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**TRAC**  
DEVELOPMENT  
GROUP

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Supporting and understanding  
financial sustainability



RESEARCH  
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# **Equipment Sharing in the Higher Education Sector**

**A TRAC Development Group guide on progress  
with Equipment Sharing**

March 2014

## FOREWORD

The TRAC Development Group has taken a close interest in the evolution of the equipment sharing agenda that has gathered pace and become more visible since the Wakeham report<sup>1</sup> and RCUK's changes to its equipment funding. TDG and RCUK are both keen to contribute to the sector having a rational and coordinated approach to equipment sharing such that the benefits do not get outweighed by overly complicated administration.

We have found that there are various collaborations and shared approaches being adopted in the sector, which is good news. We also acknowledge the thorough report that Sarah Jackson produced on behalf of the Department for Business Innovation and Skills, which outlined the positive work that has taken place. We therefore hope that this guide helps direct institutions to work that may already have been undertaken, to reduce the risk of repetition and a reinvention of the wheel.


Costing and charging is an area that TDG and RCUK recognise as being potentially complex and one that could become a barrier to sharing, or certainly, a part of the process that discourages institutions from sharing. Please do not let this become the case.

TRAC and full economic costing (fEC) are flexible in this regard and institutions have the choice of how shared equipment is costed and whether it is treated as a facility for TRAC/fEC purposes. Ensuring that costing takes account of all the respective costs has to be the priority in order to contribute to the sustainable operation of institutions. TRAC/fEC requirements provide good practice examples for achieving this, but I must reiterate that it is an institution's decision regarding the treatment of shared equipment within TRAC/fEC.

In completing this research we have also listened to views and understood in more detail the needs of TRAC/fEC in respect of costing facilities. These insights are being taken forward as part of our project to refine and simplify the TRAC requirements and associated guidance.

I hope that you find this guide useful.

Yours sincerely



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Prof. Rick Rylance

Chair of the TRAC Development Group

Chair of RCUK Executive Group

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<sup>1</sup> <http://www.universitiesuk.ac.uk/highereducation/Documents/2010/FinancialSustainabilityAndEfficiency.pdf>

## CONTENTS

1. INTRODUCTION.....	1
1.1 Background.....	1
1.2 How to use this guide.....	2
2. EQUIPMENT SHARING PROGRESS .....	3
2.1 Introduction .....	3
2.2 Mapping and Cataloguing Activity .....	3
2.3 Uniquip .....	3
2.4 Kit Catalogue.....	4
2.5 Equipment Sharing Groups .....	5
3. IMPLICATIONS FOR TRAC fEC .....	7
3.1 Administrative Burden.....	7
3.2 The Current Approach .....	7
3.3 Options for Further Guidance Development.....	11
4. NEXT STEPS.....	12
4.1 Institutional Developments.....	12
4.2 Guidance Redevelopment .....	12
5. CONTACTS AND REFERENCES.....	13
Appendix 1 Equipment Access Schematic .....	14



# 1. INTRODUCTION

## 1.1 Background

In June 2010, Research Councils UK (RCUK) and Universities UK (UUK) published their report on 'Financial Sustainability and Efficiency in Full Economic Costing of Research in UK Higher Education Institutions' – the 'Wakeham' report.<sup>2</sup> One of the recommendations presented by the report was that RCUK and UUK 'consider that the greater intensity of utilisation of assets by HEIs should be encouraged, particularly the sharing of research equipment and facilities.' The sector has since taken on board the challenge and has made significant progress in understanding its asset base better and exploring options for wider sharing and collaboration.

The TRAC Development Group (TDG) has been keen to understand how the sector is approaching equipment sharing, both from a costing perspective, and also to understand whether it could assist institutions by sharing information regarding the different approaches and progress made to date. Work has therefore been undertaken to understand the work that is taking place in the sector and also to appraise how the costing requirements that form part of the full economic costing methodology (fEC) should take account of charges for sharing of equipment.

Prior to embarking on this review it was understood that although equipment sharing is not a new concept for the sector, some collaborations have previously been subject to quite informal arrangements. Therefore it was also anticipated that the benefit of more stringent asset tracking within institutions will in the first instance have greatest immediate benefit internally but will also contribute significantly to understanding utilisation levels across the sector and contribute to efficiency savings when factored into future bidding opportunities.

Under current TRAC guidance, where institutions decide to separately cost facilities and larger equipment, it has to be classed as either Major (MRF) or Small (SRF) Research Facilities. However, beyond the requirement for biological research facilities to be separately costed, there is flexibility for institutions to determine the number and kind of facilities that should be costed. It was for these reasons that the TDG decided to release this brief summary of progress being achieved to help institutions understand the progress at national, regional and institutional level, to inform action and agendas within their own institutions.

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<sup>2</sup> <http://www.universitiesuk.ac.uk/highereducation/Documents/2010/FinancialSustainabilityAndEfficiency.pdf>

## 1.2 How to use this guide

This brief guide should provide a basis for institutions to understand what progress is being made within regional collaborative groups and at individual institution level. Links to publications that may be of interest and web sites are included to encourage additional reading around sector wide activity. The benefit should be that this guide enables institutions to learn from work undertaken in other parts of the sector, and provide linkages such that learning and approaches can be shared more widely.

This guide is not intended to form part of TRAC guidance and does not contain new 'TRAC requirements'. It is not expected that institutions make significant changes to their current approach to facility and equipment costing for the TRAC 2012/13 or 2013/14 submission periods as a direct result of the work highlighted here; instead practitioners are encouraged to understand what progress is being made within their own institutions with regard to asset registers, utilisation records, facility access models, etc. in order to be part of any debates around the approach to costing for facilities and equipment.

## 2. EQUIPMENT SHARING PROGRESS

### 2.1 Introduction

In 2011 RCUK responded to the recommendations of the 'Wakeham' report, and introduced new guidelines for equipment funding. In response, significant progress has been made across individual institutions, equipment sharing groups and new university clusters to address the first two priorities presented to them by the RCUK; identification and publication of internal asset registers, and secondly the compilation and publication of regional equipment lists using a shared classification criterion.

This section of the report provides an outline of the activities that have been and continue to be taking place across the sector. Earlier this year the Department for Business, Innovation and Skills commissioned Sarah Jackson from the N8 Research partnership to document and analyse evidence of the efficiencies within the higher education research base<sup>3</sup>, some examples from which are included in the body of this report.

### 2.2 Mapping and Cataloguing Activity

The first challenge faced by the sector was to improve its understanding of the current equipment and facility infrastructure; a barrier more difficult to overcome than may have been anticipated due to the wide variation in systems adopted by institutions. To encourage early action a number of external grants were provided to some institutions to develop bespoke web sites and encourage collaboration.

### 2.3 Uniquip

Throughout this development phase, the Universities of Bath, Leeds, Loughborough and Southampton joined together and formed the 'Uniquip'<sup>4</sup> project to aid classification of equipment with financial support from EPSRC. In joining together, they sought to develop shared standards for the cataloguing of research facilities and equipment, including:

- Mapping existing vocabulary and taxonomy,
- Aggregating existing data from alternate systems,
- Engaging with stakeholders to understand technology capabilities,
- Evaluating current data management and equipment publishing capabilities, and

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<sup>3</sup> ['Making the Best Better'](#) – BIS Report by Sarah Jackson –2013

<sup>4</sup> <http://www.uniquip.ecs.soton.ac.uk/>

- Publishing and promoting guidelines for effective facility and equipment sharing.

In delivering their work programme through to 2013, the 'Uniquip' project established a network of institutions who have committed to take the project forward across their institutions. At November 2013, this partnership provides access to over 20 institutions, which although not sector wide does offer significant opportunities for further collaborative development and includes more than half of the Russell Group members.

For those institutions that have not made significant inroads into equipment cataloguing and publication yet, reference to the 'Uniquip' project should prove a useful reference and start point, as would reference to existing online databases published by the equipment sharing groups, (for example the N8 research partnerships fully searchable database accessible from their equipment web site<sup>5</sup>). Contact details for these projects are provided below and at section 5.

## 2.4 Kit Catalogue

Another development of note is the JISC funded 'Kit Catalogue'<sup>6</sup> project through which the University of Loughborough developed an open-source system, utilising the European 'Common Procurement Vocabulary'<sup>7</sup>, for cataloguing and sharing information about research equipment and facilities. Further work on development of open data vocabulary<sup>8</sup> for the sector has been undertaken by the University of Southampton in collaboration with the University of Oxford; the principles from which have been extended to the SES-5 consortium. Again, contact details are provided below and at section 5.

Complementing the work of 'Uniquip' and 'Kit Catalogue', EPSRC also host a national web facility<sup>9</sup> which contains information about research equipment available in participating UK universities – an already significant database that is growing quickly.

It is clear from the examples provided above that although collaboration has brought significant progress, there are still barriers to overcome in relation to classification and taxonomy of equipment before sector wide data compatibility can be achieved. Institutions embarking upon their own mapping process at this stage are encouraged to carefully consider how to take advantage of existing and shared sources highlighted above before investing heavily in developing bespoke approaches.

Significant own funded action has accompanied the external investment to bring asset registers up to date and in particular, to update administrative systems. Some institutions with considerable

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<sup>5</sup> <http://www.n8equipment.org.uk/>

<sup>6</sup> <http://www.kit-catalogue.com/>

<sup>7</sup> Regulation (EC) No [2195/2002](#) of the European Parliament and of the Council of 5 November 2002 on the Common Procurement Vocabulary (CPV)

<sup>8</sup> <http://openorg.ecs.soton.ac.uk/>

<sup>9</sup> <http://equipment.data.ac.uk/>



volumes of equipment have embraced the opportunity to refresh their asset registers, but have incurred significant cost in doing so. Through participation in this process, TRAC practitioners have confirmed their own assumptions that equipment sharing already takes place, although this is most commonly internal and not always visible centrally – an indication that culture change required is not specifically related to willingness to share, but more about improving utilisation recording.

## 2.5 Equipment Sharing Groups

A number of institutions have taken the informal equipment sharing arrangements within their own networks and have formalised their collaboration through the establishment of equipment and cost sharing groups (see table below) to gain advantage and efficiencies from pooling resources.

Group	Institutional Members	
GW4	University of Bath University of Bristol	Cardiff University University of Exeter
<a href="#">N8</a>	Durham University Lancaster University University of Leeds University of Liverpool	University of Manchester Newcastle University The University of Salford The University of York
<a href="#">M5</a>	Aston University University of Birmingham University of Leicester	Loughborough University The University of Nottingham The University of Warwick
SES-5	The University of Cambridge Imperial College London University College London	University of Oxford University of Southampton
<a href="#">EaStCHEM</a>	University of Edinburgh	University of St Andrews
<a href="#">WestCHEM</a>	University of Glasgow	University of Strathclyde

To illustrate the scale of activity across these groups, as of March 2013, over 10,000 items of equipment had been catalogued by the GW4, M5, N8 and SES-5 groups alone<sup>10</sup>.

A number of success stories have been reported publically in recent months by the equipment sharing groups, demonstrating the wider benefits of collaborative working beyond internal equipment sharing inside each group. Increasing collaboration has required equipment sharing groups to improve current processes for managing access to facilities and to consider when equipment use is 'Research' as defined by TRAC and when it is purely being provided to another

<sup>10</sup> 'Making the Best Better' – BIS Report by Sarah Jackson –2013.

institution. The N8 Research Partnership has developed a practical schematic to map out equipment access routes within their group (see appendix 1) and have released an accompanying guide to wider issues such as health and safety, VAT, etc. which is accessible from their web site.

To explore the opportunity presented by wider collaboration, the M5 universities hosted a meeting in July 2013 between the four major regional groups: the N8, GW4, M5 and SES-5. Discussions at the event concluded that there was now a need to develop metrics to evidence the impact of sharing and collaboration and to measure the efficiency savings made.

### 3. IMPLICATIONS FOR TRAC fEC

#### 3.1 Administrative Burden

A study funded by EPSRC in 2012<sup>11</sup> suggested that due to the “substantial transaction costs” associated with sharing equipment a pragmatic approach would be to exclude equipment under a threshold of £200k to £500k; a threshold which is set significantly above the current £10k used by the Research Councils in their funding rules. While an efficient threshold for external sharing may well fall between these two values, updating asset registers with all equipment down to £10k has delivered significant benefit internally within institutions and therefore should continue to be the standard benchmark level under current best practice.

In reality, some institutions are not focusing on value alone; instead they are focusing on equipment deemed to be ‘managed’ and/or capable of being shared instead, an option we pick up on below when presenting the principles to follow under current TRAC fEC guidance.

#### 3.2 The Current Approach

A number of key questions were raised by the TDG and sector representatives as part of this review, the five most common questions are addressed below.

RCUK have provided additional guidance to institutions via the [FAQ](#) pages on their web site around equipment sharing requirements, but have also provided the following confirmations to common questions raised through the TRAC helpdesk<sup>12</sup>:

	Questions to address	Response
1	Are all types and value of equipment to be made available for sharing?	<p>Although RCUK may be anticipating that all equipment over £10k will be catalogued (in order to determine whether equipment exists internally before external applications are made), to date many institutions are establishing minimum thresholds between £15,000 and £25,000.</p> <p>Institutions must have confidence when confirming that no access to equipment with capacity exists when applying for awards, and are therefore required to continue refining</p>

<sup>11</sup> ‘Sharing for Excellence and Growth’ – EPSRC funded Report by Luke Georghiou - 2012

<sup>12</sup> [trachelpdesk@kpmg.co.uk](mailto:trachelpdesk@kpmg.co.uk)

	Questions to address	Response
2.	Does this include all own-funded equipment?	<p>and maintaining equipment registers.</p> <p>RCUK have confirmed that all equipment should be considered for sharing, not just RCUK funded items or 'TRAC' equipment and facilities<sup>13</sup>.</p> <p>Where equipment and facilities are charged to fEC research projects they should be 'TRAC' costed and be calculated in line with current fEC guidance.<sup>14</sup></p>
3.	When does RCUK expect institutions to have introduced new procedures to incorporate wider equipment sharing costing and charging mechanisms?	<p>RCUK have not defined a date for this as it is acknowledged that sharing already takes place and is being furthered as a result of the equipment sharing agenda. Although this view may change in the future, at this point in time, RCUK are encouraged by the progress that has been made and want to see this continue in a sustainable way, which could be compromised by setting a finite deadline.</p> <p>Costing systems are required to be operational already as equipment lists are now being publically shared; some sophisticated booking systems are already in place for commercial equipment access, but fEC based costing methodologies are preferred by the cost sharing groups consulted for ease of transition.</p> <p>In practice, existing fEC costing systems are likely to be sufficient for the longer term requirements of most institutions, but care should be taken to ensure that utilisation records that inform costing calculations are robustly recorded and maintained.</p>

<sup>13</sup> 'TRAC' facilities and equipment are defined as those separately costed and excluded from 'TRAC' estates rates.

<sup>14</sup> Section C4 and C5 of the TRAC Statement of Requirements - <http://www.jcpsg.ac.uk/guidance/require/>

	Questions to address	Response
4.	How should the approach to access charges differ to that of facility charging under TRAC, and whether Major Research Facility (MRF), Small Research Facility (SRF) distinctions need to be made?	<p>When considering how to apply access charges for shared equipment, institutions must understand collaboration arrangements first; in particular the sub-contracting arrangements, whether the host institution is delivering research or simply supplying access, and whether equipment costs currently reside within TRAC cost pools.</p> <p>The access route schematic provided by the N8 Research Partnership (appendix 1), illustrates when access is deemed to be 'research' or 'other', when charges are applicable to research grants, and how double funding can be avoided.</p> <p>The TRAC/fEC requirements as currently written provide the flexibility for institutions to determine what items are classed as facilities and separately costed. For shared equipment the same considerations need to be taken into account by institutions in terms of whether items of shared equipment are classed as facilities in TRAC/fEC or not. Therefore a change is not needed in TRAC to accommodate the equipment sharing agenda.</p> <p>The current treatment for equipment defined as a Major Research Facility (MRF) or a Small Research Facility (SRF) for TRAC requires the deduction of annual costs from the Estates rates. Looking ahead, the sector have expressed a preference for the two TRAC costing options to merge as part of the simplification process, a challenge that TDG is taking onboard as part of the guidance redevelopment programme.</p>

	Questions to address	Response
5.	<p>Should costing templates be based on fEC methodology?</p> <p>If so, how should newly costed equipment be accounted for in the TRAC model?</p>	<p>TRAC and fEC requirements do not specify whether individual pieces of equipment should be costed in line with TRAC/fEC requirements or not – this remains an institution decision.</p> <p>Current TRAC/fEC costing templates provide a basis to enable the costings to be prepared, but this will only affect TRAC where they are formally designated for TRAC purposes as a research facility.</p> <p>Alternate examples for costing have been developed by the N8 Research Partnership for use within their consortium to ensure consistent approaches are followed; the templates are available for open access from the N8 web site.<sup>15</sup></p> <p>It is noted that, particularly at the early stages of equipment sharing, the extent of actual use for the equipment is not known; therefore if institutions are classifying equipment as a research facility, institutions should take care when estimating utilisation levels and therefore the potential impact on TRAC rates and overall recovery of costs.</p> <p>Estimated, efficient utilisation levels remain acceptable for new equipment calculations based on current understanding of useful life and anticipated usage patterns. Institutions are not expected to remove the costs of all equipment identified as having potential to be shared from TRAC estates rates unless these are classified as facilities for TRAC purposes. This is however a decision for institutions in terms of when equipment is costed as a facility and deducted from the estates rates.</p>

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<sup>15</sup> <http://www.n8research.org.uk/>

	Questions to address	Response
6.	How can the sustainability of equipment be addressed?	Under the current TRAC guidance, the Statement of Requirements confirms that access and replacement cost depreciation <sup>16</sup> charges (where appropriate and not introducing double funding) remain essential costing elements to include within templates to ensure accurate costing. Improving understanding of utilisation records and useful life of equipment will help improve recovery of fEC costed equipment in advance of new approaches being introduced.

### 3.3 Options for Further Guidance Development

Existing TRAC templates and guidance for facility costing are deemed to be fit for purpose by institutional contacts and are flexible enough to adapt to institutional requirements as equipment sharing progresses. Future TRAC guidance will seek to provide greater clarity on which facilities should be consistently costed for TRAC and fEC purposes. In doing so, consideration will be given to the issue of costing for shared equipment, and whether this decision could be better informed by a combination of classification and value rather than value alone. The decision of what equipment to cost is and will remain an institution decision.

In order to reduce the burden under the current arrangements, institutions are firstly encouraged to consider materiality of equipment charges on TRAC rates before introducing new 'TRAC' facilities, and secondly to consider equipment type classification to determine whether equipment should be made available for sharing, one common approach being a banding structure applied to asset registers, such as:

- Small pieces of equipment identified as not being practically available for formal sharing;
- Larger pieces of 'managed' equipment where formal or informal sharing already exists as a result of collaborative working, or with capacity and capability to share; and
- Strategic facilities, where the criteria for sharing the equipment will be part of a competitive award winning process.

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<sup>16</sup> Current TRAC guidance prohibits reimbursement of equipment depreciation under TRAC fEC rates applied to RCUK projects where the original equipment was purchased by RCUK funds.

## 4. NEXT STEPS

### 4.1 Institutional Developments

As stated already, this guide is not intended to become part of the 'TRAC Requirements' or guidance; instead, it is hoped that it provides easily accessible reference on equipment sharing activities that are taking place across the sector.

When reviewing current equipment and facility costing within institutions, TRAC Steering Groups should consider whether additional 'TRAC' facilities should be introduced, or not, based upon improved understanding of internal equipment ownership and utilisation.

### 4.2 Guidance Redevelopment

RCUK and representatives from equipment sharing groups are working with the TRAC support unit to consider how the sustainability of equipment can be factored into future costing models, whether standard lifecycle and utilisation values could be prescribed, and to address any remaining or emerging equipment and facility costing related issues in the new TRAC guidance.

The Support Unit will liaise with RCUK about communicating new developments through the RCUK FAQ pages in addition to distribution through existing TRAC practitioner networks.



## 5. CONTACTS AND REFERENCES

In order to keep up to date with equipment sharing developments, the following contact points and further reading will prove useful:

'Wakeham' Review	<a href="http://www.universitiesuk.ac.uk/highereducation/Documents/2010/FinancialSustainabilityAndEfficiency.pdf">http://www.universitiesuk.ac.uk/highereducation/Documents/2010/FinancialSustainabilityAndEfficiency.pdf</a>
RCUK FAQ	<a href="http://www.rcuk.ac.uk/research/efficiency/efficiency2011/efffaq/">http://www.rcuk.ac.uk/research/efficiency/efficiency2011/efffaq/</a>
ESPRC Equipment database	<a href="http://equipment.epsrc.ac.uk/default.aspx">http://equipment.epsrc.ac.uk/default.aspx</a>
N8 Report – 'Making the best better'	<a href="http://www.n8research.org.uk/assets/files/EfficiencyReportFinal.pdf">http://www.n8research.org.uk/assets/files/EfficiencyReportFinal.pdf</a>
Equipment Data	<a href="http://equipment.data.ac.uk/">http://equipment.data.ac.uk/</a>
Kit Catalogue	<a href="http://www.kit-catalogue.com/">http://www.kit-catalogue.com/</a>
Uniquip	<a href="http://www.uniquip.ecs.soton.ac.uk/">http://www.uniquip.ecs.soton.ac.uk/</a>

Further information can be obtained from the TRAC Support Unit:

[trachelpdesk@kpmg.co.uk](mailto:trachelpdesk@kpmg.co.uk)

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## Appendix 1 Equipment Access Schematic

