

How to develop generic skills: Developing knowledge of enterprise

Swansea University – Industrial PhDs

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Research and Innovation Office

www.swansea.ac.uk/research-innovation

Swansea University

An aerial photograph of Swansea University. The university's main campus is a cluster of modern, multi-story buildings with flat roofs, situated on a green hillside. To the left of the campus is a wide, sandy beach that curves along the edge of a large bay. The water in the bay is a deep blue, and the sky above is a clear, light blue. In the background, the city of Swansea is visible, with a dense residential area and a large green field. The overall scene is bright and sunny, with clear shadows cast by the buildings and trees.

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Outline

- o Introduction to Swansea University
- o Postgraduate Skills Agenda
- o EngD in Steel Technology
 - Sectoral Focus
 - Programme Management
 - Programme Structure
 - Assessment
 - Completion Rates
- o Intellectual Property

Introduction to Swansea University

- ❑ Founded 1920
- ❑ £30m Annual Research Funding
- ❑ 10,000 Students
- ❑ Wales, UK
- ❑ Research-led University
- ❑ Growth in Student Numbers/Research Income
- ❑ Wales HE Sector – Cardiff, Swansea, Aberystwyth, Bangor
- ❑ Key Academic Strengths
 - ❑ Engineering (Mechanical, Materials, Civil, Electrical, Chemical)
 - ❑ Life Sciences/Medicine
 - ❑ Geography (Human Geography, Climate Change)
 - ❑ Human Sciences (Childhood Studies, Ageing, Psychology, Sports Science)
 - ❑ Telecommunications (Biosensing, Wireless Technology)

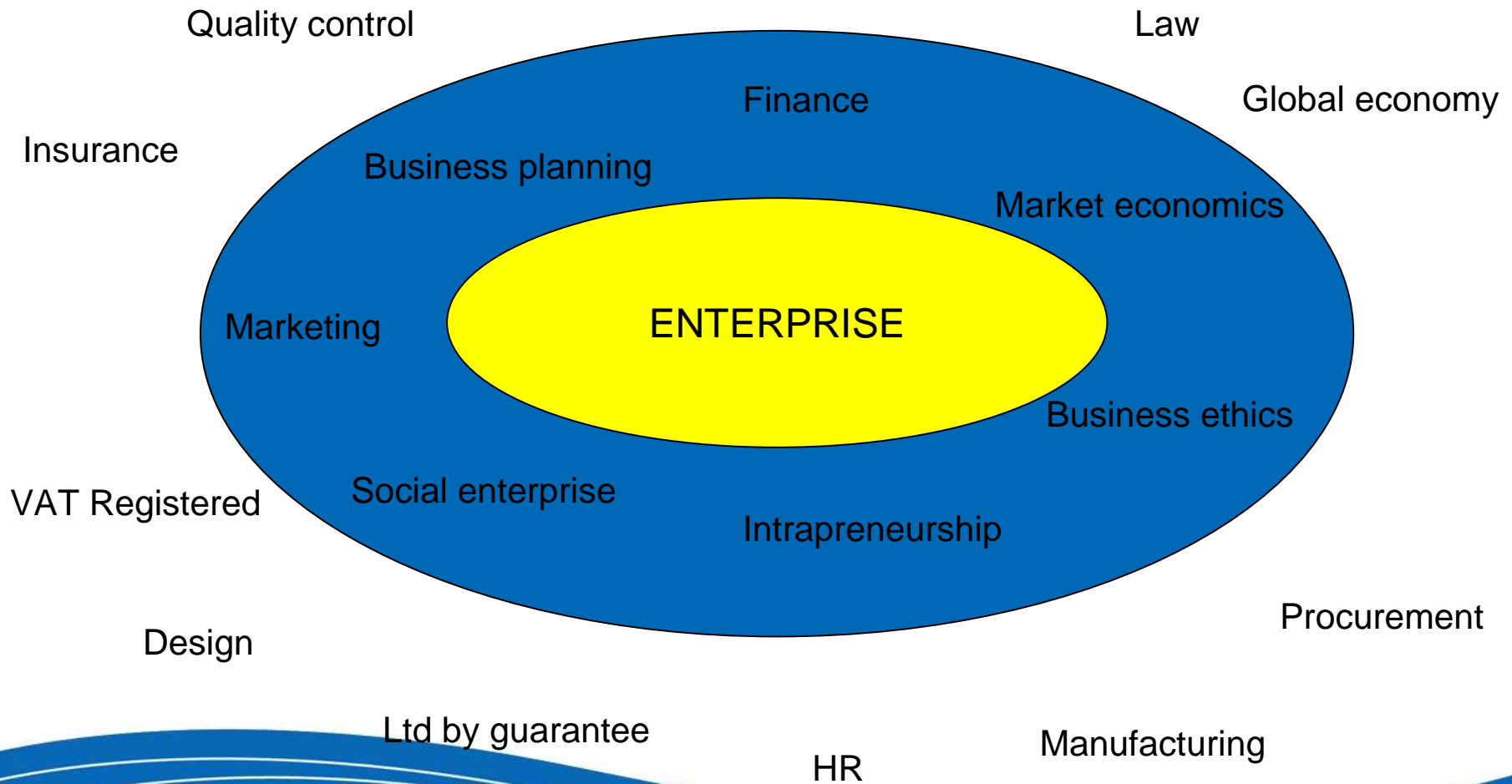
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Postgraduate Skills Agenda

- ❖ Industrial PhD Programmes in Electrical/Materials/Chemical Engineering, Water Management, Print, Aquaculture
- ❖ Technical v Vocational
- ❖ Employability Skills – seminar programmes, industry supervision
- ❖ Commercial Exposure
- ❖ Intrapreneurship
- ❖ SME – Driving the Business!
- ❖ Intellectual Property – Realising the Value...

Enterprise Skills



EngD in Steel Technology

Programme Aims

EngD Graduates will have the Technical Capabilities, Professional Skills and Personal Attributes essential to future career success at Technical, Managerial and Executive level.

Sponsoring companies

Corus Group

Akzo Nobel

Land Rover / Jaguar

Crown Cork and Seal

Cogent Power

Qinetiq

Bayer Materials Science

BASF

Beckers

Rockfield Software

Newport Galvanisers

JCB

TWI

Niobium Products

Alstom

Wedge Group Galvanisers

Wales Waste Management

Dyesol

Alstom

Castech

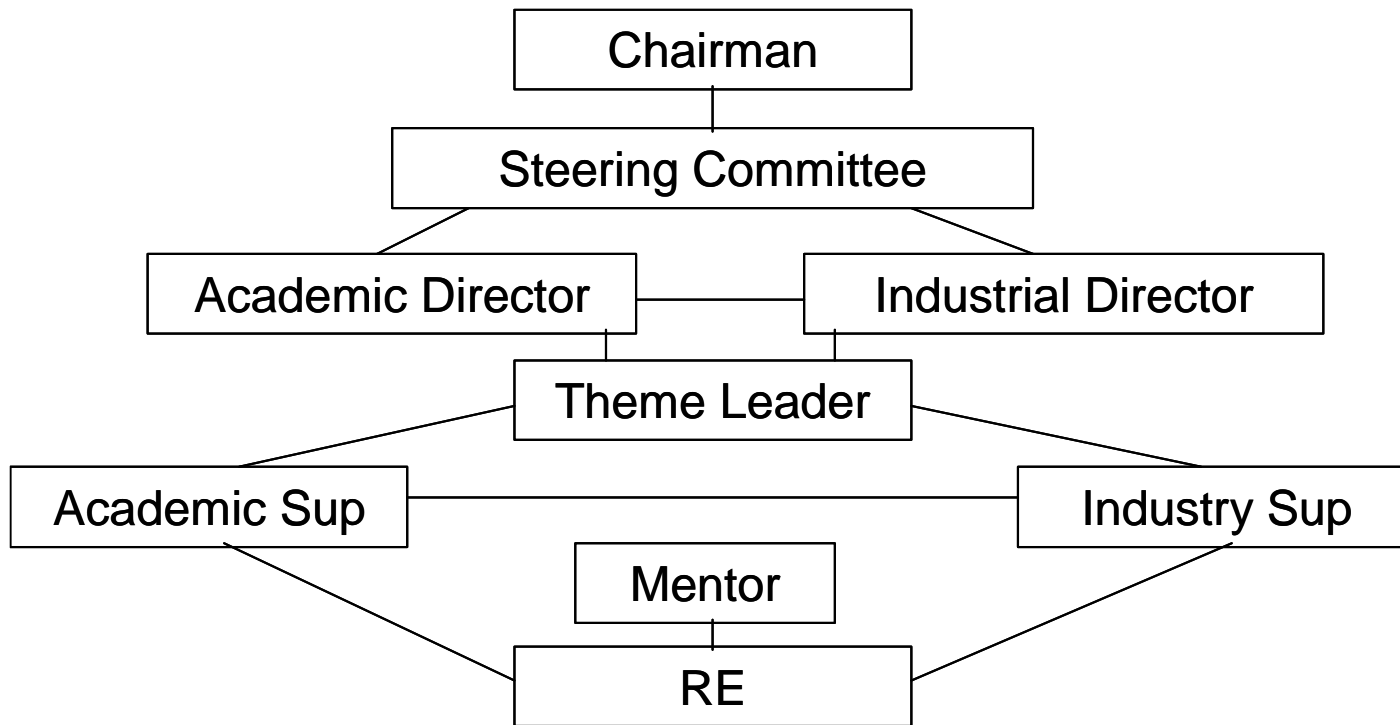
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Programme Management



Currently 41 REs enrolled at 4 Welsh HEIs

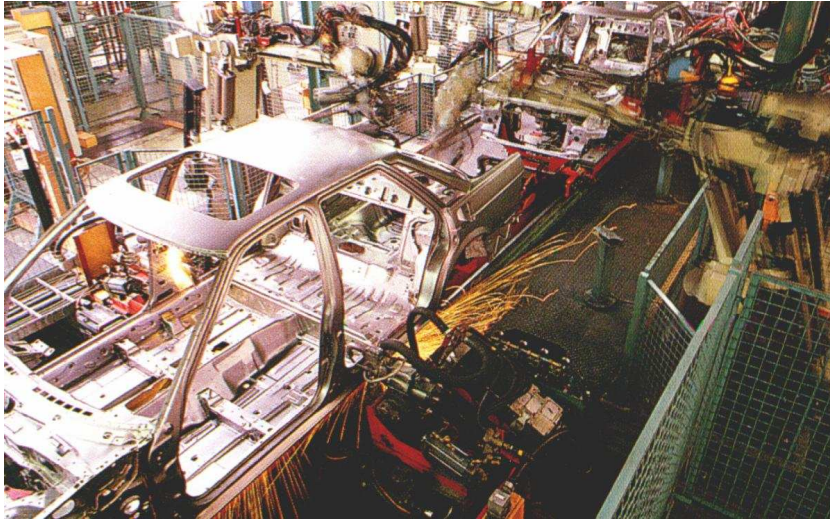
Training Programme (19 compulsory modules)

- Technical and professional skills modules
- Management and financial issues training
- All modules are examined
- Opportunities for specialist courses

Industrial site visits

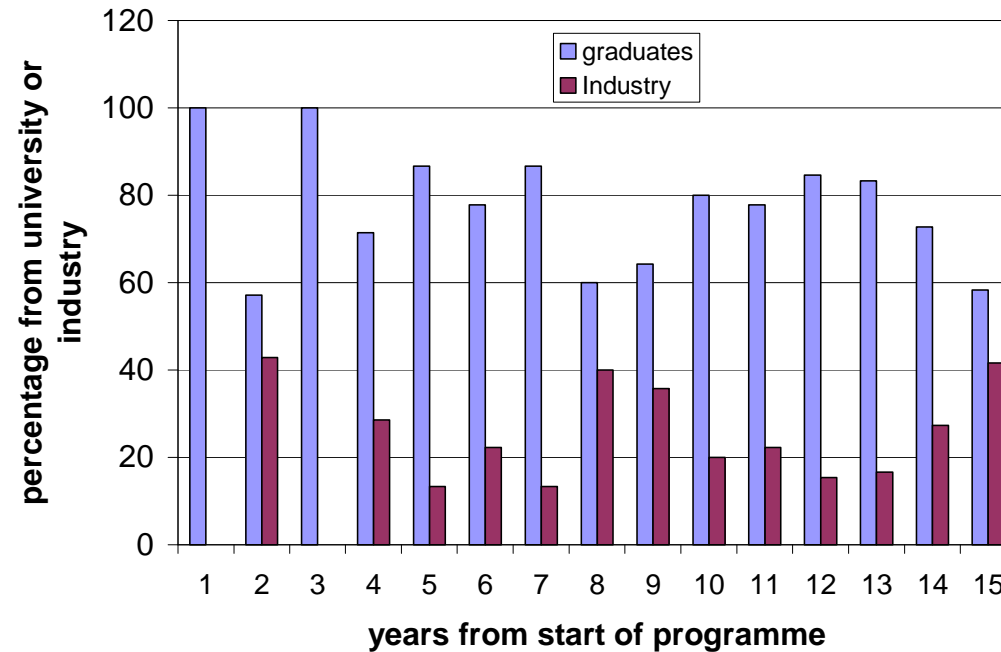
- Centre organised tours to Holland, Germany and France
- Similar centre organised visits to UK locations
- Opportunities to perform collaborative research in Europe

Industry Selected Research Project



Research Performed at Industrial and University Locations

Background of Intake



All with minimum 2.1 equivalent in science or engineering

Assessing Progress

Regular Meetings with Supervisory team

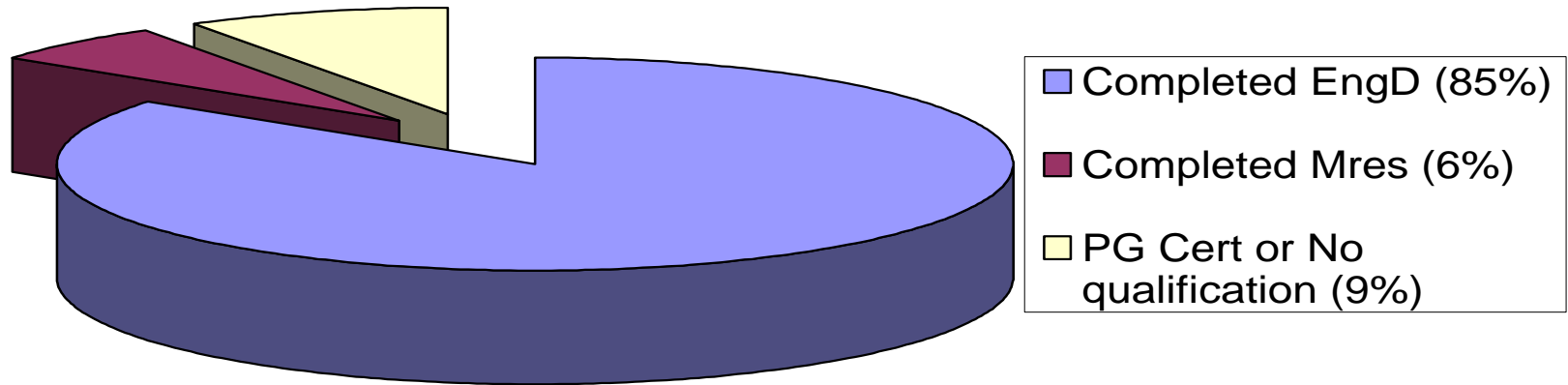
4-Monthly Review Meetings

Maintenance of Personal Log

Annual Appraisal

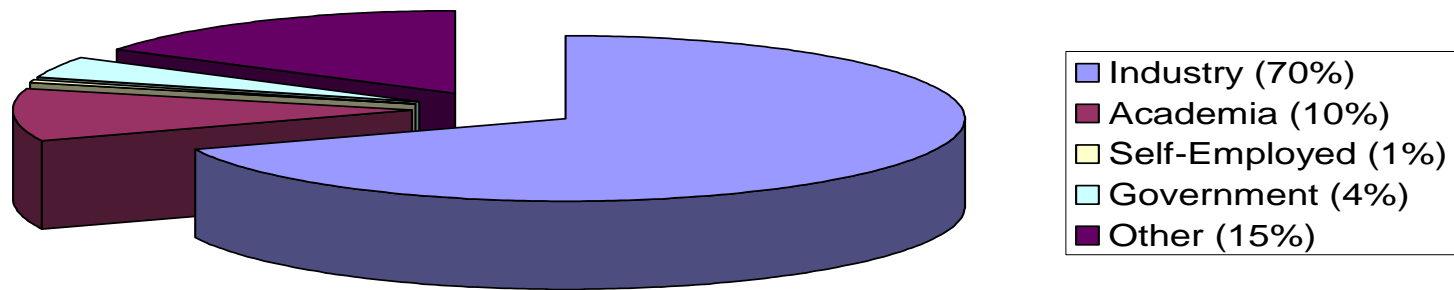
Performance Related Pay

Completion Rates



124 EngD graduates to-date

Employment by sector



EngD in Steel Technology; the future

- Expanding partnership (ICL, Sheffield and Tata)
- Flexible training portfolio (IPD for industrial partners)
- Clusters of research activity; functional materials

- New EngD topics (Energy, Water and Environmental Management)

Financial Support

- Scheme funded by EPSRC
- Stipend of £16,600
- All associated costs such as fees, training are covered by the industrial partner
- Travel allowance
- Tour of UK and European Manufacturing Plants
- Gala Dinner with Industrialists

Intellectual Property

- Defining Background Intellectual Property (IP)
- Agreeing Terms for Use of Foreground IP – limit to specific fields/markets
- Commercialisation Plan: Buy-in from the University and Company Important
- Understanding and Protecting the Student Rights
- Publication Clauses – Vital!
- State Aid – Complex and Risky
- **IP as a Career Platform**

Three Party Approach

The Company – WIN?

The University – WIN?

The Student – WIN?

Thank you

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