

# SEESP

## Innovation Ecosystems







**USP**







USP in Numbers	(2022)	(2023)
Rank Best Universities (QS World)	115th	85th
Eng.FAPESP Centers	6	7
CEPIDs FAPESP	9	13
EMBRAPII Units	7	9
INDUSTRY CONTRACTS	82	BRL 169M
Incubated Companies	149	179
DNA-USP companies	2687	2798

## Education and Research

**110,000 Highly Qualified People**

**18.5%**  
of Brazilian  
scientific  
production

UnderGradu  
ated  
61K

Graduated  
30K

Staff  
13.2K

Professors  
5.2K

Undergradu  
ate courses  
333

Graduate  
Programs  
264

Published  
Works  
17,600

Awards and  
Distinctions  
1,473

**12th university that most produces research in the world  
(CWTS 2022)**

**247 Most Influential Researchers in the World**

# EXAMPLES OF NATIONAL IMPACT

## NATIONAL COVERAGE USP PROJECTS

### INSPIRE Lung Ventilator:

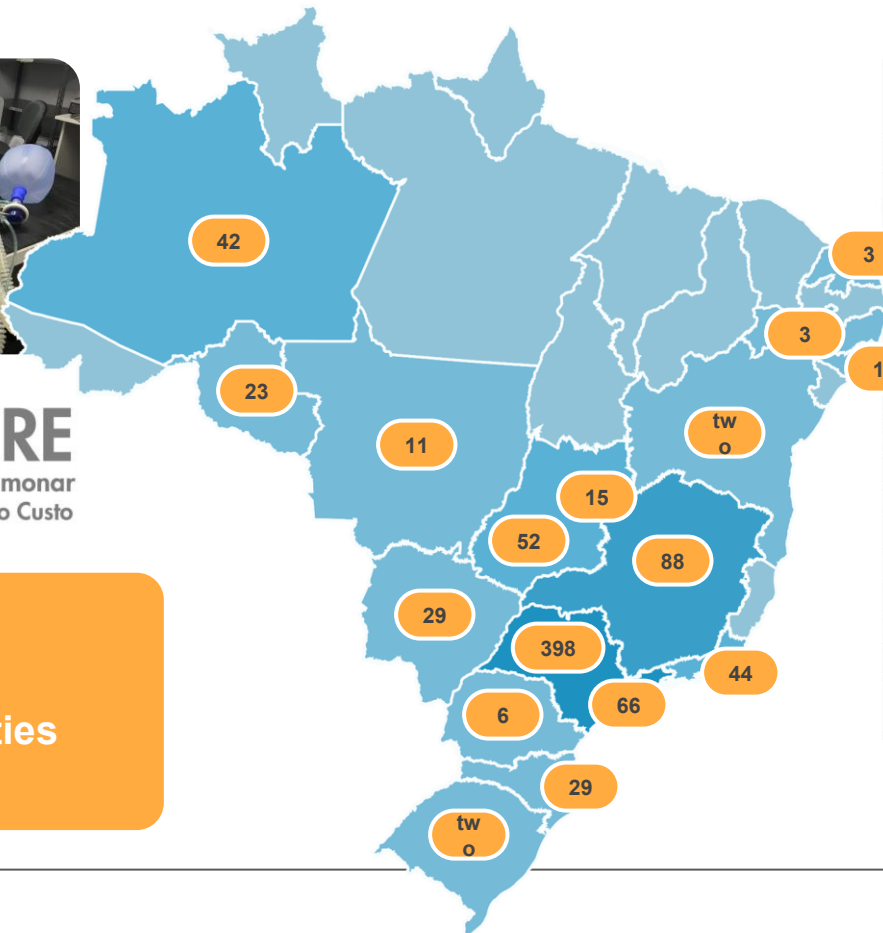
From conception to 3M certification in 100 days!

1,000 units manufactured and distributed in 16 states in Brazil



**INSPIRE**  
Ventilador Pulmonar  
Aberto de Baixo Custo

1000 units  
16 states  
197 municipalities  
219 Hospitals



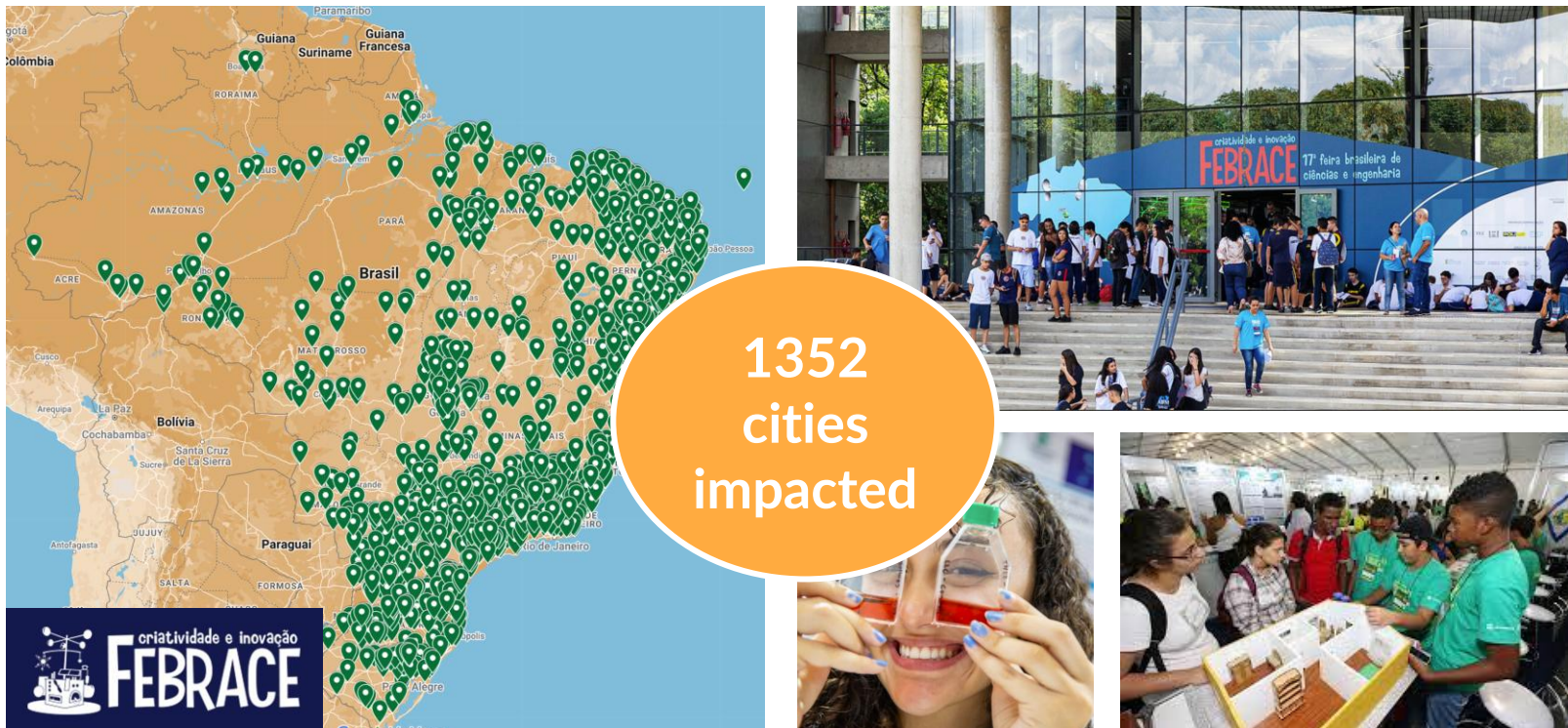
UF	Número de municípios atendidos	Número de hospitais	Quantidade de ventiladores
SP capital	1	8	66
SP interior	107	110	398
AL	5	6	12
AM	2	13	42
BA	1	1	2
DF	1	1	15
GO	13	13	52
MG	26	26	88
MS	12	12	29
MT	2	2	11
PE	1	1	3
PR	2	2	6
RJ	3	3	44
RN	1	1	3
RO	11	11	23
RS	1	1	2
SC	8	8	29
<b>16</b>	<b>197</b>	<b>219</b>	<b>825</b>



# EXAMPLES OF NATIONAL IMPACT

## Brazilian Cities Impacted by FEBRACE

Brazilian Science and Engineering Fair - Annually at USP



# EXAMPLES OF NATIONAL IMPACT

## STEM online free courses

### **APICE - scientific and engineering method courses**

([apice.febrace.org.br](http://apice.febrace.org.br))

+200.000 users from all over Brazil

+100.000 certificates



### **CODE IOT - six IoT courses** (concepts and practical courses)

([codeiot.org.br](http://codeiot.org.br))

+145.000 users from +130 countries

+14.000 certificates

Portuguese, English and Spanish



# EXAMPLES OF NATIONAL IMPACT

## STEM teachers training courses

### Desafio de Inovação Instituto 3M

(<https://formacao3m.febrace.org.br/v2024/>)

11 years program  
+1.500 trained teachers



### STEAM Tech Camp

(<https://steamtechcampbrasil.febrace.org.br/v2022/>)

5 years program  
300 science teachers and  
curriculum coordinators from all over Brazil





# Examples of International Impact

## The First Global Ethanol-H<sub>2</sub> Plant

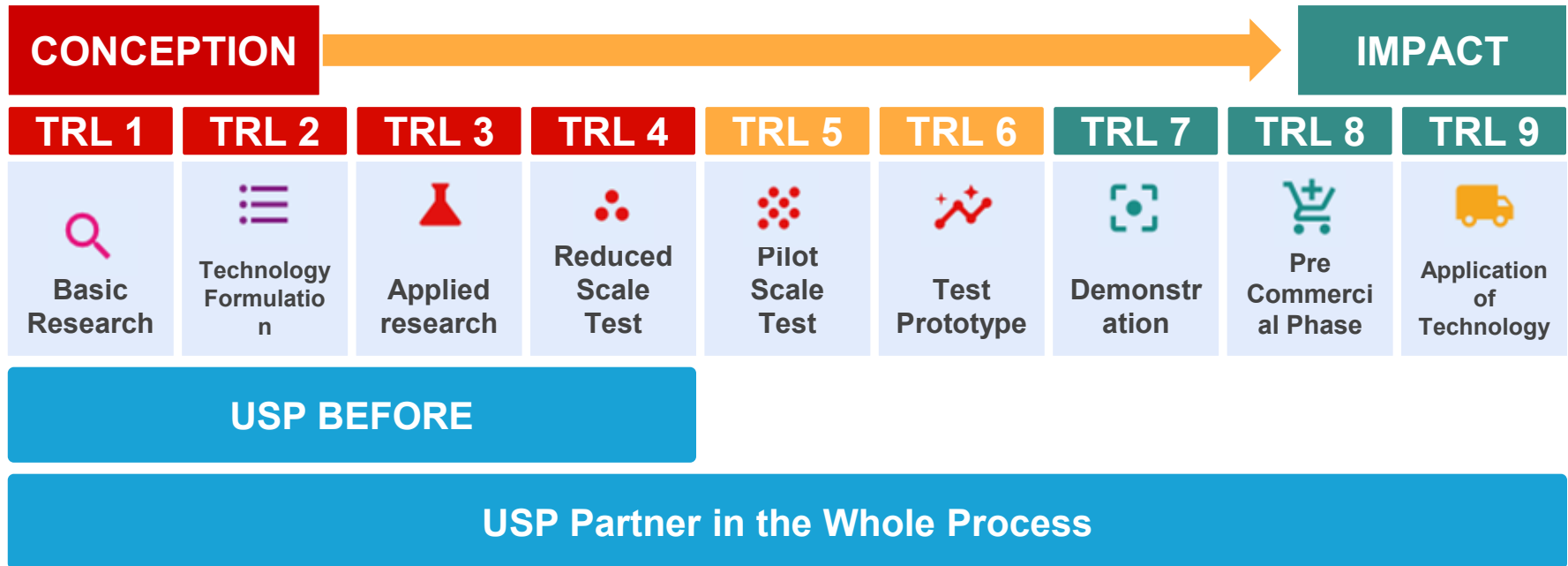


Research Centre for  
Greenhouse Gas Innovation



# USP ECOSYSTEM STRATEGY

FROM CONCEPTION TO IMPACT



CAPES

CNPq

NSF

BNDES

EMBRAPII

FAPESP

NIH

anp  
Agência Nacional  
de Petróleo,  
Gás Natural e Biocombustíveis

Finep  
INOVAÇÃO E PESQUISA

ANEEL

Softex

DAAD

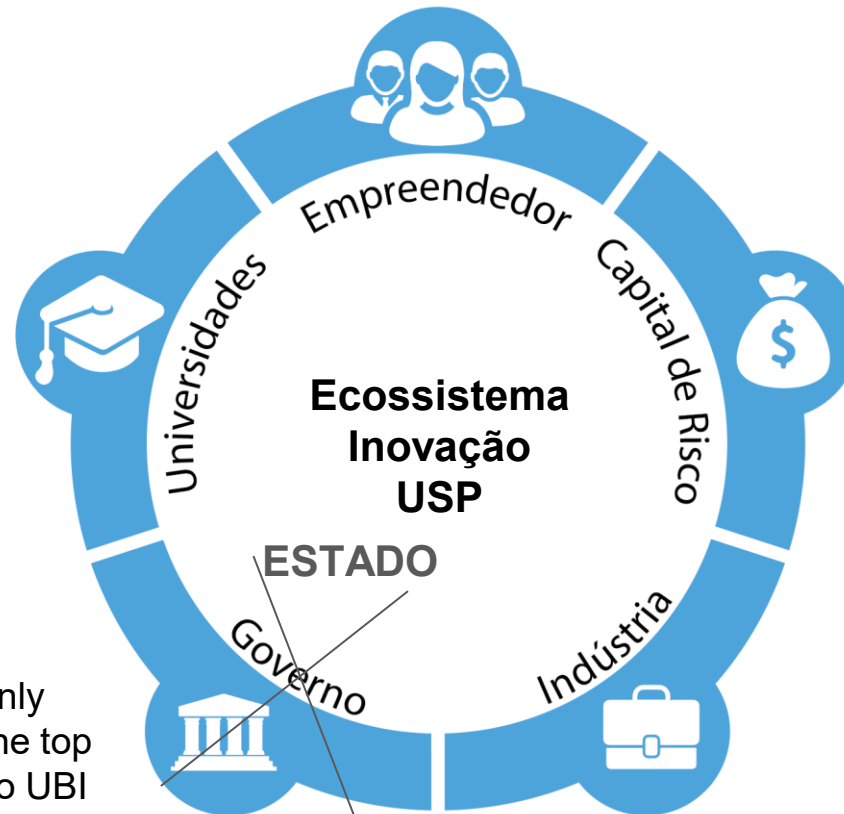
USP  
UNIVERSIDADE  
DE SÃO PAULO

# The Penta Helix Model

Multilateral Relations with Agents Aiming at Innovation in Society



Supera Incubadora is the only Brazilian in the ranking of the top 20 in the world, according to UBI Global



Top Science&Technology  
Cluster 2022  
São Paulo 71º  
WIPO 2022





# New International Advanced Research Centers



International Centre for Genetic  
Engineering and Biotechnology

International Center for Genetic  
Engineering and Biotechnology



National Center for Scientific Research of  
France at USP



Institut Pasteur São Paulo

# New USP Advanced Research Centers



Center for Studies and Convergent Technologies for **Precision Oncology**



Center for **Sustainable Amazon**



Center for **Sustainable Tropical Agriculture** Studies



Center for **Carbon in Tropical Agriculture**



USP **Observatory for Brazilian Institutions**

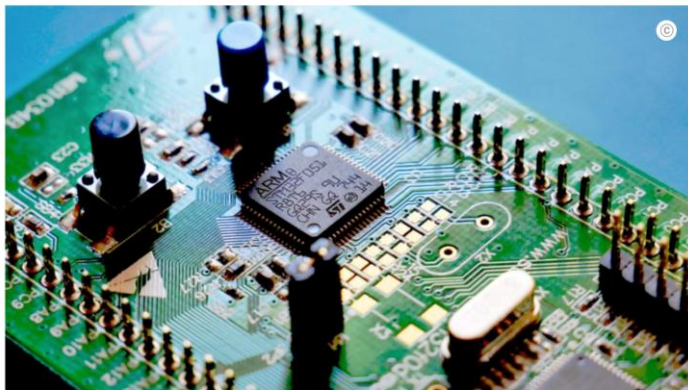
# CEPIDS, CPES FAPESP and EMBRAPILs

CEPIDS FAPESP				CPES FAPESP	
<b>FoRC</b>	Food Research Center	<b>CeMEAI</b>	Research Center in Mathematics Applied to Industry	<b>RCGI SHELL</b>	Research Center for Gas Innovation (Shell)
<b>NEV</b>	Center for the Study of Violence	<b>CIBFar</b>	Center for Research and Innovation in Biodiversity and Pharmaceuticals	<b>CPBEC NATURA</b>	Center for Applied Research in Well-Being and Human Behavior
<b>CEM</b>	Metropolis Studies Center	<b>CEPOF</b>	Optics and Photonics Research Center	<b>SPARCBio Copperhead</b>	São Paulo Advanced Research Center for Biological Control
<b>CRID</b>	Inflammatory Disease Research Center	<b>NeuroMat</b>	Center for Research, Innovation and Dissemination in Neuromathematics Research Center on Redox Processes in Biomedicine	<b>CINE SHELL</b>	New Energy Innovation Center
<b>CTC</b>	Cell Therapy Center	<b>REDOXOMA</b>		<b>C4AI IBM</b>	Artificial Intelligence Center
<b>CEGH - CELL</b>	Human Genome and Stem Cell Research Center	<b>CCARBON</b>	Center for the Study of Carbon in Tropical Agriculture	<b>AGAIN</b>	Artificial Intelligence Recreating Environments
<b>B3</b>	Research Center for Biology of Bacteria and Bacteriophages			<b>OTIC SHELL</b>	Offshore Innovation Center
EMBRAPILs					
<b>CEINFAR, FCF/ICB</b>	Discovery and Development of Drugs and Biopharmaceuticals	<b>CICS COP</b>	Construction of Coefficient	<b>BIOCONTROLLERS, ESALQ</b>	Agricultural Pest Biocontrollers
<b>BIOFOTÔNICA IFSC</b>	Biophotonics and Instrumentation	<b>POWERTRAIN POLI</b>	Technologies associated with Powertrain	<b>TECNOGREEN POLI</b>	Green Chemistry Technologies
<b>FARM, FMRP</b>	Drug discovery and development	<b>IQSINT IQ-SP</b>	Synthetic Chemical and Biochemical Inputs	<b>BIG DATA ICMC</b>	Data Science



## USP atuará em pesquisa e produção de chips avançados

Universidade anunciou adesão ao programa de capacitação de pesquisa da empresa de semicondutores britânica Arm



Microprocessadores (foto) são semicondutores presentes em computadores, celulares e outros equipamentos eletrônicos

## RCGI e Total Energies investem R\$ 80 milhões em projetos de P&D

Iniciativas buscam avanços na geração sustentável e tecnologias para parques eólicos onshore e offshore



University of São Paulo  
Innovation Center



01/08/2023 17:23 - Prefeito

## **Prefeitura anuncia investimentos de mais de R\$ 10 milhões para triplicar parque de inovação tecnológica**

Anúncio foi feito pelo prefeito nesta terça, durante assinatura de cessão para duas novas empresas no Supera Parque; local já tem 72 empresas

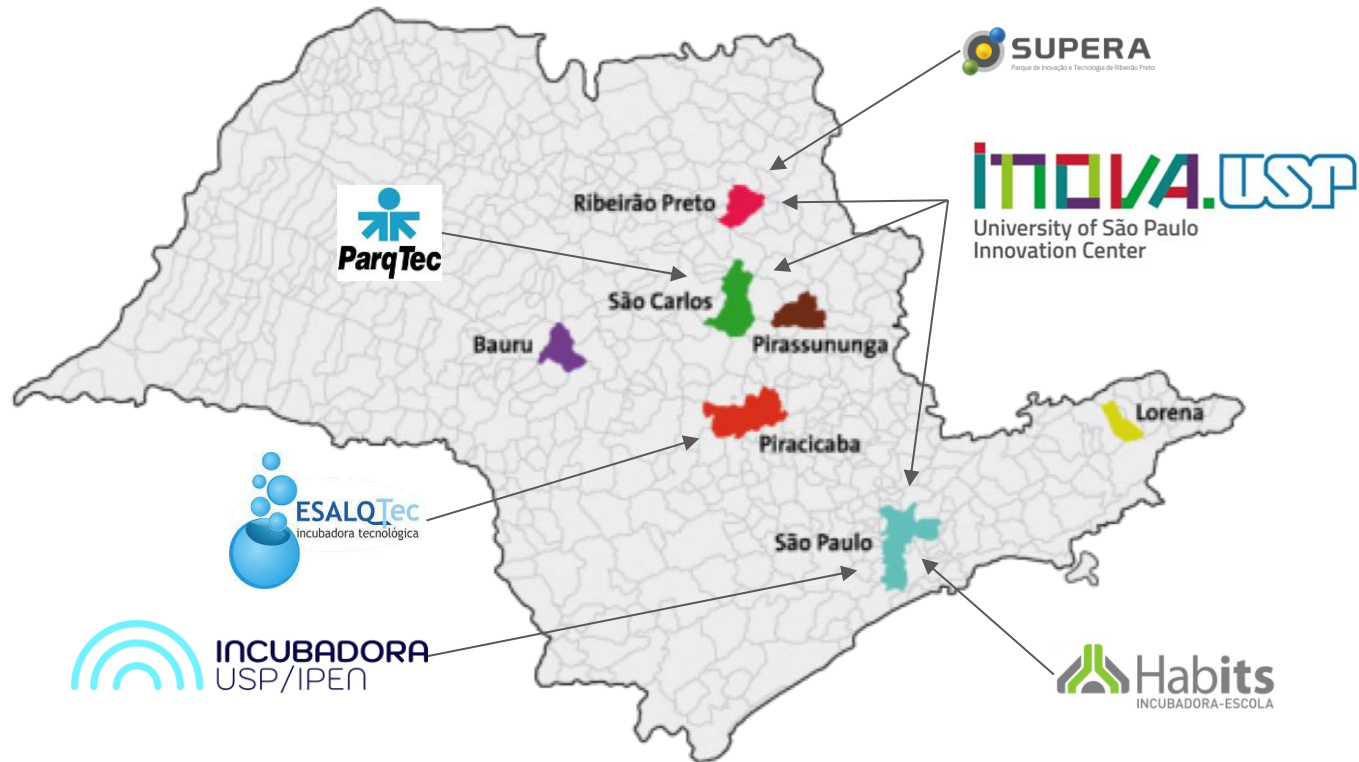
Foto: Fernando Gonzaga



**SUPERA**  
Parque de Inovação e Tecnologia

**Incubadora de Empresas**

2798 companies with  337 outside SP and 18 outside Brazil  
~ 30 thousand jobs generated (RAIS 2018)  
~ BRL 16 billion in revenue (2019)  
5 Incubators



Negociadas em Bolsa

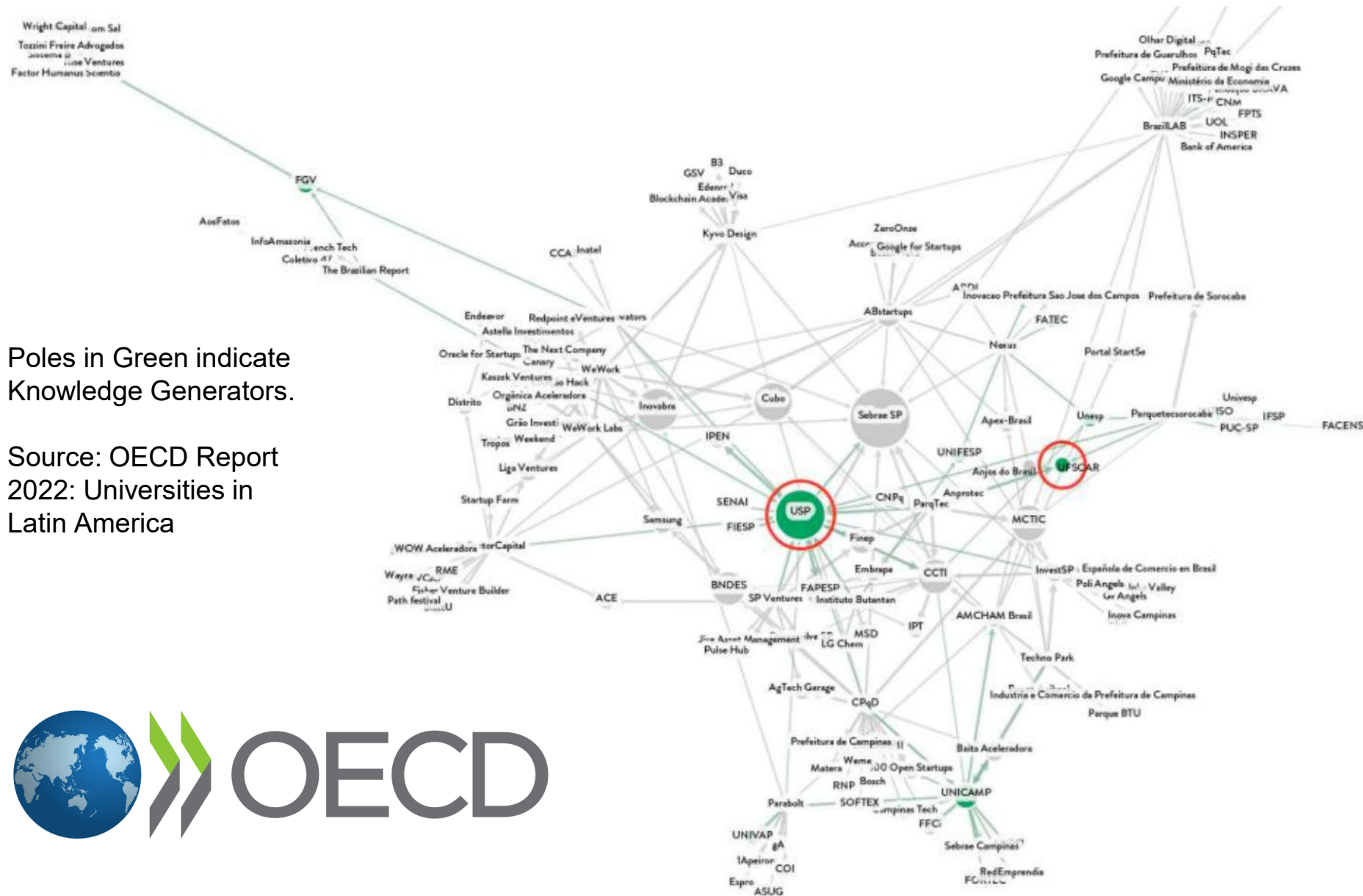


Unicórnios





# Reputation of Innovation Ecosystem Actors in São Paulo



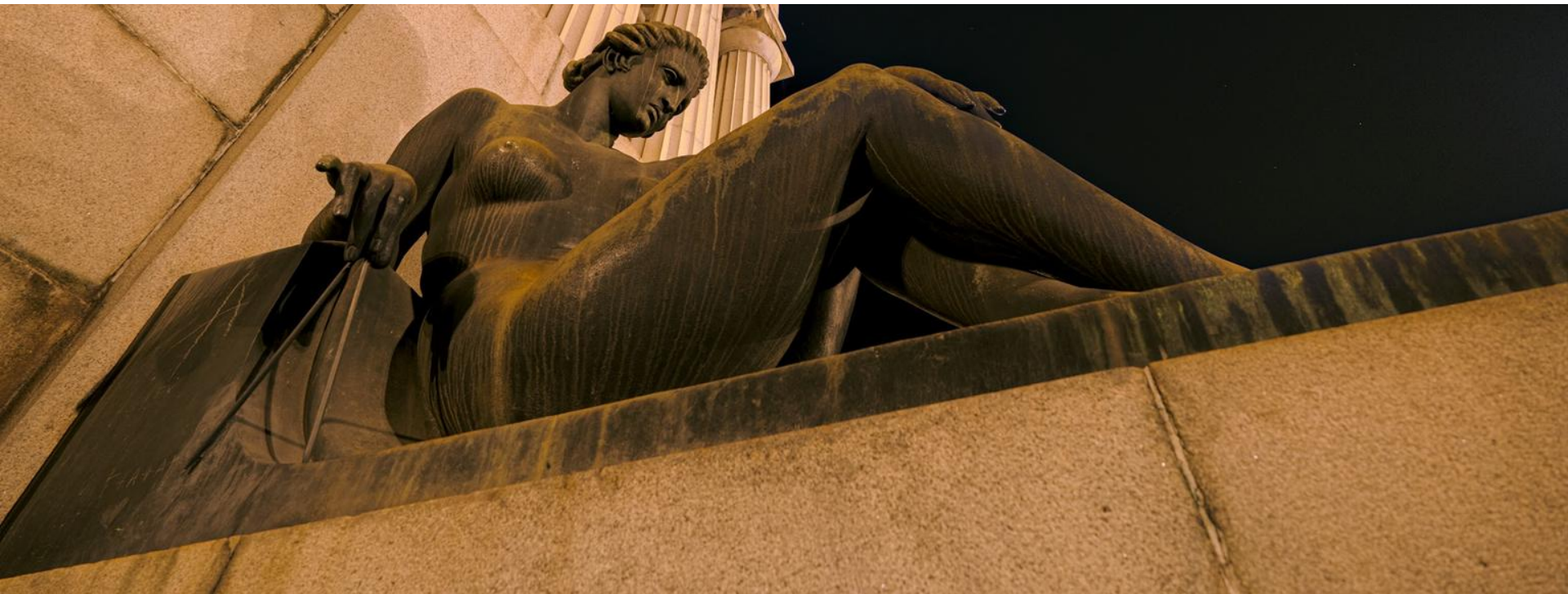
Poles in Green indicate Knowledge Generators.

Source: OECD Report 2022: Universities in Latin America





# Co-creation aiming innovation

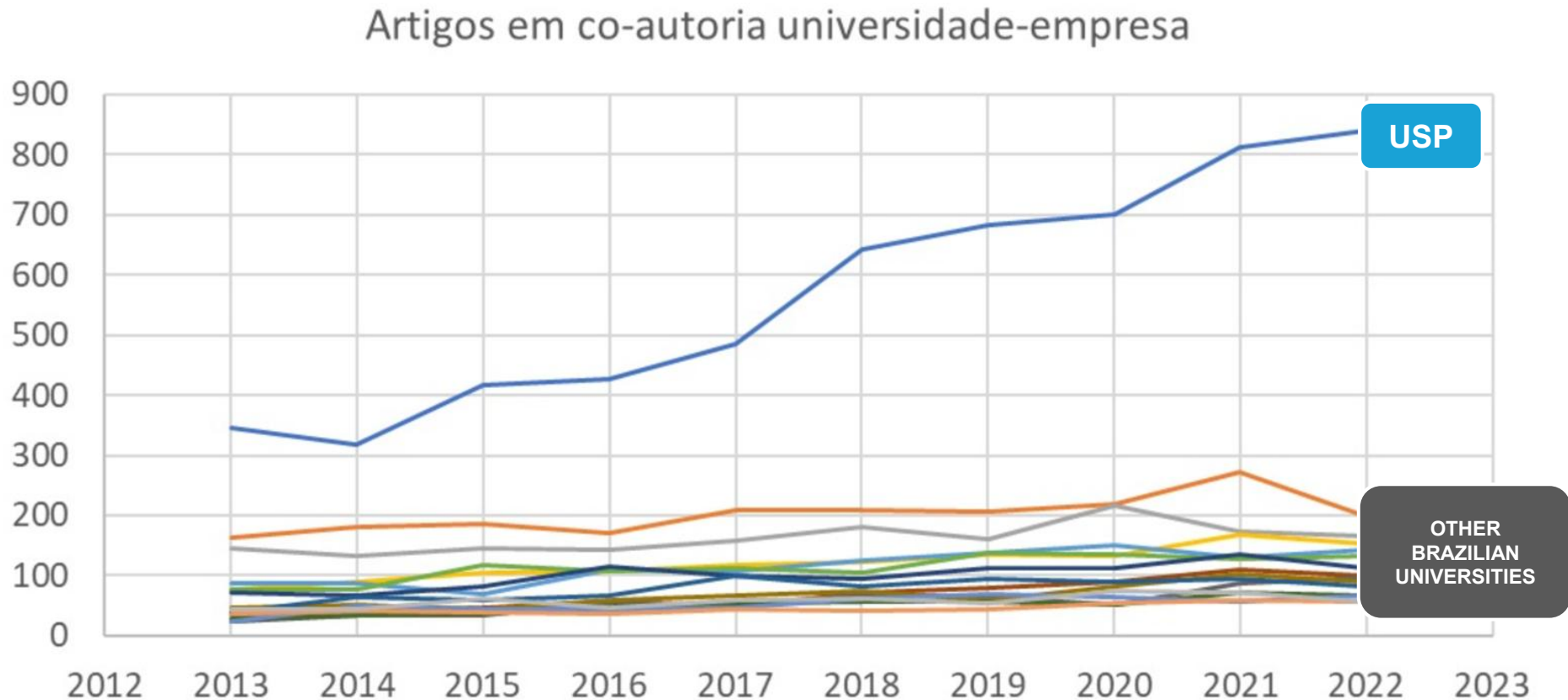


# Co-creation & Open Innovation

"Generating value from innovation through co-creation involves collaborating, resulting in greater creativity, relevance in society and shared benefits."



# EXAMPLE OF CO-CREATION - Evolution of USP publications with Companies



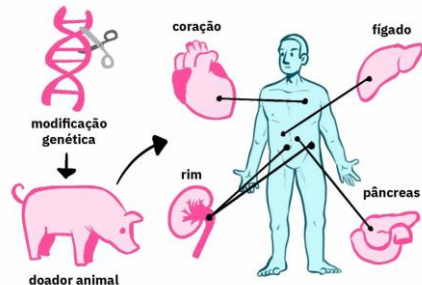
SOURCE: ELSEVIER 2023  
DATABASE

# MEI - Themes for Missions

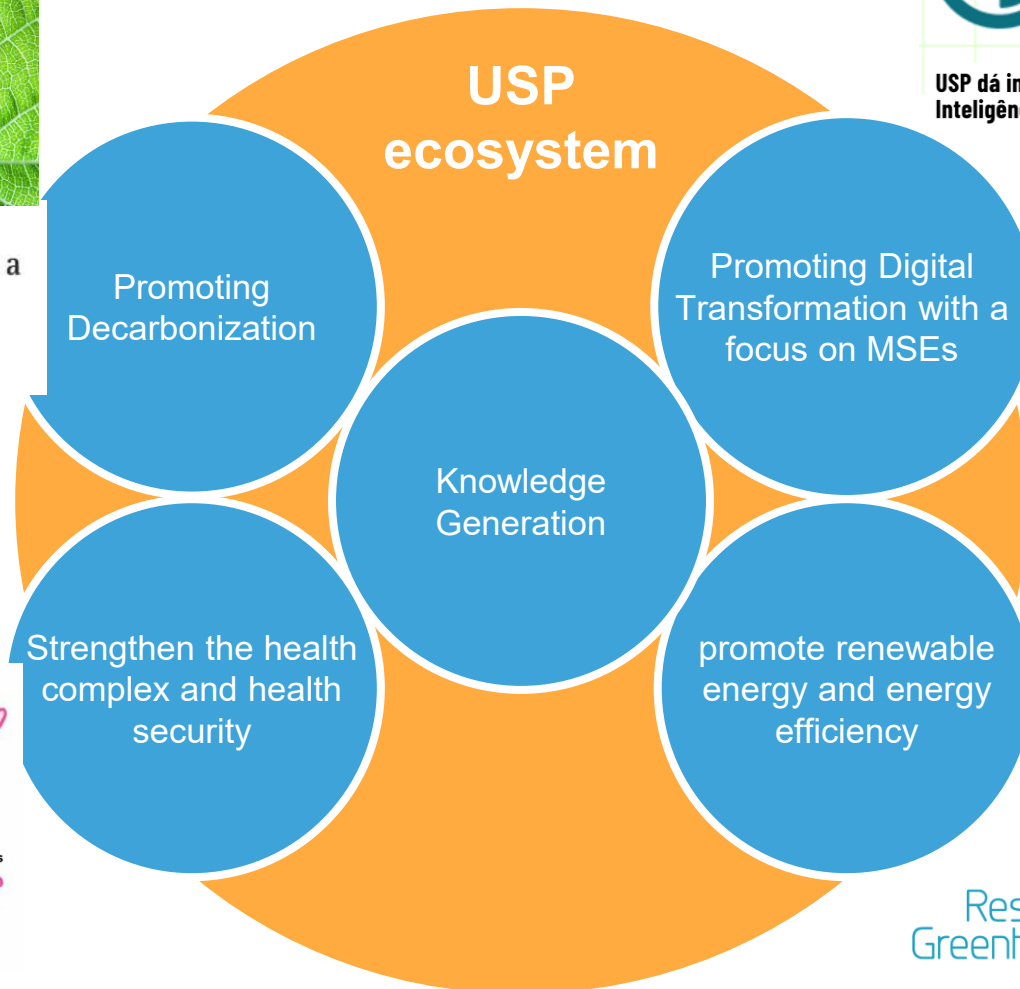


**Shell e Raízen vão fazer hidrogênio verde de etanol com a USP**

Combustível será usado em ônibus circulares da universidade já no ano que vem



**USP e MCTI investem R\$ 10 milhões para o desenvolvimento de órgãos para transplantes**



**Center for  
Artificial  
Intelligence**

**USP dá início às atividades do mais moderno Centro de Inteligência Artificial do Brasil**



**Research Centre for  
Greenhouse Gas Innovation**

**Parceria da USP com empresas do setor de energia permitirá a produção de hidrogênio renovável**



# International Institute of Innovation: Co-Creation







# Call for Action





“USP articulates and promotes its innovation ecosystem with the purpose of accelerating the transformation of competitive and sustainable Brazilian industry.”