



**NEW STRATEGIES AND POLICIES  
FOR THE TRANSFER, EXPLOITATION AND**

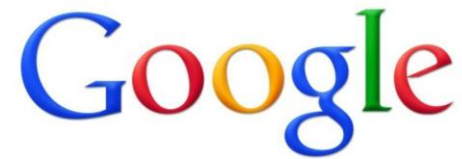
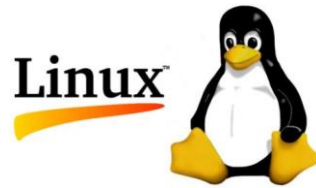
# **COMMERCIALISATION OF PUBLIC RESEARCH RESULTS**

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## Commercialising public research...

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... is important for generating more economic growth and jobs from innovation...

... and is not easy, as academia and business are two different worlds, with different motives, rules and cultures.

Commercialisation has been at the centre stage of research policies in OECD countries for 20 to 30 years now

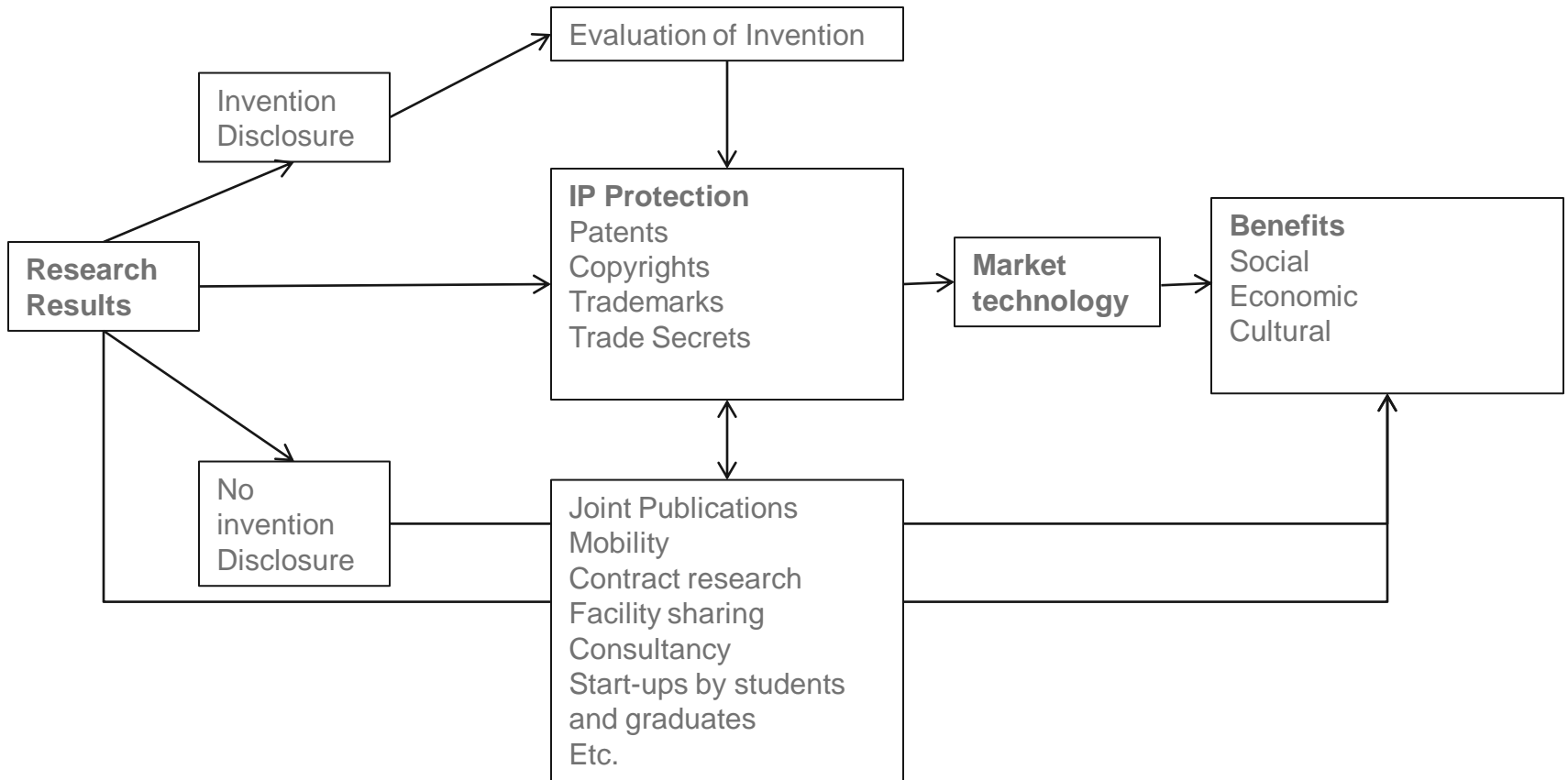
⇒ What is it about?

⇒ Where are we with it?

⇒ What can we do to foster it?



# Commercialisation is more than IP

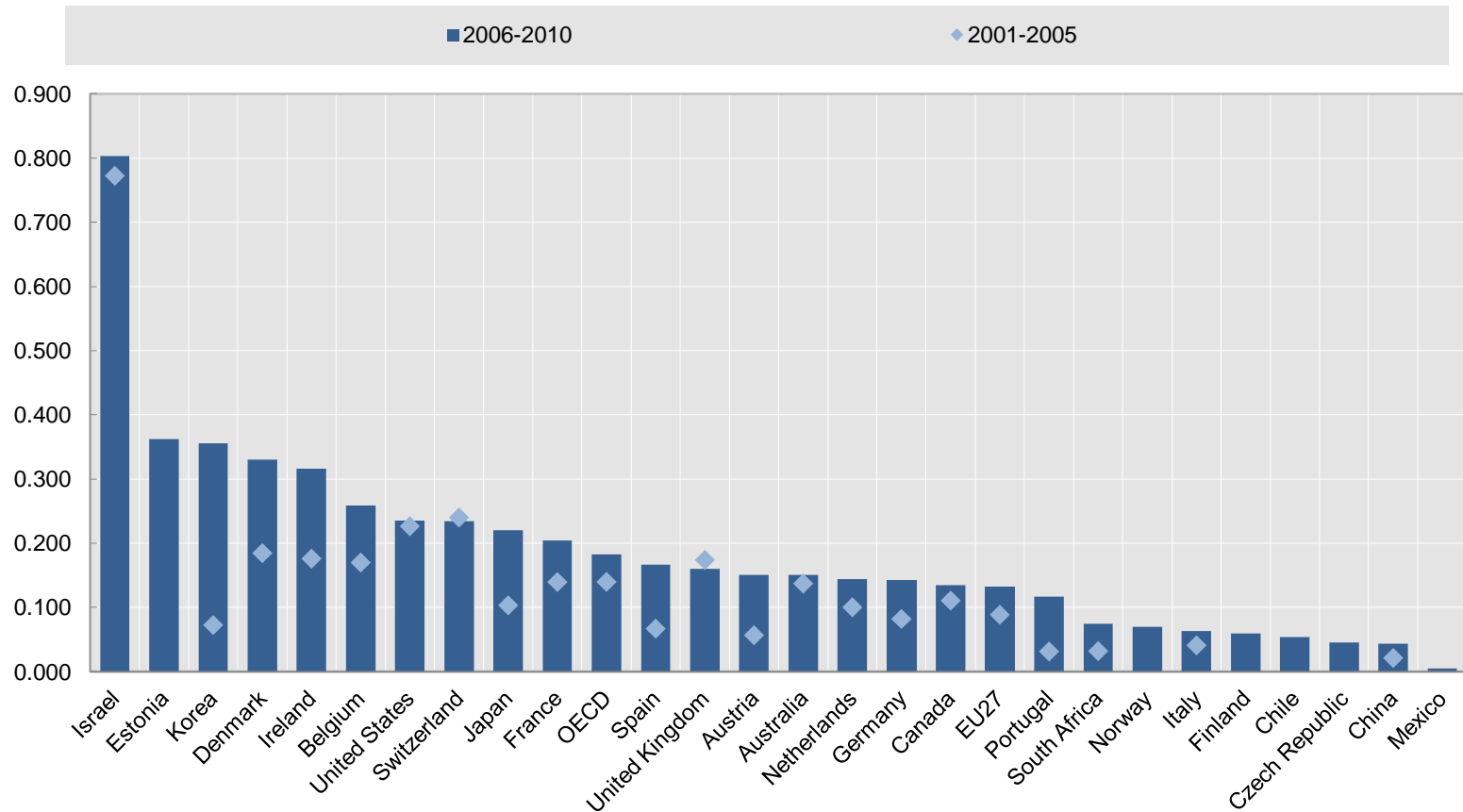




# Academic patenting has increased in most countries in the 2000s

## Patents filed by universities, 2001-2005 and 2006-2010

Patent applications under Patent Cooperation Treaty (PCT) per billion GDP (*Constant 2005 USD (PPP)*)



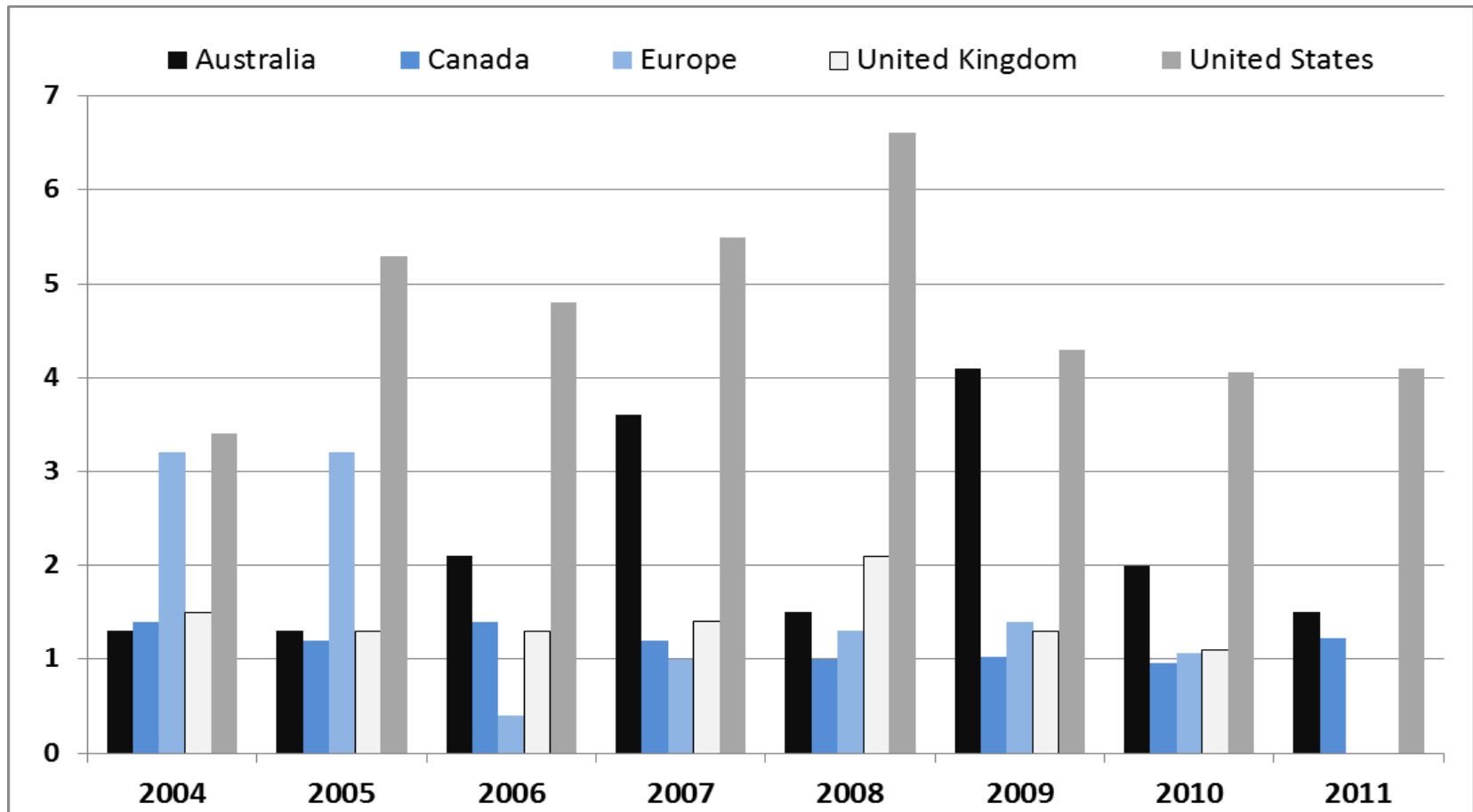
Source: OECD Patent Database



# In Europe, revenue from licensing is low compared to the US and is not increasing

## Licensing income, 2004-2011

As a percentage of research expenditures

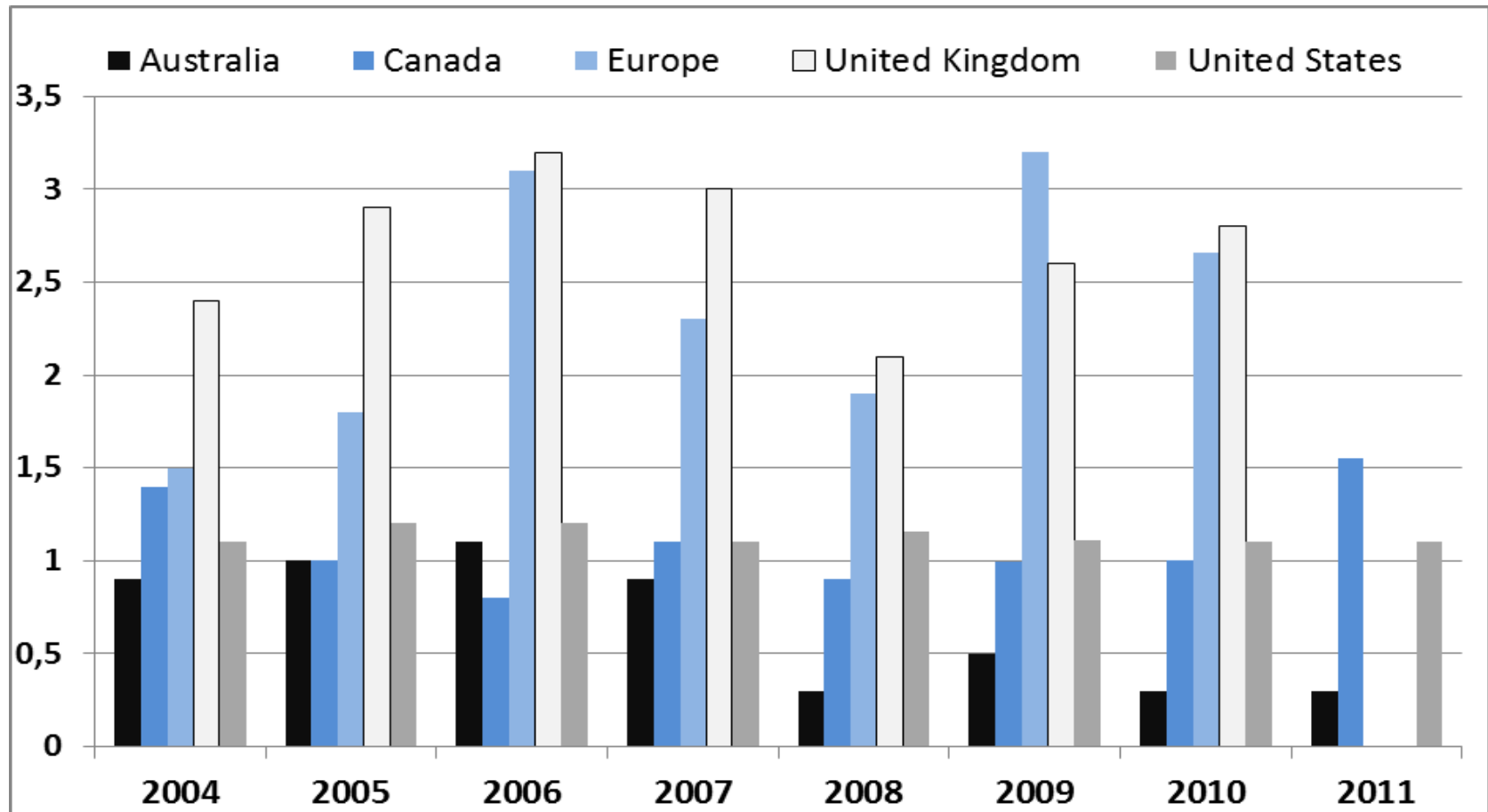




# Spin-off creation is higher in Europe, but little evidence of growth and job effects

## Creation of public research spin-offs, 2004-2011

Per USD PPP 100m research expenditure






# After two decades of reform in Europe and emulation of Bayh-Dole around the world ...

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*... commercialisation seems to be levelling off in a number of countries.*

- *What is holding back the commercialisation of public research?*
  - *What solutions?*
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## Why the levelling off?

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- **Limits in policies:** narrow focus on patenting, with little understanding of the broader determinants (“what should I do with my patents?”)
- **Governance and incentives:** Technology Transfer Offices often lack capabilities (size, skills, incentives)
- **The knowledge produced** by public research is not always relevant to commercialisation.

BUT...

- Some research institutions (e.g. IMEC) and countries (e.g. Finland) have had **successful experience**, notably in relation with contract research.



# New mechanisms for tech transfer

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- Technology Transfer Offices (TTOs) have expanded their missions (marketing non-patent services, innovation culture), liaise or merge to reach a critical mass.
- New bridging and intermediation structures
  - e.g. Innovation offices programme in Sweden
- Replacing or improving TTO structures
  - *Technology Transfer Alliances* (e.g. Innovation Transfer Network (ITN) in the US, SATT in France)
  - *For-profit models* (e.g. Science Ventures in Denmark)
  - [Internet-based models](#) (e.g. Flintbox at University of British Columbia )
  - *Free Agency model*
- Patent funds: selling or licensing IPR.



# Boosting Entrepreneurship

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- Successful spin-offs come more often from students and alumni than from professional researchers.
- Creating a favourable eco-system for student and academic entrepreneurs
  - e.g. Aalto Centre for Entrepreneurship (ACE) in Finland
- Work study programmes, internships, mentoring relationships, workshops, seminars, all-campus initiatives, free online entrepreneurship courses, ...
- “Crowd funding for research”: more about engaging scientists with society and the economy
  - University of Utah’s TTO entered in 2013 an exclusive agreement with crowdfunding platform RocketHub



# Promoting Openness in Science

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- Requirement to publish in digital format
  - *Institutional*: e.g. US National Institutes of Health (NIH), Canadian Institutes of Health Research (CIHR)
  - *National*: e.g. Spain, New Zealand, US
- Building knowledge repositories
  - e.g. EC: Digital Repository Infrastructure Vision for European Research (DRIVER), Open Access Infrastructure for Research in Europe (OpenAIRE), etc.
- New co-operative models
  - e.g. Lund University, the National Library of Sweden and Nordbib to adopt online guides to open access journals publishing



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**Thank you!**

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