

SBIR-type Programs and the Geography of Innovation: the case of PIPE – Fapesp

Entrepreneurship and the Geography of Innovation

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Outline

- Fostering research for technological innovation at Fapesp: the PIPE Program
 - History/characteristics/evolution
 - Assessment
 - Cases
- Studying PIPE: increasing knowledge on KIE and improving policy

Fapesp: Research for Technological Innovation Programs

- PITE – The Program for Partnership on Research for Technological Innovation
 - 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 Businesses
 - Research projects developed by researchers in small companies

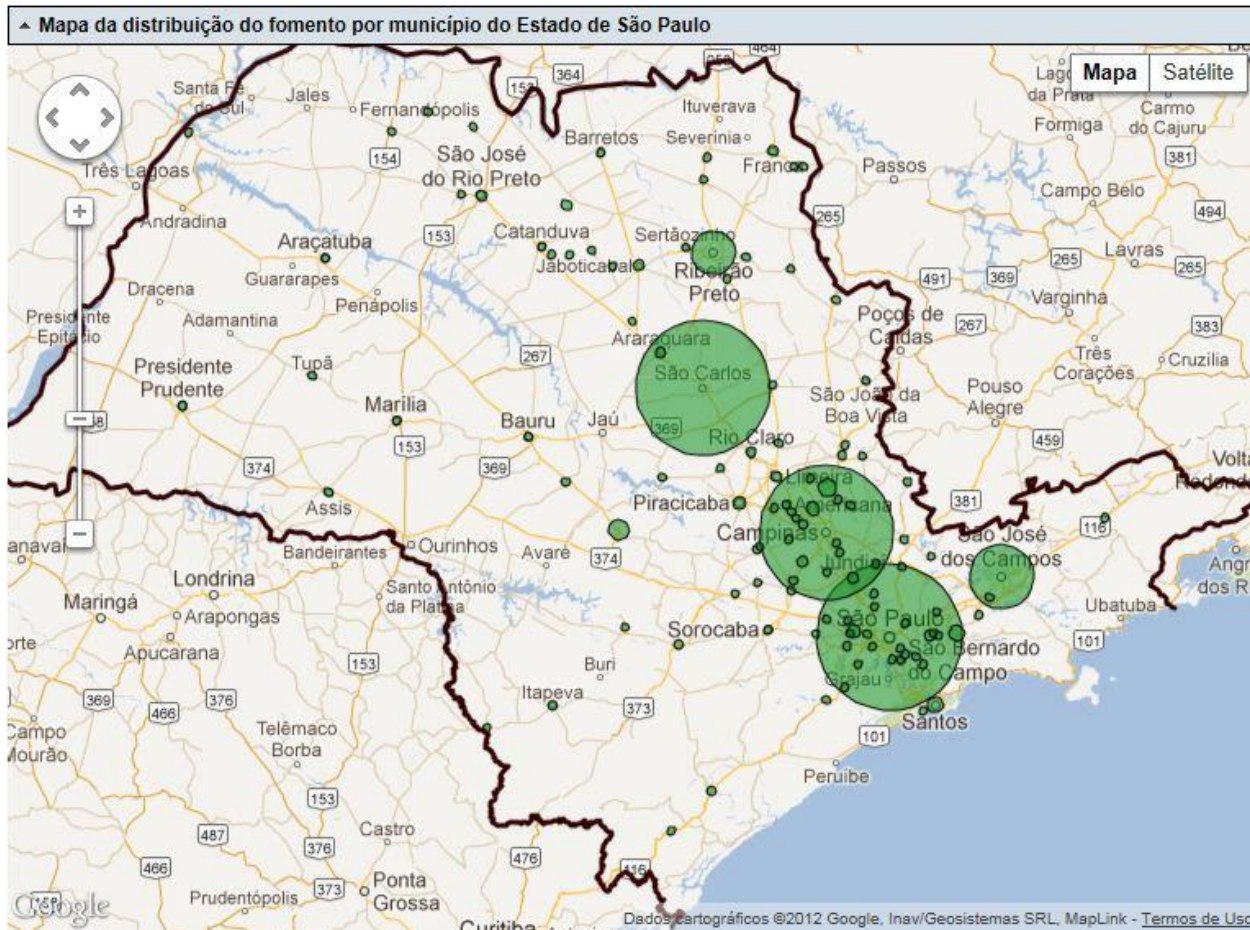
Research for Technological Innovation in SBs (PIPE)

- Initiated in 1997
- Two phases (similar to SBIR)
- 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)

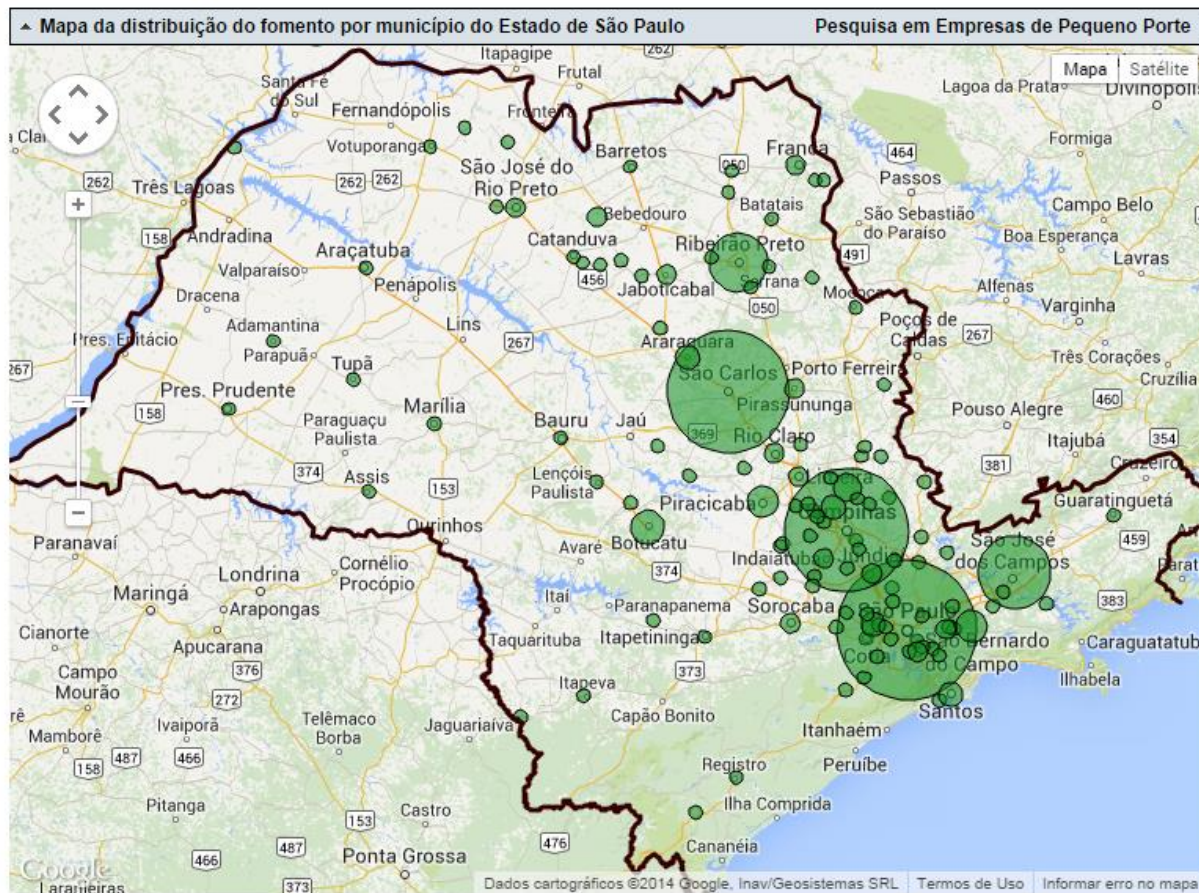
- FAPESP can review the proposal of a company to be created
- Money is intended to solve a research problem (Fapesp supports research)
- More than 230 projects approved last year (2016)
- Almost 1800 projects approved so far, more than 1100 small companies supported

Geographical distribution of PIPE projects, 2012



Em <http://www.bv.fapesp.br/pt/266/pesquisa-em-empresas-de-pequeno-porte/>

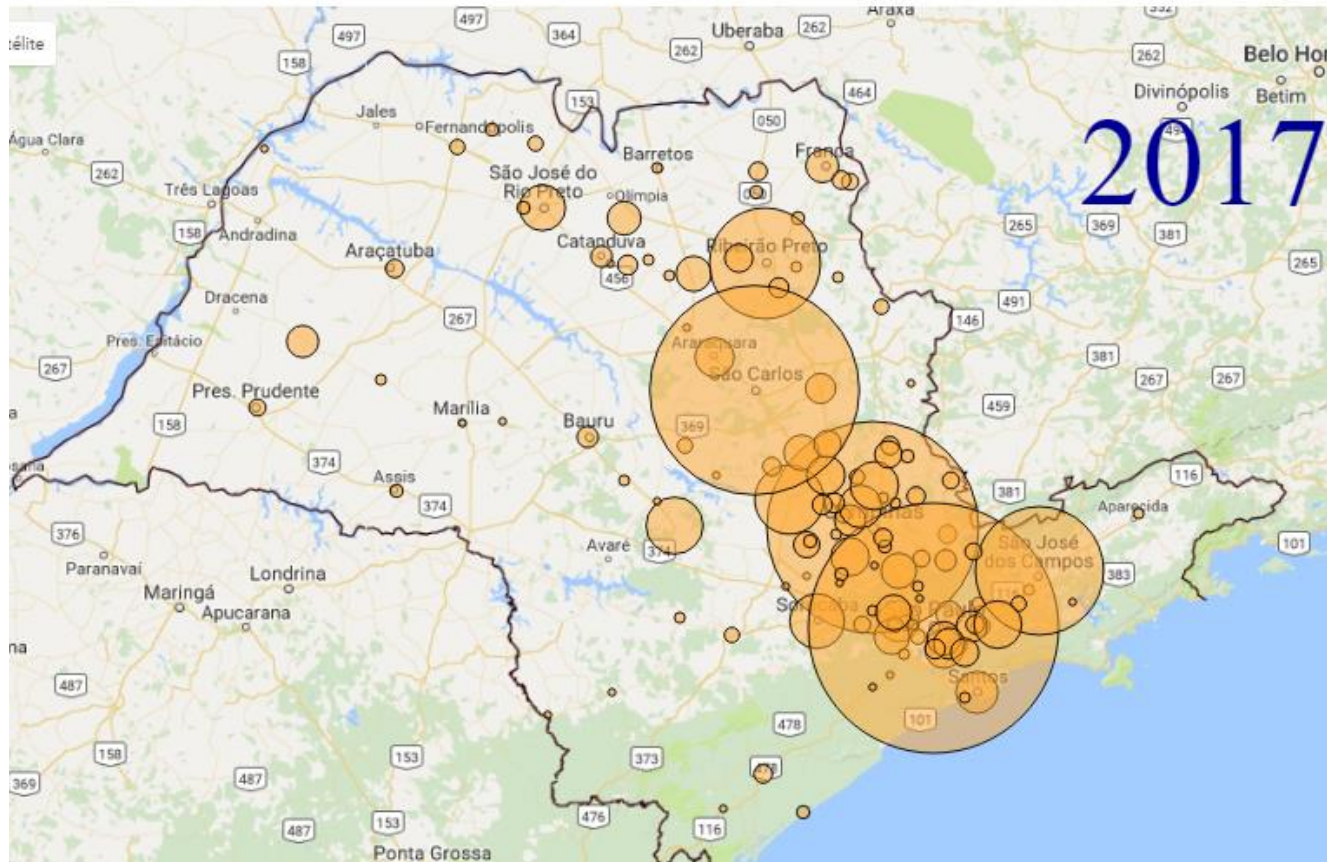
Geographical distribution of PIPE projects, 2014



Em <http://www.bv.fapesp.br/pt/266/pesquisa-em-empresas-de-pequeno-porte/>

Geographical distribution of PIPE projects, 2017

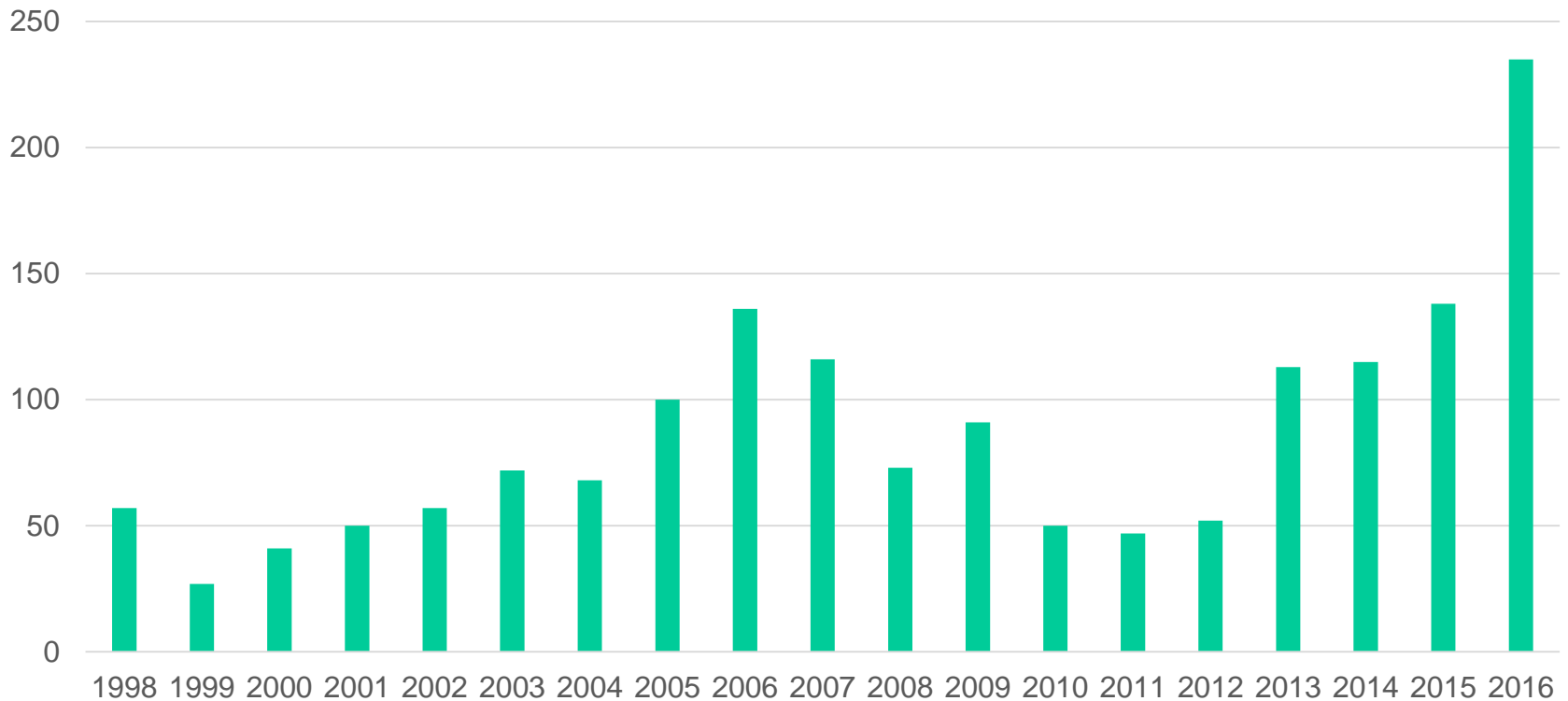
Mapa da distribuição do fomento por município do Estado de São Paulo



Em <http://www.bv.fapesp.br/pt/266/pesquisa-em-empresas-de-pequeno-porte/>

The challenge of expanding PIPE

Grants started in the year



PIPE assessment: similarities with SBIR (US)

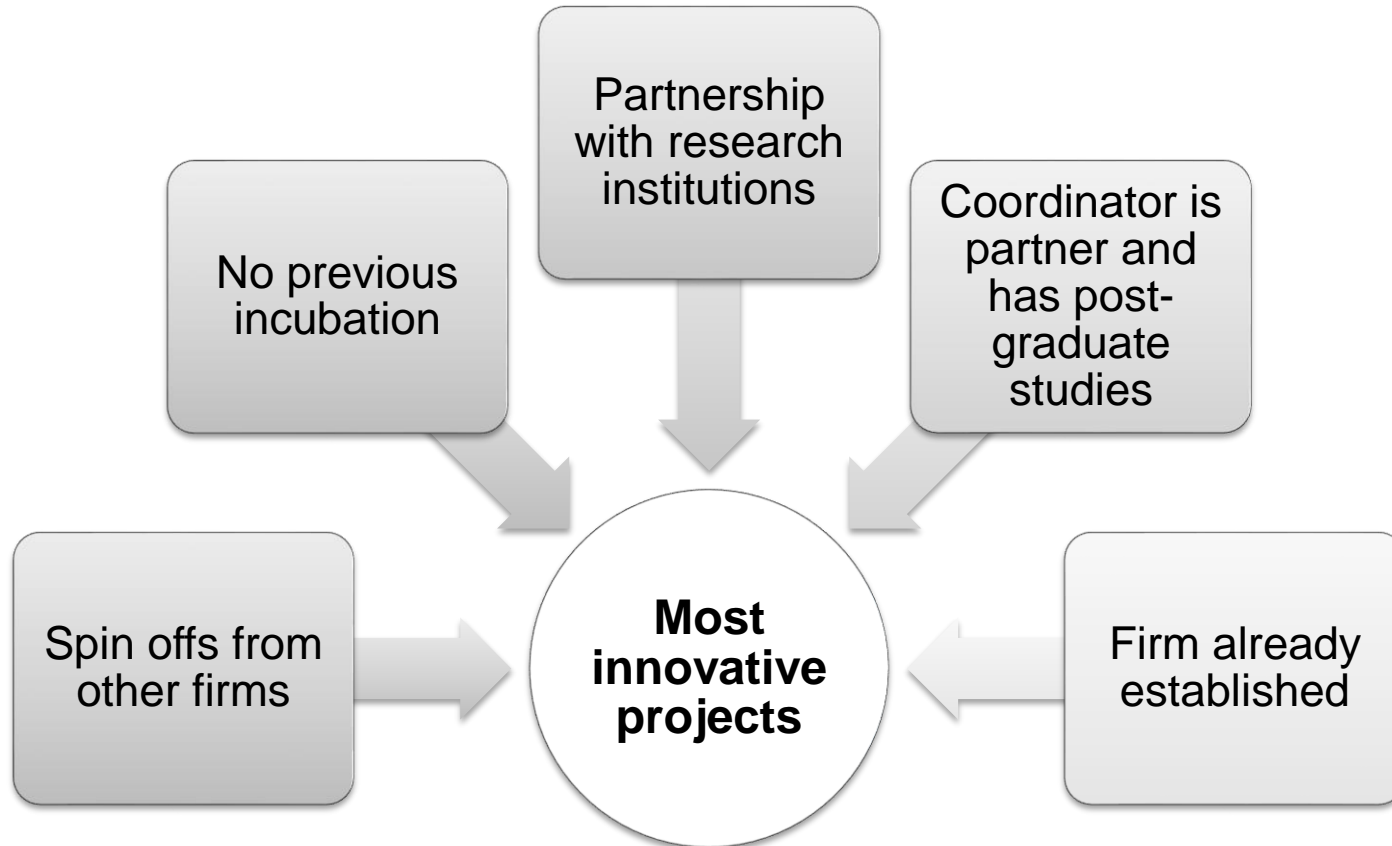
| | PIPE | SBIR |
|---|----------------|-----------|
| Sales increase due to support of PIPE/SBIR | 40% | 40% |
| Sales of largest 5% | R\$ 20 a 25 mi | US\$25 mi |
| Projects with patents | 29% | 29% |
| Projects that would not have been developed without the Program | 50% | 67% |
| Projects that have got additional funding | 52% | 56% |

PIPE assessment: differences in relation to SBIR (US)

| | PIPE | SBIR |
|--|-------------|-------------|
| Creation of enterprises to receive the grant | 12% | 20% |
| Venture capital investment | 12% | 25% |
| Commercial exploration of IPR | 4% | 16% |

Source for SBIR data: Wesser, C. W. An assessment of the Small Business Innovation Research Program. National Academies, Washington, 2007. Available in <http://www.nap.edu/catalog/11989.html>

PIPE assessment: the innovation generation



PIPE assessment: employment

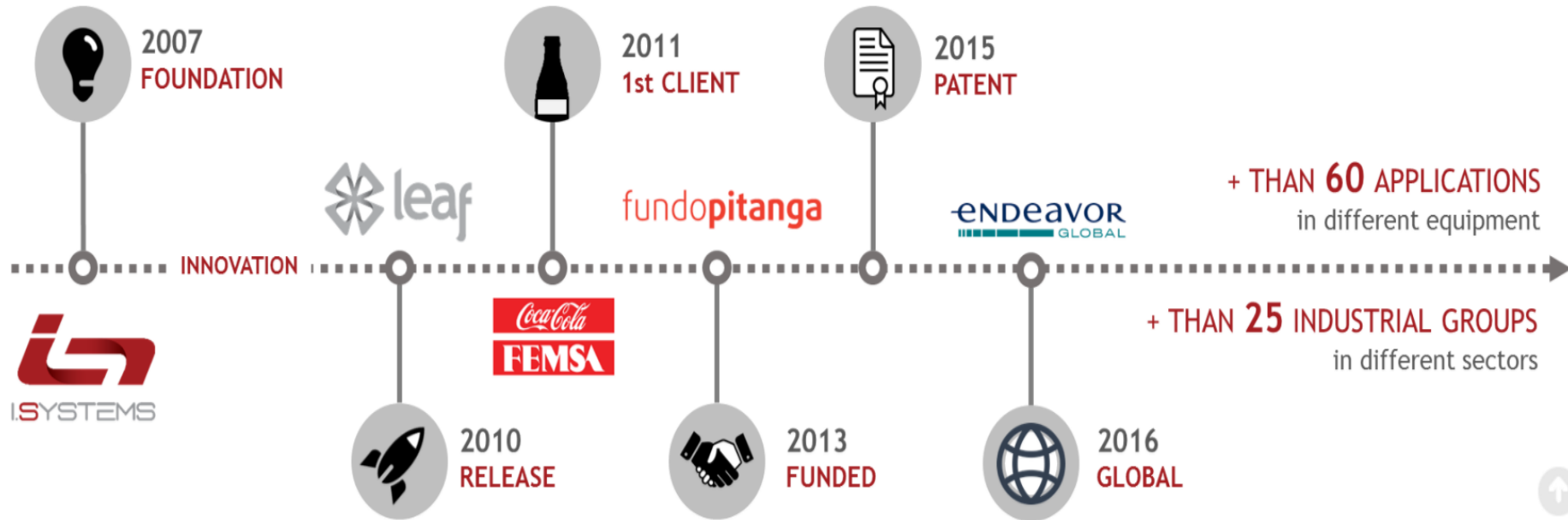
- Significant impact on employment:
 - 41% increase in total employment (hired, outsourced and fellows)
 - almost 30% increase in hired people
 - 60% increase in the number of graduate
 - 91% increase in post-graduate

PIPE assessment: the economic impact

- High economic impact
 - Return on FAPESP's investment (plus matching funds from firms) was 6 to 1
- Sales derived from projects are significant and growing
 - But highly concentrated (similarly to SBIR): 11 firms accounted for 90% of the total
- Self-sustained
 - Generates about the same amount in taxes as it invests annually in new projects

Successful cases

I.Systems



Successful cases

Nexxto



Filtrar por solução ▾

SOLUÇÃO NEXXTO



Saiba como a Ofner reduziu perdas de alimentos que somavam R\$ 180 mil por mês

ARTIS



Saiba como a EQUINIX reduziu em 98% o tempo utilizado para realizar inventários.

ARTIS



Entenda como a BM&FBOVESPA conseguiu 100% disponibilidade em seu datacenter

Successful cases

Altave



The screenshot displays the ALTAVE website interface. At the top right, there are flags for Brazil and the United Kingdom. The navigation menu includes: HOME, CONHEÇA A ALTAVE, PRODUTOS, SERVIÇOS, ÁREAS DE ATUAÇÃO, PREMIAÇÕES, FOTOS E VÍDEOS, CARREIRAS, NOTÍCIAS, and CONTATO. The main content area features a large image of a hot air balloon launch with the text: "PMERJ utilizará balão de monitoramento para grandes eventos". Below the image is the slogan "Soluções mais leve que o ar".

Successful cases

Braincare



Tecnologia de medição da pressão intracraniana foi desenvolvida com o apoio do programa PIPE-FAPESP e conta com patentes no Brasil, Estados Unidos e Europa (*imagens: divulgação*)

Braincare terceiriza produção para focar no desenvolvimento do produto

Successful cases

XMobots



The screenshot shows the homepage of the XMobots website. At the top is a black navigation bar with the XMobots logo on the left and menu items: Home, A Xrobots, VANTS, Soluções, Blog, Clipping, and Contato. Below the navigation bar is a large hero image of a yellow and red Echar 20C experimental aircraft flying over a field. A large, stylized 'X' is overlaid on the image, with the top half showing a blue sky and the bottom half showing a field. A red button with the text 'Garanta já o seu!' is positioned above the aircraft. To the right of the aircraft, the text 'Echar 20C' is displayed in white on a green background, followed by 'HA' in a red circle with a target symbol. Below this, the text 'Acurácia de poucos centímetros sem pontos de controle' is shown with a right-pointing arrow. The XMobots logo is repeated in the bottom right corner of the hero section. At the bottom of the page, a grey banner contains the text 'Bem vindo ao mundo XMobots'.

Successful cases

Promip



+55 19 3857-2020 +55 19 99695-2666 promipcb

in f yt ig tw language: PT|EN

Home Company Products Services IPM Solutions Talk to us



BIOLOGICAL PRODUCTS AND SPECIALIZED SERVICES FOR IPM PROGRAMS

OUR PRODUCTS

BIOLOGICAL CONTROL



RESEARCH SERVICES



Successful cases


Nanox



Versão em português ►

| | | | | | |
|---------|----------|------------|-------|------|---------|
| Company | Products | Innovation | Press | News | Contact |
|---------|----------|------------|-------|------|---------|

Nanox's Vision
The knowledge of
nature in the service of life



Unicamp start-ups: 434 firms, >21.000 jobs, annual revenues R\$ 3 billions





Research Trajectory
Knowledge Intensive Entrepreneurship

ON THE LOCATION OF KNOWLEDGE-INTENSIVE ENTREPRENEURSHIP IN DEVELOPING COUNTRIES:

A CASE STUDY OF THE STATE OF SÃO PAULO, BRAZIL

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Results

- The role of the knowledge infrastructure
 - Universities
- Importance of economic centers as attractors of innovation-driven entrepreneurial activity
 - **However**, indications of agglomeration diseconomies affecting the levels of knowledge-intensive entrepreneurship

Concluding remarks

- A lot to learn from the PIPE Program
 - Determinants of KIE location, determinants of success and failure etc
- Improving policy
 - Programs to support innovation (beyond research)
 - Technology parks; incubators

Thank you

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