

ENGINEERING AND PHYSICAL SCIENCES RESEARCH COUNCIL

Eng Doc: A Revolution in Postgraduate Training



Paul Golby, EPSRC Chairman

AEngD Launch

1st November 2012

EPSRC

Pioneering research
and skills

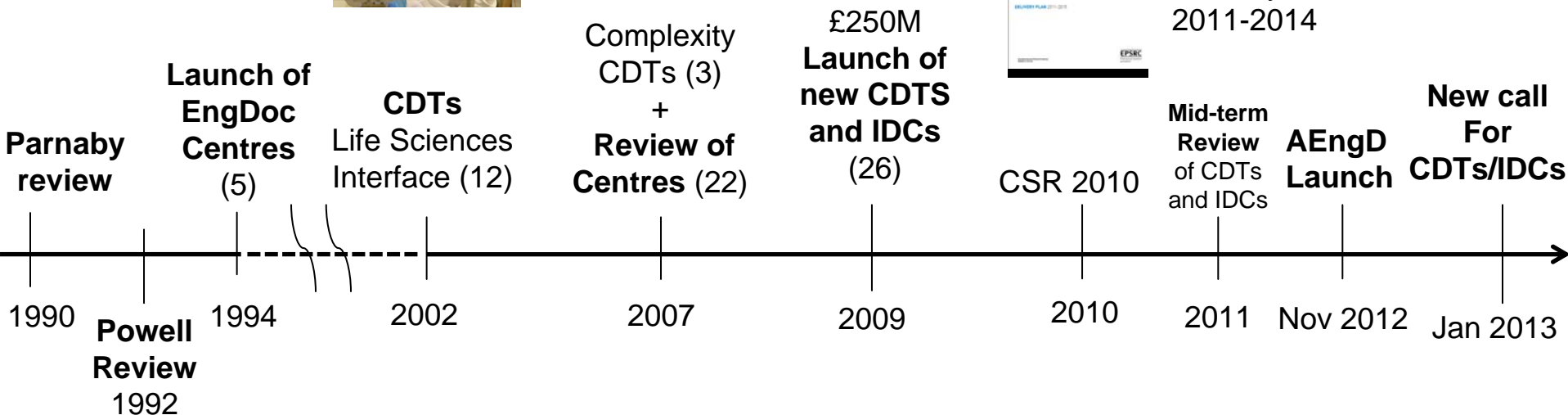
From Eng Docs to IDCs WHERE WE'VE COME FROM



EPSRC
Strategic
Plan 2010



EPSRC
Delivery Plan
2011-2014



Engineering Doctorates – Facts and Figures

- **29** Industrial Doctoral Training Centres (IDCs)
- Total spend (2011-12) = **£19M**
- No of students trained = **1400** (approx.)
- No of company partners = **600** (over time)

“Without the work done by EPSRC-funded Students, the Trent 900 would not have flown”

Colin Small(Rolls-Royce)

What Eng Docs have achieved

- Successive reviews (2007 / 2011) identified key achievements:
- High-quality KT through People
- Quality of intake / outputs from the centres
- Practical research aligned to business needs
- Combines academic learning with integration within sponsor company
- Produces people with the right skills needed by UK Businesses

Case Study 1 – Zoe McMahon



- IDC – Sustainability for Engineering and Energy Systems (University of Surrey)
- Placement with HP (1994)
- Integrating environmental management into mainstream business processes
- Now Director of Social and Environmental Sustainability and Compliance at HP

“An EngDoc is like a 4-year job interview. You are not guaranteed a job at the end but you could get a great job anywhere”

Zoe McMahon, HP

Case Study 2 – Liza Brooks

- EngDoc at Cranfield University
- True Snowboard Ltd – Co-founder and Technical director (until 2010)
- Focus on Materials, Geometry and Construction – improving snowboard design
- Entrepreneur and STEM Ambassador
- Now Engineer at Dyson (Acoustics Team)

“I think EPSRC funding is essential to pushing science and engineering further than ever before, and pushing industry forward.”



Case Study 3 – Paul Golby

- Interdisciplinary Higher Degree (Aston)
- Study into Crude Oil offshore loading systems
- Sponsored placement with Shell and Dunlop
- Focus on Materials, Construction and failure modes – improving product and system design
- 12-months site testing in Nigeria

EngDocs – Broader Impacts

- Several other UK HEIs are looking to embed CDT/IDC-style PhDs as the norm
- Internationally:
 - CDT franchised in China twinned with UK
 - Australia have already set one CDT up and track EPSRC developments very closely
 - AStar (Singapore) has set up targeted collaborations/exchanges with several CDTs in the UK

EngDocs – Future and Challenges

- Sustainability of funding / Cost sharing
- Plans for making Centres become ‘business as usual’?
- Relevance to Growth agenda / Industrial Strategy

“Centres for Doctoral Training are causing a revolution...”

David Willetts (Science Minister)