

DRIVING COMPETITIVENESS THROUGH INNOVATION: Insights from an Entrepreneurial Perspective

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May 5th, 2025

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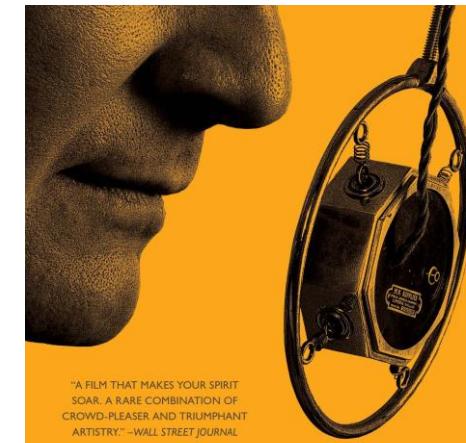
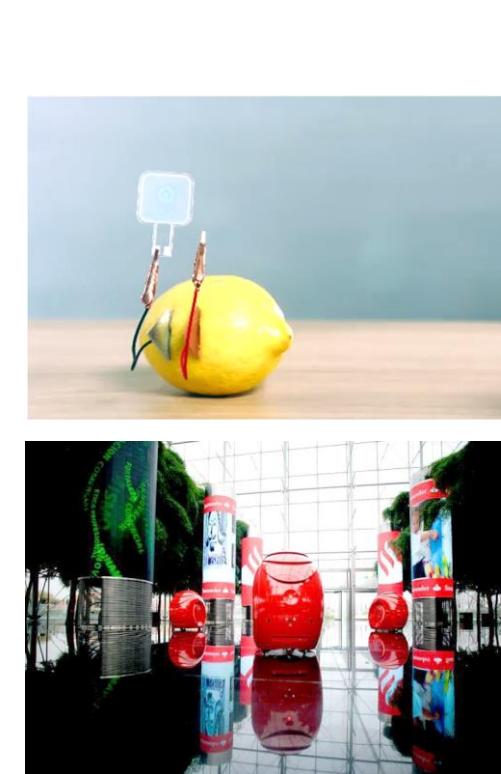
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"A FILM THAT MAKES YOUR SPIRIT SOAR. A RARE COMBINATION OF CROWD-PLEASER AND TRIUMPHANT ARTISTRY." —WALL STREET JOURNAL

THE KING'S SPEECH

COLIN FIRTH • GEOFFREY RUSH • HELENA BONHAM CARTER

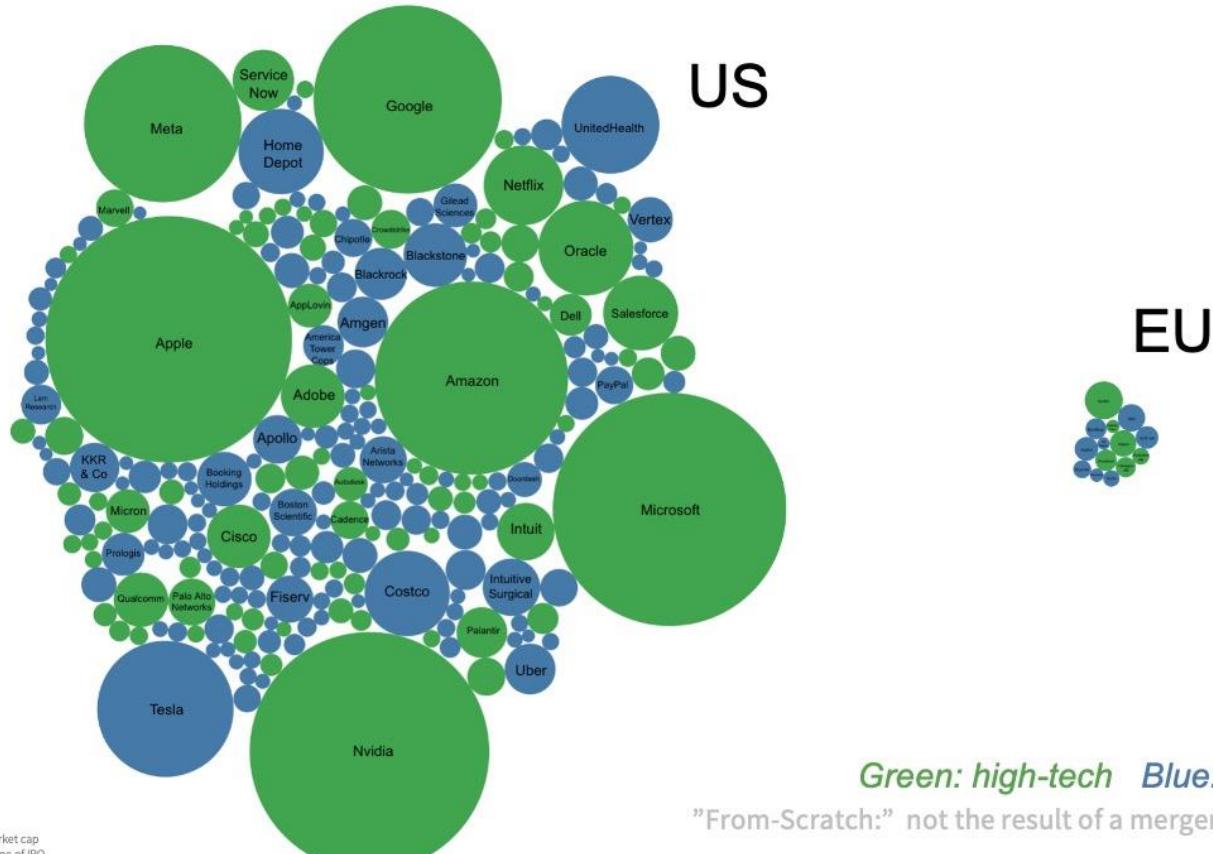
THE INDEPENDENT - 19 JULY 2003 - 11

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Comparative landscapes

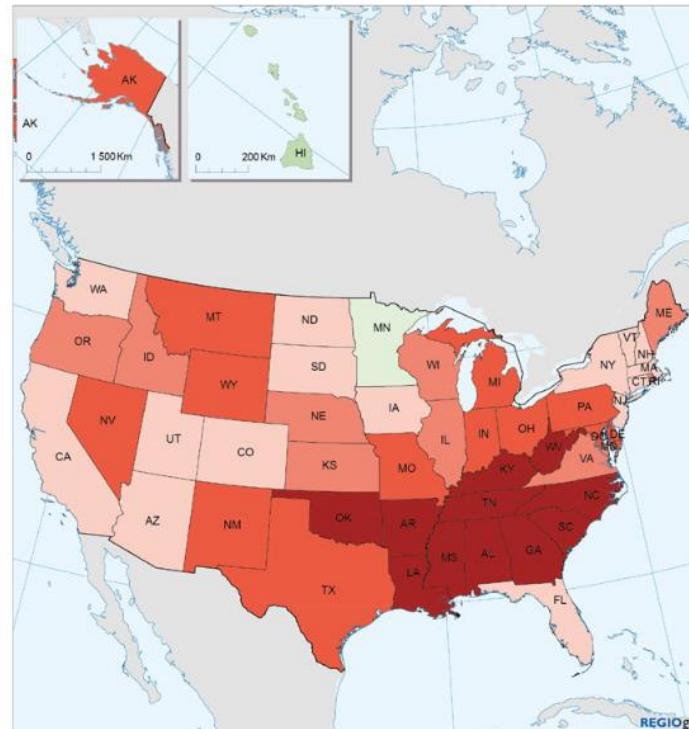
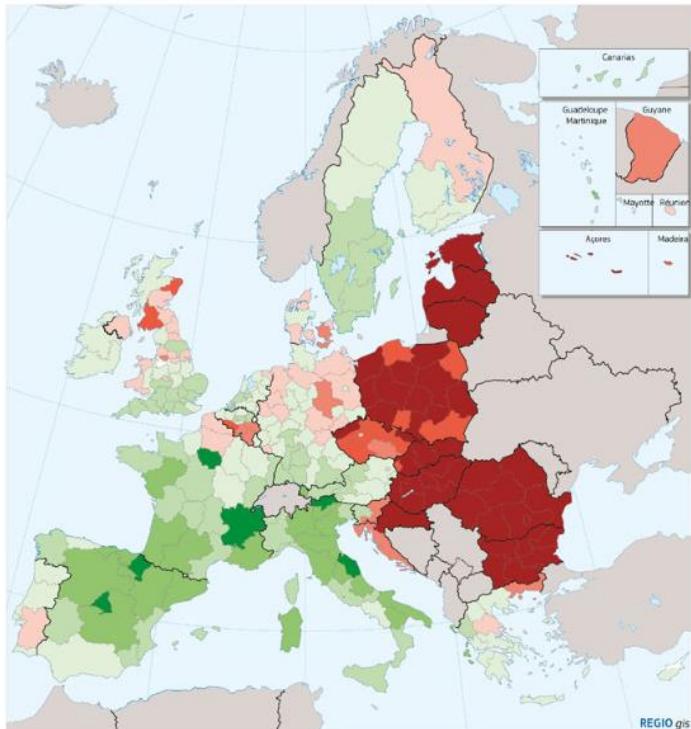
Public From-Scratch US and EU Companies Less than 50 Years Old with \$10B+ Market Cap



"From-Scratch:" not the result of a merger, acquisition, or spinoff

Andrew McAfee (@amcafee), MIT

Comparative landscapes



Driving Competitiveness through Innovation*

** This presentation is focused on the impact of the policy mix associated to EU's cohesion funding programs on innovation. It does not cover compensation, taxes, legal and other relevant issues.*

1. **Efficiency** of the existing policy mix and instruments
2. **Skills** as part of the policy mix
3. **Priorities** for future investments
4. What would be the **most important reform** needed at national/sub-national level



1. **Efficiency of the existing policy mix**

Efficiency of the policy mix

“the well-behaved view”

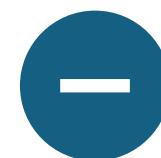


Well-established R&D tax incentives

Portugal 2020 and Recovery and Resilience Plan funds

Growing startup ecosystem with initiatives like Startup Portugal

Interface Programs strengthening industry-academia collaboration



Fragmented governance across multiple ministries and agencies

Complex bureaucratic processes slowing implementation

Insufficient focus on scaling companies

Overreliance on direct subsidies rather than market-creating policies

Efficiency of the policy mix

“what we have”

**Academia, innovation & industry –
traditional model
(Francis Bacon; 1561 – 1626)**



LINEAR TECHNOLOGY EVOLUTION

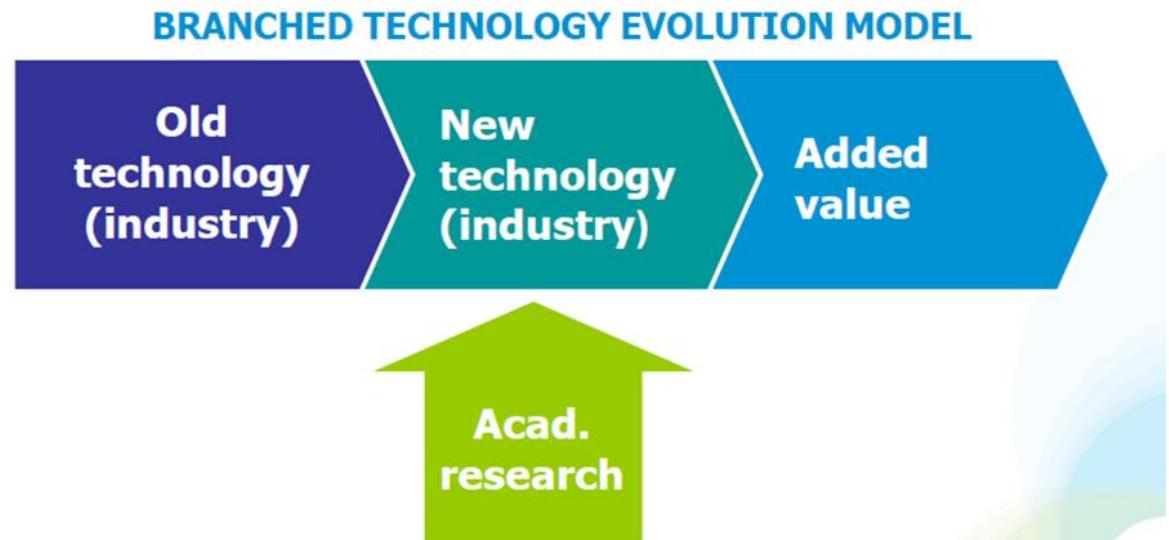


Alexander Von Gabain on EU's Innovation Model

Efficiency of the policy mix

“what we should have”

**Academia, innovation & industry:
the Californian model
(Adam Smith; 1723 – 1790)**



* Leary et al
2002

More than half of economic growth during 1945 – 2002 is attributed to innovation within the high-technology sector*

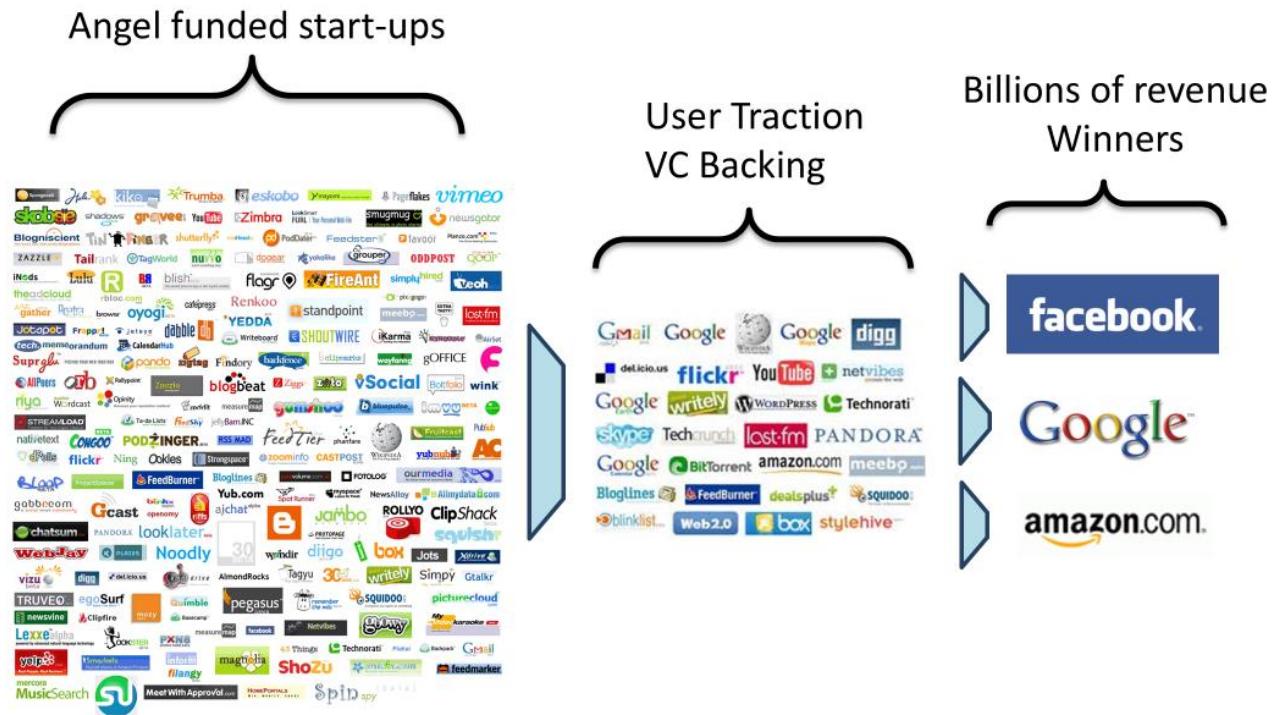
Alexander Von Gabain on EU's Innovation Model



Efficiency of the policy mix

“a model we should
re-invent”

The Silicon Valley Model



Picture Credits: [Ludwig Gatzke](#)

2. Skills as part of the policy mix

Skills as part of the mix

“the well-behaved view”



Strong engineering and
technical education
foundations

Growing international talent
attraction

Competitive labor costs
relative to skills



Limited management
capabilities for scaling
companies

Weak lifelong learning
culture and infrastructure

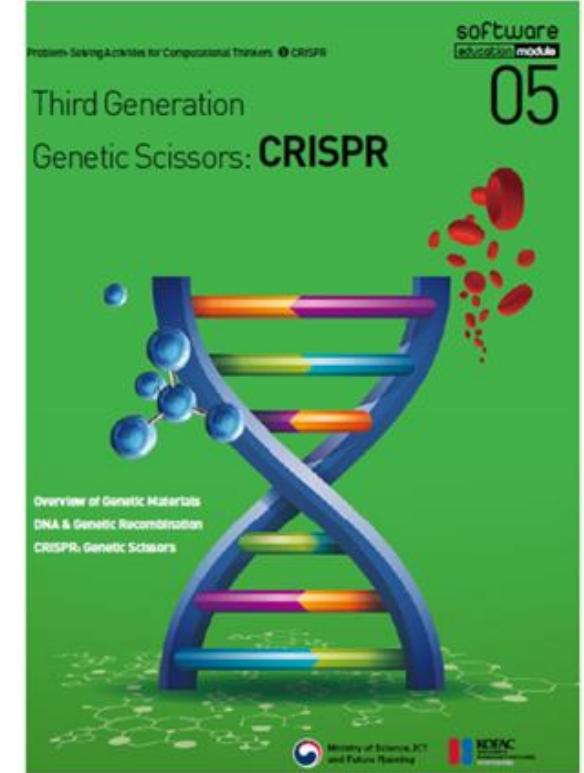
Brain drain of top technical
talent

Skills as part of the mix

“what we should have”

Learning from KOFAC (South Korea)
program for 9th year students

- 1 [Artificial Intelligence](#)
- 2 [Driverless vehicles](#)
- 3 [Internet of things](#)
- 4 [Virtual reality](#)
- 5 [CRISPR](#)
- 6 [Space launch vehicles](#)
- 7 [Natural disasters](#)
- 8 [Smart medicine](#)
- 9 [Game engines](#)
- 10 [Sports statistics](#)



Our secondary school system needs an update

Skills as part of the mix

“the game and the game on top of the game”



“

We blacks dominate basketball.

Then the whites developed a game on top of our game called NBA

”

Skills as part of the mix

“the game and the game on top of the game”



The “game on top of the game” has not been our strength

3. Priorities for future investments

Priorities for future investments

“the well-behaved view”

- **Smart specialization in areas of competitive advantage:** Health tech, ocean economy, sustainable agriculture, renewable energy
- **Digital transition:** Invest heavily in AI, AR/VR, IoT, cybersecurity, robotics
- **Green transition:** Support green tech development and adoption (batteries, hydrogen, smart grids, nature-based solutions)
- **Tech transfer and commercialization:** Build a stronger bridge from universities to market (IP valorization, venture building)

Priorities for future investments

“what we should invest on”

- **Foster a culture of skunkworks** and moonshot projects since high school
- Develop **incentives** for “first clients”
- **Develop financing ecosystem** complementing the existing public and private sources: high net worth new residents, Euronext Start

Seixal Mundo

projetos de estudantes do concelho para o Mundo



WiseLamp



ErgoChair



Sonosphere



icupa



Cannarde

seixal
**CRÍA
TIVO**

Priorities for future investments

“Portugal Natural Capital Corporation (PNCC)”

Develop PNCC: Atlantida (Ocean) and Lusitania (Land) as pioneer projects based on State assets, research centers and private companies fostering the development of an Internet of Nature

- Sovereign Nature Digital Models and Twins (Ocean and Land)
- High-Integrity Carbon/Biodiversity Credits
- Biotech and Natural Products
- Controlled Premium Eco-Tourism
- Launch platform-as-a-service models for monitoring, certification, and trading

Nature is the largest market in the World, worth 9 trillion Euros

Priorities for future investments

“Portugal Natural Capital Corporation (PNCC)”

ECOSYSTEM SERVICES*				
	Supporting Necessary for the production of all other services Soil Formation Biodiversity Primary production Habitat	Regulating Benefits obtained from regulation of ecosystem processes Climate/Carbon Pollination Water and Air purification Flood Control	Provisioning Products obtained from ecosystems Food&Fiber Wood Water Medicinals	Cultural Non material benefits obtained from ecosystems Inspiration Recreation Education Aesthetic
Motive for Investing	Exchange	Exchange	Exchange	Psychic
	Regenerative	Regenerative	Extractive	Regenerative
Existing & Potential Markets	Offset& Derivative	Offset & Derivative Carbon-linked	Intrinsic	Embedded & Derivative

*Ecosystem Services Table: Millennium Ecosystem Assessment, 2005

4.

**The most important reform needed
at national / sub-national level**

The most important reform at national/sub-national level

“The only view”

- Portugal should **streamline its innovation governance** through the creation of a centralized innovation agency such as Finland's [Business Finland](#) and Sweden's [Vinnova](#)
- It shall also **empower regional ecosystems** with **strategic autonomy**
- Portugal should **replicate Finland's parliament strategic exercise**. See [Societal Transformation 2018-2037: 100 anticipated radical technologies, 20 regimes, case Finland](#)

Summing up

Summing up

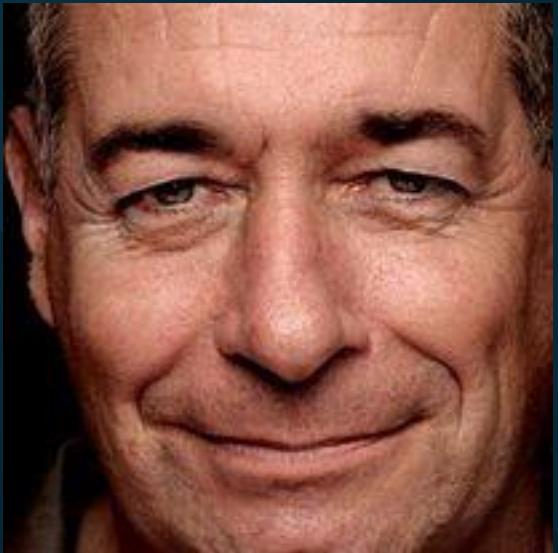
Portugal and most of Europe needs to **ABANDON** the XVII century innovation model of our universities

Europe must **develop an alternative model** to the Silicon Valley: It needs to become A **TRULY SINGLE MARKET**, provide similar access to investment and exits

Portugal needs to **OVERHAUL ITS EDUCATIONAL system** to become more creative and aware of how the World works

PORUGAL SHOULD BE BOLD. We can create the Internet of Nature (the largest market in the World)

We should look up to Northern European **EXAMPLES OF GOVERNANCE AND STRATEGIC VISION**



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Cornell Systems Engineering Conversations

The YDreams Collection

Sunday News