TRINITY COLLEGE DUBLIN

Report to Council on the Review of the School of Engineering

October 2013

This report presents the outcome of a review of the School of Engineering which was undertaken from the 25 - 27 March 2013 by Professor Lorna Gibson (MIT Department of Materials Science and Engineering/Mechanical Engineering), Professor Josef Kittler (University of Surrey, Electronic Engineering) and Professor David Nethercot (Imperial College London, Civil Engineering). The internal facilitator was Professor Celia Holland, Trinity College Dublin.

The report attached includes (i) the External Reviewers' report received on the 10 May 2013, (ii) the School of Engineering response received on the 24 June 2013 and an update received on the 9 October 2013, and (iii) the response of the Dean of the Faculty of Engineering, Mathematics & Science, received on the 1 July 2013.

The main purpose of the School review is (a) to provide a structured opportunity for the School to reflect on its activities and plans for development, while benefiting from a constructive commentary by senior colleagues external to College; (b) to ensure that quality and standards in teaching, research and administration are being maintained and enhanced and that areas of concern in this regard are identified and addressed.

The Institutional Review of Irish Universities (IRIU) recommended that the role of the Quality Committee be strengthened in respect to 'the implementation of quality assurance and enhancement processes and outcomes'. As a result, the reviewers' report and responses from the School and Faculty were discussed at a sub-committee of the Quality Committee on the 4th October 2013 and at the full Quality Committee on the 10th October 2013. The Head of School, Professor Brian Foley, was in attendance at both meetings.

Council is invited to consider the Reviewers' report, the responses from the School and the Faculty Dean, and the Vice-Provost/Chief Academic Officer's response to the College-specific recommendations below:

Review recommendation #7
'The College should take steps to make School and Discipline Heads more obviously recognised and valued members of its community.'

- A programme of support for new Heads of School, managed by Human Resources, is in place and improvement to this programme is on-going.

Review Recommendation # 8
'The College should create a stronger linkage between the School earnings/entitlement and actual award.'

- The Planning Group recognises the need to improve communication in this area, and it has been agreed that the Vice-Provost/Chief Academic Officer and the Treasurer will consider ways to address this.

Review Recommendation # 9
'The College should improve the induction processes for the induction of new members of all types.'

- Human Resources will be invited to review the existing staff induction programme and to consider alternative additional ways to ensure that all new staff receive induction training. The involvement of Heads of School, Faculty Deans and Heads of Administration is necessary and induction training should be closely linked to staff development and existing mentoring supports.

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Reviewers' Report

Introduction

The Review Team of Professor Lorna Gibson (MIT Department of Materials Science and Engineering/Mechanical Engineering), Professor Josef Kittler (University of Surrey, Electronic Engineering) and Professor David Nethercot (Imperial College London, Civil Engineering) spent the 3 days March 25-27 visiting the College, having previously been provided with a comprehensive set of briefing material that included the School's Self- Assessment document.

The visit proceeded smoothly thanks to the excellent arrangements made for us by the College's Quality Office; we were granted ready access to all appropriate parts of the College and provided with ample opportunities for questioning and discussion with various groups of its staff and students.

We were impressed by the enthusiasm and vibrancy of the School; it is clearly highly active across a broad range of activities typical of those found in the best university Engineering departments and is enjoying considerable success as indicated by the usual academic measures of research outputs, grants secured, ability to attract high quality staff and to recruit good students etc. We observed the excellent spirit exhibited by all the groups we met: academics (including newly appointed staff), support staff, u/g and p/g students.

We chose to interpret our role as being more one of identifying ways in which the School can become more successful, and the possible barriers to achieving this, rather than of forming judgements - which, in many cases would have required more detailed factual information than was actually provided and more time than was available.

As background to our Review, we were made aware of and recognise the twin (Irish) constraints of:

- Tight finance
- Employment limitations

Our visit was greatly assisted by the constant and constructive presence of the College's Internal Facilitator, Professor Celia Holland, and by having Elspeth Hayes available to take notes of our meetings.

Research and Scholarly Activity

Current Status

The current research in the School is of good quality. Some of the research centres, e.g. telecommunications, and bioengineering are very strong. The School has academics, who are stars, with a significant research income, and scientific contributions which provide clear evidence of international leadership, as manifest in the number of citations to their work and h-index. However, as in many institutions, the research output is not uniformly excellent.

Overall the research income is respectable, amounting to an average spend of some €100k per academic per annum. Also the number of PhD students per academic (3) is quite impressive. It provides evidence of a thriving and vibrant community that attracts good students and financial support for its activities.

Whilst most of the research facilities appeared to be adequate for the current research focus, both in terms of space and research equipment – there was an often stated concern of the main barrier being the physical spread of the activities over several buildings, which makes it difficult to develop a sense of School identity.

Scope for Improvement

Although the status quo is satisfactory, there are a number of factors that could enhance the effectiveness of research.

Strategic issues

First of all, there is a question mark about critical mass. Being a School of engineering, covering three distinct engineering disciplines, the School covers a very wide spectrum of research activities, some of which may be conducted at below critical mass. In some cases this could be addressed via collaboration with other Schools (e.g. Computer Science), or the planned E3, but the aim should be to grow the academic staff complement on the back of the planned increase of postgraduate and undergraduate student numbers by virtue of the forthcoming migration to the 5-year MAI programme and overseas student recruitment.

The E3 (Engineering, Energy and Environment) initiative is a brilliant concept with a significant potential for promoting multidisciplinary research, as well as training PhD graduates with broad knowledge and awareness of wider societal issues with the potential to be instrumental in addressing the gender issue (attracting women to engineering). However, the proposed strategy needs a clear implementation plan with time-scales and a champion to realise it.

Organisation and administrative processes

The preparation of research grant proposals for funding seems to be hampered by overly bureaucratic procedures which may take months to finalise, and the duty of care seems to be independent of the amounts of funding applied for. The IP ownership aspects of research contracts appear to be a stumbling block, especially when dealing with industrial sponsors. In many research areas the benefit to the College should be viewed more in terms of impact, rather than commercial return to the College.

The School does not appear to have a Research Committee, which for a multidisciplinary grouping should play an important role in developing a School research strategy, formulate School policies, coordinate research activities, help to identify research opportunities across School disciplines, develop common PhD and postdoctoral researcher supervision and monitoring practices (e.g. 6 monthly PhD student progress reviews, annual Research Assistant appraisals). The committee should have a budget for pump priming purposes, and to support early career academic staff.

There seems to be a lack of transparency in the way financial resources from external funding come back to the School, and how then they are allocated to support research activities, new initiatives, and maintenance of the research facilities. The €5m per year grant spend should be reflected in more clearly identifiable benefit to the research units.

Staff, PhD student and postdoc support

Bringing new (young) academics up to speed currently relies on informal mentoring. It would be beneficial to assist the development of early career academics by improved structured mechanisms of senior colleague mentoring, probation targets and regular progress reviews, start up package including travel money, PhD studentship, funds for the purchase of equipment and space.

The current domination of staff promotion prospects by financial constraints, rather than merit, may have a detrimental effect on morale and even result in loss of successful academics to other institutions.

There appears to be a very limited structured support for PhD students (training in transferable skills, formal progress monitoring)

Some research activities would benefit from better technician support, especially in cross disciplinary research centres, such as BioEngineering.

There do not seem to be many opportunities for postdoctoral researchers getting together, not even by means of regular external seminars, coffee mornings, etc.

The cohesion of the School and cross fertilisation would be better promoted by collocation of research activities in a single building.

Teaching and Learning

General

The academic staff are strongly committed to teaching. Although resources are tight and people are spread thinly, the academic staff are pulling together in a collegial atmosphere to deliver quality programmes that attract highly qualified students. Recently, the standard of incoming students has been rising. Feedback from the recent accreditation review was positive.

The undergraduate students are very satisfied with the quality of teaching, the link between research and teaching and the approachability of the staff. The undergraduate students report that their engineering studies have changed the way they look at the world in terms of understanding how things work. They feel part of the engineering community.

The most significant issue facing the School is the introduction of the 5-year MAI degree, and the provision of sufficient resources to run it successfully. The faculty are most concerned about the additional demand placed on their time with the introduction of a Master's level 30-unit project in year 5 in addition to the current 15-unit final year project in year 4, which all students except those in Mechanical are required to complete; there is also a more general recurring issue with those more demanding projects e.g. lab space, technician time, software etc. One possibility to alleviate the supervision issue would be to engage postdocs in MAI project supervision; this would also assist in training of postdocs in teaching, something in which some of them have expressed an interest. The undergraduate students are concerned about the availability of computer resources and, in Mechanical and Manufacturing Engineering, the elimination of the 4th year project in favour of additional lectures as a consequence of the need to resource the 5-year MAI project.

Undergraduate teaching

Resources for teaching, especially in the laboratories, are adequate, but barely. The purchase and maintenance of equipment is supplemented by research funds; very little academic funding appears to be available for the purchase of equipment for teaching. Undergraduate labs are often taught in research labs due to a lack of dedicated teaching lab space/or are fitted around other activities.

A few specific concerns were raised. Junior faculty are sceptical of the equal weighting for research and teaching in the promotion criteria; if they are, in practice, not weighted equally, the correct weighting should be communicated to the faculty. The student information system does not work well, especially in handling non-EU students; we heard that this is still a work in progress, with the goal of finalizing it within the next year. In Mechanical and Manufacturing Engineering, the lack of access to suitable workshop facilities limits students' ability to machine and fabricate their own designs; students are currently limited to about 6 hours training in the main machine shop.

The undergraduate students we spoke with would like more regular feedback on how they are doing as each subject progresses; they currently find there is a long delay in getting work and grades back (or they don't get work back at all). The undergraduates also brought up a number of logistical issues: they would like to see more on-line learning (e.g. using Blackboard); a reduction in the overlap of deadlines for assignments in different subjects; the weighting of subjects to reflect the amount of work required for each; and exams distributed throughout the year, rather than all at the end of the year (some students reported that they have 11 exams in one exam period).

Postgraduate teaching

The School of Engineering offers research-based MSc and PhD programmes, an MPhil in Music and Media Technology and industry-oriented Diploma programmes. The School has a strong record in research, but diminishing financial support for research is a concern. The Innovation Academy assists in developing entrepreneurship among research students. The Diploma courses attract students with an interest in careers in industry; the contacts developed with industry are useful to both faculty and students, although the previous financial benefits would now appear to be much reduced.

The “confirmation” to the PhD program occurs at up to 18 months; this is late relative to the length of the degree (typically 4 years). We are concerned about the process for students who are not progressing well as the current process seems ad hoc and ill-defined. We recommend that the confirmation report be submitted and evaluated at the latest 12 months into the PhD and that a process be developed for students who are not progressing well.

The research students we spoke with had several specific concerns. They would like to have an orientation/induction when they arrive. Those demonstrating in undergraduate laboratories would like improved training on the lab itself and in handling groups of students. Like the undergraduate students, postgraduate students would like to be able to do some machining of their designs themselves.

Postdoctoral training

The postdocs we spoke with (admittedly a small sample) were critical of the lack of mentoring and career development advice available; it appears that this is currently done on an ad hoc basis with the research supervisor. There should be more formal mentoring and career development advising of postdocs. Postdocs often go on to academic careers; they would like to have the opportunity to gain teaching experience. The postdocs tended to know other postdocs in their lab or in related labs, but not others; there is a lack of community among the postdocs.

Engagement with Society and Service to the College

General

We observed plenty of evidence of productive engagement with industry, the profession, research communities and (possibly less frequently but strongly in certain areas) other parts of the College. Links to School of Computer Science (especially in a pervasive research sense) were, perhaps less apparent than we had expected - possibly because we did not have an opportunity to explore these with the relevant staff.

Resources

TCD and hence its academic departments are clearly adversely affected by the current state of the Irish economy, with money being tight and restrictions on employment. The attitude within the School was, very much, one of accepting the external realities and of making the best use of what they had. Thus staff numbers in relation to the expectations placed upon them were low, operational money was tight, space was cramped, equipment was adapted and maintained through skill and ingenuity but there was an obvious sense of 'getting on with the job'.

The two most frequently voiced concerns were:

- Accommodation - which leads on to the issue of a new building and thus to the E3 initiative
- Money - as exemplified principally by the Financial Model/Allocation Process

The School's accommodation, whilst often not being attractive and clearly tailored to the activities housed therein, did appear to be functional, to be being used productively and to house some good facilities. In making these comments, we recognise the realities of the Trinity campus (old and not readily adaptable buildings, constrained site). Some activities are clearly cramped, much of the accommodation is fundamentally not of the type associated with a modern and well housed Engineering School and this leads to operational inefficiencies. However, the principal concern - voiced frequently by different groups - was proximity and the relative lack of opportunity to meet, to engage in 'chance conversations' and to benefit from being in a stimulating environment.

Concerns over how the School is financed - especially the lack of clarity between perceived entitlement and actual reward and hence of the financial link between different activities and the consequences of engaging in them - appeared especially acute and could easily become a major demotivating factor. A particular aspect of this was the School's seeming inability to provide relatively small amounts of money for items such as: assisting newly appointed staff, attending professional meetings, purchase of consumables etc. - with the total annual sum probably only being of the order of a few tens of thousands of Euros.

Staff are clearly busy but did not complain - except about the volume of admin tasks 'passed down' to them and an attitude encountered from parts of the administration that came across as being unduly protective rather than encouraging and supportive.

The School appears to be able to recruit excellent young academic staff but may have difficulty retaining them in the future due to the external constraints on promotion. The School is also facing a potential problem replacing technicians who will retire in the near future, especially as these people make distinct and valuable contributions to research and teaching i.e. they do far more than simply ' make things to order'.

Organisational Structure and Planning

The School comes across as being well organised and well run (subject to a number of specific opportunities for improvement raised above), with individuals having a clear idea of their role, of how it interacts with their colleagues and beyond and of there being a genuinely pervasive esprit de corps extending from the Head of School to the newest undergraduate.

The School feels itself to be less well connected to, understood by and thus valued by the higher echelons of the College. This is about visibility and perception and is doubtless true to some extent for all Schools in all universities. However, given the negative features of tight finances, limited promotions etc., retaining the enthusiasm and commitment of the staff becomes ever more difficult and even seemingly small items can assume great significance.

We note the absence of a School Research Committee and a School Postgraduate Committee and believe that the formation of both would bring benefits.

We gained the impression that the posts of School Head or Discipline Head were not regarded as attractive. If Trinity wishes to recruit able and ambitious people to undertake these roles and for them to be able to exhibit real leadership in driving their subject area forward, it needs to make the posts such that they become sought after by the most talented individuals. We believe that the present emphasis on 3 year terms often does not provide post holders with sufficient time or incentive to exhibit true leadership; we believe that 5 years would normally be more appropriate; more evidence of gratitude from the College (not simply honoraria) to those individuals who take on such roles and who discharge them well would also help.

Both the College and the School do not appear to give sufficient attention to induction - defined here as making it easier for newly arrived people, especially academic staff, PhD students and postdocs, to function effectively and to become successful. Whilst we saw examples of good local provision within some research groups, this appeared to be the exception.

Understandably, the School seemed focussed - with the exception of E3 - on the comparatively short term e.g. securing research grants, accommodating the new 5th year etc. When we invited the Head and the Discipline Heads (over dinner) to speculate on what might be possible were Engineering at Trinity to double in size (a not outrageous concept given the additional fifth year undergraduates, the College aspiration for 20% international students - many of whom would likely be in Engineering - and the ability to attract excellent staff and undergrads), the effect was one of an entirely new prospect being introduced.

Whilst we appreciate the importance to the College of the E3 development and recognise its potential to provide the School with numerous benefits and opportunities, we were concerned that the implementation of the concept, through detailed planning to delivery and use, did not appear to be developing with the vision, energy and insight needed for an undertaking of this scale. In particular there appears to be a mismatch between the work needed to define, 'sell' and deliver the Project and the level of resource currently devoted to it.

Overall View and Recommendations

1. The School should seek to achieve an above critical mass in all major research activities; it is suggested that the School should aim to increase its size by 20-40%.
2. A champion for the E3 Institute should be appointed to drive the project aggressively forward.
3. The School needs to become more comfortable and more astute in dealing with its finances, especially in devising ways to ensure an appropriate balance between spending on projects and supporting the "general good" and in communicating this to its members.
4. The School should set up a Research Committee with the responsibility for developing the School research strategy, and formulating School policies relating to newly appointed staff, PhD student and postdoc support and monitoring.
5. Arrange the confirmation to the PhD at the latest 12 months into the PhD and develop a process for students who are not progressing well, as part of a more general drive to address the specific concerns of students and postdocs, possibly by establishing more formal School wide arrangements to recognise that not all individuals will always behave impeccably.
6. Smooth implementation of the 5-year MAI programme would be assisted by the development of a financial, staffing and equipment (laboratory, computing) plan.
7. The College should take steps to:
    - Make School and Discipline Heads more obviously recognized and valued members of its community.
    - Create a stronger linkage between School earnings/entitlement and actual reward.
    - Improve the induction processes for the induction of new members of all types.

Response from Head of School to the Reviewers' Report (July 2013)

1. Introduction

The School of Engineering would like to thank Professor David Nethercot (Imperial College London, Civil Engineering), Professor Lorna Gibson (MIT, Materials Science and Engineering/Mechanical Engineering) and Professor Josef Kittler (University of Surrey, Electronic Engineering) for conducting the Quality Review of the School of Engineering in March 2013. We are very grateful to them for the inclusive and comprehensive way in which they handled the meetings with staff and students.

We are heartened by their findings, such as:

'*We were impressed by the enthusiasm and vibrancy of the School; it is clearly highly active across a broad range of activities typical of those found in the best university Engineering departments and is enjoying considerable success as indicated by the usual academic measures of research outputs, grants secured, ability to attract high quality staff and to recruit good students etc. We observed the excellent spirit exhibited by all the groups we met: academics (including newly appointed staff), support staff, u/g and p/g students.'*

2. Response to Recommendations

The School's response to each of the recommendations made by the Reviewers is presented below.

Recommendation 1: The School should seek to achieve an above critical mass in all major research activities; it is suggested that the School should aim to increase its size by 20-40%.

Response: The School agrees with this recommendation and requests that the College release sufficient resources to enable the School to scale to the recommended level.

Recommendation 2: A champion for the E3 Institute should be appointed to drive the project aggressively forward.

Response: The School agrees with this recommendation.

Recommendation 3: The School needs to become more comfortable and more astute in dealing with its finances, especially in devising ways to ensure an appropriate balance between spending on projects and supporting the "general good" and in communicating this to its members.

Response:

a) The College has continually changed its funding model from year to year over the last number of years and has repeatedly left it until very late in the academic year to transfer pay and non-pay funding to Schools. This makes it almost impossible to know how much money will be available in the first half of the academic year for different activities.

b) The budget is allocated within the School on the basis of student FTEs and the allocation is discussed and agreed with the Heads of Discipline.

c) It was clear in the discussions with the Reviewers that they themselves are working in well-resourced environments and in Schools which have not been hit significantly by the financial crisis. We would fully agree with their recommendations if the School was adequately and appropriately resourced. Unfortunately, it is not. One cannot be astute or otherwise with funding one does not have.

d) The suggestion that the School finds an appropriate balance between spending on projects and supporting the 'general good' presumably relates to the way the School currently manages overheads from research contracts. The Reviewers were made aware of the model the School uses in terms of returning a proportion of research contract overheads to PIs and keeping a percentage for general use. In the last 18 months, discussions have taken place twice with the PIs in the School in relation to using some of the overheads to part-fund a School Research Development Officer. Only a few PIs were in favour of this and the majority of PIs would not approve this proposal.

Recommendation 4: The School should set up a Research Committee with the responsibility for developing the School research strategy, and formulating School policies relating to newly appointed staff, PhD student and postdoc support and monitoring.

Response: The School notes this recommendation and will consider it.

Recommendation 5: Arrange the confirmation to the PhD at the latest 12 months into the PhD and develop a process for students who are not progressing well, as part of a more general drive to address the specific concerns of students and postdocs, possibly by establishing more formal School wide arrangements to recognise that not all individuals will always behave impeccably.

Response: The School notes this recommendation and will consider it.

Recommendation 6: Smooth implementation of the 5-year MAI programme would be assisted by the development of a financial, staffing and equipment (laboratory, computing) plan.

Response: The School has already completed such plans at discipline level.

Recommendation 7: The College should take steps to make School and Discipline Heads more obviously recognized and valued members of its community.

Response: The School strongly agrees with this recommendation.

Recommendation 8: The College should create a stronger linkage between School earnings/entitlement and actual reward.

Response: The School strongly agrees with this recommendation.

Recommendation 9: The College should improve the induction processes for the induction of new members of all types.

Response: The School strongly agrees with this recommendation.

Conclusions

The School intends to work with the Faculty Dean and other appropriate College Officers to address the recommendations arising from the report and will prepare an implementation plan in due course.

Updated response from Head of School to the Reviewers' Report (October 2013)

The purpose of this Update Response to the Reviewers' Report for the School of Engineering is to provide the Quality Committee with information on recent developments pertinent to comments and recommendations made by the reviewers since the first Response from the Head of School. Essentially there have been two significant overriding developments concerning the School which have resulted in the implementation of most of the reviewers' recommendations already.

1. New School Organisation

With a changeover in School headship having taken place in July has come a change in School organization – see accompanying diagram. Rather than one new committee – a research committee – as recommended by the reviewers, the present Head of School has established a system of four School committees:

I. ***A Resources/Staffing Committee*** chaired by the Head of School. This committee will deal with the prioritization and distribution of both financial and staffing resources as requested and provided by the Faculty.

II. ***An Undergraduate Curriculum Committee*** chaired by the School Director of Teaching and Learning (Undergraduate). This committee is already established and has met. Included in the brief will be overseeing the introduction of year 5 of the MAI, examining issues surrounding the missing year 4 project in Mechanical Engineering, investigating the provision of more regular feedback to students on their academic progress. In other words, this committee provides a direct mechanism for addressing, on a School basis, all the detailed undergraduate issues brought up in the Reviewers' Report.

III. ***A Postgraduate Curriculum Committee*** chaired by the corresponding School Director. Again this committee is established and has agreed to the earlier (12 months in) confirmation process for PhD students as recommended in the School Review report. The committee will also give consideration how best to handle on a consistent School-wide basis the issue of postgraduate students who are deemed to be underperforming.

IV. ***A Research Committee*** chaired by the School Director of Research. This committee, as suggested by the Review, will also be responsible for developing School strategy and hence its linkage with the Engineering Development Board, a group of high-profile external individuals charged with providing critical appraisal of School strategy, in particular E3 strategy, and with assisting in philanthropic fundraising.

The basic governing mechanism for the School is that the constituent Disciplines will be represented on the School committees. These will draft policy and make proposals for submission to the decision-making School Executive.

E3 Building Development

Over the Summer and early Michaelmas period, both the Provost and Dean of Research have become actively involved in progressing the E3 strategy and in setting out plans for forthcoming College building projects. The development of E3 strategy sees that strategy being linked to the wider and recently-approved College policy on Innovation and Entrepreneurship which also encompasses the planned new

building for the Business School. With this policy on Innovation and Entrepreneurship likely to feature as a central theme in the next College Strategic Plan, and College (and the State) having already deployed significant resources towards Innovation and Entrepreneurship in the form of CRANN and Biosciences, a strong case is being built for further State resources to complete the Innovation and Entrepreneurship agenda through support for the two proposed new buildings.

For the School of Engineering (and that of Natural Sciences) to be seen as delivering on both E3 and Innovation and Entrepreneurship, a number of sub-projects have been identified. In the first instance there will have to be an academic plan for the new building. This plan, while primarily focused on Engineering and Natural Sciences may well extend to cognate areas such as Business, Computer Science, Physics, Chemistry, etc. and will identify possible new programmes and/or new streams to existing programmes. Appropriate learning experiences will also be identified with an emphasis on teaching innovation. In line with emerging College policy, a significant increase in the number of students and staff is envisaged. The process of drafting this plan has already begun under the chairmanship of the Dean of Research.

The next phase of the project will see the academic plan mapped onto a space/function specification for the architects. In parallel with the subsequent architectural work will be a drive towards securing philanthropic funding, a task for which the Engineering Development Board has been enlisted for assistance. This Board has already been briefed by the Provost on the overall project and their role.

Progress on Recommendations

Implicit in the above has been reference to most of the recommendations made in the Reviewers' Report. A number of the recommendations have been directly implemented while appropriate mechanisms have been put in place for implementing others. Dealing with the recommendations in order:

1. Upscaling is being incorporated into the developing academic plan for E3.

2. There is not one overall "champion" for E3 but a series of champions at various levels of the project. The Provost will be chairing an E3 Governance Board while the Dean of Research is 'facilitating' – his term – the developing academic plan.

3. Assuming that recommendation 3 from the reviewers refers to the distribution of research overheads, both the School Research Committee and the School Resources Committee will consider the distribution of overheads and make a joint proposal to the School Executive.

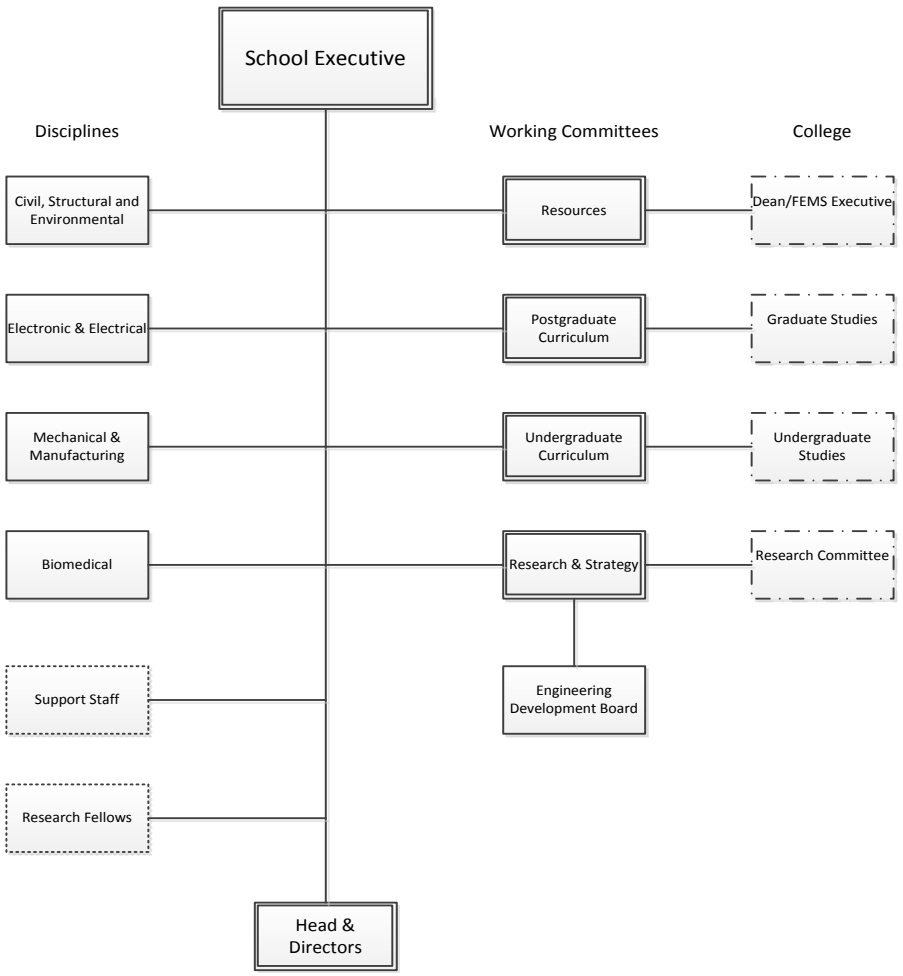
4. A School Research Committee has already been established and is operational.

5. The earlier confirmation process for PhD students has been agreed. The Research Committee will reflect further on how to handle negative outcomes.

6. Year 5 of the MAI is up and running, and its development is being monitored by the School Undergraduate Curriculum Committee.

Thus, irrespective of what recommendations are submitted to Council arising from the review of the School of Engineering, the recommendations set out in the Reviewers' Report which lie within the remit of the School have all either been directly implemented already or School structures have put in place which will ensure the remaining recommendations are implemented in full.

Brian Foley, Head, School of Engineering, 9 October 2013



Others: BAI/MAI Management
Appeals
Staff-Student
Open Day
Ethics
Cluster
Unitech

Response from the Faculty Dean to the Reviewers' report

The Faculty Dean thanks the Review Team and the School for its work/input to the Review and welcomes the Reviewers' reports and their generally positive comments.

The Faculty Dean:

- Welcomes the overall Review comments that the School is performing well in strategic planning, teaching, research and engagement with the external stakeholders;
- Acknowledges the Review comments that better communication is needed within and to the School in such matters as budgets, allocations, mentoring, etc.;
- Welcomes the recommendation that the School set up a Research Committee to develop a research strategy and formulate School policies on research related activities;
- Welcomes the concept and need for the E3 strategy to aid in School integration, communication and attainment of critical mass for further development of the School;
- Acknowledges the need to make School and Discipline Heads more obviously recognized and valued members of its community;
- Acknowledges the need for better communication of the linkage between School earnings/entitlement and actual reward;
- Continues to support the School in the processes for the induction of new members of all types.

The Dean intends to work with the Head of School and appropriate College Officers to address the recommendations arising from the Reviewers report through the preparation of a detailed Implementation Plan.