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### NIPMO INTERPRETATION NOTE 13: EVERYTHING YOU NEED TO KNOW ABOUT FULL COST

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The National Intellectual Property Management Office (NIPMO) is mandated to promote the objects<sup>1</sup> of the Intellectual Property Rights from Publicly Financed Research and Development Act, 51 of 2008 (IPR Act). One of the functions of NIPMO, according to Section 9(4)(c)(iv)<sup>2</sup>, is that NIPMO must provide assistance to institutions with any matter provided for in the IPR Act.

The IPR Act provides for research and development (R&D) to be funded on a full cost basis such that the provisions of the IPR Act do not apply. Section 15(4)(a) and (b) of the IPR Act states as follows:

- (a) *“Any research and development undertaken at an institution and funded by a private entity or organisation on a full cost basis shall not be deemed to be publicly financed research and development and the provisions of this Act shall not apply thereto.*
- (b) *For the purposes of paragraph (a), “full cost” means the full cost of undertaking research and development as determined in accordance with international financial reporting standards, and includes all applicable direct and indirect cost as may be prescribed.”*

The purpose of this NIPMO Interpretation Note (NIN) is to provide information on “*everything you need to know about full cost*” by way of international comparison with the South African system and frequently asked questions.

Please do not hesitate to contact NIPMO ([jetane.charsley@nipmo.org.za](mailto:jetane.charsley@nipmo.org.za); 012 844 0228) should you have any questions with regards to any matter in this document.

Warm regards

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Dr Kerry Faul  
Head: NIPMO  
Date: 6 August 2019

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<sup>1</sup> Section 2(1) of the IPR Act: The object of this Act is to make provision that intellectual property emanating from publicly financed research and development is identified, protected, utilised and commercialised for the benefit of the people of the Republic, whether it be for a social, economic, military or any other benefit.

<sup>2</sup> Section 9(4)(c)(iv) of the IPR Act: NIPMO must, furthermore provide assistance to institutions with any other matter provided for in this Act

## List of acronyms/terms

<b>F&amp;A rate</b>	Facilities and Administrative Rate
<b>FCC</b>	Full costing sub-committee of the NIPMO Advisory Board
<b>fEC</b>	full economic cost
<b>Guideline 5.1 of 2019</b>	Guideline 5.1 of 2019 entitled “ <i>Guidance for determining the full cost of research and development as per in the Intellectual Property Rights from Publicly Financed Research and Development Act</i> ”
<b>ICRR</b>	Indirect Cost Recovery Rate
<b>Institution</b>	Section 1 of the IPR Act: “ <i>any higher education institution contemplated in the definition of “higher education institution” contained in section 1 of the Higher Education Act, 1997 (Act No. 101 of (1997); any statutory institution listed in Schedule 1; and any institution identified as such by the Minister under section 3(2)</i> ”. (see Annexure A of Guideline 5.1 of 2019 for a full list of institutions).
<b>IP</b>	Intellectual Property (see IPR Act and Guideline 1.3 of 2019 for the definition)
<b>IPR Act</b>	Intellectual Property Rights from Publicly Financed Research and Development Act
<b>NIPMO</b>	National Intellectual Property Management Office
<b>OECD</b>	Organisation for Economic Co-operation and Development (OECD)
<b>Private entity or organisation</b>	Section 15(5) of the IPR Act: “ <i>a private sector company, a public entity, an international research organisation, an educational institution or an international funding or donor organisation</i> ”.
<b>R&amp;D</b>	Research and Development (see Guideline 1.3 of 2019 for the definition)
<b>TRAC</b>	Transparent Approach to Costing model/system
<b>UK</b>	United Kingdom
<b>US</b>	United States of America

## 1. SOUTH AFRICAN LEGISLATIVE FRAMEWORK

Regulation 16 of the IPR Act states that “*each institution must, every 2 years, submit to NIPMO for approval, formulae for calculation of its applicable direct costs and indirect costs of undertaking research and development*”. “*The formulae... must include the basic applicable direct costs of undertaking the research and development determined in terms of the institution's financial and related policies and in accordance with generally accepted accounting practices*”.

“*Where it is not feasible to determine the indirect costs accurately, the formulae will include a determination of a surcharge [or indirect cost recovery] in the form of a percentage to be levied on the direct costs [or relevant cost driver] as a best estimate of the indirect cost of undertaking such research and development*”. “*The indirect cost percentage may vary from organisational units or faculties within an institution and the institution must justify any variations*”.

Regulation 16 further makes provision for the establishment of an expert committee (called the Full costing sub-committee (FCC) of the NIPMO Advisory Board) to whom NIPMO will refer the institutions' submissions for recommendation of approval or amendment.

Upon approval of an institution's formula and matrices (more specifically referred to as the indirect cost recovery rate (ICRR)), **NIPMO issues the institution with a certificate** confirming NIPMO's acceptance of the institution's costing model. The certificate is valid for a period of two (2) years.

Guideline 5.1 of 2019 entitled "Guidance for determining the full cost of research and development as contemplated in the Intellectual Property Rights from Publicly Financed Research and Development Act" sets out generally applicable guiding principles and criteria, specifically definitions of terms and concepts, for the determination of the full cost of R&D, applicable to all institutions. Guideline 5.1 of 2019 is available on the NIPMO website at: <https://nipmo.dst.gov.za>.

## 2. INTERNATIONAL COMPARISON WITH THE SOUTH AFRICA SYSTEM

Various universities around the world provide for different calculations to determine the indirect cost associated with conducting research. Indirect cost associated with publicly funded university research projects are recognised by leading Organisation for Economic Co-operation and Development (OECD) countries as a legitimate element of the cost of undertaking research projects.<sup>3</sup>

In this section, we will discuss different calculation methods, negotiated indirect cost rate as calculated in the United States of America, activity based costing as calculated in the United Kingdom and briefly set out the South African full cost basis approach. Please refer to Guideline 5.1 of 2019 for a more in depth discussion on calculating the full cost of R&D at South African institutions.

### 2.1 United States of America (US) – negotiated indirect cost rate

The Facilities and Administrative (F&A) Rate is the mechanism used to reimburse US Universities for the infrastructure support costs associated with sponsored research and other sponsored projects. The F&A rate is essentially an overhead rate.<sup>4</sup>

F&A costs are defined in the code for federal regulations<sup>5</sup> as costs that are "incurred for common or joint objectives and therefore cannot be identified readily and specifically with a particular sponsored project, an instructional activity, or any other institutional activity".

Recoverable F&A costs include<sup>6</sup>:

Facilities "F" such as	Administrative "A" such as
Building and Equipment	Human Resources, Payroll Procurement, Accounts Payable
Maintenance	Sponsored Projects and Compliance

<sup>3</sup> <https://docs.education.gov.au/system/files/doc/other/acgdiscussionpaperdec08.pdf>

<sup>4</sup> <https://finance.uw.edu/maa/fa/facosts>

<sup>5</sup> CFR 2 Part §200.420

<sup>6</sup> [https://osp.gatech.edu/sites/default/files/f\\_and\\_a\\_rates\\_july\\_27\\_2018.pdf](https://osp.gatech.edu/sites/default/files/f_and_a_rates_july_27_2018.pdf)

Custodial and Grounds	Executive Management
Utilities and Insurance	Dean's Offices, Controller's Office, Academic Finance Offices
Public Safety	Administrative Activities of Researchers
Library	Grants & Contracts

Entities receiving federal research contracts, uses a federal negotiation process to determine a reasonable means to recover the indirect costs from its research sponsors. These costs are allocated in accordance with federally mandated methods and become the starting point for the rate negotiation process. F&A Rate is generally calculated using the below formula:<sup>7</sup>

$$\frac{F+A(\text{Indirect})\text{Expenses}}{\sum \text{Direct Program Expenses}} \times 100 = \text{F\&A\%}$$

The table below, sets out the F&A Rates at different US universities during 2017:<sup>8</sup>

Name of University	Facilities and Administrative Rates
Washington University in St. Louis	52.5%
Massachusetts Institute of Technology	54.7%
Emory University	56%
Northwestern University	56.5%
Stanford University	57%
Harvard - School of Public Health	58.5%
Columbia University	60%
Cornell University	61%
University of Pennsylvania	61%
Princeton University	62%
Johns Hopkins University	63%
California Institute of Technology	65%
Yale University	67.5%
Harvard - University	69%
Harvard- Medical School	69.5%

## 2.2 United Kingdom (UK) – activity based costing

The UK determines the full economic cost (fEC) of doing research using the Transparent Approach to Costing (TRAC) model/system. TRAC is an activity-based costing system adapted to an academic culture. It is essentially a process of taking institutional expenditure information from published financial statements, and applying cost drivers (such as academic time allocation and space usage) to allocate these costs to academic departments and to activities.<sup>9</sup>

<sup>7</sup> [https://osp.gatech.edu/sites/default/files/f\\_and\\_a\\_rates\\_july\\_27\\_2018.pdf](https://osp.gatech.edu/sites/default/files/f_and_a_rates_july_27_2018.pdf)

<sup>8</sup> <https://doresearch.stanford.edu/research-scholarship/costs-conducting-research#q&a:-stanford-university-facilities-and-administrative-costs->

<sup>9</sup> <https://www.trac.ac.uk/wp-content/uploads/2018/07/FSSG-TRAC-policy-overview.pdf>

UK universities do not have to use the fEC for contract research with industry as they can choose at which rate they want to conduct the research, however fEC is used as a basis for negotiations with industry.<sup>10</sup>

As the fEC is based on labour and space usage there is no fixed indirect cost recovery rate that is used by the UK Universities.

### 2.3 South Africa – full cost

The full cost of an R&D is typically determined using the following equation:

$$\text{Full Cost} = \text{Direct costs} + \text{Indirect costs}$$

As not all indirect costs can be specifically allocated to a project/ activity level, these indirect costs are often grouped together and allocated to a project/ activity based as an indirect cost recovery rate (ICRR).

The ICRR is calculated every two years by the institution in line with Guideline 5.1 of 2019. In terms of Regulation 16(1)(g) of the IPR Act, NIPMO approves the ICRR of the institution and issues a certificate.

The approved ICRR is applied to the direct cost (or relevant cost driver) to determine the full cost of a research project (Indirect costs = (Indirect Cost Recovery Ratio (ICRR) X Modified Direct cost). This rate is regarded as the best estimate of the indirect cost of undertaking such R&D.

When a “*private entity or organisation*”<sup>11</sup> wishes to full cost fund R&D at an institution, the approved ICRR must be applied to the direct cost (or relevant cost driver) to determine the full cost of the R&D project.

In some exceptional instances an institution may want to determine the accurate full cost of a project and not apply the best estimate ICCR which is approved by NIPMO. Where it is feasible to determine the accurate indirect cost of a R&D project, such project would be deemed to be full cost and, similarly, the IPR Act will not apply.

Where the private entity or organisation funds a R&D project on a full cost basis, the research project will be deemed to not be publicly financed R&D and the provisions of the IPR Act will not apply to the IP which emanates from such R&D. It also means that the institution’s costs associated with undertaking the R&D (as a best estimate) are covered by the private entity or organisation.

The benefit of knowing and applying the ICRR makes the institution aware if:

- the institution’s costs associated with undertaking the R&D (as a best estimate) are covered by the private entity or organisation; and
- the provisions of the IPR Act apply to the R&D project (or not). This enables the parties and can contract accordingly.

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<sup>10</sup> Email correspondence with Jaci Barnett, Bristol University (10 June 2019)

<sup>11</sup> Section 15(5) of the IPR Act: For the purposes of this section, private entity or organisation includes a private sector company, a public entity, an international research organisation, an educational institution or an international funding or donor organisation.

### 3. FREQUENTLY ASKED QUESTIONS

#### 3.1 Does full cost apply to research undertaken by a recipient (other than an institution)?

No, the concept of full cost only applies to R&D undertaken at an institution.

#### 3.2 What does undertaking research on a full cost basis mean to an institution and a private entity or organisation?

The full cost of an R&D project is typically determined using the following equation:

$$\text{Full Cost} = \text{Direct costs} + \text{Indirect costs}$$

As not all indirect costs can be specifically allocated to a project/activity level, these indirect costs are often grouped together and allocated to a project/activity based as an indirect cost recovery rate (ICRR).

The ICRR is calculated every two years by the institution in line with Guideline 5.1 of 2019. In terms of Regulation 16(g) of the IPR Act, NIPMO approves the ICRR of the institution and issues a certificate. The approved ICRR is applied to the direct cost (or relevant cost driver) to determine the full cost of a research project (Indirect costs = (Indirect Cost Recovery Ratio (ICRR) X Modified Direct Cost). This rate is regarded as the best estimate of the indirect cost of undertaking such R&D.

If the all the direct costs and indirect costs associated with an R&D project, undertaken by an institution, are covered (by a private entity or organisation<sup>12</sup>), then it is deemed (as a best estimate) that no public funds are being utilised and hence the IPR Act does not govern the IP generated as part of the project.

#### 3.3 What are Direct and Indirect costs?

**Direct research costs** typically include: All costs (including direct staff and labour costs) directly attributable to, or incurred as a result of, the goods or services produced, or to be produced, as part of the R&D project, or in fulfilling a contract; including all direct capital R&D cost and direct recurrent R&D cost.

This includes, but not limited to, any expenditure incurred specifically for a R&D activity, project or contract, and includes direct staff and labour costs, bursary costs, consumable costs, the costs of equipment purchased for the specific project, rental costs or depreciation costs for other equipment used, import and export related costs, direct research support costs (if applicable), the costs of sub-contractors, travel, reporting costs, and any direct administration costs.

**Indirect research costs** are the sum of all indirect costs attributable to R&D carried out at an institution, or in a research project.

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<sup>12</sup> Section 15(5) of the IPR Act: For the purposes of this section, private entity or organisation includes a private sector company, a public entity, an international research organisation, an educational institution or an international funding or donor organisation.

These include, but not limited to, health and safety compliance and management, utilities such as water and electricity, human resource management, financial management, information technology infrastructure and services, libraries and library collections, operation and maintenance of buildings and laboratories (e.g. building upkeep, campus security, ground care and custodial services), departmental administration of grant/contract preparation and expenditure tracking, central administrative granting/contracting costs, disposal of hazardous waste, regulatory certification requirements, and support services for research, including central research and financial service.

### 3.4 What is the difference between full cost and pricing?

**Full cost** is the sum of the direct plus indirect costs and is the expense incurred by the institution for conducting the R&D.

NIPMO's legal mandate and its responsibilities in terms of the IPR Act and the Regulations apply to the concept of full costing only and exclude all pricing considerations, as well as so-called contingency or risk provisions. The NIPMO approved ICRR (as applied to the direct cost) is therefore representing the expenses incurred by the institution for conducting the research (with no profit, risk and contingencies taken into consideration).

The **pricing strategy**, and provisions for project risks or unforeseen events (contingencies) are regarded as outside of the legislative requirement of full costing of R&D at institutions and these remain at the discretion of the institutions.

Price is the amount a private entity or organisation is willing to pay for R&D to be undertaken at an institution.

It is generally accepted that the difference between the price paid and the costs incurred is the profit.

### 3.5 How do I know what the NIPMO approved ICRR is for a specific institution?

In terms of Regulation 16(1)(g) of the IPR Act, NIPMO approves the ICRR of the institution. NIPMO further issues a certificate to each institution. A private entity or organisation may request the institution to see/ have a copy of this certificate for their records.

NIPMO is bound by confidentiality in terms of Section 16 of the IPR Act and will not disclose the approved ICRRs, institutional certificate or calculation to any party (unless upon an order of a competent court or in so far as the provisions of the Promotion of Access to Information Act require).

### 3.6 The institution is undergoing restructuring which has affected the way we do costing. May I submit formulae for calculating the indirect cost of R&D before the 2-year approval has expired?

Yes, whenever an event such as restructuring or acceptance of major R&D projects may affect the ICRR of the institution over an extended period, an institution may submit such amended calculations to NIPMO for consideration and (where appropriate) approval.

### 3.7 The NIPMO approved ICRR has expired, can I still use the expired ICRR for my R&D projects?

In the event that the NIPMO approved ICRR expired, an institution **may not** use its expired ICRR. In the absence of a NIPMO approved ICRR, all R&D projects (to be undertaken on a full cost basis) must be accurately determined.

### 3.8 How do I know whether the R&D project is on full cost or not?

Parties enter into a research or collaboration agreement prior to the commencement of the R&D. As part of the research or collaboration agreement, an institution will have a proposed budget for that specific research project. The parties will therefore know, prior to the commencement of the research whether the private entity or organisation will pay for the full cost (Direct costs + Indirect costs) of the research and they will contract on such basis.

### 3.9 Can full cost be applied to a research project retrospectively?

Following the research being conducted and the IP developed (as part of a research or collaboration agreement), a private entity or organisation **cannot** retrospectively pay for the full cost of the research, so that the provisions of the IPR Act do not apply to the IP which emanated from that research or collaboration agreement. If the arrangement at the time of the undertaking the R&D was not full cost, the R&D and the resulting IP will fall within the scope of the IPR Act.

Should the private entity or organisation want access to the IP, it can negotiate with the institution for an exclusive or non-exclusive, royalty/revenue bearing or royalty/revenue free licence (some IP transactions may be subject to NIPMO approval – please refer to NIPMO Interpretation Note 2 entitled “*Intellectual Property Transaction Approvals*” (<https://nipmo.dst.gov.za/resources/nipmo-interpretation-note-2-intellectual-property-transaction-approvals>)).

Should the private entity or organisation **not pay the full cost** of the R&D project/activity and insist on owning the IP, an institution may (if it deems it the most suitable IP transaction) submit for NIPMO’s approval an application/submission for a local or offshore assignment. For a local assignment (IP4 Form), the recipient must demonstrate that such assignment is in the public interest; or provide reasons as to why the IP cannot be commercialised through other means such as an exclusive licence. For an offshore assignment (IP5 Form), the recipient must demonstrate that there is insufficient capacity in the Republic to develop or commercialise the IP locally; and the Republic will benefit from such offshore transaction.

### 3.10 What are the implications if an R&D project is partially funded?

Section 15(4)(a) of the IPR Act states that any R&D funded by a private entity or organisation on a full cost basis (i.e. all direct and indirect cost) shall not be deemed to be publicly financed R&D and the provisions of the IPR Act shall not apply.

Therefore, if a project is partially funded, it is deemed to be publicly funded (even if just partially) and the provisions of the IPR Act will apply. If a private entity or organisation pays the direct cost and not the indirect cost – the project is funded partially, it is deemed to be publicly funded and the provision of the IPR Act shall apply.

If the requirements for co-ownership are met<sup>13</sup>, the parties can co-own the IP. If they are not met, the default position applies and the IP belongs to the institution<sup>14</sup>.

### 3.11 If a private entity or organisation pays for the research to be undertaken at an institution on a full cost basis, does that mean that the IP automatically belongs to the funder?

IP ownership **does not automatically** belong to the full cost funder (i.e. private entity or organisation). As the IPR Act does not apply, IP ownership will be determined in terms of applicable IP statutes and contractual arrangements.

Generally, the IP belongs to the institution (via an employment agreement or institutional policy/ies). The institution has the discretion to make the IP available by assigning or licensing the IP, at no further cost, to the private entity or organisation. Alternatively, the parties may negotiate a further margin for the transfer of (assignment) or access to (licence) the IP.

### 3.12 Can a Government Department pay the full cost of a project for the IPR Act not to apply?

The IPR Act makes provision in Section 15(4), that any R&D undertaken at an institution and funded **by a private entity or organisation** on a full cost basis shall not be deemed to be publicly financed R&D and the provisions of the IPR Act shall not apply thereto.

Private entity or organisation is defined in Section 15(5) as a private sector company, a public entity, an international research organisation, an educational institution or an international funding or donor organisation.

A Government Department (national, provincial or local) does not fall within the definition of “*private entity or organisation*” and **can therefore not fund R&D, undertaken at an institution, on a full cost basis in order that the IPR Act does not apply**. Thus, if the Government Department pays for all the direct and indirect costs of the research agreement, the IPR Act will still apply.

Should the Government Department wish to own the IP which emanated from the R&D, the institution has the discretion to make the IP available by assigning or licensing the IP, at no further cost, to the Government Department. Alternatively, the parties may negotiate a further margin for the transfer of (assignment) or access to (licence) the IP (some IP transactions may be subject to NIPMO approval please refer to NIPMO Interpretation Note 2).

### 3.13 A private entity or organisation (very often philanthropic organisation) is only willing to pay xx% of the indirect cost/overheads of the R&D project. They want to own the IP which emanates from the R&D project. This percentage (xx%) is below my NIPMO approved ICRR, will NIPMO approve the lower rate.

**NIPMO cannot approve a project specific lower ICCR rate.**

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<sup>13</sup> Section 15(2) of the IPR Act

<sup>14</sup> Section 4(1) of the IPR Act

However, there are three options available to an institution in these circumstances:

1. **Option 1:** The private entity or organisation is not paying the full cost of the R&D and therefore the provisions of the IPR Act apply. Should the private entity or organisation wish to own the IP, an institution may submit for NIPMO's approval an application/submission for a local or offshore assignment (IP4 or IP5 Form).

For a local assignment (IP4 Form), the recipient (institution) must demonstrate that such assignment is in the public interest; or provide reasons as to why the IP cannot be commercialised through other means such as an exclusive licence. For an offshore assignment (IP5 Form), the recipient (institution) must demonstrate that there is insufficient capacity in the Republic to develop or commercialise the IP locally; and the Republic will benefit from such offshore transaction.

2. **Option 2:** Very often philanthropic funders fund multiple projects under a main/umbrella research or collaboration agreement. If the umbrella research or collaboration agreement offers an ICRR/overhead rate which is below that of the institution, the funder is not paying the full cost of the R&D and the provisions of the IPR Act will apply.

Should there be certain IP transactions within the umbrella research or collaboration agreement which require NIPMO approval, NIPMO is willing to consider the umbrella agreement and (where appropriate) provide upfront approval (within specified parameters) of all R&D projects flowing from the umbrella agreement.

An institution will in turn be required to report to NIPMO on an annual basis on all IP transactions which fell within the scope of the NIPMO approval. Should a project (under the umbrella agreement) fall outside the scope of the NIPMO approval, an institution must refer that IP transaction to NIPMO for approval - please refer to NIPMO Interpretation Note 2 entitled "*Intellectual Property Transaction Approvals*".

3. **Option 3:** An institution can opt to determine the accurate indirect cost of the specific research project. Once the accurate research project specific indirect costs have been determined and found to be equal (or greater) to the indirect cost percentage being offered by the private entity or organisation, the project is deemed to be funded on a full cost basis and the provisions of the IPR Act will not apply. The accurately determined indirect costs are not approved by NIPMO once they have been determined. The onus rests on the institution to accurately determine the full cost (indirect and direct cost) of the research project as if they are not accurately determined, then the research will not be full cost funded and the IPR Act will apply. As it is not practical to make these calculations for each research project, this approach is not adopted often and hence is the reason that a best estimate ICRR is determined.

[END]