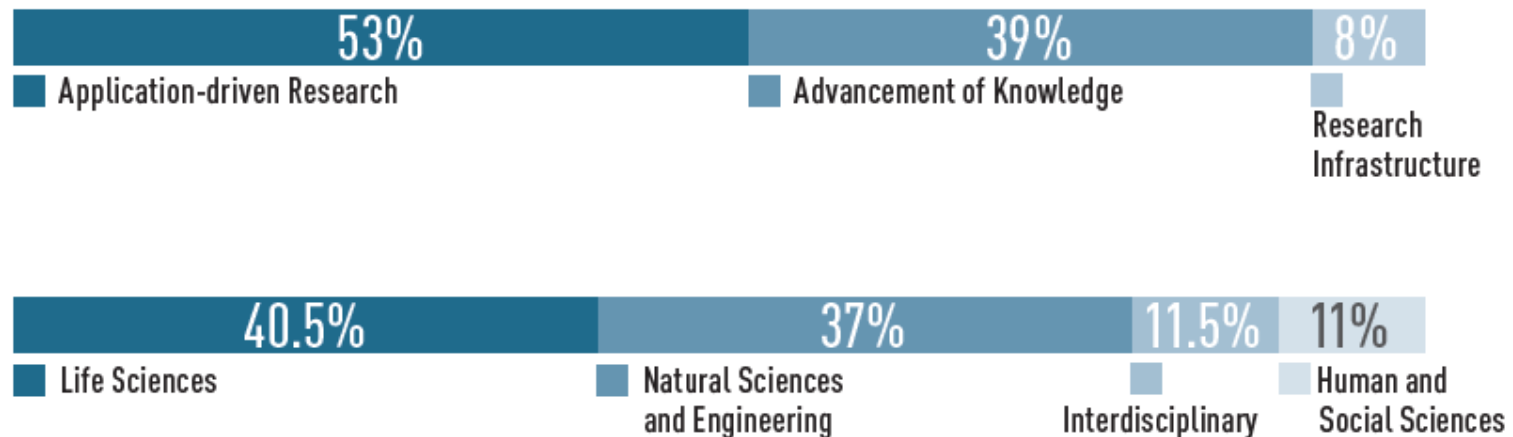
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- Mission: support research in the State of São Paulo in all fields
  - Started in 1962
- Funded by the State of São Paulo with 1% of all State revenues
- All proposals are peer reviewed (24,685 research projects in 2016)
  - Average time for decision: 65 days in 2016

# FAPESP – The São Paulo Research Foundation

**DISBURSEMENT \$ PPP\* 533.9 million**

in 24,685 research projects



# *Research for Technological Innovation*

- PITE – FAPESP & Industry Joint Research Program
  - Research projects developed in partnership with R&D institutions in the State of São Paulo and businesses located in Brazil and abroad
- ERCs – Engineering Research Centers
  - Research program addressing medium and long term challenges of high scientific and technological impacts
- PIPE – The Program for Research for Technological Innovation in Small Business
  - Research projects developed by researchers in small companies

# *FAPESP-Industry Joint Research Program – PITE*

- FAPESP and Company associate to invite and select proposals
  - Themes proposed by company
  - Exploratory research (adequate for academic environment)
  - Joint Steering Committee
  - Merit analysis and selection using reviewers chosen by FAPESP and the Company
  - 2 – 5 years grants, 50% from FAPESP, 50% from company
- Embraer, Natura, Ouro Fino, Oxiteno, Microsoft Research, Telefonica, Dedini, PadTec, Ci&T, Braskem, Whirlpool, Sabesp, Boeing, GSK, Intel, Vale, Biolab, Boticário, BG, Peugeot-Citroen, Medimmune-AZ, etc.

# Selected FAPESP-Industry Joint Research

## Lab for Advanced Materials: IPT – Embraer – FAPESP – BNDES



Home > Technology Centers > Center for Integrity of Structures and Equipment > Labs and Sessions

## Lightweight Structures Laboratory - LEL



Automatic Fiber Placement Machine

Lightweighting is key to modern structures. Affordable structures, with less weight and less cost, are vital to the achievement of a sustainable society. The materials to be used on these structures on the future must have its origins on renewable sources and must be safely recycled or disposed.

An important agent of innovation in lightweight structures is the aerospace/aeronautics sector,

## Advanced Molecular Biology for Health and Agriculture

02/25/2015 09h47

### Latin America's first kinase laboratory

Center located at Unicamp involves an investment of R\$ 18 million from Fapesp

Unicamp

On March 10, Unicamp will launch the first research center of biology in Latin America (LA) in the area of protein kinases, molecules that are highly required in the pharmaceutical industry due to their signaling characteristics and the regulation of important biological processes. The laboratory, called Biology Center in Protein Kinase, relies on the partnership with São Paulo Research Foundation (Fapesp) and the Structural Genomics Consortium (SGC).

# *Engineering Research Centers*

- New instrument to support research in partnership with industry
- Medium and long term (up to ten years) challenges
- High impact exploratory research on themes proposed by industry
- Co-funding and co-management
  - 10 years contract; cost sharing between Fapesp: Company: University – 1:1:2
  - Vice-director is a company scientist acting as a visiting professor at the university

# Selected Engineering Research Centers

## *FAPESP+Peugeot-Citroen: Advanced Research Center for Biofuel Engines*

[Brazil's FAPESP teams with Peugeot Citroën on biofuel engine research](#)

December 12, 2013 | [Meghan Sapp](#)

In Brazil, the Sao Paulo Research Foundation FAPESP and Peugeot Citroën approved a proposal for the creation of a Research and Engineering Center focused on the development of biofuel-powered combustion engines. The center will bring together researchers at the Mechanical Engineering School of the University of Campinas (Unicamp), the Polytechnic School of the University of São Paulo, the Mauá Institute of Technology and the Aeronautics Technology Institute (ITA), who will develop a joint research project focused on creating an ethanol motor that performs better than those developed in recent decades in Brazil. The project was selected in a call for proposals launched by FAPESP and Peugeot Citroën do Brasil Automóveis (PCBA)

## *GSK-FAPESP Center for Green Chemistry*

- Federal Univ. S. Carlos; with Unicamp, USP-RP, UNESP, UFSC
- Reducing environmental impact in organic synthesis
- Use of sustainable solvents, energy sources, safer reactants, cleaner processes, renewable feedstocks



**CERSusChem**  
Centre of Excellence for  
Research in Sustainable Chemistry



# ***Research for Technological Innovation in SBs – PIPE***

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- Initiated in 1997
- Two phases (similar to SBIR/NSF)
- Up to R\$ 1,200,000 per project, non refundable funding
- Requirements for the PI related to experience and competence in the area of the project, not to formal degree
- PI must be an employee of the SB (research carried out within the firm)

# ***Research for Technological Innovation in SBs – PIPE***

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- FAPESP can review the proposal of a company to be created
- Money is intended to solve a research problem (Fapesp supports research)
- Almost five projects per week approved in 2017

# ***Research for Technological Innovation in SBs – PIPE***

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## Phase I

- To test the technical and commercial feasibility of the proposed ideas
- Up to 9 months
- Up to R\$ 200,000 per project
- Outsourcing limited to 1/3 of the total budget, including consultancy services

# *Research for Technological Innovation in SBs – PIPE*

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## Phase II

- To develop the research
- Up to 2 years
- Up to R\$ 1,000,000 per project
- Outsourcing limited to 1/2 of the total budget, including consultancy services

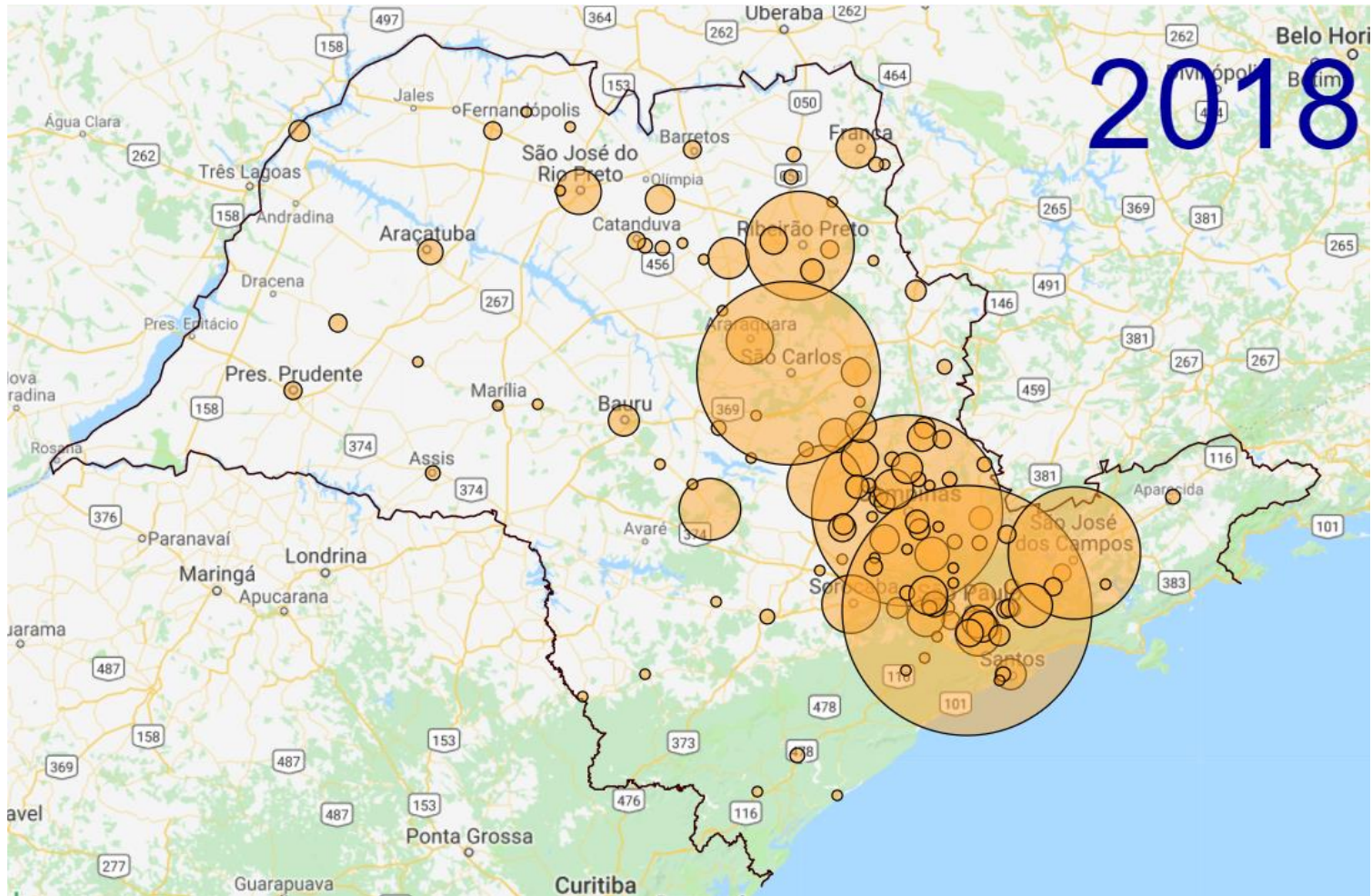
# ***Research for Technological Innovation in SBs – PIPE***

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## Phase III

- To develop and implement initial commercialization of the product
- Not supported by FAPESP
- Partnerships with FINEP (PAPPE), BNDES and Venture Capital Funds

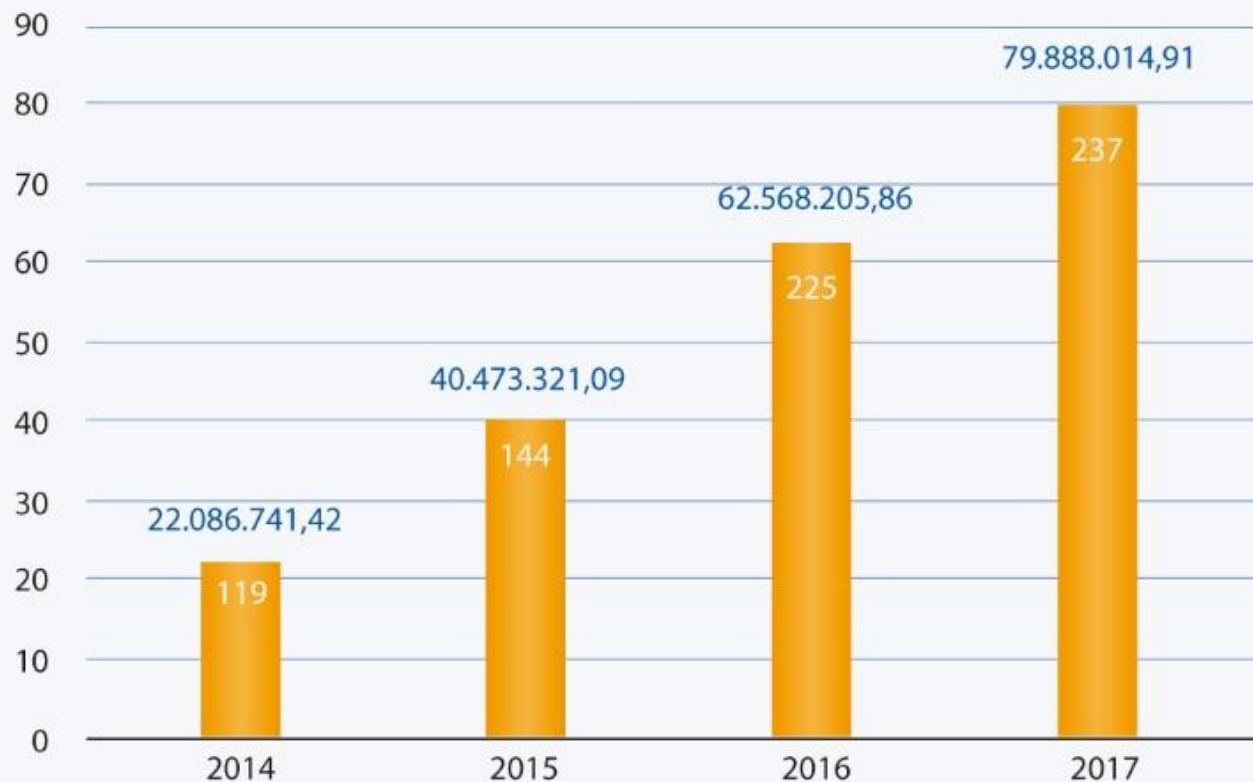
# Geographical distribution of PIPE projects, 2018



# The increasing number of PIPE Projects

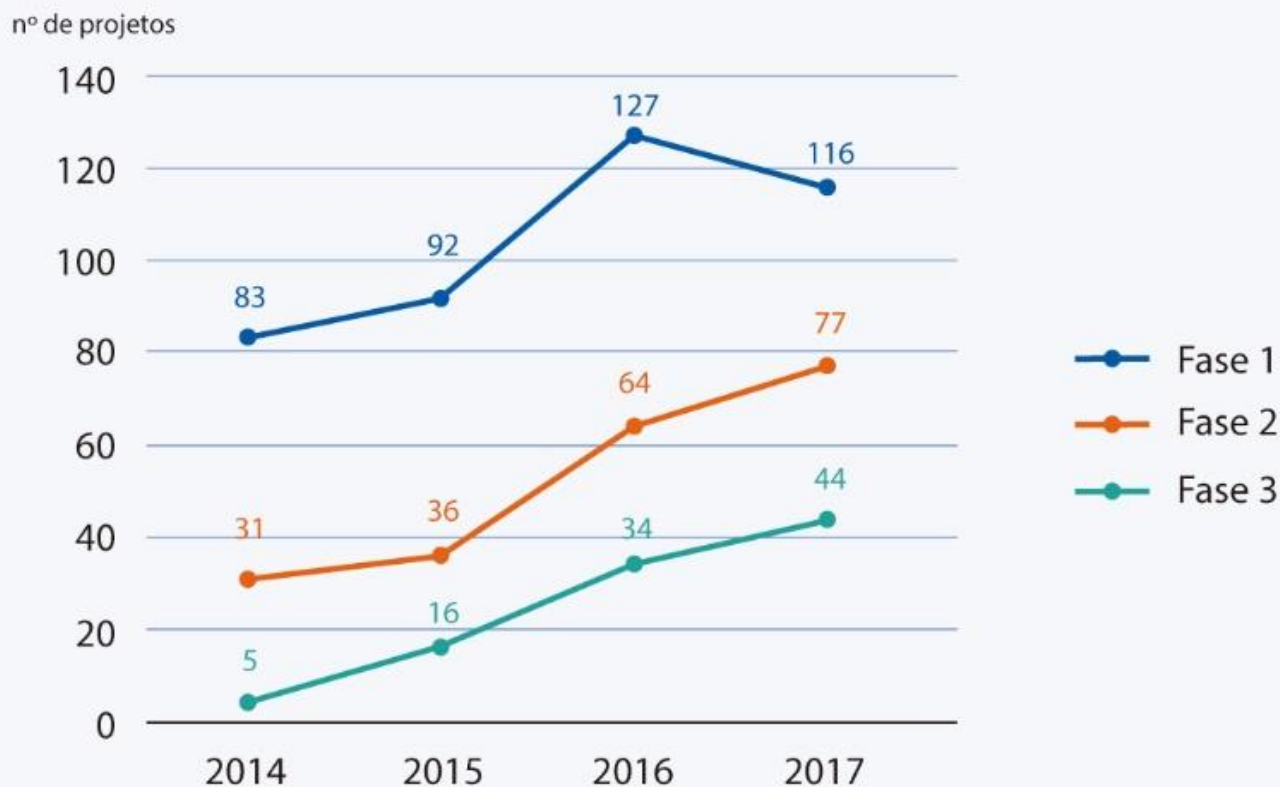
PIPEs: VALOR E NÚMERO DE PROJETOS CONTRATADOS – 2014 A 2017

em milhões de reais (R\$)



# The increasing number of PIPE Projects

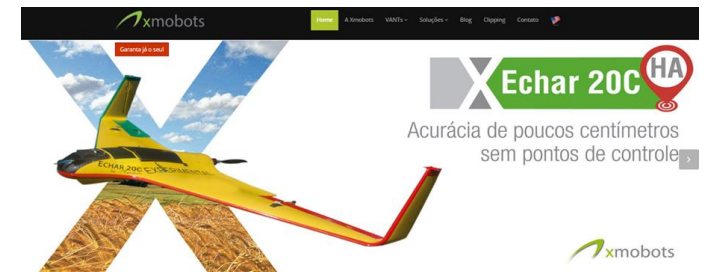
PIPE – NÚMERO DE PROJETOS CONTRATADOS POR FASE DO PROGRAMA – 2014 A 2017





# Selected Startups

Automation, IoT, photonics, artificial intelligence, biological control, precision agriculture, genomics, intelligent materials, medical devices etc.



## *Main questions*

- How is the PIPE programme structured in order to promote the development of technological innovation in the food and beverage industry?
- What remains to be done in order to the entrepreneurship in the food and beverage industry to assume a major role in economic and social development policies in Brazil?
- What are the main difficulties for micro and small business owners to engage themselves in technological innovation programs for the food and beverage sector in Brazil?

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***Thank you***

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