

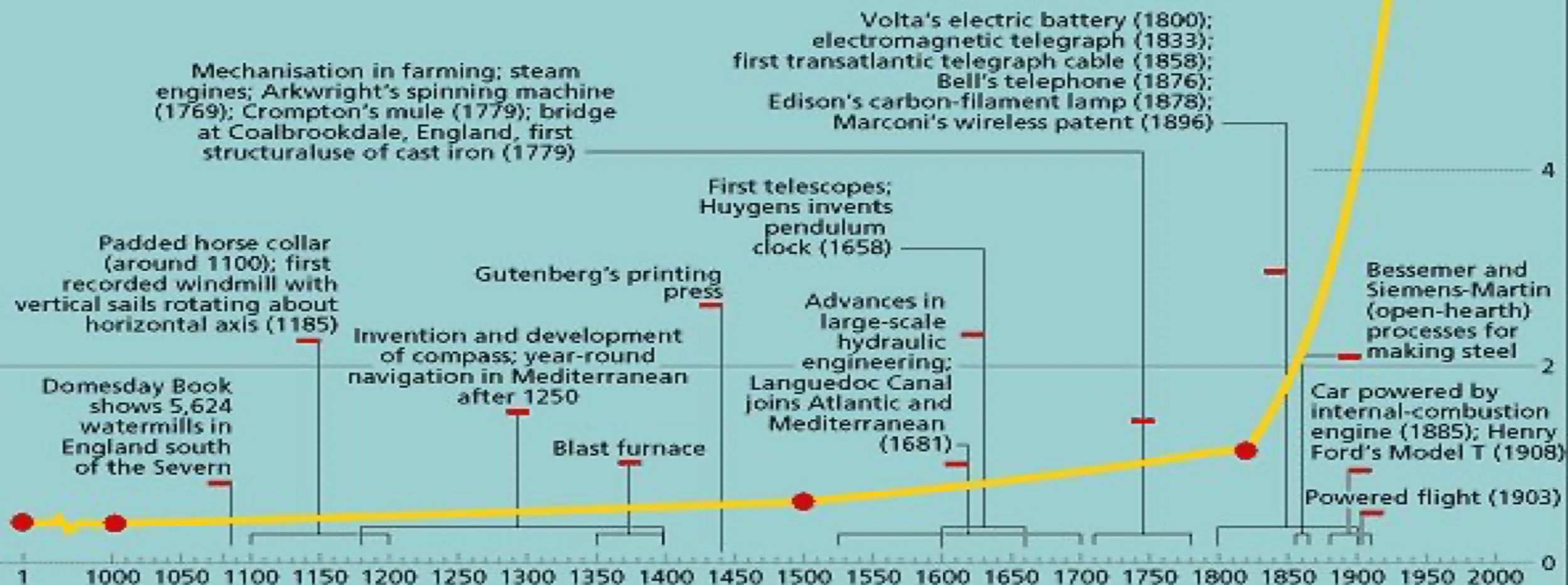


# Inovação como motor de crescimento económico

Joana Mendonça

## Take-off

GDP per person in Western Europe, \$'000, 1990 prices



Source: Angus Maddison



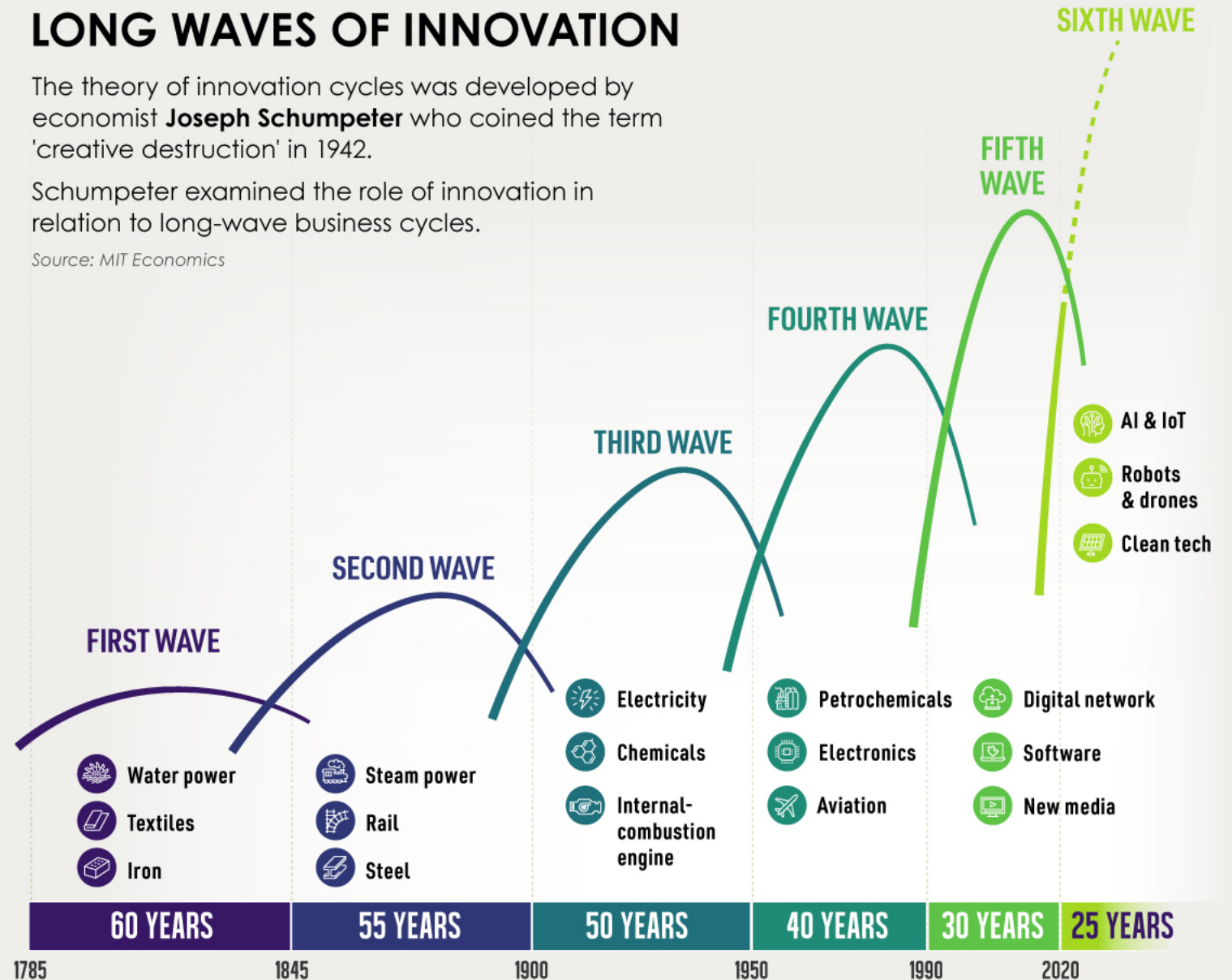
Waves of innovation across 250 years  
from industrial revolution to  
sustainable technology

## LONG WAVES OF INNOVATION

The theory of innovation cycles was developed by economist **Joseph Schumpeter** who coined the term 'creative destruction' in 1942.

Schumpeter examined the role of innovation in relation to long-wave business cycles.

Source: MIT Economics



Source: Edelson Institute

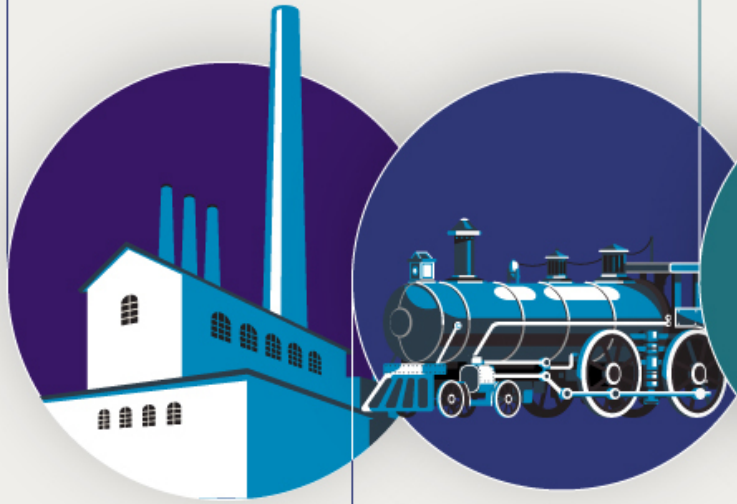




# KEY BREAKTHROUGHS

## FIRST WAVE

During the Industrial Revolution, the first factory emerged—a cotton mill in Britain.



## SECOND WAVE

As railways proliferated, their networks strongly influenced urban growth.

Source: Nacima Baron, HAL

## THIRD WAVE

Henry Ford's Model T introduced the assembly line, revolutionizing the automotive industry.



## FOURTH WAVE

Aviation gains mass adoption on a global scale, providing a lever to economic integration.

Source: OECD

## FIFTH WAVE

In 1990, 2.3M used the internet—by 2016 this reached 3.4B.

Source: World Bank



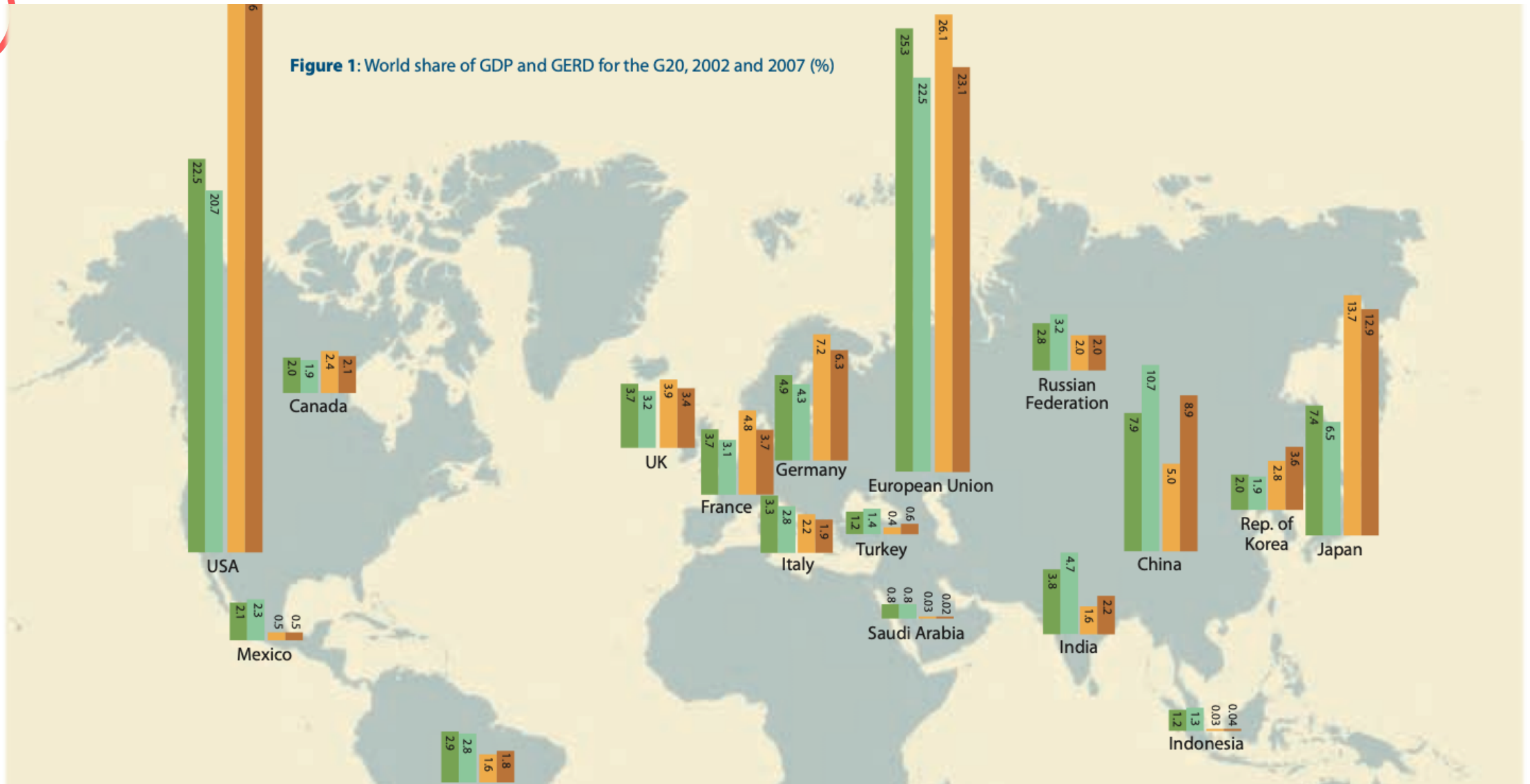
## SIXTH WAVE

As climate challenges intensify, clean tech may reshape business models and consumption patterns.





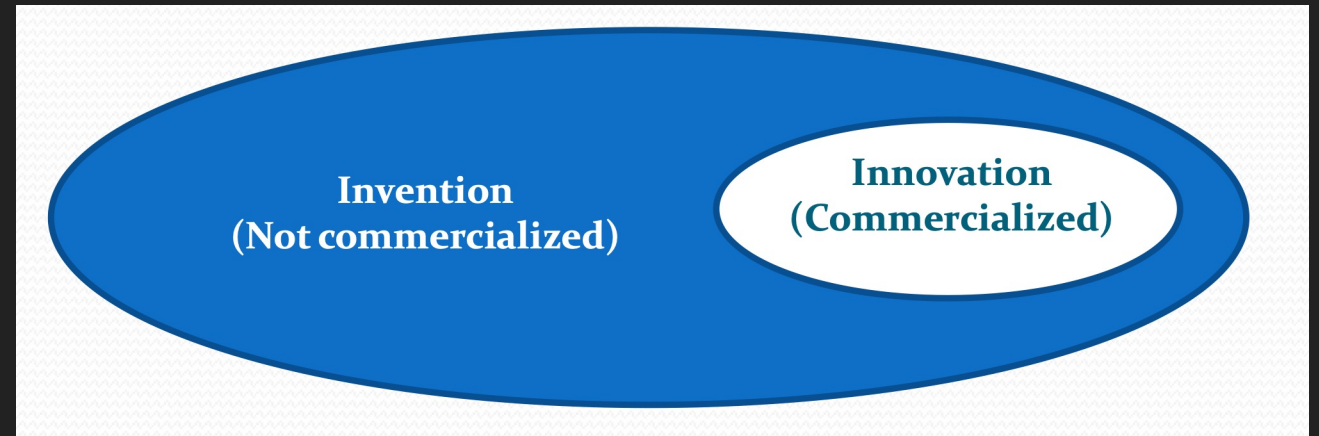
**Figure 1: World share of GDP and GERD for the G20, 2002 and 2007 (%)**





# Innovation and Invention

- ▶ Invention is the conversion of cash into ideas.
- ▶ Innovation is the conversion of ideas into cash.
- ▶ For invention to become an innovation, the organisation needs to be introduced to the invention and invention should add value to the organisation in some way.





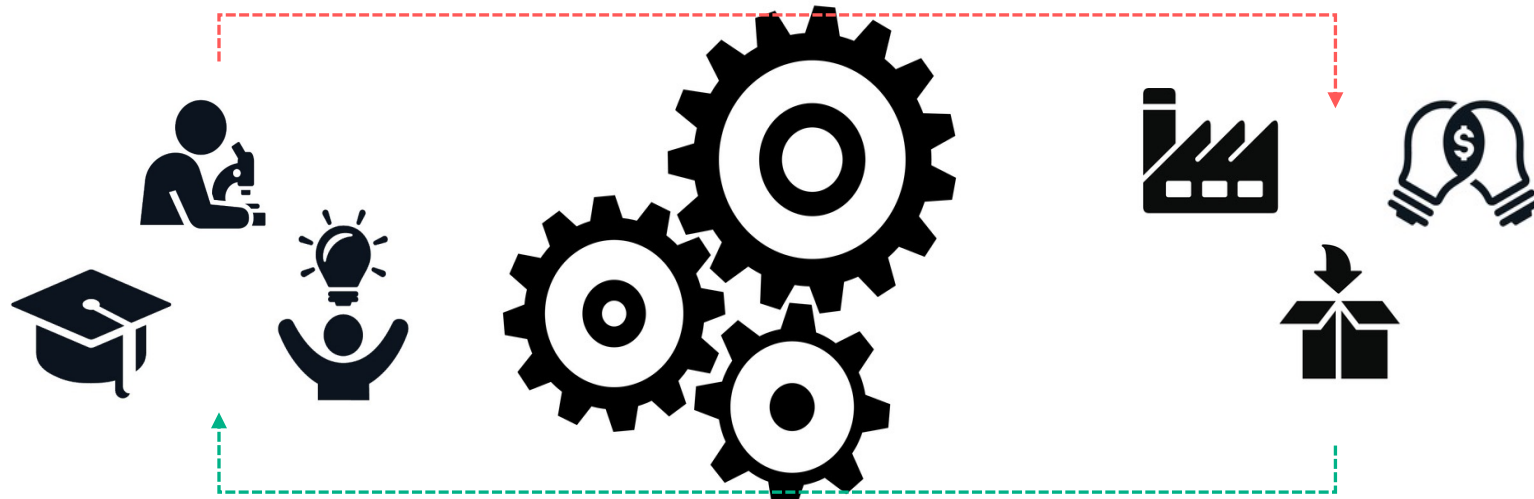
# ANI- Agência Nacional de Inovação

Catalizar e potenciar a  
Inovação em Portugal

Colaboração e  
cooperação

Transferência de  
conhecimento

Ligação  
empresas-  
instituições de  
I&D-Interfaces





# Áreas de atuação



## Financiamento à I&D+I

Gerimos uma conjunto de instrumentos de I&DT e incentivos à inovação



## Capacitação e valorização da inovação

Contribuímos para a capacitação do sistema nacional de inovação pelo apoio às compras para a inovação e incentivos à valorização de tecnologia

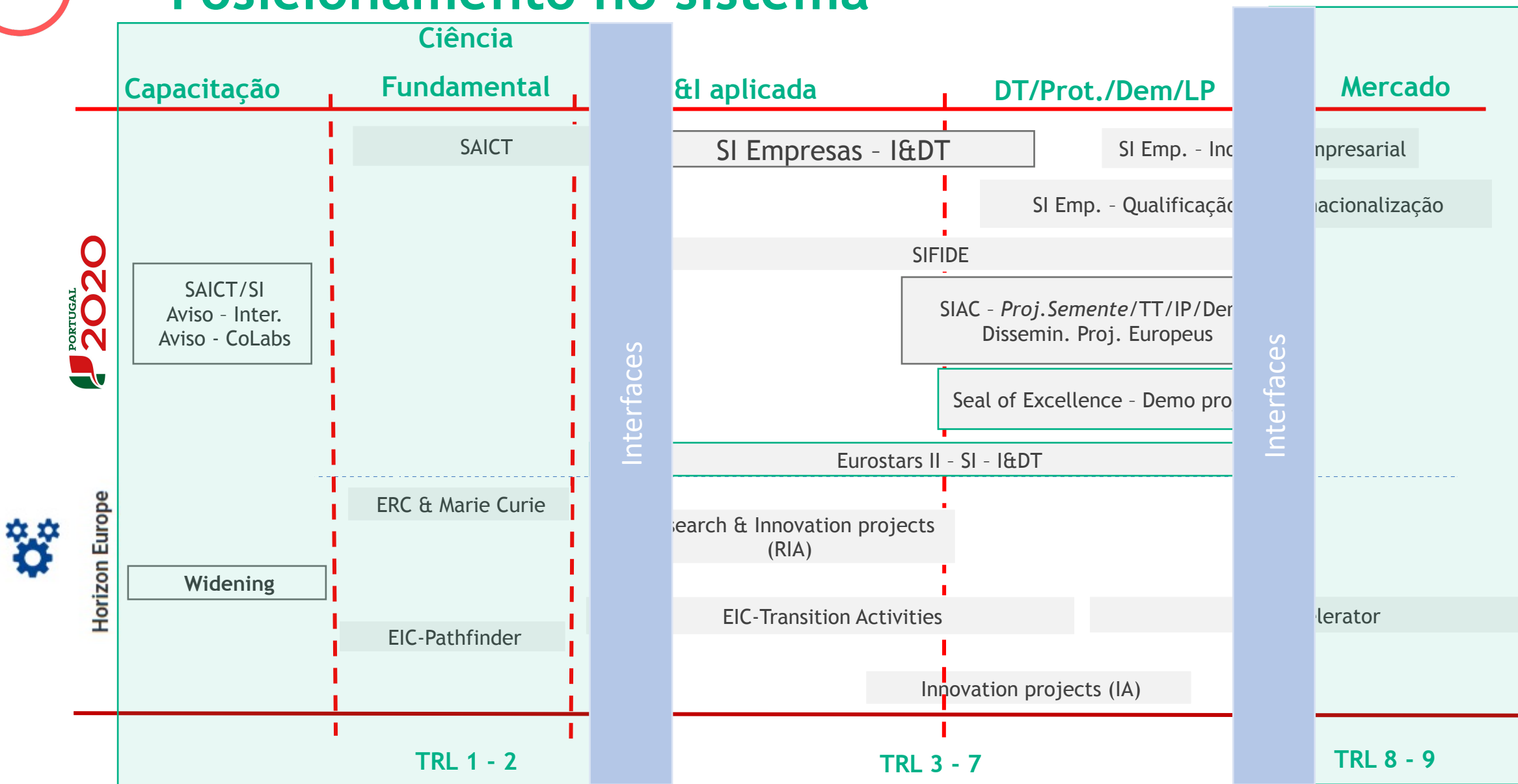


## Redes Internacionais

Promovemos e apoiamos a participação de instituições portuguesas em programas e redes internacionais o



# Posicionamento no sistema

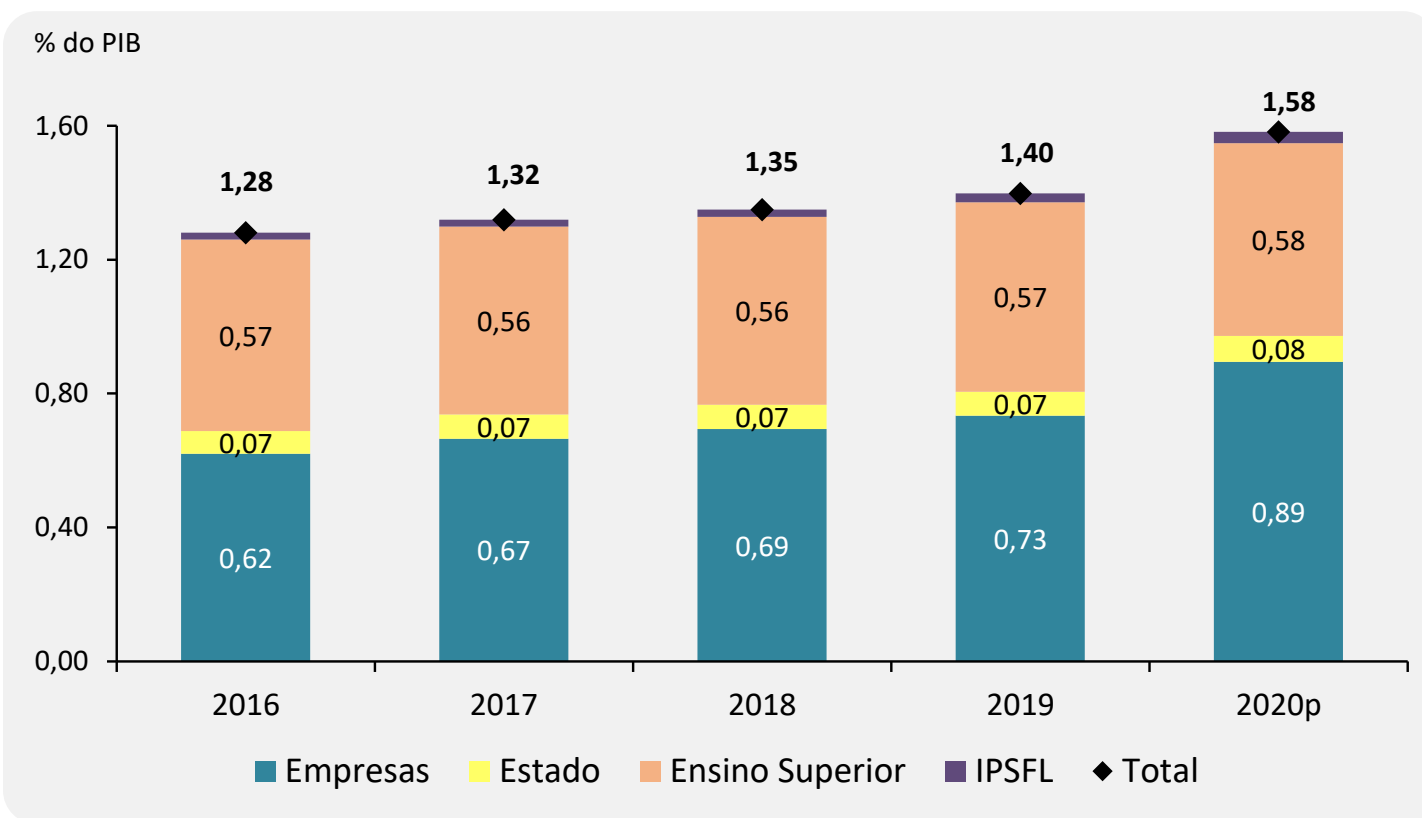


# Inovação em Portugal

- Evolução I&D em Portugal

	Total <sup>2</sup>
2016	1,28%
2017	1,32%
2018	1,35%
2019	1,40%
2020p	1,58%

- Despesa em I&D em Portugal 2016-2020 total e por setor (em %PIB)





# Inovação em Portugal

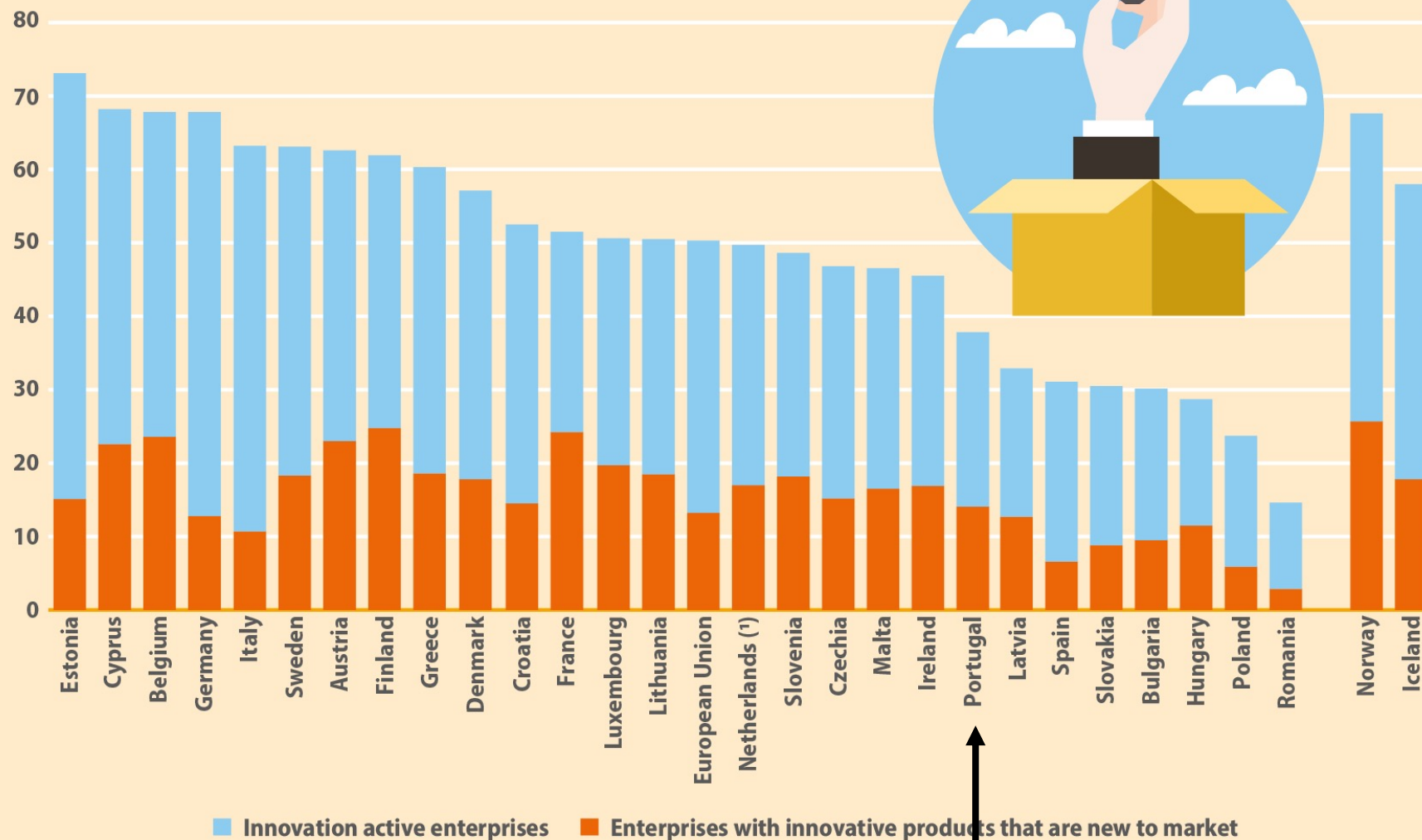


Fonte: DGEEC e INE, Inquérito Comunitário à Inovação (CIS)

# Inovação em Portugal – Comparação Internacional

## Share of innovative enterprises, 2018

(% of all enterprises with at least 10 people employed)



# Inovação em Portugal – Comparação Internacional

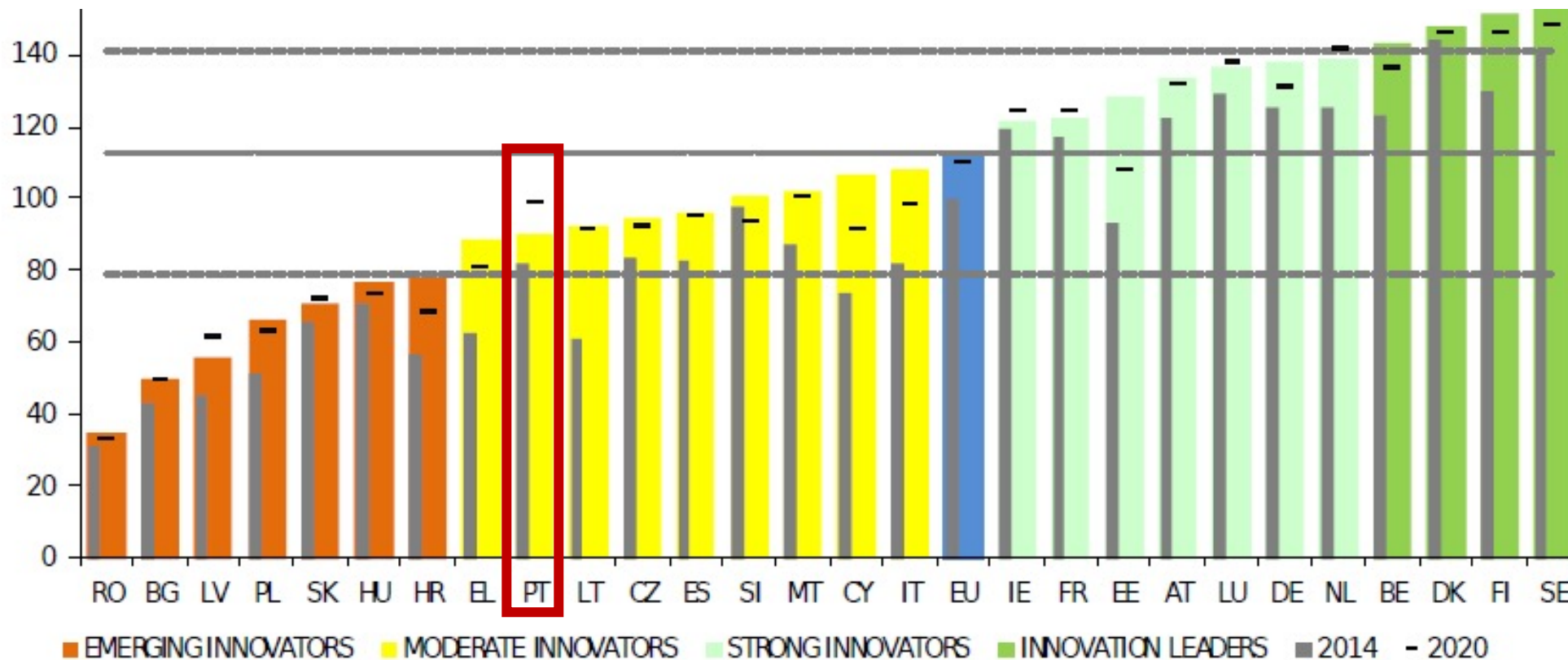
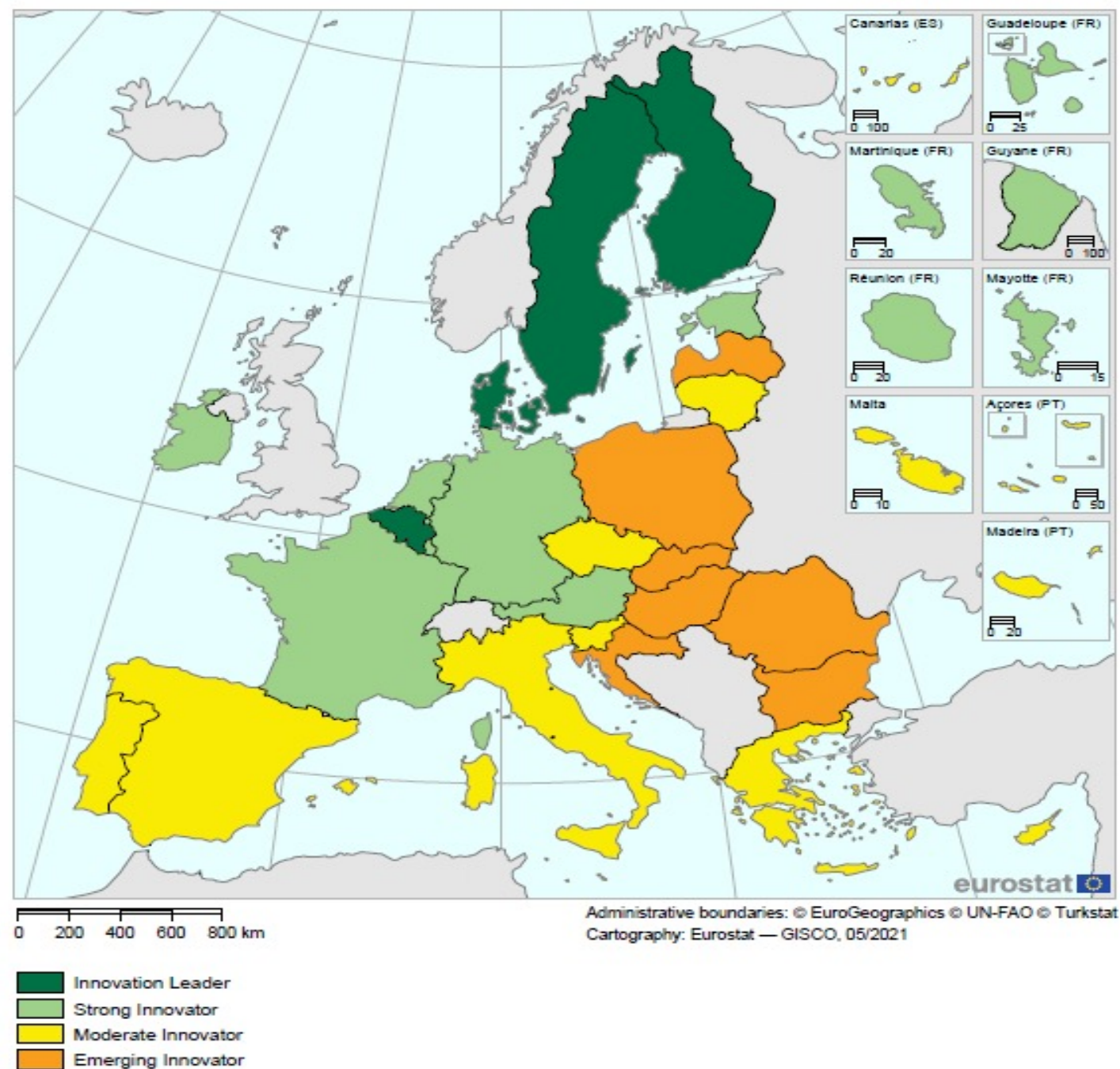


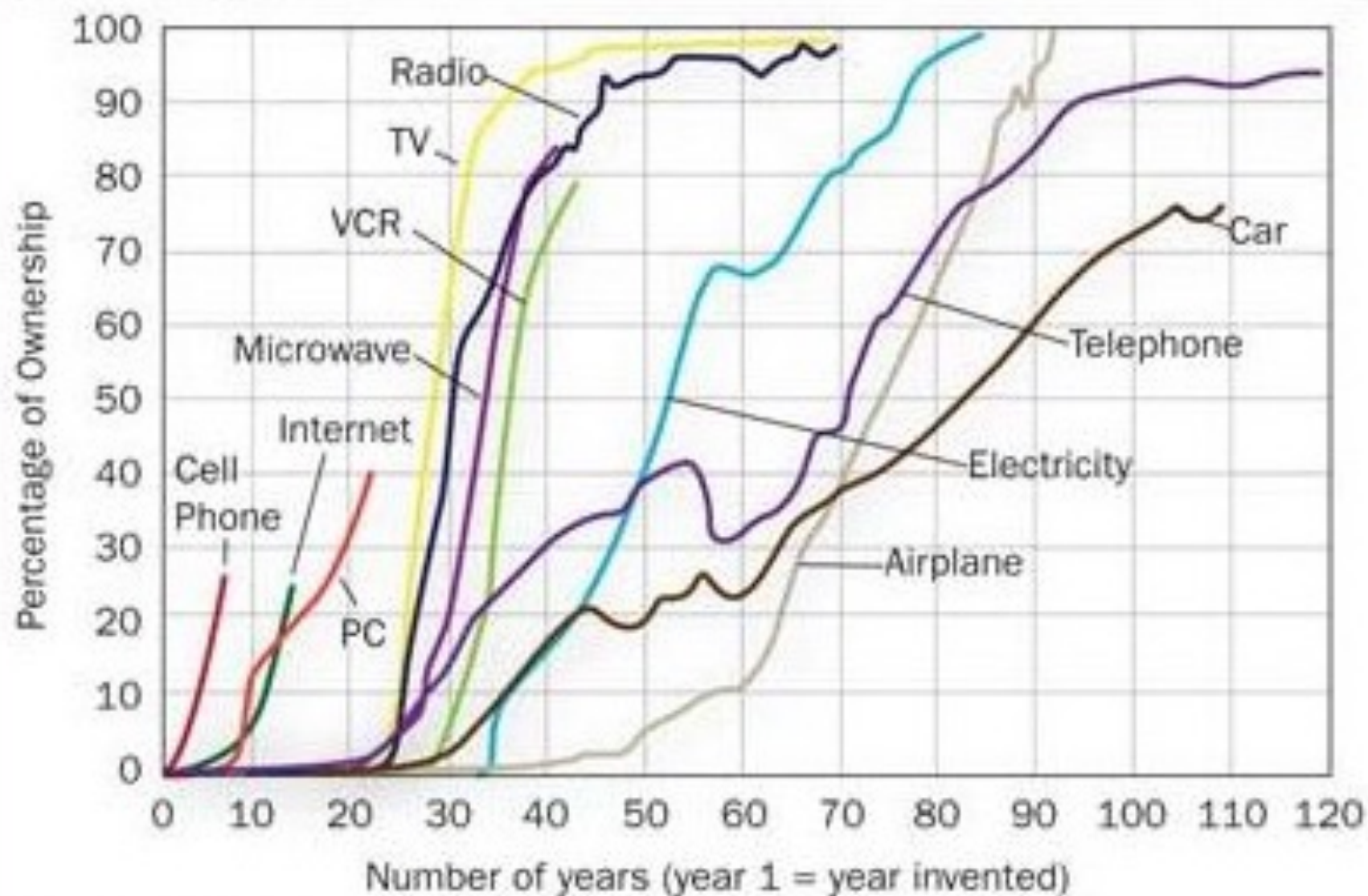




Figure 4: Map showing the performance of EU Member States' innovation systems



## Technology Adoption



Source: Forbes Magazine



# Forças que determinam produção

- **Globalização/geografia de produção**
- **Mudança Tecnológica**





*Fazer o futuro  
hoje  
transformando  
a economia  
pela ciência*

