The Norwegian universities' methodology on full costing

It is imperative for universities and university colleges to know the full costs of all their activities. This provides necessary tools for enhancing financial sustainability, increasing transparency and informing strategic decision-making. The Norwegian universities' and university colleges' full cost methodology will be implemented from 2014. One of the main actions is related to treating research infrastructure as direct cost rather than indirect cost.

The concept of full costing is an ongoing European trend (EUA 2008; EUA 2013). In Norway three important developments are observed:

1. *Regulations*
   Ministry of Education Regulations on external funding (2007) require that full costing is applied to externally funded projects.
2. *Increased competition*
   Externally funded research grants play an increasing role in research funding. An increase in co-funding puts other/existing activities under pressure (Handlingsromutvalget 2010).
3. *Funder policies*
   Important funders accept full costing as a basis for funding (but will not necessarily cover 100 % of costs), e.g. the EU Seventh Framework Programme for Research, and the 2011 joint policy statement on better project funding of The Norwegian Association of Higher Education Institutions (UHR) and the Research Council of Norway.

From 2005 Norwegian universities and university colleges[1] have been working together to develop a full costing approach in cooperation with the Research Council of Norway. A national working group was established under the auspices of The Norwegian Association of Higher Education Institutions (UHR) in 2011. The working group's report (May 2012) proposed the adoption of the "TDI model" (common full costing methodology) by Norwegian HEIs.

The methodology was approved by the board of the UHR in the autumn of 2012, with a recommendation that Norwegian HEIs implement the methodology as their common full costing approach.

> **T**ime spent by academic staff is the primary driver for both **D**irect and **I**ndirect costs.

A Costing methodology

HEI costs are for the purpose of costing methodology divided in two – costs related to core activities and costs related to support activities.[2] The first of these categories includes salaries of the academic staff as well as personal consumption (e.g. travel expenses) for academics. These are always direct costs.

The most significant shift in applying the TDI model will be that some of the costs related to support activities, traditionally regarded as indirect costs, from now on will be regarded as direct costs. Thus, the costs of support activities are divided in two:

[1] Later in this paper we will be using the term HEIs (Higher Education Institutions).

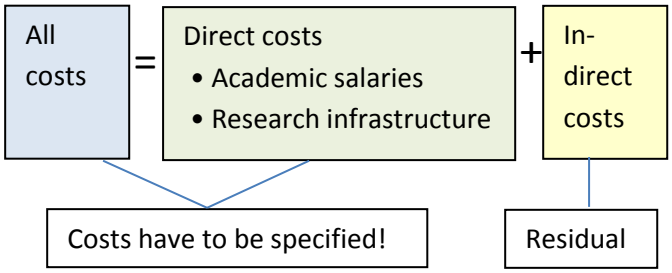
[2] This paper covers research and support activities related to research, but leaves out many details. We will be using terms according to the definitions in EUA (2013).

a) *Direct costs*
Investment in and running of large infrastructure, instruments and laboratories, including buildings and technical staff. These costs are called *"research infrastructure resources" (RIR)* [3]

b) *Indirect costs*
Remaining support activities are indirect costs. These are costs connected to general expenses for office and support space, and horizontal services such as library, IT, administrative and financial management, human resources, training, legal advice, documentation and more.

To categorize research infrastructure as direct costs will lead to more accurate resource allocation at the project level, as well as ensuring sustainable funding, especially with regard to future investments in scientific equipment and infrastructure.

Figure 1 Norwegian model of full costing



Later in this paper we will provide an overview of the data needed for the TDI model.

A.1 Costing methodology – research infrastructure resources (RIR)

The term *research infrastructure resources (RIR)* is closely linked to the understanding of how the academic disciplines vary related to costs. The RIR will have to be specified, primarily by use of accounting information.

i. Building space used for laboratory purposes has to be measured in order to find the cost of space.
ii. Depreciation costs of scientific equipment/instruments.
iii. Consumables necessary for running of laboratories.
iv. Salaries for the technical staff working in laboratories supporting academics when doing research.

Externally funded research projects requiring the use of RIR, will have to cover these services according to their relative use of them. RIR costs will then appear in projects accounting as direct costs. To achieve this, pricing models have to be developed.

These models may vary between universities and departments, depending on characteristics within the departments. In any way, the general approach will be to divide the total RIR costs by capacity, i.e. the number of simultaneous users and annual hours that the RIR is being used.

Fig. 2 Simplified RIR model

$$\text{Hourly rate} = \frac{\text{RIR costs}}{\text{Capacity}}$$

The actual use of RIR services within a project will be followed up periodically, e.g. on a monthly basis. Vouchers will be produced and signed by authorized persons.

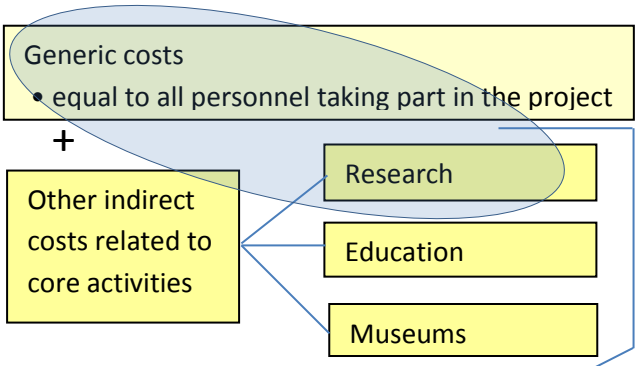
A.2 Costing methodology – indirect costs

Some indirect costs are generic and related to office, IT/telephone and human resources/-financial management. These costs are applied with the same rate/amount to all project personnel – academics or non-academics.

[3] *Research infrastructure resources (RIR)* is a new concept to the majority of Norwegian universities and university colleges. It is defined throughout this text. If any reader would propose another word for this concept, we are happy to consider it.

Remaining indirect costs are related to core activities such as research and education. The division of indirect costs between these core activities are calculated based on the use of services (support activities). Students' use of support activities are always attributed to education. Academics' use of support activities are attributed to research or education based on the share of annual working hours attributed to each core activity. The share of indirect costs attributed to research will then be divided equally between all scientific personnel within the HEI.

Fig. 3 Indirect costs



This was specified by the UHR work group in May 2012

Rates for indirect costs are calculated as average rates of each HEI. This will be done once a year at the institutional level.

B Time allocation

Time allocation for personnel temporarily hired for research projects, will be based on the employment contract.

For permanent scientific personnel taking part in project activities, time allocation will be based on (1) either[4] general or individual agreements on time spent on core activities as well as (2) agreements on time spent on specified projects with external funding.

[4] Dependent of personnel policies within each HEI.

No time sheets

We assume that a professor with e.g. a 50/50-split between research and teaching is fulfilling her/his obligations. The need for extra specification on time spent is only a matter when she/he works on externally financed projects. Time spent on projects will then be specified as share of annual work hours.

A full time equivalent (FTE) is 1628 working hours after weekends, vacation, holidays and average sick leave rate are subtracted. These 1628 hours are spent on administration (6 %, i.e. 98 hours), while the remaining 1530 hours are split between research and education according to local guidelines (at group or individual level).

The specification of work as a share of FTE will by definition provide the number of hours. No time sheets are necessary.

The agreement on time spent by each individual on each project will provide the basis for the accounting of labour costs on the project. Necessary documentation, signed by project management, will be provided on a monthly basis. This documentation will also include the handling of exceptions from the agreement.

C Data needed for use with the TDI model

It is an essential task for every HEI using the TDI model to document the data used in an transparent and revisable way. The following table specifies the data needed to fill in the Norwegian model of full costing:

Table 1 Data needed for the TDI model

Data category	Source	Comment
A Total costs	General ledger	All costs *minus* sales revenues and reimbursements
B «Irrelevant costs»	General ledger and calculation	Student welfare, activities not formally a part of the HEI and public library services
C Salaries for academic staff	General ledger *or* calculation	Some may have to calculate this by multiplying average salary by FTEs
D Research and education services	General ledger	Specific accounts
E Researchers' personal consumption	Estimates	Specified at the institutional level
F Research infrastructure resources		
F.1 Tenancies	Calculation	Laboratory square meters multiplied by tenancy rates
F.2 Depreciation of scientific equipment	General ledger	Specific accounts
F.3 Laboratory consumables	General ledger	Specific accounts
F.4 Technical support	General ledger and HR system	Reports from departments on technical staff FTEs and salaries
G Indirect costs	G = A minus SUM(B:F)	
G.1 Generic indirect costs	General ledger	Office, IT/telephone, HR/finance – equal to all project personnel
G.2 Indirect costs for research	General ledger and calculation	Research share of remaining indirect costs is calculated and divided equally by research FTEs

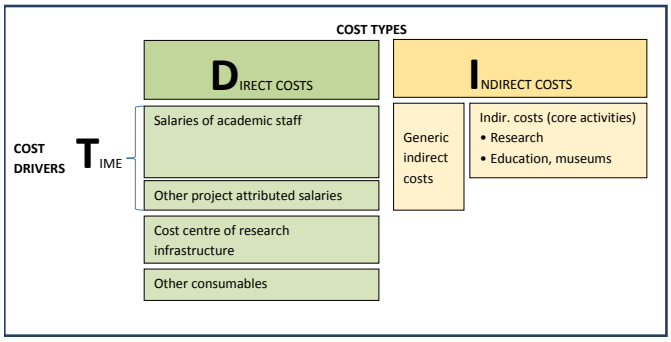
D Closing remarks

It has been imperative in developing the TDI model to provide the information needed to the full costing model without more administrative efforts than absolutely necessary. The Norwegian TDI model does not require extensive adjustments, neither administratively nor in the IT systems.

Research costs of an academic FTE in Norway according to the TDI model will be about NOK 1 mill (€ 135.000) on average. This includes salary, social costs and indirect costs. Any costs regarding research infrastructure resources is not included.

One of the important benefits when applying the TDI model is that the rate for indirect costs for personnel is not tied to academic discipline, but reflects the average costs per FTE. All sciences have the same rate for indirect costs. Only the direct costs, such as RIR, willl differ between disciplines. The TDI model allows the calculation of costs in a realistic way and, hence, provides a basis for sustainable funding.

Fig. 4 TDI model



E References

EUA (2008): *Financially sustainable universities. Towards full costing in European universities.* Brussels.

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