2015 Technical Services Review

Report of the Review Panel

Contents

Introduction

Technical Services within the Research School of Engineering were last reviewed in 2010. Since then the School has undergone significant growth in terms of personnel, the geographic footprint of the School, substantial increases in undergraduate student numbers, and the breadth of research and teaching undertaken.

This growth has led to increasing pressure on the Technical Services Group to provide support to existing activities while also supporting the fit out and transition to new facilities. This pressure will increase in the coming year with the acquisition of a refurbished Craig Building.

Therefore, it was deemed essential once again to review the provision of technical service support and to ensure that it is aligned to the School's strategic objectives while addressing current issues and clearly identifying future needs. It is hoped that this review will allow the Research School of Engineering to ensure that the Technical Services Group is effectively and efficiently supported to deliver the services required by the School over the next five years.

Terms of Reference

The panel operated under the following Terms of Reference

1. Review the existing structural model for RSEng technical support and identify any issues in processes, governance and management for provision of suitable skills, expertise and appropriate staff numbers to support current and future technical service requirements.
2. Review existing financial arrangements for funding of technical services in RSEng and identify any issues, processes, governance and management which might impact on the capacity of the school to support its future teaching and research activities.
3. Review the performance and service culture of the RSEng technical staff and provide advice to support continuous improvement in service provision.

Panel

1. Prof John Richards, Emeritus Professor, CECS (Chair)
2. Prof Stephen Buckman, Director, Research School of Physics & Engineering
3. Dr Richard Corkish, COO, ACAP, UNSW
4. Mr Ron Marshall, Technical Operations Manager , FEIS, UoW

Findings

The panel met for two days over Wednesday 4th and Thursday 5th of March. During this time they met a cross section of students and staff from across the School. The panel also took part in a tour of the research and teaching facilities led by the Technical Services Manager and technical support staff. There were several recurrent themes that came across in the interviews and tour.

Support for Education

The panel found that teaching support staff were under significant pressure as a result of several factors which were often exacerbated unintentionally by course convenors. For example, the desire to deliver an engaging and accessible course to students has led to labs often running overtime with the convenor's consent. This has led to technical staff remaining behind and working late to prepare labs that would run the following morning. This problem is compounded by the lack of flexibility in some teaching labs, with labs needing to be completely re-equipped between classes. It seems also that some, especially international, students have entered the School's academic program inadequately equipped for laboratory work.

> *Recommendation 1: (ToR 1):*
>
> *That the School considers the appointment of a senior academic leadership position at the Associate Director level, to work in partnership with the Technical Services Manager, with overall responsibility, authority and accountability for the ongoing development and maintenance of the strategic direction for the Technical Services Group.*
>
> *In partnership with the Technical Services Manager, this person would liaise particularly with staff involved in the teaching program on operational issues including, but not limited to, ensuring that tutors are appropriately trained in the use of all equipment necessary to deliver labs and that technical support required for teaching in each semester is identified, within the resources available and communicated to the Technical Service Group in a timely fashion.*

Funding & Structure

The panel found that a lack of transparency in funding technical services and clarity in processes within the School have created a lack of confidence in several areas; in one particular case concern was expressed about the allocation of research quantum funding. The panel believes that a transparent funding model for central technical services, well documented and communicated to the School, would significantly increase that confidence and provide a sound basis for future expansion.

The panel was broadly supportive of the current structure of technical support within the School with clearly identified client bases and a central Technical Services Manager; in particular it is of the view that those staff hired on research grants, while forming part of the overall technical services team, should remain responsible to the respective grant holders. Nevertheless, the panel did feel that it would be beneficial for technical services resources and staff, in some instances, to be shared across research areas, so long as the client focus, and current reporting lines, were not adversely affected. This sharing would be beneficial both to the wider school and the staff themselves in terms of acquiring new skills.

One issue that had been raised were the inadequate procedures and facilities for chemical deliveries to the School as a whole. Currently those deliveries could be made to multiple locations and to untrained staff. Often deliveries will need to be carefully stored or refrigerated with no facilities for short term refrigeration upon arrival in some delivery locations.

> *Recommendation 2 (ToR 1, 2):*
>
> *That the School applies consistent and transparent funding and structural models to underpin Technical Services within the School. These models should include, but not be limited to: costing, procedures and reporting lines.*
>
> *Recommendation 3: (ToR 1):*
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> *The School should explore the benefits of technical service resource sharing between areas, although not at the expense of effective support of grant funded research on which particular staff are employed.*

Recommendation 4: (ToR 3):

That the School investigate the possibility of a single Chemical Delivery Point to ensure the safe and timely distribution of chemical deliveries.

Workshop

Several issues around the workshop emerged during discussions with academics and students. The panel found that there isn't a general understanding among services users as to the ultimate aim of the workshop; is it, for example, primarily to support the undergraduate teaching program? Similarly a lack of transparency in the flow of jobs from request, through prioritisation, to completion and, if necessary, outsourcing has caused frustration among those requesting work.

In turn, workshop staff drew attention to the issue of poor or misconceived designs that form the basis of some job requests. The load on workshop staff to bring these designs up to a workable standard can often be significant. Issues were also raised around an overprotective approach to some workshop equipment which prevents otherwise competent operators from using that machinery; this in turn increases staff workload. It was unclear to the panel whether the workshop has been sufficiently staffed in the past to ensure that it could operate safely, although it has been noted that additional staff have recently been brought in.

The panel believed that it would be beneficial for the School to revisit the Workshop Policy and Operational Plan to articulate better the value provided by the workshop and clarify the procedure around its usage. While not necessarily recommending a fee-for-service model it may be beneficial for the School to consider it again, in light of the issues raised by workshop staff and service users. On several occasions interviewees indicated that such a model would help improve working relationships and reduce the number of poorly thought out job requests.

Recommendation 5: (ToR 1, 3):

That the efforts to develop a Workshop Policy identified as Recommendation 8 of the 2010 review be revisited. A refreshed Workshop Policy and Operational Plan should include, but not be limited to: conditions for access and usage of the facilities and consistent and transparent procedures for requesting, prioritising and, if necessary, outsourcing work. The Competency Assessment

Program identified in the 2010 Review should also be revisited to ensure that competent staff and students, who may not possess the relevant trade qualifications, are able to use workshop equipment with the prior consent of the Workshop Manager.

Emerging Research Groups

Separate from the workshop the main concern of many of those interviewed was the lack of a concomitant growth in technical support for emerging research groups. As these groups expand and begin to establish themselves this becomes a significant issue. As many emerging groups prepare to transition to a refurbished Craig Building it is important that the School prepares a plan to address this level of support and how it may be funded.

Similarly, as the research at the School diversifies a lack of skills has emerged in supporting several key areas. This is most apparent in the emerging biomedical and nanotechnology groups; however, it had been raised in the more established research groups as well.

Recommendation 6: (ToR 1, 2):

That the School ensures sufficient resources are identified to meet the technical support requirements of new strategic research areas and that the school develops an open and transparent procedure to support these areas as they transition from startup and seed funding to a state of self-sufficiency.

Recommendations

Recommendation 1 (ToR 1):

That the School considers the appointment of a senior academic leadership position at the Associate Director level, to work in partnership with the Technical Services Manager, with overall responsibility, authority and accountability for the ongoing development and maintenance of the strategic direction for the Technical Services Group.

In partnership with the Technical Services Manager, this person would liaise particularly with staff involved in the teaching program on operational issues including, but not limited to, ensuring that tutors are appropriately trained in the use of all equipment necessary to deliver labs and that technical support required for teaching in each semester is identified, within the resources available and communicated to the Technical Service Group in a timely fashion.

Recommendation 2 (ToR 1, 2):

That the School applies consistent and transparent funding and structural models to underpin Technical Services within the School. These models should include, but not be limited to: costing, procedures and reporting lines.

Recommendation 3 (ToR 1):

The School should explore the benefits of technical service resource sharing between areas, although not at the expense of effective support of grant funded research on which particular staff are employed.

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That the School investigate the possibility of a single Chemical Delivery Point to ensure the safe and timely distribution of chemical deliveries.

Recommendation 5 (ToR 1, 3):

That the efforts to develop a Workshop Policy identified as Recommendation 8 of the 2010 review be revisited. A refreshed Workshop Policy and Operational Plan should include, but not be limited to: conditions for access and usage of the facilities and consistent and transparent procedures for requesting, prioritising and, if necessary, outsourcing work. The Competency Assessment Program identified in the 2010 Review should also be revisited to ensure that competent staff and students, who may not possess the relevant trade qualifications, are able to use workshop equipment with the prior consent of the Workshop Manager.

Recommendation 6 (ToR 1, 2):

That the School ensures sufficient resources are identified to meet the technical support requirements of new strategic research areas and that the school develops an open and transparent procedure to support these areas as they transition from startup and seed funding to a state of self-sufficiency.

Implementation

Within two months of receipt of this report, the Director, in consultation with the College General Manager, will provide an implementation plan to the Dean outlining the actions, timeframes and any constraints limiting the response to the recommendations of the review.

In order to monitor the implementation plan the Technical Services Manager will provide a Progress Report to the Dean via the CGM at agreed dates during the twelve month period following the review. This report will outline the progress against review recommendations.

Schedule

Wednesday 4th March			
09.00	Dean & General Manager	Prof. Elanor Huntington Ms. Leanne Cambridge	
09.30	Director	Prof. Rob Mahony	
10.15	Tour (w/ Neil Kaines)	Eng Workshop (32)	Mr. Ben Nash
		Solar PV Labs (32)	Mrs. Nina De Caritat
		Materials Labs (32)	Dr. Jason Chen
		Materials Labs (C1)	
		Teaching Labs (IR)	Mr. Erasmo Scipione
		Labs (RSISE)	Mr. Alex Martin
		ASP Labs (RSISE)	Mr. Hanchi Chen
12.00	Oral Submissions	Prof. Andrew Blakers	
		Prof. Thushara Abhayapala	
12.40	**Lunch**		
13.30	Technical Services Manager	*Mr. Neil Kaines*	
14.15	Technical Service Staff	*Solar PV*	Mrs. Nina De Caritat Mr. Mark Saunders
		Workshop	Mr. Ben Nash Mr. David Tychsen Smith
		Teaching	Mr. Erasmo Scipione Dr. Jason Chen
		Solar Thermal & CVR	Mr. Greg Burgess Mr. Alex Martin
15.15	**Afternoon Tea**		
15.30	**ENGN Students**	Ms. Francesca Maclean Mr. Thomas Allen Ms. Tegan McAnulty	
16.15	**ENGN Teaching**	Prof. Rod Kennedy Dr. Salman Durrani Mr. Jeremy Smith	

Thursday 5th March		
09.00	Callback #1	Prof. Andrew Blakers
09.30	Research - Panel 2	A/Prof. Wojciech Lipinski A/Prof. Dan Macdonald Dr. Evan Franklin Dr. Mike Dennis
10.15	Morning Tea	
10.30	Research - Panel 3	A/Prof. Shankar Kalyanasundaram Dr. Antonio Tricoli Dr. Changbin Yu
11.15	Research - Panel 4	Prof. Qinghua Qin A/Prof. Takuya Tsuzuki Dr. Matthew Doolan
12.00	Callback #2	Prof Rob Mahony
12.20	CECS IT	Mr Peter Shevchenko
12.40	Panel Discussion	
13.30	Lunch	Prof. Elanor Huntington Ms. Leanne Cambridge
14.30	Panel Discussion	

Submissions Received

25 submissions were received prior to the Review.

1. Prof Andres Cuevas
2. Group Submission
    a. Prof Andrew Blakers
    b. A/Prof Kylie Catchpole
    c. Dr Vernie Everett
    d. Dr Matt Stocks
    e. Dr Tom White
3. Mr Andrew Wilkinson
4. Dr Antonio Tricoli
5. Mr. Carl Canaris
6. A/Prof Dan Macdonald
7. Group Submission
    a. Alexandra Rodriguez
    b. Kiara Bruggeman
    c. Francesca Maclean
8. Mr James Cotsell
9. Mr Bruce Condon
10. Dr Jason Chen
11. A/Prof Klaus Weber
12. Ms Maureen Brauers
13. Ms Nina De Caritat
14. Dr Roman Bader
15. A/Prof Takuya Tsuzuki
16. Mr David Tyschen-Smith
17. Mr Mark Saunders
18. Ms Judith Harvey
19. Mr Neil Kaines[1]
20. Mr Chris Samundsett
21. A/Prof Wojciech Lipinski
22. Dr Evan Franklin

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[1] Two submissions were received from Neil.
1. A Self Evaluation Report requested in of him as Technical Services Manager as part of this report.
2. A personal submission.

23. Mr Erasmo Scipione
24. Prof Robert Mahony
25. Prof Rodney Kennedy

3 additional submissions were received during the Review.

1. Prof Andrew Blakers
2. Ms Nina De Caritat
3. Mr Mark Saunders

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