

ENGINEERING AND PHYSICAL SCIENCES RESEARCH COUNCIL

EPSRC SATs CONFERENCE



David Delpy, CEO
18th March 2013

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

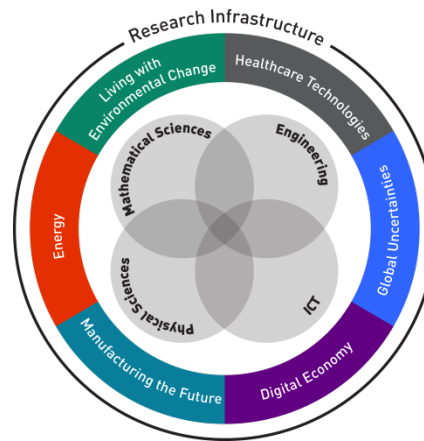
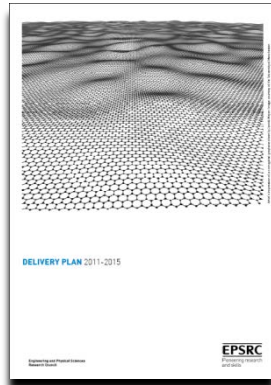
Pioneering research
and skills

STRATEGIC AND DELIVERY PLANS – WHERE WE'VE COME FROM

EPSRC
Strategic
Plan 2010



EPSRC
Delivery Plan
2011-2014



Comprehensive
Spending
Review

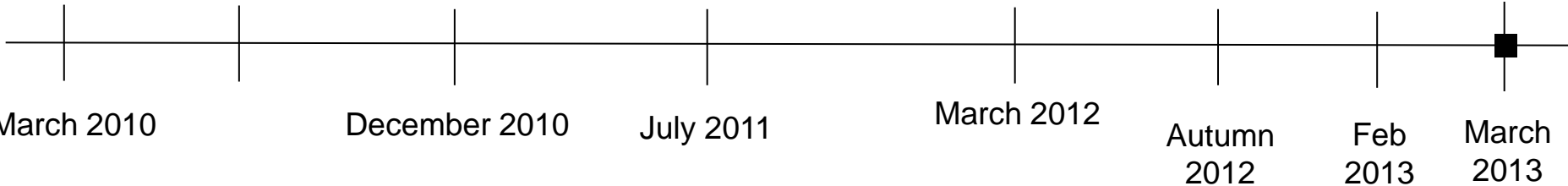
First details of
Our Portfolio
published

Full Shaping
Capability
plans
published

Impact
Acceleration
Accounts

CDT
call

SR
2015-16



Engagement



Context

- Still having to do 'more with less'
- Eight Great Technologies
- Industrial Strategies - Impact of UK Research on Growth?
- Triennial Review
- Next Spending Review 15-16
- Visiting panels



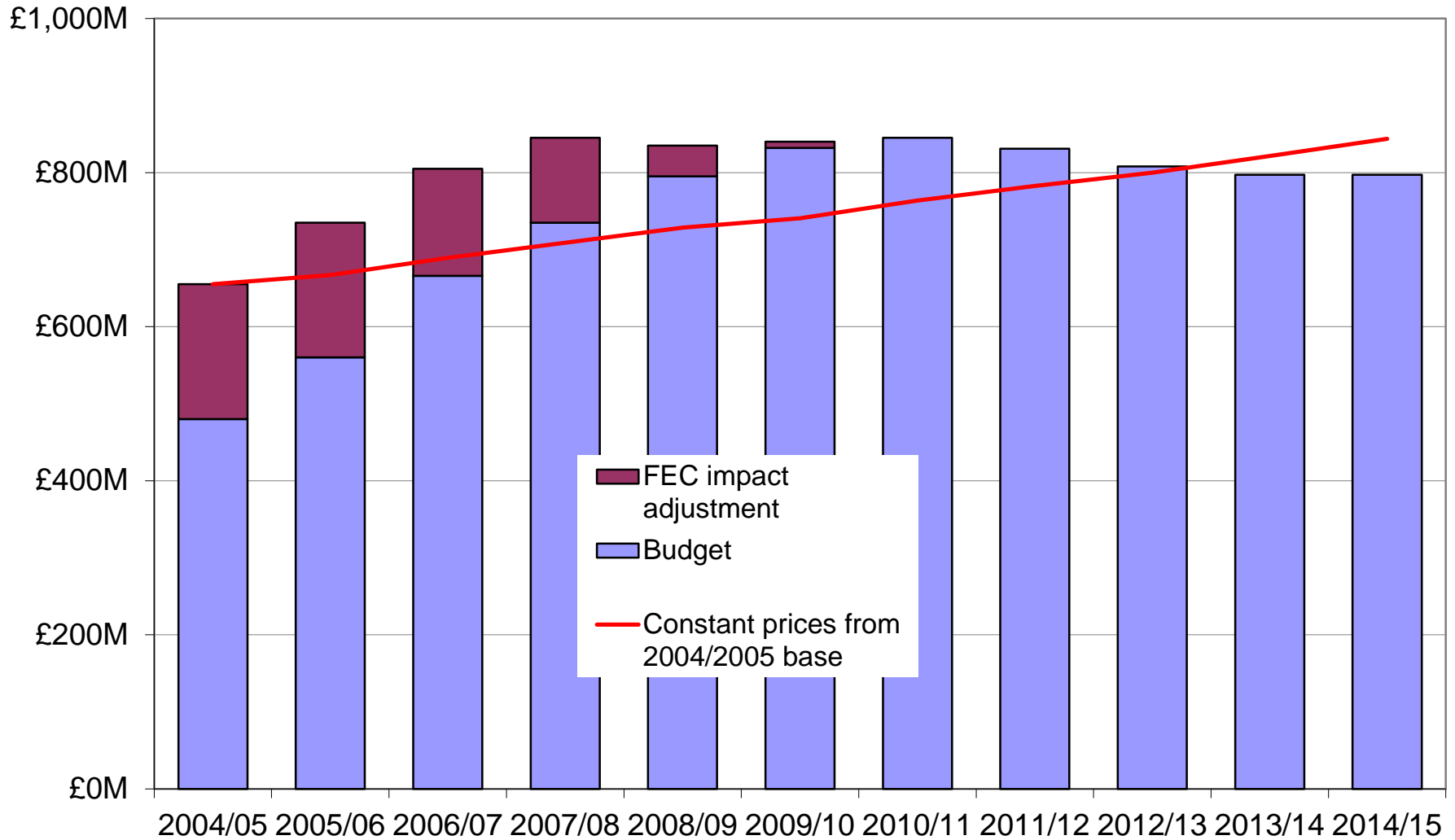
Where EPSRC-sponsored research plays a direct role Industrial Strategies / 8 Great Technologies

BIS Industrial Sectors / 8 Great Technologies	Aerospace	Nuclear	Renewables	Automotive	Information Economy	Construction	Oil & Gas	Life Sciences	Education	Professional & Business Services
Big Data					✓					
Space										
Robotics & Autonomous Systems	✓	✓		✓	✓		✓			
Regenerative Medicine								✓		
Synthetic Biology								✓		
Energy Storage			✓	✓						
Advanced Materials	✓	✓	✓	✓		✓	✓			
Agri-science										

EPSRC leads 3 and is significantly involved in another 3 out of the 8 Great Technologies

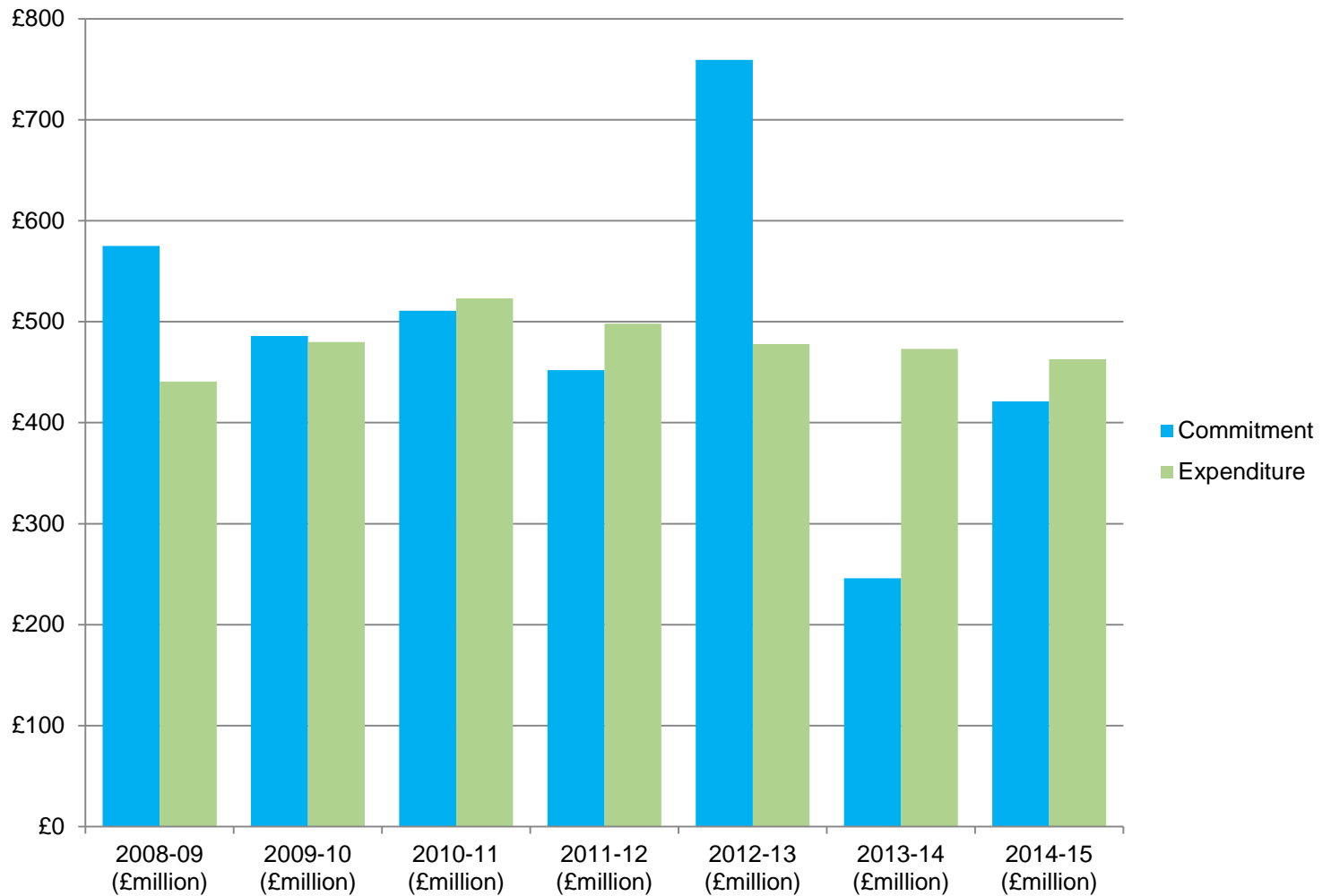
~70% of EPSRC portfolio directly relevant to Industrial Strategies

EPSRC Budgets 2004/05-2014/15



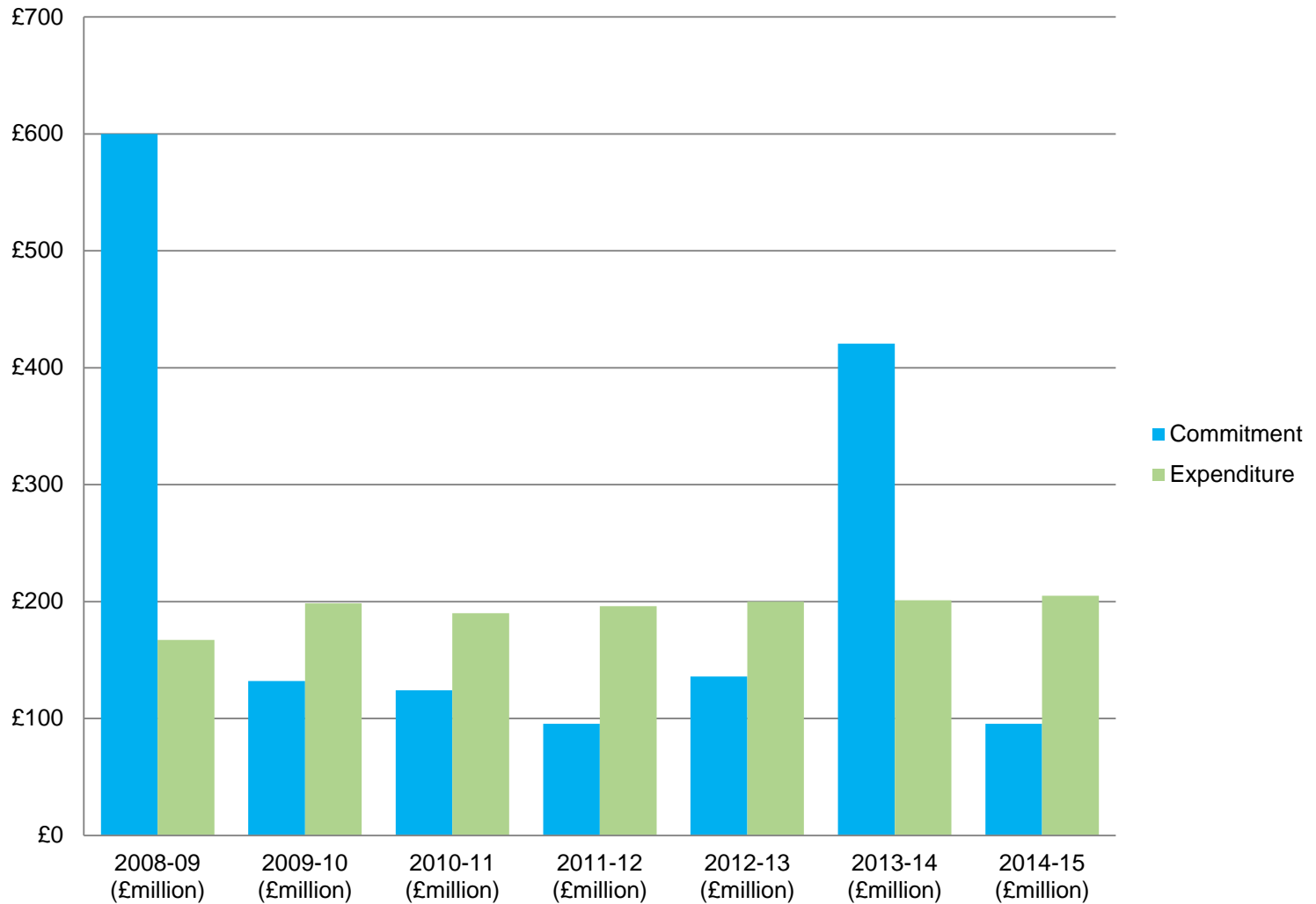
Looking ahead - Research (1)

Research Funding (£million)



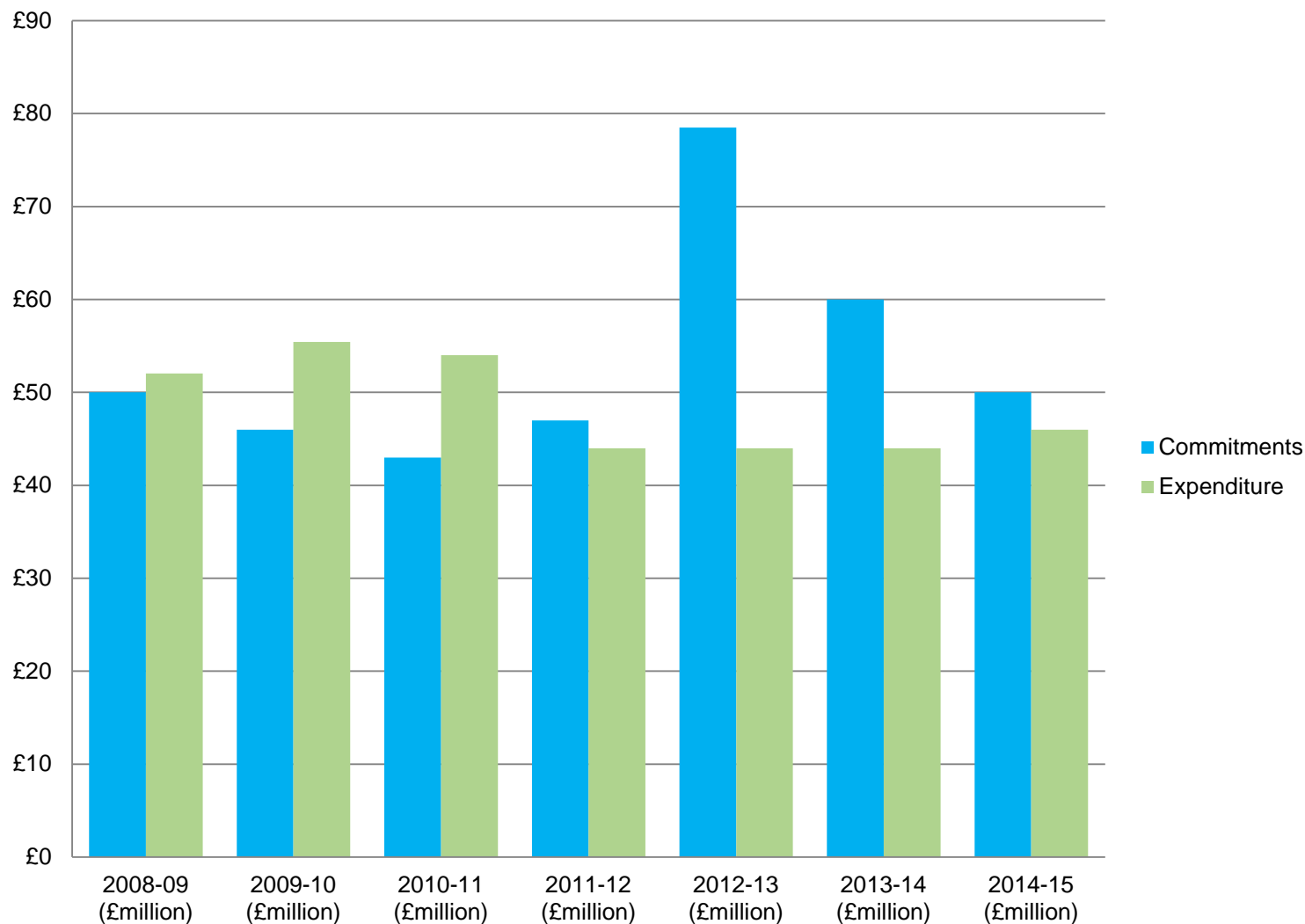
Looking ahead – PhD Training (2)

Training Funding (£millions)



Looking ahead – Fellowships (3)

Fellowships Funding (£million)



Key Messages – Council / Key Partners event 5th and 6th March

- EPSRC and the Community must do more to communicate better with key people in government:
 - We need good news stories e.g. story lines aligned with 8 Great Technologies
 - We need those who can advocate for EPS to do so effectively
- EPSRC should engage positively with Industrial Strategies – focus on the long-term contribution

Capital for Great Technologies (1)

- £100M for capital equipment
- Spend in 2013/14 and 2014/15 – 50/50 (*approx*)
- Three key research areas:
 - Advanced Materials - £30M
 - Grid-scale Energy Storage - £30M
 - Robotics & Autonomous Systems - £25M
- Build on previous investment: applicants must have £10M research funding over past 5 years within relevant research area
 - Can be from a variety of sources: EPSRC, EU, TSB, BIS, Industry etc

Capital for Great Technologies (2)

- Institutions can make one application per research area
- Applications via business cases, not JeS
- Alignment to “Eight Great Technologies” and BIS Sector strategies
- Official Launch – 1st April 2013
- Closing Date – 7th May 2013
- Awards through university equipment accounts in July

Shaping Capability – Update

- **Directions of travel published (2011-12)**
- **Changes in peer-review process implemented (2012)**
- **EPSRC working with SAN and SATs to monitor changes in the portfolio – 2013/14**
 - **Currently working with the SAN to develop a robust approach to monitor changes**
 - **Active monitoring and first report to Council – 2013/14**

Developing Leaders – PhD Training (1)

- **Statement of expectation**
- **DTG 2013 allocations finalised:** announced during March
- **I-CASE:** £17M commitment in 2013/14

Developing Leaders - PhD Training (2)

- ■ **New call for Centres for Doctoral Training**
 - ■ £350m in CDTs to address priority areas
 - ■ Over 400 suggestions received (9/12)
 - ■ SATs + SAN/Council work-stream + Council approval of priorities (12/12)
 - ■ Call live on 6 February 2013
 - ■ Aim to train future research leaders and equip them with the knowledge, skills and creative approaches for the good of the UK
 - ■ Joint-funding from other Research Councils
 - ■ Closing date for outlines: 4 April 2013

Update on CDT call – Feedback on indicative bidding plans(1)

- Very pleased at the positive approach being taken to internal sifting/review/bid management
- Early indication: good mix of outline bids addressing one priority area vs. several priority areas
- Coverage of all the priority areas indicated so far – volumes of interest vary
- Good to see coverage of both areas core to the EPSRC remit as well as those priority areas that reach out to other disciplines/other Research Councils
- Range of single institutions and multi-partner bids
- Bids need to demonstrate how they will manage the cohort of students – especially for those bids coming from several institutions

Update on CDT call – Feedback on indicative bidding plans(2)

- Areas which are seeing higher levels of interest (but not unmanageable levels) include :
 - Functional Materials
 - Computational and Theoretical Physical Sciences
 - Measurement and Sensing
 - Towards Quantum Technologies
 - New Physical Sciences for Biology and Healthcare
- Lower level of intentions at this point in :
 - Engineering for Life and Health
 - ICT for Manufacturing
 - Lightweight systems

Developing Leaders – Focus on People

■ Focus on current and future leaders

■ Current Fellowship framework:

- Merger of previous schemes

- Refresh priority areas (twice a year)

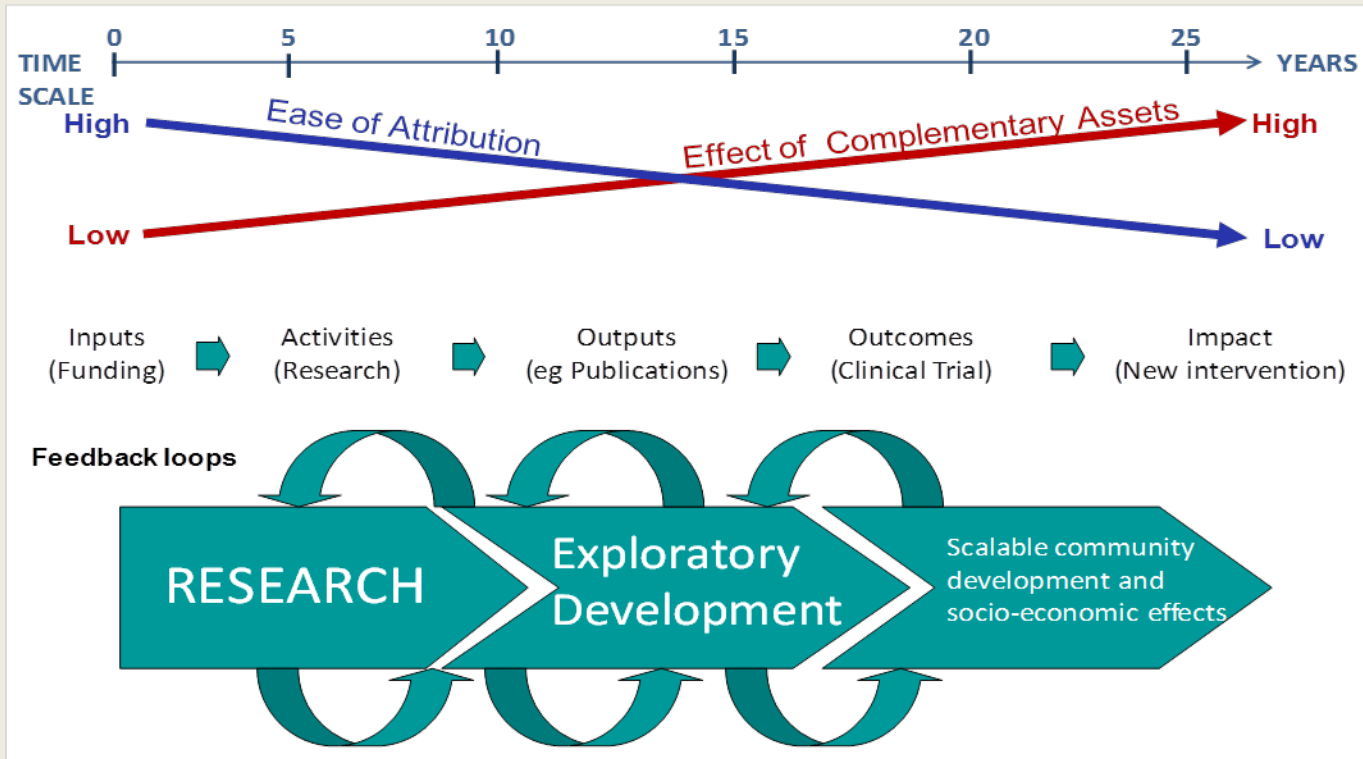
- Plans to introduce ‘Stage-Gating’ for Fellowships

■ Developing cohorts of current and future leaders:

- Theme specific initiatives e.g. INSPIRE

- Mentoring for Individual Researchers

Delivering Impact - Challenge of attribution over time



Delivering Impact – Update

■ Impact Acceleration Accounts (2012)

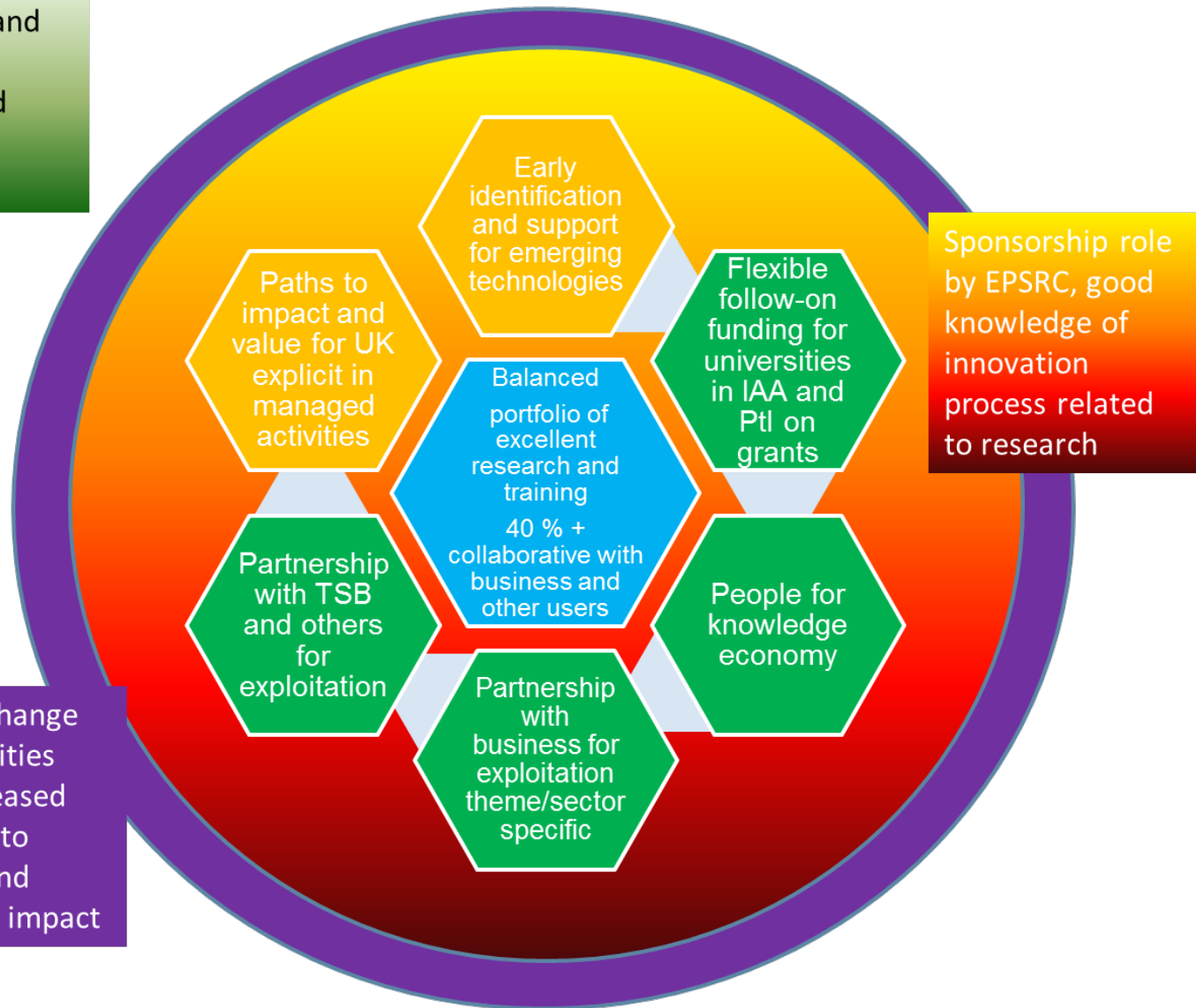
- Provide greater flexibility for HEIs / Support mobility between academia and industry
- Will require leverage from Users – de-risking of early stage innovation prior to industry uptake or TSB funding
- 31 Universities received awards

■ RCUK Gateway to Research (GtR)

- Will provide useful information about RCs portfolios - Primary audience: Business especially SMEs

Delivering Impact – Next Steps

Innovation and Research Strategy and Industrial Strategy

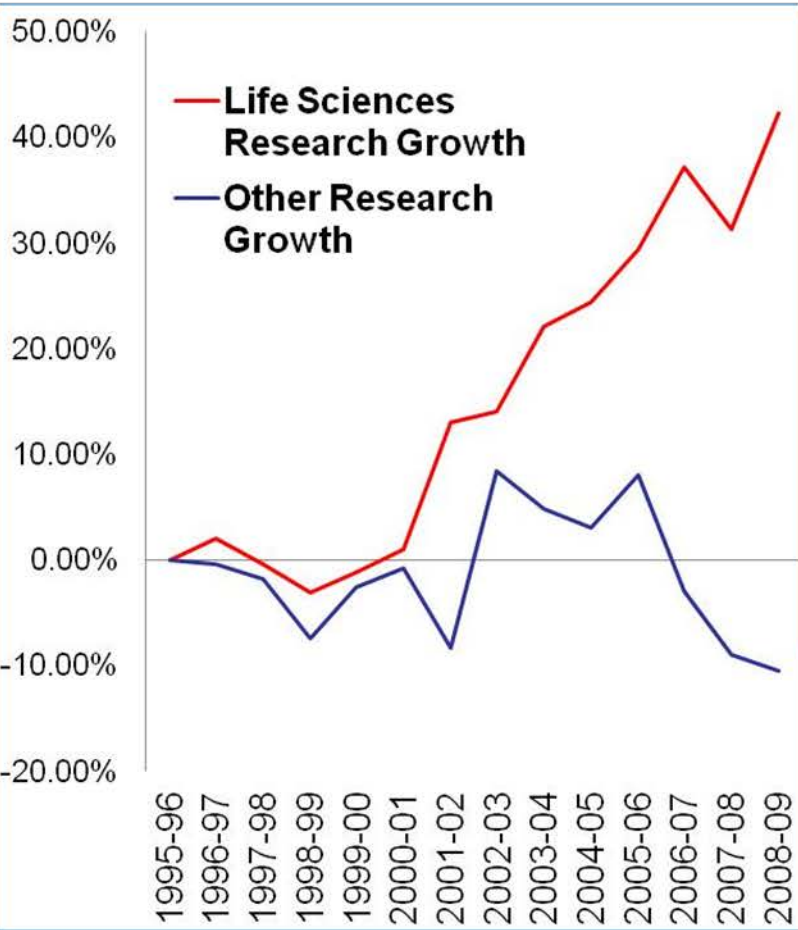


Working together towards the next SR – 2016 onwards

- **Need to increase funding** for EPS research and PhD training
- **Key messages** that we all need to communicate
 - ***World-leading discovery*** - Creating the opportunities and environment for the UK to be the best place in the world to do research
 - ***Ingenious people*** - Supporting our very best researchers throughout their careers by fostering their ambition, innovation and adventure
 - ***Fuelling innovation*** - Connecting academia with industry to capitalise on innovative research for the prosperity and sustainability of the UK
 - ***Fuelling growth and prosperity*** - Investing in world-leading discovery, ingenious people and delivering innovation that fuels long-term growth

Comparison of Research Growth in Engineering and Physical Sciences and the Life Sciences in the UK and USA

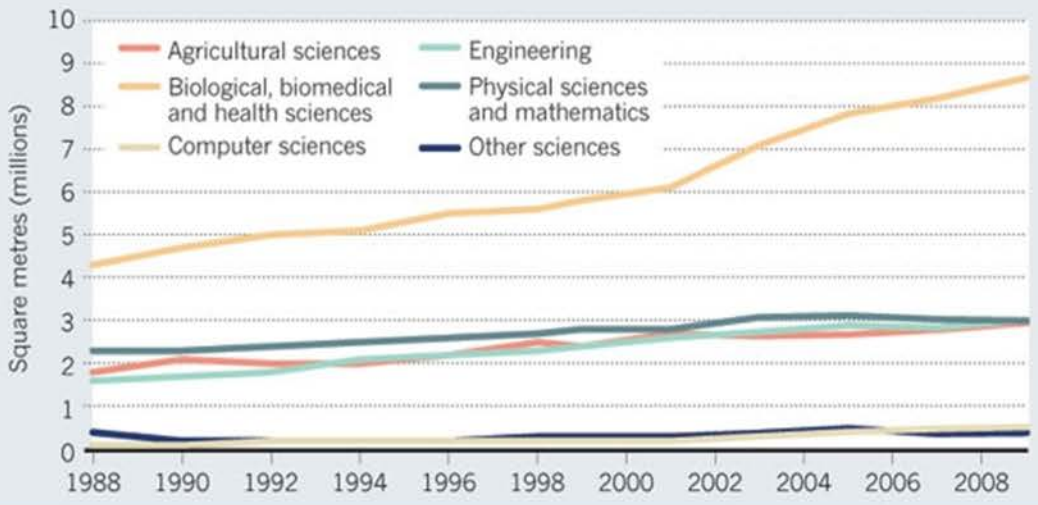
UK 1996 to 2009



USA 1988 to 2008

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



SATs – An essential advice stream for EPSRC

- Advice to Theme Leads is essential to delivery our Strategy
 - Example 1: mapping the research landscape (2010-12)
 - Example 2: priority areas for CDTs (2012)
 - Example 3: innovation in engagement
 - ICT theme days
 - Inspire (Physical Sciences)
- Thank you for your contribution!

Thank you for listening

Any Questions?

