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PRACTICE NOTE 3 OF 2015

APPROACH FOR DETERMINING THE FULL COST OF RESEARCH AND DEVELOPMENT CONDUCTED AT PUBLICLY FINANCED RESEARCH AND DEVELOPMENT INSTITUTIONS

Dated: 11 June 2015

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Batho Pele - putting people first

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LIST OF ACRONYMS

DC	Direct costs
DICRR	Divisional indirect cost recovery rate
FCC	Full Costing Sub-Committee
HEI	Higher education institutions
HESA	Higher Education South Africa
IASB	International Accounting Standards Board
ICR	Indirect cost recovery
ICRRs	Indirect cost recovery rates
IFRS	International Financial Reporting Standards
Institutions	HEI and Schedule 1 institutions
IPR Act	Intellectual Property Rights from Publicly Financed Research and Development Act, 2008 (No 51 of 2008)
NIPMO	National Intellectual Property Management Office
R&D	Research and development
Schedule 1 institutions	Institutions which appear in Schedule 1 of the IPR Act

1. INTRODUCTION

In this document an approach is set out for determining the full cost of research and development (R&D) conducted at publicly financed institutions as required by the Intellectual Property Rights from Publicly Financed Research and Development Act, 2008 (No 51 of 2008; IPR Act) and for the submission of such determinations to the National Intellectual Property Management Office (NIPMO) for certification. The affected institutions are listed in Annexure A in two categories: Higher education institutions (HEI) and Schedule 1 institutions as per the IPR Act.

1.1 Rationale for developing an approach towards determining the full cost of R&D

The rationale for developing an approach towards determining the full cost of R&D of publicly financed institutions is set out in Section 15(4)(a) and (b) of the IPR Act which 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.**”*

Section 15(5) provides a definition for the term “*private entity or organisation*” to include “*a private sector company, a public entity, an international research organisation, an educational institution or an international funding or donor organisation*”.

Section 15(4) is elaborated upon in Regulation 16(1) of the IPR Act which determines that:

- a) *“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 and matrices substantially set out in Form IP9 or*

such other format as may be provided by NIPMO in guidelines, together with an explanation note in respect of how such factors have been arrived at.

- b) The formulae referred to in paragraph (a) must include applicable direct costs of undertaking research and development determined in terms of the institution's financial and other policies and in accordance with generally accepted accounting practices.*
- c) Where it is not feasible to determine the indirect costs accurately, the formulae will include a determination of a surcharge in the form of a percentage to be levied on the direct costs as a best estimate of the indirect cost of undertaking such research and development.*
- d) The indirect cost percentage may vary between organizational units or faculties within an institution and the institution may justify any variations.*
- e) The Advisory Board must constitute a committee of independent experts to whom NIPMO shall refer for consideration the formulae and matrices submitted by the institutions.*
- f) NIPMO must within 60 days of receipt of the submission referred to in paragraph (a) approve or recommend amendments based on reasons provided by the committee referred to in paragraph (e), the formulae and matrices submitted by the institution.*
- g) On approval of an institution's formula and matrices, NIPMO or such other agency accredited by NIPMO in terms of guidelines to be issued by NIPMO, must issue such institution with a certificate confirming NIPMO's acceptance of the institution's costing model."*

1.2 Aims of the approach towards determining the full cost of R&D

The approach set out in this document towards determining the full cost of R&D conducted at publicly financed institutions has the following aims:

- a) Compliance with the requirements regarding the determination of full cost of R&D of publicly financed institutions as provided for in the IPR Act and its Regulations.
- b) Recognition of the following specific institutional characteristics of publicly financed R&D institutions, where applicable: institutional and operational autonomy, and institutional public accountability.

- c) While recognising the diversity of publicly financed R&D institutions in South Africa, nevertheless ensuring acceptable levels of consistency across the publicly financed R&D system in the application of the approach towards determining the full cost of R&D and in this regard ensuring a reasonable 'levelling of the playing fields' amongst these institutions.
- d) Strengthening institutional capacity (including financial and contract management) and institutional leverage in successfully concluding R&D agreements/contracts with external funders (including private entities or organisations as defined in Section 15(5) of the IPR Act and set out above) as a means of advancing the country's R&D outputs.

The aims in b) and c) above seek to achieve a careful balance between ensuring broad consistency across the publicly financed R&D system in determining the full cost of R&D while at the same time endeavouring not to require institutions to adopt a prescriptive and intrusively uniform approach in their individual formulae and bases for calculating the full cost of R&D. For many institutions the approach set out here may imply some adaptation of their existing measures in calculating the full cost of R&D while for others this approach could well serve as a useful instrument in significantly improving the accuracy and reliability of their costing method.

1.3 Process followed in developing the approach towards full costing of R&D

The approach set out in this document was developed by the Full Costing Sub-Committee (FCC) of the NIPMO Advisory Board, set up in accordance with the Regulations passed in terms of the IPR Act. As part of its deliberations the FCC was provided with input from NIPMO with regard to the legal background and legal implications of the provisions of the IPR Act and its Regulations, interpretations by NIPMO of what constitutes R&D, documentation on full costing approaches followed in a number of overseas countries, the IP9 matrices and supporting documentation of all institutions which submitted IP9 matrices to NIPMO, and a generically applicable model for HEI developed under the auspices of Higher Education South Africa (HESA). This model was derived by means of adapting and simplifying a similar approach used in the USA in calculating the indirect cost recovery rate (ICRR) for facilities and administration.

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As can be expected the various IP9 matrix submissions varied significantly in terms of approaches followed, understanding and usage of terminology and definitions related to determining the full cost of R&D, and level of supporting motivation and arguments. Needless to say these variations also resulted in significant variation in the values of ICRR of the various institutions.

This assessment of IP9 matrix submissions also showed widespread misunderstanding as to the role of pricing, provision for contingencies and project related risks in full cost calculations in that a number of institutions included these factors in their full cost calculations. Furthermore, the IP9 matrix submissions showed that while commonalities with regard to full costing of R&D exists between HEI and the Schedule 1 institutions, the HEI formed a far more homogenous subgroup than was the case for the Schedule 1 institutions. The FCC therefore came to the conclusion that the following approach would have to be followed:

- a) Development of a generally applicable set of guiding principles and criteria, specifically definitions of terms and concepts, for the determination of the full cost of R&D, **applicable to all institutions.**
- b) In addition, providing for distinct differences between the HEI on the one hand, and Schedule 1 institutions, on the other hand, specifically in relation to terms and concepts and their definitions.

This approach thus implies two sets of guiding principles and criteria mainly in respect of the definitions attached to various terms and concepts: One set of definitions, which is applicable to all institutions and another set which distinguishes between HEI and Schedule 1 institutions.

1.3.1 Higher education institutions

Given the significant variation in outcomes of IP9 based full cost calculations amongst HEI, the FCC had a very constructive workshop interaction with the main architects of the above-mentioned HESA approach in order to obtain a better understanding of the definitions used and factors taken into account in order to find a resolution to some perceived shortcomings in the proposed HESA model. Based on

this workshop and at the request of the FCC, the HESA approach was refined further and formed the basis for an approach for HEI for the full costing of R&D eventually formulated by the FCC which is given in Annexure B. This approach was considered and accepted by the Finance Executives Forum of HESA early in 2015.

1.3.2 Schedule 1 institutions

The submissions of the Schedule 1 institutions were assessed by the FCC in view of the following fairly broad initial criteria: completeness and overall adequacy of the submission; basis and clarity of full cost calculations; and outcomes of calculations, particularly regarding ICRRs.

This initial assessment likewise revealed considerable variation amongst the Schedule 1 institutions both in terms of approach and method employed as well as in outcomes. In some cases, submissions did not result in a specific ICRR but in a range of values while in other cases ICRRs varied enormously due to differences in definitions of concepts and factors used and in the method of calculating the full cost of research, specifically the ICRR.

1.3.3 Synopsis

The IP9 evaluations for all institutions emphasised the need for clarifying a number of misunderstandings and shortcomings in the determination of the full cost of R&D and ensuring greater levels of consistency in the definitions of concepts, the factors relevant to the calculation of full cost of R&D and the methods followed.

An initial approach based on the above analysis was submitted by the FCC to the NIPMO Advisory Board, accompanied by a suggestion that this approach to determining the full cost of R&D first be discussed at workshops between the FCC and publicly funded R&D institutions before finalisation for the NIPMO Advisory Board's consideration and subsequent implementation by NIPMO.

The aforementioned workshops, one in Cape Town and one in Johannesburg, provided valuable input, which input was evaluated by the FCC for incorporation in the final document.

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The approach to determining the full cost of R&D, set out further in this document, represents the outcome of these processes and constitutes the final submission of the FCC for consideration by the NIPMO Advisory Board.

In the remainder of the document the following matters are covered:

- a) A set of guiding principles and points of departure as a basis of the approach.
- b) A glossary of terms including apposite definitions applicable to determining the full cost of R&D.
- c) Minimum requirements/factors to be satisfied by institutions in determining the full cost of their R&D.

2. GUIDING PRINCIPLES AND POINTS OF DEPARTURE

Against the background of the issues covered in Section 1 and particularly the aims in Paragraph 1.2, the following framework of guiding principles and points of departure apply:

- a) 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. This implies that all institutions must apply direct and indirect cost factors, as set out in the glossary and definitions in their method, calculations and subsequent submissions to NIPMO. 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 and no information on these factors should be included in the IP9 matrix. In terms of this document, institutions are thus free to adjust their anticipated mark-up or their provision for contingencies etc. as a means of ensuring that they are successful in obtaining fully funded private sector research contracts. They may, however, **not artificially reduce their real and full R&D costs as determined per the approach set out in this document for this purpose.**

- b) In terms of the IPR Act and the Regulations thereto the determination of the full cost of R&D must comply with internationally acceptable accounting standards. This implies that audited financial statements and supporting financial data such as trial balances and management accounts should be used by institutions in their determination of the full cost of R&D at their institutions, and that no data manipulation to arrive at 'more acceptable' outcomes shall be entertained.

- c) Institutions should endeavour to use the guiding principles, glossary and definitions, and the minimum submission requirements given in this document not only for compliance purposes but also for their strategic and managerial

benefit in improving levels of strategic focus and levels of institutional effectiveness and efficiency, particularly in relation to their costing of R&D. This implies that institutions should analyse the outcomes of their full costing of institutional R&D from a strategic point of view as well as from an operational effectiveness and efficiency perspective.

- d) In determining the full cost of R&D, an acceptable balance must be found between absolute accuracy and consistency and reliability of best estimates. This implies that methods for determining the full cost of R&D should not be made unduly complex and overly detailed and thus in effect contributing significantly towards increasing the cost of R&D. However, the methods used should nevertheless eliminate unacceptable or inexplicable levels of volatility in best full cost estimates.

For HEI in particular, given the approach endorsed by the FCC for them (some of the principles mentioned next may also apply to Schedule 1 institutions), this implies that the calculation of indirect cost, while avoiding any forms of 'double counting' of costs already included in the calculation of direct costs, or the inclusion of patently obvious non-R&D related costs, should be kept as straightforward as possible. This issue is addressed in greater detail in the note in Paragraph 2 of Annexure B in relation to certain cost exclusions when calculating indirect costs for HEI.

- e) If at all feasible, institutions should endeavour not to create new data information systems only for the purposes of calculating the full cost of R&D. This implies that within the constraints of acceptable levels of data integrity institutions should, wherever possible, use existing data sets and audited financial statements, including supporting financial statements such as the relevant management accounts, for their full cost calculations.
- f) If needed, institutions can also present their calculations on full cost of R&D based on data and financial information pertaining to their different internal organisational structures such as academic faculties or R&D units.

Such varying full cost outcomes should be the result of varying direct costs and varying ICRRs within the institution. It is, however, of the utmost importance that a consistent approach is followed throughout the entity and that variations in outcomes are only due to data reflecting valid and verifiable cost differences within the institution. The ICRR should be a fixed rate and not be presented as “approximate”, “at least”, “maximum” or any other non-definite value such as covering an ICRR range.

Should institutions prefer to apply different ICRRs for its various faculties or R&D units, each faculty or R&D unit should be identified in relation to its specific ICRR. In such a case it should be made clear that the various ICRRs are based on a common institutional approach and only differ in terms of different cost factors applicable to the various faculties or R&D units.

Institutions must keep in mind that the ICRR only applies in certain circumstances (i.e. **for R&D**) and should refer to the exclusions in Table 3 of NIPMO Guideline 1 of 2012 for guidance in this regard.

- g) The glossary and apposite definitions of terms should form the basis of interpretation within institutions when calculating the full cost of R&D. For purposes of consistency in application this implies that institutions must ensure that these definitions are adhered to in the application of their particular method for determining the full cost of R&D. The glossary of definitions is given in Section 3 below.

- h) The method adopted by a publicly financed institution for determining the full cost of R&D, especially regarding the direct and indirect cost of labour, should be in accordance with the nature and function of the institution as a HEI or a Schedule 1 institution.

This implies that the method applied for determining the full cost of R&D should enjoy a high level of internal institutional buy-in and, if needed, be defensible

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when interacting with potential external funding agencies. It further implies that the basis and method followed in determining the full cost of R&D should not simply be determined unilaterally by the entity's Finance Department but should involve R&D line function managers as well.

- i) Methods for determining the full cost of R&D used by institutions must clearly distinguish between direct labour costs and other forms of direct costs, and indirect labour costs and other forms of indirect costs. This implies that R&D entities will have to submit supporting documentation in addition to their IP9 matrices. Such supporting documentation should, for example, clearly set out the basis used in the calculations in arriving at an ICRR value, or, if applicable, why different ICRR values are deemed necessary for the various faculties or R&D units in a publicly financed R&D institution.

- j) Given the initial stages of the certification processes of R&D institutions of the full cost of R&D, and until further notice, certification by NIPMO will depend on the **submission of a statement by the CFO of the institution concerned that the submission complies with the provisions for determining the full cost of R&D** as set out in this document. In addition the institution will also have to ensure that where the provision for deviations has been utilised, such deviations have been fully motivated as part of the IP9 submission.

This issue is covered in greater detail in Section 4 below.

3. GLOSSARY

In this section of the document a glossary of terms and definitions to be used in calculating the full cost of R&D conducted at publicly financed institutions is given. In each case the concept itself is given, followed by a description or illustration of its meaning, and then followed by some information which could assist institutions in the calculation of the full cost of R&D. The 'glossary' consists of three parts, namely:

Part A: This part is applicable to all Institutions regardless of their institutional type.

Part B: This part is applicable to HEI only.

Part C: This part is applicable to Schedule 1 institutions only.

TABLE 1: Glossary Of Terms And Definitions To Be Used In The Full Cost Of R&D At Publicly Financed Institutions

CONCEPT	DESCRIPTION	GUIDELINE FOR CALCULATION
PART A: APPLICABLE TO ALL PUBLICLY FINANCED INSTITUTIONS		
Direct R&D cost	All costs (including staff 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, or by the project, or in fulfilling a contract.	Includes any expenditure incurred specifically for a R&D activity, project or contract, including but not limited to items such as components and materials, use of professional services or sub-contractors, import and export related costs (Source: Relevant accounts in audited financial statements).
Direct capital R&D cost (capital expenditure)	Cost incurred in the acquisition of buildings, machinery and equipment	All acquisition costs form part of the cost of a project. (Amounts expressed to be in compliance with IFRS (see definition in glossary))
Direct recurrent R&D cost (current expenditure)	All expenditure incurred in purchasing R&D or project related consumables and services	Includes amongst others: laboratory cost; cost for use of specialised equipment (e.g. rental); consultation services; audit fees (e.g. where client specifically insists on annual audited financial reports); additional insurance not included in the institution's overhead insurance portfolio; project-specific depreciation, unless calculated as part of overhead costs to be allocated to the project on basis of entity specific formula. (Cost of material expressed to be in compliance with IFRS)

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CONCEPT	DESCRIPTION	GUIDELINE FOR CALCULATION
Divisional indirect cost recovery rate (DICRR)	Direct R&D support cost and indirect R&D support cost (or overhead cost), as attributed to a division of the institution	DICRRs should be clearly stated for each specified division and each division with its combined or single rate should be mentioned.
Expenditure apportionment basis	Allocation of total support costs between R&D and non-R&D activities by using either the institution's total expenses per major activity or by applying an institution-specific formula.	-
Full Cost	The sum of direct R&D cost, direct R&D support cost and indirect R&D support cost	Calculation occurs according to applicable FCC endorsed approach set out in either Annexure B or C
Indirect cost recovery rate (ICRR)	Direct R&D support cost and indirect R&D support cost (or overhead cost), as attributed to the entire institution	A single ICCR for the entire institution and/or divisional ICCRs may be calculated
International Financial Reporting Standards (IFRS)	Principles-based standards, interpretations and frameworks adopted by the International Accounting Standards Board (IASB)	-
Staff cost	Cost of personnel directly involved in the project and personnel services obtained from sources external to the institution	Costing on basis of "cost to company" of person and estimated productive time spent on project, or contracting cost of consultancy or professional service.
Total R&D support cost	Sum of direct R&D support costs and costs incurred by other divisions within the institution in support of R&D	-

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PART B: SPECIFIC TO HIGHER EDUCATION INSTITUTIONS ONLY		
CONCEPT	DESCRIPTION	GUIDELINE FOR CALCULATION
Bursaries	All student bursaries (under- and postgraduate)	-
General or unrestricted fund	The operating fund of an institution, comprising funds within the discretion of the institution (Council and Management) to allocate to teaching, learning, R&D and support services inclusive of capital outlay and student accommodation	-
Direct R&D support costs	Personnel and operating costs of the R&D office	Operating costs include both running and other direct costs incurred when providing an institution-wide service such as training of researchers.
Indirect costs attributable to restricted fund	Proportion of the total expenses that has to do with external funds (i.e. recurrent restricted funds excluding residences as percentage of total expenditure), applied to the total expenditure from support departments	-

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CONCEPT	DESCRIPTION	GUIDELINE FOR CALCULATION
Indirect cost allocation ratio (ICAR)	The portion of the total of restricted and unrestricted funds deemed to be incurred as indirect R&D support cost	Ratio between recurrent restricted cost (excluding residences) and total cost (i.e. the sum of restricted and unrestricted cost (both excluding residences))
Indirect cost recovery	Total of direct R&D cost of activity and percentage of direct cost (net of exclusions) deemed to be recovered as R&D support cost	Excluded items: bursaries, major equipment and subcontractors
Indirect R&D support cost	All costs of R&D activities that are shared with other divisions in the institution but which are not readily identified with the project	Sum of indirect cost attributable to the restricted fund and direct R&D support costs. Direct R&D support costs include items such as library services, international office, overhead R&D support services, student administrative services, depreciation (per asset class), insurance, ethical clearance, bank fees, net value added tax, and internal and external audit fees, management and maintenance of facilities, security services, cost of municipal services, and usage of equipment
Major equipment-refer to note in Par 2 of Annexure B	All amounts exceeding a threshold level per complete equipment item	Threshold level = R 250 000 (2014-values) (Alternative threshold to be motivated to NIPMO via IP9 form)

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CONCEPT	DESCRIPTION	GUIDELINE FOR CALCULATION
Recurrent restricted cost, excluding residences	Expenditure that forms part of the R&D mandate and are restrictive, excluding: (a) abnormal items or cost anomalies that are not part of maintainable restricted expenditure; (b) student accommodation costs; (c) research-related bursaries (where possible)	It is assumed that all restricted funds pertain to R&D. If the non-R&D component is material then the university should exclude it. (Source – Audited Annual Financial Statements)
Recurrent unrestricted cost, excluding residences	Unrestrictive expenditure that forms part of the operational teaching and learning mandate and which excludes: (a) abnormal items or cost anomalies that are not part of maintainable operational expenditure; (b) student accommodation costs	(Source – Audited Annual Financial Statements)
Restricted funds	A collection of gifts, grants and contract funds received from donors and third parties, over which Council and Management have less control but for which they have a fiduciary responsibility to ensure that such funds are subject to the university's internal controls, accounting systems and business processes, and used in accordance with the agreements with donors and third parties	-
Subcontractor cost	All amounts exceeding a threshold level per subcontract	Threshold level = R 250 000 (2014-values) (Alternative threshold to be motivated to NIPMO via IP9 form)

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CONCEPT	DESCRIPTION	GUIDELINE FOR CALCULATION
Total cost	Sum of unrestricted and restricted expenditure	-
Total expenditure from institution-wide support departments (with exclusions)- refer to note in Par 2 of Annexure B	-	As obtained from relevant management accounts in audited financial statements. (Source: Audited general ledger accounts and its cost centres or departments-also known as management accounts)
Total indirect R&D cost	Sum of direct R&D support costs and indirect costs attributable to R&D	In FCC formula referred to as “total indirect cost”

PART C: SPECIFIC TO SCHEDULE 1 INSTITUTIONS ONLY		
CONCEPT	DESCRIPTION	GUIDELINE FOR CALCULATION
Indirect R&D support cost	All costs of R&D activities that are shared with other divisions in the institution but which are not readily identified with the project and are attributed in a standardised manner to a project, activity or contract	Calculated using an indirect cost factor, which is largely driven by the proportion of work time spent by non-project staff on the execution of projects/contracts, as well as other overhead costs. This may also entail fees charged by cost or profit centres or business units in the entity or entity-structure, for services rendered to other centres or units, in which case no profit or other mark-up on cost is included in the full-cost calculation
Overhead costs	Cost of management, administration and general facilities and services of the entire institution, of which an appropriately calculated portion is attributed to a project, activity or contract.	Includes items such as infrastructure costs, voice and data connectivity, functional support costs, financial service costs, staff cost (“cost-to-company”, per hour, calculation) depreciation, levies and cost of other shared services. An indirect cost factor may be calculated that relates the overhead cost to attributable staff.

4. METHOD AND MINIMUM REQUIREMENTS

The FCC does not recommend the prescribing of a specific and detailed method for calculating the full cost of R&D in respect of Schedule 1 institutions, given the institutional diversity amongst them. Despite this pronounced level of institutional diversity, some minimum requirements and guidelines in determining the full cost of R&D for Schedule 1 institutions are given in Annexure C in order to limit inter-institutional inconsistencies.

Given the greater level of homogeneity amongst universities a specific sector wide approach has been developed and is set out in Annexure B. This approach is based on the method put forward by HESA for HEI for calculating the full cost of R&D. This annexure represents an adaptation by the FCC of a more expanded document presented to the FCC by HESA and constitutes an **FCC approach applicable to all public universities in South Africa.**

Apart from these considerations regarding method, submissions on the full cost of R&D by all publicly funded R&D institutions, have to comply with the following minimum requirements in order to be considered by the FCC for recommendation to the NIPMO Advisory Board:

- a) A **completed IP9 matrix** which contains the ICRR(s) applicable to the publicly financed Institution and which also refers to any appropriate additional notes/explanations which clearly sets out the basis on which the full cost of R&D is calculated.
- b) The setting out of a **formula or structured approach** for determining the full cost of R&D including the rationale and method for determining an ICRR or ICRR(s).
- c) The provision of **motivating reasons and factors for deviating** from any of the FCC determined steps of the approach to calculating the full cost of R&D in cases where such deviations are provided for.
- d) An **accompanying statement signed by the institution's CFO** confirming that :

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- No pricing factors or contingency provisions have been included in the calculations of the full cost of R&D.
- The definitions of concepts and terminology contained in the glossary in Section 3 of this document have been incorporated and have been applied to the methods and calculations used in determining the full cost of R&D.

The full submission to NIPMO is to be accompanied by a letter from the institution, signed by its CEO or Vice Chancellor, as appropriate.

Please do not hesitate to contact NIPMO (info@nipmo.org.za; 012 844 0222) should you have any questions with regards to any matter in this Practice Note.



DR KERRY FAUL

HEAD: NIPMO

DATE: 11 June 2015

ANNEXURE A

LIST OF INSTITUTIONS REQUIRED TO MAKE IP9 SUBMISSIONS

1. HIGHER EDUCATION INSTITUTIONS

Cape Peninsula University of Technology
Central University of Technology
Durban University of Technology
Mangosuthu University of Technology
Nelson Mandela Metropolitan University
North-West University
Rhodes University
Sefako Makgatho Health Sciences University
Stellenbosch University
Tshwane University of Technology
University of Cape Town
University of Fort Hare
University of Johannesburg
University of KwaZulu-Natal
University of Limpopo
University of Mpumalanga
University of Pretoria
University of South Africa
University of the Free State
University of the Western Cape
University of the Witwatersrand, Johannesburg
University of Venda for Science and Technology
University of Zululand
Vaal University of Technology, and
Walter Sisulu University

2. SCHEDULE 1 INSTITUTIONS

Agricultural Research Council
Council for Geoscience
Council for Mineral Technology
Council for Scientific and Industrial Research
Human Science Research Council
National Research Foundation
South African Bureau of Standards
South African Medical Research Council
South African Nuclear Energy Corporation, and
Water Research Commission

ANNEXURE B

DETERMINING THE FULL COST OF R&D AT HIGHER EDUCATION INSTITUTIONS (HEI)

1. INTRODUCTION

In this annexure the FCC endorsed approach to determining the full cost of R&D activities at HEI is set out. This approach is based on work done in this regard by some colleagues working in the administration of R&D and in Finance Departments at HEI under the auspices of Higher Education South Africa (HESA). The FCC wishes to acknowledge the valuable work done by these colleagues in establishing a higher education institution-wide approach which promotes consistency as well as ensuring that HEI all follow the correct approach in determining the cost of R&D at their institutions.

Unless specified to the contrary, the generally applicable definitions and terminology set out in Part A and B of Table 1 apply.

2. DETERMINING THE FULL COST OF R&D ON AN EXPENDITURE APPORTIONMENT BASIS

The Expenditure Apportionment Basis is deemed the most appropriate HEI sector wide method to allocate indirect costs to direct costs to determine the full cost of an R&D activity or project.

In calculating indirect R&D costs according to this basis, some modifications or adjustments may be necessary in individual cases and are permissible in order to achieve a fair presentation of the various R&D costing elements. Examples of such modifications to the total direct cost of projects are outlined below. These are aimed at avoiding 'double counting' of costs that are already included in the direct costs of the various applicable projects or exclusions of costs that are clearly not related to R&D activities.

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- R&D related bursaries should be excluded from the calculations of indirect costs, as these would already have been included in the direct costs of the various applicable projects. In addition all other student bursaries not related in any way to R&D activities should be excluded.
- Known indirect costs which are embedded within teaching costs and which can be easily separated should be excluded in the calculation of indirect R&D costs.
- Cost of equipment that has already been included in the calculation of direct project costs should be excluded. In addition, in the HESA accepted model depreciation forms part of the council controlled and non-council controlled funds used to allocate indirect costs between research and other activities. Avoiding any form of double counting in the Expenditure Apportionment Basis is most easily achieved by excluding the cost of equipment in the calculation of indirect cost greater than a threshold value of say R250 000. HEI can, however, also use a different threshold value for this purpose provided it is properly motivated.
- Cost of sub-contractors related to specific R&D activities should form part of direct costs of such projects. However, indirect costs should not be recovered on work done elsewhere by subcontractors. As- the HEI still incurs costs in the management of such subcontractors an element of indirect cost does apply and thus sub-contractor costs should once again be excluded from the calculation of indirect cost by applying the above threshold value of R250 000 or another value that is properly motivated.

$$\begin{aligned}\text{Full Cost (FC)} &= \text{Direct costs (DC) + (Indirect Cost Recovery Ratio (ICRR)} \\ &\quad \text{x modified DC)} \\ &= \text{DC + ICR}\end{aligned}$$

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TABLE 2: Example for calculating the full cost of R&D at a higher education institution as per the expenditure apportionment basis

(i)	Indirect Cost Recovery (ICR) calculation, using the Expenditure Apportionment Basis	Item
	Recurrent Unrestricted expenditure excluding residences	A
	Recurrent Restricted expenditure excluding residences	B
	Total cost (sum of the above): A + B	C
	Indirect cost allocation ratio (ICAR) (%): B/C	D
	Determine total expenditure from support departments, with certain exclusions	E
	Indirect cost attributable to research: $D \times E$	F
	Direct research support costs	G
	Total indirect research cost: $F + G$	H
	The indirect cost recovery rate (ICRR)(%): H/B	I
(ii)	Direct Cost modifications/exclusions for purposes of calculating ICRR:	
	As per the note in Par 2 above when calculating the ICR per project, the following deductions should be made from the budgets for direct costs before applying the ICRR to it:	
	<ul style="list-style-type: none"> • Bursaries – all non R&D related bursaries and all R&D related bursaries already included in the direct costs 	M
	<ul style="list-style-type: none"> • Major equipment – all amounts exceeding R250 000 per complete equipment item. 	N
	<ul style="list-style-type: none"> • Subcontractors – all amounts exceeding R250 000 per subcontract. 	O
(iii)	Full Cost calculation:	
	<ul style="list-style-type: none"> ▪ Direct cost of activity (as per management accounts) 	J
	<ul style="list-style-type: none"> ▪ Indirect Cost recovery: Apply ICRR to direct cost of activity, with certain exclusions: $I \times (J-M-N-O)$ 	K
	Full Cost = J + K	L

3. ADDITIONAL SUPPORT

Additional notes aimed at assisting HEI in the calculation of the full cost of R&D are contained in a document compiled under the auspices of HESA and which has been made available to all HEI by HESA.

ANNEXURE C

DETERMINING THE FULL COST OF R&D AT SCHEDULE 1 INSTITUTIONS

1. INTRODUCTION

In this annexure, an FCC endorsed approach to determine the full cost of R&D at Schedule 1 institutions is set out.

The various Schedule 1 institutions tend to serve widely varying and usually very specific 'client' groupings as they each focus on very clearly identified areas of knowledge in respect of their R&D activities. As such they thus tend to apply financial management approaches which are tailored for their differing 'client' groupings. In addition, their approach to institutional management and financial systems differ and are not necessarily comparable as in the case of HEI, who tend to exhibit a far greater degree of homogeneity in their objectives, stakeholder groups, R&D activities and sources of income.

Furthermore, some Schedule 1 institutions focus on research, others focus on the management of research funding in which the research is done by other institutions, while still others focus on the provision of standards and services. Given this high level of institutional diversity and differentiation amongst Schedule 1 institutions, the FCC, therefore, does not see much merit in advancing a single and composite approach to determining the full cost of R&D, as in the case of the HEI and as set out in Annexure B.

However, despite these differences it is necessary for Schedule 1 institutions to present their indirect cost recovery rate (ICRR) in a format which will enable NIPMO to evaluate the basis of their calculations for the purposes of certification. For that reason the FCC proposes a set of minimum standards to be adhered to by all Schedule 1 institutions in their IP9 submissions. \These standards and guidelines should also prove of value to those Schedule 1 institutions that were not able to submit ICRRs in their initial submission of IP9s to NIPMO.

In the case of HEI discussed as part of Annexure B, the Expenditure Apportionment Basis is used in the calculation of indirect costs. This requires certain exclusions to direct costs to be effected in order to arrive at non-inflated indirect costs due to possible 'double counting' of certain costs that already formed part of direct cost calculations. Although the approach in calculating full R&D cost set for universities is not deemed suitable for Schedule 1 institutions, the latter should, however, also ensure that forms of double counting in calculating indirect R&D costs are avoided.

2. MINIMUM REQUIREMENTS TO ENABLE NIPMO TO ASSESS THE SUBMITTED IP9s

In addition to the guiding principles provided in Section 2 the following is emphasised:

- (a) If necessary, Schedule 1 institutions will be expected to develop or amend their financial policies to make specific provision for determining the full cost of R&D as defined in the IPR Act.
- (b) The basis for calculating the ICRR must be set out clearly and systematically by using the definitions of the various terms and concepts appearing in the glossary in Table 1 above.
- (c) The ICRR included in the IP9 submission to NIPMO should contain ICRR values that are given as rates and not as absolute overhead amounts.
- (d) Should Schedule 1 institutions prefer to apply different ICRRs for its various divisions, each division should be identified in relation to its specific ICRR. In such a case it should be made clear that the various ICRRs are based on a common institutional approach and only differ in terms of different cost factors applicable to the various divisions.