

ENGINEERING AND PHYSICAL SCIENCES RESEARCH COUNCIL

# EPSRC Delivery Plan - Next Steps



David Delpy, CEO

17<sup>th</sup> April 2012

**EPSRC**

Pioneering research  
and skills

# Royal Charter - 2003 (replacing Founding Charter of 1993)

The objects for which the Council is established and incorporated are:

- **to promote and support**, by any means, **high-quality basic, strategic and applied research** and related **post-graduate training** in engineering and the physical sciences;
- **to advance knowledge and technology (including the promotion and support of the exploitation of research outcomes)**, and provide trained scientists and engineers, which meet the needs of users and beneficiaries **thereby contributing to the economic competitiveness of Our United Kingdom and the quality of life**;
- in relation to the activities as engaged in by the Council under (i) and (ii) above and in such manner as the Council may see fit:
  - **to generate public awareness**;
  - **to communicate research outcomes**;
  - **to encourage public engagement and dialogue**;
  - **to disseminate knowledge**; and
  - **to provide advice.**

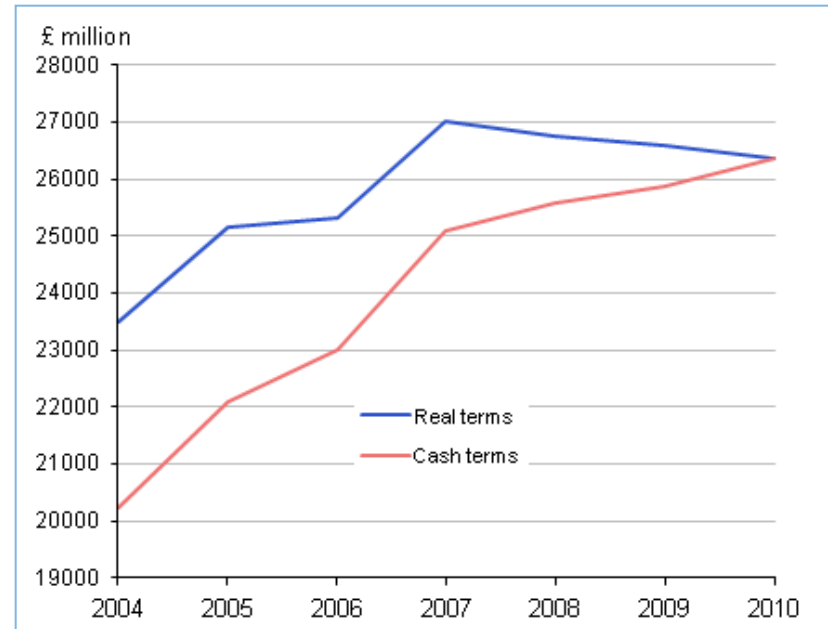
**EPSRC**

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# Context

- Still having to do 'more with less'
- Business investment in R&D not rising in UK
- Impact of UK research is still high (per £ invested)
- Impact of UK Research on Growth needs to be made more clearly

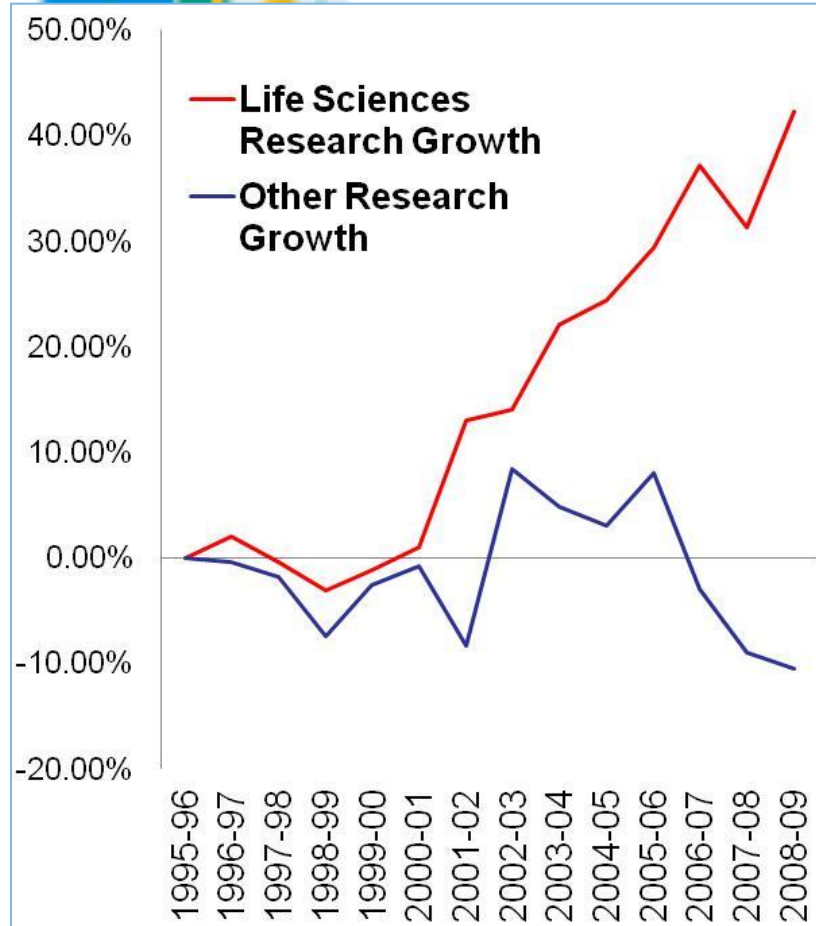
**Gross domestic expenditure on R&D  
2004 to 2010**



Source: Office for National Statistics (March 2012)

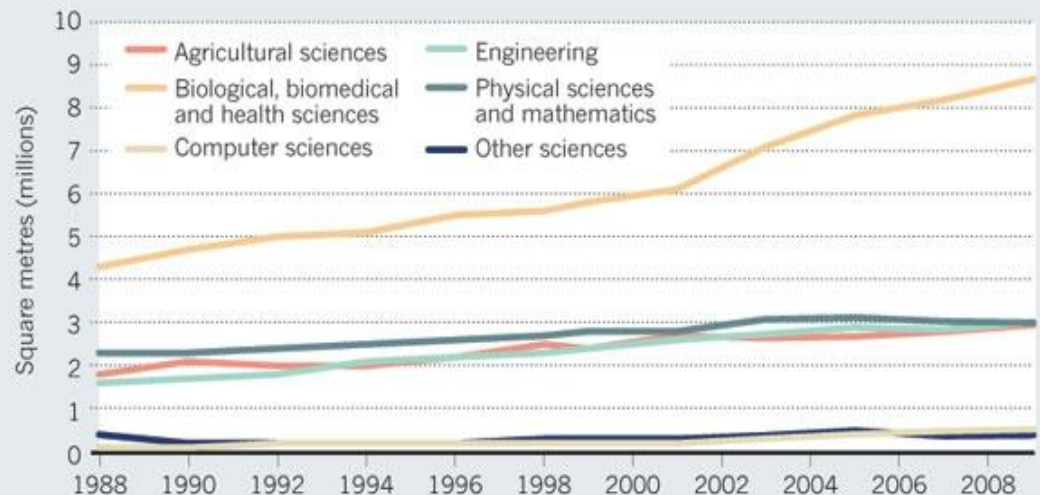
# Comparison Engineering and Physical Sciences vs Life Sciences

## Life Sciences vs. Other Research 1996 to 2009



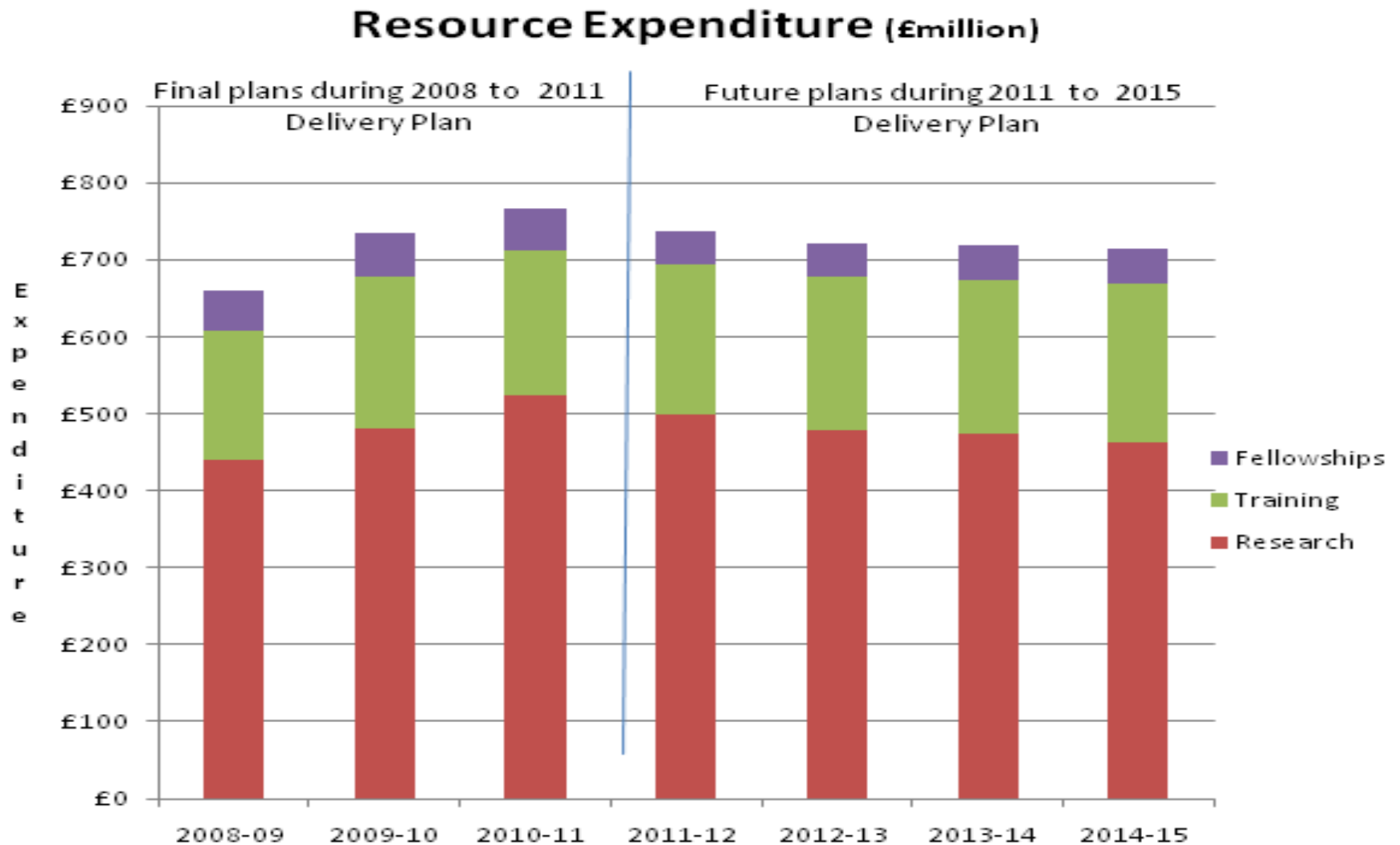
### BIOLOGY'S RESEARCH FOOTPRINT

There has been huge expansion in laboratory space for the biomedical sciences since the late 1990s in comparison with other fields.



Nature 5, Vol 484, No 7392, pp29-30 April 2012

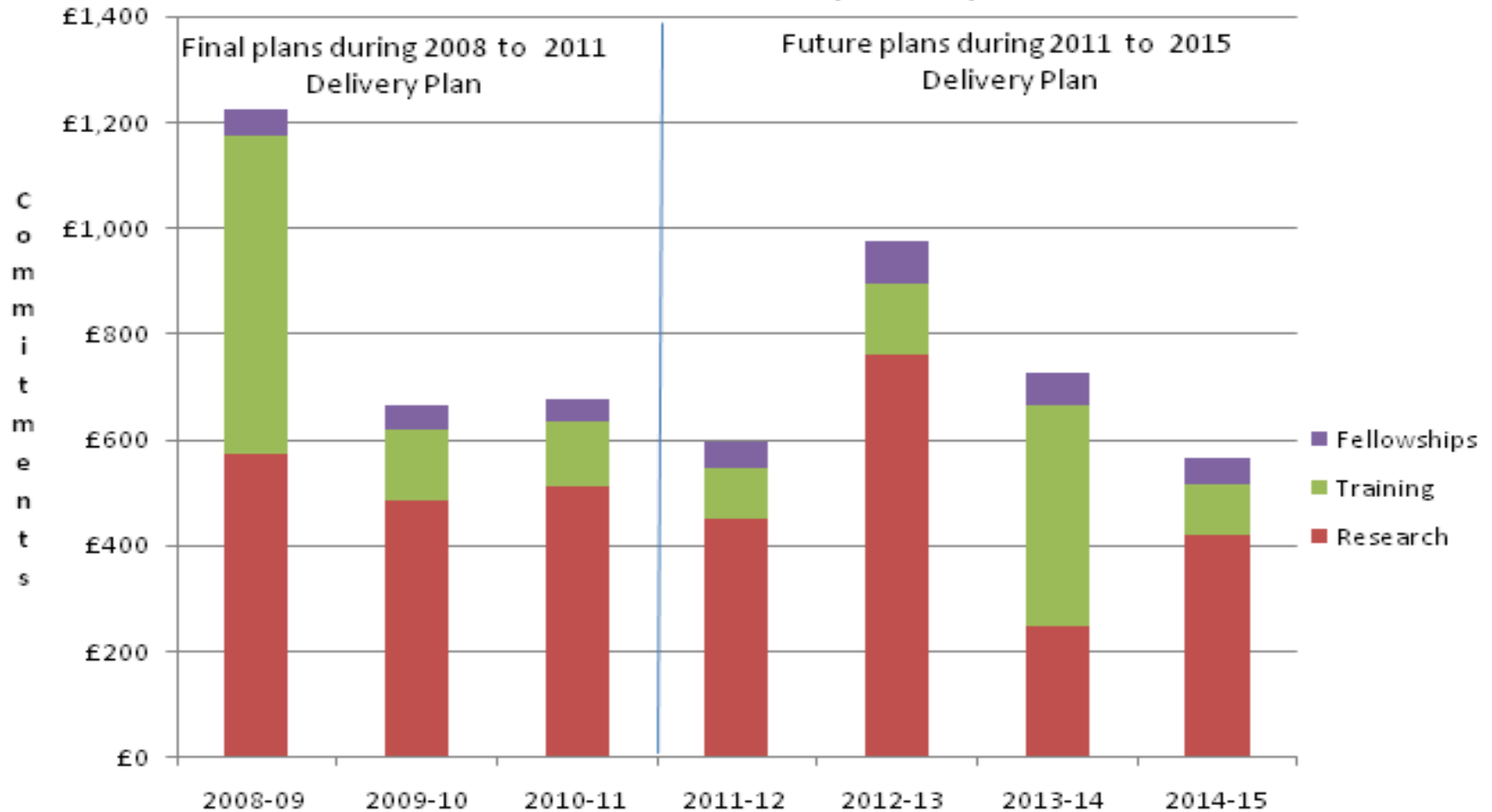
# Looking ahead (1)



Note: Fellowships funding include RCUK Academic Fellowships which EPSRC administered on behalf of RCUK. The scheme has finished but there is residual expenditure through to 2012/13.

# Looking ahead (2)

## Commitments (£million)



# Shaping Capability – what it means in practice

- No area is to be stopped altogether
- EPSRC is providing a sense of direction i.e. no funding targets
- Maintain = Reduce in real terms
- Grow = Significant investment
- New adventurous/innovative ideas are encouraged in all areas
- Changes to peer-review will help to make it happen but it will take time
- Engineering supported via many of EPSRC's themes – many opportunities available

# Shaping Capability: Changes to Peer-review

- March 2012 – EPSRC Council agreed proposed changes to peer-review process:
  - Principles of peer-review staying the same
  - ‘National Importance’ to continue as a secondary criterion (introduced 11/2011)
  - Panels to receive contextual briefing
  - Panel scores to be received well before meeting – to enable discussion in context of shaping capability
  - 3 speakers (not 2) to maximise quality of the discussion on each proposal



# Developing Leaders – Focus on People

- Focus on investing in current and developing future leaders (tailored support for people)
- New Fellowship framework:
  - Merger of previous schemes
  - Priority areas (annual)
  - Example: New Directions for Supporting Leaders
- Addressing the needs of the nation:
  - Manufacturing Fellowships – 4 funded + new call for 2012-13

# Developing Leaders – PhDs

- Review of Centres for Doctoral Training (CDTs)
- New call for CDTs in 2013
  - Maintain balance with Doctoral Training Grants (DTGs)
  - Selected areas only – Engagement with HEIs
  - No automatic renewals
- DTGs
  - Statement of expectation
  - Engagement with HEIs to shape their future
  - New DTGs process from 2015-16

# Delivering Impact – Next Steps

- Impact Acceleration Accounts
  - To be discussed at Council – May 2012
  - To replace KTAs and KTS
  - Provide greater flexibility for HEIs to accelerate impact from previous investments
  - Support mobility between academia and industry
  - Would require leverage from Users – de-risking of early stage innovation prior to industry uptake or TSB funding



# Engineering Theme – National Capability

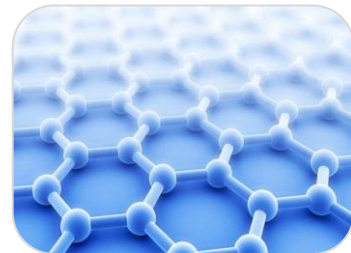
- £103M commitment for 2012-13
- Focus on ground-breaking research, mobilising leadership and fit to national priorities
- Priorities
  - Speculative Engineering
  - Resource Efficiency and Water Engineering
  - Synthetic Biology – 22<sup>nd</sup> Century Engineering
  - Power Electronics – National Strategy
  - Novel Catalysis
  - Infrastructures

**Contacts: Kedar Pandya  
and Liam Blackwell**

# Manufacturing the Future

- £122M commitment for 2012-13
- Key to long-term sustainable growth:
  - Renaissance of Manufacturing
  - Engineering Research at its core
- Priorities for 2012-13
  - Innovative Productions Processes
  - Frontier Manufacturing
  - Sustainable Manufacturing
  - Manufacturing Informatics

**Contact: Mark Claydon-Smith**





# Healthcare Technologies

- £117M commitment for 2012-13
- HTs underpin the Life Sciences
- Focus on co-creation with Clinicians – applicability of research NOT applied research
- Priorities
  - Treatment and Therapies
  - Predictive Diagnosis - £25M call for IRCs
  - Technologies for a healthy life course
  - Design, Manufacturing and Integration



**Contacts: Rachel Bishop**

# Conclusion / Summary

- EPSRC further transitioning to Sponsorship role
- Consolidating Shaping Capability and emphasised focus on Leaders and Impact
- Peak of commitments in 2012-13 – working with our partners to safeguard best research and PhD training
- Engineering Research at the core of EPSRC strategy – must continue to demonstrate and create value

**Thank you for listening**

**Any Questions?**

