



Science & Technology  
Facilities Council

# ***Particle Physics, Nuclear Physics and Particle Astrophysics meeting***

**October 2010**

**John Womersley**

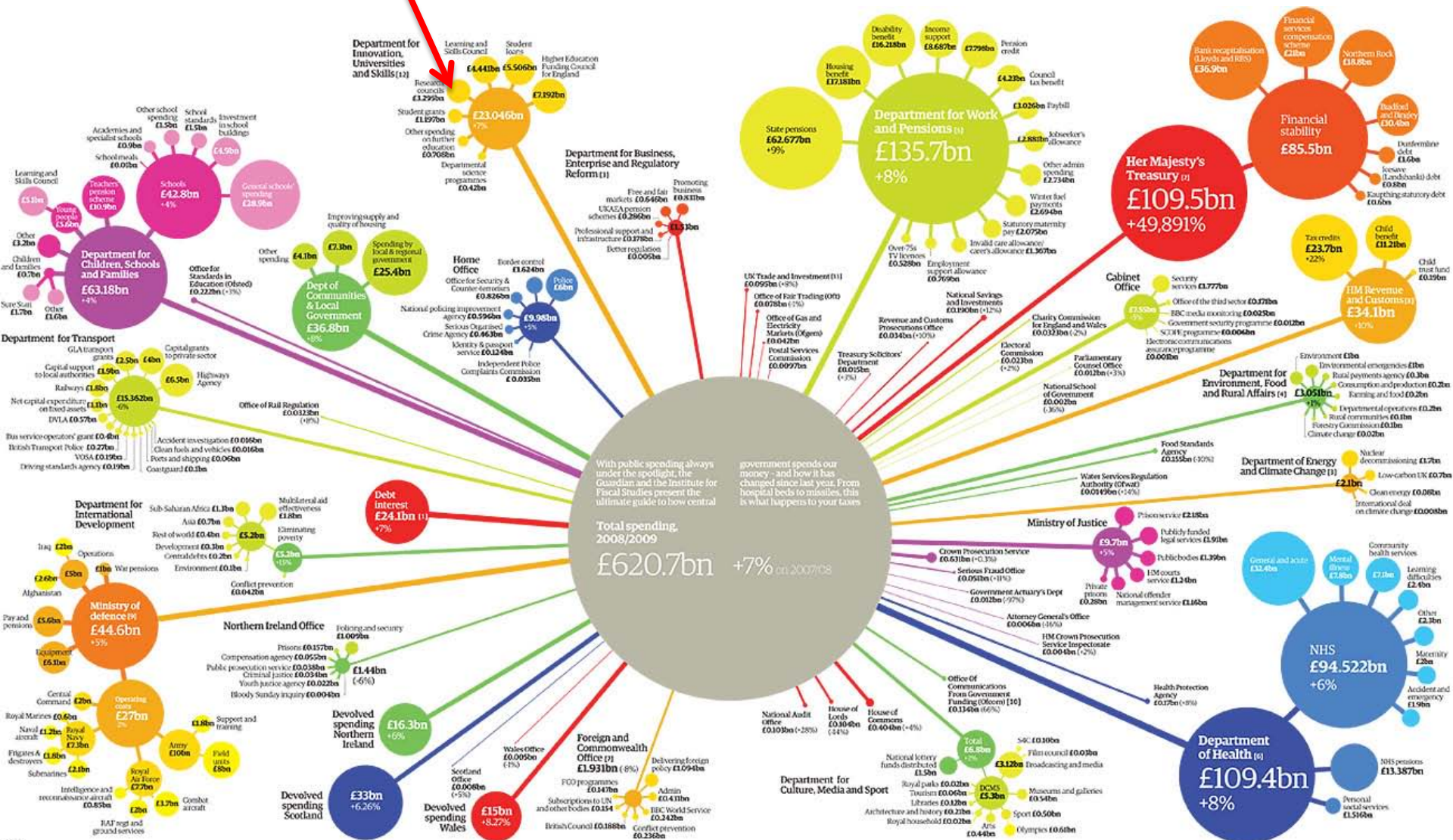
*Director, Science Programmes, STFC*

# Spending Review 2010

- On 20 October the government will announce major reductions in spending over the next four years
    - Average 25% across all departments
    - Also imposing unilateral 33% cut in “administration”
  - Ministers & Treasury appear to accept value of publicly funded science research to the taxpayer
    - Economic impact
    - PhD training
- ... but they've also made clear science won't escape cuts

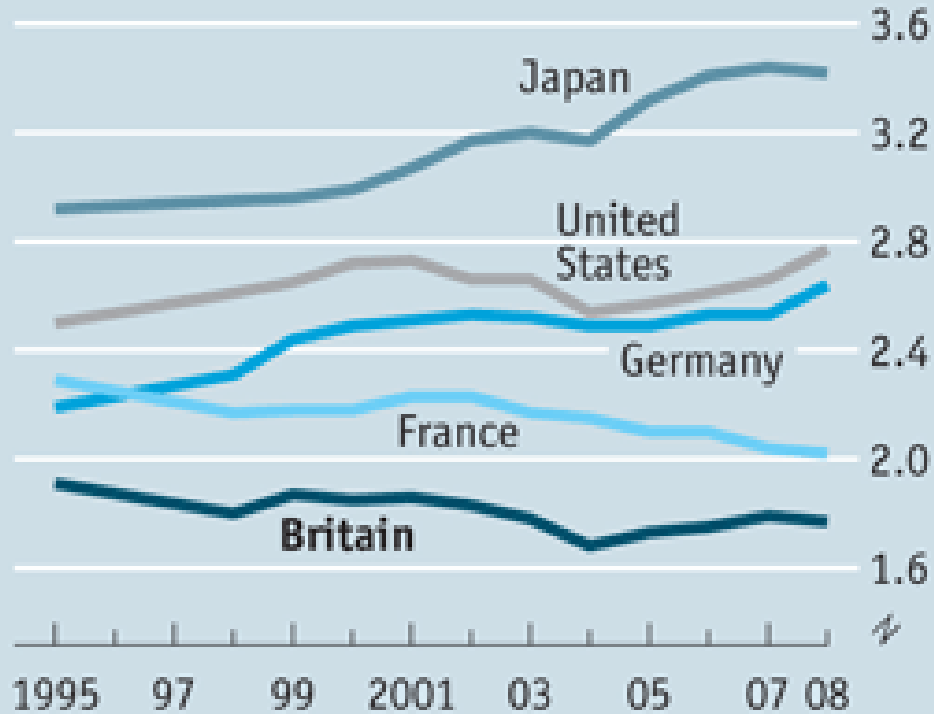


# Research councils



## On the cheap

R&D spending as % of GDP



Source: OECD, Main Science and Technology Indicators



# Spending Review 2010 Timeline

- BIS are in final negotiations with Treasury
- Research Councils are continuing to iterate with BIS
  - Describing impact of various funding scenarios
  - Addressing specific requests
- Final BIS allocation will be confirmed on October 20<sup>th</sup> as part of a public announcement of the SR outcome
- BIS will then carry out their internal review
- We may know the individual Research Council budgets by December? Earlier?



# Scenarios

	Near cash	Capital
A	flat	-33%
B	-10%	-33%
C	-20%	-50%

Government's targets are over four years and with respect to an inflating baseline, so their "25% reduction" is equivalent to a reduction of about 15% in cash terms



# Delivery plan status

- Must address the 33% reduction in administration costs under all scenarios
- Assuming that the STFC budget is partitioned into 3 areas; International subs, UK facilities, and core programme, and applying the scenarios separately to each area.
- Assuming full international compensation for currency fluctuations and transfer of space programme to UKSA.
- STFC Council CSR Planning Group developed delivery plan, taking input from Science Board.
- Most recent information to BIS on 30 September; we are continuing to respond to questions and expect more “homework”



# Why fund science in 2010?



- 1. Impact on the economy**  
recovery from recession,  
knowledge economy
  
- 2. Address the big challenges facing us and the world**  
energy, environment,  
healthcare and security



# To do this we need a *long term vision*

- Young people must be attracted into STEM to underpin future workforce
  - role of inspirational science - particle physics, nuclear physics and astronomy
- Access to world class research facilities and technology
- Bringing researchers together across disciplines and connecting national laboratories, academia and industry
  - solutions to these cross-disciplinary challenges will not be found within any of these alone



# ...and hence our plan for 2010-14

- Funding clearly constrained for the next four years
- *But* the importance of science is growing – scientific and technical innovation is increasingly key to our future prosperity, security and wellbeing
- We need to find ways to maintain our scientific position on reduced funding levels without causing permanent damage to our long term prospects



# and do great science...



T2K barrel ECAL now installed in the ex-UA1 magnet at J-PARC



Science & Technology  
Facilities Council

- Let's assume our arguments are well received and we are successful in making the case
- this might mean that STFC does better than the –25% average across government: what if we ended up with –15% for example?
- *We have therefore started to ask the research communities:*

*If we are still faced with serious and real reductions, what is your vision for this area of research?*



# Some questions for today

- Research concentration vs. maintaining national breadth (in support of undergraduate education)?
  - Physics is already concentrated: 80% of STFC funding goes to only 16 institutions
- University institutes/consortia to maintain critical mass in strategic but vulnerable science areas
  - Nuclear Physics and Particle Astrophysics?
- Importance of studentship training schemes?
- Some kind of fellowships scheme to retain key talented researchers in UK?



- Role of national laboratories
  - Greater complementarity (especially in areas such as particle physics) between technology role of labs and science exploitation role of universities
  - Concentration of research equipment at national laboratory sites
- What capabilities (or technologies) have the greatest potential to contribute to the global challenges (health, energy, environment, security) and how best could these be exploited?



# Grant Funding Mechanisms Review

- Panel chaired by James Stirling reviewed grant funding mechanisms in PP, NP and A
- Carried out consultation on three possible options
- Panel's recommended option takes account of consultation inputs and is not exactly any of the three options proposed
- Will continue to allow for long term support for ongoing research efforts
- Consistent with need for administration savings
  - a streamlined, simpler system
- Recommendations presented to PPAN, goes to Science Board next week and Council later this month





# discussion