Horizon Europe: A few reflections on its context

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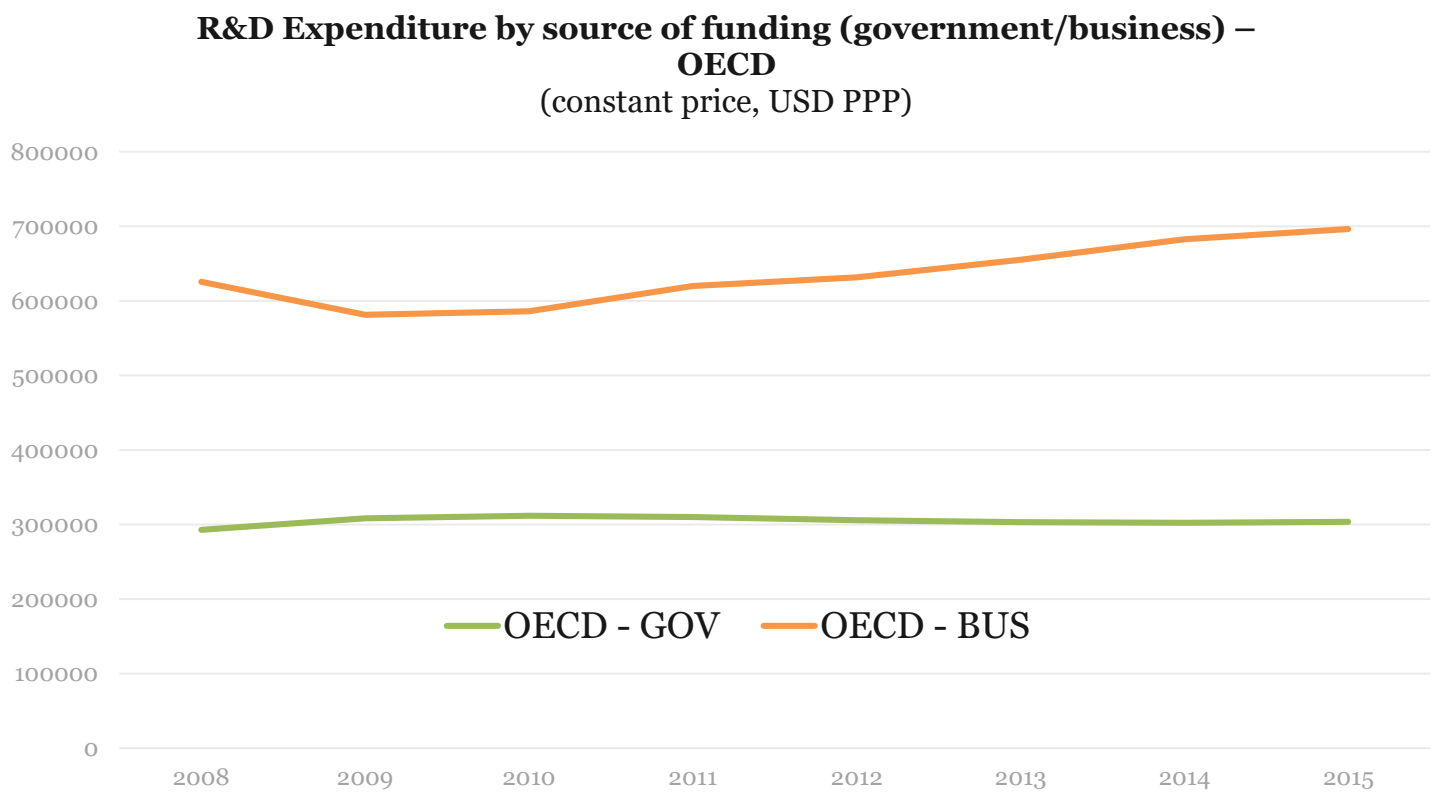
Objective of this presentation

Provide background information that will inform strategic choices for Horizon Europe:

- To what extent is government still capable of steering science and innovation?
- To what extent is Europe still a global player in science and innovation?
- What are the main challenges that Horizon Europe will have to address?

Government spending on R&D has been weakening relative to business in the OECD since the financial crisis of 2008



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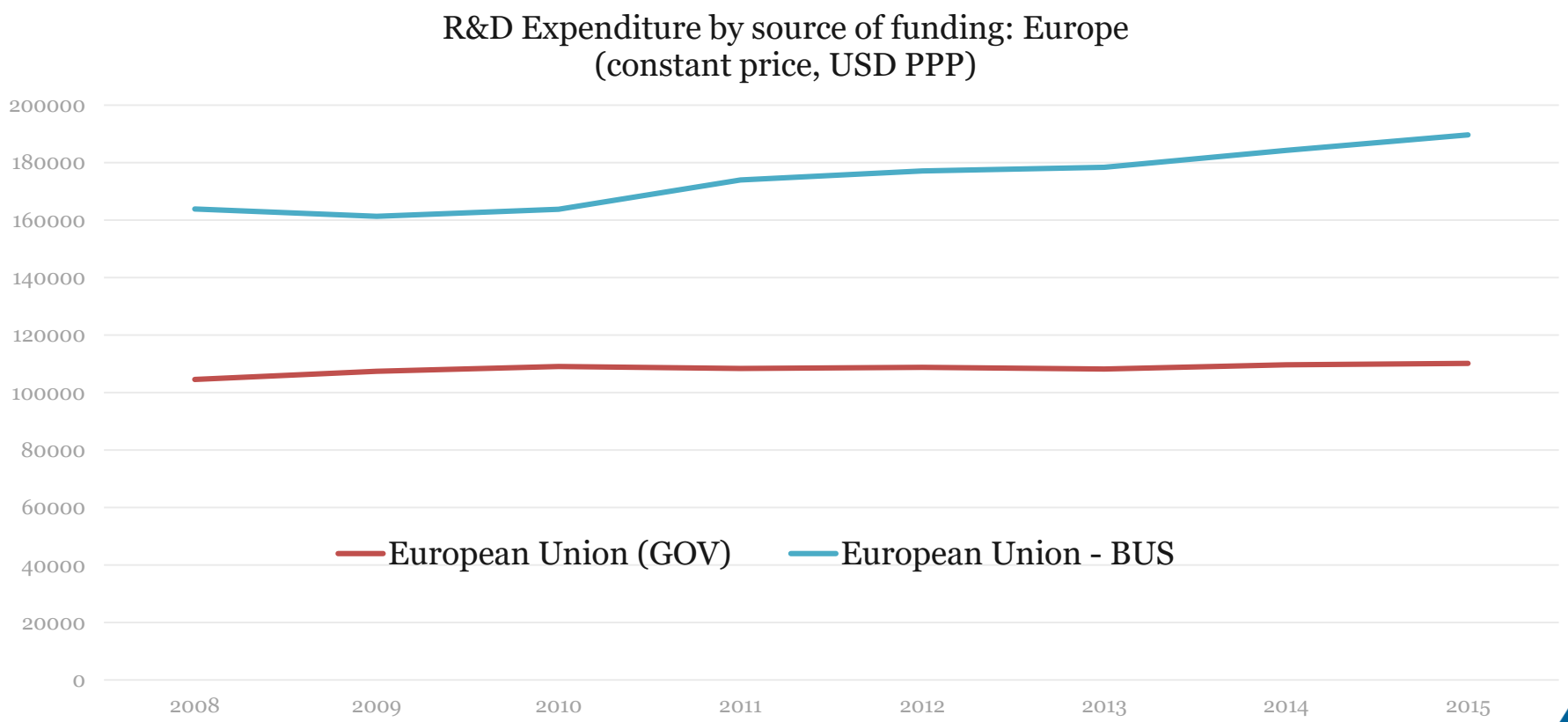

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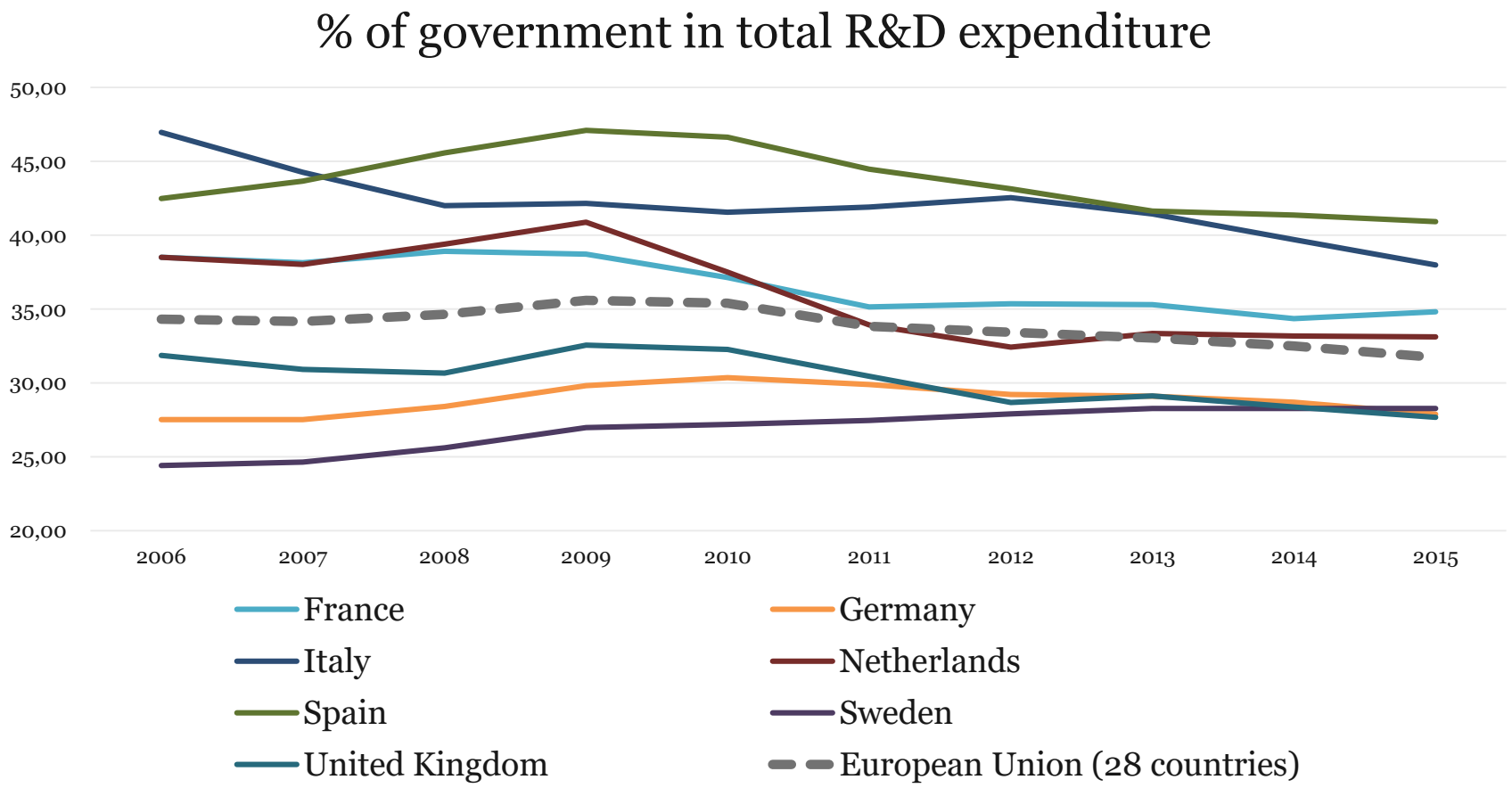


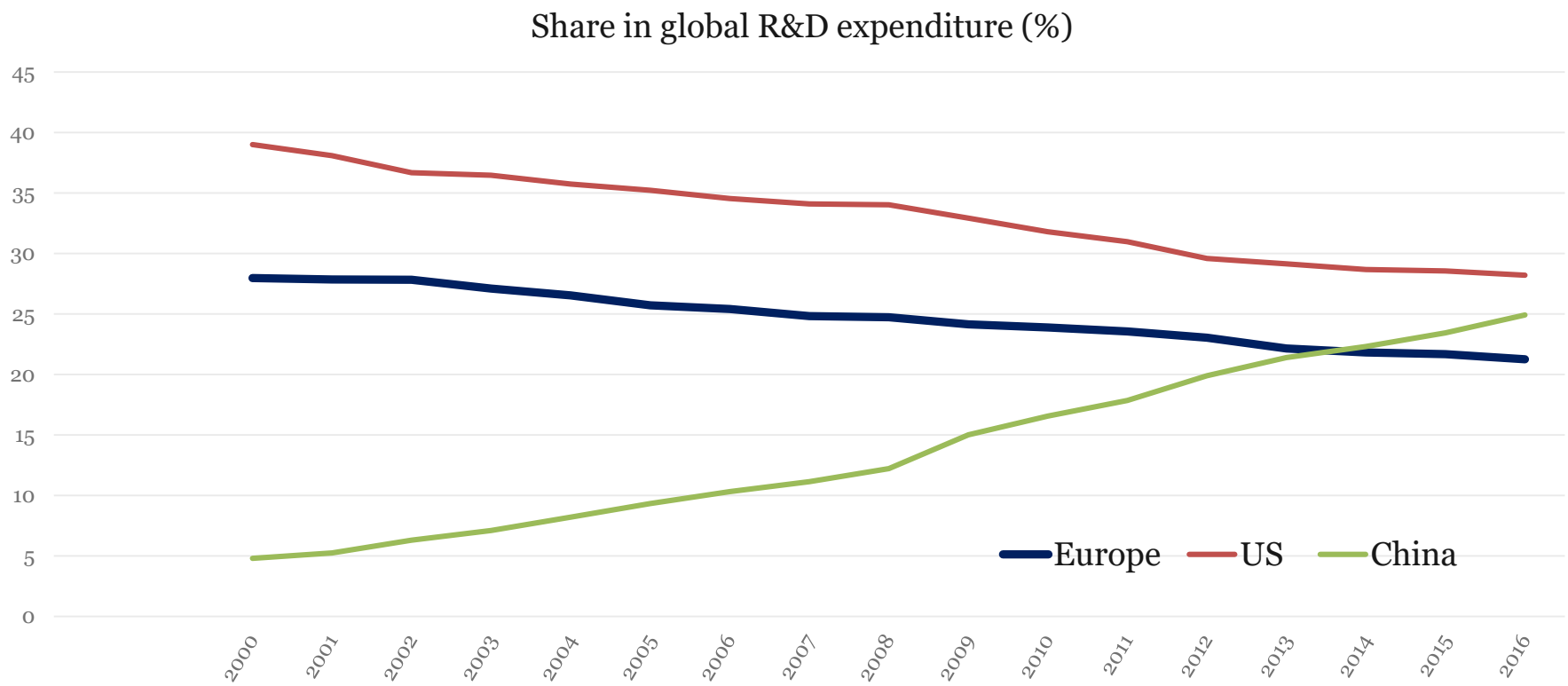
Can Government still influence science and innovation?

- The share of government (incl. EU) in the funding of R&D in Europe declined from 40% in 2009 to 36.7% in 2015.
- In key areas (Artificial Intelligence) nearly all research is done by (non European) businesses.

=> What is the capacity of government to steer research towards societal needs? Towards basic science?

OECD STI Outlook 2018, forthcoming on November 20

Europe: A declining Share in Global R&D



How big is the EU FP in the R&D game?

As compared with EU countries: H2020 = 77b€ over 2014-20: it is 10% of EU total government spending on R&D (110b€ in 2015)

With the US: Yearly budget of NIH (US): 32b USD; NSF (US): 6b USD.

⇒Hence: FP is significant but not outstanding.

Challenges in front of Horizon Europe

Funding is not enough: Successful innovation requires a number of conditions that Europe needs to work on

=> **A single market for**:

- **Products**: start-ups can't afford dealing with 28 national regulations…
- **Capital**: there is not enough venture capital in Europe (and the largest place for VC is London); a European VC market requires harmonisation of prudential regulation etc.
- **Data**: at the digital age, data is the main input of innovation. AI is based on large amounts of data. US, China offer such scale. EU is segmented, no European single market for data => lack of critical mass.

Challenges in front of Horizon Europe (2)

- A multiplicity of objectives.

  => Which are not Missions vs. Excellence

- A multiplicity of stakeholders

  => And their agendas are not necessarily aligned: Academia, PROs, businesses, civil society, national & regional government

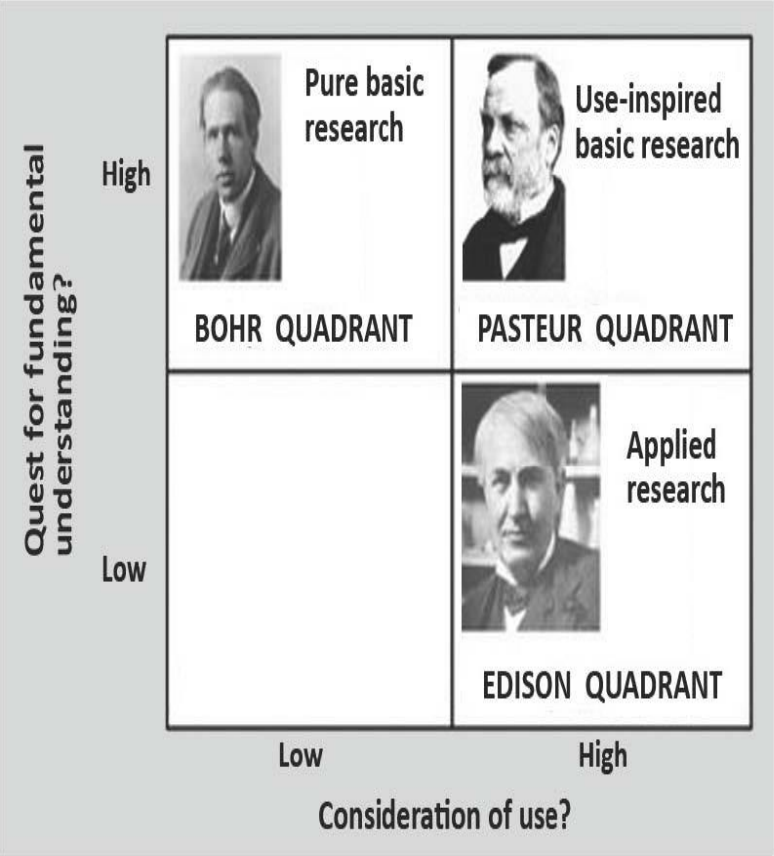
- Leveraging national expenditure

  => HE by itself is too small: Need coherence between HE & national plans in terms of objectives & funding arrangements

Challenges in front of Horizon Europe (3)

Performing basic research in the context of mission driven programmes

- ⇒ Achieving missions requires applied research, development and innovation: Quid of basic research?
- ⇒ Basic research is needed in order to identify options and prepare further progress (medium to long term)
- ⇒ Challenge: implement the Pasteur's Quadrant



Conclusions

- The capacity of government to steer science and innovation is declining.

- The global status of Europe in science and innovation is declining

- Horizon Europe is a fantastic opportunity but it needs to address strategic issues around governance and allocation of funds

Thank You

Innovationpolicyplatform.org

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