



Australian National Fabrication Facility Ltd  
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## **Advice for Research Grant Applicants**

ANFF was established to support micro, nano and advanced materials fabrication research in Australia.

As well as providing access to its portfolio of over 500 tools based in 20 Universities and CSIRO, it can help researchers prepare applications from many R&D funding programs in Australia.

### ***For University Researchers:***

This document has been prepared to provide specific advice on both how ANFF can help with planning your research project and how to include ANFF facility access time in your Australian Research Council (ARC) Discovery or National Health and Medical Research Council (NHMRC) project application.

### ***For Industry Researchers:***

ANFF can provide advice on all aspects of establishing a research project, from identifying ideas or collaborators from within the ANFF Network of over 2500 researchers, to experimental planning, training or performing research on behalf of a client.

ANFF can also advise clients on the many funding programs available to support their R&D project. There are more than one hundred grant types available, some key programs include:

- [ARC Linkage Programme](#), which is now open to continuous applications.
- [Innovation Connections](#).
- Technology voucher schemes from various State Government organisations e.g. [Jobs for NSW](#).
- Defence Grants e.g. through the [Defence Innovation Hub](#) or Next Generation Technologies Fund.

All grant types available in Australia for R&D can be searched [here](#).

For more information please contact Dr Warren McKenzie, ANFF Business Development Manager, or your local Node Facility Manager. Contact details are on page 8 of this document.

## ***Advice for ARC Discovery and NHMRC applicants for the 2018 round.***

ANFF staff can help with your applications by:

Providing Project advice:

- **Facilities Required:** Understanding the ANFF portfolio available for your project. A searchable database of ANFF facilities can be found [here](#).
- **Planning:** ANFF staff can provide advice on components of your project which require ANFF facilities and the approximate number of instrument hours required.
- **Budgeting:** Information or quotes on facility access and ancillary costs (e.g. project-specific accessories) required for your project can be obtained directly from the nodes. Instrument access charges can be obtained through the ANFF access and pricing policy.
- **Information on subsidies:** Most ANFF facility access is heavily subsidised for university or government programs. This should be recognised as an in-kind contribution, for example in section E2 of an ARC Discovery Project application. Contact ANFF Ltd or the relevant node for a statement on the extent to which access charges are subsidised by university or government funding.

Provide a supportive “Research Environment”. For an ARC discovery project, if a significant portion of the experimental component of a research project is planned to be conducted in an ANFF laboratory, it is important to discuss the details with the relevant node and articulate in the grant application how these provide the most supportive environment. The main elements of a supportive research environment which ANFF can provide are as follows:

- **Training:** ANFF provides regular training courses on the key capabilities of each node. Dedicated technical staff are also on hand to either perform complex experimental procedures or provide one-on-one training of new users tailored to their individual research problem.
- **Technical Support:** Dedicated technical staff of all ANFF facilities are on hand to ensure they are operating at an optimal level and also to provide advice during user sessions.
- **Research Support:** Each node of ANFF houses a critical mass of academic knowledge, technical know-how and world class research facilities to provide Australia’s most well supported academic centres in their specialist fields. By performing projects in the relevant nodes the researcher will become part of the ANFF collaborative network and be mentored by leaders in their respective specialist fields.

The remainder of this document provides specific guidance on the inclusion of facility access time via the online research management systems for ARC or NHMRC grants.

## ARC Grants

Grant proposals to the ARC must be submitted in their online Research Management System (RMS). For ARC Discovery Project applications 2018, you should include the access costs as a line item in the 'Project Costs' table (Part E) under 'Other' as shown in the examples below.

In the following example, the project requires access to an Electron Beam Lithography (EBL) unit for one sample per week, at 2 hours per sample, for 40 weeks in Year 1, which equates to 80 h of beam time. At \$50 per hour for access charges, this translates to a total cost of \$4,000 for instrument access in Year 1 of the project (see Step 5).

**STEP 1:** If your project involves contributions from an organisation such as your host university, you will need to add the detail of your host university under 'Add Organisation Participant...' In the example below, The University of New South Wales was added as the Administering Organisation participant.

The screenshot shows the 'Organisation participants' section of the RMS interface. A red circle highlights the 'Add Organisation Participant...' link. A red arrow points from this link to a dialog box titled 'Add proposal organisation participant'. The dialog box shows the 'Participation Type' set to 'Administering Organisation' and the 'Organisation' dropdown menu set to 'The University of New South Wales'. There are 'Add Participant' and 'Cancel' buttons at the bottom of the dialog.

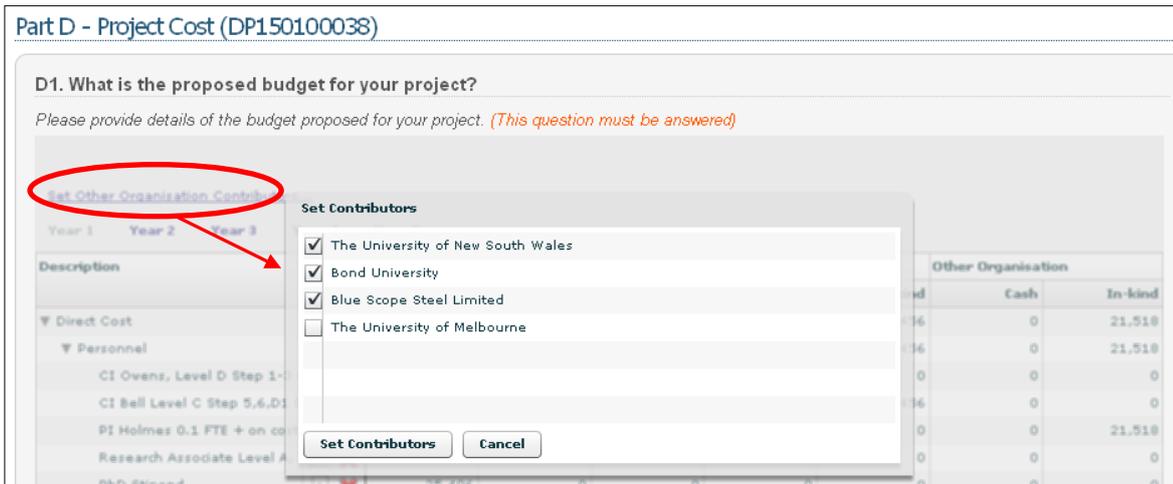
Name	Participation Type		
The University of New South Wales	Administering Organisation	Remove	▲▼
Bond University	Other Eligible Organisation	Remove	▲▼
The University of Melbourne	Other Organisation	Remove	▲▼
Blue Scope Steel Limited	Other Organisation	Remove	▲▼

**STEP 2:** Under the **Application form** section, please click on 'D - Project Costs'.

The screenshot shows the 'Application form' section of the RMS interface. A list of sections is displayed, each with a link and a status indicator. The 'D - Project Cost' link is circled in red. All sections are marked as 'Complete and valid' with a green checkmark icon.

Section	Status
DP150100038	Complete and valid
A - Administrative Summary	Complete and valid
B - Classification and other statistical information	Complete and valid
C - Project Description	Complete and valid
<b>D - Project Cost</b>	Complete and valid
E - Budget Justifications	Complete and valid
F - Personnel (Mr Daniel Owens)	Complete and valid
G - Research Support	Complete and valid
H - Statements on Progress on ARC-funded Projects	Complete and valid
I - Additional Details	Complete and valid

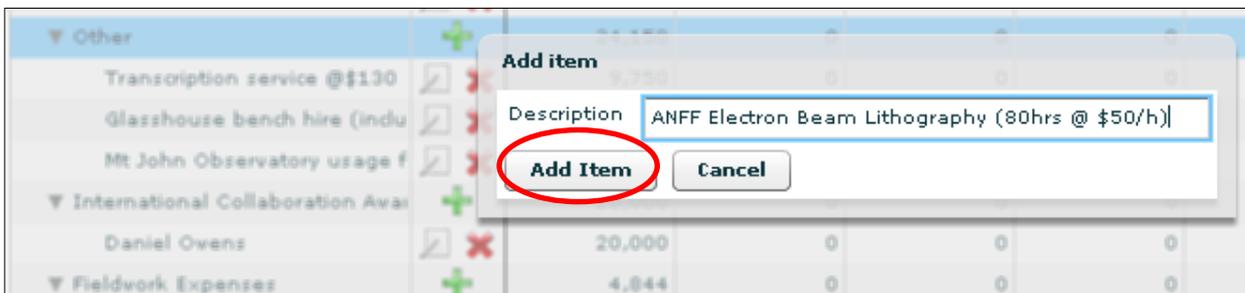
**STEP 3:** Click on the 'Set Other Organisation Contributors...' link and make sure to tick the box for the organisation participant (added in step 1), then press the 'Set Contributors' button. This will add the 'AdminOrg' column to the budget table.



**STEP 4:** Under the heading 'Other', click on the green plus sign.

▼ Other		24,150	0
Transcription service @\$130		9,750	0
Glasshouse bench hire (inclu		2,400	0
Mt John Observatory usage f		12,000	0

In the resulting **Add item** text box, type in 'ANFF Electron Beam Lithography (80hrs @ \$50/h)', then press the 'Add Item' button.



**Step 5:** Click on the **ARC** column of the newly created row and enter the amount required for this item; e.g. \$4,000.

▼ Other		24,150	0	0
Transcription service @\$130 per hour of interview		9,750	0	0
Glasshouse bench hire (includes pots and potting mix)		2,400	0	0
Mt John Observatory usage fees		12,000	0	0
ANFF Electron Beam Lithography (80hrs @ \$50/h)		4,000	0	0
▼ International Collaboration Award		20,000	0	0

**STEP 6:** Click on subsequent years, e.g. **Year 2 and Year 3**, above the budget table and then repeat step 5, with the requested amount adjusted for higher or lower instrument usage as the requirement of the project changes over time.

[Set Other Organisation Contributors...](#)

	Year 1	Year 2	Year 3	Year 4	Year 5
Description					
ARC					
AdminOrg					
Cash					
▼ Direct Cost					
▼ Personnel					
CI Owens, Level D Step 1-3 0.5FTE + 29.42% on-costs					
CI Bell Level C Step 5,6,D1 0.3FTE + 29.42% on costs					
PI Holmes 0.1 FTE + on costs					
Research Associate Level A, 1.0 FTE Step 6-8 + 28% on					
PhD Stipend					
▼ Other					
Transcription service @\$130 per hour of interview					
Glasshouse bench hire (includes pots and potting mix)					
Mt John Observatory usage fees					
ANFF Electron Beam Lithography (80hrs @ \$50/h)					
▼ International Collaboration Award					

**STEP 7:** Justify the funding requested for ANFF instrument access in **Part E1 - 'Budget Justifications'**

The following example text may be used as a basis for your justification:

*"This research project requires the synthesis/fabrication/analysis [insert as appropriate] of N samples per week/month/year [insert as appropriate] with the advanced technique/s of [specify; e.g. electron beam lithography]. The estimated time required for the synthesis/ fabrication/ characterisation [insert as appropriate] of each sample is X hours, at a cost of \$X per hour of instrument time."*

You should add further specific explanation of why the chosen synthesis/fabrication/analysis technique/s is/are necessary for the research project, for example:

*"Electron beam lithography is necessary to produce fine features (<30nm) on a silicon wafer with a high degree of control and accuracy whilst allowing the sample to be produced under an efficient time frame"* with a reference to further detail elsewhere in the application.

**STEP 8:** In **Part E2 - 'Details of non- ARC contributions'**, input information on contributions arising from other sources from the relevant Node. Most ANFF facility access is heavily subsidised for university or government programs.

<a href="#">C - Project Description</a>	<b>Steps 7 and 8</b>	✔ Complete and valid
<a href="#">D - Project Cost</a>		✔ Complete and valid
<a href="#">E - Budget Justifications</a>		✔ Complete and valid
<a href="#">F - Personnel (Mr Daniel Owens)</a>		✔ Complete and valid

## NHMRC Grants

Grant proposals to the NHMRC must be submitted in their online **Research Grants Management System (RGMS)**.

For NHMRC Project Grant applications 2018, please calculate the annual access fees relevant for the ANFF instrument required (e.g. \$4,000) and then add it to other direct research costs (e.g. \$30,000 for personnel, travel, etc.) to form a total annual figure (e.g. \$34,000). The total annual Direct Research Costs (e.g. \$34,000) for each year must be entered into the corresponding year box as shown below.

### P-PB: Proposed Budget

Direct Research Costs (eligible costs are outlined in the relevant funding rules)

Enter the value of Direct Research Costs for each year. Only the relevant number of years should be completed.

* Year 1 (\$AUD)	35000
* Year 2 (\$AUD)	45000
* Year 3 (\$AUD)	55000
* Year 4 (\$AUD)	0
* Year 5 (\$AUD)	0

\* Give details and justify each item of Direct Research Costs (6000 character limit including spaces and line breaks).

EXAMPLE: "This research project requires the synthesis/fabrication/analysis [insert as appropriate] of N samples per week/month/year [insert as appropriate] with the advanced technique/s of [specify; e.g. electron beam lithography]. The estimated time required for the synthesis/fabrication/characterisation [insert as appropriate] of each sample is X hours, at a cost of \$X per hour of instrument time."

In the example below; assume \$30,000 worth of other direct research costs for Year 1, and the access fee for ANFF instrument required was \$4,000 for 80 hrs of access (\$50/hr, as per the ARC example above). Adding these costs gives a total direct research cost of \$34,000 for Year 1, which gives \$35,000 when rounded up to the nearest \$5,000 unit.

This amount \$35,000 is entered in the Year 1 (\$AUD) box under – **Direct Research Costs**.

Proceed in a similar manner for each year of the application, with the requested amount adjusted for higher or lower instrument requirements at different stages of the project.

#### The following example text may be used as a basis for your justification:

*"This research project requires the synthesis/fabrication/analysis [insert as appropriate] of N samples per week/month/year [insert as appropriate] with the advanced technique/s of [specify; e.g. electron beam lithography]. The estimated time required for the synthesis/fabrication/characterisation [insert as appropriate] of each sample is X hours, at a cost of \$X per hour of instrument time."*

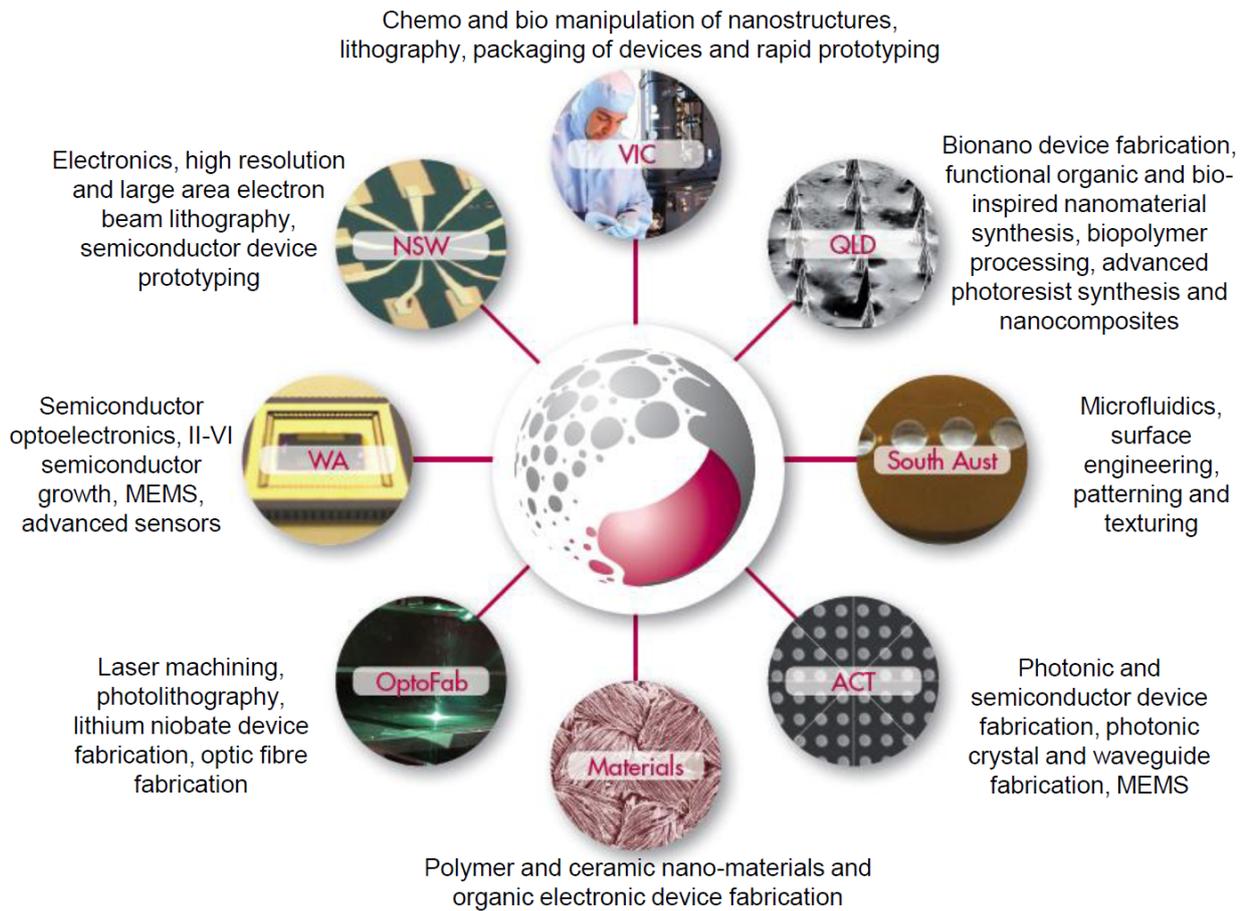
**You should add further specific explanation of why the chosen synthesis/fabrication/analysis technique/s is/are necessary for the research project, for example:**

*"Electron beam lithography is necessary to produce fine features (<30nm) on a silicon wafer with a high degree of control and accuracy whilst allowing the sample to be produced under an efficient time frame"* with a reference to further detail elsewhere in the application.

**About ANFF:**

Established under the National Collaborative Research Infrastructure Strategy (NCRIS), ANFF provides researchers and industry with access to state-of-the-art fabrication capabilities through a network of 8 nodes including 21 institutions throughout Australia. The ANFF facility portfolio consists of over 500 instruments valued at approximately \$200m.

The 8 Nodes of ANFF draw on existing infrastructure and expertise providing a research environment that supports world class interdisciplinary research in their respective fields. These fields include:



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