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Monitoring and Evaluation for National Research Systems for Health

A Resource for Strategic Planning, Learning and Generating Evidence for Research Management

Research for Health Africa Programme
A joint initiative by COHRED and NEPAD

Draft - for discussion and input

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Overview

COHRED presents a strategic monitoring and evaluation approach for national research governance institutions to demonstrate their return on investments in such a way that institutions can begin to show how and to what degree they contribute to social good, while learning of ways to maximise this good.

The approach builds on a methodology called Outcome Mapping[1] that focuses on understanding the vision and mission of an institution and then looks at which external partners need to be influenced, in order for the vision and mission to be achieved. That way all the processes, activities and results that the institution would like to achieve tie in to its mission and vision.

COHRED's approach can be used by institutions or government departments in charge of governing research for health in their country. It can easily be adapted to specific needs and realities.

Having a well established monitoring and evaluation approach for the governance of research for health can help countries demonstrate, understand and qualify the importance of investing in a research for health system and illustrate its contribution towards health, equity and development.

Organisations perform better if they are able to evaluate the effect of their activities. They can plan more effectively, learn from successes and failures, and communicate more clearly to others that what they are doing is valuable.

COHRED's (Monitoring and Evaluation) approach will help to equip organisations with the information they need for forward planning, internal learning and for garnering political backing and funding to support the research system in their country. Below is an overview of the three steps to the approach.

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1. For a definition please see *Box 2: Why outcome mapping as a methodology?* On page 9.

STEP 1:
Setting the scene

Identify needs, and what is already in place for monitoring and evaluation:
- What information on your work do you need?
- What information on your work do you currently generate?

Identify capacity:
- What capacity do you currently have?
- Financial capacity : Funding
- Human capacity: People, skills and knowledge
- Physical capacity: Equipment, technology and machines

Budget and allocate funds for
- Staffing
- Review activities
- Data collection activities (surveys, evaluations, desk research)

Create a management structure
- Empowering a member of the senior management team to manage this process

STEP 2:
Building the institutional M&E framework

Define the Vision
- The large-scale development changes that you hope to encourage

Define the Mission
- How the institution intends to support the vision

Identify Boundary Partners
- The individuals or groups with whom the institution interacts directly and can anticipate opportunities for influence

Create Outcome Challenges
- The desired changes in the behaviour, relationships, activities, and actions of the boundary partner

Identify and review Progress Markers
- The changes in a boundary partner as they progress from their current situation to full achievement of their outcome challenge, from first steps to transformative changes.

Identify Data Sources
- Where to see the progress marker

Identify Data Availability
- How to ensure that this data is available

STEP 3:
Integrating the M&E framework into working processes

Include in planning phases
- The approach is used in senior management planning exercises, including strategic planning sessions

Include in reporting and review phases
- The approach is used in data collection, review and reporting periods
- This activity should be done at any periodical planning, monitoring or evaluation reviews that are conducted by senior management

Integrate into the communication strategy
- Ensure that data, and information that is generated by the approach is used in communication activities for advocacy, marketing, fundraising and public information

Introduction

Research for Health

The past century has been marked by rapid advances in human welfare. People in most parts of the world are healthier and live longer. To continue to improve health more knowledge is needed about diseases and conditions, old and new, that are the cause of poor health. For this we need research - not just in laboratories or hospitals, but in manufacturing, the environment, education, and many other areas that impact directly on health.

This is what *research for health* means.

Research generates knowledge. However, knowledge alone is not enough to improve health – it needs to be transformed into drugs, technologies, health care, road safety, better nutrition, less stressful work, healthier environments... the list is endless. They need to be produced at the right scale to ensure enough high quality products or services where and when needed – to all who need it. This requires innovation, involving many different sectors and a huge variety of stakeholders, such as governments, civil society, industry and research institutions.

A research system for health

In order to ensure that all of these stakeholders work together there needs to be a governance and management structure for research for health in place. More than this, there needs to be a *research system for health* that can be managed and improved.

Doing it → Enabling it

CHARITY **VERTICAL PROGRAMS** **A SYSTEM APPROACH TO DEVELOPMENT**
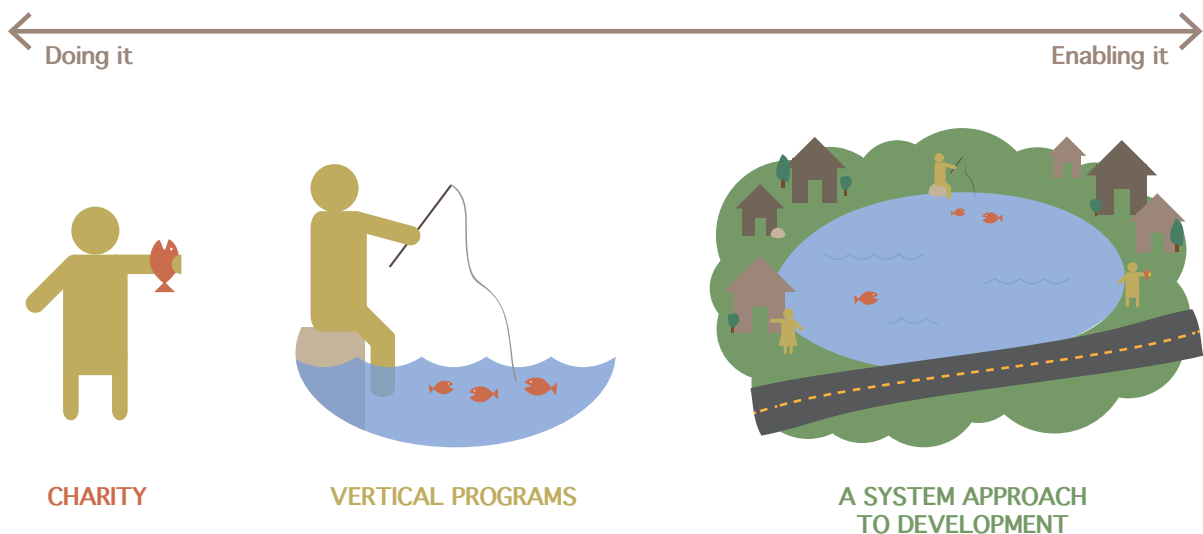
A research system for health is described as a set of institutions that create, govern, manage, coordinate, demand, require, communicate and use knowledge resulting from research to improve the population's health and status. Each country in the world has some sort of research system for health. Depending on the context of a country, a system's scope varies. Although the basics can remain the same, each system will differ markedly in its management and coordination structures. A system might cover certain areas, that in other countries are not covered, and it might be placed at a different level or between different institutions within a government.

A research system needs to receive political support to thrive, and some foundations need to be put in place (national research priorities, policies and a management structure) in order for it to function well. Once these foundations are there, human, institutional and financial resources need to be strengthened in order for the system to enhance its performance. Lastly, a series of system optimisers (such as communication; monitoring and evaluation; information management systems; ethics review systems) can be developed to further improve the system's functioning.

Demonstrating value

Most governments empower one parastatal institution, or government department to take the lead in the governance and management of research in their country. These institutions/ departments effectively govern a research system. In many countries, the research system does not have effective planning, monitoring and evaluation mechanisms. As a result of this, institutions that are charged with the governance of research for health are often unable to track the successes and failures of their own work due to an absence of data or inability to make the data they do have relevant.

However, for any initiative, programme or organisation to be able to gain funding and grants, it needs to be able to demonstrate its return on investment. Similarly, to have an effective governance system that has political and financial support, it needs to be able to demonstrate its value. To demonstrate the importance of research, of investing in research, and of investing in research governance, these research governing bodies need evidence.

Generating evidence for a research system for health

How can evidence be generated with limited capacity and resources (as is the case for many lower income countries)? This can be done by looking at the different parts of a research system, how this system changes behaviour in different stakeholders and by collecting information in the simplest, most effective and 'resource light' way possible.

Developing an approach to capture this evidence can help to provide institutions with oversight of their work, and can help people to understand the contribution their work makes towards social change. Most importantly, it can help managers to understand whether their activities and resources are contributing effectively to the mission and vision set for their institutions or departments in the governance and management of a research system for health.

COHRED's approach, presented in this resource, proposes a way through which, with small investment, evidence is generated and information collected that can be used for communication and advocacy aiming to create greater investment and political support, and for organisational learning leading to better results.

BOX 1: MEASURING THE IMPACT OF RESEARCH?

This is not a framework for researchers to measure the impact of their work. COHRED's approach instead focuses on the governance of research at the national level, and not the impact of the research itself. While they are related, they are different areas. Measuring the impact of research for health that is conducted in a country is an extremely costly and difficult exercise that needs significant investments of resources (time, infrastructure and money) that is beyond the scope of nearly all research governance institutions.

There are frameworks that have been created with an attempt to provide a structure for collecting this information. One notable example being <u>Making an Impact: A Preferred Approach and Indicators to Measure Returns on Investment in Health Research</u>, a Report of the Panel on the Return on Investments in Health Research from the Canadian Academy of Health Sciences that was published in January 2009.

BOX 2: WHY OUTCOME MAPPING AS A METHODOLOGY?

Outcome Mapping is a methodology for planning, monitoring and evaluating development initiatives in order to bring about sustainable social change. As the name suggests, its niche is understanding outcomes; the so-called 'missing-middle' or 'black box' of results that emerge downstream from the initiative's activities but upstream from longer-term economic, environmental, political or demographic changes.

Outcome Mapping is about the intended use. It does what many other logic models do; it lays out the logical intended relationships among the elements of a programme, a project or any other kind of intervention – so that it can be implemented, monitored or evaluated. Outcome Mapping's applicability depends on:

1. The interventions intended outcomes. Do they involve influencing human behaviour?
2. The information that monitoring or evaluation seeks. Does it pose questions related to how behaviours are, or are not, changing?

It is this key focus on behaviour change that makes Outcome Mapping a useful methodology for the planning, monitoring and evaluation of a research system for health. COHRED decided to use the outcome mapping methodology for this approach because it is the most feasible in resource-constrained environments, in particular by focusing on boundary partners as key groups, data collection can be less resource intensive than as with other models.

Outcome Mapping also has advantages in the way in which all indicators that are generated flow naturally from the vision and mission for a research system for health. In addition, Outcome Mapping facilitates engagement with key partners in the research system thus enhancing coordination among partners. It helps managers to understand change processes, improves the efficiency of achieving results and promotes realistic and accountable reporting. For alternative approaches, please consult the bibliography at the end of this resource.

For more information on outcome mapping please see <u>Outcome Mapping: a realistic alternative for planning, monitoring and evaluation</u>, an ODI Background Note from October 2009 by Harry Jones and Simon Hearn.

BOX 3: DEVELOPING A MONITORING AND EVALUATION *APPROACH* OR *SYSTEM*?

This resource is a guide to integrating a monitoring and evaluation approach for a research governance institution. The approach outlined in this resource focuses on the outcomes of the governance of research in a country, and does not include internal indicators on efficiency and performance. The paper covers aspects of integration but does not look holistically at a monitoring and evaluation system, which is much broader and further reaching in its scope (for example it might cover issues such as HR, finance, communications, reporting and data management).

There is already a practical guide <u>Developing Monitoring and Evaluation Systems for Complex Organisations</u>, by Nigel Simister that exists for this purpose.

Step 1: Setting the scene

Identifying needs, and what is already in place for monitoring and evaluation

Even when an organisation wishes to implement a new monitoring and evaluation approach, there will be existing systems, procedures and processes already in place.

Whether you want to design a new approach, or simply make alterations to an existing one, it is important to fully understand the consequences of doing so. This means acquiring an accurate knowledge of what is already in place. After clarifying the desired scope and purpose of the new approach, the next important step is to perform a thorough situational analysis. You can do this through:

- A literature review, provided that an organisation's existing systems and practices are documented. This could include concept papers, overviews, plans, reports, manuals and guides.
- Interviews with different groups of people – either face-to-face or via telephone or email – to investigate their perceptions. These may be very different to the information contained in the literature. Interviews can show whether the rhetoric of formal documents matches up with the reality.
- Site visits. To observe approaches to planning, monitoring and evaluation directly, such as how information is stored or retrieved, how information is collected and analysed and the use of participatory monitoring and evaluation tools.

Ultimately, you need to have as much information as possible about what is currently in place in order to inform the type of changes that may be feasible or desirable. In particular it is crucial to know how different people and departments within a complex organisation use the current system.

Identifying capacity

It is important to first identify what capacity an organisation has in terms of three resources:

- Financial capacity : Funding, in-kind support and partnerships
- Human capacity: People, skills and knowledge
- Physical capacity: Equipment, technology and machines

Once a clear picture is available, it will help inform decisions on how many progress markers can be used, how data collection will be carried out and how frequently this can be done. If an institution has a dedicated monitoring and evaluation officer, funding and equipment, it may be possible to implement all of the progress markers that have been developed as examples within COHRED's approach (see Step 2 for more information on progress markers). However, if an institution only has someone who can commit 10% of their time to monitoring and data collection activities it will be necessary to select only the key progress markers that need to be collected, and to do this on a less frequent basis (eg annually).

Budgeting and allocating funds

Once a comprehensive review of the needs and capacity has been explored, it may be necessary (if possible) to budget and allocate resources for effective monitoring and evaluation. Budget lines may include:

- Staffing
- Review activities
- Data collection activities (surveys, evaluations, desk research)

Creating formal processes and structures

Supportive formal processes and structures that privilege data and evidence as part of the decision-making process will need to be created within the institutional culture. While people are a core part of that, and it will be necessary to empower key staff to manage the process, the implementation of the approach will need to be systematised. This requires formal processes and structures to be established by a management team.

Implementing a management structure

Ideally all staff would become oriented with the approach, with some level of basic training in Outcome Mapping. This is critical in creating a management model that is sustainable. Therefore training and professional development should be factored in.

However, in some instances, where institutions do not have the capacity to bring all staff on-board, or where institutions are very hierarchical, a management structure needs to be in place that empowers a senior figure with the responsibility for monitoring and evaluation. In this way the approach will become integral to strategic and programming planning activities and by empowering a member of the senior management team to manage this process the sustainability of the approach will be ensured.

Consultations with staff

In complex organisations, people often have detailed knowledge about the particular systems and processes they use in their daily work, but only a rough idea about those used in other parts of the organisation. It is not unusual to find that nobody has an exact knowledge of all the different planning, monitoring and evaluation, reporting processes and practices used within an organisation at all the different levels. Consequently, once you have a detailed overview of an organisation's information systems, you might even find that you are the only one within that organisation who has.

Consultation with a variety of different stakeholders is important as you will need to have buy-in to the new monitoring and evaluation approach, and are unlikely to get this if people feel they have not been consulted, or their needs have not been addressed. It is advisable also to involve key stakeholders that will need, or make use of, the information generated by the approach, either for management or for communications, lobbying and influencing.

Step 2: Building the institutional monitoring and evaluation framework

There are seven main components to the institutional M&E framework, these are: defining the vision, defining the mission, identifying boundary partners (the key partners that the institution needs to influence in terms of behaviour changes in order to achieve the mission and vision), creating outcome challenges for each boundary partner (statements on what changes the institution would like to see), identifying and reviewing progress markers (what the institution would expect, like and love to see the partner do), identifying data sources and identifying data availability.

FIGURE 1

VISION	The large-scale development-related changes you hope to encourage
MISSION	How the institution or department intends to support the vision
BOUNDARY PARTNER **BOUNDARY PARTNER**	Who you need to influence in order to achieve the vision and mission
OUTCOME CHALLENGE **OUTCOME CHALLENGE**	What changes you would like to see these partners achieve
PROGRESS MARKERS **PROGRESS MARKERS**	What changes you would expect, like and love to see
DATA SOURCES	Where you would like to see changes
DATA AVAILABILITY	How you would ensure that this information is available

1. Defining the vision

The vision reflects the large-scale development-related changes that a national institution or department governing a research system for health would hope to encourage. It describes economic, political, social or environmental changes that the institution hopes to help bring about, as well as broad behavioural changes in key boundary partners.

The vision is related to the system's objectives but goes deeper, is broader in scope, and is longer-term. The ultimate achievement of the vision lies beyond the system's capability; however, its activities should contribute to and facilitate that end. It is the institution's contribution toward the vision (through its boundary partners) that will be measured, not whether the vision was achieved.

For formulating the Vision statement you may want to respond to the question: **What would you ideally like to see? What are your dreams of success?**

Possible answers could be...
- There is a dynamic research agenda driven by the research priorities of the country.
- Research evidence is used in decision-making, policy formation and implementation that improves the health of the population and contributes towards equity and development.
- The importance of research to improve health is championed at the highest possible political level.
- Funding is available which is sufficient and sustainable in order to fulfil a national research agenda, and is aligned with that agenda.
- Appropriate technology is developed and transferred.
- An enabling, globally recognised research environment is in place which:
  - attracts and retains researchers, and
  - enhances national capacity to generate knowledge.
- Research conducted is ethical, rigorous and responsive to national priorities.
- Strong international and national collaborators and partnerships are in place, which result in mutual benefit and growth.
- Research activities and findings dissemination is targeted and well marketed.

Note: This example vision is for the research system and not necessarily for the whole institution.

BOX 5: MISSION STATEMENT

For formulating the Mission statement you may want to respond to the question: **How can you get there?**

Possible answers could be...
- A national research agenda is developed and regularly updated through an inclusive process with government, civil society, academia, private sector etc in order to ensure that research priorities are relevant to the country.
- Tailored research information is made available to policymakers through different channels (fora, knowledge-brokering, briefs etc) in order to guide decision-making.
- Demonstrable, clear, tailored evidence for the value of research is used in advocacy with political leadership in order to achieve their support and the inclusion of research as a strategic priority for the country, including specific financial commitments for research.
- Mechanisms are put in place which ensure adherence of international funding sources with national health priorities in order to ensure funding for research is relevant.
- Research findings result in new products, technology and processes.
- Effective management and infrastructure is in place that enables researchers to undertake their work.
- Funding is available for researchers to conduct research aligned with the national agenda.
- Capacity development plans are in place and work effectively for researchers to develop their skills and knowledge and in order to retain researchers.
- An efficient and transparent approval system (i.e. research ethics committees, peer review panels etc) is in place which requires researchers to satisfy specific standards (timeliness, ethical standards, quality and relevance) prior to research licensing.
- Mechanisms are provided (facilities, advice, financing and linkages) to support private and public sector partnerships for the development of research and transfer of appropriate technology.
- Knowledge management and communication mechanisms are in place for the targeted dissemination of research activities and findings.

2. Defining the mission

The mission statement describes how the institution or department intends to support the vision. It states the areas in which the institution will work towards the vision, but does not list all the activities in which the research system will engage. Rather, it is an ideal statement about how the research system will contribute to the vision. It represents what the institution wants to grow into as it supports the achievement of the vision.

3. Identifying boundary partners

Boundary partners are those individuals, groups, or organisations with whom the institution interacts directly and with whom the institution can anticipate opportunities for influence. These actors are called boundary partners because, even though the institution will work with them to effect change, it does not control them.

FIGURE 2: SPHERE OF INFLUENCE
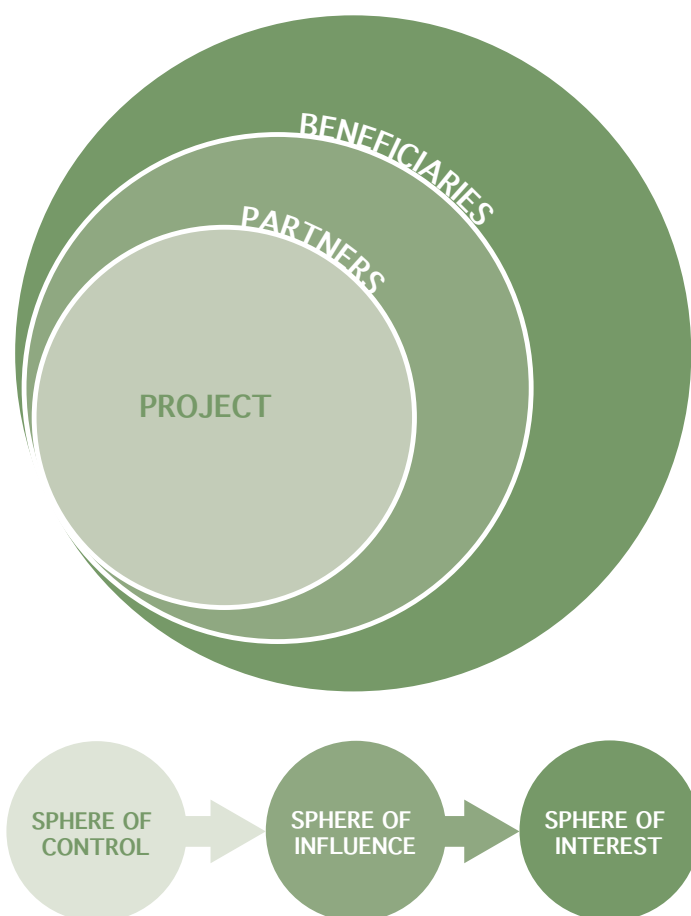
Boundary partners must meet two criteria, they must be:

1. Those with whom the institution in charge of research governance works directly,
2. Those with whom the institution has a significant and direct opportunity to influence.

When deciding on the boundary partners, and reflecting on the opportunities for influence it may be desirable to conduct a SWOT Analysis. A SWOT analysis encourages groups (or individuals) to reflect on and assess the Strengths, Weaknesses, Opportunities and Threats of a particular strategy and how it can best be implemented.

The SWOT framework - a two-by-two matrix - is best completed in a group with key members of the team or organisation present.

Strengths and Weaknesses describe 'where the project or organisation is now: the existing resources that can be used immediately and current problems that won't go away'.

Opportunities and Threats describe 'what is going on outside the organisation, or areas which are not yet affecting the strategy but could do'.

Strengths and weaknesses are internal aspects, which can be controlled by the programme under evaluation. In contrast, opportunities and threats are external aspects, which are outside of the control of the programme and are determined by its environment.

For more information, please see Start, D., Hovland, I. (2004). *SWOT Analysis, Tools for Policy Impact: A Handbook for Researchers*, Overseas Development Institute

FIGURE 3: BOUNDARY PARTNERS
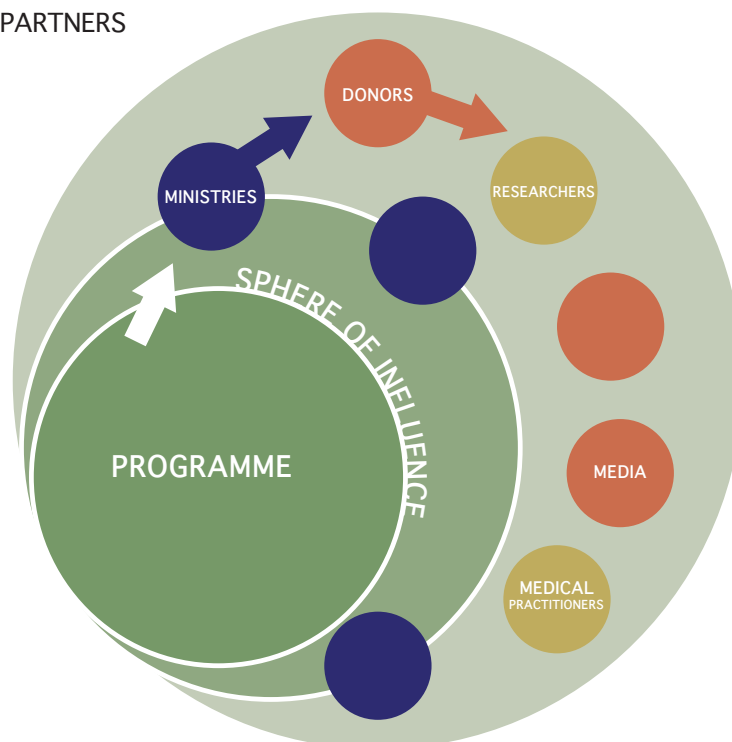
Possible example of the sphere of influence
of research system governance

● Stakeholders ● Beneficiaries ● Boundary partners

In many countries, research for health straddles Ministries of Health, Higher Education, Science and Technology, and Agriculture, therefore ministries and decision-makers, as a boundary partner, can include these where applicable.

COHRED decided not to include international funders as a boundary partner, because normally they lie outside the sphere of direct influence of institutions or departments that are charged with the governance of research for health. International funders are mainly influenced by ministries.

BOX 7: POSSIBLE BOUNDARY PARTNERS
For identifying the boundary partners you may want to respond to the question: Whose behaviour needs to change in order to achieve the mission and vision?
Possible answers could be...
1. Ministries / Decision-makers
2. Organisations that conduct research

4. Creating outcome challenges

Outcomes are the effects of the institution 'being there', with a focus on how actors behave as a result of being reached. An outcome challenge describes how the behaviour, relationships, activities, or actions of an individual, group, or organisation will change if the institution is extremely successful. Outcome challenges are phrased in a way that emphasises behavioural change. They should be idealistic, but also realistic. This is done for two reasons:

1. It stresses that development is done by, and for, people; and
2. It illustrates that, although the institution can influence the achievement of outcomes, it cannot control them. The institution contributes to the change, but ultimate responsibility and power for change rests with the boundary partners themselves.

Outcome challenges are phrased so that they capture how the actor would be behaving and relating to others if the institution had achieved its full potential as a facilitator of change. Outcome challenges are written like this: *The institution intends to see [boundary partner] who [description of behaviours in the active present tense].*

FIGURE 4: INPUTS, OUTCOMES AND IMPACT
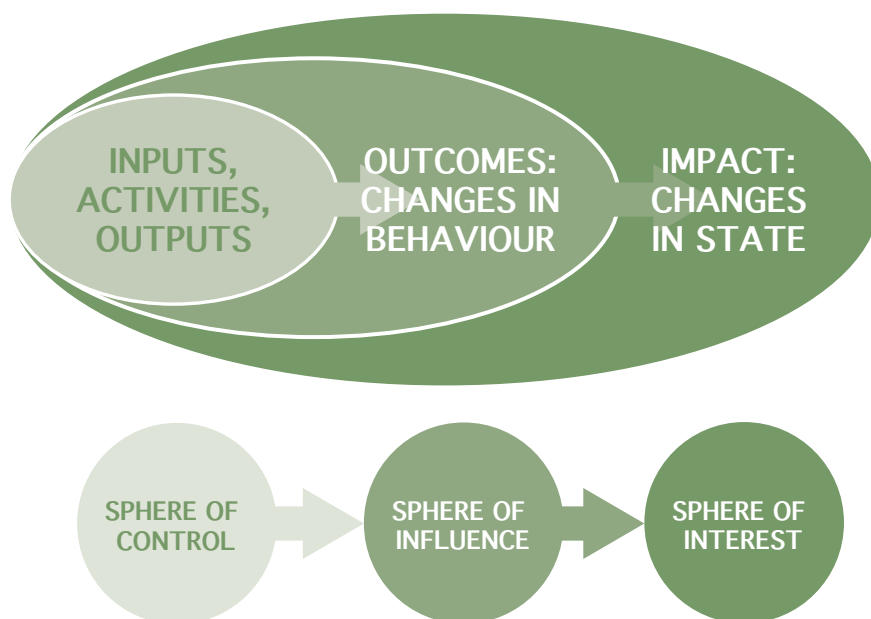
BOX 8: OUTCOME CHALLENGES

For formulating outcome challenges you may want to respond to the question: **What behaviour changes in these boundary partners do you need to see in order to achieve your vision and mission?**

Possible answers could be...

1. Ministries / Decision-makers:
- Mandate the development of the national research agenda and work collaboratively with researchers and other partners to implement and review the research agenda.
- Recognise the importance of research-informed policies and use research findings in their policy formulation process.
- Allocate and lobby for research and strengthen mechanisms to enable researchers to access government funding.
- Ensure that research policies and agendas are defined and that human, institutional and financial plans are developed.
- Facilitate the enactment of legislation to support and regulate research.
- Negotiate and lobby with national and international partners to ensure funding alignment with the national agenda.

2. Organisations that conduct research:
- Conduct research in line with the national agenda that generates new knowledge in areas of national importance.
- Focus on using research findings for the development of technologies and processes for improved livelihoods.
- Design and implement an institutional management structure which provides coordination and coherence, between policies, priorities and action, and appropriately responds to the national guidance and policy frameworks available.
- Assess, plan and undertake infrastructure improvement of research facilities and identify and access various funding sources that allow this upgrading to proceed in a suitable fashion.
- Provide grants, fellowships, award programmes and training for researchers thus creating the conditions for researchers to conduct quality research aligned with national priorities.
- Support capacity strengthening in terms of training researchers in research processes.
- Conduct research that is scientifically and ethically sound in order to generate trustworthy knowledge and to ensure that the rights and welfare of human research subjects are protected.
- Actively reach out to potential collaborators / national and international partners (via conference attendance, face-to-face meetings, social media, publications etc) and exchanging information about activities in order to raise visibility and identify common ground and shared need for partnering.
- Make knowledge generated by research organisations accessible to key stakeholders (eg policy makers, the general public, other researchers) by identifying appropriate dissemination channels and tailoring messages.

5. Identifying and reviewing progress markers

A set of progress markers represents a change model for the boundary partner that illuminates the depth and complexity of change being sought. The progress markers should advance in degree from the minimum one would 'expect to see' the boundary partner doing as an early response to the system's basic activities, to what it would 'like to see' them doing, and then to what it would 'love to see' them doing if the system were having a profound influence.

For instance, progress markers that indicate reactive participation by the boundary partner are relatively easy to achieve and are listed first, under '*expect to see*'; whereas those that indicate more active learning or engagement are listed second, under '*like to see*'; and those that are truly transformative are listed third, under '*love to see*'. In this way, the institution will be able to trace what has been accomplished, while being reminded of what still needs to be achieved. The 'love to see' progress markers should be set sufficiently high to represent profound change.

Love to see
Deep transformation

Like to see
Active engagement

Expect to see
Early positive responses
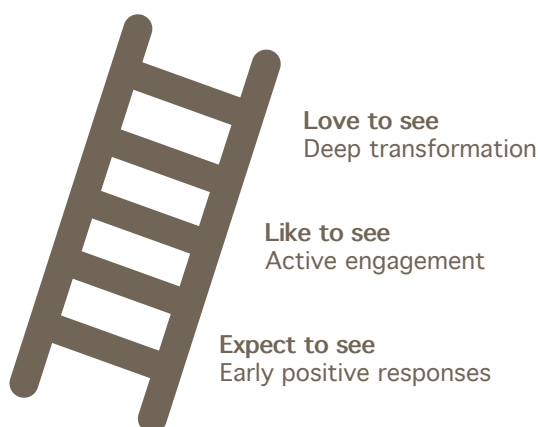
BOX 9: PROGRESS MARKERS FOR MINISTRIES / DECISION-MAKERS

For formulating progress markers you may want to respond to the question: **What would you expect, like and love to see these partners do?**

Possible answers for **Ministries / decision-makers** could be...

Expect to see
- The ministry mandates a research governance body to set the agenda and define policy, and other strategy documents.
- Legislative and strategy documents are available and adopted as national policy/ guidelines.
- National research agenda passed.
- Regular revisions of the national research agenda (e.g. every five years).
- Dedicated funding for research.

Like to see
- Standard Operating Procedure is in place stating that a researcher / group of researchers should be included in the policy making process.
- Attendance of researchers in policy development workshops.
- Research / evidence is included in briefings to ministers.
- Research institutions are invited to comment on draft proposals and legislation.
- Number of public statements made in support of research by ministry.

Love to see
- Formal bodies in which ministries interact with organisations that conduct research (e.g. task forces or commissions).
- Formulated policies (legislation, guidelines, procedures) citing peer reviewed research (include number of references).
- Budget allocation to research that follows the national agenda.
- Level of funding for research matches budget allocations.
- Funding mechanism is established for research institutions.
- The ministry creates a functioning monitoring mechanism for the collection of data on research policies, agenda, funding, human and institutional resources for institutions that function under their remit.
- Number of sponsors and partners in line with national agenda (internal and external funding sources).
- Research coordination meetings between the ministry and external partners (bi-lateral, multilateral etc).

BOX 10: PROGRESS MARKERS FOR ORGANISATIONS THAT CONDUCT RESEARCH

For formulating progress markers you may want to respond to the question: What would you expect, like and love to see these partners do?

Possible answers for organisations that conduct research could be...

Expect to see
- Number of actors that participate in dialogue spaces (meetings, workshops etc) in which the national research agenda and research programmes are discussed.
- Infrastructure plan (including budget) is in place that is linked to organisational aims.
- Develop a programme to institutionalise mentoring and/or coaching processes in HR and strategy documents.
- Develop budget line for institutional grants.
- Design and implement appropriate training programmes.
- Individuals attend trainings.
- Staff retention rates.
- Research Ethics guiding documents in place.
- Ethics committees have the resources (human capacity, financial, infrastructure) to review proposals.
- Ethics review management systems are in place.
- Number of conferences attended.
- Number of formal and informal cross-institutional collaborations developed (national and international).

Like to see
- Number of organisations that set institutional research agenda informed by the National Research Agenda.
- Strategy documents developed that link to national research priorities and national development goals.
- Management ensures that there is coherence between priorities and research activities.
- Research undertaken is aligned with established national research agenda.
- Develop and deliver capacity development programmes [e.g. synthesis of research findings, integration of research into curricula, data collection, management and use, knowledge management and communication strategies, improve writing / proposal skills] Access alternative funding to support health research activities (e.g. infrastructure, staffing, equipment, supplies etc]).
- Trained researchers demonstrate use of trainings in their on-going work.
- Establish attractive career paths for researchers.
- Number of researchers consulted by industry.
- Access institutional grants to support and participate in networking opportunities and collaborative activities (eg multidisciplinary proposals, ICT, professional networks).

- Functional and efficient national and/or institutional ethics committee(s) in place.
- The proportion of co-authored publications (internationally, nationally, with industry, and with other disciplines).
- Have working knowledge-management, communication and dissemination strategies that identify key target audiences and dissemination channels.
- Dedicate resources (HR, budget, and infrastructure) to manage knowledge-management, communications and dissemination strategies.
- Dissemination counts in formats (policy briefs, public education, journals, articles, presentations, conferences) appropriate to various audiences (policy makers, private sector, general public, researchers).
- Relative download rate (from the internet).

Love to see
- Improve / modernise research facilities (infrastructure plan realised).
- Co-author analysis (bibliometric) of collaboration between industry and academia.
- Number of joint projects between industry and organisations that conduct research.
- Co-location analysis to show where industry is located in relation to academic centres.
- Develop and implement grant management systems (e.g. guidelines, assessment criteria etc).
- Numbers of graduated PhD/MSc/MDs, year on year.
- Numbers of research and research related staff.
- Number of staff members with masters / doctorate level.
- Use of research in stage reports by industry.
- Number of patents granted.
- All research that necessitates ethical review is undertaken after ethical review processes are conducted in a timely manner.
- Relative citation impact.
- Citation of research in textbooks and reading lists for university students in health related disciplines.
- Continuing health professional education materials produced cite research to support new practices.

6. Identifying data sources

Essentially the data source is where you would be able to see the progress marker. It is the origin of the data or information that you need to collect. Data sources can include informal and official records, individuals, documents, an online registry etc.

7. Identifying data availability

The data availability is how you ensure that this data is available. It is essentially asking what instruments you need to use to collect the information. If the data source is about what, the data availability is about how. Examples might be a survey, observation, interviews, focus groups, expert opinion, case studies, literature search and content analysis of records.

By adding the sections on data source and availability, this provides those responsible for monitoring and evaluation with an approach that is practical and can be implemented. Otherwise, what can happen is that the progress markers or indicators that are listed in an approach can seem too aspirational, and too difficult to collect.

By adding these two categories, and identifying what data you need and how to collect this data, the approach becomes a usable and easy to implement tool.

TABLE 1: EXAMPLES OF DATA SOURCES AND DATA AVAILABILITY FOR MINISTRIES / DECISION-MAKERS

PROGRESS MARKERS What would you expect, like and love to see these partners do?	DATA SOURCE Where would you see this?	DATA AVAILABILITY How do you ensure that this data is available?
National research agenda passed	National agenda formally published	Ministry website / archives
Regular revisions of the national research agenda (eg every five years)	National agenda formally published	Ministry website / archives
Attendance of policy makers to research dissemination activities	Conference participation lists	Ministry website / archives or interviews
Attendance of researchers in policy development workshops	Minutes of workshops / workshop reports	Ministry website / archives or interviews
Number of formal bodies in which ministries interact with organisations that conduct research (e.g. task forces or commissions)	Press releases, newsletter, website page	Ministry website / archives / news cuttings
Standard Operating Procedure is in place stating that a researcher / group of researchers should be included in the policy making process	Official guidance document containing Standard Operating Procedures	Personal contact with Ministry official
Research / evidence is included in briefings to ministers	Briefing templates, briefing reports	Ministry website / archives or conduct survey
Research institutions are invited to comment on draft proposals and legislation	Invitations to institutions to engage in consultations/ written responses to consultations from research institutions / Consultations reports	Ministry website / archives or through personal contact with Ministry official (Policy Officer)
Proportion of formulated policies (legislation, guidelines, procedures) citing peer reviewed research (include number of references)	Government legislation (guidelines, procedures and policies)	Departmental or parliamentary website / archives
Number of public statements made in support of research by ministry	Press releases, websites, newspapers.	Departmental website / archives/ news cuttings
Budget allocation to research that follows the national agenda	Ministries annual budget / government budget or annual reports	Ministry website / archives
Level of funding for research matches budget allocations	Ministries annual budget / government budget or annual reports	Treasury website / archives
Funding mechanism is established for research institutions	Ministries annual budget / government budget or annual reports	Treasury website / archives
The ministry mandates a research governance body to set the agenda and define policy, and other strategy documents	Institutions' articles of incorporation / legislation	Ministry website / archives
The ministry creates a functioning monitoring mechanism for the collection of data on research policies, agenda, funding, human and institutional resources for institutions that function under their remit	Monitoring framework / annual reports	Ministry website / archives
Legislative and strategy documents are available and adopted as national policy/guidelines	Government legislation (guidelines, procedures and policies) (e.g. ethical guidelines)	Departmental or parliamentary website / archives
Number of sponsors and partners in line with national agenda (internal and external funding sources)	National research registries	RHInnO Research, HRWeb, ministry website / archives
Level of internal funding for research	Annual report	Ministry website / archives
Research coordination meetings between the ministry and external partners (bi-lateral, multilateral etc)	Meeting minutes / reports	Ministry website / archives

TABLE 2: EXAMPLES OF DATA SOURCES AND DATA AVAILABILITY FOR ORGANISATIONS THAT CONDUCT RESEARCH

PROGRESS MARKERS What would you expect, like and love to see these partners do?	DATA SOURCE Where would you see this?	DATA AVAILABILITY How do you ensure that this data is available?
Number of actors that participate in dialogue spaces (meetings, workshops etc) in which the national research agenda and research programmes are discussed.	National agenda / priority setting workshop reports	Website / archives / internal e-filing system
Number of organisations that set institutional research agenda informed by the National Research Agenda.	Research agendas	Website / survey / interviews
Research undertaken is aligned with established national research agenda.	National research registries / annual reports	National research registry management information system (e.g. RHInnO Research) website, surveys
Number of joint projects between industry and organisations that conduct research	National research registries / annual reports	National research registry management information system (e.g. RHInnO Research) website, surveys
Number of researchers consulted by industry	Company reports/	
researchers end-of-project reports	Grant reporting information systems, industry research reports	
Co-author analysis (bibliometric) of collaboration between industry and academia	Multidisciplinary quantitative analysis of publications (e.g. journal articles)	Bibliometric analysis software or company
Co-location analysis to show where industry is located in relation to academic centres	Analysis of locations (addresses of industry and research institutions)	Industry and research organisation websites, reports, public listings, or maps
Number of patents granted	Counts of licensed patents	National patent office website or records office
Strategy documents developed that link to national research priorities and national development goals	Institutions' strategic plans and other strategic documents	Website or institutions will need to be contacted directly
Management ensure that there is a coherence between priorities and research activities	Annual reports	Website or institutions will need to be contacted directly
Infrastructure plan (including budget) is in place that is linked to organisational aims	Institutions' strategic plans and other strategic documents	Website or institutions will need to be contacted directly
Access alternative funding to support health research activities (e.g. infrastructure, staffing, equipment, supplies etc)	Annual reports	Website or institutions will need to be contacted directly
Improve / modernise research facilities (infrastructure plan realised)	Annual reports	Website or institutions will need to be contacted directly
Funding from 'external' sources that can be attributed to the capacity built in an organisation, institution, or region (could also include matched funding)	Annual reports	Website or institutions will need to be contacted directly
Develop budget line for institutional grants	Annual reports	Website or institutions will need to be contacted directly
Access institutional grants to support and participate in networking opportunities and collaborative activities (e.g multidisciplinary proposals, ICT, professional networks)	Annual reports	Website or institutions will need to be contacted directly, if this is not addressed in the annual report, institutions will need to respond to a survey or questionnaire

Develop and implement grant management systems (e.g. guidelines, assessment criteria etc.)	Annual reports	Website or institutions will need to be contacted directly, if this is not addressed in the annual report, institutions will need to respond to a survey or questionnaire
Develop a programme to institutionalise mentoring and/or coaching processes in HR and strategy documents	Annual reports	Website or institutions will need to be contacted directly, if this is not addressed in the annual report, institutions will need to respond to a survey or questionnaire
Develop and deliver capacity development programmes (e.g. synthesis of research findings, integration of research into curricula, data collection, management and use, knowledge- management and communication strategies, improve writing / proposal skills]	Annual reports	Website or institutions will need to be contacted directly, if this is not addressed in the annual report, institutions will need to respond to a survey or questionnaire
Number of actors that participate in dialogue spaces (meetings, workshops etc) in which the national research agenda and research programmes are discussed.	National agenda / priority setting workshop reports	Website / archives / internal e-filing system
Number of organisations that set institutional research agenda informed by the National Research Agenda.	Research agendas	Website / survey / interviews
Research undertaken is aligned with established national research agenda.	National research registries / annual reports	National research registry management information system (e.g. RHInnO Research) website, surveys
Number of joint projects between industry and organisations that conduct research	National research registries / annual reports	National research registry management information system (e.g. RHInnO Research) website, surveys
Number of researchers consulted by industry	Company reports /	
researchers end-of-project reports	Grant reporting information systems, Industry research reports	
Co-author analysis (bibliometric) of collaboration between industry and academia	Multidisciplinary quantitative analysis of publications (e.g. journal articles)	Bibliometric analysis software or company
Co-location analysis to show where industry is located in relation to academic centres	Analysis of locations (addresses of industry and research institutions)	Industry and research organisations websites, reports, public listings, or maps
Number of patents granted	Counts of licensed patents	National patent office website or records office
Strategy documents developed that link to national research priorities and national development goals	Institutions' strategic plans and other strategic documents	Website or institutions will need to be contacted directly
Management ensure that there is a coherence between priorities and research activities	Annual reports	Website or institutions will need to be contacted directly

TABLE 3: ARRIVING AT A MANAGEABLE SET OF INDICATORS

How do you know what are the critical indicators? What is the information that you need to know? What are the indicators that are desirable but require more resources to collect?

It may be desirable to create a country dashboard, with key indicators for core areas that describe progress on an annual or bi-annual basis. Besides ensuring that indicators are SMART and SPICED (see below), the key questions to ask are: is the indicator of essential **importance**, the most **useful** and **resource friendly** (in terms of money, time and equipment needed)?

PROPERTIES DEFINITION	PROPERTIES DEFINITION
Setting SMART indicators	
Specific	Focused and clear
Measurable	Quantifiable and reflecting change
Attainable	Reasonable in scope and achievable within set time-frame
Relevant	Pertinent to the review of performance
Time-Bound	Progress can be charted chronologically
Setting SPICED indicators	
Subjective	Informants have a special position or experience that gives them unique insights which may yield a very high return on the investigator's time
Participatory	Indicators should be developed together with those best placed to assess them.
Interpreted and communicable	Indicators may mean little to some stakeholders, so they need to be explained.
Cross-checked and compared	The validity of assessment needs to be cross-checked, by comparing different indicators and progress, and by using different informants, methods and researchers.
Empowering	The process of setting and assessing indicators should be empowering in itself and allow groups and individuals to reflect critically on their changing situation.
Diverse and disaggregated	There should be a deliberate effort to seek out different indicators from a range of groups, especially men and women.
Narrowing down to the *essential* indicators	
Importance	Is this indicator essential for cross-country analysis? Is it expected by industry peers and senior management?
Usefulness	Will this indicator be useful for learning, or for advocacy communications? Who really needs this indicator and why? Is it essential to demonstrating the value of your work?
Resource friendly	Will this indicator be easy to collect? Will this indicator be resource intensive to collect as regards time, money and equipment?

Step 3: Integrating the approach into working processes

COHRED's approach cannot be designed and implemented in isolation, a framework needs to be integrated horizontally; with other organisational systems and processes, and vertically; with the needs and requirements of other agencies.

By integrating an approach horizontally, this ensures that the approach is properly aligned with other organisational systems such as financial, administrative, logistics, fundraising or human resources. This might be straightforward in a smaller institution or department, but much more complex in a larger institution. In order to ensure that the approach is well integrated, a review will need to be conducted of the existing organisational systems, to determine to what extent the approach overlaps with these areas. Once this overlap has been defined, either the approach, or these other areas of work, will need to be adjusted in order to ensure alignment. For instance, fundraising processes may need to be aligned with data collection and reporting periods, in order to ensure that the approach generates information that can be used in a timely manner.

Adapting COHRED's approach to an institution's needs

This framework has been designed so that it can be adapted according to different institutions' needs, based on their capacity and the nature of the research system for health that exists within their country.

This activity can be done at all periodical planning, monitoring or evaluation reviews that are conducted by senior management, including strategic planning sessions. It will facilitate monitoring, planning and stimulate learning.

Through conducting this excercise institutions will be better able to align their activities to ensure that they are contributing to the mission and vision, and to understand whether this is happening in the right ways.

Three key ingredients for generating evidence

There are three crucial requirements for COHRED's approach to work successfully. They are as follows:

1. The approach is used in senior management planning exercises.
2. The approach is used in data collection, review and reporting periods.
3. A member of the senior management team is empowered to manage this process (not necessarily in a full time position, although that would be desirable)

The integration of the approach into working processes will enable institutions to collect information that will help to inform future planning exercises, and generate learning and evidence for communications and advocacy.

Crucially, COHRED's approach will equip institutions with the information that they need to generate political support and funding to support the research system for health within their country.

Integrating planning, monitoring and evaluation with communications

There are progress markers and data collection methods that will help generate evidence that can be used to increase the support for research and research governance for health. How can you effectively use this evidence to influence changes in behaviour with ministries and decision-makers (boundary partner), and other instrumental partners, such as the media?

Through the integration of the approach with communications work, the information that is generated by the approach can be used in communication activities for advocacy, marketing, fundraising and public information.

Aligning communications and organisational objectives will help to reinforce the importance and relevance of the governance of research and thereby make a convincing case for proper resourcing.

Integrating processes

The most important step is to create a clear information flow between planning, monitoring and evaluation – and communications in order to ensure that any information that is collected using the approach is available to those in charge of communications strategy and implementation. This can be as simple as getting two people in the same room to discuss their roles and any potential overlaps and synergies.

A key aspect of developing the approach also requires involving communications staff in the planning and the setting up of the monitoring and evaluation approach. Communications staff can advocate for specific types of progress markers that can help them to achieve their goals. By having a communication-centred viewpoint represented during the development of any measurement framework (and specifically the progress markers), the perspective of evidence generation and using the data for influencing will help to ensure that the information from the approach is useful not just for learning, but also for any communication needs.

BOX 12: INFLUENCING DECISION-MAKERS
When developing a monitoring framework that is integrated with any communication strategies (that includes lobbying and influencing decision-makers), it is important to identify the key 'top-line' information that will most effectively encourage behaviour change.

Not all indicators are needed for internal communications and management, while not all indicators are needed for external communications, advocacy and influencing.

By integrating communication strategies in the development of the approach, you can select the key indicators that will be of importance to decision-makers in charge of research governance, for example by presenting a mix of qualitative data, such as anecdotal case studies and quantitative data (such as number of patents etc).

Ultimately selecting indicators and presenting information to senior staff and decision-makers is a pragmatic process, this is about selectively picking information to support political objectives. The information must be factual, but more than that it is also tactical, and selected based on the audience, the issue at hand, and what makes a good 'sound bite'.

Key questions to ask would be:

- Given the purpose, context and scenario, what exactly do decision-makers really need to know? What is the strategy? What are their motivations?
- Have you identified the various actors, issues or options; outlined the stated and unstated agendas; captured strategic considerations?
- What is the bottom line? Have you identified or positioned the benefits and key information at the top?
- Is the level of detail you are providing appropriate to the subject and situation at this time? Is every word and paragraph essential? What can you edit out?

Storytelling

Presenting evidence is sometimes not enough. Although all decision-makers are rational, they are also heavily influenced by emotive, non-rational factors, such as stories. Storytelling is one of the most powerful ways in which to influence decision-makers and encourage behaviour change. Storytelling is essentially about translating complex ideas into authentic stories that create emotional connections.

By adapting case studies and evidence, and turning these into case stories it is possible to create emotional connections and empathy among decision-makers that can contribute towards changes in policy and support for research governance.

TABLE 4: KEY ASPECTS TO CONSIDER IN ORDER TO TURN CASE STUDIES INTO CASE STORIES[2]

CASE STUDY	CASE STORY	TIP
Has no theme	Has a strong theme or moral	Select a theme that ties to a vision for influencing behaviour change and build your story around this. The communicator should explain to the audience what the story means.
Organised by problem / solution / result	Organised dramatically	To build dramatic tension, include questions and raise doubts about whether the story will have a happy ending. There needs to be an aspect of danger or vulnerability.
Straight road to success	Moments of vulnerability and failure	Try to include a provocative incident, a turning point and ending and an element of surprise.
Invites critique and counter argument	Evokes emotion and empathy	Research shows that audiences are more moved by the story of a single person than by statistics or case studies about many people.
Conveys work product	Conveys values, culture and beliefs	'we firmly believe in the strengths of X' rather than 'we work on X',
Focuses on the 'what'	Focuses on the 'so what?'	Conclude the story with an action point. For example 'this shows that we need to do x, y and z'.
Speaker tells what happened	Speaker recreates the experience	Use sensory language. Describe events as if recorded by a camera that can also smell, taste and touch. Sensory language arouses specific responses in listeners' brains.
Told in past tense	Told in present tense	For example: 'We are walking', rather than 'we walked'
Summarises what people thought and felt	Uses verbatim reactions and dialogue	For example 'she looked left and then said...' rather than 'the reaction was'
Uses concepts and generalities	Uses concrete details and images	Instead of merely informing your audience of your findings, you could make them come alive by using concrete details and images.
No specific time and place	Tied to a specific time and place	Include details on time, date and location.

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2. Note: This table was adapted from a model developed by Jane Praeger of Ovid, Inc, a speech and media training company based in New York, USA.

BOX 13: MONITORING AND EVALUATION FOR ORGANISATIONAL CHANGE

One of the primary purposes of this approach is learning for organisational change. However, many organisations fail in implementing change processes because of some avoidable mistakes. Here are some key things to consider in order to ensure buy-in from the top and sustainable institutional change that is based on monitoring and evaluation results.

1. Create a sense of importance and urgency

People in an organisation need to be convinced that the proposed change is not just another 'flavour of the month' that will not last but something which is vital to the success of the organisation. They must understand that the situation is changing and that simply staying as they are (or doing things as they have always done) is not possible; the status quo is no longer an option.

2. Create a vision

People who have not thought about the issue or problem at hand will not immediately understand what the proposed change is about. They are unlikely to see what the potential advantages are or the potential dangers if change is not adopted. So a 'vision' – an explanation, needs to be given to them. This vision should express simply and succinctly what the benefit will look like when it is successfully implemented. Ideally, a good vision can be understood by any staff member, in just a few minutes of explanation.

3. Create an alliance

No one person is powerful enough on their own to introduce and sustain meaningful change, it can only happen when many different people within an organisation support this, so when an idea is introduced alliances of people need to back this. While powerful staff members need to be part of this alliance, so do other influential staff members such as staff representatives and respected team members.

4. Communicate the vision to create buy-in

Most people realise that they need to explain what is being proposed and therefore plan meetings, interviews, newsletters and the like. Generally people will underestimate just how much communication is needed for staff to really understand what is happening and to give their active support. Plan your communication strategy around this, and then increase it tenfold.

In communicating the vision, there are some things to keep in mind. The vision should be:
- Simple: No jargon.
- Vivid: A verbal picture is worth a thousand words – use metaphor, analogy, and example.
- Repeatable: Ideas should be able to be spread by anyone to anyone.
- Invitational: Two-way communication is more powerful than one-way communication.

For more information on influencing change processes, you can read Leading Change: Why Transformation Efforts Fail by Professor John P. Kotter of the Harvard Business School.

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COHRED has also produced a number of free tools and guides in the area of research system governance, including priority setting, fair research contracting and ethics. For more information, and to access these publications you can visit www.cohred.org.