



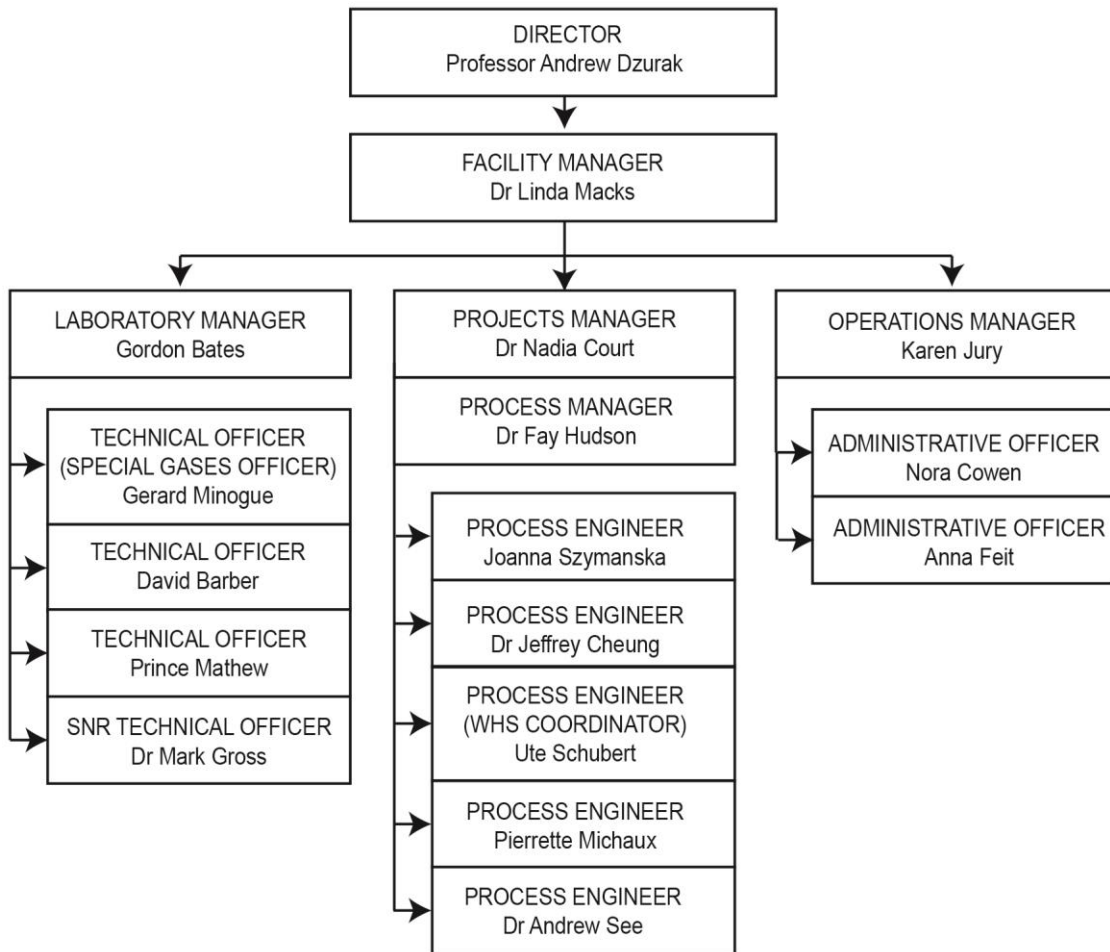
ANFF-NSW ACCESS & PRICING POLICY



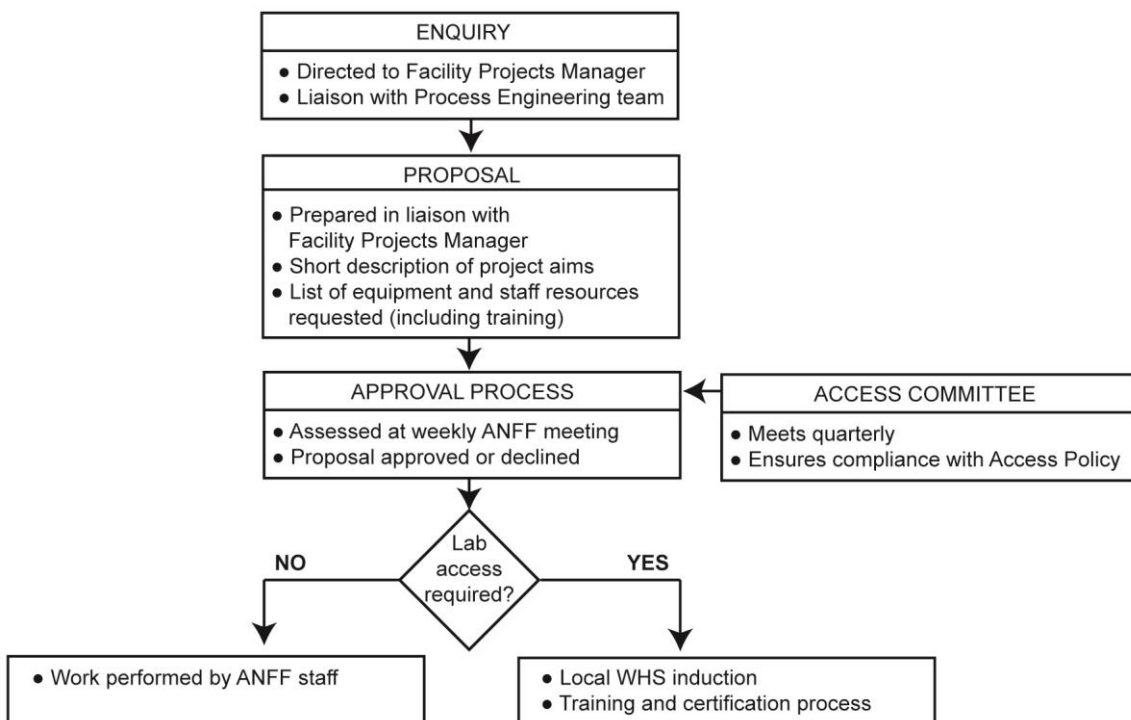
A. Organisational Matters and Policies

1. Established under the National Collaborative Research Infrastructure Strategy (NCRIS), the Australian National Fabrication Facility (ANFF) is a national network of eight Nodes.
2. ANFF's core aim is to provide micro- and nano-fabrication facilities for Australia's researchers.
3. User access at all ANFF Nodes must be consistent with general NCRIS principles as laid out in the national "ANFF Access and Pricing Policy".
4. The ANFF-NSW Node is based at the University of New South Wales.
5. In addition to the policies detailed in this document, all ANFF-NSW users must adhere to ANFF-NSW Health and Safety guidelines as well as to all relevant UNSW policies and procedures.
6. ANFF-NSW is funded for 2006-2011 ('NCRIS Project') with the following support: (i) \$3M Federal NCRIS funding (distributed via ANFF Ltd); (ii) \$2M NSW Government funding through the Science Leveraging Fund; (iii) \$1M funding from the University of New South Wales.
7. ANFF-NSW is funded for 2008-2013 ('EIF Project') with the following support: (i) \$4.38M Federal EIF-Super Science funding (distributed via ANFF Ltd); (ii) \$455k NSW Government funding through the Science Leveraging Fund; and (iii) \$1.24M funding from the University of New South Wales.
8. ANFF-NSW is funded for the period 1 July 2013 to 31 December 2014 ('CRIS Project') with the following support: (i) \$1.123M Federal CRIS funding (distributed via ANFF Ltd); (ii) \$289k NSW Government funding through the Research Attraction and Acceleration Program; and (iii) \$360k funding from the University of New South Wales.
9. ANFF-NSW is funded for 2013-2017 ('NCRIS2013 Project') with the following support: i)\$3.328M Federal NCRIS2013 funding (distributed via ANFF Ltd); ii) \$445k NSW Government funding through the Research Attraction and Acceleration Program; and iii) \$1.08M funding from the University of New South Wales.
10. ANFF-NSW funding is used to purchase fabrication equipment and to support salaries and operational costs as specified in Funding Agreements with the funding bodies.

11. The organisation and staffing of the Node is summarised in the following Organisational Chart:



B. Access Policy and Process for New Users or Job Requests



1. The Projects Manager is the first point of contact for all potential users of ANFF-NSW facilities.
2. The Projects Manager will liaise with the potential user and with the ANFF-NSW Process Engineering team to assess the scope of the work required and to prepare an ANFF Proposal describing the proposed work and the equipment and staff resources required.
3. ANFF Proposals are assessed by the Node Director, the Facility Manager, the Projects Manager, the Laboratory Manager and the Process Manager at weekly ANFF meetings. All users are welcome to attend weekly ANFF meetings. Potential users may present their ANFF Proposals for assessment in person if they wish, otherwise their Proposals will be presented by the Projects Manager.
4. Where requested equipment or staff resources are oversubscribed (defined as being unavailable within one month of request), or where a Proposal is likely to be declined, the ANFF-NSW Access Committee will be invited to take part in the assessment of the Proposal.
5. In addition to having an ANFF Proposal formally approved, users requesting direct access to ANFF-NSW laboratories must also complete the local safety induction procedures (as described in the ANFF-NSW Health and Safety guidelines).
6. In addition to other requirements, the ANFF-NSW Node User Agreement and ANFF-NSW Node Payment Form must be completed and returned to the Projects Manager before user access can be booked or a job can commence.
7. Approvals of ANFF Proposals remain valid for 12 months. For projects which will continue beyond 12 months, a new Proposal must be completed seeking approval for the continuation of the project beyond the initial 12 month period.
8. ANFF-NSW reserves the right to revoke Approvals of ANFF Proposals with seven days' written notice.
9. The ANFF-NSW Access Committee regularly reviews all ANFF Proposals (approved, declined and revoked) to ensure compliance with the ANFF-NSW Access and Pricing Policy.
10. The ANFF-NSW Access Committee comprises the Node Director, the Facility Manager, the Projects Manager, the Laboratory Manager and representatives from the major user groups. The ANFF CEO may also attend Access Committee meetings.

C. Pricing Policy

1. Use of ANFF-funded tools will be charged at a rate of \$50 per hour for publicly-funded users (students or research staff from UNSW or from external institutions), and \$250 per hour for industry (R&D) or international users. **[INDUSTRY R&D RATE REDUCED TO \$150 PER HOUR FOR WORK COMPLETED BETWEEN 1 NOVEMBER 2016 AND 30 JUNE 2017]**
2. Many pre-existing tools within the ANFF-NSW laboratories have been made available as an in-kind contribution to ANFF. With the exception of the XL30 and Sirion electron beam lithography systems, UNSW users will not be charged for use of these tools. External users will be charged at the rate of \$50 per hour for publicly-funded users (students or research staff), and \$250 per hour for industry (R&D) or international users. **[INDUSTRY R&D RATE REDUCED TO \$150 PER HOUR FOR WORK COMPLETED BETWEEN 1 NOVEMBER 2016 AND 30 JUNE 2017]**
3. UNSW users (students or research staff) will be charged \$50 per hour for use of the XL30 and the Sirion electron beam lithography systems.
4. User support and training provided by ANFF Staff will be charged at a rate of \$50 per hour for publicly-funded users (students or research staff from UNSW or from external institutions), and \$150 per hour for industry (R&D) or international users. **[INDUSTRY R&D RATE REDUCED TO \$50 PER HOUR FOR WORK COMPLETED BETWEEN 1 NOVEMBER 2016 AND 30 JUNE 2017]**
5. Work completed by, or on behalf of, industry users which cannot be classified as industry R&D will be charged at commercial rates as agreed with the ANFF-NSW Node Director.
6. Access charges are invoiced by calendar month in arrears.
7. Regular users of ANFF-NSW facilities may choose to set up an ANFF-NSW subscription whereby discounted access charges are deducted from a subscription fee paid in advance. Further details are available from the ANFF-NSW Facility Manager.
8. Access fees are reviewed on an annual basis.
9. The current pricing structure is summarised in the table below:

Node Access Hourly Charges *

	Publicly-funded		Privately-funded	
	UNSW Students or Research Staff	Non-UNSW Students or Research Staff	Industry Users (R&D work)**	Industry Users (R&D work) Reduced Rates 1/11/16 – 30/06/17
ANFF-funded Tools	\$50	\$50	\$250	\$150
MBE Tools	\$50	\$50	\$250	\$150
XL30 and Sirion EBL Tools	\$50	\$50	\$250	\$150
Other In-kind Tools	NIL	\$50	\$250	\$150
ANFF Staff Support (in addition to any applicable tool charges)	\$50	\$50	\$150	\$50

* Hourly rates all cover basic costs including clean-room garments, standard chemicals, standard metals and standard resists. Specialty materials (including precious metals) will be charged at cost.

** Work completed by or on behalf of industry users which cannot be classified as industry R&D will be charged at commercial rates as agreed with the ANFF-NSW Node Director.

10. The current ANFF-NSW Tool List is summarised in Appendix 1. More detailed tool specifications along with details of the extensive wet chemical processing capability offered at ANFF-NSW are available from the ANFF website (www.anff.org.au) or by direct enquiry with ANFF-NSW staff.

D. Confidentiality and Intellectual Property Policy

1. University of New South Wales staff and student users of the ANFF-NSW laboratories have developed and acquired, and use in connection with their operation, valuable, confidential and proprietary technical and economic information related to their processes, technologies, manufacturing lines, equipment, products, operations, customers, suppliers and other aspects of their operation. Such information is referred to below as "ANFF Information".
2. ANFF Users must treat as confidential all ANFF Information to which they may be exposed and not disclose any ANFF Information to any third party without prior written permission from the ANFF-NSW Node. This does not restrict an ANFF User's use or disclosure of any information that is now or, through no act of the ANFF User or their employer, later becomes generally available to the public.
3. ANFF Users must not photograph or otherwise make any electronic, optical or magnetic recording of the ANFF-NSW laboratories or other Node facilities without prior written permission from the ANFF-NSW Node.
4. Should an ANFF User's Node access be revoked, obligations of non-disclosure of ANFF Information remain in effect.
5. Work undertaken by an ANFF User in the ANFF-NSW laboratories or otherwise making use of the facilities of the ANFF-NSW Node is governed by the UNSW Intellectual Property Policy <<https://www.gs.unsw.edu.au/policy/documents/ippolicy.pdf>> with the following variations under Clause 4, unless otherwise agreed in writing:
 - i) Ownership of any background intellectual property brought to a project by either an ANFF User or a UNSW staff member shall remain with the originator and/or the originator's organisation,
 - ii) Intellectual property developed by an ANFF User using the ANFF facilities with no direct contribution from ANFF staff shall be owned by the ANFF User and/or the ANFF User's organisation,
 - iii) Intellectual property developed collaboratively by an ANFF User and by UNSW staff shall be shared between the ANFF User and/or the ANFF User's organisation and UNSW in proportion to each party's contribution to that intellectual property,
 - iv) Intellectual property developed by UNSW staff completing ANFF commercial jobs shall be owned by UNSW.

Appendix 1: ANFF-NSW Tool List

Capability	Tool	Funding Source
Electron Beam Lithography (EBL)	Raith 150TWO EBL system	ANFF
	FEI Sirion/NPGS EBL system	In-kind
	Suite of resist processing tools (spinners and hotplates)	Combined
UV Lithography	Karl Suss MA6/BA6 mask aligner	ANFF
	Quintel Q6000 mask aligner	In-kind
	Karl Suss MJB3 mask aligner	ANFF
	Suite of resist processing tools (spinners and hotplates)	Combined
Dry Etching	STS ICP-RIE system	In-kind
	Oxford RIE system	ANFF
	Hollow cathode RIE system	In-kind
	O ₂ plasma ashers (two available)	Combined
Deposition	Lesker PVD75 e-beam evaporator (general purpose)	ANFF
	Lesker PVD75 e-beam evaporator (MOS)	ANFF
	Lesker thermal evaporator	In-kind
	Edwards thermal evaporator (MOS)	In-kind
	HHV sputtering system	ANFF
	Edwards sputtering system	In-kind
	CNT Savannah S200 ALD system	ANFF
	Oxford PECVD tool	ANFF
	Hollow cathode PECVD tool	In-kind
IBS IMC200 ion implanter	ANFF	
Epitaxial growth	Veeco III-V molecular beam epitaxy system	LIEF
	Pascal laser-molecular beam epitaxy system (sensitive materials)	LIEF
	Pascal laser-molecular beam epitaxy system (general purpose)	LIEF
Thermal Processing	UDOX oxidation furnace (MOS)	In-kind
	GP oxidation furnace (general purpose)	In-kind
	Boron diffusion furnace	In-kind
	Phosphorus diffusion furnace	In-kind
	GP anneal furnace	In-kind
	Clean anneal furnace (MOS)	In-kind
	Jipelec rapid thermal annealer (MOS)	In-kind
	Muffle furnace	ANFF
Metrology	Raith 150TWO EBI system (SEM capability)	ANFF
	FEI Sirion SEM	In-kind
	DI3000 AFM	In-kind
	JA Woollam spectroscopic ellipsometer	ANFF
	Suite of Dektak profilometers	Combined
	Suite of optical microscopy tools	Combined

Electrical Testing	Cascade probe station with Keithley semiconductor characterisation electronics	ANFF
	Four point probe	In-kind
Packaging and Bonding	DAD3240 dicing saw	ANFF
	Karl Suss wafer scribe	In-kind
	K&S Au ball bonder	In-kind
	K&S Au ball bonder (digital)	In-kind
	K&S Al wedge bonder	In-kind