

**International Workshop on Accountability Challenges:  
*Restoring Trust*  
Summary Report  
June 16-18, 2009  
Lisbon, Portugal**

**INTRODUCTION**

On June 16-18, 2009, the Portuguese Foundation for Science and Technology (FCT) in conjunction with the US National Science Foundation (NSF) hosted an international Workshop on the challenges of managing research accountability.

The 2009 Workshop, co-chaired by Deborah Cureton (NSF) and Ligia Amâncio (FCT), was the seventh in a series of annual workshops. The purpose is to gather officials from international research organizations responsible for the oversight of research to discuss new or existing challenges and exchange experiences and best practices.

The first Accountability Workshop was held in Paris in 2003 and focused on organizational structures and missions of each of the represented funding organizations. Since that time, the workshops have covered a multitude of subject areas including implementation of grant oversight strategies, audit practices and compliance, misconduct in research, evaluating the results of research, evaluating and managing research performance and financial risks, and strategies to prevent fraud and abuse of research funds.

**PURPOSE**

The primary purpose of the Workshop was to present and discuss strategies to address accountability challenges using case studies and discussing best practices. The Workshop agenda is contained in **Appendix A**.

**INVITEES**

Invited persons were mainly individuals who have responsibility for operating programs that prevent and detect fraud, waste, and abuse in government- funded science and engineering programs. In addition, research universities and institutions were represented. International attendees and their affiliations are listed in **Appendix B**.

**Day One – Tuesday, June 16, 2009**

**OVERVIEW**

Deborah Cureton, Associate Inspector General for Audit, National Science Foundation and Ligia Amâncio, Vice President, The Portuguese Foundation for Science and Technology, hosted the workshop at the Centro Cientificico e Cultural de Macau Museum in Lisbon, Portugal. Christine C. Boesz, PhD., Former Inspector General, the National Science Foundation, served as the meeting facilitator.

In welcoming the attendees, Deborah Cureton introduced the topics that would be discussed during the two and a half days, with the focus on research grants oversight and management, internal audit,

risk assessment, and audit committees and governance strategies. Ligia Amâncio also welcomed the attendees to Lisbon and to the Workshop.

The remainder of the agenda was devoted to 1) evaluating and managing grant risks, 2) general auditing and internal control issues, 3) information technology issues, and 4) misconduct in research. The language for communication was English.

## **NARRATIVE SUMMARIES**

The following narratives are summaries only. Please refer to the accompanying compact disk to view full presentations in PowerPoint or PDF format. Also, the presentations are available on line at <http://www.nsf.gov/oig/lisbon.jsp>

### **Portuguese Foundation for Science and Technology Overview and Accountability Challenges *Ligia Amâncio, Vice President, The Portuguese Foundation for Science and Technology (FCT), Portugal***

The Portuguese Foundation for Science and Technology (FCT) has approximately 6000 active projects and makes about 1200 new awards each year. FCT funds research in four areas--Life and Health Sciences, Engineering Sciences, Natural and Environmental Sciences and Social Sciences and Humanities. This presentation explained the various stages of an award's life cycle and the accountability and stewardship controls built into each stage. In the submission stage, FCT advertises its award funding opportunities and informs candidates of the rules of receiving an award, including a requirement that the Principal Investigator agree to provide a minimum of 25 percent of his/her time on the project. During the validation stage, FCT verifies that the PI has an acceptable track record of prior performance as evidenced by the PI final reports on past projects and that the PI has no history of improper management of FCT funds. In the evaluation stage, independent review panels assess the merits of each research proposal and rank the proposals. During the execution of the research project, the PI must submit cost reports and scientific accomplishment reports which are reviewed by FCT to ensure the project is meeting both the financial and programmatic goals of the award. This stage will also require audits of the costs. Finally, at the end of the project there is an evaluation of the final scientific report conducted by panels of science experts to determine whether the work performed complied with the initial work plan. Final payment is made if the panel approves the final report. If the report is not approved, all of the funding for the project must be returned to FCT.

### **Matching Funds: An Accountability Challenge**

***Paul McEaney, Finance Manager, Grants & Systems, and Donal Keane, Chief Operations Officer, Science Foundation of Ireland (SFI)***

The purpose of the presentation was to generate discussion among the participants at the workshop on several issues facing SFI. The presentation began with a brief history of the Science Foundation of Ireland.

Background information was given on two of SFI's awards which have a requirement for matching funds from industry partners. The SFI Grants Department initiated a review of these awards after their first term and discovered problems in verifying receipt of the promised matching funds from the industry partners. Specifically, in almost all cases matching funds were in the form of "in kind"

contributions rather than cash, making it difficult to determine the value of the match. The nature of the “in kind” funding varied and it was often difficult or impossible to substantiate that the match actually existed. Because SFI has no requirement for periodic reporting of the value and nature of matching funds, the industry partner and SFI program staff did not make meeting the matching requirement a priority.

Mr. McEaney described the particular difficulties SFI encountered in verifying ‘in kind’ contributions of personnel, equipment, and proprietary software.

The presentation concluded with a list of lessons learned from SFI first term awards:

- Basis of valuing “in kind” contributions must be agreed at outset
- All documentation supporting matching funds must be available for audit purposes
- Responsibility and accountability for validating matching funds needs to rest with Research Body.
- Regular reporting on the value of cost share should be required.

### **Update on Financial Management and Accountability at NWO**

*Co de Vries, Netherland Organization for Scientific Research, The Netherlands, Holland*

This presentation provided an overview on financial management and accountability at the Netherlands Organization for Scientific Research (NWO) - It covered two primary areas:

1. Finance and internal control at NWO rests primarily in a central NWO Department of Finance and Control and Departments of Finance and Control at the several NWO Research Councils. The latter departments operate under the governing accountability and financial policies and procedures of the central department..
2. Responsibility of NWO’s accountability policies and procedures are based upon the accountability rules of the Department of Education, Science and Culture (OCW). These rules require an annual audit of NWO by an external accountant and a review of the internal control system of NWO. The internal control system of NWO relies on audits at the Dutch universities of funds from NWO. NWO also conducts site visits to the universities to perform a limited review of the universities processes to account for and manage NWO funds.

To improve accountability, NWO is working on:

1. Developing standard general terms and conditions for all of NWO’s research projects, including the harmonisation of funding schemes (funding of indirect costs)
2. Developing new (automated) systems for making and handling the financial management of NWO’s awards.

The challenge is how to better integrate NWO’s finance and control function with its grant making function in the individual Research Councils. NWO is also trying to better ensure that its decision making processes recognize and take into account the principals of effectiveness, efficiency and integrity.

## **Financial Review of Research Grant Applications**

***Brian Hooper, Director of Finance, Economic Social & Research Council (ESRC), United Kingdom***

This presentation gave a broad overview on the financial procedures applied within UK Research Councils to applications for funding of research projects from UK Research Organisations (ROs). It additionally provided an outline of the financial procedures applied to managing and administering the full life cycle of the UK Research Councils' grants, including financial settlement.

The presentation also addressed the overall control and assurance processes that the Research Councils' rely on in making their grant awards and the grant funding framework in the UK.

The overall assurance framework for funding in the UK has a number of key elements. In particular an electronic application system which must be used by all applicants – a system which incorporates eligibility and registration controls over both Research Institutions and individual researchers. This ensures that all applications for funding are made within a controlled environment which provides underlying assurance, and enforces a common template on the content of an application.

Secondly, applications for funding have to be made within the UK's Full Economic Costing framework, which ensures that all costs sought by the university RO to be paid under the award are defined, are within a controlled cost range, and are subject to specific and published rules on their funding. Staff at the ROs is expected to be trained and have an understanding of the full Economic Cost framework and how it is working at the RO which adds extra assurance within the process. Prior to receiving applications, individual Research Councils perform checks first at the Institutional level. Secondly an automated system checks to ensure completeness of the research application.

Assurance on the reasonableness and type of costs sought by the RO is achieved via a mix of peer review and office checks. The peer review focuses on the quality of science and the level of resources sought, including scientific and other skill requirements. The Research Council administration examines costs and justifications, including correctness of the indirect and estate amounts. The presentation included an outline of a number of mechanisms which are applied during the review and approval process to adjust the costs, in line with agreed changes to the scope of the research project. Once amounts are approved, total values are then indexed to allow for future inflation over the life of the grant, excluding the capital costs.

The final steps in the award commissioning process are the financial approval of the grant, which is done under delegated financial powers by the Research Council Executive. This step ensures that funds are available and can be committed, that the investment merits funding, that all required peer review and other processes have been completed, VFM requirements are met, and finally that appropriate related party clearances are disclosed. Following this, the grant costs, grant terms, and payment profiles are approved. The grants contain common terms and conditions applied by all UK Research Councils.

The presentation also described the key features of the framework which apply once a grant offer has been made. First, the RO has to formally accept the grant and provide a start date, which then triggers a payment schedule. During the life of the grant, payments will be made against the payment profile, except as affected by approved changes such as grant extensions, or re-profiling if for instance interim or annual claims are applied by the Research Council. At the end of the grant,

scientific accomplishment reports and final claims for cost share are required from the RO within specified times. Financial sanctions (including 100% recovery) are in place against the RO in the event that reports and / or claims are delayed or not provided.

During the presentation, reference was also made to the assurance mechanisms in place covering administration of grants by ROs. These assurances are provided by the Research Councils Funding Assurance and Quality Assurance & TRAC Validation (FAP /QAV) program. An explanation of this assurance process is discussed in a later session of this Workshop.

### **How We Cope with Our Financial IT Systems!**

***Mark Brocken, Head of the Financial Department, Foundation for Fundamental Research on Matter, The Netherlands, Holland***

The Foundation for Fundamental Research on Matter (FOM) promotes, coordinates and finances fundamental physics research in The Netherlands. It is an autonomous foundation closely connected to the physics division of the Netherland Organization for Scientific Research (NWO). FOM's annual budget is about 80 million Euros. FOM employs about 850 people who work in FOM research institutes and in university laboratories.

The financial IT-systems of FOM consist of three basic systems, -- namely a Human Resource system, a Finance system (general ledger, and accounts payable) and a Budget administration system (assigned budgets and positions in long-term perspective). On top of this FOM is a data warehouse in which the information from the three basic systems is maintained and accessed to generate required reports. The main challenge with respect to the financial systems of FOM are:

- fully utilizing and realizing the potential of IT-systems;
- updating the existing software;
- securing and encrypting the data; and
- providing the necessary expertise to support the systems.

Recently an IT-audit was done on the financial systems. The audit concluded that the main risks currently are addressed by manual controls rather than automated controls. The audit yielded some recommendations with respect to the application controls and the general IT-controls. FOM intends to implement e-business systems in the coming year, for instance for grant application submission and processing and for HRM. With respect to the financial systems, FOM foresees a need for new functionality in the future for electronic invoicing, workflow management and document management.

### **Full Cost in an Organization in Transition**

***Meine Bosma, Head of Finance Department, Royal Netherlands Academy of Arts & Sciences (KNAW), The Netherlands, Holland***

The Royal Netherlands Academy of Arts and Sciences (KNAW) is a hybrid organization. On one hand, it is a society of members forming a broad forum for the scientific community in the Netherlands, committed to advising, quality assessment, promoting international scientific cooperation etc. On the other hand it is a research organization containing nearly 20 research institutes on several disciplines in humanities and life sciences. The Executive Board decided in 2008 that these two parts should be made more visible in a new type of organization. This decision

led to a refreshment of the Board of Directors, effective on 1<sup>st</sup> July 2009. This new Board's first task is to design the necessary new organizational structure.

The Board will also need to address a number of agenda items regarding accountability:

- Risk management which has not been as high on the agenda in the past as it should have been.
- Management of a standard project accounting method which was successfully completed on 1-1-2008.
- The choice for a costing system, which had been postponed largely because of a major decrease (6%) of the basic finances of the Ministry of Education.
- New legislation coming up by the end of 2009 that is going to be a challenge for compliance.
- The need to strengthen and intensify internal audit activity which has not been as high on the agenda in the past as it should have been.

At the moment three topics direct the financial agenda:

- There is a strong need for further shared services between HRM as well as Finance. The pressure on this subject will grow during the transition period.
- The need for intensifying internal audit is still present, according to the external auditor. Also, KNAW needs to investigate the setup of an audit committee. The Executive Board has to address this subject and, since KNAW is in transition, that new overall governance structure is going to be very important. In that respect, the development and emphasis on internal audit and on risk management should hopefully come together.
- The implementation of Full Cost (FC) accounting will be inevitable as the management tool for financial sustainability and reasonable accountability. Also FC helps to restore trust in KNAW's decisions for financing research.

### **Performance Management: Achieving Institutional Goals While Addressing Government Priorities and Meeting Regulatory Constraints**

*Ian Carter, Director of Research, University of Sussex, United Kingdom*

This presentation illustrated the competing interests of institutional goals, government priorities, and regulatory frameworks that research organizations and individual researchers face. It discussed an approach to defining good research performance, and the challenges of including knowledge exchange into that performance.

#### **Balancing Competing Interests**

Governments are typically setting priorities and expectations for their research organizations that relate to delivering high quality research, that is internationally recognized, and which, increasingly, addresses economic and social issues. As an example of this, the UK Government has identified five economic impacts of research:

- Delivering highly skilled people to the labor market;
- Improving the performance of existing businesses;
- Improving public policy and public services;
- Attracting R&D investment from global businesses;

- Creating new businesses.

In terms of regulatory frameworks, these take a number of forms, some overlapping, and others competing:

- Funding arrangements, such as core funding to the organization, and project-specific funding, each of which will have terms and conditions.
- Research governance requirements, including good practice, research integrity, and research ethics.
- Legal frameworks, which might be specific to research, or more generally applicable, such as the Charities Act, Tax laws, the EU Clinical Trials Directive, State Aid, Financial Services and Markets Act, Freedom of Information Act, Health and Safety at Work legislation.

While many of these will exist in most countries, the form and application will vary given the legal, social and cultural approaches adopted, which further complicates trans-national research.

Most research organizations now have a set of goals, which often take a similar form. As an example, the research strategy of the University of Sussex has four aspects:

- Realistically build on current strengths to develop recognized centers of sustainable research excellence across subject areas;
- Demonstrate research of international standing in all subject areas and world-class quality in recognized centers of excellence, through appropriate performance indices and other benchmarks of success;
- Develop and maintain a sustainable environment based on people, culture and infrastructure, that facilitates the prosecution of research at appropriate volumes of activity and of the very highest quality;
- In partnership with others, contribute to socio-economic well being, in the region, nationally and internationally, as a result of exchanging ideas, knowledge and technology.

Within this, the University has defined six research themes, aimed at encouraging interdisciplinary and cross-departmental collaboration. It has also, in the context of its Strategic Plan, defined targets for increasing research income and numbers of postgraduate research students.

### Good Research Performance

In order to help deliver this performance, the University's Senate has approved a set of minimum and aspirational standards, which cover seven areas: publication, research income, PhD supervision, post-doctoral supervision, conference participation, links with external partners, and knowledge exchange. Variations in expectations are recognized between subject areas, and individuals; e.g. based on career stage. The areas are consistent with the future national research assessment mechanism (the Research Excellence Framework), which is used to determine the core funding received by universities in the UK.

Over the last eight months, the Pro-Vice-Chancellor for Research and the Director of Research and Enterprise have met with each Head of Department (HoD) to discuss the research performance of their department as a whole, and of each individual, categorizing the latter's contribution on the scale of exceptional, expected, partial, and very limited.

Comparative data and institutional targets have been combined in order to construct an indicative research planning model, which then helps to test the reasonableness of the overall targets, and what is required by each department. This information can be used by each HoD in agreeing research plans with individuals, although there is a challenge in how to incorporate such material into a formal appraisal process.

### Inclusion of Knowledge Exchange

As already noted, governments are expecting more economic impacts from research organizations, and one form that this takes is through knowledge exchange (KE). KE covers a wide range of activities, from “hard” commercialization (the creating of spin-out companies and licensing of intellectual property), through consultancy, training, contract and collaborative research, to the softer community engagement (such as public lectures, and liaison with schools).

The timescales for KE can be both short-term (with potentially quick effects), to long-term partnerships (with potentially significant benefits). One question is whether KE is a core activity or not, for both the institution and the individual. It is increasingly the case that KE is now seen as a core activity of the institution, but not all individuals yet see it that way, and equally, not all institutional processes necessarily recognize it as such (e.g. workload distribution mechanisms, annual objectives, promotion and reward systems).

A further question is how KE is funded. Some KE activities should be self-supporting, but others never will be. Given the relationship to research of many forms of KE, should it be considered to be an aspect of research dissemination, and if so, should it be included in the costs of research projects?

Two examples of KE can be explored further: consultancy and intellectual property (IP).

### Consultancy

Consultancy is typically based on the know-how of an individual, who provides advice or opinion. It involves the application of existing knowledge, not the generation of new knowledge, although there may be new insights for the customer and the consultant. There are a range of benefits, to the customer (e.g. a problem solved), and hence to the wider economy, to the consultant (income and access to real-world problems or data), and the institution (who are measured on the level of this form of activity).

Consultancy has been used as a means of allowing staff to earn additional personal income, although this can cause some issues, given the variable ability of individuals to undertake consultancy, because of the subject area or their seniority. Equally, most universities allow their staff to undertake consultancy on a private basis (if no other university resources are used), which means the income does not flow through the institution.

There can be conflicts of interest or commitment, for example if the individual has a relationship with the customer in some way, or if the time they spend on consultancy affects the delivery of their other duties, and hence also affects their colleagues.

The final aspect to consider is how to cost, price and approve consultancy. While day rate costs can be produced for an individual or a grade of staff, consultancy usually needs to be priced, based on market value, which may not be properly understood. Approval is normally required, but because

consultancy can be delivered outside “normal hours”, it is possible that activity takes place without the institution knowing, and for which it may have some direct or vicarious liability.

### Intellectual Property

IP takes a range of forms, including patents, copyright, trademarks, and registered designs. They are a means of dissemination (e.g. patents are publicly-available, published documents), translation and public benefit. Benefits can be realized through know-how and technology, and hence this is applicable across all university subjects, not just in science and technology areas.

As with consultancy, there can be conflicts of interest (e.g., receipt of research funding from one’s own company) or commitment (e.g. the time spent on one’s own company). There can also be institutional conflicts of interest, where a university has a shareholding in a spin-out company (and hence an interest in its success), and has a contractual relationship with the company, for provision of space and facilities, or on research.

Successful commercialization can also result in the depletion of core research expertise; e.g., the loss of a senior researcher and his team (including technical staff) to a spin-out company.

The treatment of student ideas and inventions, and the relationship to their supervisor(s), can be problematic, both in law and in the execution. This can be compounded when a student’s research is funded by a third party who wishes to control the use and dissemination of the results.

Institutions have mechanisms to share the financial benefits of the exploitation of IP with the staff inventors or generators, but this does raise questions for some about individuals benefiting personally from research that has had some or significant support from public funds. The approach therefore needs to be proportionate and well documented.

Also as with consultancy, the processes for costing, pricing and approval can be problematic, not the least because the development and exploitation of IP does not necessarily proceed in a step-wise fashion. However, many institutions operate a form of gateway control mechanism.

### Conclusion

Research performance is subject to influences, positive and negative, from institutional goals, government priorities, and regulatory frameworks. Defining good research performance, and using it in both broad and individual research planning can help to provide some alignment. Including knowledge exchange as part of research performance is increasingly important, but brings with it a number of challenges, especially because of the commercial nature of much of it. Achieving performance is important to any researcher or research organization, but needs to be done while managing conflicts, constraints and variations, observing the law, and applying good practice, integrity and governance.

## **Accountability in Japanese Research Funding Systems**

*Junpei Watanabe, Director Research Program Department, Japan Society for the Promotion of Science (JSPS), Japan*

This presentation discussed accountability in JSPS's largest research grant 'KAKENHI' from three aspects.

### **1. Brief introduction of KAKENHI**

JSPS ministries utilize a competitive system to make research award decisions. KAKENHI is the largest grant program and comprises about 40% of all governmental research grants. KAKENHI is a base of research grants, which covers basic and applied research for all fields of science. JSPS is the funding agency which manages KAKENHI.

KAKENHI accepts about 100,000 applications every year and the success rate is about 23%. KAKENHI consists of several grant categories, of which the main one provides funds for the smallest size grants supporting up to US\$ 50,000 per project. This is one of the characteristics of KAKENHI.

### **2. Accountability for Expenditures.**

The KAKENHI program obliges institutes to manage each grant, including having proper accounting and internal audit processes in place. The ministry 'MEXT' established "Guidelines of Management and Auditing of Public Research Fund at Research Institute" in 2006. It required the universities and institutes to strengthen their organizational grant administration practices.

When the institutes find a violation of the rules, they have to report the violation to JSPS. Reported violations are about 10 per year among 50,000 projects. In these cases JSPS requires some improvements to be made at the institutes and that the related researchers receive some penalty. Typical cases involve holding money as a venter deposit, holding money through fictitious procedure, and spending project money for other research activities. Careless slips, such as over payments made by mistake, are corrected by the institutions without penalty.

The penalty to the related researchers is significant. If the researchers have other ongoing research projects, they are all cancelled, including the researchers' other grants. The researchers cannot apply for a new project for about 4 years. As researchers are required to be accountable for their grant expenditures, we have taken these measures against misuse, but on the other hand, adoption of strict penalties may harm science in some cases.

### **3. Accountability for Taxpayers.**

As of recent, researchers are required to disclose their research results to taxpayers. Research results are posted to a JSPS database which contains about 500,000 research reports of KAKENHI. JSPS will improve the contents to make the information more useful for non academic people or industrial people.

JSPS also will publish the research goals of newly selected large-scale research projects in KAKENHI newsletters which introduce several projects in easy word and figures and KAKENHI Essay Series. JSPS conducts the science experience program to encourage the Principal Investigators of KAKENHI to organize such programs for children.

#### 4. Accountability on Selection.

Since JSPS handles over 100,000 applications annually, it is difficult to notify all applicants of the reasons for failure. Instead, JSPS is now considering issuing a summary document disclosing the weaknesses in the applications for all failed applicants.

JSPS conducts an evaluation of its reviewers' work every year. Program officers in JSPS analyze all of the reviewers' comments on research proposals, and if there are problems identified, JSPS removes those reviewers from the next year's reviews. There are about 30 cases per year among 5000 reviewers. Typical problems are conflicts of interest such as the reviewer's preference toward a particular application or indications of biased assessments such as finding a reviewer's assessment to be very different from the other reviewers or to be inadequate with almost no comments.

#### **Day Two – Wednesday, June 17**

##### **COSMOS-Service Orientated Architecture to Improve Key Performance Indicators**

*David Weber, Director Administration & Finance, European Science Foundation (ESF), France*

The ESF has launched an overhaul of its Information System, called COSMOS, based on a urbanisation approach. The chosen underlying architecture is SOA, Service-Oriented Architecture. This presentation discussed how this IT system increases the ability of ESF to monitor Key Performance Indicators and thus provides the means to act efficiently and improve the overall performance of the ESF organization.

##### **American Recovery and Reinvestment Act**

*Debbie Cureton, Associate Inspector General for Audit, National Science Foundation, Office of Inspector General, United States*

This presentation provided insights into the significant challenges faced by the US government in managing, accounting and reporting on \$787 billion of funds provided under the American Recovery and Reinvestment Act to stimulate the US economy. It provided some history of events leading up to the near financial meltdown of the US economy and steps taken by the President and Congress to address the financial crisis. One of those steps was the passage of the American Recovery and Reinvestment Act (ARRA) which directed 28 Federal agencies to fund a multitude of programs that would help create jobs and invest in infrastructure. NSF received \$3.02 billion to specifically fund grants for research and development. The presentation explained how NSF planned to spend these funds quickly as required by the Act, while simultaneously ensuring that controls were in place to manage and oversee the funds after the research awards were made. It also addressed the role of the Office of Inspector General (OIG) under the Act. Specifically, the Act charged the OIG with evaluating the adequacy of NSF's procedures for managing, overseeing, and ensuring accountability for the funds awarded under the Act. The Act expects the OIG to be involved proactively as NSF is developing and implementing its accountability processes and to provide continuous assessment throughout the life of research awards of how well NSF has used, managed and accounted for these funds. In recognition of this role, the presentation described how the OIG was conducting "real time" reviews of NSF's award and oversight activities and provided examples of the reviews recently completed.

## **The Audit Committee Contribution to Accountability**

***Jeremy Twomey, Head of Audit & Compliance, Science Foundation Ireland (SFI), Ireland***

This presentation covered five areas:

- First, it provided a definition, background information and best practice guidance on Audit Committees.
- The second part of the presentation concentrated on the Audit Committee's responsibilities and specified the role in the oversight of :
  - Financial Reporting & Accounting
  - Internal Control & Risk Management
  - External Audit
  - Internal Audit
- The next section of the presentation highlighted the benefits of the Audit Committee to an organization.
- The fourth part of the presentation briefly outlined some of the current challenges facing Audit Committees.
- The final section included a brief summary and was followed by a Question & Answer session.

## **Internal Control Systems in Directorate-General Research**

***Marc Bellens, Head of Unit, European Commission, Research Directorate-General, Belgium***

The two objectives of the presentation on the internal control Systems in the Research Directorate-General (DG-RTD) of the European Commission were:

- (1) to benchmark the DG-RTD practices with the processes applied in other national research foundations that award grants, and evaluate whether there is any opportunity for simplification, and
- (2) to present two main risks that were identified in DG-RTD's annual risk assessment exercise, namely
  1. the insufficient verification of the scientific results, since audits mostly focus on awardee financial compliance, and
  2. the insufficient verification of plagiarism (paying several times for largely the same study) since there is insufficient data exchange in between grant-awarding research foundations.

Regarding objective 1, the presentation explained the Internal Control Standards that apply to the whole European Commission, to every EC DG, and the four-stage process to make research awards in DG RTD. On the latter item, the presentation discussed the specific key controls for the evaluation of proposals, selection and award negotiation, project and grant management, as well as the audit process.

With regard to objective 2, the presentation explained DG-RTD's risk assessment methodology. This led to a discussion by participants of two risks mentioned above and the difficulties of mitigating and managing these risks. One remark was that "scientific" audits may be warranted by qualified experts after the research project was finished. On the risk of plagiarism, the participants acknowledged the lack of sufficient data exchange between funding organizations, but some research foundations would be willing to examine ways that data could be exchanged.

### **Implementing Internal Audit Standards**

*Trine Tengbom, Director, The Research Council of Norway, Norway*

The operation of the Internal Audit department at the Research Council of Norway (RCN) is obliged to follow The International Professional Practices Framework (IPPF) developed by The Institute of Internal Auditors Inc (IIA), [www.theiia.org](http://www.theiia.org). The RCN Executive Board made this decision in 2004.

Under this Framework, RCN's Internal Audit seeks to achieve the goals of an internal audit function which is defined in IPPF as:

*“an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.”*

The presentation then described RCN's systematic, disciplined approach to auditing at RCN. The approach includes the implementation of

- Code of Ethics
- Attribute Standards
- Performance Standards

### **A Cautionary Tale: Blinded by the Mission**

*Cheryl Place, Director of Internal Audit, & Laura Lew, Associate Director of Internal Audit, The Nature Conservancy, United States*

The presenter described a particular project that went awry, although its original purpose and goals were sound. But from the outset, the administration and management structure governing the project were flawed and ultimately jeopardized the entire project. In its zeal to preserve the habitat of an endangered species and provide sustainable funding for the conservation of a national park in a developing country, the Nature Conservancy brought its scientific expertise and entrepreneurial drive to this project. Although the Conservancy succeeds in its conservation goals, its significant financial, cultural, organizational, and management missteps put the overall success of the project at risk. The Nature Conservancy staff presented and discussed the series of events that lead to the discovery of a major fraud which in turn revealed internal control weaknesses and management shortcomings that have, from the beginning, endangered the entire project.

## **International Collaborations: Ventures, Hazards, Obstacles and Solutions**

*Lynne Chronister, Executive Director, Office of Sponsored Programs, University of Washington, United States*

The University of Washington has embarked upon a program to conduct research in foreign countries. In order to achieve that goal, the University needed to establish a comprehensive set of administrative procedures and control systems to ensure award funds were properly used and accounted for. This presentation described the various legal, cultural, regulatory compliance, local in-country staff, physical safety and other challenges the university faced in setting up the initial systems to support this global research initiative. It emphasized the importance of bringing together all the various staff having the necessary expertise to find solutions to each challenge. It also identified other factors that are critical to success, including developing relationships with in-country representatives to understand how business is done and gaining support from the governmental and political players. The presentation made clear the need to carefully think through the processes for supporting global research, understand the risks in those processes and develop a clear plan to address those risks before undertaking such an effort.

## **Global Science Forum**

*Christine Boesz, Dr.P.H., Former Inspector General, National Science Foundation, Office of Inspector General, United States*

With increasing numbers of international collaborations in scientific and engineering research, misconduct in research, (i.e., fabrication and falsification of data, and plagiarism) represents a major challenge, as principles, definitions, and investigative procedures may differ, or not exist, in the collaborating countries. This complicates efforts to handle allegations in a timely, fair, and confidential manner. Therefore the Global Science Forum (GSF), under the auspices of the Office of Economic Development and Cooperation, undertook two projects. The first resulted in a consensus report, *Best Practices for Ensuring Scientific Integrity and Preventing Misconduct*. The 2007 report concludes that a major challenge exists and makes recommendations to strengthen contacts among responsible national officials, to foster exchange of information, to promote integrity, and to consider ways for harmonizing principles and procedures across national boundaries.

The GSF also authorized a follow-up activity to look into facilitating international research misconduct investigations. This Committee, co-chaired by the United States and Canada (Dr. Christine Boesz was the US representative), consisted of participants from 25 countries. The focus of the Committee was to produce practical recommendations and tools to help in the investigation of allegations. The main objective was to define core principles on international investigations. Also, the Committee wanted to raise the level of awareness of the issue and to encourage networking among experts and institutions.

The final report, *Investigating Research Misconduct Allegations in International Collaborative Research Projects: A Practical Guide*, incorporates a fundamental set of principles, guidelines, and suggested procedures for conducting international research misconduct investigations that can be used by the international research community. There is also recommended text that could be inserted into international agreements that would help facilitate inquiries and investigations into

allegations of wrongdoing. The report also addresses the sharing of information and establishing networks. Specifically, the report recommends the development of a database of national policies on research misconduct with discussion of the characteristics that such a data base should have in order to be useful to investigators of misconduct. A number of potential international organizations were identified that have the interest and the desired capabilities to develop and maintain such a data system.

*Day Three – Thursday, June 18*

**An Update on Quality Assurance for Funding Research at Full Economic Cost in the UK**  
*Gareth MacDonald, Head of Assurance, Biotechnology & Biological Sciences Research (BBSRC), United Kingdom*

This presentation gave an update on the implementation of full economic costing (FEC) in the United Kingdom Research Councils. The introduction of FEC has resulted in the need to restructure the Research Councils' quality assurance review process. One aspect of this review is the introduction of a Quality Assurance and Validation of the university costing systems which was undertaken in 2008/09. This demonstrated that, while FEC was becoming better understood and implemented in universities, there remained some challenges to be resolved. However, the assurance process was designed to support universities in addressing areas of concern. The driving principles of the review has been to ensure transparency in approach so that universities are fully aware of the breadth of coverage and a willingness to share findings with other funding agencies to the extent possible, in order to avoid duplicative audits and unnecessary burden on institutions. The restructuring has resulted in enhancements to the full economic costing methodologies and enabled the Research Councils to better understand and work with universities to address their accountability issues and improve the overall management of research funds.

**Managing Applicant Demand**

*Stuart Ward, Director, Corporate Services, Engineering & Physical Sciences Research Council (EPSRC), United Kingdom*

The level of demand for funds for research experienced by EPSRC has increased steeply in recent years. As a consequence the proportion of research grant proposals that can be funded has fallen. EPSRC is therefore taking action to underpin efficiency of the process and to reduce burden on peer review. From April 2009, EPSRC has ceased to accept re-submissions, apart from a small number of invited proposals, and in April 2010 will introduce a constraint on repeatedly unsuccessful applicants. Together these measures are expected to reduce the volume of applications by some 30%. In addition EPSRC plans to enhance the transparency of its decision making and provide additional advice and guidance to institutions and academics on this issue. The outcome will be:

- Better quality research through fewer, more considered proposals.
- Increased efficiency of the current peer review process reducing submission of uncompetitive applications.
- A reduced burden of effort spent on assessing poor quality applications by the peer review community.
- More time and effort available to peer reviewers to spend on the consideration of high quality proposals.
- Increased scope to focus on communicating new opportunities rather than reactive communication about success rates.

## **GENERAL WORKSHOP OBSERVATIONS AND CONCLUSIONS**

The participants agreed that the workshop achieved its objectives. It was recognized that scientific research involves an increasing number of international collaborations using both formal agreements and informal arrangements. While collaborations make complex and expensive projects more feasible, the accountability challenges are enormous both in scope and resources needed. Therefore, global communication and cooperation among accountability professionals is necessary to gain efficiency and to produce timely, useful accountability information. During the Workshop, there was discussion on the importance of devising ways to rely on the work of others in the accountability profession. The progress made by participants and their institutions in improving accountability systems was notable. The next Accountability Workshop is scheduled for June 23-24, 2010 to be held in Norway at the Research Council of Norway.

The Workshop participants are grateful for the efforts of Ligia Amâncio and Isabel Ribeiro and the generosity of The Portuguese Foundation for Science and Technology and the Centro Cientifico e Cultural de Macau (CCCM) as the venue and general support for this meeting. Also special thanks to Margarida Ferreira, Florbela Ferreira, Isabel Carvalho, Maury Pully and others for their assistance with the agenda and all the logistical and organizational arrangements they coordinated to make this Workshop such a success.

For additional information, contact Deborah Cureton, Associate Inspector General for Audit, National Science Foundation, U.S.A., e-mail: [dcureton@nsf.gov](mailto:dcureton@nsf.gov)

**International Workshop on Accountability Challenges**  
**Portuguese Foundation for Science & Technology**  
**VENUE: Centro Cientifico e Cultural de Macau**  
**Rua da Junqueira 30**  
**Lisbon, Portugal**  
**June 16-18, 2009**

**AGENDA**

- Co-Chair: Deborah Cureton, Associate Inspector General for Audit  
National Science Foundation (NSF)  
United States of America (USA)
- Co-Chair: Ligia Amâncio, Vice President  
The Portuguese Foundation for Science & Technology (FCT)  
Portugal
- Meeting Facilitator: Christine C. Boesz, Former Inspector General  
National Science Foundation (NSF)  
United States of America (USA)

**Theme: *Accountability Challenges: Restoring Trust***

**Monday, June 15**

6:30 – 8:00 PM “Meet & Greet” Reception Hosted by the Portuguese Foundation for Science and Technology- *Solar do Vinho do Porto*, Rua S. Pedro de Alcantare, 45 (FCT Shuttle to be provided between *Hotel Jeronimos 8* and *Hotel Vila Gale Opera* and reception location. There will be a hostess in hotels to assist)

**Tuesday, June 16**

**VENUE: Centro Cientifico e Cultural de Macau**, Rua da Junqueira 30, Lisbon, Portugal; Website: <http://www.cccm.mctes.pt>

- 8:30 AM Workshop Registration
- 9:00 AM Welcome and Introductions
- 9:15 AM Ligia Amâncio--Overview of the Portuguese Foundation for Science & Technology
- 9:45 AM Break
- 10:00 AM Donal Keane & Paul McEneaney– Matching Funds: an Accountability Challenge
- 10:45 AM Co de Vries – Financial Management and Accountability at NWO
- 11:30 AM Working Lunch Speaker: Brian Hooper – Financial Review of Research Applications (NOTE: Lunch to be served in separate room at 12:15pm)
- 1:30 PM Mark Brocken – How to Cope with Your Financial IT Systems

## APPENDIX A

2:15 PM	Meine Bosma – Full Cost in an Organization in Transition
3:00 PM	Break
3:15 PM	Ian Carter – Performance Management: Achieving Institutional Goals While Addressing Government Priorities and Meeting Regulatory Constraints
4:00 PM	Jumpei Watanabe – Accountability in Japanese Research Funding Systems
4:45 PM	Close for Day
7:00 PM	Dinner on your own

### **Wednesday, June 17**

9:00 AM	David Weber – COSMOS-Service Orientated Architecture to Improve Key Performance Indicators
10:15 AM	Break
10:45 AM	Deborah Cureton – Accountability for Recovery Act Funds
11:30 AM	Jeremy Twomey – Audit Committees and Their Contributions to Accountability
12:15 AM	Working Lunch: Marc Bellens – Internal Control Systems in Directorate General Research  (NOTE: Lunch to be served in separate room at 12:45pm)
1:45 PM	Trine Tingbom – Implementing Internal Audit Standards
2:30 PM	Break
2:45 PM	Cheryl Place & Laura Lew – A Cautionary Tale: Blinded by the Mission
3:30 PM	Lynne Chronister – Conducting Research in a Foreign Country
4:15 PM	Christine (Tina) Boesz – Global Science Forum Report
5:00 PM	Close for day
8:00 PM	Dinner at “ <i>Casa Do Leao</i> ” – Shuttle to be provided to and from conference hotels and Restaurant

**Thursday, June 18**

9:00 AM	Gareth MacDonald – Update on Research Councils Assurance Programme
9:45 AM	Stuart Ward – Managing Applicant Demand
10:30 AM	Discussion/Conclude Workshop
10:45 AM	Adjournment

PLEASE NOTE: All sessions will be conducted in English. Times of presentations and speakers may change. NSF Contact: Ms. Maury Pully, Assistant to Inspector General: [mpully@nsf.gov](mailto:mpully@nsf.gov)  
6-05-09 Revised

**2009 Accountability Challenges Workshop  
Lisbon, Portugal - Final  
List of Participants**

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