



The Royal Academy  
of Engineering

# PROGRAMME PLAN FOR GRANT-IN-AID ACTIVITIES

*SPENDING REVIEW PERIOD*  
*2005/6 -2007/8*

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## INTRODUCTION

1. On 7 March 2005 the Secretary of State for Trade and Industry announced the allocation of the Science Budget for the period 2005/06 to 2007/08. The amount of Grant-in-Aid allocated to the Academy in each year of the spending review will be £5.85 million in 2005/06, £7.885 million in 2006/07 and £9.752 million in 2007/08. This document sets out how the Grant-in-Aid will be spent on the various programmes, and explains the purpose, targets and outcomes of each programme.

## FINANCE

2. The allocation in the Spending Review represents a major vote of confidence in the work of the Academy. Support from the OST through Grant-in-Aid is of vital importance not only for its own sake but also as a 'pump-primer' in order to attract third party finance. In this the Academy has been very successful, and the Academy can often secure double or treble the amount of Grant-in-Aid spent on programmes from industrial sponsors. The Academy believes that its ability to attract third party funding at this level to its programmes is a key performance indicator.

3. The planned expenditure on each programme and the additional funding that the programmes will attract is shown in Annex 1. The major sources of income and destination of expenditure from 1985/86 up to the end of the planning period in 2007/08 is shown graphically in Annex 2. The main financial effects can be summarised as:

Year	Source of Funding			Destination of Expenditure		
	Grant-in-Aid	Non Grant-in-Aid	Total	Admin Spend	External Spend	Total
£000s						
2005/06	5,850	15,842	21,692	3,154	18,538	21,692
2006/07	7,885	18,736	26,621	3,248	23,373	26,621
2007/08	9,752	21,967	31,719	3,344	28,375	31,719

## GOVERNANCE

4. The governance structure of The Academy is shown in Annex 3. Overall responsibility for the governance of The Academy at a strategic level rests with the Council which meets four times per year, the officers of Council also meet four times per year between Council meetings. Council acts through a number of standing committees which control activities on the programmes either directly or through steering committees for individual programmes. The permanent secretariat staff, led by the Chief Executive, provides the administration for the programmes.

## STRATEGIC PRIORITIES

5. The leadership and expertise for the Academy's activities is provided by its Fellowship, which comprises the UK's most eminent engineers. The Fellowship has established three strategic priorities which guide the work of the Academy:

- ***Enhancing national capabilities***

As a priority, we will encourage, support and facilitate links between academia and industry. Through targeted national and international programmes, we will enhance – and reflect abroad – the UK's performance in the application of science, technology transfer, and the promotion and exploitation of innovation. We will support high quality engineering research, encourage an interdisciplinary ethos, facilitate international exchange and provide a means of determining and disseminating best practice. In particular, our activities will focus on complex and multidisciplinary areas of rapid development where we believe we can make a difference.

- ***Recognising excellence and inspiring the next generation***  
Excellence breeds excellence. We will celebrate engineering excellence and use it to inspire, support and challenge tomorrow's engineering leaders. We will focus our initiatives to develop excellence and, through creative and collaborative activity, we will demonstrate to the young, and those who influence them, the relevance of engineering to society.
- ***Leading debate***  
Using the leadership and expertise of our Fellowship, we will guide informed thinking; influence public policy making; provide a forum for the mutual exchange of ideas; and pursue effective engagement with society on matters within our competence. The Academy will advocate progressive, forward-looking solutions based on impartial advice and quality foundations, and will work to enhance appreciation of the positive role of engineering and its contribution to the economic strength of the nation.

## **PROGRAMME AIMS AND PERFORMANCE TARGETS**

6. The following section contains a detailed description of the programmes. The aims of the programmes are summarised in Annex 4, and the performance target in terms of numbers of posts to be awarded, external and internal expenditure are set out in Annex 5.

### ***Activities principally in support of 'Enhancing National Capabilities'***

#### **Support Industry/Academia Links**

7. **Research Chairs and Senior Research Fellowships** are run in partnership with universities and industrial organisations. The scheme promotes industry/academia links and is in line with the recommendations of the Lambert Report. The benefits to both companies and universities in such a relationship are extremely valuable to both, as evident by the high level of financial support from industry. This is a flagship scheme which provides an important mechanism for promoting direct interaction between industry and academic researchers in fields of common interest.

8. **Visiting Professorships** bring industrial experts into the universities. They were created, initially, in Principles of Engineering Design then in Design for Sustainable Development. More recently the programme has included Integrated Systems Design, and will be extended to Industrial Design and Innovation. The programme supports the need, identified in the DTI's Innovation Report, to promote industrial design for innovation, as well as the need, identified in the Roberts Report (SET For Success), for high quality undergraduate courses. The purpose of the visiting professorship programme is to ensure that undergraduate engineers and academic staff are educated in those important key disciplines necessary for companies to compete successfully. The visiting professors are all senior practising engineers who bring a wealth of practical experience to the subject. The universities also benefit from the contacts with companies which are built up during project work. The programme has the added benefit, particularly to SMEs, that networks of experts have been created which bridge the industry-academe divide.

9. **Industrial Secondments** enable university academic staff to be seconded to industrial companies to work on engineering projects. The industry/ academia links created by the scheme are directly supportive of the aims of the Lambert Report. This programme provides for lecturers in engineering to work on a project in industry for up to six months full-time or for longer part-time. The individual gains up-to-date experience of current industrial practice, with the result that this experience is translated into case study material and can be used for new course design. The host also gains by having specialist expertise available within their organisation in support of real projects. There is much evidence to show that in many cases the link established between a company, a lecturer and his/her university is continued and developed once a secondment has been completed.

### **Promote World Class Research**

10. **Research Chairs in Emerging Technologies** will be created for outstanding individuals. Such appointments would be for a period of up to ten years, enabling the individual to concentrate on research in areas which have not attracted significant support from industrial companies. The opportunity and freedom, thus provided, to establish a new and potentially important centre of research excellence would be in direct support of the technology strategy identified in the Innovation Report. The programme will be launched with an initial appointment in 2007/08. The eventual aim would be to have a maximum of 10 posts to be achieved over a ten year period.

11. **RAEng/EPSRC Research Fellowships** provide support for young, high-quality engineers over a five year period, allowing them to develop their interests in basic academic research as a stepping stone to a successful international research career. The scheme is a mechanism for tackling the high level skills shortage identified in the Roberts Report. The scheme provides outstanding young researchers, who have attained a PhD, with five years of full funding of their salary plus a Fellowship Support Fund of £10,000 to support their research for each of the five years. They are normally under the age of 32 and have a maximum of three years post-doctoral experience.

### **Promote International Contacts and Exchanges**

12. **Global Research Awards** enable high quality engineers engaged in research and development activities, in both academia and industry, to be seconded to centres of excellence overseas for periods of 3 to 12 months. The scheme is in support of the establishment of global links as advocated in the Innovation Report. The Scheme is highly beneficial in establishing and developing international networks of key players from industry and academia. It also encourages the uptake of globally competitive technology in the UK. The programme has established itself as unique in the UK and the quality of its secondees has been uniformly high.

13. **International Travel Awards** to doctoral students enable them to present papers and participate at overseas conferences or to participate in collaborative research projects. This programme is the only one available nationally which caters for engineers of all disciplines and is persistently oversubscribed with high quality applications. The selection criteria applied to the awards are tight and, typically, almost a quarter of those applying are unsuccessful. The development of international engineering research networks is a major national benefit resulting from this scheme. The scheme also has its own monthly newsletter published on The Academy's web site in support of the programme's technology transfer role.

14. **Researcher Exchanges between the UK and China/India** will be devoted to the applied science end of the spectrum which is so critical and important in the development of relations between the UK and the target countries. Flexible in duration, this scheme supports the need, identified in the Innovation Report, to build up international collaboration; it would also enable the enhancement of international networks of excellence. The programme will be launched in 2007/08.

15. **Distinguished Visiting Fellowships** is a new programme, to be launched in 2007/08, designed to bring distinguished academic researchers to the UK for up to one month, and will develop an international exposure in engineering academic circles. Research links will be established and consolidated in key disciplines and the opportunity will be given to excite and invigorate students and staff in the host institution via guest lectures and seminars. The scheme supports the establishment of global links as proposed in the Innovation Report. Female nominees will be given first refusal on 50% of all awards.

### **Support Small and Medium Sized Enterprises**

16. **Engineering Professional Development Awards** enable engineers based in SMEs to develop their professional skills. The programme encourages these companies to undertake professional development programmes and is in direct support of the need identified in the DTI

Innovation Report for companies to replenish their skills. The scheme fulfils a very important need, namely providing seed corn funding to encourage smaller companies to take on the vitally important role of maintaining the skills of their workforce.

### **Activities principally in support of 'Recognising Excellence and Inspiring the Next Generation'**

#### **Lead the Best Engineering Education Programme**

17. **The Best Programme** covers all stages of education from school through university and into the postgraduate stage. The ultimate objective of Best is in direct support of OST and DfES objectives of consolidating the provision of engineering education support scheme within a single organisation. The Academy provides leadership and integrated management for Best and assists in fund raising. Best will be expanded to fulfil its role of becoming the primary source of information on engineering to the nation's schools.

18. Best Programme activities are described below in the order of the age range of students for which they cater:

Age	Activity
7-19	The <b>Young Engineers Clubs</b> have over 20,000 members in 1,750 schools. Club members have the opportunity to work on engineering projects in teams.
8-13	Bring new scheme providers into Best who engage with groups who are currently under represented in the Best Programme.
13-19	The education programmes of the <b>Smallpeice Trust</b> are affiliated to the Best Programme. These programmes include the Smallpeice Engineering Experience, Engineering Skills and Careers, Electronic Engineering, Engineering Management and Engineering Careers Foundation Year programmes.
16-17	The <b>Engineering Education Scheme</b> places about 2,000 school students per year to work with leading companies over a six-month period on real industrial projects.
17	<b>Headstart</b> has 700 school students per year on residential courses at 25 universities where they are briefed on engineering courses and careers available within the profession.
18-19	<b>The Year in Industry</b> places about 700 engineering students in high quality companies.
20-25	<b>Engineering Leadership Awards</b> are given to about 30 top engineering undergraduates per year on MEng courses. They are given funds to spend over a three-year period on activities aimed at developing their leadership potential.
25-32	The <b>Executive Engineers Programme</b> offers exciting career development opportunities to the very best engineering graduates in order to fast track them into managerial positions.
26-34	<b>Sainsbury Management Fellowships</b> enable engineering graduates to attend MBA courses at approved overseas business schools.

19. The Academy has started to develop the programme through the expansion of existing schemes and through consolidation with other providers of science and engineering schemes. The Academy has appointed a Development Director whose task is to increase funding for Academy schemes including Best. Additional funding for Best will be used to accelerate the

expansion and consolidation of the programme. In particular, the funding will be used to support the development of individual schemes with dedicated targets to increase the participation of women, ethnic minorities and disabled people.

20. **Programme for Science Teachers** will be launched in 2006/07. One of the main ways in which school students can be enthused about engineering is through the influence and encouragement of their science teachers. This new programme would allow science teachers to be released from schools to attend two day programmes which would give them practical, inspirational experiences of engineering. Run as part of the Best Programme and in conjunction with the Science Learning Centres' teachers' CPD programme, the aim would be to reach 1,700 science teachers in 2006/07 and nearly 3,000 teachers in the following year.

### **Recognise and Celebrate Excellence**

21. The Academy aims to reward and celebrate excellence in engineering through the awards and medals which it bestows. The Academy's principal awards and are:

- **The Royal Academy of Engineering MacRobert Award for Innovation in Engineering** consists of a gold medal and prize of £50,000.
- **The Prince Philip Medal** recognises and rewards an engineer who has made an exceptional contribution to engineering as a whole.
- **The President's Medal** recognises and rewards an organisation or individual not eligible to be elected to the Academy who has contributed significantly to the Academy's aims and work.
- **The Royal Academy of Engineering Silver Medal** recognises an outstanding and demonstrable personal contribution to British engineering which has led to market exploitation.
- **The Sir Frank Whittle Medal** recognises an outstanding and sustained engineering achievement which has contributed to the well-being of the nation.
- **The Public Promotion of Engineering Medal** rewards an individual, small team or organisation that has contributed to the Academy's aims through the public promotion of engineering.

22. Separately, the Academy is working towards a consolidated celebration of engineering event in 2005, which would readily transfer into a broader event in later years.

### **Activities principally in support of 'Leading Debate'**

#### **Promote Policy Formulation**

23. The Academy is empowered by its Royal Charter to provide expert advice to the Government or any other body on matters concerning the overall practice of engineering. This is done in a variety of ways, including the submission of responses to enquiries from Government departments and Parliamentary Select Committees. To this end the Academy is active in the collation and submission of expert views on issues across the whole spectrum of engineering. It also brings forward Fellows to present oral evidence before such committees. Similar work is undertaken in response to requests from Ministries and various national bodies. The rights given in the Academy's Charter to provide advice also extends to leading debate and action on a wide range of issues of interest and importance which have an engineering dimension in areas, for example, such as sustainable development, biomedical engineering and emerging engineering disciplines. The Academy has a unique asset in the multi-disciplinary and high level experience of its Fellows.

24. Engineering has an all pervading influence on modern society, underpinning sectors of life and business which are frequently not recognisably in the traditional engineering mould. Wherever engineering plays an important role the Academy seeks to contribute to future success by drawing attention to key policy issues affecting the national capability to achieve globally sustainable competitive advantage. Equal priority is attached to activities promoting wealth creation, improving the quality of life and creating a sustainable infrastructure which adds to social cohesion.

25. The Academy seeks to take a policy view on major issues of the day which have an engineering dimension. The objective in all such activity is to promote awareness and pursuit of best practice for the good of the United Kingdom. Such engineering policy work is pursued under the following five themes:

- Engineering, society and the quality of life
- Sustainability and Environmental Management
- Engineering for wealth creation
- Innovation and R & D
- Emerging technologies

26. The Academy is concerned with attracting first class students into engineering, and with developing a well trained national workforce of professional engineers. Therefore The Academy seeks to use its influence with government and other bodies to develop and promote education policies designed to attract more of the most able young science students into engineering and to encourage links between industry and education. The Academy will also work closely with other bodies, such as the Engineering and Technology Board and the engineering institutions, who have vital roles to play in developing aspects of engineering education and training policy.

#### **Promote Engagement with the Public on Engineering Matters**

27. Engineering is the creative force that makes society richer, whether it is for the nation's financial health or for its citizens' quality of life. However, new technologies can bring new fears and, in such circumstances, the beneficial impact of engineering will not be realised unless there is effective and early engagement with the public on issues of concern and also in areas where future concerns can reasonably be predicted. In addition to effective engagement with the public, there is also an increasing need to inspire and motivate the next generation of engineers. Without a pool of talented, dynamic and inventive people at all levels within the profession, British engineering will risk forfeiting its ability to turn ideas into useful products and services.

28. To earn public confidence and support, the scientific community and policy makers must engage in a dialogue with the public to better understand and respond to public priorities and concerns – and to increase public awareness of scientific policy, issues and processes. Research shows that there is general recognition of the benefits that science and technology can bring to individuals and the economy; this must be built upon if the UK's ambitions in this area are to be realised". In pursuit of this, the Academy will launch **Public Engagement Fellowships for Researchers** in 2006/07 to enable top class researchers to be given exposure to communications techniques in order to engage better with the public and media regarding their work.

29. The Academy's **publications** consist of the reports of studies undertaken, lectures and the proceedings of conferences. The Academy's quarterly magazine, *Ingenia*, is a non-technical magazine of general interest geared to enhance the image and cause of engineering. The magazine is circulated, free of charge, to a large number of opinion formers such as Members of Parliament, senior industrialists, financiers and academics and rising young engineers. In addition to printed publications, the Academy puts the text of most of its publications on its highly successful web site.

30. The Academy uses its **public relations** activities to ensure that its activities are outward looking and seen to be relevant and concerned with the well being of the nation as a whole. In this way the focus of attention in engineering issues is broadened to include, for example, the societal aspects, circumstances and consequences of engineering and the links between engineering and other professions and disciplines.

### **Provide an International Voice for British Engineering**

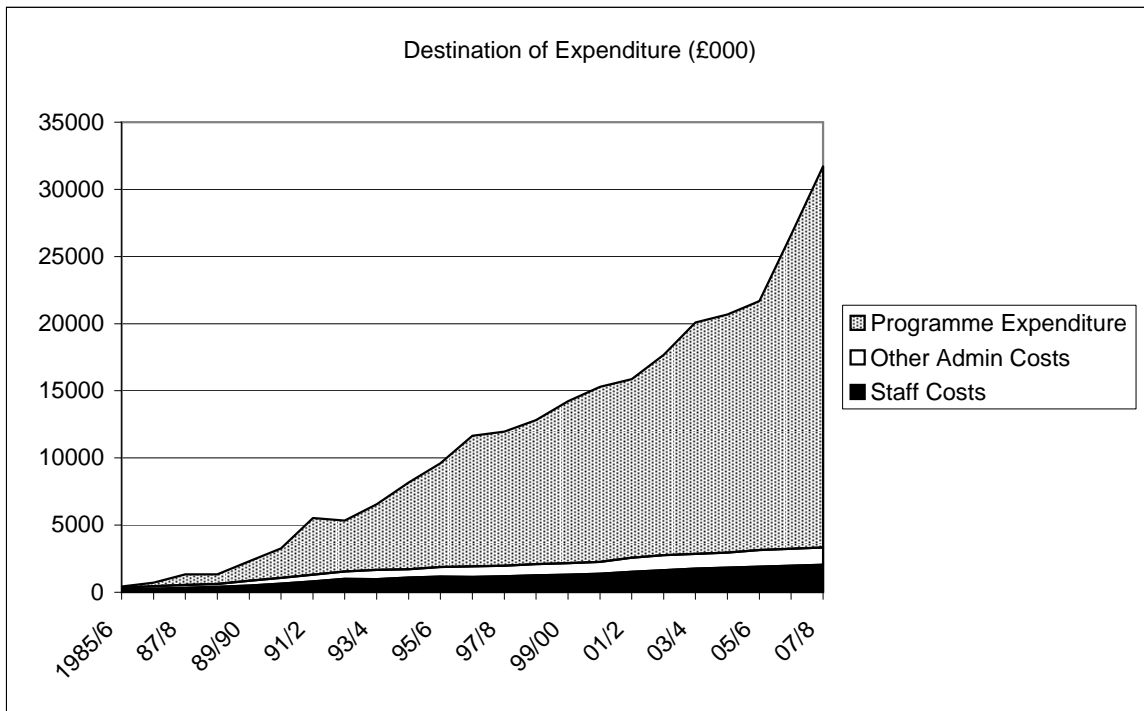
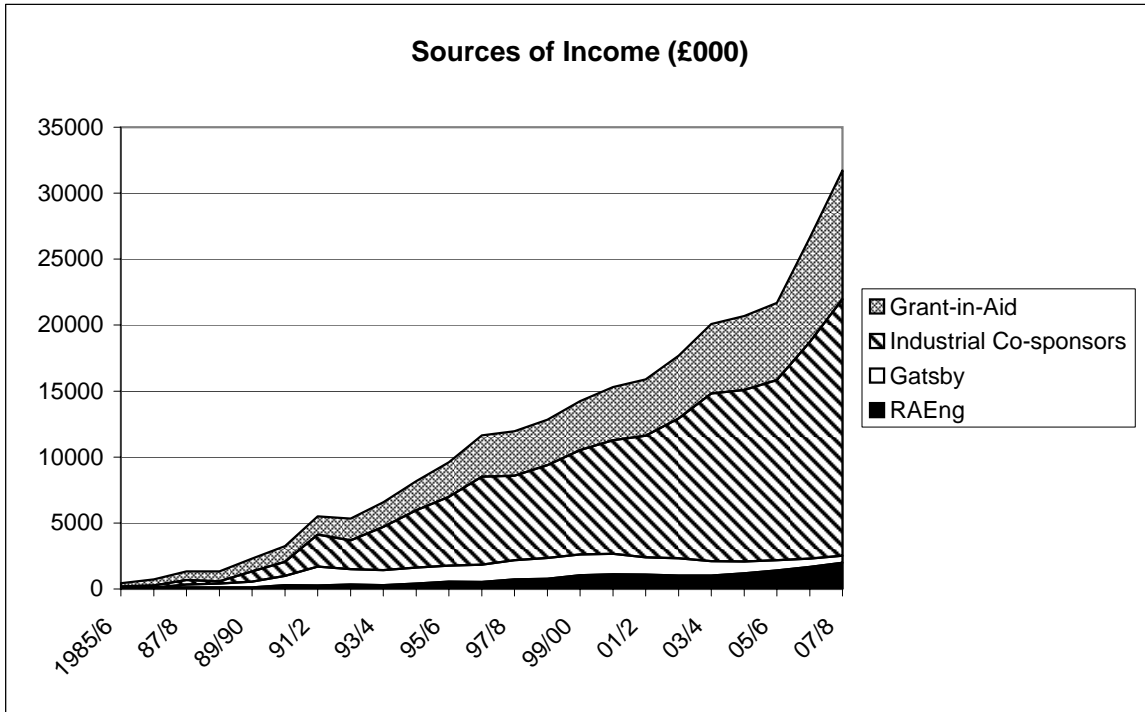
31. The Academy is a member of the worldwide Council of Academies of Engineering and Technological Sciences (CAETS), and the European Council of Applied Sciences and Engineering (Euro-CASE). Activities with these bodies are closely integrated with the Academy's own policy development function and provide useful forums for the exchange of information on global engineering issues. The Academy uses the connections made through these bodies to develop links in countries of strategic importance to the UK.

32. The Academy works closely with the FCO Science and Technology Unit. We aim to brief all senior S&T Embassy staff before they start their appointments overseas.

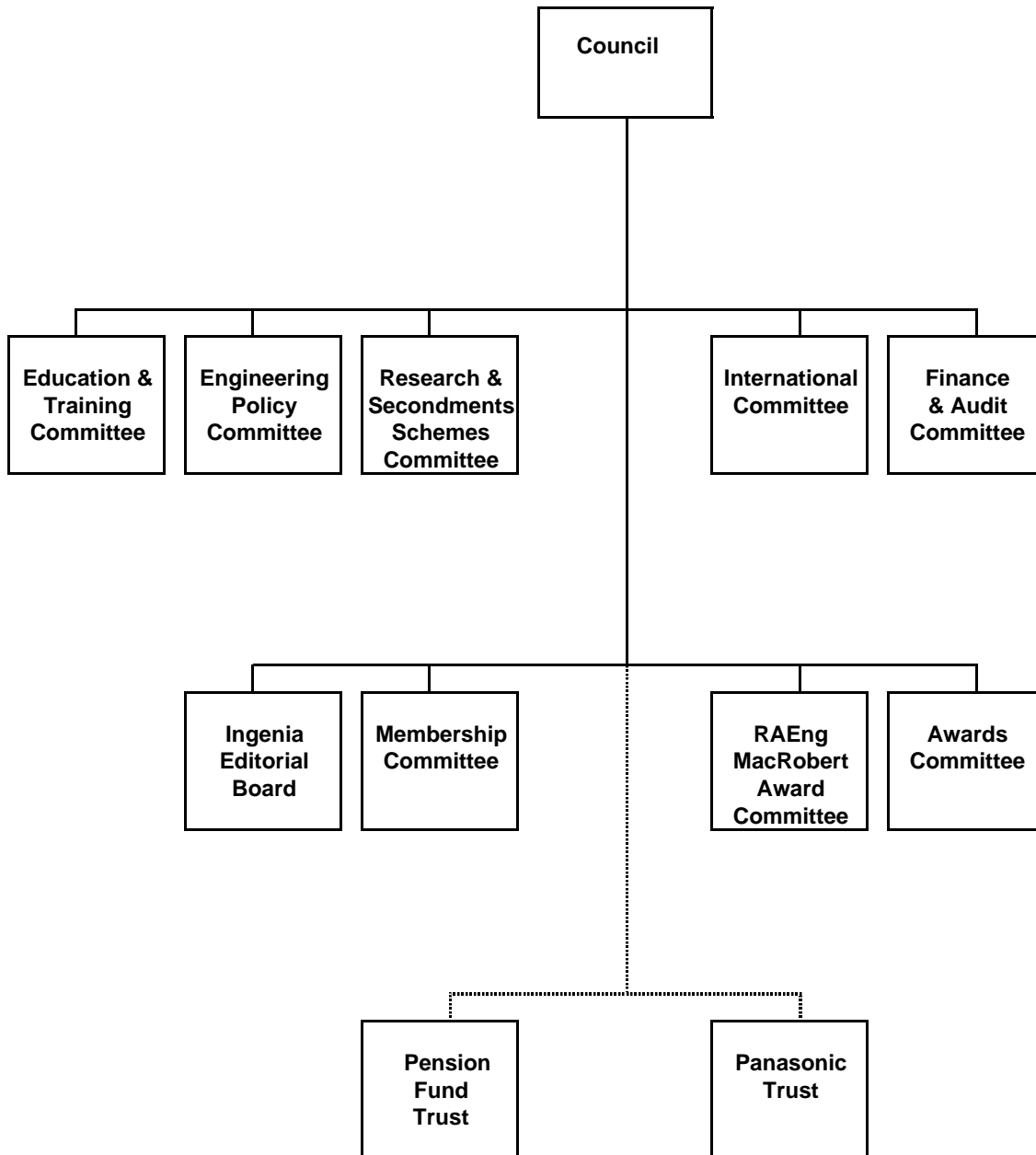
## TOTAL EXPENDITURE 2005/06 - 2007/08

£000s	2005/06			2006/07			2007/08		
	Grant-in-Aid	Third Party	Total	Grant-in-Aid	Third Party	Total	Grant-in-Aid	Third Party	Total
<b>STRATEGIC PRIORITY 1</b>									
<b>Enhancing National Capabilities</b>									
G4.0 Personal Research Chairs and Senior Research Fellowships	838	6,152	6,990	1,124	7,613	8,737	1,419	9,191	10,610
G1.2 Visiting Professorships	626	845	1,471	646	992	1,638	666	1,144	1,810
G1.3 Industrial Secondments	341	256	597	351	264	615	362	273	635
G4.1 RAEng Research Fellowships	891	1,091	1,982	1,535	1,529	3,064	2,190	1,891	4,081
G4.3 Research Chairs in Emerging Technologies	-	-	-	-	-	-	149	100	249
G2.1 Global Research Awards	377	339	716	450	349	799	460	360	820
G4.2 Research Exchanges with China/India	-	-	-	-	-	-	215	200	415
G2.2 International Travel Awards	483	584	1,067	526	636	1,162	593	717	1,310
G1.4 Engineering Professional Development Awards	293	2,896	3,189	303	2,984	3,287	313	3,074	3,387
G4.4 Distinguished Visiting Fellowships	-	-	-	-	-	-	160	150	310
<b>SUB-TOTAL</b>	<b>3,849</b>	<b>12,163</b>	<b>16,012</b>	<b>4,935</b>	<b>14,367</b>	<b>19,302</b>	<b>6,527</b>	<b>17,100</b>	<b>23,627</b>
<b>STRATEGIC PRIORITY 2</b>									
<b>Recognising Excellence and Inspiring the Next Generation</b>									
G1.1 Best Engineering Education Programme	448	3,342	3,790	621	3,673	4,294	655	3,962	4,617
G1.5 Programme for Science Teachers	-	-	-	180	100	280	261	200	461
<b>SUB-TOTAL</b>	<b>448</b>	<b>3,342</b>	<b>3,790</b>	<b>801</b>	<b>3,773</b>	<b>4,574</b>	<b>916</b>	<b>4,162</b>	<b>5,078</b>
<b>STRATEGIC PRIORITY 3</b>									
<b>Leading Debate</b>									
G3.1 Engineering Investigations	544	-	544	705	-	705	727	-	727
G2.3 Communications and External Affairs	323	297	620	373	306	679	403	315	718
G2.4 Public Engagement Fellowships	-	-	-	382	250	632	487	350	837
G3.2 Publications	106	40	146	109	40	149	112	40	152
<b>SUB-TOTAL</b>	<b>973</b>	<b>337</b>	<b>1,310</b>	<b>1,569</b>	<b>596</b>	<b>2,165</b>	<b>1,729</b>	<b>705</b>	<b>2,434</b>
<b>TOTAL IN SUPPORT OF OBJECTIVES</b>	<b>5,270</b>	<b>15,842</b>	<b>21,112</b>	<b>7,305</b>	<b>18,736</b>	<b>26,041</b>	<b>9,172</b>	<b>21,967</b>	<b>31,139</b>
<b>ADMINISTRATION</b>									
G5.0 Contribution to Rent, Rates and Running Costs	580	-	580	580	-	580	580	-	580
<b>TOTAL</b>	<b>5,850</b>	<b>15,842</b>	<b>21,692</b>	<b>7,885</b>	<b>18,736</b>	<b>26,621</b>	<b>9,752</b>	<b>21,967</b>	<b>31,719</b>

**SOURCES OF INCOME AND  
DESTINATION OF EXPENDITURE**



COUNCIL / COMMITTEE STRUCTURE



## SUMMARY OF PROGRAMME AIMS

<b>Programme</b>	<b>Aims of Programme</b>	<b>Target</b>
<b>Strategic Priority 1 – Enhancing National Capabilities</b>		
<i>Support Industry/Academia Links</i>		
1. Personal Research Chairs and Senior Research Fellowships	To establish research teams headed by a Professor or Senior Research Fellow in pre-competitive areas likely to yield industrial applications in the longer term, funded largely by industry.	To increase the number of appointments of Personal Chairs and Senior Research Fellowships to a total of 46 by the end of 2007/08. To establish one or two Chairs in medical engineering.
2. Visiting Professorships	To heighten the industrial relevance of teaching engineering design in undergraduate courses. To increase awareness among undergraduates of design, sustainability and design of integrated systems.	To maintain the number of posts in Engineering Design and Engineering for Sustainable Development at current levels as they become self funding. To increase the number of posts in Engineering Design for Integrated Systems to 20 by 2007/08. To launch Industrial Design and Innovation in 2006/07 with 10 posts. To investigate the possibility of establishing posts in medical engineering.
3. Industrial Secondments	To enable academic staff in HEI's to gain current awareness of modern industrial practices through secondments to companies.	To support 26 secondments by 2007/08.
<b>Promote World Class Research</b>		
4. RAEng Research Fellowships	To provide 5 years support to recent post-doctoral engineering researchers to establish a track record of high quality research achievement.	To increase the number of awardees in post to 69 by 2007/08.
5. Research Chairs in Emerging Technologies	To enable outstanding individuals to conduct in areas of new technologies. The chairs to be fully funded for periods up to 10 years.	To launch the scheme in 2007/08 with 1 appointment and to make 10 appointments over a period of 10 years.

## ANNEX 4 (contd)

Programme	Aims of Programme	Target
<b><i>Promote International Contacts and Exchanges</i></b>		
6. Global Research Awards	To enable engineers working in a UK based organisation, undertaking R&D, to work on their projects for between 3 and 12 months in a centre of excellence overseas.	To maintain up to 16 awards per year through to 2007/08.
7. Research Exchanges with China/India	To enable top flight engineering researchers from China and India to visit the UK and vice versa, to establish a network of excellence	To launch the scheme in 2007/08 with 10 awards.
8. International Travel Awards	To enable graduate engineering researchers to attend conferences overseas, present papers and interact with international teams.	To increase the number of awards to over 720 per year by 2007/08.
9. Distinguished Visiting Researchers	To bring top academic researchers to the UK on organised programmes for up to one month.	To launch the scheme in 2007/08 with 50 awards.
<b><i>Support Small and Medium Sized Enterprises</i></b>		
10 Engineering Professional Development Awards	To encourage companies to develop professional development programmes.	To assist around 1,200 engineers per year with professional development by FY 2007/08

### ***Strategic Priority 2 – Recognising Excellence and Inspiring the Next Generation***

<b><i>Inspiring the Next Generation</i></b>		
11. <b>Best</b> Engineering Education Programme	<p>To improve the flow of high quality young people towards engineering by supporting programmes in UK schools.</p> <p>To develop the leadership skills of high potential engineering undergraduates.</p> <p>To develop the management skills of first class engineering graduates.</p>	<p>To lead the <i>Best</i> Programme and provide it with integrated management.</p> <p>To consolidate the provision of engineering support schemes within a single organisation.</p> <p>To work with strategic partners to expand these programmes and to make the advice of Fellows available to resolve strategic issues.</p>
12. Programme for Science Teachers	To allow science teachers to be released from school for a two day programme which would give them an inspirational experience of engineering and,	To introduce the scheme as part of the <i>Best</i> Programme in 2006/07 for about 1,700 science teachers, rising to nearly 3,000 teachers in the

## ANNEX 4 (contd)

Programme	Aims of Programme	Target
12. Programme for Science Teachers (contd.)	thereby, pass on enthusiasm for engineering to their students.	following year.
<b>Strategic Priority 3 – Leading Debate</b>		
<b><i>Promote Policy Formulation</i></b>		
13. Engineering Investigations	To conduct studies on a range of topics to identify key engineering factors crucial for international success and quality of life. To provide responses to requests for advice on engineering issues in order to improve the quality of engineering contribution to parliamentary and governmental debate. To identify and promote engineering issues of public importance which require action at national level.	To undertake at least three relevant major studies per year and publicise the outcomes. To make 20 to 30 responses to requests for engineering comment from government, parliamentary and other national bodies. To further develop a proactive stance on policy issues of the day.
<b><i>Promote Engagement with the Public on Engineering Matters</i></b>		
14. Communications and External Affairs	To expose engineering issues of national importance to public debate.	To hold a series of lectures, conferences and seminars each year and attract first class speakers and large attendances of influential people.
15. Public Engagement Fellowships for Researchers	To inform top researchers in academia of the media and communications issues surrounding their activities with a view to creating a better informed public.	To launch the scheme in 2006/07 with around 20 academia placements in media environments. The possibility of placing media personnel with research institutions would also be explored.
16. Publications	To make publications aimed at enhancing the image and cause of engineering.	To publish "Ingenia" magazine quarterly and send copies to 10,000 opinion formers in Parliament, industry and academia. To publish lectures and conference proceedings and make them freely available through publication on the web site.

## PROGRAMME TARGETS

### 1. Personal Research Chairs and Senior Research Fellowships

Year	External Expenditure		Internal Expenditure		Total Expenditure		Number of Posts
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	of which % Internal	
2005/06	750	6,152	88	-	6,990	1.3	33
2006/07	1,033	7,613	91	-	8,737	1.0	39
2007/08	1,325	9,191	94	-	10,610	0.9	46

### 2. Visiting Professorships

Year	External Expenditure		Internal Expenditure		Total Expenditure		Number of Posts
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	of which % Internal	
2005/06	516	845	110	-	1,471	7.4	152
2006/07	514	992	132	-	1,638	8.1	152
2007/08	531	1,144	135	-	1,810	7.5	155

### 3. Industrial Secondments

Year	External Expenditure		Internal Expenditure		Total Expenditure		Number of Posts
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	of which % Internal	
2005/06	266	256	75	-	597	12.6	24
2006/07	274	264	77	-	615	12.5	25
2007/08	283	273	79	-	635	12.4	26

### 4. RAEng Research Fellowships

Year	External Expenditure		Internal Expenditure		Total Expenditure		Number of Posts
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	of which % Internal	
2005/06	790	1,091	101	-	1,982	5.1	33
2006/07	1,431	1,529	104	-	3,064	3.4	48
2007/08	2,083	1,891	107	-	4,081	2.6	69

### 5. Research Chairs in Emerging Technologies – (launch in 2007/08)

Year	External Expenditure		Internal Expenditure		Total Expenditure		Number of Posts
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	of which % Internal	
2007/08	129	100	20	-	249	8.0	1

### 6. Global Research Awards

Year	External Expenditure		Internal Expenditure		Total Expenditure		Number of Posts
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	of which % Internal	
2005/06	336	339	41	-	716	5.7	15
2006/07	408	349	42	-	799	5.3	16
2007/08	417	360	43	-	821	5.2	16

## ANNEX 5 (contd)

### 7. Research Exchanges with China/India – (launch in 2006/07)

Year	External Expenditure		Internal Expenditure		Total Expenditure		Number of Posts
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	of which % Internal	
2007/08	185	200	30	-	415	7.2	10

### 8. International Travel Awards

Year	External Expenditure		Internal Expenditure		Total Expenditure		Number of Posts
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	of which % Internal	
2005/06	410	584	73	-	1,067	6.8	600
2006/07	451	636	75	-	1,162	6.5	640
2007/08	516	717	77	-	1,310	5.9	720

### 9. Distinguished Visiting Fellowships – (launch in 2007/08)

Year	External Expenditure		Internal Expenditure		Total Expenditure		Number of Posts
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	Of which % Internal	
2007/08	140	150	20	-	310	6.5	50

### 10. Engineering Professional Development Awards

Year	External Expenditure		Internal Expenditure		Total Expenditure		Number of Posts
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	of which % Internal	
2005/06	274	2,896	19	-	3,189	0.6	1,120
2006/07	283	2,984	20	-	3,287	0.6	1,130
2007/08	292	3,074	21	-	3,387	0.6	1,150

### 11. Best Engineering Education Programme

Year	External Expenditure		Internal Expenditure		Total Expenditure	
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	Of which % Internal
2005/06	91	3,229	357	113	3,790	12.4
2006/07	253	3,598	368	75	4,294	10.3
2007/08	276	3,912	379	50	4,617	9.3

- To support studies in engineering education policy
- To provide the secretariat infrastructure in support of the **Best** Engineering Education Programme in terms of providing co-ordinated management, promotion and the identification of financial sponsors.

### 12. Programme for Science Teachers – (launch in 2006/07)

Year	External Expenditure		Internal Expenditure		Total Expenditure		Number of Posts
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	of which % Internal	
2006/07	160	100	20	-	280	7.1	1,700
2007/08	240	200	21	-	461	4.6	2,900

## ANNEX 5 (contd)

### 13. Engineering Investigations

Year	External Expenditure		Internal Expenditure		Total Expenditure	
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	of which % Internal
2005/06	77	-	467	-	544	85.8
2006/07	224	-	481	-	705	68.2
2007/08	232	-	495	-	727	68.1

- To undertake at least three studies per year on a range of topics.
- To maintain the policy team at five staff through 2007/08.
- To continue working with international bodies, primarily the CAETS and Euro-CASE.
- To initiate at least one relevant study each year in the field of engineering education.

### 14. Communications and External Affairs

Year	External Expenditure		Internal Expenditure		Total Expenditure	
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	of which % Internal
2005/06	107	297	216	-	620	34.8
2006/07	157	306	216	-	679	31.8
2007/08	187	315	216	-	718	30.1

- To mount a major national event, in partnership with related organisations, to celebrate engineering.
- To continue supporting events such as lectures, conferences and seminars.
- To continue promoting and enhancing the public awareness and understanding of engineering.
- To continue to seek sponsorship to fund events wherever possible.
- To expand the level of activity from 2004/05 onwards.

### 15. Public Engagement Fellowships for Researchers – (launch in 2006/07)

Year	External Expenditure		Internal Expenditure		Total Expenditure		Number of Posts
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	of which % Internal	
2006/07	337	250	45	-	632	7.1	20
2007/08	441	350	46	-	837	5.5	30

### 16. Publications

Year	External Expenditure		Internal Expenditure		Total Expenditure	
	Grant-in-Aid	Non Grant-in-Aid	Grant-in-Aid	Non Grant-in-Aid	Total	of which % Internal
2005/06	54	40	52	-	146	35.6
2006/07	55	40	54	-	149	36.2
2007/08	56	40	56	-	152	36.8

- To continue to make publications freely available to opinion formers
- To continue to seek sponsorship and advertising to provide additional funding.
- To maintain the level of activity at current levels in real terms in the period up to 2007/08.
- To continue to make publications and information on all Academy activities available on the web site.