Industrial Doctorate Centre in Systems

www.bristol.ac.uk/eng-systems-centre/idc/

Developing future leaders for a complex world

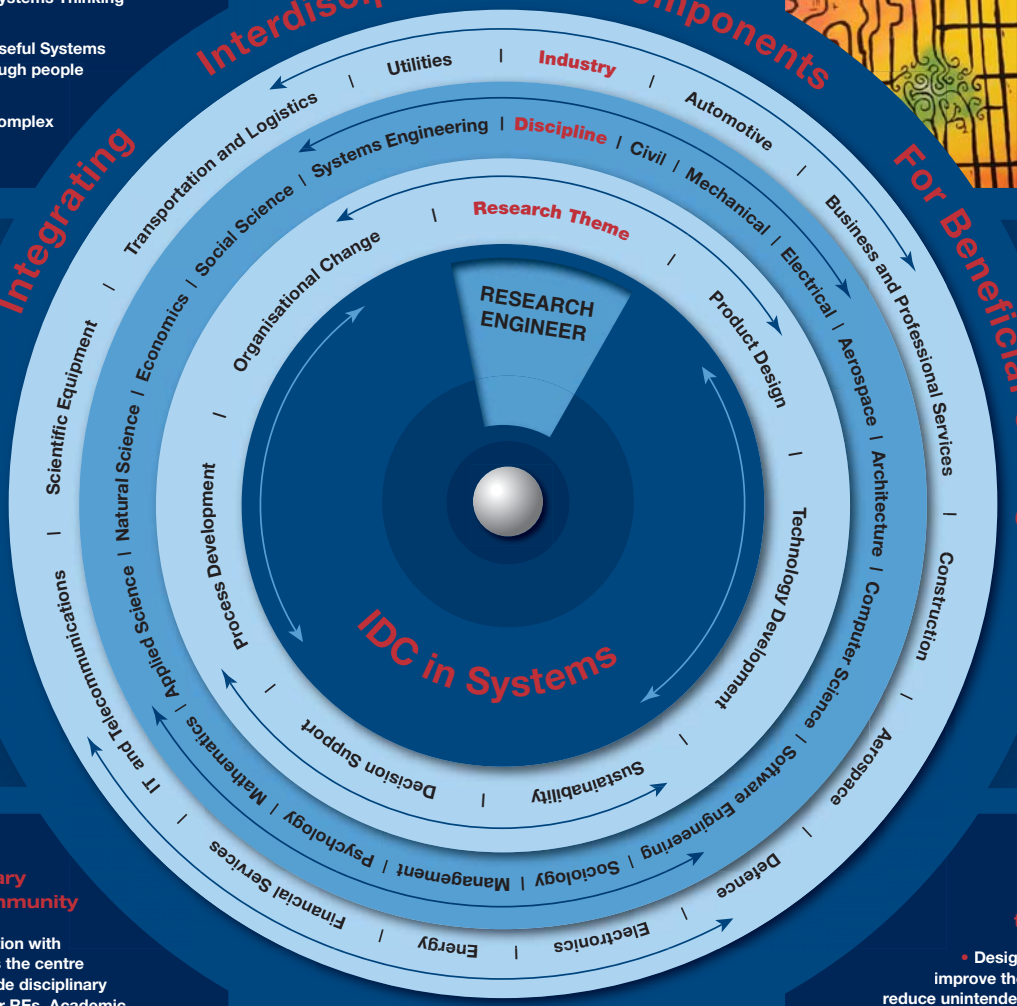
Through bespoke professional development programme, research activities and a unique taught programme in Systems the Research Engineers are learning:

- to integrate across diverse research traditions
- how to apply systems models to major research programmes, with novel content beyond the boundaries of current knowledge
- how to practice Systems Thinking in the real world
- to deliver a purposeful Systems performance through people and processes
- to be leaders of complex research projects in industry.

Delivering impact in industry

More than 40 UK-based and international companies currently sponsor the EngD in Systems programme. A key benefit from the application of systems thinking to engineering projects is to be able to move from innovative conceptual designs to real-world engineering solutions more rapidly, and achieve this in complex environments (organisations).

Blake Kendrick, Cohort 6 with Renishaw communicating complexity through art



Building an interdisciplinary research community

Through collaboration with industrial sponsors the centre draws upon the wide disciplinary backgrounds of our REs, Academic and Industrial Supervisors. This has led to a multidisciplinary research portfolio of 80 EngD in Systems research projects.

Paul Waterfall, Cohort 5 with Imetrum on site

Delivering original contributions to knowledge

- Designing for synergy to improve the performance and reduce unintended consequences in complex systems
- Integrating engineering perspective (e.g. safety, quality and sustainability) in the design process
- Applying systems modelling for interdisciplinary knowledge exchange, decision support and stakeholders engagement.

LEARNING TOGETHER

EPSRC Engineering and Physical Sciences Research Council

University of BRISTOL

UNIVERSITY OF BATH

London Gatwick Airport, Toshiba, Airbus, Rolls-Royce, Frazer-Nash Consultancy, Capgemini, Buro Happold, GKN, Aero Engine Controls, Systemic Consult Ltd, Ramboll, Parsons Brinckerhoff, Vestas, Power, Met Office, Rencol, Fujitsu, Broadcom, [dstl], Boeing, Halcrow, Provision, EADS, Renishaw, ARUP, Agusta Westland, GCHQ, cfms, Saint-Gobain, Thales, PC IP, CR CheckRisk, babcock, TWI, Triumph, British Energy, Parker, sustain, Balfour Beatty, DRTS, iMETRUM, usefulsimpleprojects, BAE SYSTEMS