



THE
OPERATIONAL
RESEARCH
SOCIETY

Annual Report and Accounts

for the year ended 31st December 2015

The Operational Research Society
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Foreword from the President

It is a privilege to introduce this report, describing the Operational Research Society's achievements during 2015 under the able Presidency of Stewart Robinson, and setting out our plans for the future.

This is a time of great opportunity for the OR Society. Operational Research is flourishing, with significant contributions across a wide range of industries, and the Society's activities in support of this can make a real difference. This report describes some of our key achievements: the EURO conference in Strathclyde welcoming more than 2,000 operational researchers from across the world; the launch of our new *Impact* magazine; and an enormous number of other activities which are part of our 'business as usual' but no less impressive for that.

To deliver this range of activities requires not only a committed and dedicated staff, but a great many volunteers, and in many cases the support of those volunteers' employers in industry, government and academia. Without their contribution, the Society simply could not function, and their work is greatly appreciated.

A special mention is also due to Jeff Griffiths and Roger Forder who retired from the Board for the final time at the end of the year, after many years' service in one capacity or another, and to Graham Sharp, who retired from working with the Society after 17 years managing our marketing.

In 2016 and beyond the Society will be building on several activities initiated in 2015, to grow reach, visibility and engagement, to support the 'people pipeline' and to nurture O.R. research. There are undoubtedly many challenges ahead, but with these initiatives, together with the Society's existing offering and sound financial base, we are in a good position to address these and to make the most of the opportunities.

Ruth Kaufman OBE, FORS, FIMA
OR Society President 2016-2017

Review of the Year 2015

The Operational Research Society is a charity set up to advance knowledge, interest and education in Operational Research (O.R.) and to advance education in Operational Research. Our vision is of a world improved by rigorous analysis and better, evidence-based, decision-making: "O.R. providing world class analysis for world class decisions". In this world O.R. would be seen as indispensable - not just a "nice to have" but a "must have" - and be used and acknowledged widely in all areas of industry, business, government and the 3rd sector.

To fulfil its mission and achieve its vision the Society's aims are that:

- decision makers understand how O.R. can help, value and seek its contribution, and know from whom they can get it; and
- operational researchers are knowledgeable and well-trained, and in good supply.

In support of this the Society also aims to:

- have a vibrant and active membership drawn from diverse areas; and
- be well-run, provide excellent services and be adequately and sustainably resourced.

These are exciting times for Operational Research, as data and technical developments open up new methodological and application opportunities, and the complexity and speed of modern decision-making generates continuing need and demand. Equally, there are many challenges – the need to maintain and grow visibility of the profession, the growing shortage of people to practise O.R., the need for sustainable and reliable funding sources.

With this in mind, priorities for 2015 included:

- taking advantage of the analytics boom, by being visible, connected and active in the world of analytics/data science;
- promoting O.R. and OR Society activities to analysts, users, decision-makers and academics who are not members of the OR Society; and
- preparing the groundwork for future work on our training and student retention strategies.

Highlights of the Year

Much has been achieved in 2015. Among this, four key events/actions will have long-term important consequences for the OR Society and the O.R. community.

Launch of Impact magazine

In Spring 2015, the Society launched the first issue of a new glossy publication, aiming to present examples of influential applications of O.R., in a readable and attractive format. *Impact*, under its first editor Graham Rand, achieves two goals: it provides case studies to inspire and interest members, and it provides examples we can all use when promoting O.R. to customers, colleagues, potential entrants to the profession, and in general a broader audience. *Impact* is a key component of our plans to improve the visibility of O.R., and awareness and understanding of what O.R. can achieve.

EURO2015

When the Association of European O.R. Societies (EURO) O.R. conference came to Scotland, hosted by Strathclyde University, it represented the biggest O.R. conference ever held in the UK, with 1,887 papers, 169 streams and 2,106 participants. Like all EURO conferences, it represented an unparalleled opportunity to engage with professional colleagues at all stages of their career, from all continents, across the whole gamut of this vast subject of O.R. There were also several distinctive innovations. Notably, the introduction of 'Making an Impact' practitioner-oriented events resulted not only in large numbers of practitioners attending this conference, but also the continuing of practitioner-oriented initiatives for future EURO conferences, which in turn is leading to the founding of a European Practitioners' Network in 2016. Academic-practitioner round tables, mentoring opportunities, and workshops with the Scottish charity Voluntary Action Fund were other innovations which will leave a lasting legacy.

Furthermore, the conference made a financial surplus, half of which comes to the OR Society and can be used to support our future strategic investments.

Special thanks are due to the organising committee chairs, Val Belton and Tim Bedford, and to Hilary Wilkes, the Society's events organiser.

EPSRC Theme Day

This event brought together 45 people from O.R. academia, practice, the OR Society and the EPSRC (Engineering and Physical Sciences Research Council), to explore O.R.'s research landscape, opportunities, and barriers to progress. It generated insight and shared understanding amongst the participants, and its recommendations will help shape the future development of O.R. research in the UK. One of the most significant next steps is the establishment of an OR Society Research Panel, to be chaired by Kevin Glazebrook, which is planned for later in 2016.

Diversity, Equality and Inclusion

In September, the OR Society signed the Science Council Declaration on Diversity, Equality and Inclusion. Removing barriers to equality and inclusion, and recognising diversity and its benefits, are essential for a profession that wants to make the most of potential talent, and that wants to be effective in improving the diverse organisations and society that it serves. Signing the declaration commits us to identifying the issues that affect us and that we can influence, and to preparing and implementing an appropriate action plan – the first step of which was to appoint our Board-level Diversity Champion, Sayara Beg.

Other Achievements during the year

Analytics / Data Science

Activities to support our objective of being visible, connected and active in the world of analytics and data science included:

- running our fourth one day analytics event (The Annual Analytics Summit – TAAS 2015), for the first time jointly branded with and promoted by the Royal Statistical Society (RSS). Attendance was down on previous years at 130. Whilst this was disappointing, it had the advantage that there was more audience engagement and discussion of the thought-provoking presentations;
- continuing to develop the Analytics Network, which now has a membership of around 1,500, and which held a full programme of events in 2015 including, for the first time, several outside London; and
- contributing to a joint event with the RSS in December on the future of O.R. and Statistics in the context of the emerging disciplines of data science and analytics.

As part of the focus on analytics our 2015 Blackett lecture was delivered by Kenneth Cukier, data editor of *The Economist*, who spoke on the subject "In Defence of Big Data". The lecture attracted over 180 registrants.

Publications

As well as the new *Impact* magazine, and our monthly members-only newsletter *Inside OR*, the Society publishes (currently) five academic journals. These document and disseminate a broad range of O.R. work (predominantly research, but also including practical applications), from authors worldwide and to an international audience. Not only are they crucial to the world of research, cementing the Society's reputation internationally, but they also provide much of the income that enables the Society to continue to promote and develop the profession (as can be seen in the Finance section and the accounts). All journals continued to publish on time, and to planned page budgets, throughout the year.

A merger between parts of our publisher Palgrave/MacMillan and Springer was forged in summer 2015. The new group, Springer Nature, have made it clear that they regard our journals as a 'jewel in the crown' of their portfolio, and are continuing to promote all journals actively.

A further four titles in the OR Essentials book series, edited by Simon Taylor, were published during the year, giving a total of six books so far.

Our thanks go to Society's office staff, to Palgrave/Springer, and most especially to our editors and peer reviewers, for their endeavours throughout the year.

Conferences and Events

A full programme of conferences and events, designed to meet the needs of the O.R. community and to develop increased awareness of the range of O.R. techniques and skills required by both academics and practitioners, included not just the events

already mentioned under 'highlights' and 'analytics', but also:

- Young (to) O.R. conference (YOR19) for those in their first 10 years of an O.R. career;
- a June one-day event, and December conference, jointly with the British Association of Management (BAM) on scenario planning;
- the Beale lecture, addressed by Kevin Glazebrook (winner of the 2014 Beale medal) and Kabir Rustogi (winner of the 2012 Doctoral Award); and
- our annual Careers Open Day, attended by 25 exhibitors and 180 students.

A number of Regional and Special Interest Group meetings were held during the year, and new guidance was produced for Regional Groups and SIG committees, to help improve their effectiveness and sustainability.

Training

Demand for our Birmingham-based high quality training programme was greater than it has been for several years. During 2015 we delivered 16 courses covering a range of O.R. topics which attracted 81 delegates of whom 28 were non-members. In addition three bespoke in-house courses ran, one in the UK and two in Dubai.

An initiative by the Government Operational Research Service (GORS) saw the OR Society commissioned to deliver a series of one-day courses, designed to give a good grounding in O.R. to recruits with a non-O.R. background (usually scientists, engineers or mathematicians). Whilst these are prepared for GORS, they are open to others, and take place in London. During 2015, the first three such courses were held, attracting 54 delegates

Pro Bono O.R.

The Pro Bono O.R. scheme continued to provide a showcase for O.R. and its benefits, as well as providing opportunities for members to engage in exciting and novel work, and for our profession to make a positive difference to a wide variety of charities and their beneficiaries. A total of 28 projects were initiated during the year, involving 41 volunteers, with exceptionally positive feedback from all involved.

The OR Society's model of Pro Bono O.R. is now being exported, with the US INFORMS' scheme launched in early 2016, and other European societies also planning schemes.

OR in Schools (ORiS)

The ORiS initiative continued to develop inspiring material for use in schools, to introduce young people at all stages of secondary education to O.R. concepts and careers. The material is disseminated to schools via a variety of means including school visits by Society volunteers.

Other items

We were pleased to welcome two new staff to the OR Society office: Rob Chidley, the Society's first directly employed Marketing and Communications Manager, and Mandy Blackett (Editorial Administrator) in recognition of the additional workload arising from our growing publications portfolio.

A new medal, the Griffiths medal, was introduced for "the most outstanding contribution to the philosophy, theory or practice of health systems published in the journal *Health Systems*", marking the fourth year of publication of *Health Systems* and named in honour of Jeff Griffiths' contribution to exactly those topics, over several decades.

Members, Affiliates and Fellows

At the end of the year, the OR Society had 2,748 members. The Analytics Network boasted 1,500 members, the Society's LinkedIn group had 3,387 members, and we had 1,841 Twitter followers.

It had three corporate partners – CORDA (part of BAe Systems), Royal Bank of Scotland and Ministry of Justice – representing 105 affiliates.

There were 349 accreditees, comprising 146 Fellows, 82 Associate Fellows, 61 Associates and 60 Candidate Associates.

Awards

- **Goodeve Medal** (awarded for best paper published in *JORS* in 2014): Awarded to Sonya Crowe, Peter Bennett, Maren Daraktchiev and Martin Utley "Use of modelling to inform public health policy: a case study on the blood-borne transmission of variant-CJD", *Journal of the Operational Research Society* (2014) 65, 269–277.
- **Stafford Beer Medal** (awarded for best paper published in *EJIS* in 2014): Awarded to Paul Tallon "Do you see what I see? The search for consensus among executives' perceptions of IT business value", *European Journal of Information Systems*, 23 306-325.
- **Tocher Medal** (awarded for best paper published in *JOS* in 2013/2014): Awarded to K-H Chang, A-L Chang and C-Y Kuo "A Simulation-Based Framework for Multi-Objective Vehicle Fleet Sizing of Automated Material Handling Systems: an Empirical Study", *Journal of Simulation*, 8 271-280.
- **Griffiths Medal** (awarded for best paper published in *Health Systems* in 2013/2014): Awarded to Holly Witteman and James Stahl "Facilitating interdisciplinary collaboration to tackle complex problems in health care: report from an exploratory workshop", *Health Systems*, 2 162-170.
- **Doctoral Award** (awarded for the most distinguished body of research leading to the award of a doctorate in the field of O.R. in 2014): Awarded to M Takac, University of Edinburgh.
- **Beale Medal** (awarded for a sustained contribution to the theory, practice, or philosophy of O.R.): Awarded to John Friend.
- **Companionship of O.R.** (awarded for sustained support and encouragement for the development of Operational Research or for those in influential positions who are in broad sympathy with the subject area): Awarded to Sue Merchant.

Finance

Structure of the Funds

The Society's funds are unrestricted but are organised into:

- the General Fund, through which the ongoing operations of the Society are conducted;
- the Reserve Fund, comprising the Seymour House property together with investments and cash on deposit to cover potential risks of a general nature, the most significant of which would arise if the Society were forced to move quickly to a financial regime in which its publications income was significantly reduced; and
- the Designated Award Fund which represents a bequest received from Mrs May Hicks in 2002 and which is used for purposes consistent with her wishes, by providing awards for the best student O.R. projects undertaken for a client organisation.

Review of Operations

The Society's overall income and expenditure account showed a surplus of nearly £100k during the year, on a turnover of nearly £1.9m. This compares with a surplus of £67k in 2014. The favourable 2015 outturn was significantly ahead of budget as a result of increased income or reduced expenditure in a number of areas. The first of these was training, where, for the first time in several years, a surplus (nearly £15k) was recorded; training income was up by a factor of nearly three compared with 2014. The EURO2015 conference returned a share of the surplus of almost £40k. Website expenditure came in under budget and was 15% lower than in 2014, reflecting savings made by bringing more development work in-house, whilst expenditure on the new *Impact* magazine was also significantly less than expected.

Most operations to support the charitable aims of the Society - such as conferences, special events, regional societies, special interest groups, education, publicity and outreach initiatives, the monthly *Inside OR* magazine and special charitable projects - result in deficits to the Society. To support them the Society relies primarily on subscriptions and income from its academic journals - particularly the latter which in 2015 contributed £627k net of all associated costs. This serves as a reminder of the Society's current financial dependence on the academic publication system; see the section on 'Risk' below.

At year end, the Society employed 14 members of staff (12.15 full-time-equivalents), compared with 12 at the end of 2014. Rob Chidley started with the Society towards the end of the year as its full-time Marketing and Communications manager, and Mandy Blackett joined to increase journal admin capacity.

From the start of 2016, a new committee, the Finance committee, chaired by the Honorary Treasurer, has been formed to support the Treasurer and Board in their work. This committee replaces the former Finance Working Group.

Assets, Reserves and Investments

The total net assets of the Society increased from £2.25m to £2.35m over the year, with the surplus on income and expenditure being slightly offset by a net £17k capital loss (realised and unrealised) on our investment fund. This loss reflects the generally adverse movements in stock markets during the year, but nevertheless amounts to less than 1.5% of the value of the Society's investments.

It is important that the Society maintains an appropriate level of reserves in relation to perceived financial risks. During the year the Board reviewed and revised the Society's reserves policy. In setting its reserve policy, the Board distinguished between the funds held in the General Fund, which arise from the normal operating activities of the Society, and the Reserve Fund held to ensure that the Society can continue long-term operations in the event of financial risks materialising.

The policy now identifies minimum and maximum levels for the reserves held in the Reserve Fund, an approach that provides a more flexible and realistic basis for financial planning than a single figure. Where in the range bounded by these levels the reserves should be sized at any given time is a matter for Board judgement, depending on factors such as planned or potential future calls on resources outside the normal pattern of income and expenditure. Advice from the Society's investment managers will also be taken into account, since, for example, if reserves have increased sharply because of buoyant market conditions, then it might be appropriate to maintain them at a higher level in order to mitigate the impact of any subsequent correction.

The Board has set the minimum level of reserves at one year's normal gross income arising from the Society's research journals plus 50% of normal annual General Fund income from other sources. The maximum level adds a further 50% of annual gross research journal income. This approach reflects the critical dependence of the Society on its journal income.

In calculating the minimum and maximum target reserves level for 2016, the 'normal journal income' has been taken as the 2015 journal income, whilst the 'normal General Fund income' has been taken as the 2015 General Fund income but based on a typical income from an OR Society conference, rather than the one-off windfall income from EURO2015. This gives a minimum reserve level of £950k and a maximum of £1.32m. At 31st December 2015, the Society's reserves - its investments and cash held within the Reserve Fund - amounted to £1.28m. The reserves are therefore close to their prescribed maximum. The Board will bear this in mind when considering opportunities for spending on worthwhile one-off projects that further the Society's objectives.

The Society's investments and their performance are kept under review by the Investment Committee in accordance with policies decided by the Board. The Committee is chaired by the Treasurer and, in addition to other members of the Society, includes representatives from the Society's investment managers.

Risk

The Society's dependency on journal income is the most significant material risk. Developments, both in the UK and abroad, that mandate 'open access' publishing for publicly funded work pose the greatest potential threat to this income stream, although the current perception is that any adverse financial impact will manifest itself over a somewhat longer timescale than was previously feared. The risk of a temporary interruption in the income stream owing to administrative or commercial problems affecting the publication and revenue-capture process is also recognised and, as described above, is a strong influence on decisions about the appropriate level of the Society's reserves.

Key Management Personnel

The Key Management Personnel for the Society comprise the trustees (its Board of Directors) and the Secretary & General Manager. No remuneration is payable to trustees for service on the Board. Remuneration for the Secretary & General Manager and the rest of the Society's staff is recommended by the Treasurer after consultation with the Finance Committee, and approved by Board. The basis for the remuneration will be reviewed in 2016.

Voluntary Contributions

The Society's work in 2015 benefited from voluntary contributions of time, from members and others, through these principal lines of work: authorship and refereeing of journal papers; editing of journals; authorship and delivery of conference papers; conference organisation; authorship and delivery of talks to regional societies and special interest groups; organisation of regional societies and special interest groups; the work of the Society's officers; contributions to the administration of the Society through service on Board and the Society's committees.

In addition to this, more than two hundred members have volunteered, or offered to volunteer, with our two main outreach projects, O.R. in Schools and Pro Bono O.R. Their work benefits the O.R. community, the future development of the profession, and the wider society, and is a fine contribution to the OR Society's charitable objectives.

It is estimated that a total of 5,000 person-days were contributed in 2015 on these lines of work. If this time is valued at £500 per day, its value is £2.5M. The Society is most grateful to all who contributed voluntary effort, without which the Society could not accomplish its goals.

Objectives for 2016

Our objectives for the next three years are to build the Society's **reach** (the number of people aware of or benefiting from the Society's activities), the **visibility** of O.R. itself, and the **engagement** of O.R. people in the profession and wider community; to help develop the **people pipeline**, and to nurture O.R. **research**.

Considerable work was undertaken during 2015, and the early part of 2016, that should come to fruition in the next year or two, in support of these objectives. Based on this work, we are aiming in 2016 or 2017 to:

- begin to offer INFORMS' Certified Analytics Professional qualification to UK-based analysts. We expect this to support members' continuing professional development, and to bolster the role of O.R. in the analytics field;
- launch a new analytics journal;
- redesign the main website, and subsequently improve our ability to offer web-based services;
- finalise and implement new member-retention, communications and marketing strategies;
- update our training strategy in the light of an external review of training to be completed in 2016;
- develop a plan to support the O.R. 'people pipeline', following an external review of the supply chain to be completed in 2016; and
- establish a Research Panel to raise the visibility and effectiveness of O.R. research.

These developments will be on top of our existing broad sweep of services: conferences, events, lectures, and training; publications; Pro Bono O.R. and O.R. in Schools; representing the OR Society on bodies including The Council for Mathematical Sciences, the Science Council, EURO and IFORS; and our more inward-looking activities to improve sustainability, efficiency and effectiveness.

For a relatively small professional body in an uncertain world, there are many challenges to overcome. By undertaking these activities we aim not just to meet the challenges, but to grow the profession, and the OR Society's contribution, and make the most of the opportunities awaiting us.

Accounts

for the year ended 31st December 2015

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF OPERATIONAL RESEARCH SOCIETY

We have audited the financial statements of The Operational Research Society for the year ended 31st December 2015 which comprise the Statement of Financial Activities, the Balance Sheet, the Cash Flow Statement and the related notes. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice) FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland".

Respective responsibilities of directors and auditor

As explained more fully in the Trustees' Responsibilities Statement set out on page 26, the trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view.

Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors. This report is made solely to the charity's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the charity's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charity and the charity's members as a body for our audit work, for this report, or for the opinions we have formed.

Scope of the audit of the financial statements

A description of the scope of an audit of financial statements is provided on the Financial Reporting Council's web-site at www.frc.org.uk/auditscopeukprivate.

Opinion on the financial statements

In our opinion the financial statements:

- give a true and fair view of the state of the charity's affairs as at 31st December 2015 and of its result for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

Opinion on the other matter prescribed by the Companies Act 2006

In our opinion the information given in the Trustees' Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

Matters on which we are required to report by exception

We have nothing to report in respect of the following matters where the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of trustees' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit; or
- the trustees were not entitled to take advantage of the small companies' exemption in preparing the Trustees' report and take advantage of the small companies exemption from the requirement to prepare a Strategic report.

Ian Holder FCA (Senior Statutory Auditor)
for and on behalf of Mazars LLP
Chartered Accountants and Statutory Auditor
45 Church Street
Birmingham B3 2RT

OPERATIONAL RESEARCH SOCIETY

STATEMENT OF FINANCIAL ACTIVITIES FOR THE YEAR ENDED 31 DECEMBER 2015

		-----Unrestricted Funds-----			2015 £	2014 £
	Note	General Fund	Reserve Fund	Designated Award Fund	Total Funds	Total Funds
INCOME FROM :						
Charitable activities :						
Subscriptions		138,722	-	-	138,722	140,452
Events and Conferences		798,164	-	-	798,164	139,155
Training		125,957	-	-	125,957	43,483
Publications	3	740,833	-	-	740,833	759,047
Accreditation		7,437	-	-	7,437	7,096
Websites		6,830	-	-	6,830	9,442
		<u>1,817,943</u>	<u>-</u>	<u>-</u>	<u>1,817,943</u>	<u>1,098,675</u>
Investment Income	7	<u>-</u>	<u>44,881</u>	<u>1,831</u>	<u>46,712</u>	<u>44,200</u>
Total Income		<u>1,817,943</u>	<u>44,881</u>	<u>1,831</u>	<u>1,864,655</u>	<u>1,142,875</u>
EXPENDITURE ON :						
Raising Funds						
Investment Management Costs		<u>-</u>	<u>9,692</u>	<u>-</u>	<u>9,692</u>	<u>9,628</u>
Direct charitable expenditure :						
Subscriptions		88,503	949	-	89,452	93,235
Events and Conferences		838,186	679	-	838,865	186,792
Training		110,990	214	-	111,204	69,485
Publications	3	231,761	917	-	232,678	213,355
Accreditation		5,209	31	-	5,240	5,791
Websites		127,658	1,112	-	128,770	153,038
Other Charitable Expenditure	4	243,646	1,787	1,500	246,933	249,119
Governance and Support Costs	5	82,725	2,530	-	85,255	80,249
		<u>1,728,678</u>	<u>8,219</u>	<u>1,500</u>	<u>1,738,397</u>	<u>1,051,064</u>
Total Expenditure	6	<u>1,728,678</u>	<u>17,911</u>	<u>1,500</u>	<u>1,748,089</u>	<u>1,060,692</u>
Net Losses on Investments	17	<u>-</u>	<u>(15,478)</u>	<u>(1,201)</u>	<u>(16,679)</u>	<u>(14,859)</u>
NET INCOME/(EXPENDITURE) and NET MOVEMENT IN FUNDS FOR THE YEAR						
		<u>89,265</u>	<u>11,492</u>	<u>(870)</u>	<u>99,887</u>	<u>67,324</u>
Reconciliation of funds :						
Total funds brought forward		753,763	1,441,949	56,249	2,251,961	2,184,637
Total funds carried forward		<u>843,028</u>	<u>1,453,441</u>	<u>55,379</u>	<u>2,351,848</u>	<u>2,251,961</u>

The notes on pages 14 to 22 form part of these accounts.

The statement of financial activities includes all gains and losses recognised in the year. All income and expenditure derive from continuing activities.

OPERATIONAL RESEARCH SOCIETY
 (A company limited by guarantee. No. 663819)

BALANCE SHEET - 31 DECEMBER 2015

	<u>Note</u>	<u>2015</u> £	<u>2014</u> £
FIXED ASSETS			
Fixed Assets : Tangible	8	188,022	199,126
Intangible	8	43,592	77,332
Investments :			
Listed at Market Value	9	1,221,016	1,253,252
Cash Deposited with Investment Brokers		58,851	8,811
Charities Aid Foundation	10	64,084	63,454
		<u>1,575,565</u>	<u>1,601,975</u>
CURRENT ASSETS			
Debtors	11	786,581	761,436
Cash at Bank and In Hand		239,880	(3,040)
		<u>1,026,461</u>	<u>758,396</u>
CREDITORS (amounts falling due within one year)	12	250,178	108,410
NET CURRENT ASSETS		<u>776,283</u>	<u>649,986</u>
TOTAL ASSETS LESS CURRENT LIABILITIES		<u>2,351,848</u>	<u>2,251,961</u>
FUNDS			
General Fund		843,028	753,763
Reserve Fund	14(1)	1,453,441	1,441,949
Designated Award Fund	14(2)	55,379	56,249
TOTAL FUNDS		<u>2,351,848</u>	<u>2,251,961</u>

These financial statements have been prepared in accordance with the special provisions relating to companies subject to the small companies regime within Part 15 of the Companies Act 2006.

Approved and authorised for issue by the Board on 18th May 2016 and signed on its behalf :

J. E. WILLIAMS
 Honorary Treasurer

R. A. KAUFMAN
 President

The notes on pages 14 to 22 form part of these accounts.

OPERATIONAL RESEARCH SOCIETY

STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 DECEMBER 2015

	<u>2015</u> £	<u>2014</u> £
Reconciliation of net incoming resources to net cashflow from operating activities :		
Net Movement in Funds	99,887	67,324
Depreciation Charge - Tangible Assets	16,210	15,742
Depreciation Charge - Intangible Assets	40,740	54,165
(Increase) / Decrease in Debtors	(25,145)	(133,407)
Increase / (Decrease) in Creditors	141,768	16,436
(Gain) / Loss on Investments	16,679	14,859
Investment Income	(46,712)	(44,200)
Cash Flows from Operating Activities	<u>243,427</u>	<u>(9,081)</u>
Investment Income	44,881	42,424
Purchase of Tangible Assets	(5,106)	(610)
Purchase of Intangible Assets	(7,000)	(44,400)
Purchase of Investments	(422,376)	(159,608)
Proceeds on Disposal of Investments	439,134	154,899
Cash Flows from Investing Activities	<u>49,533</u>	<u>(7,295)</u>
Increase / (Decrease) in Cash and Cash Equivalents in the Year	292,960	(16,376)
Cash and Cash Equivalents at the Beginning of the year	5,771	22,147
Cash and Cash Equivalents at the End of the year	<u>298,731</u>	<u>5,771</u>

OPERATIONAL RESEARCH SOCIETY

NOTES TO THE ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 2015

1 ACCOUNTING POLICIES

(1) Basis of preparation

The accounts have been prepared in accordance with the Companies Act 2006, the Charities Act 2011, the Charities Statement of Recommended Practice (FRS 102), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) and under the historical cost convention in accordance with applicable Accounting Standards as modified by the accounting policy for investments quoted on a recognised stock exchange, which are stated at market value (see 1(6) below).

The Operational Research Society meets the definition of a public benefit society under FRS 102.

(2) Reconciliation with previous Generally Accepted Accounting Practice

In preparing the accounts the trustees considered that no restatement of comparative items was required as a result of applying the accounting policies required by FRS 102 and the Charities SORP FRS 102. The transition date was 1st January 2014.

(3) Preparation of the accounts on a going concern basis

The Operational Research Society operates as a going concern and the trustees are of the view that it will continue to do so for the foreseeable future.

(4) Designation of funds

Income and expenditure arising from the normal charitable activities of the Society is included within the General Fund.

The Reserve Fund consists of resources of the Society which are represented by land and buildings, fixed asset investments and cash deposited with the Society's investment brokers. The Designated Award Fund represents a legacy received in 2002 which is used to fund an annual award.

The Society operates a reserves policy that reflects its critical dependence on journal income. The policy sets the minimum level of reserves held in the Reserves fund at one year's normal gross income arising from the Society's research journals plus 50% of normal annual General Fund income from other sources. The maximum level is set at the minimum level plus a further 50% of normal annual gross research journal income.

(5) Dividends and investment income

Dividends and investment income are recognised when receivable.

(6) Other income and expenditure

Income and expenditure other than dividends are accounted for on an accruals basis.

(7) Value added tax

The Society has partial exemption status for Value Added Tax and Value Added Tax on apportionable costs which cannot be reclaimed is disclosed separately within administration costs. This item was £nil in 2015. (2014 - £nil).

(8) Investments

Investments quoted on a recognised stock exchange are included in the accounts at their market value.

OPERATIONAL RESEARCH SOCIETY

NOTES TO THE ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 2015

1 ACCOUNTING POLICIES (continued)

(9) Tangible and Intangible fixed assets

Tangible and intangible fixed assets costing more than £1,000 and with a useful economic life in excess of 3 years are capitalised and included at cost including any incidental expenses of acquisition.

Depreciation of tangible fixed assets is charged on a straight line basis at the following rates :

Long leasehold building	-	2%
Office machines and computer equipment	-	25%
Fixtures and fittings	-	10%

Amortisation of Intangible fixed assets is charged on a straight line basis at the following rate :

Software systems	-	25%
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(10) Debtors

Trade and other debtors are recognised at the settlement amount due after any trade discount offered. Prepayments are valued at the amount prepaid net of any trade discounts due.

(11) Cash at bank and in hand

Cash at bank and cash in hand includes cash and short term highly liquid investments.

(12) Creditors and provisions

Creditors and provisions are recognised where the charity has a present obligation resulting from a past event that will result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors and provisions are normally recognised at their settlement amount after allowing for any trade discounts due.

(13) Pensions

The Society contributes to individual pension schemes established for each eligible employee.

(14) Allocation of costs

Salaries, depreciation, website expenditure and other central and establishment overheads are allocated to appropriate cost categories using consistently applied ratios based on estimates of actual time and costs expended in each area.

2 LEGAL STATUS OF THE SOCIETY

The Society is a company limited by guarantee, has no share capital and is a registered charity. The objectives of the Society are the advancement of knowledge and education in operational research.

The liability of each member in the event of a winding-up is limited to £1.

OPERATIONAL RESEARCH SOCIETY

NOTES TO THE ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 2015 (continued)

	<u>2015</u>	<u>2014</u>
	£	£
3 PUBLICATIONS		
Incoming resources :		
Journal / KMRP / JOS	510,086	538,156
Inside OR	9,567	9,422
EJIS / Health Systems	219,984	209,964
Other Publications	<u>1,196</u>	<u>1,505</u>
	<u><u>740,833</u></u>	<u><u>759,047</u></u>
Resources used :		
Journal / KMRP / JOS	62,873	63,041
Inside OR	105,719	112,086
EJIS / Health Systems	39,741	28,615
Impact Magazine	21,443	5,548
Other Publications	<u>2,902</u>	<u>4,065</u>
	<u><u>232,678</u></u>	<u><u>213,355</u></u>
4 OTHER DIRECT CHARITABLE EXPENDITURE		
Charitable projects		
On-line Synchronous Teaching	3,500	-
Fitness of OR in Universities	-	10,280
Piloting Blended Learning	-	3,078
The Future Policy Influence of OR	-	5,867
Training to Practice or Training to Research ?	-	9,097
Mapping and Analysis of Research Funding	-	6,196
	<u><u>3,500</u></u>	<u><u>34,518</u></u>
Non-revenue earning activities in pursuit of charitable aims		
IAOR Online - Members access	6,600	6,642
Library	5,000	5,000
Foreign Affairs Expenses	3,036	7,695
Regional Societies	3,577	3,741
Special Interest Groups	2,998	5,503
Public Information about OR :		
Science of Better	17,255	18,091
Learn about OR	58,432	50,591
General Publicity	43,261	44,651
Third Sector Pro Bono	25,023	22,884
Sponsorship of OR Conferences	-	5,000
Medals, Awards and Scholarships	7,538	6,522
Strategic Initiatives	70,713	38,281
Other Costs	-	-
	<u><u>243,433</u></u>	<u><u>214,601</u></u>
Total	<u><u>246,933</u></u>	<u><u>249,119</u></u>
5 GOVERNANCE AND SUPPORT COSTS		
Board and Committees	69,438	67,494
Auditors' Fees :		
for audit	6,375	6,350
for other services	1,150	-
Other Legal and Professional Fees	8,292	6,405
	<u><u>85,255</u></u>	<u><u>80,249</u></u>

OPERATIONAL RESEARCH SOCIETY

NOTES TO THE ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 2015 (continued)

6 TOTAL RESOURCES EXPENDED

Expenditure analysed by type of cost :

	<u>Staff Costs</u>	<u>Other Costs</u>	<u>Depreciation</u>	<u>Total</u>	<u>Total</u>
	£	£	£	2015	2014
				£	£
Investment Management Costs	-	9,692	-	9,692	9,628
Subscriptions	69,521	17,483	2,448	89,452	93,235
Events and Conferences	49,263	787,768	1,834	838,865	186,792
Training	15,654	94,983	567	111,204	69,485
Publications	67,218	163,093	2,367	232,678	213,355
Accreditation	2,302	558	2,380	5,240	5,791
Websites	81,492	12,159	35,119	128,770	153,038
Other Charitable Expenditure	130,756	105,482	10,695	246,933	249,119
Governance and Support Costs	43,739	39,976	1,540	85,255	80,249
	<u>459,945</u>	<u>1,231,194</u>	<u>56,950</u>	<u>1,748,089</u>	<u>1,060,692</u>

Staff costs :

Wages and Salaries	381,479	324,883
Social Security Costs	37,591	32,783
Pension Costs	40,875	37,251
	<u>459,945</u>	<u>394,917</u>

The average number of employees of the Society, calculated on a full time equivalent basis, during the year was :

	<u>2015</u>		<u>2014</u>	
	FTE	Headcount	FTE	Headcount
Charitable activities	8.5	9.6	7.5	8.5
Management and administration	2.7	3.0	2.5	2.8
	<u>11.2</u>	<u>12.6</u>	<u>10.0</u>	<u>11.3</u>

During this and the previous year one employee of the Society earned between £70,000 and £80,000, excluding pension contributions. Contributions of £8,214 were paid to their pension scheme (2014 - £8,113).

The key management personnel of the Society comprise the trustees and the Secretary and General Manager. The total employee benefits of the key management personnel of the Society were £84,100 (2014 - £83,103)

No remuneration was paid or is payable to Trustees for service on the Board for the year (2014 - £Nil)

During the year 10 Trustees (2014 - 9 Trustees) received a total of £ 6,724 (2014 - £7,047) in reimbursement of expenses incurred on Society business . Prof S L Robinson received £3,803 (2014 - £1,128) , Dr F O'Brien £4,754 (2014 - £741) and Dr M Kunc £826 (2014 £Nil) for the supply of training courses to the Society during the year.

There have been no related party transactions during the year.

Other external costs include :	<u>2015</u>	<u>2014</u>
	£	£
Other Operating Leases	<u>5,159</u>	<u>5,915</u>

OPERATIONAL RESEARCH SOCIETY

NOTES TO THE ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 2015 (continued)

7 INTEREST RECEIVABLE AND SIMILAR INCOME

	2015 £	2014 £
Income from Listed Investments	44,772	42,374
Interest on Bank Deposits	109	50
Distributions - CAF	1,831	1,776
	<u>46,712</u>	<u>44,200</u>

8 FIXED ASSETS

	-----Tangible-----				Intangible
	Long Leasehold Land and <u>Buildings</u> £	Office <u>Equipment</u> £	Fixtures & <u>Fittings</u> £	<u>Total</u> £	<u>Software Systems</u> £
Cost					Cost
At 31 December 2014	314,306	114,565	42,297	471,168	740,775
Additions	-	5,106	-	5,106	7,000
Disposals	-	(4,316)	-	(4,316)	-
At 31 December 2015	<u>314,306</u>	<u>115,355</u>	<u>42,297</u>	<u>471,958</u>	<u>747,775</u>
Depreciation					Amortisation
At 31 December 2014	132,006	98,739	41,297	272,042	663,443
Charge for the Year	6,286	9,097	827	16,210	40,740
Disposals	-	(4,316)	-	(4,316)	-
At 31 December 2015	<u>138,292</u>	<u>103,520</u>	<u>42,124</u>	<u>283,936</u>	<u>704,183</u>
Net Book Value					Net Book Value
At 31 December 2015	<u>176,014</u>	<u>11,835</u>	<u>173</u>	<u>188,022</u>	<u>43,592</u>
At 31 December 2014	<u>182,300</u>	<u>15,826</u>	<u>1,000</u>	<u>199,126</u>	<u>77,332</u>

Capital expenditure authorised but not contracted for at 31 December 2015 and not provided for in the accounts amounted to £Nil (2014 - £Nil).

The Trustees consider the market value of the Long Leasehold Land and Buildings to be materially in excess of the book written down value shown above.
The Trustees do not consider that the difference can be accurately defined without the benefit of a professional valuation.

OPERATIONAL RESEARCH SOCIETY**NOTES TO THE ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 2015 (continued)****9 LISTED INVESTMENTS AT MARKET VALUE**

	<u>2015</u> £	<u>2014</u> £
Market Value at 1st January 2015	1,253,252	1,264,538
Additions at Cost	422,376	159,608
Proceeds on Disposal	(439,134)	(154,899)
Net Investment Gain /(Loss)	(15,478)	(15,995)
Market Value at 31st December 2015	<u>1,221,016</u>	<u>1,253,252</u>
Cost	<u>1,040,201</u>	<u>987,737</u>

All the above investments are either listed on a recognised stock exchange in Great Britain or are represented by unit trusts which are traded on a daily basis in the UK, and fall within the wider range of investments as defined by the Trustees Act 1961.

The Society's narrower range of investments as defined by the Trustees Act 1961 is covered by deposits held at Investec.

10 CHARITIES AID FOUNDATION

At 31 December 2015 this investment is represented by 56,058 (2014 - 56,058) shares in the FP CAF Fixed Interest B Accumulation Fund, having a market value of £64,084 (2014 - £63,454).

	<u>2015</u> £	<u>2014</u> £
Market Value at 1st January 2015	63,454	60,542
Net Investment Gain /(Loss)	(1,201)	
Distributions not remitted	<u>1,831</u>	
	630	2,912
Market Value at 31st December 2015	<u>64,084</u>	<u>63,454</u>
Cost	<u>56,060</u>	<u>56,060</u>

OPERATIONAL RESEARCH SOCIETY

NOTES TO THE ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 2015 (continued)

11 DEBTORS

	<u>2015</u>	<u>2014</u>
	£	£
Trade Debtors	16,269	8,241
Taxation Recoverable	8,414	14,414
Prepayments	18,455	46,203
Accrued Income	743,443	692,578
	<u>786,581</u>	<u>761,436</u>

12 CREDITORS

	<u>2015</u>	<u>2014</u>
	£	£
Trade Creditors	140,183	38,314
Taxation and Social Security	-	-
Accruals	70,017	38,166
Deferred Income	39,978	31,930
	<u>250,178</u>	<u>108,410</u>

<i>Deferred income brought forward</i>	31,930
<i>Released to incoming resources during the year</i>	(31,930)
<i>Deferred income arising in the year</i>	<u>39,978</u>
<i>Deferred income carried forward</i>	<u>39,978</u>

Deferred income consists of 2016 subscription income paid in advance and income relating to 2016 training courses and advertising invoiced in advance.

13 FINANCIAL COMMITMENTS

At 31st December 2015 the Society had commitments under other non-cancellable operating leases as follows :

	<u>2015</u>	<u>2014</u>
	£	£
Expiry date :		
Under one year	5,079	5,159
Two to five years	6,006	7,705
Over five years	169	-
	<u>11,254</u>	<u>12,864</u>

OPERATIONAL RESEARCH SOCIETY

NOTES TO THE ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 2015 (continued)

14 DESIGNATED FUNDS

The funds of the charity include the following designated funds which have been set aside out of unrestricted funds by the trustees for specific purposes :

(1) Reserve Fund

The reserve fund consists of resources of the Society which are represented by land and buildings, fixed asset investments and a cash deposit with the Society's investment brokers, The Society operates a reserves policy that reflects its critical dependence on journal income.

(2) Designated Award Fund

The Designated Award Fund represents a legacy received in 2002. The Legator, Mrs May Hicks, expressed a non-binding wish that the Society uses its bequest to fund an annual award to be determined by the Council of the Society. The legacy is currently invested in the Charities Aid Foundation Fixed Interest B Accumulation Fund.

15 STATEMENT OF FINANCIAL ACTIVITIES :
COMPARATIVE FIGURES BY INDIVIDUAL FUND

	<u>General Fund</u>		<u>Reserve Fund</u>		<u>Designated Award Fund</u>	
	<u>2015</u> £	<u>2014</u> £	<u>2015</u> £	<u>2014</u> £	<u>2015</u> £	<u>2014</u> £
INCOME FROM :						
Charitable activities	1,817,943	1,098,675	-	-	-	-
Investment income	-	-	44,881	42,424	1,831	1,776
Total	<u>1,817,943</u>	<u>1,098,675</u>	<u>44,881</u>	<u>42,424</u>	<u>1,831</u>	<u>1,776</u>
EXPENDITURE ON :						
Raising funds	-	-	9,692	9,628	-	-
Direct charitable expenditure	1,728,678	1,041,230	8,219	8,229	1,500	1,605
Total	<u>1,728,678</u>	<u>1,041,230</u>	<u>17,911</u>	<u>17,857</u>	<u>1,500</u>	<u>1,605</u>
Investment Gains/(Loses)	-	-	(15,478)	(15,995)	(1,201)	1,136
Transfer between funds	-	34,400	-	(34,400)	-	-
Net Income/(Expenditure)	<u>89,265</u>	<u>91,845</u>	<u>11,492</u>	<u>(25,828)</u>	<u>(870)</u>	<u>1,307</u>

OPERATIONAL RESEARCH SOCIETY

NOTES TO THE ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 2015 (continued)

16 ANALYSIS OF NET ASSETS BETWEEN FUNDS

	General Fund £	Reserve Fund £	Designated Award Fund £	Total £
Tangible Fixed Assets	12,008	176,014	-	188,022
Intangible Fixed Assets	43,592	-	-	43,592
Investments	-	1,221,016	64,084	1,285,100
Cash Deposited with Investment Brokers	-	58,851	-	58,851
Net Current Assets/Liabilities	787,428	(2,440)	(8,705)	776,283
Total Net Assets	<u>843,028</u>	<u>1,453,441</u>	<u>55,379</u>	<u>2,351,848</u>

17 RECONCILIATION OF MOVEMENTS IN UNREALISED (GAINS)/LOSSES ON INVESTMENT ASSETS

	Reserve Fund £	Designated Award Fund £	Total £
Unrealised gains at 31 Dec 2014	265,514	1,177	266,691
Realised investment (gains) / losses during the year	(63,410)	-	(63,410)
Net unrealised investment gains/ (losses) arising during the year	(21,288)	(1,201)	(22,489)
Unrealised (losses)/gains included in net assets at 31 Dec 2015	<u>180,816</u>	<u>(24)</u>	<u>180,792</u>

DISPOSAL OF INVESTMENTS

	Cost £	Proceeds £	Book Gain/(Loss) on Disposal £	Realised Revaluation Gain/(loss) £
Reserve Fund	<u>369,913</u>	<u>439,133</u>	5,810	<u>63,410</u>
Net unrealised investment gains/ (losses) arising during the year as above			(21,288)	
Per Statement of Financial Activities			<u>(15,478)</u>	

18 PENSION FUND

The Society contributes to individual pension schemes established for each individual employee. The assets of these schemes are held separately from those of the Society in independently administered funds. The pension charge represents contributions payable by the Society to the schemes and amounted to £40,875 (2014 - £37,251).

Information about the Society

- (1) The Operational Research Society is a company limited by guarantee (no. 663819). It is also a charity registered in accordance with the provisions of the Charities Act 2011 (registration no. 313713)
- (2) The objects of the Society are given in its Memorandum and Articles, and can be summarised as:
 - (a) the advancement of knowledge by fostering, promoting and furthering interest in Operational Research; and
 - (b) the advancement of education by providing facilities for, and by subsidising it; endowing, organising or supporting scholarships or educational or training schemes; and conducting examinations or advising on their content.
- (3) The Society is empowered to do all proper things in pursuit of these objectives.
- (4) The affairs of the Society were managed during 2015 by the elected officers and members of the Board listed below. Together they constitute the Board of Directors of the limited company, and Trustees of the charity and the members of its management committee. Specific matters are delegated to particular committees of the Society by resolution of the Board and in accordance with the Society's Articles.

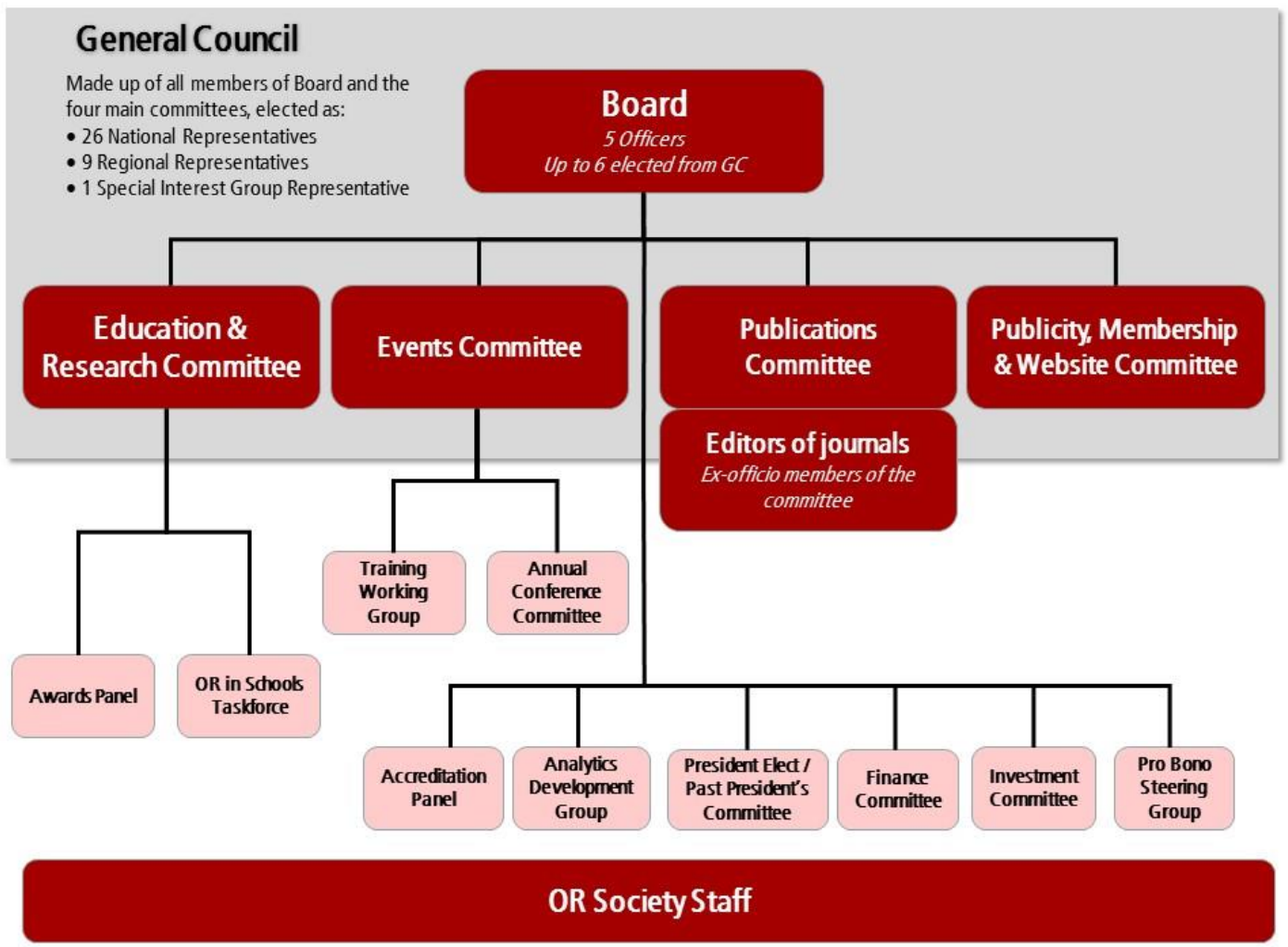
The following served as members of the Board in 2015

S L ROBINSON President	S BEG
J R HOPES Vice President	J D GRIFFITHS
S PETROVIC Vice President	M H KUNC
R A KAUFMAN President Elect	F A O'BRIEN
R A FORDER Hon. Treasurer	J PARKIN
	A F SHEEN

Unless otherwise stated, changes in the membership of the Board occur at the end of a calendar year.

The Board is supported by a General Council with a maximum membership of thirty-six. These two bodies assist the Society in its ongoing commitment to involve as many members as possible in its affairs. The Board of Directors is responsible for governance and strategy, and the General Council, with its wide representation, provides advice, feedback and challenge, and monitors the Board's activity. Members of General Council have also, in all cases, been assigned to one of the Society's four main committees: Publications; Publicity, Membership and Website; Education and Research; and Events, and the Chairs of those committees are currently Board members.

The structure is set out in the diagram below.



(5) The committees are established to implement policies of Board & General Council with respect to meeting the Society's objectives and to controlling expenditure. The names of the committees are set out as follows, together with the object ((a) or (b) as above) towards the achievement of which they contribute:

Accreditation Panel	(a)
Analytics Development Group	(a)
Awards Panel	(a)
Education & Research	(b)
Events	(a), (b)
Finance	Management of financial aspects
Investment	Management of investments
Past President's/President Elect's	Elections, planning & administrative reviews
Pro Bono Steering Group	(a)
Publications	(a)
Publicity, Membership & Website	(a)
Training Working Group	(b)

(6) Other Committees are set up from time to time for specific purposes, but they are given no delegated powers. In addition, the Society has a large number of active Special Interest Groups which are listed in the Journal of the Society. They contribute particularly to object (a).

(7) The registered address of the Society is:

Seymour House
12 Edward Street
BIRMINGHAM
B1 2RX

Its Secretary & General Manager is:

I G Blackett
The OR Society
12 Edward Street
BIRMINGHAM
B1 2RX

Its Bankers are:

The Co-operative Bank
Delf House
Southway
SKELMERSDALE
WN8 6WT

Its Solicitors are:

Sydney Mitchell and Co
Cavendish House
Waterloo Street
BIRMINGHAM
B2 5PU

Its Auditors are:

Mazars LLP
45 Church Street
BIRMINGHAM
B3 2RT

Its Investment Adviser is:

Tom Quicke
Investec
2 Gresham Street
LONDON
EC2V 7QN

Its Stockbrokers are:

Investec
2 Gresham Street
LONDON
EC2V 7QN

- (8) The Society's investment policy is governed by the legislative provisions relating to charity investments, but the Society is not otherwise restricted in the way in which it can invest. However, it is the Society's policy not to invest in tobacco shares.
- (9) These particulars are published in compliance with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2015).

Public Benefit

The OR Society is a charity and meets the public benefit test as set out in the Charities Act 2011 in various ways:

Advancement of education:

Through the O.R. in Schools initiative, its many networking, training, and conferencing activities in schools, universities and workplaces, and extensive on-line resources, the OR Society promotes the understanding of OR and how it can be applied for the wider benefit. The OR Society is a participating society (with voting rights) on the Joint Mathematical Council of the UK.

Advancement of science:

Through its publications, conferences, and networking activities; representation on the Council for Mathematical Sciences, Science Council, funding bodies and international federations; and on-line materials and facilities, the OR Society supports, promotes and publicises research; raises standards of research and practice; and promotes the effective application of O.R. for wider social benefit. Through its accreditation and awards schemes, the OR Society recognises and promotes engagement, effectiveness and development in its members, further raising standards.

Advancement of community development:

The OR Society encourages volunteering and involvement through its Pro Bono O.R. initiative, involvement of members in outreach to schools and universities, and networks of Regional and Special Interest Groups.

The OR Society funds educational, development and research projects that are in line with its charitable aims of advancing knowledge and education through fostering O.R.

All OR Society events and training are open to all who may be interested. In addition, it minimises barriers to access by:

- (1) ensuring that many of its on-line resources are publicly and freely available;
- (2) keeping membership fees low, and offering reduced fees for unwaged groups; and
- (3) supporting Regional and Special Interest Group networks which offer free meetings.

In governing the OR Society, the Trustees have had regard to the Charity Commission's public benefit guidance.

Statements as to disclosure of information to auditors

In accordance with Company Law, as the charity's trustees, we certify that:

- so far as we are aware, there is no relevant audit information of which the Charity's Auditor is unaware; and
- we have taken all the steps that we ought to have taken in order to make ourselves aware of any relevant audit information and to establish that the Charity's Auditor is aware of that information.

Statement of responsibilities of the elected officers and members of the Board

Company law requires the elected officers and members of the Board to prepare financial statements for each year which give a true and fair view of the state of affairs of the Society and of the surplus or deficit of the Society for that period. In preparing those financial statements, the elected officers and members of the Board are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements;
- prepare the financial statements on the going concern basis unless it is inappropriate to assume that the Society will continue in business.

The elected officers and members of the Board are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the Society and to enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Society and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Appointment of trustees

The officers and other members of the Board are elected by secret ballot of the Society's membership and the members of General Council respectively, to serve for a three-year term (except for the President, who serves one year as President-Elect, two years as President and a further year as Immediate Past-President). A member of the Board, other than the President, whose first term of office has expired may stand for election for one further term. At the end of 2015, two members of the Board completed their term of office: R A Forder and J D Griffiths. J Parkin and A F Sheen resigned from their positions for personal reasons.

Induction of new trustees

New trustees receive a comprehensive information pack, setting out details of their role and responsibilities as both trustees and company directors, the nature of a charity, the Society's constitution, its policies on members' interests and expense claims, and including the Charity Commission's 'welcome' leaflet.

Members' interests

In accordance with Article 46 of its constitution, the Society requires that members of Board or committees having an interest in a matter to be debated should declare that interest and leave the room whilst the matter is discussed and decided. Members of the Training Working Group are drawn from organisations which have no interest in bidding for courses and wherever appropriate, recommendations on major charitable projects are made by a special expert committee comprised entirely of disinterested parties.

Approval of report

We approve this report and the audited accounts for the year 1st January to 31st December 2015, and recommend their adoption by the Society at its Annual General Meeting.

R A KAUFMAN President

J E WILLIAMS Hon Treasurer

P ALBORES

S BEG

S P COLLINGWOOD

R W EGGLESE

J R HOPES

M H KUNC

F A O'BRIEN

S PETROVIC

S L ROBINSON

Being the elected officers and members of the Board of the Operational Research Society as at 18 May 2016.

I G Blackett

Secretary & General Manager

18 May 2016

History

In the autumn of 1947, at a dinner discussion convened at the Athenaeum Club in London, it was decided to form an Operational Research Club. The Club was inaugurated in April 1948 with an initial membership of 50, under the chairmanship of Sir Charles Goodeve and with Mr J A Jukes as the first Secretary. The exclusivity associated with the word "Club" was deliberately chosen for the initial period, to ensure clarification of what was meant by operational research and to attempt to develop a wholeness in what was otherwise a somewhat vague field. The Club met regularly in the rooms at the Royal Society for technical discussions. By 1953 the initial objectives had been achieved and the pressure to form a normal "learned and professional" society had become strong. Therefore, the Club was transformed into the Operational Research Society, and its first President was Sir Owen Wansbrough-Jones and the Hon Secretary Mr B H P Rivett.

Presidents of the Society

Sir Owen Wansbrough-Jones	1954/55
Sir William K Slater	1956/57
Professor M G Kendall	1958/59
The Earl of Halsbury	1960/61
Professor B H P Rivett	1962/63
Professor G A Barnard	1964/65
Professor R T Eddison	1966/67
Mr E C Williams	1968/69
Mr S Beer	1970/71
Professor K D Tocher	1972/73
Mr R C Tomlinson	1974/75
Mr A M Lee	1976/77
Professor M G Simpson	1978/79
Mr G H Mitchell	1980/81
Professor K B Haley	1982/83
Dr R S Stainton	1984/85
Professor J V Rosenhead	1986/87
Dr J C Ranyard	1988/89
Mr P N Thornton	1990/91
Professor C B Chapman	1992/93
Professor L C Thomas	1994/95
Mr I J Disley	1996/97
Professor R G Dyson	1998/99
Professor M Pidd	2000/01
Mr J Gibb	2002/03
Professor V Belton	2004/05
Professor J D Griffiths	2006/07
Mrs S M Merchant	2008/09
Professor R W Eglese	2010/11
Dr G H Royston	2012/13
Professor S L Robinson	2014/15
Ms R A Kaufman OBE	2016/17

OR Society Awards

Companion of Operational Research

Sir Hermann Bondi	1983
Mr D Hicks	1983
Professor R V Jones	1983
Professor B H P Rivett	1983
Mr H R W Watkins	1984
Professor Sir David Cox	1985
Lord Ezra	1985
Mr P Hughes	1985
Lord Zuckerman	1985
Sir John Kingman	1986
Sir Dennis Rooke	1986
Sir Charles Carter	1987
Mr T P Frost	1987
Professor H.Muller-Merbach	1988
Mr D A Quarmby	1989
Professor R C Tomlinson	1990
Mr R A Showell	1991
Mr G H Mitchell	1992
Professor P Whittle	1994
Mr J Plymen	1994
Professor S Vajda	1995
Professor K B Haley	1996
Professor M F Shutler	1996
Professor D J White	2001
Professor K C Bowen	2001
Dr R A Forder	2005
Professor F Kelly	2005
Mr G K Rand	2005
Dr J C Ranyard	2005
Professor J V Rosenhead	2005
Dr J F Miles	2006
Professor R G Dyson	2007
Mr E K G James	2007
Professor J Friend	2008
Dr G Royston	2008
Professor R J Paul	2009
Professor A Mercer	2010
Mr T O'Connor	2010
Professor V Belton	2011
Ms R A Kaufman	2011
Professor M Pidd	2011
Professor P H Millard	2012
Professor D M Ryan	2013
Professor R M Davies	2014
Mr C R Humby	2014
Mrs S M Merchant	2015

Goodeve Medal

B H Mahon	1976	S Howick	2002
R J M Bailey	1976	C Eden	2002
N R Tobin	1977	J E Beasley	2003
I Sanderson	1979	H Howells	2003
A J Williams	1980	J Sonander	2003
J G Shepherd	1981	R Hartley	2004
F K Lyness	1982	G Lanot	2004
L P Fatti	1984	S C Brailsford	2005
A H Christer	1985	V Lattimer	2005
W M Waller	1985	P Tarnaras	2005
G Best	1987	J Turnbull	2005
G Parston	1987	K Taylor	2006
J V Rosenhead	1987	B Dangerfield	2006
D Rowland	1988	S C Brailsford	2007
I R Turner	1989	D Evenden	2007
R Bandyopadhyay	1990	V Harinda	2007
S Datta	1990	P Harper	2007
D Schrady	1992	A Medina-Borja	2008
D Wadsworth	1992	K S Pasupathy	2008
A Bouzaher	1993	K Triantis	2008
S Offutt	1993	D Ronen	2009
D W Bunn	1994	C A Goodhart	2009
E R Larsen	1994	S Kumar	2010
K Vlahos	1994	D A Nottestad	2010
G M Campbell	1995	E E Murphy	2010
C F Davis	1995	L C Thomas	2011
M Carey	1996	F R Johnston	2012
D Lockwood	1996	E A Shale	2012
C M Yeats	1997	S Kapoor	2012
T Rehman	1997	A Sheth	2012
D-W Tcha	1998	R True	2012
T-J Choi	1998	P Kemmer	2013
Y-S Myung	1998	A Strauss	2013
F Duckworth	1999	T Winter	2013
A J Lewis	1999	J Bengtsson	2014
J Banasik	2000	D Bredstrom	2014
J N Crook	2000	P Flisberg	2014
L C Thomas	2000	M Ronnqvist	2014
K Korporaal	2001	S Crowe	2015
A Ridder	2001	P Bennett	2015
P Kloprogge	2001	M Daraktchiev	2015
R Dekker	2001	M Utley	2015

Stafford Beer Medal

JJ Jahng	2003	F Thiesse	2010
H Jain	2003	J Al-Kassab	2010
K Ramamurthy	2003	E Fleisch	2010
R Lindgren	2004	P O'Reilly	2011
D Stenmark	2004	P Flanagan	2011
J Ljungberg	2004	R Lederman	2012
S Sarker	2005	R Johnston	2012
S Sahay	2005	H Koch	2013
S Madon	2006	E Gonzalez	2013
C Middleton	2007	D Leidner	2013
W Cukier	2007	D Denyer	2014
S K Sia	2008	M Hall	2014
C Soh	2008	E Kutsch	2014
C Ashurst	2009	E Lee-Kelley	2014
N Doherty	2009	P Tallon	2015
J Peppard	2009		

Tocher Medal

K Kotiadis	2007/08	Y Saanen	2011/12
T Pitana	2009/10	K-H Chang	2013/14
E Kobayashii	2009/10	A-L Chang	2013/14
C Boer	2011/12	C-Y Kuo	2013/14

Cook Medal

P Jackson	2012/13	J Klobas	2012/13
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Griffiths Medal

H Witteman	2013/14	J Stahl	2013/14
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Doctoral Award

K Kaparis	2008	K Rustogi	2012
A Strauss	2009	T Lidbetter	2013
F Liberatore	2010	M Takac	2014
R Wood	2011		

President's Medal

D R Corkindale	1976	H Gilles	2000
M L Chambers	1977	D Bright	2000
R G Dyson	1977	V Kocatulum	2000
M Sloman	1978	E Wolf	2000
J V Rosenhead	1979	J Moffat	2000
P Doyle	1980	J J Race	2001
J Fenwick	1980	D Burnell	2001
G P Savage	1980	M Neighbour	2002
D B Gilding	1981	M Acutt	2003
C Lock	1981	P Loader	2004
B Fokkens	1982	M Bryant	2004
M Puylaert	1982	P Bates	2004
R S Hambleton	1983	C McGuckin	2004
A W Nimmo	1984	D Kelly	2004
C B Chapman	1985	P Loucopoulos	2005
D F Cooper	1985	KG Zagrafos	2005
A B Cammaert	1985	Y Pyrgiotis	2005
P Doyle	1987	D Beis	2005
J Saunders	1987	A Swain	2006
M Pidd	1988	A Ross	2006
S R Clarke	1989	A Lewins	2007
A H Christer	1990	M Sykes	2007
K A H Kobbacy	1990	A Moon	2007
B C Dangerfield	1991	M Allwright	2008
C A Roberts	1991	J Ball	2008
M B Wright	1992	D Pankhurst	2008
C P Thunhurst	1993	I Wright	2008
C J Ritchie	1993	P Frangos	2010
A Khakee	1994	S Hughes	2010
K Stromberg	1994	S Hammond	2011
J J Glen	1996	K Slater	2011
H Tsoukas	1997	C Marston	2012
D B Papoulias	1997	P Rose	2012
J H Powell	1998	S Mardle	2013
G Laporte	1999	L Fildes	2013
F Semet	1999	A Lewins	2013
V V Dadeshidze	1999	E Husemann	2014
L J Olsson	1999	D Lane	2014
F Vasko	2000	E Munro	2014

Beale Medal

J V Rosenhead	1992	L C Thomas	2008
D J White	1993	J D Griffiths	2009
A H Christer	1995	K H Haley	2010
G H Mitchell	1998	F Kelly	2011
H P Williams	1999	M D Elder	2012
R C Tomlinson	2005	K D Glazebrook	2013
P Checkland	2006	R Fildes	2014
C Eden	2007	J Friend	2015

Silver Medal

Sir Charles Goodeve	1964
Professor P M Morse	1965
Professor K D Tocher	1967
Professor B H P Rivett	1968
Professor R T Eddison	1969
Mr A M Lee	1970
Professor R L Ackoff	1971

Sir Geoffrey Vickers	1975
Mr E.K.G.James	1979
Professor E M L Beale	1980
Professor S Eilon	1982
Professor G Dantzig	1986
Mr L V Kantorovich	1986

Bronze Medal

R M Adelson	1965
J Stringer	1967
T A Burgin	1967
A R Wild	1967
D J Chambers	1968

M F Cantley	1969
F D Lyness	1970
A M Duguid	1972
C G Moss	1972



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