



Five Keys to improving research costing in low- and middle-income countries

An in-depth 3-day workshop
[DATES]
[PRESENTER]



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Day 1

A quick overview of the workshop
Defining some terms
Introducing Keys 1 and 2



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Workshop aims and overview

The aims

- To explain the importance of accurately calculating the costs of research, especially externally funded research.
- To unpack the meaning of full costing, and show how the full costs of research can be calculated fairly and defensibly.

Overview

- **Day 1:** Nuts and bolts of research costing (K1 & K2)
- **Day 2:** Managing grants effectively at your institution (K3, K4, and K5)
- **Day 3:** Working through some practical examples, review of learning against course objectives, formal course evaluation

Framing questions



- 1: Why is it important to know the full cost of a research project?
- 2: Are the full costs of research always covered by the funds raised for research?
- 3: What systems do organizations need to coordinate and manage research funding?
- 4: How can organizations manage and improve their relationships with funders?



Learning goals

- To develop a thorough understanding of the concepts contained in the *Five Keys* good practice document, including points made in the case studies
- To work through practical examples given in the Course Notes, and based on our own experience
- Discuss ways in which the *Five Keys* can be applied in our institutions, projects, or research networks

First, a question...

When you buy a tin of baked beans do you pay only for the beans?





Why research is important and needs to be sustained



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There are many pressing global challenges





Here is a summary...

- **Health burden:** HIV/Aids, Malaria, TB, non-communicable diseases such as heart disease, diabetes, obesity and malnutrition...
- **Social burden:** racism, sexism, gender violence, xenophobia, alcoholism, drug abuse, LGBT-phobias...
- **Economic burden:** unemployment, inequality, North-South divide
- **Environmental burden:** Food, water and energy insecurity, pollution, loss of biodiversity
- **Others?**



Unique problems → unique solutions

- Some problems occur all over the world
- Different regions prioritize different problems
- Local solutions tend to work best in local contexts
- Solutions developed elsewhere often need to be adapted to local situations



Where do real solutions come from?

Knowledge-based organizations...

...that is, research-focused universities
and research institutions

We have a shared responsibility...



- To develop solutions for the world's problems, research institutions are going to be needed for a long time.
- So: What can **we** do to ensure that they stay around?



Sustainable research institutions

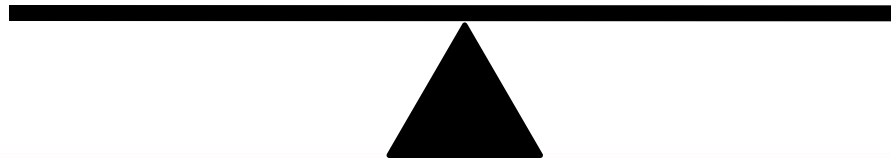
Inputs

- Good students
- Good academics
- New academics
- Income
 - Student fees
 - Grant funding
 - Subsidies

Outputs

- Good graduates
- Research publications
- Protected innovations
- New ideas
- Knowledge
- Solutions

Balance is required





Financial balance means...

- Income is roughly equal to expenditure
- Surpluses help institutions to grow and expand
- Losses don't have to spell immediate disaster

This workshop's central questions

- How sustainable is your institution?
- How do your research-costing practices sustainability?





Where the Five Keys fit in



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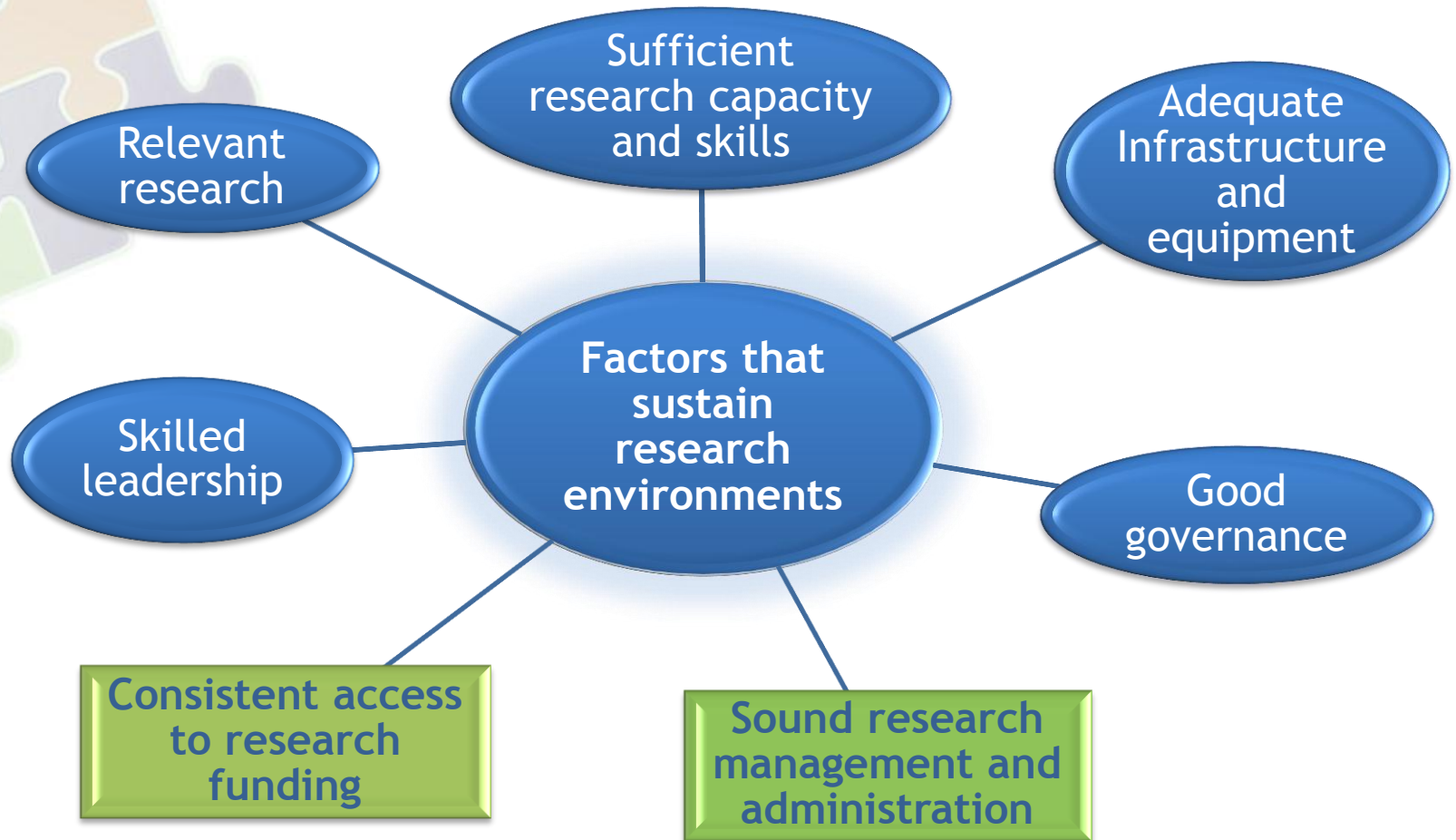
ESSENCE on Health Research

ESSENCE on Health Research is a **collaborative framework between development agencies, research funders, philanthropists and multilateral initiatives** to:

- Strengthen research capacity and conditions for doing research, especially in Africa;
- Implementation of Paris Declaration and Accra Agenda principles in interactions between funders and recipients;
- Enhance alignment of efforts and achieve sustainable impact.

<http://www.who.int/tdr/partnerships/initiatives/essence>

Research findings



Five keys to improving research costing in low-and middle-income countries



<http://www.who.int/tdr/partnerships/initiatives/essence>

The Five Keys



Defining and categorizing direct and indirect costs



Determining indirect cost rates



Institutional management of research grants



Developing relevant skills and competencies



Bridging the gap between funders and research institutions



Key 1

Defining and categorizing direct and indirect costs



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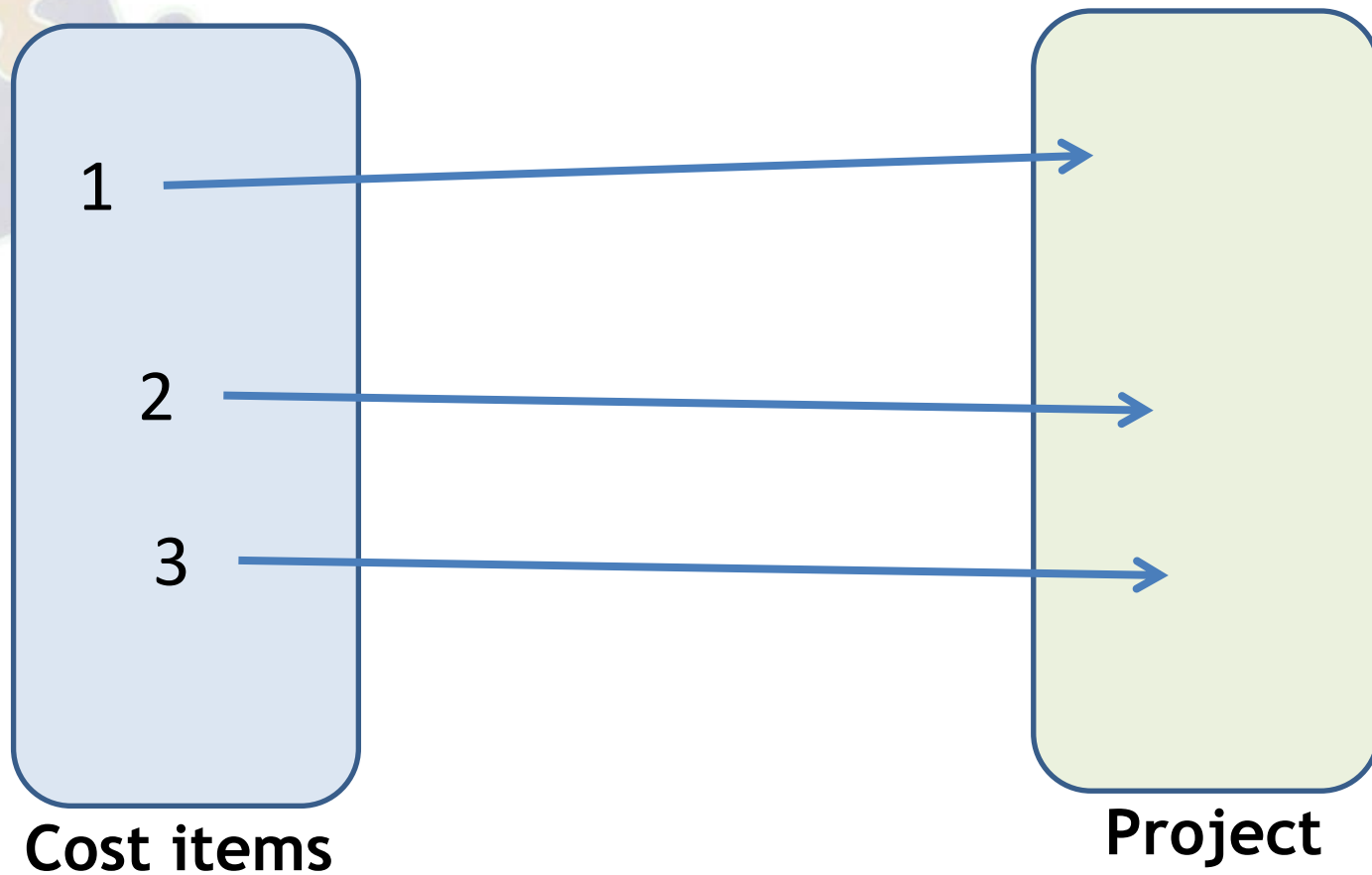


Direct costs

Direct costs are expenses that are necessary to the completion of a project.

- Direct costs can include:
 - Personnel
 - Equipment
 - Materials and supplies
 - Travel costs
 - Bursaries

One-to-one mapping of costs to a project



If you were digging a hole for a client...

Would you charge for:

- Joe's time?
- The shovel?
- Joe's overall?
- Joe's haircut?
- The printing of the job advertisement?





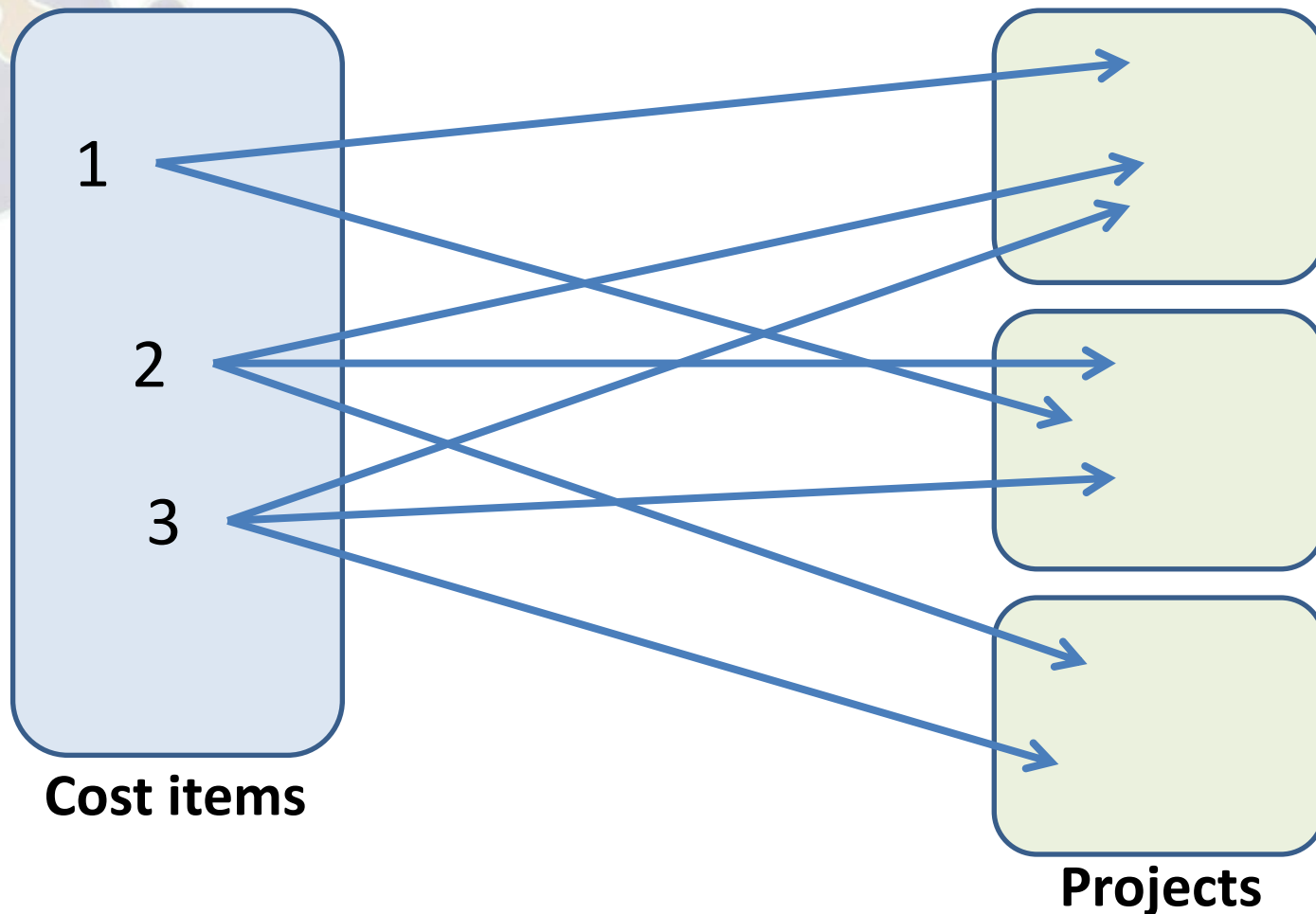
Indirect costs

(overheads, office costs, administrative costs)

Indirect costs are often difficult to allocate accurately to a single project as they are often shared between several projects

Items allocated to indirect costs differ depending on an organization's structure and accounting system.

One-to-many mapping of costs to multiple projects





Examples of indirect costs

Administration costs

- Procurement services
- Financial management
- Support services - e.g. Research Office
- Library services
- Legal services

Buildings and equipment

- Maintenance
- Electricity
- Water
- Cleaning
- Insurance
- Waste

Other

- Audit fees
- Security services
- Quality assurance
- Marketing

If Joe was still digging...

Which of these costs could be considered indirect:

- Joe's time?
- The shovel?
- Joe's overall?
- Joe's haircut?
- The printing of the job advertisement?





Direct, indirect and full costs

- Direct costs relate directly to a single project
- Indirect costs relate to multiple projects

Direct costs

+

=

Full cost

Indirect costs



Indirect-cost rates

- Because indirect costs are difficult to allocate accurately to a particular project, organizations calculate a standard rate that is applied to all projects.
- An indirect-cost rate is a method of charging individual projects for their share of indirect costs.
- The rate is usually a ratio between the total indirect expenses and the direct costs.
- Understanding how your institution's indirect-cost rate is derived is the key to adequate cost recovery, and thus to ensuring your organization's sustainability.



Calculating an indirect-cost rate

- The ratio of indirect to direct costs is calculated as follows:

$$\frac{\text{Indirect costs}}{\text{Direct costs}} \times 100 = \text{Indirect cost rate}$$

- The indirect-cost rate is the ratio of indirect costs to direct costs expressed as a percentage
- Indirect costs are usually lower than direct costs

Costing a project



Direct costs

- \$
 - \$
 - \$
 - \$
-
- \$

Indirect costs

- \$
 - \$
 - \$
 - \$
-
- \$

Full cost = \$

Indirect cost ratio = %

Exercise 1

- Direct costs relate to the cost of the can and its contents
- Indirect costs relate to everything else that is needed to get the can to the consumer
- The amount you spend on the beans is the full cost - that is, it includes both the direct and the indirect costs



Work against the clock





And the answers are...

Direct costs

- Beans 10.00
- Tin 2.00
- Label 1.00

Indirect costs

- Carton 5.00
- Transport 2.00
- Advertising 1.00

Direct costs = \$13, indirect costs = \$8, full cost = \$21

$$8 / 13 \times 100 = 62$$

Percentage of indirect to direct costs = 62%

Exercise 2

- Costs related to a research project
- Categorize direct costs linked to the project, and indirect costs that support this project as well as other similar projects



Work against the clock





And the answers are...

Direct costs

\$20.00

\$30.00

\$50.00

Indirect costs

\$2.00

\$5.00

\$3.00

\$10.00

Full cost = \$60

Did you see the bean counter?





Recap learning

- Research institutions need to be sustainable
- Institutions can increase their income by charging the full costs on externally funded research projects
- Full costs include
 - Direct costs (arise from one project)
 - Indirect costs (arise from multiple projects)
- Indirect-cost (recovery) rates are calculated as follows:

$$\frac{\text{Indirect costs}}{\text{Direct costs}} \times 100 = \text{Indirect cost rate}$$

Consider...



Are the full costs of your research being met by the funds raised for research (irrespective of the source)?

If YES:

- How are indirect costs being recovered by the organization?
- How is the organization distributing the recovered costs?

If NO:

- Does your organization have an indirect-cost rate that is applied to all research projects?
- Does your organization have criteria or processes for deciding whether to submit research proposals to funders that do not cover the full indirect-cost rate?



Key 2

Determining indirect-cost rates



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Calculating an indirect-cost rate

Calculations need to be

- Accurate
- Defensible - based on audited financial results
- Updated regularly (annually)
- Flexible enough to suit the requirements of different funders

It is probably best to calculate one rate for the whole institution but, in large institutions, it may be necessary to vary the rate across faculties



Some pointers

- There is no 'one size fits all' method - context matters
- Your accounting system may limit you to a single rate or allow different rates for different departments
- Try to agree on an appropriate methodology with your major funders - this will reduce time spent negotiating about specific projects
- Recalculate the rate regularly using fresh data
- Use financial data averaged out over about three years to allow for irregularities



Four approaches to calculating indirect-cost rates

Based on:

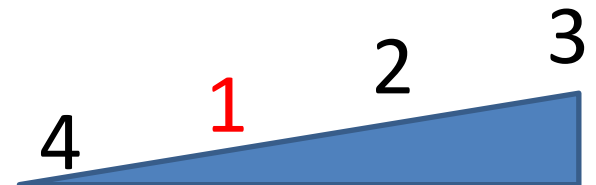
1. Total direct costs
2. Modified (or reduced) total direct costs
3. Remuneration costs only (even more modified than 2)
4. Facility costs only



1. Total direct costs

- A simple approach
- Total indirect costs divided by total direct costs

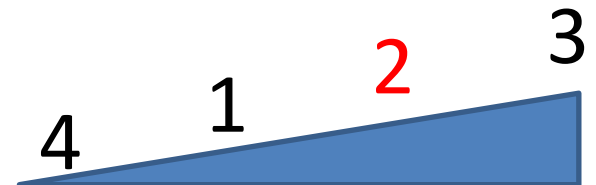
$$\frac{\text{Indirect Costs}}{\text{Total Direct Costs}} \times 100 = \text{Indirect Cost Rate}$$



2. Modified total direct costs

- Total direct costs are reduced by subtracting:
 - Capital expenditure
 - Bursaries
 - Other expenses that cannot be justified

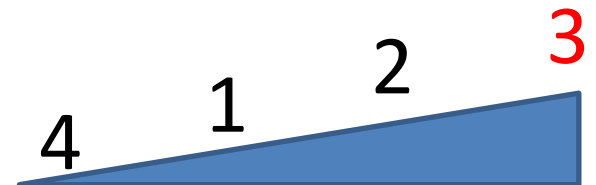
$$\frac{\text{Indirect Costs}}{(\text{Total Direct Costs} - \text{Certain Direct Costs})} \times 100 = \text{Indirect Cost Rate}$$



3. Remuneration only

- The numerator is the normal sum of indirect costs
- The denominator is the difference between the total salary cost of the university minus the salary costs of the Research Office and others that are usually included in the indirect costs

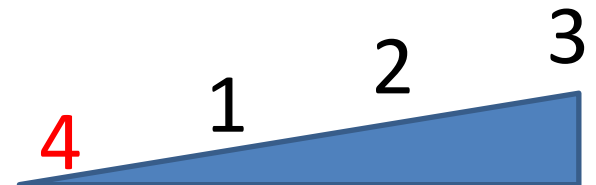
$$\frac{\text{Indirect Costs}}{(\text{Total Salary Cost} - \text{Salary Component in the Indirect Costs})} \times 100 = ICR$$



4. Separating facility costs

- Facility costs include:
 - The cost of municipal services
 - Building maintenance
- This method is useful for charging for off-site work
- A facility rate (per meter² can then be added back in for on-site work)

$$\frac{(\text{Indirect Costs} - \text{Facility Costs})}{\text{Total Direct Costs}} \times 100 = \text{Indirect Cost Rate}$$





Using the appropriate methodology

Different methods might be better for different contexts:

- Sometimes you want to keep things simple
- Sometimes you are willing to keep the budget low to help you establish a relationship with a new funder or a prestigious research partner
- Sometimes a method is determined by a funder or by your institution's management team



Costing versus pricing

- The cost of a project is not necessarily the same as the price charged to the client
- The price will depend on the type of project, the funding stream, the reasons for doing the project, etc.
- There may be reasons to conduct a project:
 - for a profit (price is more than the cost)
 - on a breakeven basis (the price is equal to the cost)
 - at a loss (price is less than the cost)



Reasons for pricing projects differently

FOR PROFIT (Price > Cost)	BREAKEVEN (Price = Cost)	LOSS (Price < Cost)
Contract research Consulting	Research grants Donations	Research grants Donations
Clients benefit from the prestige of your institution Profits are allowed	Funding stream does not allow any profit to be made by the institution but the research benefits the institution	The project brings other benefits, such as students, equipment, capacity, etc.



Permissible deviations

PERMISSIBLE DEVIATIONS	APPLICATION OF THE POLICY ON DEVIATIONS
The funder's prescribed indirect-cost recovery rate is less than 25% of the total project income.	The maximum allowable overhead that the funder is willing to pay must be used as the indirect-cost recovery rate.
The funder's allowable overhead is greater than 25% of project income	The maximum allowable overhead can be used in the project budget, but only 25% will be taken as the indirect-cost recovery rate. If more than 25% is used, the balance accrues to the project as profit.
The funder will pay for direct project costs only (i.e. they will not pay for university-funded staff costs or indirect costs)	The researcher can apply for the 25% to be waived if significant other benefits accrue to the university (such as student involvement, publications, patents, etc.).
The funder will allow an overhead on certain costs only	The researcher can apply for the levy on the applicable cost to be waived if significant other benefits accrue to the university (student involvement, publications, patents, etc.).

(Source: University of the Free State, South Africa)



Day 2

Introducing Keys 3, 4 and 5

Role-plays



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Key 3

Institutional management of external research grants



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An overview of grant management

Pre-grant period

Grant development

- Identify funding opportunities
- Disseminate information
- Liaise with funders
- Help with proposals and budgets

Grant submission

- Facilitate peer and ethics reviews
- Facilitate institutional sign-off
- Send and follow up on proposals

Post-grant period

Grant implementation and stewardship

- Ensure financial compliance
- Monitor progress
- Facilitate financial reporting
- Project closure



Institutional policies and guidelines

- Outline roles responsibilities, and procedures for proposal development, clearance, approval and sign-off
- Set out the steps involved in setting up, managing and closing out a grant
- Spell out categories for direct and indirect costs
- Explain how to apply institution's standard indirect-cost rate
- Establish procedures for waiving the standard indirect-cost rate
- Establish how recovered indirect costs are distributed
- Support the development of research proposals and budgets

Consider...



- Given the complexity and competition of the funding environment, can individual researchers cope with their own research, as well as apply for (and then manage) research grants?
- What is currently in place to support researchers in the pre- and post-award processes? Is this sufficient?
- What organizational changes could strengthen the coordination and management of research funding at my institution?



Key 4

Developing the relevant skills and competencies



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The ideal grant manager

- Facilitates the administrative aspects of research grants and *reduces* researchers' administrative loads.
- Is aware of and able to limit the contractual, legal, ethical and financial risks involved in grant management.



General responsibilities

- Develop policies and procedures
- Develop processes, systems and supporting tools
- Drive policy implementation
- In-house training to build research capacity
- Build relationships and networks to advance research
- Pre-award grants management (proposal development, including budget development and proposal submission)
- Award negotiation and acceptance
- Post-awards grants management (grant implementation and stewardship)



Skills and competencies

- Understanding of the institution's strategic priorities and processes
- Awareness of research processes and of what motivates researchers
- Ability to formulate policies, and to design and implement effective workflows
- Thorough understanding of how direct and indirect costs are defined, calculated, charged, and allocated
- Capacity to monitor and apply institutional and funder regulations
- Ability to coordinate and document institutional approval for grant proposals
- Awareness and experience of grant-seeking techniques and tools



Skills and competencies (continued)

- The ability to assess project budgets, and mastery the relevant financial-management skills
- Strong organizational, analytical and project-management skills
- Good interpersonal and negotiating skills, including the ability to foster respect for cultural and individual differences
- The ability to communicate technical and budgetary details
- The ability to multi-task and meet deadlines



Key 5

Bridging the gaps between funders and research institutions



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The gap between funders and grantees

- Policies and practices among funders, or in some cases even within funding organizations, differ vastly when it comes to funding the indirect costs of research
- Research institutions in low- to middle-income countries could benefit significantly if they were more successful at recovering indirect costs



Funders' concerns about institutions

- Grant management and coordination is weak
- Language barriers and cultural differences create difficulties
- Institutions have few policies or standard procedures
- The redistribution of recovered indirect costs is not documented so funders can't be sure how these will be allocated



Institutions' concerns about funders

- Funders are powerful and generally unwilling to negotiate terms and conditions of grants
- Modest budget proposals are more likely to be successful
- Reporting templates and requirements are highly varied, and institutions seem to be expected to set up several different management and financial systems
- Training offered by funders needs to happen *in situ*; it is too expensive if held in the US or Europe



Obstacles to accurate research costing

- Institutions fail to calculate and negotiate indirect-cost rates proactively
- Institutional management and coordination of research grants tends to be random and undeveloped
- Funders policies and practices on reimbursement of indirect costs vary significantly
- Cooperation between funders, as well as between funders and grantees could be improved

Consider...



How can organizations improve their relationships with funders?

- What do funders expect?
- What are we not doing that they want us to do?
- How are we currently managing relationships (strategically and operationally)?
- Where can we improve?



Day 3

Moving from theory to practice



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Indirect-cost-recovery percentage

- The **expenditure-apportionment method** has been deemed the most appropriate sector-wide option for the South African context.
- The basis of the calculation is to determine the **proportion of the total expenses that are to do with external funds**. This proportion is **then applied to support-services costs**, excluding undergraduate-student-related services.
- The information used is based on the **latest audited annual financial statements of each university** (each university should do this calculation to determine its recovery percentage).
- This approach was designed and agreed to via a sector-wide process. It was seen as the **most practical and simple option**, and was arrived at after many iterations, and taking the differing contexts of various institutions into consideration.

(Source: University of the Free State, South Africa/Higher Education South Africa)

Description	Label	Formula	Amount
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**Let's go through that again
a bit more slowly...**

1 Description	2	Label	Formula	Amount
Recurrent UNRESTRICTED expenditure excluding residence costs		A		R 700.00
Recurrent RESTRICTED expenditure excluding residence costs	3	B		R 270.00
Total relevant expenditure		C	A + B	R 970.00
Indirect costs allocation ratio, expressed as a %	4	D	B/C	27.84%
Total expenditure of support services excluding Research Office expenditure		5 E		R 230.00
Indirect expenditure attributable to research support	6	F	D x E	R 64.02
Research Office expenditure (salaries + operating)	7	G		R 4.00
Total research support expenditure	8	H	F + G	R 68.02
Indirect cost (recovery) rate	9	I	H / B	25.19%

Template for calculating indirect cost recovery rates

Description	Label	Formula	Amount
Recurrent UNRESTRICTED expenditure excluding residence costs	A		
Recurrent RESTRICTED expenditure excluding residence costs	B		
Total relevant expenditure	C	$A + B$	
Indirect costs allocation ratio, expressed as a %	D	B / C	
Total expenditure of support services excluding Research Office	E		
Indirect expenditure attributable to research support	F	$D \times E$	
Research-office expenditure (salaries + operating)	G		
Total research-support expenditure	H	$F + G$	
Indirect cost (recovery) rate	I	H / B	



Did we achieve our learning goals?

- To develop a thorough understanding of the concepts contained in the *Five Keys* good practice document, including in the case studies
- To work through practical examples from the Course Notes, and from our own experience
- Discuss ways in which the *Five Keys* can be applied in our institution, projects, or research networks



Where to from here?

- *Five Keys to improving research costing in low- to medium-income countries*
<http://www.who.int/tdr/partnerships/initiatives/essence>
- Videos on YouTube
- Additional training interventions?

Thank you for your attention and participation!