

The role of the State in financing **INNOVATION**

Informatics Europe
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No formal education



Lorenzo de Medici
ruler of the Florentine
Republic

15th Century

Banks were an
innovation!

14th Century



Innovation funding through the ages

Middle Ages

Noble & religious
patronage

Age of Enlightenment

Self-funding

Universities

Philanthropy

18th & 19th Century

State sponsored
“prizes”

Industry

20th & 21st Century

VCs

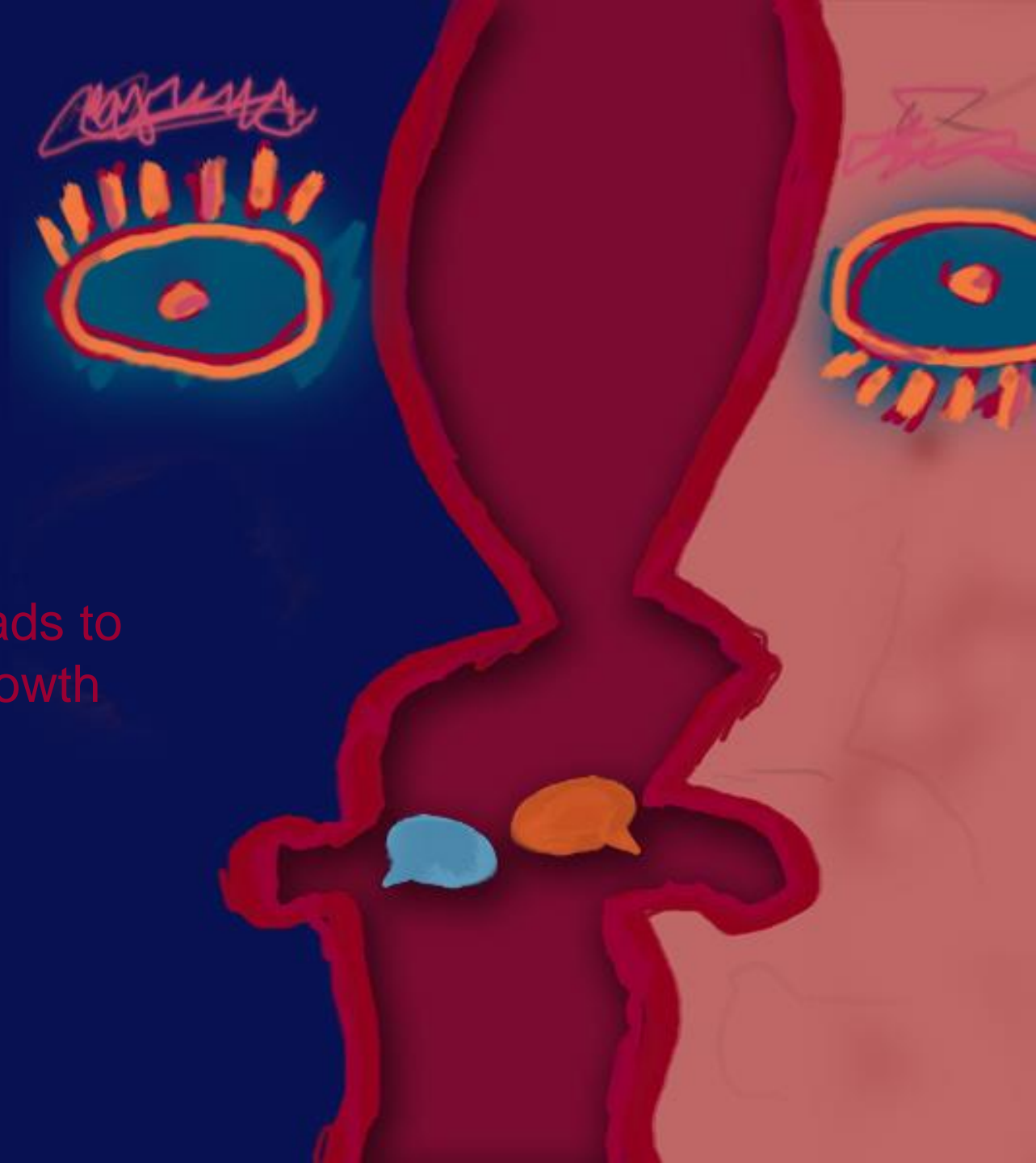
State as investor



Photo: Leiden University

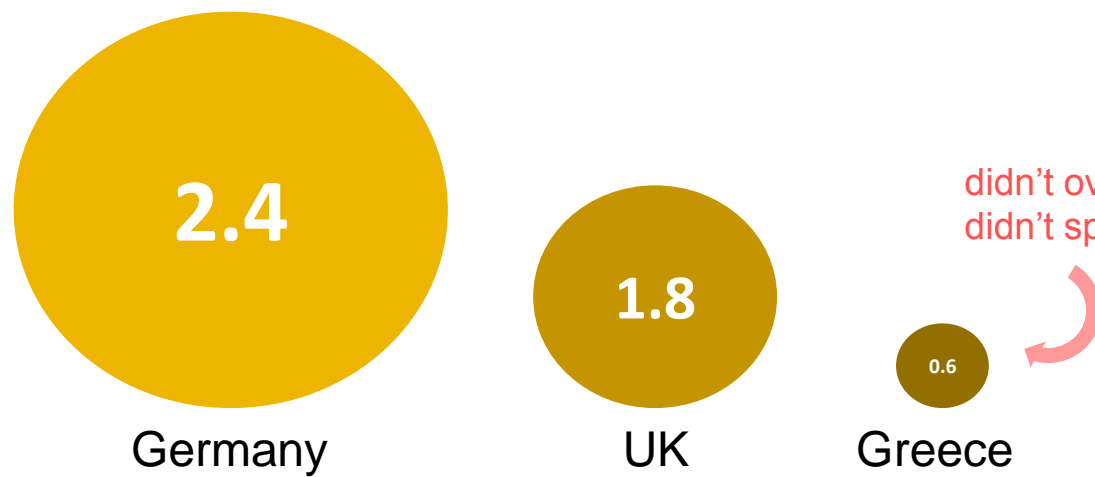
University was given to the people of Leiden by Prince William of Orange as a thank you for the heroic defence against the Spaniards in 1575

Innovation leads to
economic growth





R&D spend per GDP 2001 (%)



Circles not to scale –for effect

WHAT DRIVES GDP?

“ Financial services

“ Hospitality services

“ Construction

“ Creative industries

Innovation leads to
economic growth ☒

What can the State do?



Silicon Valley



Photo: Stanford University

Cold War defence spending

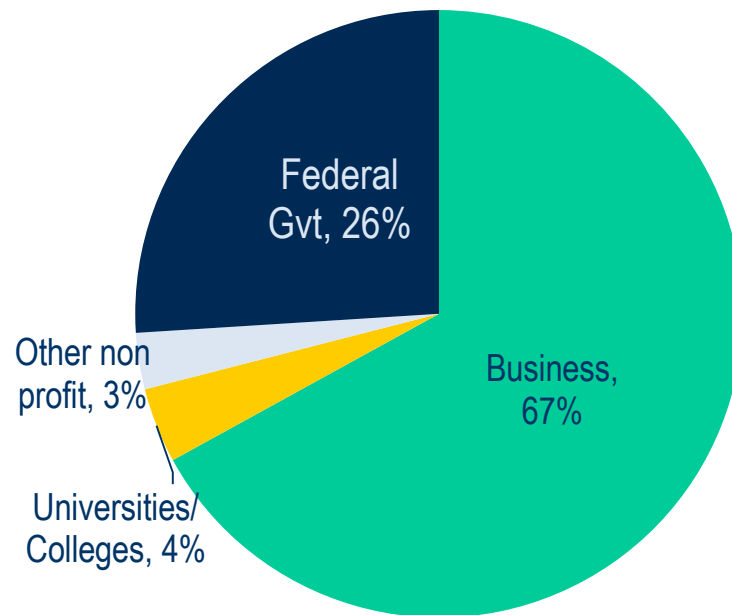
State funded research has given us ...

Internet

GPS

Siri

Sources of funding for R&D in the USA (2008, NSF)



The State can set the direction and make things happen

“The role of the State
has been more about
**taking on risk with
courage and vision**
—

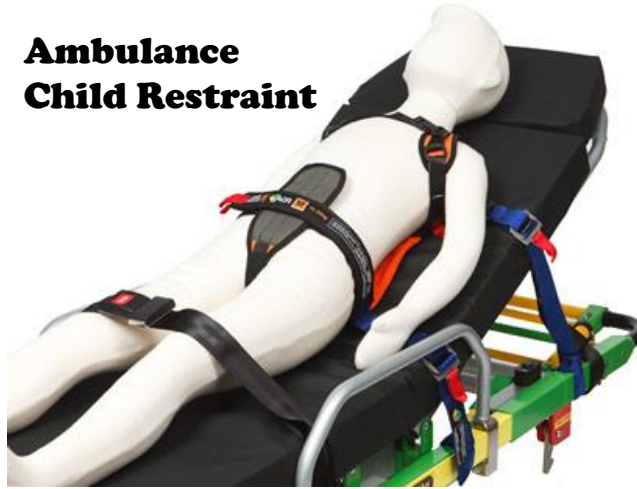
not simply taking it
away from someone
else who then
captures the returns”
(Mazzucato)





Supporting commercialisation

**Ambulance
Child Restraint**



**Touch Bionics
i-Limb**



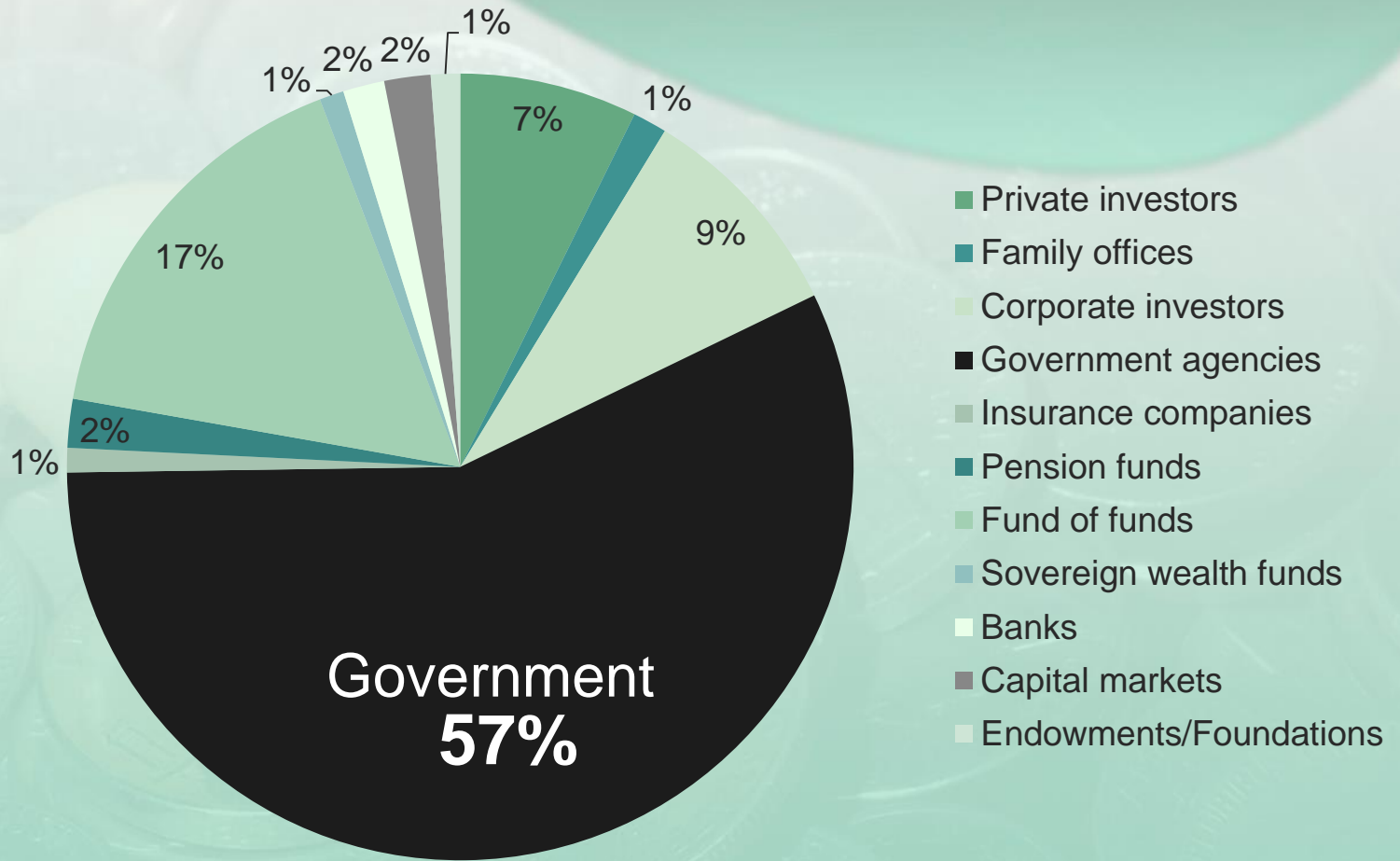
**Illuminated
retractor**

**But surely this is where the money-men
come in?**



Source of investors in European Venture Capital

(2011, EVCA)



Capital for Enterprise Ltd → British Business Bank



Enterprise Capital Funds

Get private investors to invest in early stage VC funds



Angel Co-investment Fund

Get angels to invest in more early stage deals

Tax
benefits



Enterprise Finance guarantee

Get banks to lend to SMEs



The State needs to wear mauve

Perkins discovered mauve dye by accident 1856

He patented it and went on to manufacture, derided by his scientific peers

1862 Queen Victoria appeared at the Great Exhibition in a mauve silk gown

By 1870, its great demand succumbed to newer synthetic colours in what became a new synthetic dye industry

Public procurement accounts for 17% of the EU's GDP