THINGS TO DO AS A PHD STUDENT

DR ANNE CLAIRE PAWSEY

Outline

- My Background
- Outreach
- POST Fellowship
- Conferences and Summer Schools
- Mentors
- Unintended Consequences

My Background

- MSci “Physics with Study in Continental Europe” (2009) University of Bristol.
- PhD “Colloids at Liquid Crystal Interfaces” (2014) University of Edinburgh.
- Post-doc Rowett Institute University of Aberdeen

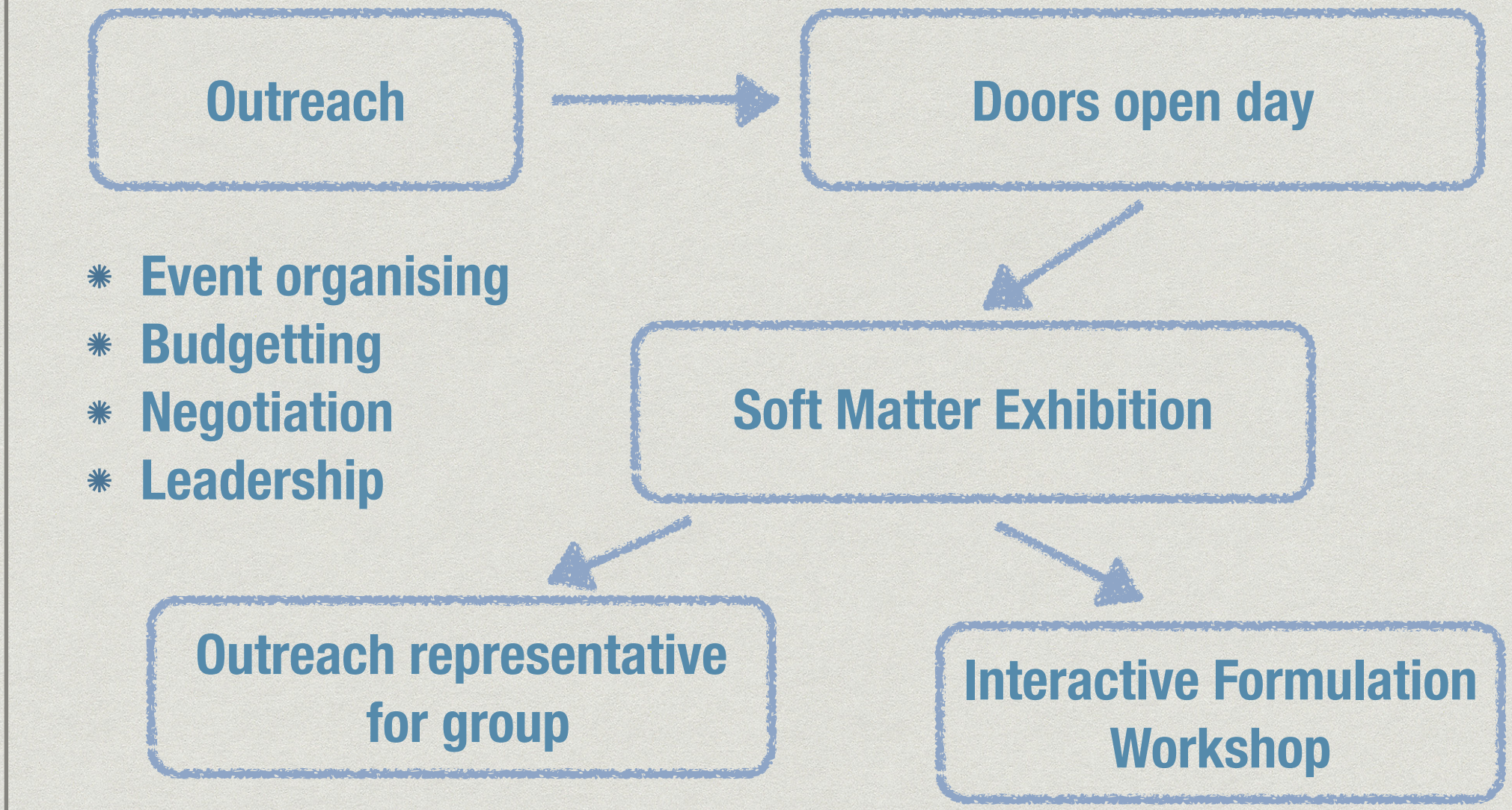
OUTREACH

“WE WILL HAVE STUDENT LED OUTREACH”

OUTREACH

OUTREACH

One Thing Leads to Another



OUTREACH SKILLS

NEGOTIATING WITH MORE SENIOR ACADEMICS
BUDGETING
EVENT PLANNING AND ORGANISATION
PROJECT MANAGEMENT
COMMUNICATION

POST FELLOWSHIP

HOUSES OF PARLIAMENT
PARLIAMENTARY OFFICE OF SCIENCE & TECHNOLOGY

POSTNOTE

Number 443 September 2013

Autonomous Road Vehicles

Vehicles capable of driving without human intervention are rapidly moving up the policy agenda. Legislation in Nevada, California and Florida now means that they are being tested on public roads for the first time. This POSTnote reviews recent technological and policy developments in this area. It looks at how road safety, the environment and congestion could be affected, and examines barriers to adoption.

Overview

- Autonomous vehicles could improve road safety and reduce congestion and emissions. However this is an emerging area of technology and it is uncertain to what extent the potential benefits will be realised.
- How autonomous vehicles could interact safely with other road users, and how they would communicate with each other, are the focus of ongoing research.
- There is no UK legislation governing autonomous vehicles and there are no EU standards.
- The main policy challenges are verifying the safety and reliability of autonomous road vehicles and creating a legal framework to allow their testing and deployment on public roads.

Background

Autonomous vehicles have existed as prototypes and demonstration vehicles since the 1970s. A fully autonomous vehicle capable of completing an entire journey on public roads without any human input is still some way from being realised. However, recent high profile demonstrations by automobile manufacturers and university research groups, and by Google, have intensified interest in the technology. In July 2013 the Minister for Science and Universities announced a £6 million investment in autonomous vehicle technology. The Department for Transport (DfT) has indicated that trials of autonomous vehicles on UK public roads will be underway during 2013.[1]

Autonomous vehicles (whether cars, buses or trucks) have the potential to improve road safety, increase fuel efficiency and reduce congestion. However, there are many technological and policy barriers to be overcome. This note summarises:

- recent policy developments in the UK and overseas
- technology and research efforts in the UK
- how road safety, traffic management and the environment could be affected
- barriers to adoption of autonomous vehicles.

Recent policy developments

DfT announced in July 2013 that it "will work to encourage the development and introduction of autonomous vehicles".[1] The Automotive Council, chaired by the Business Secretary, sees autonomous vehicles as an important technology for the UK, especially given the strength of UK based automotive research and development, and wishes to promote UK based expertise.[2]

There are several EU funded programmes of research on both the technology and policy implications of autonomous vehicles. The European Commission has a working group on automation in road transport, which is cooperating with the US and Japanese departments of transport to develop research strategies and international standards. DfT is involved in these international negotiations. Three US states (Nevada, California and Florida) have enacted legislation to allow autonomous vehicles to be tested on public roads. The US National Highway Traffic Safety Administration (NHTSA) has issued preliminary guidance for states considering similar legislation.[3] Spain, Italy, Finland and Greece all have some degree of legislation governing their use but at present there is no specific UK legislation.

The Parliamentary Office of Science and Technology, 7 Millbank, London SW1P 3JA T 020 7219 2840 E post@parliament.uk www.parliament.uk/post

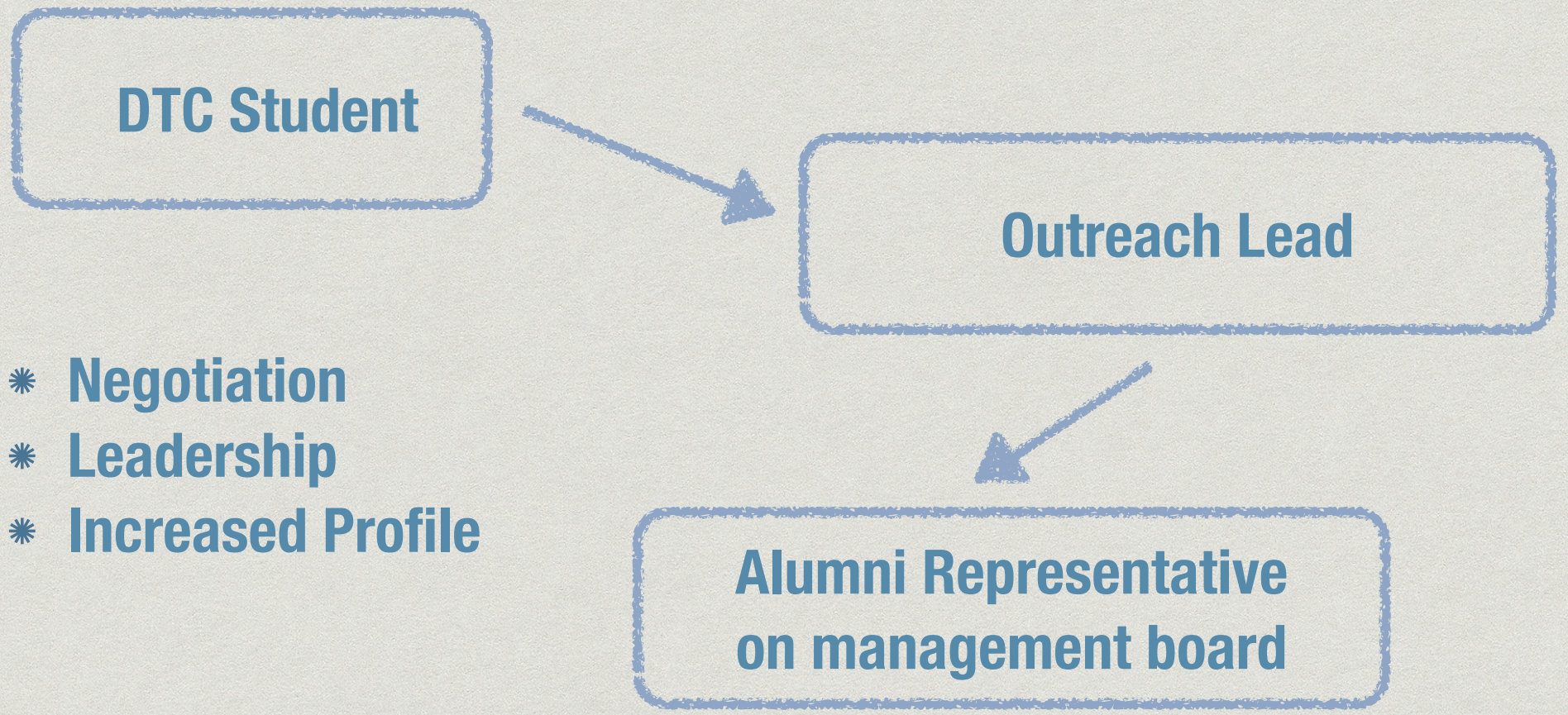
POST FELLOWSHIP

HOW POLICY IS MADE
THREE LETTER ACRONYMS
BEHIND THE SCENES ACCESS
A REASONABLE FLUENCY IN
BUREAUCRAT

SHELL AND IOP VERY EARLY CAREER WOMEN PHYSICIST OF THE YEAR

2013

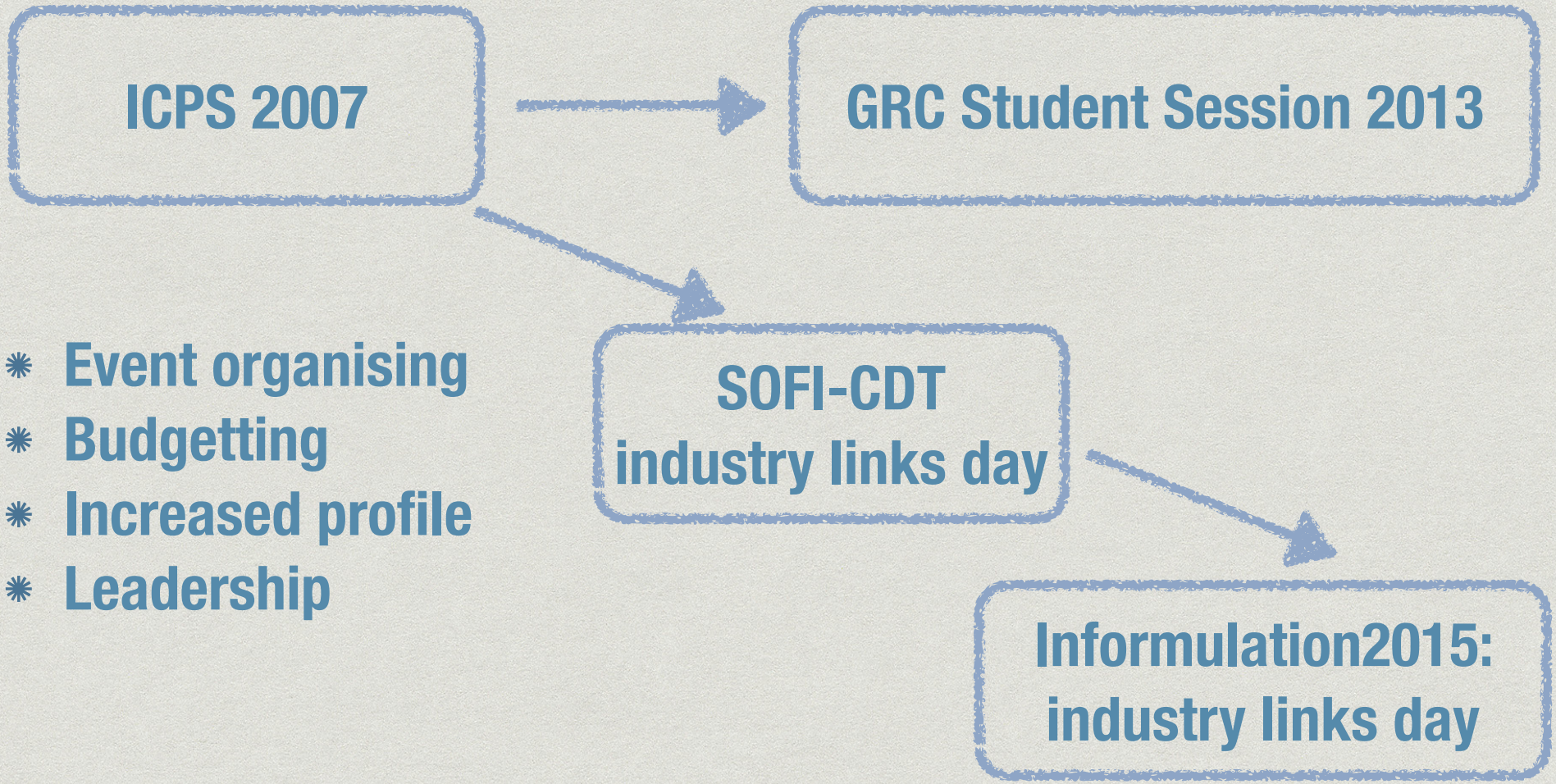
One Thing Leads to Another



- Negotiation
- Leadership
- Increased Profile

CONFERENCES AND SUMMER SCHOOLS

One Thing Leads to Another



- Event organising
- Budgetting
- Increased profile
- Leadership

CONFERENCES AND SUMMER SCHOOLS

RAISE PROFILE
FIND MENTORS
PEER SUPPORT
PROFESSIONAL NETWORKS

Mentors - no single, formal mentor

Mentors / Supervisors

Mentors from Conferences

Supervisor didn't attend Liquid Crystal conferences…so was "adopted" by other academics who have been generous with advice about careers/projects

Mentors Outside My Field

Good to get outside disinterested perspectives

LIFE AWAY FROM WORK

Conclusions

- Talk to everyone and ask questions.
- Have fun.
- Don’t do things (just) for the CV.
- Saying yes often leads to interesting and unexpected opportunities.

ICPS 2007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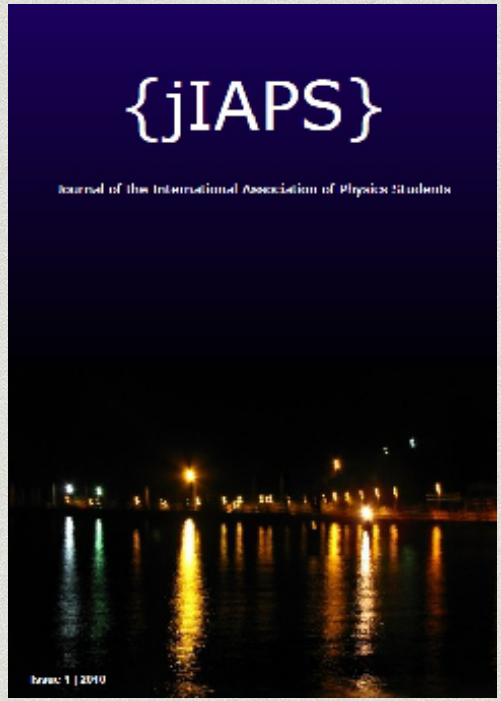
2007
London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