

USP's innovation ecosystem

Marcelo Knörich Zuffo

Infieri 2023

University of São Paulo



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
Agreements	82	124 (BRL 169M)
Incubated Companies	149	179
DNA-USP companies	2687	2798
Budget	R\$7.5B	R\$8.4B

Education and Research

110,000 Highly Qualified People

18.5%
of Brazilian
scientific
production

Under
graduated
61K

Graduated
30K

Technical
Staff
13.2K

Faculty
5.2K

Under
graduate
courses
333

Graduate
Programs
264

Published
Papers
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:

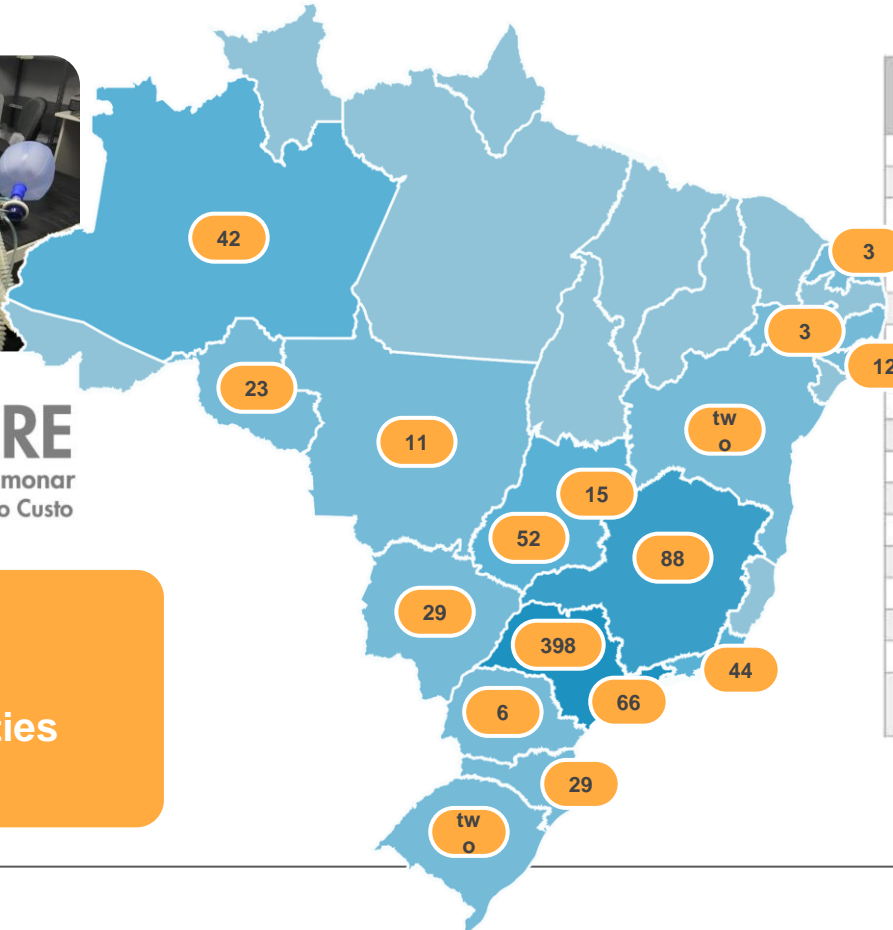
From conception to 3M certification in 100 days!

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



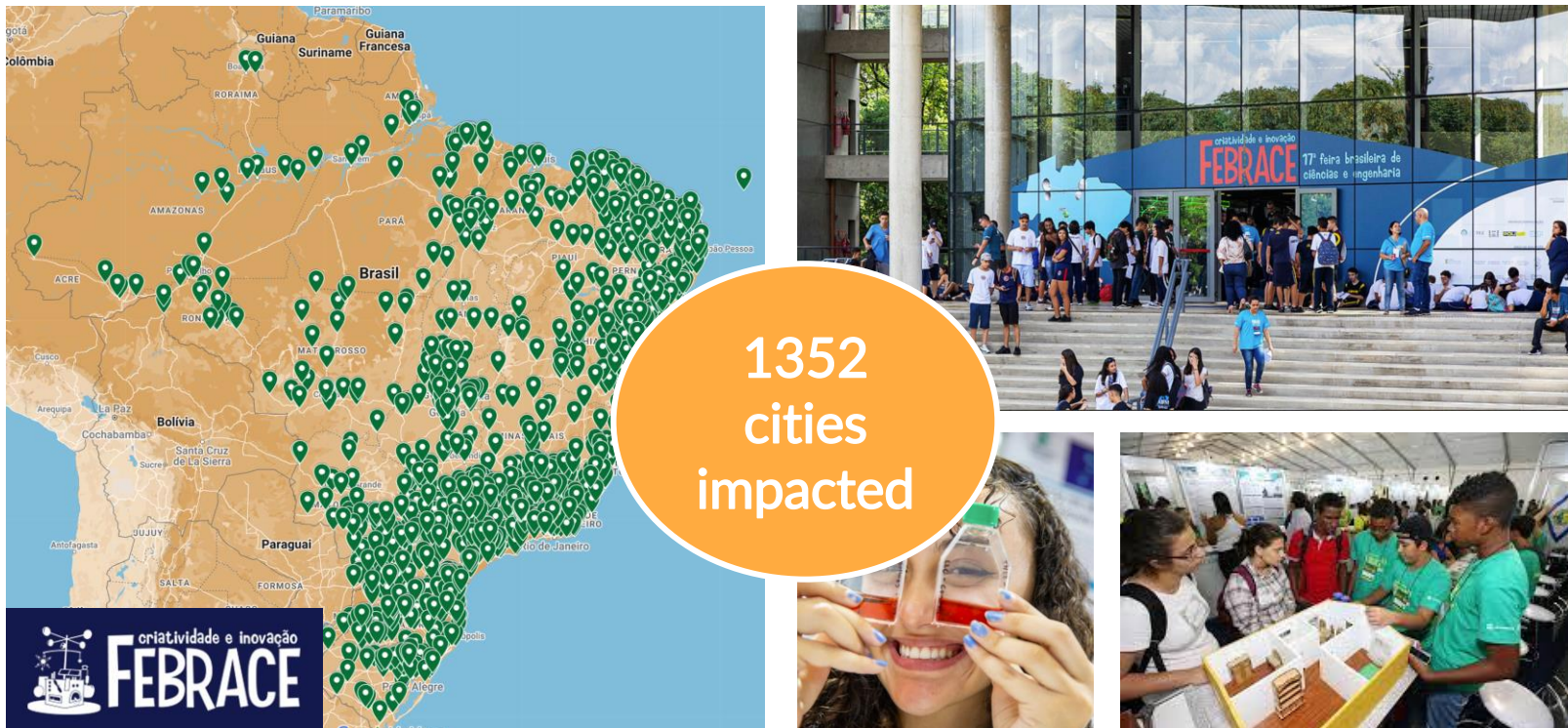
UF	Número de municípios atendidos	Número de hospitais	Quantidade de ventiladores
SP capital	1	8	66
SP interior	107	110	398
AL	5	6	12
AM	2	13	42
BA	1	1	2
DF	1	1	15
GO	13	13	52
MG	26	26	88
MS	12	12	29
MT	2	2	11
PE	1	1	3
PR	2	2	6
RJ	3	3	44
RN	1	1	3
RO	11	11	23
RS	1	1	2
SC	8	8	29
16	197	219	825



EXAMPLES OF NATIONAL IMPACT

Brazilian Cities Impacted by FEBRACE

Brazilian Science and Engineering Fair - Annually at USP





USP's Innovation Strategy



JORNAL DA USP

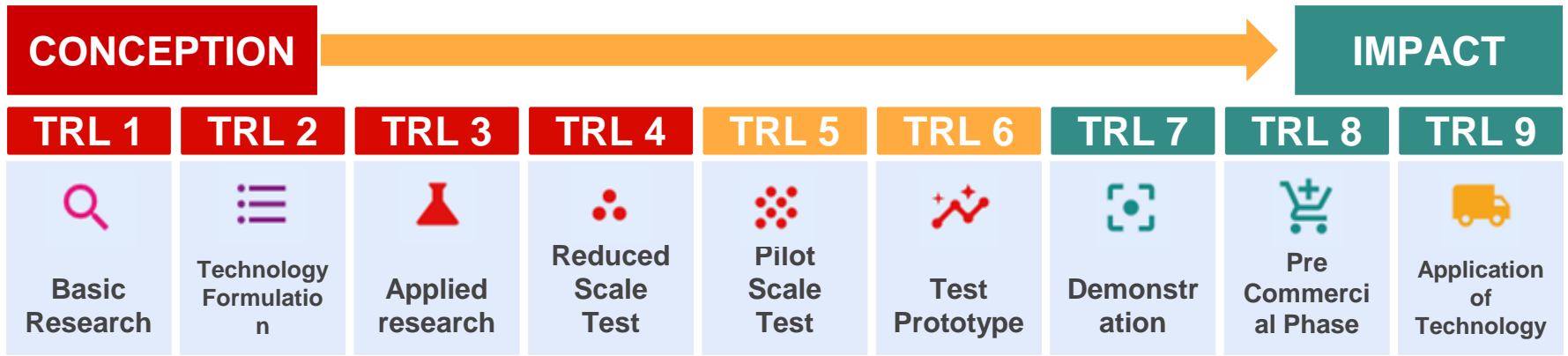
“Fortalecer a inovação na USP é uma prioridade para a atual gestão”, afirma reitor

Conselho Universitário aprova a reformulação da Pró-Reitoria de Pesquisa, incorporando as atividades de Inovação



USP ECOSYSTEM STRATEGY

FROM CONCEPTION TO IMPACT



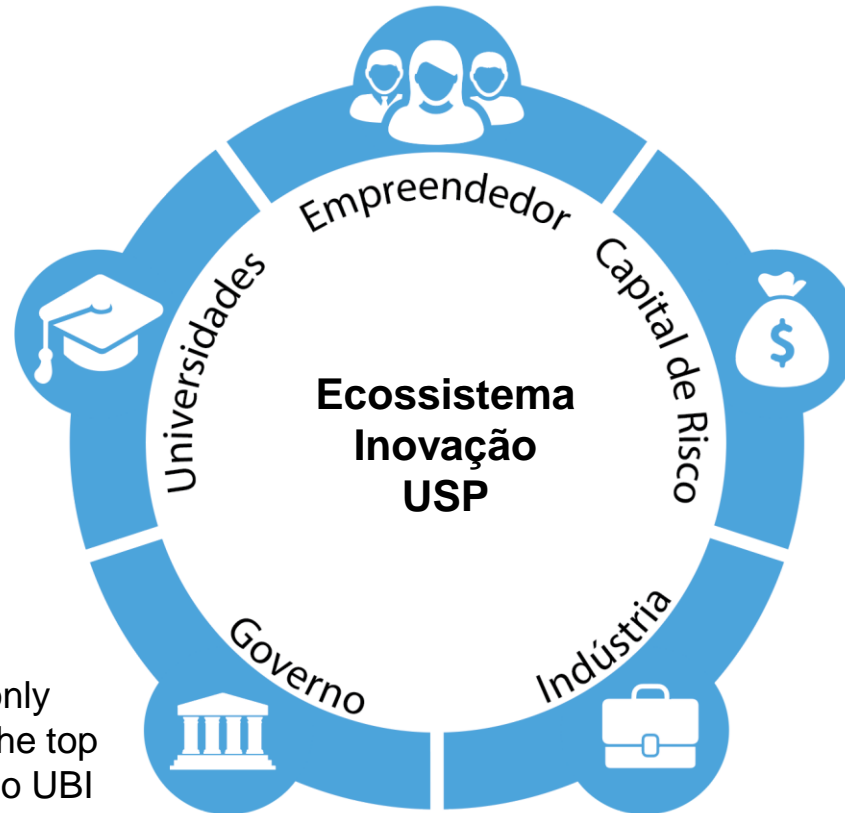
USP BEFORE

USP Partner in the Whole Process



The Penta Helix Model

Multilateral Relations with Agents Aiming at Innovation in Society



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



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



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 EMBRAPIIs

CEPIDS FAPESP

- FoRC** Food Research Center
- NEV** Center for the Study of Violence
- CEM** Metropolis Studies Center
- CRID** Inflammatory Disease Research Center
- CTC** Cell Therapy Center
- CEGH - CELL** Human Genome and Stem Cell Research Center
- B3** Research Center for Biology of Bacteria and Bacteriophages

- CeMEAI** Research Center in Mathematics Applied to Industry
- CIBFar** Center for Research and Innovation in Biodiversity and Pharmaceuticals
- CEPOF** Optics and Photonics Research Center
- NeuroMat** Center for Research, Innovation and Dissemination in Neuromathematics Research Center on Redox Processes in Biomedicine
- REDOXOMA**
- CCARBON** Center for the Study of Carbon in Tropical Agriculture

CPES FAPESP

- RCGI SHELL** Research Center for Gas Innovation (Shell)
- CPBEC NATURA** Center for Applied Research in Well-Being and Human Behavior
- SPARCBio Copperhead** São Paulo Advanced Research Center for Biological Control
- CINE SHELL** New Energy Innovation Center
- C4AI IBM** Artificial Intelligence Center
- AGAIN** Artificial Intelligence Recreating Environments
- OTIC SHELL** Offshore Innovation Center

EMBRAPIIs

- CEINFAR, FCF/ICB** Discovery and Development of Drugs and Biopharmaceuticals
- BIOFOTÔNICA IFSC** Biophotonics and Instrumentation
- FARM, FMRP** Drug discovery and development

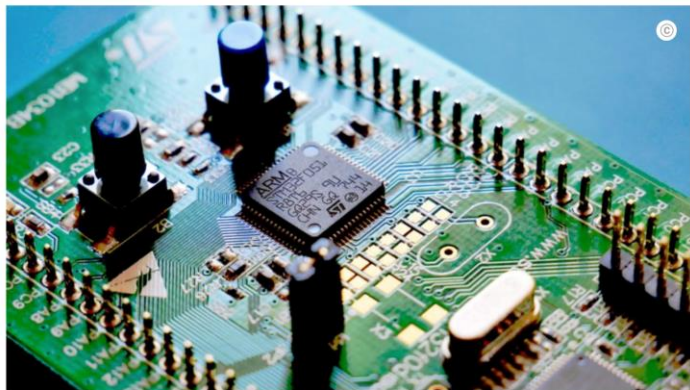
- CICS COP** Construction of Coefficient
- POWERTRAIN POLI** Technologies associated with Powertrain
- IQSINT IQ-SP** Synthetic Chemical and Biochemical Inputs

- BIOCONTROLLERS, ESALQ** Agricultural Pest Biocontrollers
- TECNOGREEN POLI** Green Chemistry Technologies
- BIG DATA ICMC** 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

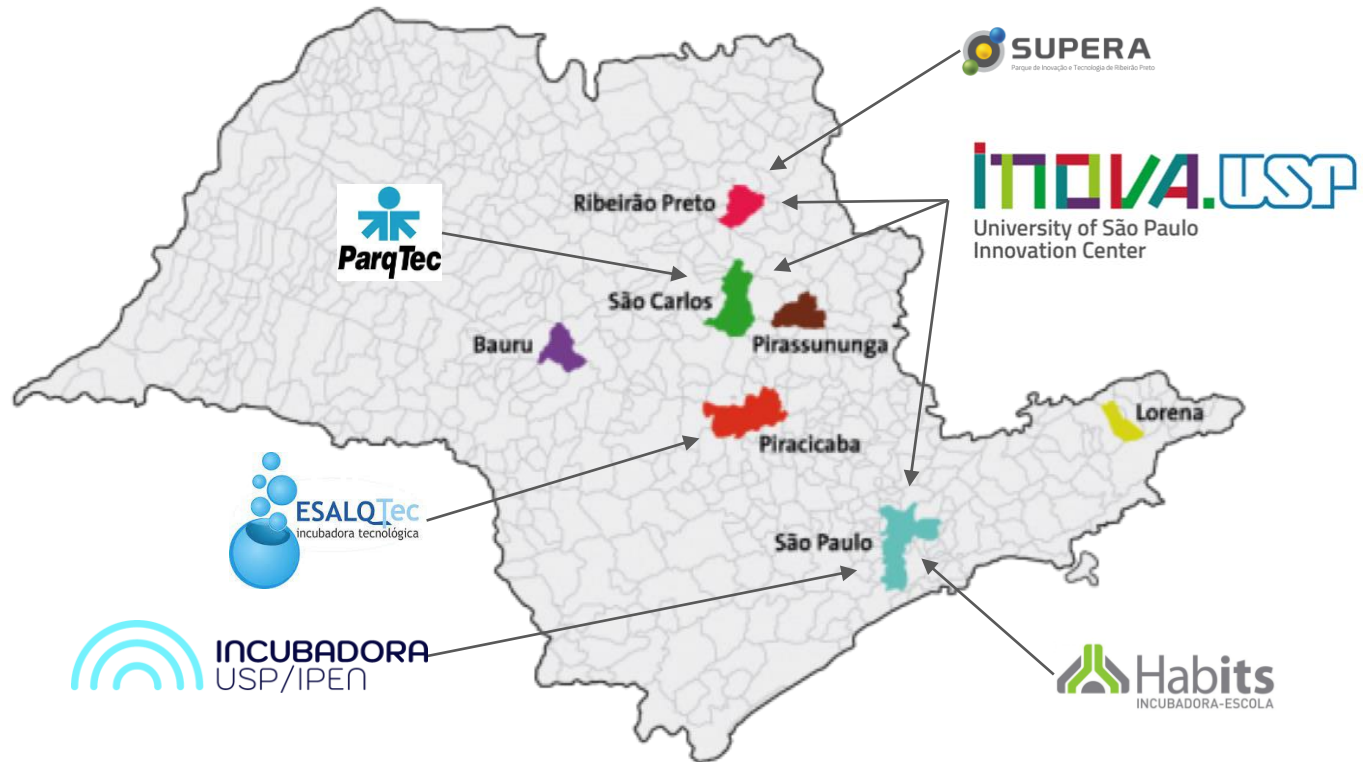
Parque de Inovação e Tecnologia

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

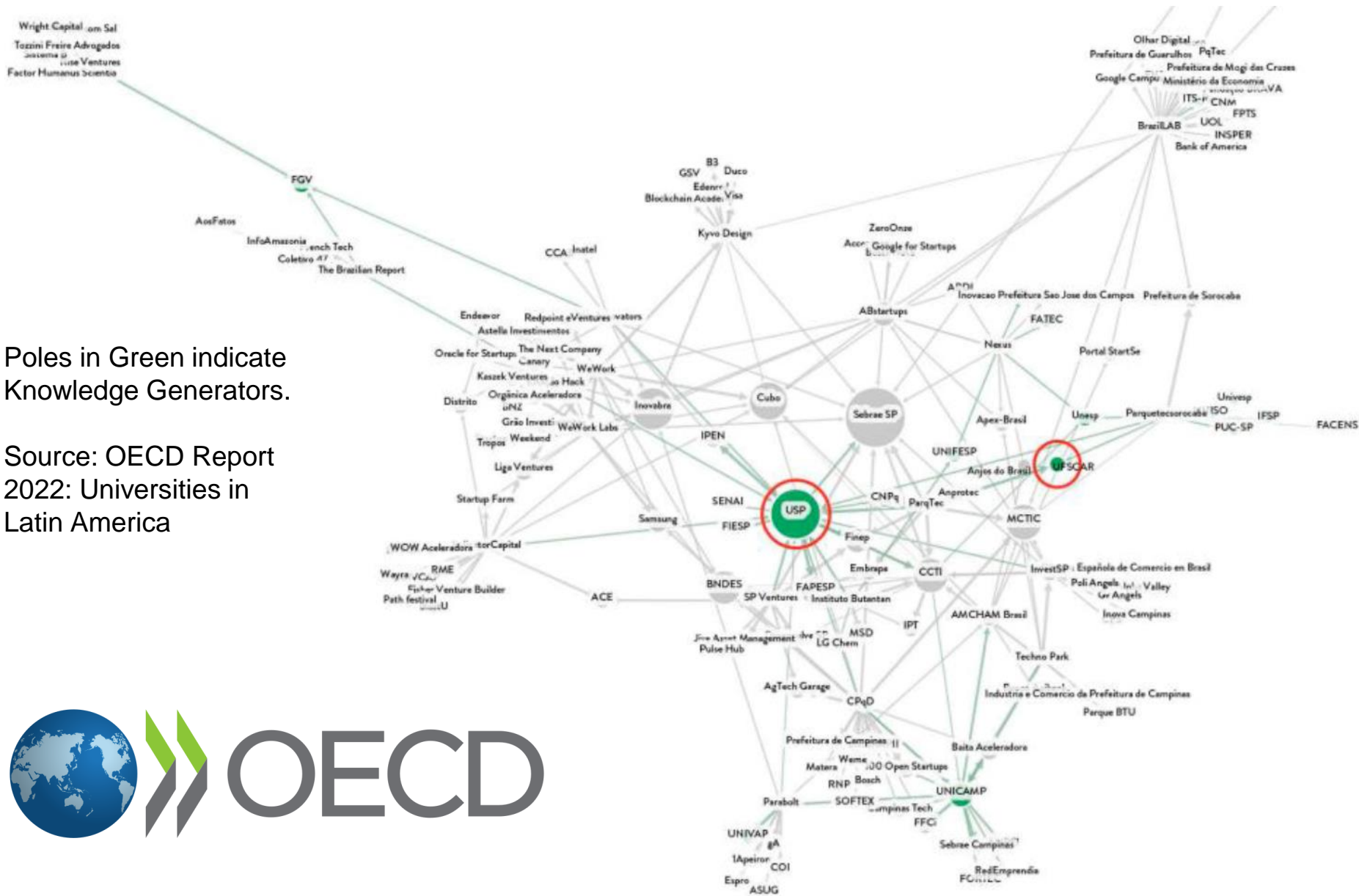


Unicórnios



99

Reputation of Innovation Ecosystem Actors in São Paulo



Poles in Green indicate Knowledge Generators.

Source: OECD Report 2022: Universities in Latin America



A photograph of the Statue of Liberty at night, illuminated by warm lights. The statue is shown from a low angle, emphasizing its height and the intricate details of its body and crown. The background is dark, with a single bright star visible in the upper right. A white horizontal banner is superimposed over the middle of the image, containing the text "Co-creation aiming innovation" in a bold, black, sans-serif font.

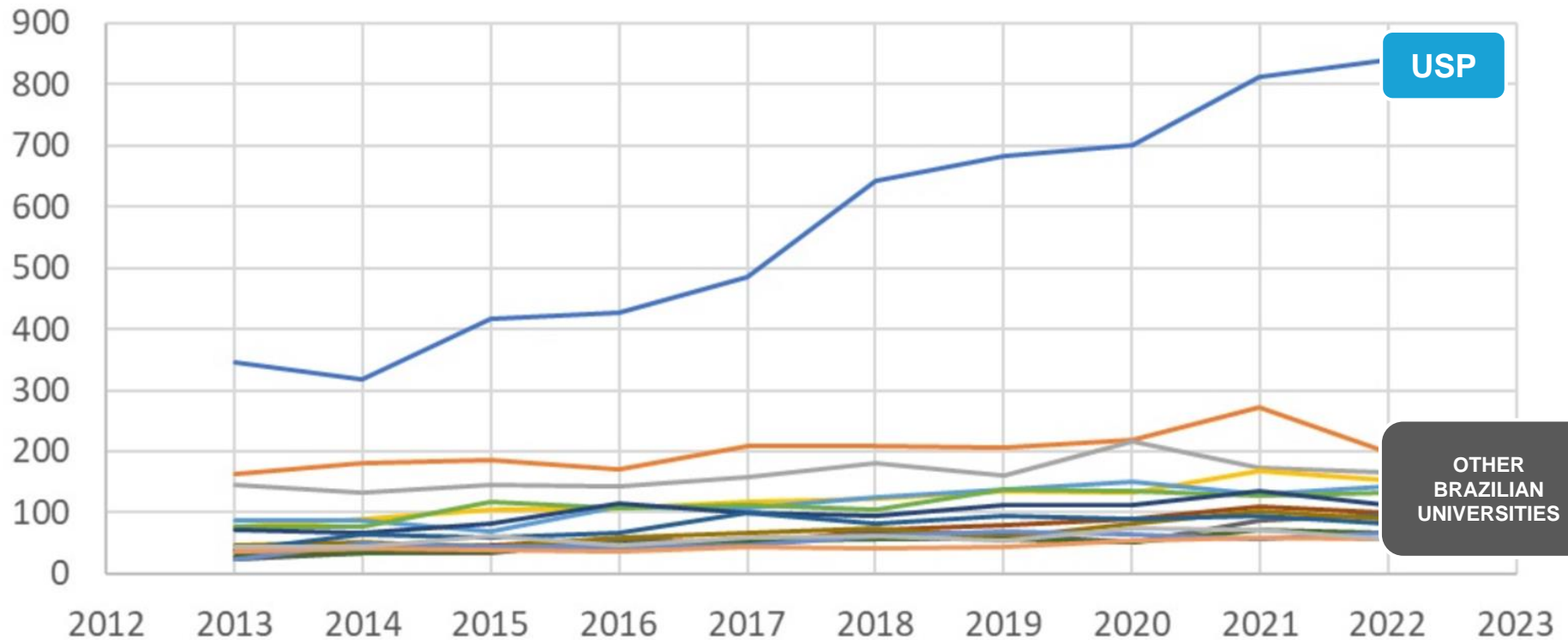
Co-creation aiming innovation

Co-creation & Open Innovation

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

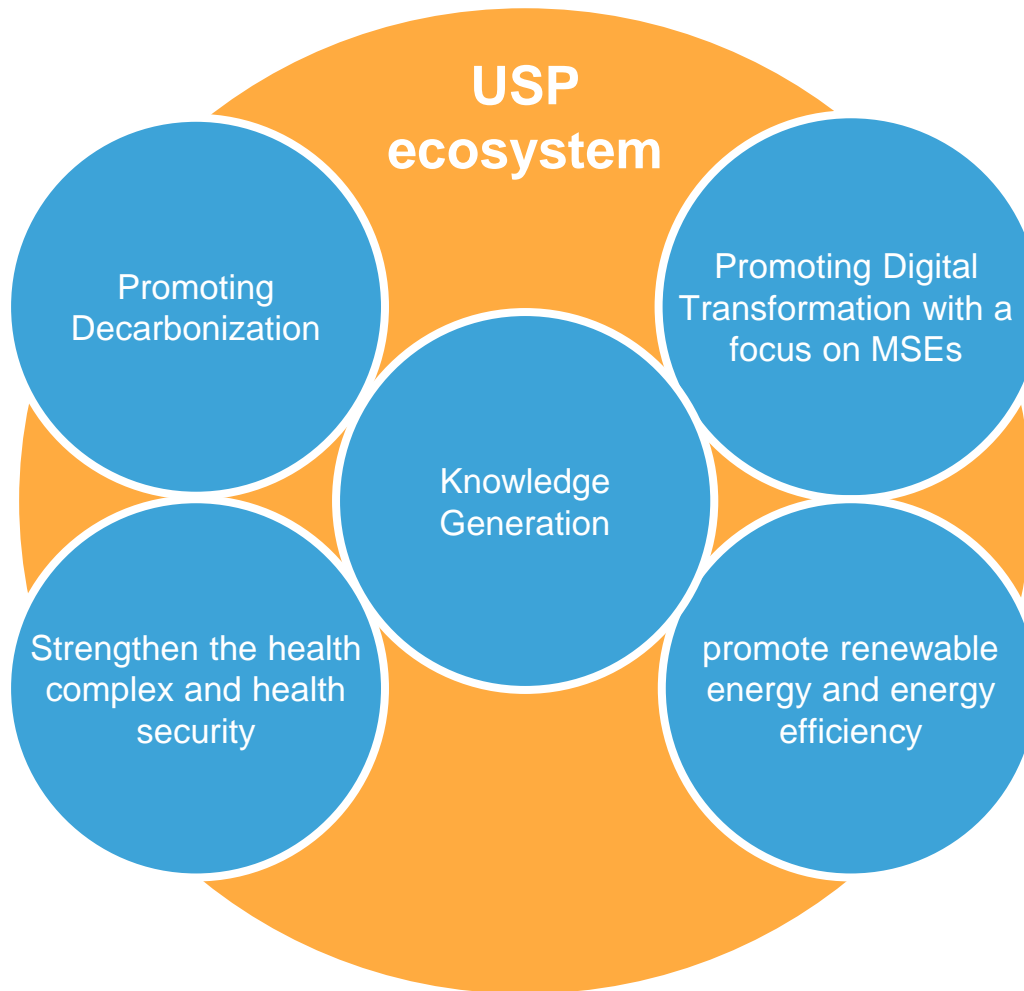
EXAMPLE OF CO-CREATION - Evolution of USP publications with Companies

Artigos em co-autoria universidade-empresa



SOURCE: ELSEVIER 2023
DATABASE

MEI - Themes for Missions

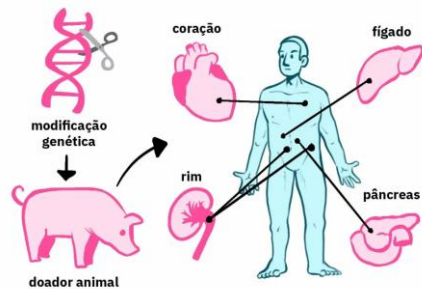


MEI - Themes for Missions

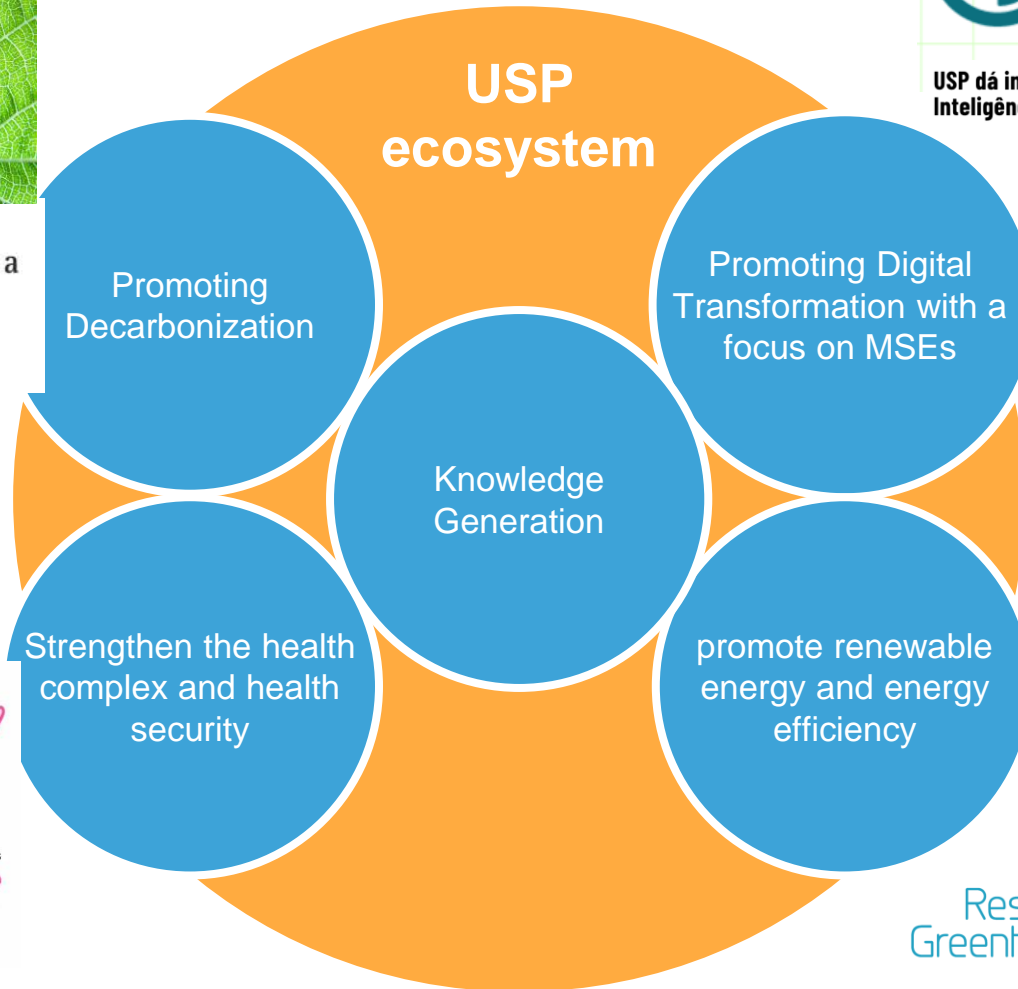


Shell e Raízen vão fazer hidrogênio verde de etanol com a USP

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.”