

# New Trends in R&D in Brazil: The New Legislation on Science, Technology and Innovation

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# Outline

1. Brazilian context for Science, Technology and Innovation
2. Main objectives of the new legislation
3. Key changes brought by the new legislation
4. Next steps

# Technology and development

On Leadership

## Some Swedish workers are getting microchips implanted in their hands

By Jena McGregor, Reporter  
April 4, 2017



12 de outubro de 2017 15:40 BRT

## This Genetics Company Is Editing Horns Off Milk Cows

Recombinetics says its genetically edited Holsteins are ready to milk, but FDA rules are in flux.

By Adam Piore



Fahrenkrug's team is making livestock healthier, fleshier, and, yes, less pointy. PHOTOGRAPHER HANNAH WALKER SMITH/CORNELL ALLIANCE FOR SCIENCE

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## Chinese e-commerce company is running a nearly autonomous warehouse with almost ZERO human employees

- Chinese e-commerce firm JD.com has built a nearly autonomous warehouse
- The logistics facility is near Shanghai and has a sophisticated network of automated machinery that scans packages, delivers them to trucks and more
- The factory's only four employees are on hand to monitor the automated robots
- JD.com has already launched a network of autonomous delivery drones

By ANNIE PALMER FOR DAILYMAIL.COM

PUBLISHED: 21:28 BST, 14 June 2018 | UPDATED: 12:53 BST, 15 June 2018

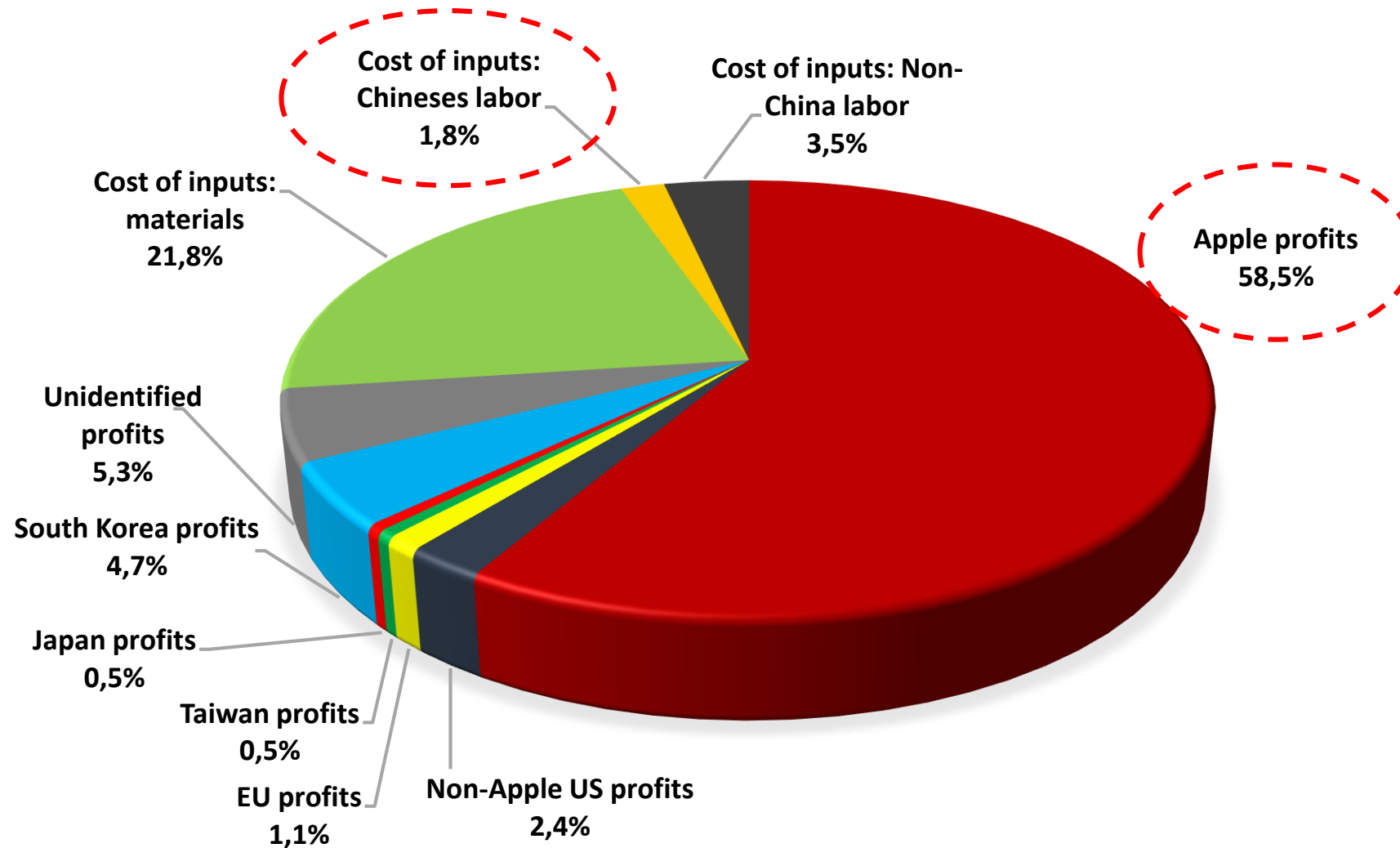
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Chinese e-commerce giant JD.com has constructed a fulfillment center that handles as many as 200,000 orders each day - and it only has four employees.

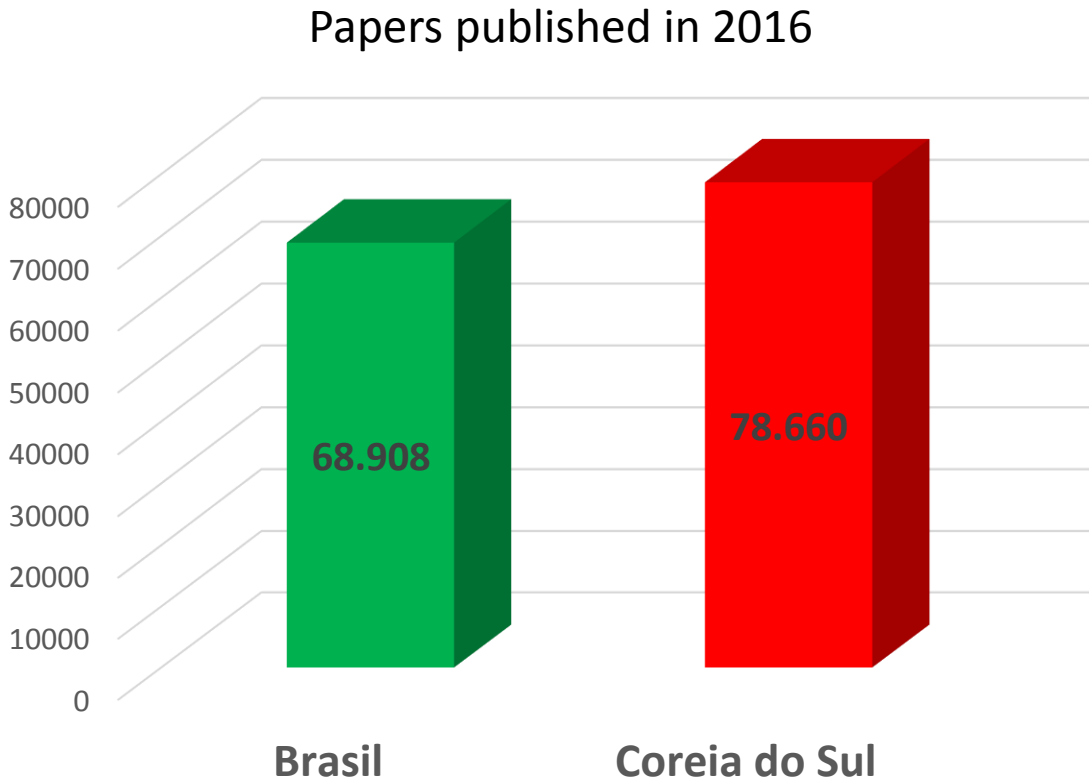
That's because the roughly 100,000 square foot facility is run almost entirely autonomously, with human employees solely on site to tend to the robots.

According to JD.com, the warehouse leverages 'highly-automated sorting technology' to sort up to 16,000 packages per hour with 99.99% accuracy.

# Distribution of value for iPhone, 2010



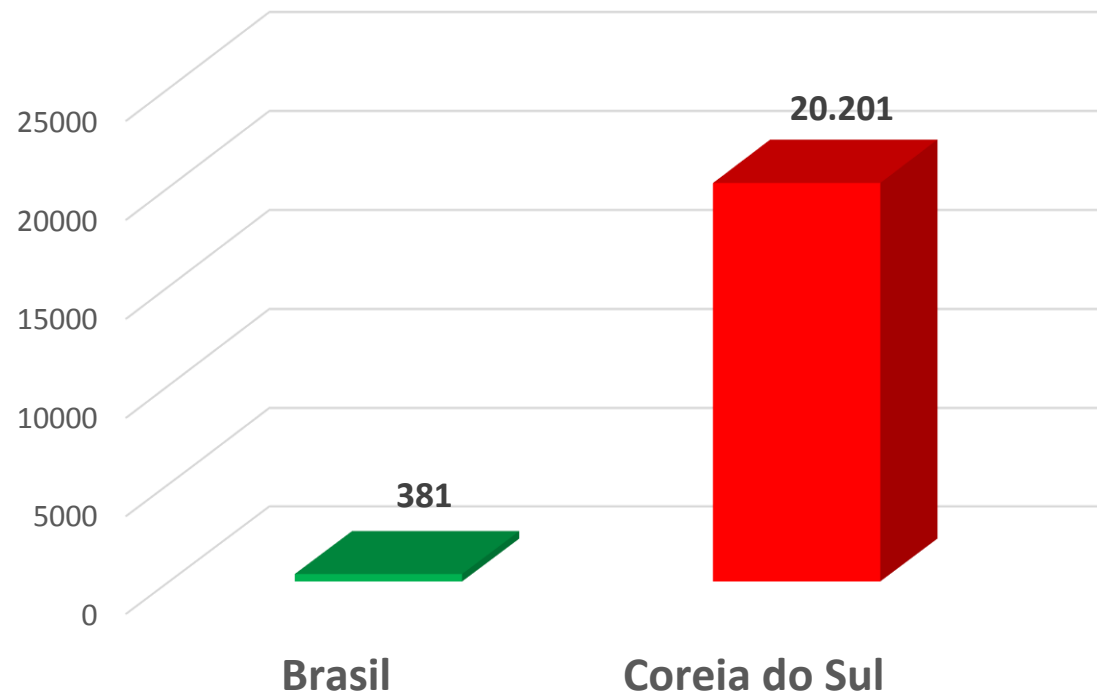
# Scientific publishing



	Country	↓ Documents
1	United States	601990
2	China	471472
3	United Kingdom	182849
4	Germany	164242
5	India	138986
6	Japan	121262
7	France	112796
8	Italy	105847
9	Canada	96928
10	Australia	89767
11	Spain	85560
12	South Korea	78660
13	Russian Federation	73207
14	Brazil	68908
15	Netherlands	55520

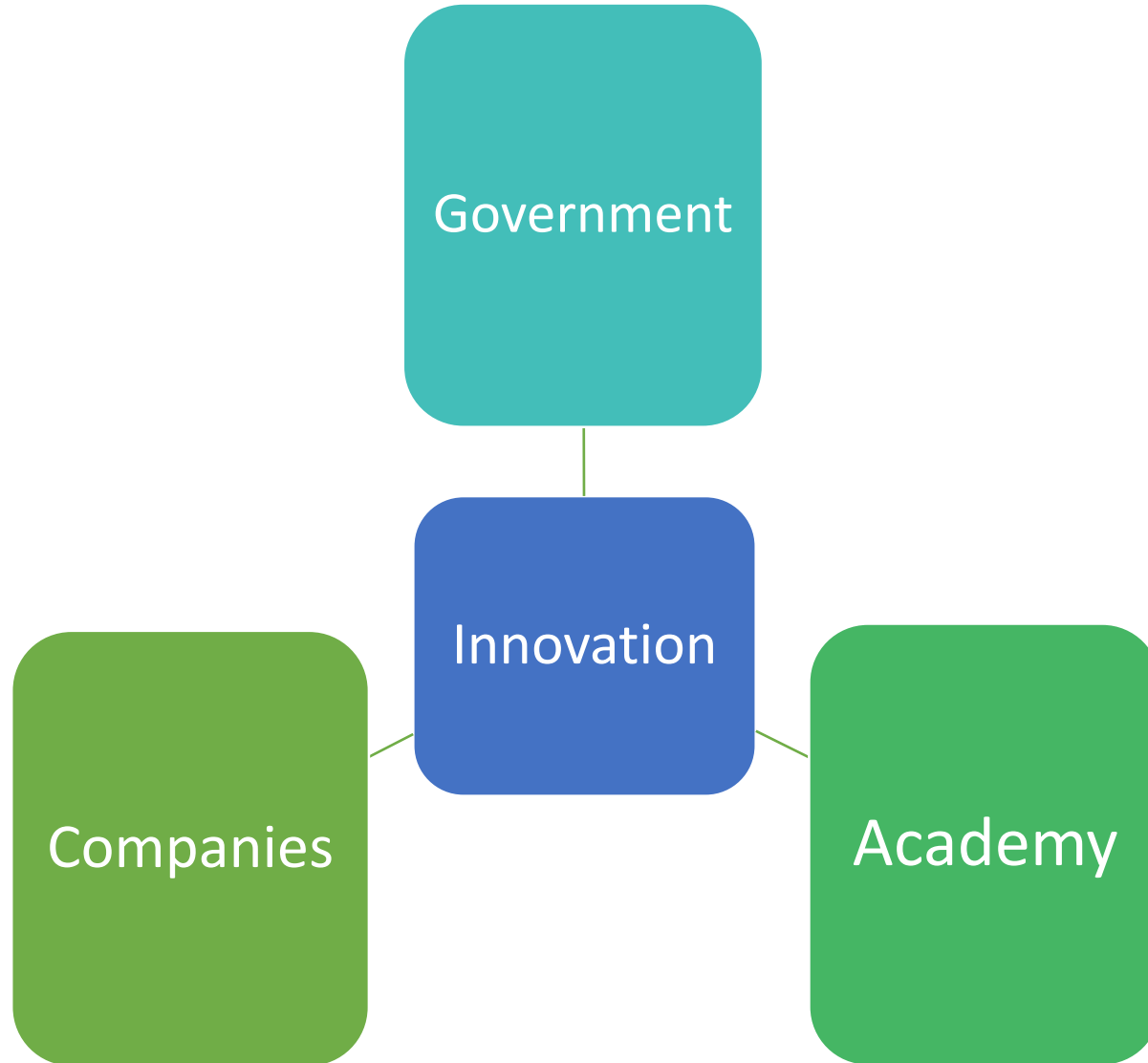
# Patents

USPTO Patents granted to nationals in 2015

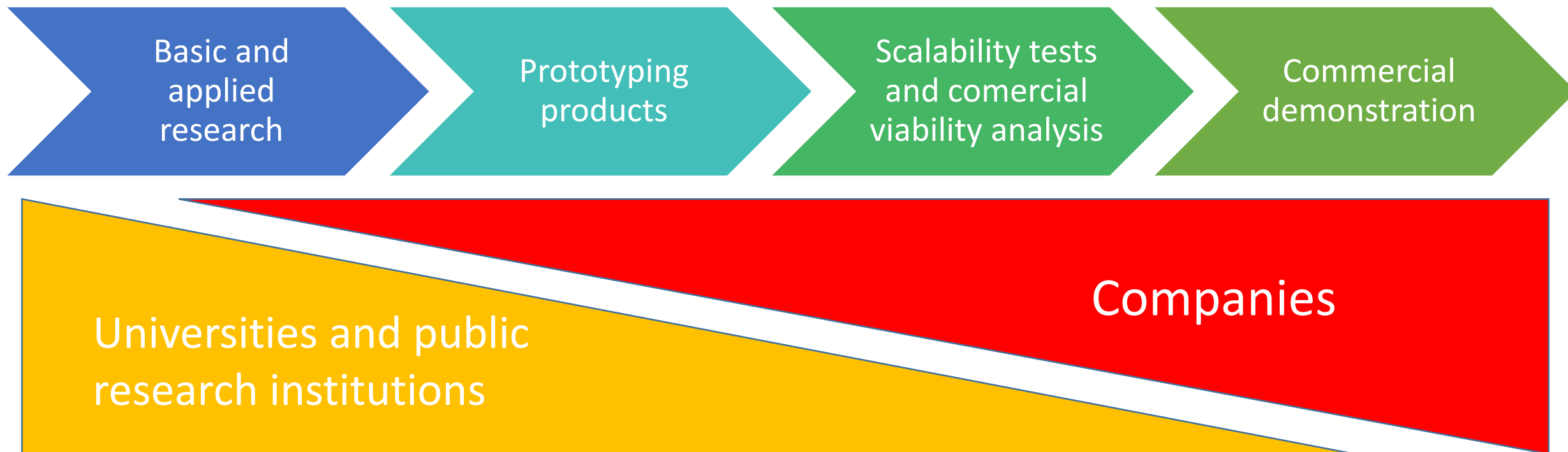


Country	Patents in USPTO in 2015
1º US	155.982
2º Japan	54.422
3º Germany	17.752
4º South Korea	20.201
5º Taiwan	12.575
6º China	9.004
7º Canada	7.492
8º UK	7.167
9º France	7.026
10º Israel	3804
(...)	(...)
28º Brazil	381

# Triple helix



# Phases of innovation investments





# Chronology of the legislation

2004 - Innovation Law (Lei 10.973, de 2004)

~~2005 - Regulation of the Innovation Law (Decree 5.563, de 2005)~~

2015 - Constitutional Amendment of STI (Amendment 85, 2015)

2016 - “New Innovation Law” (Law 13.243, de 2016)

2018 - Regulation of the New Innovation Law (Decree 9.283, 2018)



# Guidelines of the New Innovation Legislation

Clarify undefined concepts from previous legislation

Empower the public officer manager who acts in good faith

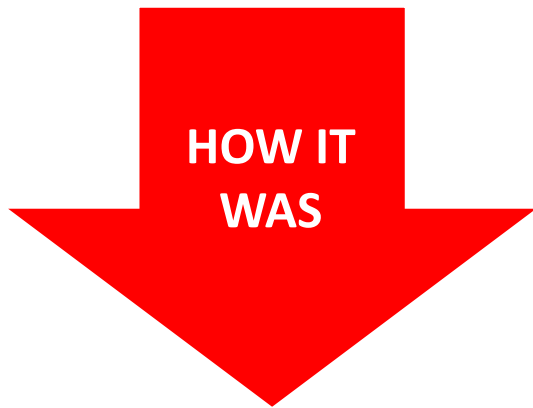
# Major advances

1. Reports focused on results instead of receipts
2. Budget flexibility
3. R&D contracting, including the scaling up
4. “RDC” for procurement in public institutions for R&D
5. Waiver of competitive bidding
6. Waiver of documents in some kinds of purchases
7. Minority investments in technology companies
8. Technology transfer
9. Economic subsidies or grants
10. Real estate assignment in innovation-promoting environments
11. Company import tax exemption for R&D
12. Import procedure improvement for researcher
13. Clear categorization for RD&I agreements, grant terms, partnership agreements and administrative contracts
14. R&D Partnership Agreements between public institutions and private companies with increased flexibility
15. Technological voucher
16. Visa for foreign researchers
17. Flexible rules for professors who work with R&D partnerships
18. Leave for researchers in public institutions
19. Temporary contracts for R&D personnel

# 1.1. Expenses report (accountability)



Focused on the results of the research  
(Research report)



Focused on receipts and financial documents  
(Expenses report)

# 1.2. Expenses report (accountability)

When a financial report is required:

Research is not executed

Vestiges of irregular activity

Sampling of projects (“malha fina”)

## 2. Budget flexibility



HOW IT  
GOT

Authorization to modify up to 20% of the project's budget by the researcher, along with subsequente notice



HOW IT  
WAS

Requirement of prior authorization to any sort of modification in the project

# 3. Public procurement



HOW IT  
GOT

“RDC” for any kind of procurement in research institution

Waiver of bid requirements for R&D products

Waiver of bid requirements for public works contracts up to R\$ 660K

Waiver of documents in immediate delivery contracts or, in any case, of up to R\$ 176K



HOW IT  
WAS

“RDC” not allowed

Waiver of bid requirements restricted to projects financed by Capes/Finep/CNPq

Waiver of bid requirements restricted not allowed for public works contracts

Lack of clarity in regard to waiver of documents

# 4. RD&I Partnership Agreements



HOW IT  
GOT

Public institutions allowed to receive private financing with flexible accountability requirements  
Budget ceiling may be waived



HOW IT  
WAS

Lack of clarity in the legal regime for private financing  
Budget limited to annual allowance



# 5. Innovation partnership (R&D Contracting)



HOW IT  
GOT

- Allows cost reimbursement and variable compensation
- Allows contracts to scale up the products, including prototypes and commercial scale
- Contractor selected based on best probable result
- Allows simultaneous hiring of more than one company



HOW IT  
WAS

- Lack of clarity in regard to payment methods
- Contract restricted to the research itself
- Lack of clarity on the criteria used to select the contractor
- Simultaneous hiring not allowed

# Next steps

Innovation policymaking of each research institution

Training and dissemination of new concepts of legislation (manual, drafts, academic articles)

Permanent Chamber of RD&I within the Federal Legal Department (AGU) –  
Search for uniformity in the interpretation of the Law

Thank you!

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