RESEARCH IMPACT ASSESSMENT COMPENDIUM

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Training Course on Research Impact Assessment (2017)

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RESEARCH IMPACT ASSESSMENT COMPENDIUM

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RESEARCH IMPACT ASSESSMENT PLAN

— GUIDELINES

Version 5.0

A guide for completing the Research Impact Assessment (RIA) Plan.

INTRODUCTION

Based on evidence, well-established principles and best practices, the *Research Impact Assessment (RIA) Plan – Guidelines* and its accompanying document, the *RIA Plan,* compose part of the Toolbox for the International School on Research Impact Assessment (ISRIA) and its affiliated regional *Training Course on Research Impact Assessment* (Course) hosted by Alberta Innovates. The Toolbox, available on the Course's SharePoint site, also includes a glossary, list of readings and resources, a summary matrix for the *RIA Plan,* an implementation work plan and a sample *RIA Plan.* The Toolbox is not intended to be a complete resource on how to assess research impact. Rather, the materials in the Toolbox should be used as decision aids along with other information and materials provided during the Course, including the faculty presentations and learning activities.

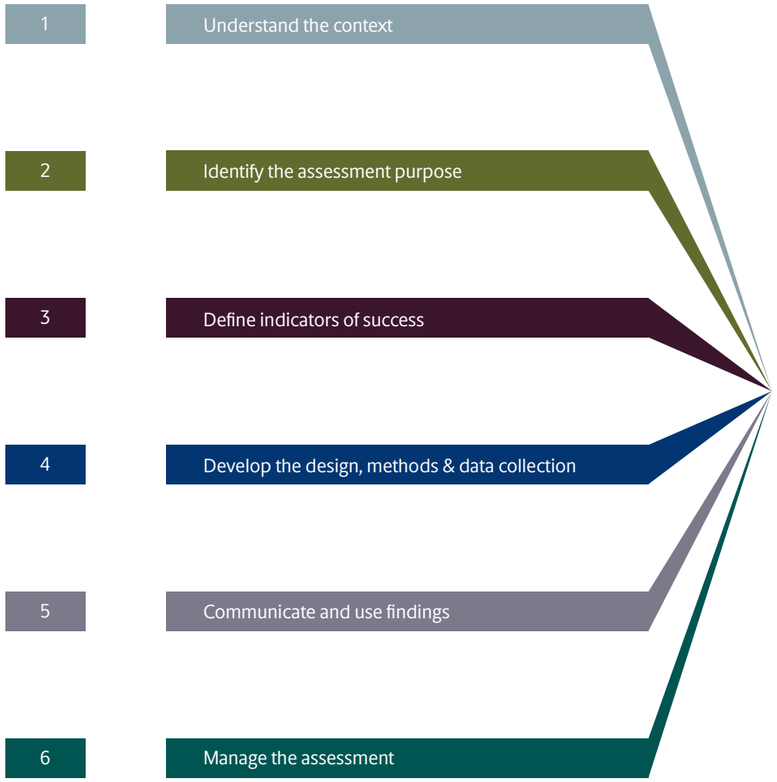
The *Guidelines* aim to assist assessors (evaluators), program managers and other staff in developing and reviewing program-specific plans for assessing research impact and should be applied in conjunction with evaluation standards (see Appendix 1). For example, program managers can use the *Guidelines* to describe the outline of a plan to assessors or to engage with assessors about the content and considerations within a specific assessment plan. Similarly, trained assessors can use the *Guidelines* to enhance the quality of their plans by including several evidence- and practice-based considerations during the development of the plans.

The *RIA Plan* is a document that describes how you intend to assess the program. It also contains future items: how you aim to manage the implementation of the plan and how the assessment results will be communicated to inform decisions about program improvement and optimization of impact. Provided as a template, the *RIA Plan* guides the development of an assessment based on ISRIA and the Course's six blocks and customized to the program of interest.

While the template provides the structure of the *RIA Plan,* the *Guidelines* inform the user of the details that should be considered in each block of the template and hence the *RIA Plan* itself. For each block, the *Guidelines* also provide tips to assist in putting the knowledge gained through the Course's plenary sessions into practice through the *RIA Plan.* The *RIA – Summary Matrix* (provided in Appendix 2 of the *RIA Plan* and in the Toolbox) provides a summary of how you propose to capture data and also serves as a communication tool that can be used with stakeholders. *The RIA – Implementation Work Plan* (provided in Appendix 3 of the *RIA Plan* and in the Toolbox) is a project management tool designed to assist with considerations and communications about the available and/or required timelines, budget and other resources needed for implementing and managing the RIA.

The tools in the Toolbox should be adapted to fit the specific context and assessment; as similar documents in the literature reflect, tools such as these can take several different forms and have different titles. The tools are also intended to be "living documents," with the program-specific content being updated as necessary to reflect the complexities of the program environment. Any such updates that are made during the planning process should be documented in different versions of the *RIA Plan.* This informs the assessment stakeholders of the changes and enables them to reflect on the different iterations of the *RIA Plan.*

Developing a *RIA Plan* requires critical thinking skills and a needs-based approach that reflects the purpose(s) of the assessment. The *Guidelines* are therefore designed as a tool to complement these types of skills and not serve as a replacement for them.



DEVELOPING A RESEARCH IMPACT ASSESSMENT PLAN

Background

The template for the *RIA Plan* is general in nature so that it can be easily tailored to a broad range of contexts and to a variety of assessment stakeholders, such as program staff, funding decision makers and others affected by the program (Note: the word 'program' is used throughout the *Guidelines* and *RIA Plan* to refer to the entity that is being assessed regardless of the level of analysis). It can be applied to different units of analysis, from small projects to multi-site initiatives and can be used when developing an assessment for a single point in the program life cycle or for assessments that will be applied at multiple points throughout a program. By taking these and other factors into account, the *RIA Plan* becomes tailored to a particular program by reflecting the program context, the purpose of the assessment, the assessment questions being asked by stakeholders and additional stakeholder requirements such as the time frame for the assessment.

The *RIA Plan* is intended to be a "living document" that can be updated at any point in the life cycle of the program and even within the assessment time frame itself. This enables program revisions, alterations in the program environment, advancements in stakeholder needs and other changes to be reflected within the *RIA Plan.*

When developing and updating the *RIA Plan,* the assessor may find it beneficial to track different iterations of the *RIA Plan* using a document history table that outlines the date, version, author(s) and a description of the changes that were made (see the Document History table in the *RIA Plan*). Also, once the template for the *RIA Plan* has been filled out, the assessor can delete the rows in each step of the template that contain guidance about what to describe, identify, etc., if preferred.

Glossary

The *Guidelines* contain several key terms that are defined in the *Glossary* in the Toolbox. For convenience, some of the terms frequently used in the *Guidelines* are provided below.

Contribution: Determining if the program contributed to or helped to cause the observed outcomes. [1]
Note – This differs from "Attribution", which looks for the proportion of observed impacts that are caused by a program.

Contribution analysis: Explores attribution through assessing the contribution a program is making to observed results. It sets out to verify the theory of change behind a program and, at the same time, takes into consideration other influencing factors. [This] provides reasonable evidence about the contribution being made by the program. [2] (Mayne)

Impact: Positive and negative, primary and secondary long-term effects produced by an intervention, directly or indirectly, intended or unintended. Note – specific frameworks and tools describe impact differently (e.g., the Research Excellence Framework (REF) defined impact as defined as 'an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia'; CAHS equates impact to outputs and outcomes within the five impact categories of capacity building, advancing knowledge, informing de-

[1] Almquist, A. 2011. CDC coffee break: Attribution vs. contribution. CDC. http://www.cdc.gov/dhdsp/pubs/docs/april_2011_cb.pdf

[2] Mayne, J. 2008.Contribution analysis: An approach to exploring cause and effect. ILAC Brief Number 16. http://www.cgiarilac.org/files/ILAC_Brief16_Contribution_Analysis_0.pdf

cision making, health impact, and social and economic benefits; and logic models equate impact to outcomes, to long term outcomes and/or occurring after outcomes. [3,4,5]

Impact assessment: Assesses the changes that can be [linked] to a particular intervention, such as a project, program or policy, both the intended and unintended ones. Many [impacts of] programs are influenced by external factors, including other national, regional and local programs and policies, as well as economic or environmental conditions. Thus, the [impacts] observed typically reflect a combination of influences. Correspondingly, the central challenge in carrying out effective impact evaluations is to identify the causal relationship between the project, program or policy and [subsequent impacts]. [6,7,8] Note: see Contribution Analysis

Innovation: The implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations [...] A common feature of an innovation is that it must have been implemented. A new or improved product is implemented when it is introduced on the market. New processes, marketing methods, or organizational methods are implemented when they are brought into actual use in the firm's operations. [9]

Outcome: Changes or benefits resulting from activities and outputs. For example, short-term outcomes produce changes in learning, knowledge, attitude, skills or understanding; intermediate outcomes generate changes in behaviour, practice or decisions; and long-term outcomes produce changes in condition. [10]

Output: The products or results of the process. These might include, for example, how many people a project has affected, their ages and ethnic groups or the number of meetings held and the ways in which the findings of the project are disseminated. [11]

Program theory: A description of a program that reflects how and why the set of program activities are intended to lead to outputs and immediate, intermediate and longer term effects over a specified period. [12]

Reach: The beneficiaries and other stakeholders of a [program]. [13]

Research and experimental development (R&D): Creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society and the use of this stock of knowledge to devise new applications. R&D covers three activities: "basic research," "applied research" and "experimental development." [14]

Evaluation Standards

Standards for evaluation practices have been developed by the Joint Committee on Standards for Educational Evaluation (JCSEE) and adopted by the Canadian Evaluation Society, January 2012. [15] The standards are divided into five major categories:

- **Utility Standards:** Intended to increase the extent to which program stakeholders find evaluation processes and products valuable in meeting their needs.
- **Feasibility Standards:** Intended to increase evaluation effectiveness and efficiency.
- **Propriety Standards:** Support what is proper, fair, legal, right and just in evaluations.
- **Accuracy Standards:** Intended to increase the dependability and truthfulness of evaluation representations, propositions and findings, especially those that support interpretations and judgments about quality.

[3] Organisation for Economic Co-operation and Development, Development Assistance Committee (OECD-DAC). 2002. Glossary of Key Terms in Evaluation and Results Based Management. http://www.oecd.org/development/peer-reviews/2754804.pdf

[4] HEFCE, SFC, HEFCW, DELNI (2012b) Main Panel A Criteria (01.2012) http://www.ref.ac.uk/media/ref/content/pub/panelcriteriaandworkingmethods/01_12_2A.pdf

[5] Canadian Academy of Health Sciences (CAHS). 2009. Making an impact: A preferred framework and indicators to measure returns on investment in health research. http://www.cahs-acss.ca/making-an-impact-a-preferred-framework-and-indicators-to-measure-returns-on-investment-in-health-research-8/

[6] ISRIA (2014) (operational definition, see ISRIA Glossary)

[7] World Bank. 2011. Impact evaluation in practice. https://openknowledge.worldbank.org/handle/10986/2550

[8] Government Accountability Office (GAO). 2012. Designing evaluation. (GAO-12-208G). http://www.gao.gov/assets/590/588146.pdf

[9] Organisation for Economic Co-operation and Development & Eurostat (OECD/Eurostat). 2005. Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data (3rd ed.). Paris, France. http://www.oecd.org/innovation/inno/oslomanualguidelinesforcollectingandinterpretinginnovation-data3rdedition.htm

[10] Organisation for Economic Co-operation and Development & Eurostat (OECD/Eurostat). 2005. Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data (3rd ed.). Paris, France. http://www.oecd.org/innovation/inno/oslomanualguidelinesforcollectingandinterpretinginnovation-data3rdedition.htm

[11] World Health Organization (WHO). 2013. Health impact assessment: Glossary of terms used. http://www.who.int/hia/about/glos/en/index.html

[12] United Nations Educational, Scientific and Cultural Organization (UNESCO). 2009. On target: A guide for monitoring and evaluation of community-based projects. http://unesdoc.unesco.org/images/0018/001862/186231e.pdf

[13] Organisation for Economic Co-operation and Development , Development Assistance Committee (OECD-DAC). 2002. Glossary of Key Terms in Evaluation and Results Based Management. http://www.oecd.org/development/peer-reviews/2754804.pdf

[14] OECD (2002) Frascati Manual: proposed standard practice for surveys on research and experimental development, 6th edition. www.oecd.org/sti/frascatimanual

[15] Joint Committee on Standards for Educational Evaluation (2015). http://www.jcsee.org/program-evaluation-standards-statements

- **Evaluation Accountability Standards:** Encourage adequate documentation of evaluations and a metaevaluative perspective focused on improvement and accountability for evaluation processes and products.

DETAILS ABOUT THE SPECIFIC STANDARDS IN EACH OF THESE MAJOR CATEGORIES ARE PROVIDED IN APPENDIX 1.

Characteristics of a Quality RIA Plan

RIA Plans of higher quality have several characteristics, including:

- An accurate, concise and coherent description of the program that provides stakeholders with a sufficient understanding of the program.
- An explanation of the assessment work that is being planned and how that work will be accomplished.
- Consideration of and consistency with, the program's content, the program's stage of development, stakeholders' needs and the assessment purpose.
- Identification and prioritization of assessment questions that can be answered with the proposed indicators and associated data collection and analysis methods.
- Proposed data collection and analysis methods that are feasible and cost effective relative to the assessment timeline, budget and other resources.
- A logical flow with linkages between the assessment elements (i.e., the assessment purpose, the assessment questions and indicators of success) and an assessment design, methods and analysis that best fit the assessment purpose.
- Use of assessment designs as well as data collection and analysis techniques that are based on generally accepted scientific practice.
- An outline or description of the expected reports and communication products that match the purpose of the assessment and are relevant in answering stakeholders' questions.
- A writing style that uses plain language and is clear, concise and understandable to different stakeholder groups.
- Documented inclusion or consideration of known assessment practices in similar programs.
- Documented quality assurance procedures that will be used to establish confidence in the findings, including if the *RIA Plan* will be peer reviewed. These procedures should cover data collection, analysis and reporting.
- Adherence to acceptable professional evaluation and ethical standards.

Assessment Purpose

It is essential that the *RIA Plan* be based on the main purpose(s) of assessment according to the needs of the primary assessment stakeholder(s). In general, there are four main purposes for assessing research impact [16] :

- **Accountability:** To show that money and other resources have been used efficiently and effectively and to hold those using resources to account.
- **Advocacy:** To demonstrate the benefits of supporting research, enhance understanding of research and its processes among policymakers and the public and make the case for policy and practice change.
- **Allocation:** To determine where best to allocate funds in the future, making the best use possible of a limited funding pot.
- **Analysis and Learning:** To understand how and why research is effective and how it can be better supported, feeding into research strategy and decision making by providing a stronger evidence base.

[16] RAND Europe, 2013, Measuring research: A guide to research evaluation frameworks and tools.

Blocks in the RIA Plan

In the template, the *RIA Plan* is divided into six blocks that serve as the foundational process for conducting research impact assessments (Table 1). Several of the blocks are further divided into steps that highlight the essential components within each respective block (Table 2), with the *RIA Plan* being composed of 15 steps. When developing an *RIA Plan*, it is recommended that a step-by-step approach be used that begins with the first step in Block 1 and then progresses through the remaining blocks and steps. However, it is not uncommon for insights gained during the development of one part of the *RIA Plan* to be relevant to a previous block(s) or step(s); this may lead to revisions of the earlier block(s) or step(s) to ensure adequate consistency, flow and linkages throughout the entire *RIA Plan*. It is therefore important to use an iterative approach (i.e., going back and forth between the blocks and steps as necessary) when developing the *RIA Plan* as opposed to a strictly sequential or linear approach.

A sample *RIA Plan* is provided in the Toolbox. The sample is for illustrative purposes only and reflects a fictitious program. It is intended to show what a *RIA Plan* may look like based on the 6 blocks; the content does not reflect a "one size fits all" *RIA Plan*.

TABLE 1: The Six Blocks in the Research Impact Assessment Plan

BLOCKS	DESCRIPTION
What is Research Impact - understand the context 1	• Describes the program to be assessed, including the unit of analysis, stage of development and time frame(s) for assessment. • Describes the program theory using a logic model to articulate how the program is going to achieve its intended impacts. • Identifies the use of a potential impact framework(s) that may be applicable to the program.
Identify the Assessment Purpose 2	• Identifies the stakeholders and their assessment need(s). • Defines the research impact assessment (RIA) purpose and assessment questions in relation to stakeholder needs.
Measure: Define Indicators of Success 3	• Identifies key indicators of success for the assessment questions and selects a balanced set of key indicators.
Develop the Design, Methods and Data Collection 4	• Describes the overall assessment design and/or the design(s) to be used to answer each assessment question. • Identifies the data collection method(s) for each assessment question, including: the method(s) and data source(s); the person(s) responsible for data collection; applicants (sample); and the measurement frequency. • Describes the data analysis methods and data management plans.
Communicate and Use Findings 5	• Identifies and describes the reporting and communication strategies to encourage and support the use of RIA findings by intended users.
Manage Assessments 6	• Outlines the role of a project manager in managing processes and people involved in the assessment and a work plan for managing the RIA. • Identifies and describes any uncertainties of the assessment actions and/or events and outlines the intended response • Describe the quality assurance processes or factors that will be embedded into the assessment

TABLE 2: Steps in the Blocks

BLOCKS	STEPS	
What is Research Impact - understand the context 1	1.1	Program and Assessment Context
	1.2	Program Theory
	1.3	Framework(s)
	1.4	Program Stage, Time Frame and Desired Characteristics of the Assessment
Identify the Assessment Purpose 2	2.1	Which Stakeholders Want the Impact Assessment
	2.2	Assessment Purpose(s)
	2.3	Assessment Questions
Measure: Define Indicators of Success 3	3.1	Indicators of Success
Develop the Design, Methods and Data Collection 4	4.1	Assessment Design
	4.2	Methods
	4.3	Data Collection
	4.4	Analysis
	4.5	Data Management
Communicate and Use Findings 5	5.1	Communicate Findings
	5.2	Use Findings
Manage Assessments 6	6.1	Work Plan
	6.2	Risk Management
	6.3	Quality Assurance

Considerations for Each Block and Step

There are several important elements to consider when completing each block and step in the template for the *RIA Plan* and hence when developing a comprehensive *RIA Plan*. For each block and step, the following provides prompts for these considerations by highlighting the purpose of the block and/or step, the minimal information that is required for a quality *RIA Plan*, the potential sources of information and practical tips.

BLOCK 1: What is Research Impact - understand the context

1.1 Program and Assessment Context

Purpose: Briefly describe the program, including its context and the unit of analysis

Information Required in RIA Plan:

- Background information that highlights the past and current need for the program, including supporting evidence (e.g., research studies, government reports, results of past assessments, etc.)
    - I.e., why was the program developed?
- A description of the baseline, especially if a pre-post design is to be used (see Methods and Data Sources in Block 4, 4.2 Methods for information about pre-post design)
- The relevance of the program
    - E.g., alignment to the organization's strategic plan or government priorities
- A program profile that includes:
    - The goal(s) and objectives of the program
    - The program's scope and complexity
    - The program's unit of analysis
    - Funding and funding sources
    - The program time frame
    - The governance structure of the program
        - When there are partners, describe the roles and responsibilities of each partner in relation to both the program and the assessment
    - A list of the key program stakeholders, including a brief description of their roles and responsibilities in relation to the program
        - Include stakeholders who are responsible for or involved with:
            - Program implementation
            - Program delivery
- Identify and describe the stakeholder population(s) that will be affected by the program (i.e., those that the program intends to influence and/or ultimately provide benefits to)
    - Include the geographical area, age, etc. of the stakeholders that the program intends to influence

Sources: Strategic plan; operational plan; vision and mission statements; program plans and guides; documented assessment requirements; previously completed assessments; and the program theory.

Tips:

- Be specific, clear and concise when describing the program goal(s) and objectives
- Describe how the program will be working with which major partners to benefit what specific stakeholder groups
- For the unit of analysis, consider the following units and think about the level at which the assessment findings will be used:

- Research system
- Field/area of research
- Organization/institution
- Department or program portfolio
- Research group
- Research project
- Individual

- In general, research impact assessments are seldom done at units smaller than the research group; however, this depends on the type of method selected (e.g., case studies can be done at the project level)
- Complete the relevant section in the *RIA Plan – Summary Matrix* (see Appendix 2 in the *Guidelines* and *RIA Plan*)

Research Impact Assessment Plan – Summary Matrix

BLOCK 1	Program:							
BLOCK 2	Purpose of Assessment:							
BLOCK 2		BLOCK 3	BLOCK 4					BLOCK 5
General Assessment Questions	Specific Assessment Questions	Indicators	Methods	Data Sources	Frequency or Timeline	Person Responsible For Data Collection	Baseline	Target Audience(s)

1.2 Program Theory

Purpose: Describe the program logic and anticipated key strategies/actions that the program has for achieving its intended impacts

Information Required in RIA Plan:

- A narrative about how the program is understood to contribute to the intended impacts through its activities, which could be articulated in the form of a narrative (e.g., theory of change statement) or as a table or figure (e.g., program logic model, strategy map, etc.)
- Clearly explain the linkages between the inputs, activities, outputs, reach and impacts
- External factors that influence whether the impacts will be achieved

Sources: Program documentation and stakeholder communication

Tips:

- Use a series of "if...then" statements to develop the program theory (e.g., if these inputs are provided, then the program can complete those activities, etc.)
- When developing the program theory, note any critical assumptions that could jeopardize the program's success as well as any critical success factors. If measured, these factors could provide significant insight into the assessment results.
- Clearly articulate what the program intends to change, especially if a specific framework (see Block 1, 1.3 Framework[s]) is not being used)
- Depending on the program complexity, it may be necessary to have cascading logic models to represent the different units of analysis associated with the program
- The program theory should be written so that a reader who is
- unfamiliar with the program will understand it
    - It can be beneficial to develop a simplified logic model for external stakeholders to highlight the key strategies/actions and intended impacts on which stakeholders

1.3 Framework(s)

Purpose: Identify and briefly describe a potential framework(s) that suits the program context, if applicable

Information Required in RIA Plan:

- Name and description of the framework, including a citation(s) for the framework when possible
- A brief rationale for selecting the framework or, alternatively, for working without a framework
    - I.e., what were the primary reasons for selecting the framework or for not having a framework

Sources: Literature (e.g., evaluation reports for similar programs)

Tips:

- Identify the framework(s) used by similar programs and/or by the primary assessment stakeholders
- When possible, endeavour to consider and/or use a common framework with the key stakeholders
- If proceeding without a framework, ensure that the change(s) that the program is/was intended to make are clearly described (see Block 1, 1.2 Program Theory)

1.4 Program Stage, Time Frame and Desired Characteristics of the Assessment

PROGRAM STAGE AND TIME FRAME

Purpose: Describe the program's stage of development and time frame

Information Required in RIA Plan:

- The stage of development that the program is currently in and the time frame of the program. For example, consider a program that is intended to operate for a seven year period:
    - **Early:** the program is currently being developed or was recently developed and implemented
        - This typically coincides with a time frame in the first 0-3 years of a program
    - **Stable:** the program has been operational for several years
        - This typically coincides with a time frame between 3–5 years after the implementation of the program
    - **Mature:** the program is well established and has been operational for a prolonged time
        - This typically coincides with a time frame of more than 5 years after the implementation of the program

Sources: Program plans and program guides

Tips:

- The stage of development is an important consideration because programs tend to be dynamic and evolve over time. Therefore, consider including a plan to collect baseline information either before or early in the program life cycle while also thinking about more distal impacts.
- Reflect on the program's stage of development when considering the type of assessment that is feasible (see below for Desired Characteristics of the Assessment)
    - E.g., a summative evaluation cannot be used to assess a recently developed program but a formative or implementation evaluation could
- Please note that the "typical" time frames in relation to program stages of development are approximate and will vary depending on the program duration and purpose of the assessment

DESIRED CHARACTERISTICS OF THE ASSESSMENT

Purpose: Identify the desired characteristics that are required for the assessment, taking into consideration the program's stage of development, the needs of the primary assessment stakeholders and the assessment purpose

Information Required in RIA Plan:

- The desired characteristics of the assessment, including:
    - If it is an assessment of a single program or a comparative assessment of different programs

- The type of evaluation being planned
  - There are different types of evaluations that can inform the overall assessment of impact, including (see Glossary):
    - Implementation
    - Formative
    - Summative
- The nature of the assessment in terms of being quantitative, qualitative or mixed (both quantitative and qualitative)
- Whether the assessment is conducted pre-program (ex-ante), during the program (ex-durante) or after the program (ex-post)
- If the program will be assessed at a single point in time (cross-sectional) or over multiple years (longitudinal)
- The level of evidence (i.e., rigour or defensibility) that is required by the stakeholders (e.g., high to low) (see Block 4, 4.1 Assessment Design)
- A summary of the resource burden of the assessment, including costs and the assessor's time and effort (see Block 6, Manage the Assessment)
- The time constraints for completing the assessment

Sources: Program plans; program guides; previous assessments; assessment requirements; and stakeholder communications

Tips:

- Typically, more can be done during the assessment if program-related data has been collected previously
- Impact assessment implies that there has been adequate time for the impacts to have occurred. However, the challenge of relating the program activities and outputs to the impacts progressively increases with the passage of time (attribution and contribution issues; see Glossary).
- Notwithstanding the above, waiting a prolonged time (e.g., 10 to 20+ years) to assess impacts can offer interesting insights for policy
  - Historical (backward) tracing is another means of assessing impacts over a considerable period of time
- Timeline requirements for the assessment as well as budget and other resource constraints frequently have implications on the type of assessment that can be undertaken and often necessitate tradeoffs between quality, cost and time. Resources and timelines should therefore be taken into consideration when identifying the type of assessment. Early consideration of these factors also helps to focus and scope the assessment in Block 2.

MY NOTES

BLOCK 2: Identify the Assessment Purpose

2.1 Which Stakeholders Want the Impact Assessment

Purpose: Identify and describe the stakeholders (i.e., people and/or organizations) who will be the primary users of the assessment and describe the need(s) that each of these stakeholders has for the RIA (i.e., who needs to know what and why?)

Information Required in RIA Plan:

- The level of influence that each primary assessment stakeholder has on the program
- The frequency for RIA required by each primary assessment stakeholder and/or the time-lines or points in the program cycle when the information is needed, for example:
    - Frequency: annually, every other year, every 3 to 5 years, etc.
    - Timelines: at time of admission, discharge and/or follow-up, etc.

Sources: Stakeholder analysis; assessment requirements; and meetings with senior managers or program staff

Tips:

- Identify the subset of key program stakeholders (see Block 1, 1.1 Program and Assessment Context) who also represent primary assessment stakeholders
- The primary users of the assessment often include:
    - Funders
    - Donors
    - Academic institutions
    - Researchers
    - Organizations
    - Industry
    - Program managers
    - Patients/public
- It may be necessary to prioritize the primary assessment stakeholders if there are multiple stakeholders with different information needs
- Prioritization can be done in several ways, including but not limited to the order of stake-holder importance, influence and/or closeness to the program as well as through stakehold-er mapping processes (for examples of approaches, see: http://www.brainmates.com.au/brainrants/some-practical-tools-for-stakeholder-management)

2.2 Assessment Purpose(s)

Purpose: Highlight the main purpose(s) for the RIA based on how the primary assessment stakeholders intend to use the assessment results

Information Required in RIA Plan:

- The main purpose(s) for the assessment (i.e., accountability, advocacy, allocation and/or analysis and learning) (see the subsection titled Assessment Purpose in the *Guidelines*)
- The secondary or additional purposes for the assessment, if any
- A rationale for the identified purpose(s) that reflects how the primary assessment stakeholders intend to use the results

Sources: Program documents; governance documents; assessment requirements; and communication with stakeholders

Tips:

- An impact assessment can cover multiple purposes but multiple purposes, as addressed through a combined or comprehensive approach, are usually more costly and difficult. Therefore, it is important to consider the budget, resources and timeline constraints of the proposed assessment when identifying the purpose(s) of the RIA with the primary assessment stakeholders. If necessary, the purpose(s) may need to be prioritized with the primary assessment stakeholders.
- Complete the relevant section in the *RIA Plan – Summary Matrix* (see Appendix 2 in the *Guidelines* and *RIA Plan*)

Research Impact Assessment Plan – Summary Matrix

BLOCK 1	Program:							
BLOCK 2	Purpose of Assessment:							
BLOCK 2		BLOCK 3	BLOCK 4					BLOCK 5
General Assessment Questions	Specific Assessment Questions	Indicators	Methods	Data Sources	Frequency or Timeline	Person Responsible For Data Collection	Baseline	Target Audience(s)

2.3 Assessment Questions

GENERAL ASSESSMENT QUESTIONS

Purpose: Identify the general (i.e. broad, overarching) assessment questions that the primary assessment stakeholders need answered in relation to the main purpose(s) of the assessment

Information Required in RIA Plan:

- General assessment questions in order of priority

Sources: Program documentation; stakeholder needs assessment; stakeholder communications; and assessment requirements

Tips:

- The assessment questions need to be responsive to the identified purpose(s) for the assessment
- Depending on the availability of resources, it may be necessary to prioritize the assessment questions and not respond to all the assessment questions at one time
- One common group of general assessment questions are those that relate to the impacts that have occurred or are anticipated to occur, such as:
    - What impacts have occurred?
    - What application, adoption or progression toward social or economic impacts has occurred?
    - What health/other sector social or economic impacts have occurred?
- Other typical general assessment questions include:
    - How do observed impacts compare to what was expected (a target, standard, etc.)?
    - What impact can be attributed to the program?
    - How do the program impacts compare with similar programs?
    - How might impact be improved?
- The assessment questions can be informed by the impact categories of interest to the primary assessment stakeholders, for example:
    - **Research Impacts:** Areas of focus where the program hopes to affect how the research is done
        - E.g., increased research capacity, new research tools, more collaboration with practitioners, etc.
    - **Application/ Adoption Impacts:** Specific affects commonly coming after the research impacts and before the health, social, or economic impacts
        - E.g., used in the development of a new product or to affect change in policy, clinical practice, etc.
    - **Health, Environmental, Social or Economic Impacts:** Areas beyond the research community that the program hopes to affect
        - E.g., health status or economic development
- Complete the relevant section in the *RIA Plan – Summary Matrix* (see Appendix 2 in the *Guidelines* and *RIA Plan*)

SPECIFIC ASSESSMENT QUESTIONS

Purpose: Identify a set of specific assessment questions for each general assessment question or, depending on resource availability, a shortlist of prioritized general assessment questions

Information Required in RIA Plan:

- For each general assessment question, specific assessment questions that align to:
  - The framework(s) being used (see Block 1, 1.3 Framework[s])
  - The purpose(s) of the assessment (Block 2, 2.2 Assessment Purpose(s))
  - The impacts of interest to the primary assessment stakeholders, where applicable (see General Assessment Questions in Block 2, 2.3 Assessment Questions)
  - The program theory (see Block 1, 1.2 Program Theory)
- Specific assessment questions that relate to any remaining prioritized general assessment questions (e.g., *How do we compare?*)

Sources: Program documentation; stakeholder communications; assessment requirements; and the program theory

Tips:

- When answered, the specific assessment questions fulfill the main purpose(s) of the assessment
- Existing or requested indicators can be used to identify specific assessment questions (e.g., Has X happened?)
- If using a program logic model, some specific assessment questions can often be generated by asking "if...then" questions when moving from outputs to a sequence of impacts

- Examples of specific assessment questions that relate to **research impacts:**
  - Has high-quality research been done?
  - Has the program advanced knowledge and published?
  - Have new research tools, techniques, facilities been developed or built?
  - Has the program trained graduate students, workforce?
  - Have new collaborations or communities of practice been formed?
  - How vital is the research environment?
  - Has the research informed or changed the research agenda?
  - Is the research esteemed by peers (e.g., awards)?

- Examples of specific assessment questions that relate to **adoption/implementation impacts:**
  - Have desired changes in knowledge, attitudes, behaviour occurred?
  - Has funding been leveraged?
  - Has the program contributed or added to the knowledge base, information production/collection, storage, utilization?
  - Have our research results informed industry R&D decisions, product development, and/or commercialization?
  - Have the research findings informed government policy, programs?
  - Have the research findings informed public opinion, advocacy?
  - Have the research findings influenced sector-specific changes (e.g., changes in clinical practice)?
- Examples of specific assessment questions related to **health, environmental, social and economic impacts:**
  - Have our research results helped improve health status?
  - Have our research results helped increase sales, jobs, lower costs, etc.?
- Complete the relevant section in the *RIA Plan – Summary Matrix* to ensure that the specific assessment questions align with the general assessment questions (see Appendix 2 in the *Guidelines* and *RIA Plan*)

MY NOTES

MY NOTES

BLOCK 3: Measure: Define Indicators of Succes

3.1 Indicators of Success

Purpose: Identify indicators for each specific question, ensuring that the indicators relate to the framework (if used), logic model and the needs of the primary assessment stakeholders

Information Required in RIA Plan:

- A smaller balanced set of key (most important) indicators that will answer the priority assessment questions while balancing perspectives
    - "Balanced" means having a set of indicators across the program theory (e.g., logic model) in order to link the impacts to the activities and to decrease the perverse effects that can accompany measurement
- The key indicators must be measurable, for example:
    - Number
    - Percent change
    - State of being as measured by an expert panel or survey
    - Change in perception based on key informant interviews, etc.

Sources: Program theory; existing indicators or scorecard (internal and external); previous assessments; organizational reports; and program management reports

Tips:

- To identify a balanced set of key indicators:
    - Consider the availability of the data
    - Link the indicators to the desired impacts and strive to link at least one indicator to the organizational goals
    - Select indicators that communicate well (i.e., indicators that are simple to report and understandable so as to enhance the stakeholders' understanding of how the program is doing)
    - Ensure that the benefits of measuring the indicator are greater than the costs
    - Avoid indicators that are vague, vulnerable to distortion, or that may lead to inappropriate behaviour (i.e., negative perverse effects); if unavoidable, offset these indicators with other indicators in the set
        - Perverse effects are unintended outcomes, either positive or negative, that were not foreseen or intended to develop from a purposeful action
- The balanced set of indicators needs to be capable of telling a brief, convincing impact story as well as driving the assessment the right way by:
    - Measuring the program's key activities and intended impacts
    - Covering all aspects of the program theory
    - Fulfilling the information needs of the primary assessment stakeholders
- When selecting indicators, *always* think through the goals and objectives of the program and the strategies for achieving them (as outlined in Block 1, 1.2 Program Theory)
- Complete the relevant section in the *RIA Plan – Summary Matrix* to ensure that the indicators align with the specific assessment questions (see Appendix 2 in the *Guidelines* and *RIA Plan*)

MY NOTES

MY NOTES

BLOCK 4: Develop the Design, Methods and Data Collection

4.1 Assessment Design

Purpose: Identify and describe the overall type of design that will be used for the assessment and/or the design(s) to be used to answer each specific assessment question

Information Required in RIA Plan:

- The assessment design that will be used for each specific assessment question

COMMON ASSESSMENT DESIGNS

	Likely Methods	Common Designs
Outcome Only	Is the program achieving its desired outcomes or having other important side effects?	• Compare program performance to law and regulations, program logical model, professional standards, or stakeholder expectations • Assess change in outcomes for participants before and after exposure to the program • Assess differences in outcomes between program participants and non-participants
Impact - Attribution	Is the program responsible for (effective in) achieving improvements in desired outcomes?	• Compare (change in) outcomes for a randomly assigned treatment group and a non-participating control group (randomized controlled experiment) • Compare (change in) outcomes for program participants and a comparison group closely matched to them on key characteristics (comparison group quasi-experiment) • Compare (change in) outcomes for program participants before and after the intervention, over multiple points in time with statistical controls (single group quasi-experiment)

Source:
U.S. Government Accountability Office (GAO). 2012. DESIGNING EVALUATIONS: 2012 Revision, GAO-12-208G.

Sources: Previous similar assessments; assessment requirements; and evaluation textbooks and guides

Tips:

- Take into consideration the rigour required by the primary assessment stakeholder(s) as well as the timelines, budget and other resources available for the assessment
- The simplest and least rigorous design is comparing to someone's expectations
- The most rigorous design is a random controlled trial (RCT) as is done when testing pharmaceuticals; however, the use of a RCT in the context of RIA is very challenging and a pre-post design with comparison groups is more feasible
- Remember to compare apples to apples by carefully selecting a comparison group(s), if that is the appropriate design selected

4.2 Methods

METHODS AND DATA SOURCES

Purpose: Identify and select the methods that are most appropriate for answering the priority assessment question(s) given the specified design(s) and that will generate credible evidence at the required level of rigour or defensibility.

COMMON DESIGN AND METHODS

Stronger Evidence ↓

Assessment Question	Common Designs	Likely Methods
Is the program achieving its desired outcomes or having other important side effects?	Compare program performance to standard or expectations	• Bibliometric analysis • Expert review; case study • Surveys or interviews • Anecdotes; self-reporting
	Assess change before and after the program intervention	• Pre, post bibliometrics • Pre, post, or post only surveys with statistical analysis
Is the program responsible for (effective in) achieving improvements in desired outcomes?	Assess differences between participants and non-participants	• Surveys, interviews
	Compare (change in) outcomes for participants and a comparison group	• Can be done with bibliometrics • Case study • Surveys
	Compare (change in) outcomes for participants before and after the intervention, over multiple points in time with statistical controls	• Econometric study using data on key variables and possibly interviews

Sources:
U.S. GAO 2012; RAND Measuring Research 2013 review of each method/tool; U.S. Department of Energy, R&D Methods Guide; and evaluation text books.

Information Required in RIA Plan:

- For each assessment question and associated design, the method(s) that will be used for data collection
- The source of data for each method

Sources: Previous similar assessments; assessment requirements; and evaluation textbooks and guides

Tips:

- Consider the pros and cons of different methods and select the best method given the purpose of the assessment and level of rigour or defensibility required
- Identify the data source(s) for each method and consider if the data source:
    - Is available either internally in the organization or external to the organization
        - E.g., existing questionnaires, Web of Science, etc.
    - Needs to be developed, purchased or modified
    - Is a primary data source (i.e., the data that will be collected directly during the assessment) or a secondary data source (i.e., data collected by others that is available for free or for purchase)
- Plan ahead! Baseline data is needed prior to or early in the program if a pre-post design is to be used (see Block 1, 1.1 Program and Assessment Context and Methods and Data Sources in Block 4, 4.2 Methods)
- Complete the relevant sections in the *RIA Plan – Summary Matrix,* ensuring that the methods and data sources align with the indicators (see Appendix 2 in the *Guidelines* and *RIA Plan*)

FREQUENCY AND TIMELINE

Purpose: For each specific assessment question and its associated key indicator(s), identify the frequency and/or timeline for data collection after taking the data sources and associated respondents into consideration

Information Required in RIA Plan:

- The frequency and/or timeline(s) for data collection for each key indicator, for example:
    - Annually collect publications of all full-time technical faculty
    - Interview a minimum of 12 subject matter experts, once each, during the program
    - Distribute questionnaires to a random sample of grantees twice during the program, specifically once at start and once at the end of the program

Sources: Program records of partners and participants; subject matter experts; and evaluation guides

Tips:

- Refer to Block 2, 2.1 Which Stakeholders Want the Impact Assessment when considering the frequency and/or timeline(s) for data collection
- The respondents are the population of interest or, if appropriate, a representative sample of that population
- Be alert to the administration burden on the respondents and use best efforts to minimize the burden

    - E.g., ask all the questions at once and limit it to the most critical questions to have answered
- When possible, consider adding the assessment questions to an existing internal or external data collection effort
    - E.g., add the question of interest to an existing internal or external questionnaire
- Use the assessment design(s) identified in Block 4, 4.1 Assessment Design to determine how frequently data needs to be collected and whether it needs to be linked across different periods of time
- Develop a protocol for collecting data for each group of respondents (e.g., clients, researchers, patients, etc.)
- Complete the relevant section in the *RIA Plan – Summary Matrix* (see Appendix 2 in the *Guidelines* and *RIA Plan*)

4.3 Data Collection

Purpose: Describe the logistics of data collection

Information Required in RIA Plan:

- For each indicator and associated data source, the person(s) responsible for gathering the data and details about how the data will be collected as per the Data Collection Checklist (see below)

DATA COLLECTION CHECKLIST

- The person(s) responsible for data collection has been identified
- Data collection procedures and guidelines were established
- Data collection procedures and guidelines were developed for cultural appropriateness
- Data collection instruments were translated (as appropriate)
- Data collection instruments were pre-tested and modified as necessary
- Data collection personnel were trained to ensure consistency in data collection
- Appropriate permissions were obtained
- Ethical considerations and approvals were obtained, as appropriate

Sources: Available program administrative data, prior assessment data, etc.

Tips:

- Ensure that the data collection plans are clear, concise and comprehensive
- If required, bring in an expert on data collection to optimize the quality of the data and to feasibly answer the assessment questions within any known constraints
- Complete the relevant section in the *RIA Plan – Summary Matrix* to ensure that there is a person(s) responsible for each of the methods and data sources (see Appendix 2 in the *Guidelines* and *RIA Plan*)

4.4 Analysis

Purpose: Identify the strategy and associated methods that will be used for data analysis

Information Required in RIA Plan:

- A description of the analytical strategy including the analytical methods that will be used and how the analysis will be appropriate for generating credible evidence that answers the assessment questions as per the Data Analysis Quality Assurance Checklist (see below)

DATA ANALYSIS QUALITY ASSURANCE CHECKLIST

1. The analysis is matched to the method(s) and compensates for weak information in any one area
2. Data is cleaned and adequately prepared for analysis
3. Data analysis:
    a) Provides a balance in the strong views of proponents and opponents
    b) Includes a balance of quantitative and qualitative data whenever possible
    c) Reveals new aspects of the program operations and outcomes
4. The validity and reliability of the results have been verified through:
    a) Data variety by source, type and participants
    b) Triangulation (cross-validation and reinforcement across each method/data source)
5. The person(s) responsible for data analysis are identified as well as their association with the program (e.g., external or internal experts; program staff; beneficiaries, etc.)

Sources: Evaluation textbooks and guides

Tips:

- Ensure that the analytical strategy is clear, concise and comprehensive
- Consider the typical use, defensibility and relative cost when determining the best analysis to use
- If necessary, acquire the assistance of a skilled analyst
- Ensure suitable measures are identified if analysis includes benchmarking or other comparators (i.e, apples to apples)
    - Benchmarks typically come from outside of the program (i.e., external source) and reflect the level of performance that another program has achieved for the same measure
    - A baseline is the average or starting level of performance of a measure for the program that the current and/or future level of performance will be compared to

4.5 Data Management

Purpose: Identify and describe how the data will be managed as well as the logistics of data management

Information Required in RIA Plan:

- Logistical details about data management that includes the elements outlined in the Data Management Checklist (see below)

DATA MANAGEMENT QUALITY ASSURANCE CHECKLIST

1. Data format is indicated (e.g., alpha, numeric, date format, etc.)
2. Name of the organization holding the data is identified
3. Data availability is indicated (e.g., currently available; aspirational; etc.)
4. Data security is highlighted (e.g., data is stored on a secure internal server; data backed-up; etc.)
5. Information technology factors are listed (e.g., software requirements)
6. Data quality control process and procedure are outlined
7. Roles and responsibilities/accountability of data management are provided

Sources: Program documentation; program and assessment requirements; and data management plans

Source: Adapted from Scott Chaplowe, AEA eStudy 2013

Tips:

- Store and retain impact assessment data according to legal requirements as well as organizational policies and procedures
- Store and manage the data so that it is easily accessible by users and has protected access through the use of tools like a stakeholder security table
- Indicate if and how subsequent analysis will occur, especially if it is needed to verify findings or to inform future program decisions

MY NOTES

BLOCK 5: Communicate and Use Findings

5.1 Communicate Findings

Purpose: Identify who needs to know what, in what format and who will deliver the assessment findings given the target audience for the assessment findings

Information Required in RIA Plan:

- A reporting plan that fits the purpose and scope of the assessment and identifies:
    - For each target audience, the specific reporting needs (including report format) and the information that will be reported
    - The timing of reporting, including reporting commitments and how they will be met
    - Dissemination and knowledge translation strategies and mechanisms that are tailored to the information requirements of the target audience
    - The person(s) responsible for preparing the reports
    - The person(s) responsible for submitting the reports, to whom and by when

Sources: Program and assessment requirements; communications with the primary assessment stakeholders about the intended use of the RIA findings; and communication documents

Tips:

- When reporting information to target audiences, consider that:
    - Reports are important for diffusing knowledge and tend to be the most used mechanism for reporting on impact assessments
    - It is recommended to report findings to the manager of the program being assessed during the assessment so that there are no surprises, particularly if there are negative findings
- Avoid using a single report format for multiple target audiences if different reports types are more suitable or meaningful for the individual target audiences, for example:
    - Executive summary
    - Technical report
    - Progress report
    - Impact narratives
    - Impact stories
- Recommendations in the report should be linked to the evidence collected and judged against standards, codes of practice, criteria and/or the values of the primary assessment stakeholders
- Key dissemination mechanisms include:
    - Print materials
    - Internet (e.g., social media) communications
    - Live presentations
    - Telephone communications
    - Radio communications
    - Television and filmed presentations

    - Networks
- Consider ways to lessen the possible misuse of the report(s)
- Complete the relevant section in the *RIA Plan – Summary Matrix*, identifying the target audience for each question and/or indicator (see Appendix 2 in the *Guidelines* and *RIA Plan*)
- For the primary assessment stakeholders, consider preparing comprehensive reports using a 1:3:25 guideline:
    - The first page is main messages
    - An executive summary is provided on the next three pages
    - The findings are presented in plain language after the executive summary and in no more than 25 pages
        - I.e., language that somebody who is not trained in research would understand

- Impact narratives are a description of the research program that outlines the key contributions of that research to inform decision making for health and other domain specific impacts as well as social and economic impacts
    - Impact narratives are best written around a framework that groups the impacts into several broad categories
    - Key components of the impact narrative include:
        - What the research was
        - How the research led to impact
        - What the impact was and who benefitted from it
        - Evidence of the impact
        - How the claims of impact can be verified
        - Research users who may be approached for corroboration

Source: Canadian Health Services Research Foundation (CHSRF). 2001. Communication Notes: Reader-friendly writing: 1: 3: 25. http://www.cfhi-fcass.ca/Migrated/PDF/CommunicationNotes/cn-1325_e.pdf

5.2 Use Findings

Purpose: Identify the potential future uses of the assessment findings, if appropriate

Information Required in RIA Plan:

- If appropriate, identify the potential future uses of the report(s) such as:
    - Holding organizations accountable
    - Informing the allocation of resources
    - Analyzing progress and identifying areas for improvement
    - Providing information to advocate for lessons learned for future assessments

Sources: Program and assessment requirements; communications with the primary assessment stakeholders about the intended use of the RIA findings; and communication documents

Tips:

- Use of the findings feeds into lessons learnt, thereby informing assessors and primary assessment stakeholders about how to better optimize impacts. Consequently, the goal is for the assessment report to be used to inform strategic and business planning
- Stakeholders should be engaged early in the assessment process (including during planning) and as relevant during the process to increase the chances of the findings being used

MY NOTES

MY NOTES

BLOCK 6: Manage the Assessment

6.1 Work Plan

Purpose: Describe how the assessment will be implemented and managed.

Information Required in RIA Plan:

- A detailed work plan for the assessment that includes the overall budget, resources and timelines allocated to the RIA as well as:
  - Major tasks involved
  - Start and end dates for each task
  - The type/names of resources allocated to each task, including if the resources are internal (in-house resources), external (contractors) or both
  - For external resources, a description of what the RIA requires from them and the budget available to achieve this
- A description of the potential risks for the assessment and the proposed risk mitigation strategies
- Considerations and factors embedded into the assessment for quality assurance

Sources: Existing program management and/or administrative tools in the organization; knowledge of the budget and resources available; and knowledge of potential external resources that could be used to support the assessment

Tips:

- Carefully consider the following when developing the work plan for the assessment:
  - It is important to ensure that the assessment has sufficient resources available to meet the needs it was set up to address. As a general rule of thumb, it has been suggested that spending between 1 and 5% of the program budget to evaluate is not unreasonable (Maredia, Byerlee, et al., 2000; Gibbons and Georghiou, 1987).
  - When the available resources do not match the needs for the assessment, engage the primary assessment stakeholder(s) in discussions about what could be realistically achieved with the available resources and what additional resources would need to be allocated for the desired impact assessment
  - Avoid making the work plan more complex than it needs to be; it is not uncommon to see too much of an assessment's time devoted to creating and maintaining the "perfect" work plan
- Some key tools available for work planning are:
  - Microsoft Excel
  - Software for creating Gantt charts
  - Basecamp
  - Microsoft Project
- Be prepared to be flexible in the work planning as it is likely that situations will arise during the assessment that had not been predicted prior to the assessment kick-off
- Complete the *Research Impact Assessment – Implementation Work Plan* (see Appendix 3 in the *Guidelines* and *RIA Plan*)

6.2 Risk Management

Purpose: Identify any uncertainties of the assessment actions and/or events, whether a positive opportunity or a negative threat and outline the intended response

Information Required in RIA Plan:

- A description of the risk that includes what the uncertainty is, the likelihood (low, medium or high) of it happening, and the consequence that could arise if it actually does happen
- A description of the action that will be taken in response to the identified risk

Sources: Existing program management and administrative records; communications with the primary assessment stakeholders and others; communication documents; subject matter experts; and knowledge of potential external resources that could be used to support the assessment

Tips:

- Risk management needs to be considered and addressed not only as part of the plan, but during implementation of the assessment and after the assessment.
- Risk management is a combination of assessing the risk and determining the intended response
    - Intended responses typically include:
        - Tolerate the risk
        - Treat the risk in an appropriate way to mitigate the risk to an acceptable level or actively taking advantage of it (i.e., regarding the uncertainty as an opportunity to gain a benefit)
        - Transfer the risk
        - Terminate the activity or initiative that is creating the risk
- It is beneficial to develop at table to outline the identified risks, their likelihood, the risk response, the mitigation strategies (if appropriate) and the anticipated outcome based on the risk response

6.3 Quality Assurance

Purpose: Describe how quality assurance processes or factors will be embedded into the assessment

Information Required in RIA Plan:

- For overall quality assurance, provide a description of the following:
    - Completeness of data and processes to be used for missing data
    - Accuracy of data, including checks for outliers, negative dates, etc.
    - Reliability checks (e.g., inter-rater reliability test for congruity)
    - Validity checks to ensure you are measuring what you think you are measuring
    - Procedures/actions to be taken to ensure timely information to inform stakeholder decisions

Sources: Evaluation textbooks and guides

Tips:

- Quality assurance needs to be considered and addressed not only as part of the plan, but during implementation of the assessment and after the assessment.
- Mixed methods serve as a form of quality assurance in the assessment as this triangulates and validates results across multi-methods and data sources (as appropriate to the assessment questions)
- A number of steps can be taken to ensure accuracy of data collection for different methods
    - E.g., for a survey, you can conduct a pilot of the survey and develop a follow-up strategy to increase the response rate
- Develop a peer review mechanism (internal and/or external) to have the *RIA Plan* or specific blocks or steps within it reviewed by an individual(s) with the required expertise but who is/are also not involved in the program

MY NOTES

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APPENDIX

1

APPENDIX 1

EVALUATION STANDARDS

The following standards, which were developed by the Joint Committee on Standards for Educational Evaluation (JCSEE) and adopted by the Canadian Evaluation Society, January 2012, are provided with the permission of the JCSEE. [17]

[17] Joint Committee on Standards for Educational Evaluation (2015). http://www.jcsee.org/program-evaluation-standards-statements

Utility Standards (U)

The utility standards are intended to increase the extent to which program stakeholders find evaluation processes and products valuable in meeting their needs.

- **U1 Evaluator Credibility:** Evaluations should be conducted by qualified people who establish and maintain credibility in the evaluation context.
- **U2 Attention to Stakeholders:** Evaluations should devote attention to the full range of individuals and groups invested in the program and affected by its evaluation.
- **U3 Negotiated Purposes:** Evaluation purposes should be identified and continually negotiated based on the needs of stakeholders.
- **U4 Explicit Values:** Evaluations should clarify and specify the individual and cultural values underpinning purposes, processes and judgments.
- **U5 Relevant Information:** Evaluation information should serve the identified and emergent needs of stakeholders.
- **U6 Meaningful Processes and Products:** Evaluations should construct activities, descriptions and judgments in ways that encourage participants to rediscover, reinterpret or revise their understandings and behaviors.
- **U7 Timely and Appropriate Communicating and Reporting:** Evaluations should attend to the continuing information needs of their multiple audiences.
- **U8 Concern for Consequences and Influence:** Evaluations should promote responsible and adaptive use while guarding against unintended negative consequences and misuse.

Feasibility Standards (F)

The feasibility standards are intended to increase evaluation effectiveness and efficiency.

- **F1 Project Management:** Evaluations should use effective project management strategies.
- F2 Practical Procedures: Evaluation procedures should be practical and responsive to the way the program operates.
- **F3 Contextual Viability:** Evaluations should recognize, monitor and balance the cultural and political interests and needs of individuals and groups.
- **F4 Resource Use:** Evaluations should use resources effectively and efficiently.

Propriety Standards (P)

The propriety standards support what is proper, fair, legal, right and just in evaluations.

- **P1 Responsive and Inclusive Orientation:** Evaluations should be responsive to stakeholders and their communities.

- **P2 Formal Agreements:** Evaluation agreements should be negotiated to make obligations explicit and take into account the needs, expectations and cultural contexts of clients and other stakeholders.
- **P3 Human Rights and Respect:** Evaluations should be designed and conducted to protect human and legal rights and maintain the dignity of participants and other stakeholders.
- **P4 Clarity and Fairness:** Evaluations should be understandable and fair in addressing stakeholder needs and purposes.
- **P5 Transparency and Disclosure:** Evaluations should provide complete descriptions of findings, limitations and conclusions to all stakeholders, unless doing so would violate legal and propriety obligations.
- **P6 Conflicts of Interests:** Evaluations should openly and honestly identify and address real or perceived conflicts of interests that may compromise the evaluation.
- **P7 Fiscal Responsibility:** Evaluations should account for all expended resources and comply with sound fiscal procedures and processes.

Accuracy Standards (A)

The accuracy standards are intended to increase the dependability and truthfulness of evaluation representations, propositions and findings, especially those that support interpretations and judgments about quality.

- **A1 Justified Conclusions and Decisions:** Evaluation conclusions and decisions should be explicitly justified in the cultures and contexts where they have consequences.
- **A2 Valid Information:** Evaluation information should serve the intended purposes and support valid interpretations.
- **A3 Reliable Information:** Evaluation procedures should yield sufficiently dependable and consistent information for the intended uses.
- **A4 Explicit Program and Context Descriptions:** Evaluations should document programs and their contexts with appropriate detail and scope for the evaluation purposes.
- **A5 Information Management:** Evaluations should employ systematic information collection, review, verification and storage methods.
- **A6 Sound Designs and Analyses:** Evaluations should employ technically adequate designs and analyses that are appropriate for the evaluation purposes.
- **A7 Explicit Evaluation Reasoning:** Evaluation reasoning leading from information and analyses to findings, interpretations, conclusions and judgments should be clearly and completely documented.
- **A8 Communication and Reporting:** Evaluation communications should have adequate scope and guard against misconceptions, biases, distortions and errors.

Evaluation Accountability Standards (E)

The evaluation accountability standards encourage adequate documentation of evaluations and a metaevaluative perspective focused on improvement and accountability for evaluation processes and products.

- **E1 Evaluation Documentation:** Evaluations should fully document their negotiated purposes and implemented designs, procedures, data and outcomes.
- **E2 Internal Metaevaluation:** Evaluators should use these and other applicable standards to examine the accountability of the evaluation design, procedures employed, information collected and outcomes.
- **E3 External Metaevaluation:** Program evaluation sponsors, clients, evaluators and other stakeholders should encourage the conduct of external metaevaluations using these and other applicable standards.

APPENDIX

2

APPENDIX 2

RESEARCH IMPACT ASSESSMENT PLAN

– SUMMARY MATRIX

The *Research Impact Assessment (RIA) Plan – Summary Matrix* is a valuable tool for communicating the critical components of the assessment to stakeholders in a comprehensive and concise manner. It also serves as an essential guide when implementing the data capture of the *RIA Plan*. It is typically included as an appendix to the *RIA Plan*.

What is the Summary Matrix?

The *Summary Matrix* highlights important components of the *RIA Plan* as developed through the six blocks of the International School on Research Impact Assessment (ISRIA) and the regional Training Course in Research Impact Assessment hosted by Alberta Innovates. These blocks are also reflected in the *RIA Plan – Guidelines*. As the *Summary Matrix* is designed to accompany the *RIA Plan* and not replace it, it should be referenced in the main body of the *RIA Plan* and included as an appendix.

The *Summary Matrix* links the purpose-driven assessment questions with the indicators used to answer them given the available resources and time. For each indicator, the *Summary Matrix* outlines the essential implementation details, including:
The proposed data collection methods that will be used

- The data sources
- Who will be collecting the data
- When the data will be collected (frequency and/or timeline)
- The baseline data that will be used
- The audiences who need the information

As with any tool, the benefits and challenges of using the *Summary Matrix* should be taken into consideration.

Benefits	Challenges
• Concise summary of the *RIA Plan* • Clearly links aspects of the *RIA Plan* together • Highlights *who* needs to be engaged for *what* data and how often • Communicates the RIA approach to stakeholders in an easily accessible format • Can be used to confirm the stakeholders' shared understanding of the RIA Plan	• Can be perceived as reductive by the primary assessment stakeholders (i.e., users of the *RIA Plan*) • The table format implies linearity despite highlighting where feedback loops exist in the *RIA Plan* • Must remain as a "living document" that is changed as necessary when revisions are made to the *RIA Plan*

As emphasized in the *RIA Plan* and *RIA Plan – Guidelines* and reflected in the *Summary Matrix,* it is important to identify and select the indicators and associated data collection methods and sources that will most appropriately answer the assessment question(s) given the purpose of the assessment (i.e., anticipated use of the assessment findings). This approach helps establish a clear link between the data to be collected and the assessment questions while reducing the unnecessary burden of collecting information that will not be used. If a multi-year assessment plan is being developed, it will be important to revisit data collection efforts during the life-cycle of the assessment to examine the burden on respondents and stakeholders.

How to Use the Summary Matrix

Refer to the *RIA Plan – Guidelines* to better understand the content that should be summarized in each block of the *Summary Matrix*. Although some assessors may find it easier to complete the *Summary Matrix* after writing the RIA Plan, others may prefer to work on these documents concurrently and in a more iterative manner.

The format of the *Summary Matrix* can be adapted to suit different assessment contexts and implementation requirements.

Research Impact Assessment Plan – Summary Matrix

BLOCK 1	Program:
BLOCK 2	Purpose of Assessment:

BLOCK 2		BLOCK 3	BLOCK 4					BLOCK 5
General Assessment Questions	Specific Assessment Questions	Indicators	Methods	Data Sources	Frequency or Timeline	Person Responsible For Data Collection	Baseline	Target Audience(s)

Sample

A mock *Summary Matrix* is provided in the Toolbox within the *Research Impact Assessment Plan – Summary Matrix* document.

MY NOTES

APPENDIX

3

APPENDIX 3

RESEARCH IMPACT ASSESSMENT

– IMPLEMENTATION WORK PLAN

The *Research Impact Assessment (RIA) – Implementation Work Plan* is a basic management tool that efficiently identifies what RIA activities are to occur, when and by whom. It is typically included as an appendix to the *RIA Plan*.

What is the Implementation Work Plan?

The *Implementation Work Plan* outlines the essential activities and deliverables that need to be completed during the RIA and the ideal timeline in which they should occur. Structured as a Gantt chart, the *Implementation Work Plan* highlights where these activities overlap within the overall assessment timeline. This visualization assists the assessor and stakeholders in better understanding the interaction between different aspects of the assessment (e.g., how the different data collection methods inform one another). It also assists in identifying where potential "bottlenecks" (i.e., periods of overlap in which the activities exceed the available resources) may develop that could impede the progress of the assessment. Early recognition of these potential constraints during the development of the *RIA Plan* provides an opportunity to focus the assessment and increase the likely success of the RIA. It is therefore important to develop the *Implementation Work Plan* early on as it serves as an important tool for managing the RIA and ensuring that the required resources are available according to the agreed upon timeline.

As with other tools, the benefits and challenges of using the *Implementation Work Plan* should be taken into consideration.

Benefits	Challenges
• Concise summary of the RIA timeline • Illustrates linkages between essential activities • Identifies *what* needs to be done and *when* • Content can be expanded to include *who* does what • Communicates the progress of the RIA • Assists with resource management to better ensure that the RIA is delivered on time and within budget	• Can be perceived as inflexible and unable to adjust to the challenges that arise during the RIA • Collapses the complexity of different activities • Requires monitoring and revision as the RIA progresses • Must remain as a "living document" that is changed as necessary when revisions are made to the *RIA Plan*

How to Use the Work Plan

Refer to the *RIA Plan – Guidelines* and *RIA Plan – Summary Matrix* to assist in identifying the essential activities that should be included in the *Implementation Work Plan*. In general, development of the *Implementation Work Plan* should begin early as determination of the available resources helps inform the timeline for conducting the assessment. At a minimum, the assessment budget and resources should be outlined prior to the development of the assessment questions (Block 2, 2.3 Assessment Questions) because these are critical factors that need to be taken into consideration when prioritizing the assessment questions; this can be done by supplementing the *Implementation Work Plan* with a table of the proposed budget and resources (Table 1). The template for the Proposed Budget and Resources (Table 1) can be adapted to suit individual assessments, requirements and/or preferences.

As a "living document," the *Implementation Work Plan* should be regularly updated to reflect the progress being made in the RIA. The initial and updated versions of the *Implementation Work Plan* should also be regularly shared with the primary assessment stakeholders. This can be done by referencing the initial *Implementation Work Plan* in the main body of the *RIA Plan* and including it as an Appendix.

The *Implementation Work Plan* follows a typical structure and can be adapted to suit different assessment contexts, implementation requirements and/or preferences for tracking the tasks. It can also be revised to include enhancements, such as:

- Identifying the individuals responsible for specific aspects of the RIA
- Specifying the resource requirements for different aspects of the RIA (e.g., number of days required to completed an activity)
- Identifying the status of the activities (e.g., not started, in progress, completed)
- Identifying where resources can or must be shared across activities

Samples

A mock *Implementation Work Plan* and a mock table for the Proposed Budget and Resources are provided in the Toolbox within the *Research Impact Assessment – Implementation Work Plan* document.

MY NOTES

Research Impact Assessment – Implementation Work Plan

Name of Program:																
ACTIVITIES	YEAR 1					YEAR 2										**Etc.**
	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Etc.
RIA Initiation																
Identify and engage stakeholders																
Identify factors driving the RIA																
RIA kick-off meeting																
RIA Plan																
Identify framework																
Identify RIA purpose																
Identify RIA questions																
Identify indicators																
Develop data collection plan																
RIA Plan completed and communicated																
Data Collection & Analysis																
Method 1																
Method 2																
Method 3																
Method 4																
Data management (cleaning, coding, etc.)																
Data analysis																
Reporting and Communications																
Identify and engage audiences																
Develop report																
Develop communications																
Report released/communications delivered																
Managing the RIA																
Manage the resources																
Progress updates to stakeholders																

TABLE 1. Proposed Budget and Resources

Name of Program:									
Resources	Initials	Rate/Day	RIA Activity					Tota Estimated Time	Total Estimated Cost
			RIA Project Managment	RIA Plan	Data Collection & Analysis	Reporting & Communicating	Managing the RIA		
			Estimated Time (in Days)						
Name (Position/Role)									
Name (Position/Role)									
Name (Position/Role)									
Etc.									
Sub-total	n/a	n/a							
			Estimated Disbursements ($)						
Disbursements	n/a	n/a						n/a	
Travel	n/a	n/a						n/a	
Long Distance	n/a	n/a						n/a	
Materials	n/a	n/a						n/a	
Courier/Shipping	n/a	n/a						n/a	
Translation Services	n/a	n/a						n/a	
Etc. (specify)	n/a	n/a						n/a	
Sub-total	n/a	n/a						n/a	
						GRAND TOTAL			

Training Course on Research Impact Assessment

RESEARCH IMPACT ASSESSMENT

– IMPLEMENTATION WORK PLAN

Version 4.0

A basic management tool that efficiently identifies what research impact assessment activities are to occur, when and by whom.

Purpose

The *Research Impact Assessment (RIA) – Implementation Work Plan* is a basic project management tool that efficiently identifies what RIA activities are to occur, when and by whom. *The Implementation Work Plan* is typically included as an appendix in the *RIA Plan*.

The *Implementation Work Plan* is one component in the Toolbox of the International School on Research Impact Assessment (ISRIA) and its affiliated regional course hosted by Alberta Innovates entitled *Training Course on Research Impact Assessment*. It is intended to be used in conjunction with the *RIA Plan* and the *RIA Plan – Guidelines*. As such, instructions for the *Implementation Work Plan* can also be found in Appendix 3 of the *Guidelines* and a copy of the template for the *Implementation Work Plan* in Appendix 2 of the *RIA Plan*.

What is the Implementation Work Plan?

The *Implementation Work Plan* outlines the essential activities and deliverables that need to be completed during the RIA and the ideal timeline in which they should occur. Structured as a Gantt chart, the *Implementation Work Plan* highlights where these activities overlap within the overall assessment timeline. This visualization assists the assessor and stakeholders in better understanding the interaction between different aspects of the assessment (e.g., how the different data collection methods inform one another). It also assists in identifying where potential "bottlenecks" (i.e., periods of overlap in which the activities exceed the available resources) may develop that could impede the progress of the assessment. Early recognition of these potential constraints during the development of the *RIA Plan* provides an opportunity to focus the assessment and increase the likely success of the RIA. It is therefore important to develop the *Implementation Work Plan* early on as it serves as an important tool for managing the RIA and ensuring that the required resources are available according to the agreed upon timeline.

As with other tools, the benefits and challenges of using the *Implementation Work Plan* should be taken into consideration (Table 1).

How to Use the Implementation Work Plan

Refer to the *RIA Plan – Guidelines* and *RIA Plan – Summary Matrix* to assist in identifying the essential activities that should be included in the *Implementation Work Plan*. In general, development of the *Implementation Work Plan* should begin early as determination of the available resources helps inform the timeline for conducting the assessment. At a minimum, the assessment budget and resources should be outlined prior to the development of the assessment questions (Block 2, 2.3 Assessment Questions) because these are critical factors that need to be considered when prioritizing the assessment questions; this can be done by supplementing the *Implementation Work Plan* with a table of the proposed budget and resources (Table 2). Table 2 can be adapted to suit individual assessments, requirements and/or preferences.

TABLE 1. Benefits and Challenges of Using the Implementation Work Plan

Benefits	Challenges
• Concise summary of the RIA timeline • Illustrates linkages between essential activities • Identifies *what* needs to be done and *when* • Content can be expanded to include *who* does what • Communicates the progress of the RIA • Assists with resource management to better ensure that the RIA is delivered on time and within budget	• Can be perceived as inflexible and unable to adjust to the challenges that arise during the RIA • Collapses the complexity of different activities • Requires monitoring and revision as the RIA progresses • Must remain as a "living document" that is changed as necessary when revisions are made to the *RIA Plan*

As a "living document," the *Implementation Work Plan* should be regularly updated to reflect the progress being made in the RIA. The initial and updated versions of the *Implementation Work Plan* should also be regularly shared with the primary assessment stakeholders. This can be done by referencing the initial *Implementation Work Plan* in the main body of the *RIA Plan* and including it as an Appendix.

The *Implementation Work Plan* follows a typical structure and can be adapted to suit different assessment contexts, implementation requirements and/or preferences for tracking the tasks. It can also be revised to include enhancements such as:

- Identifying the individuals responsible for specific aspects of the RIA
- Specifying the resource requirements for different aspects of the RIA (e.g. number of days required to completed an activity)
- Identifying the status of the activities (e.g. not started, in progress, completed)
- dentifying where resources can or must be shared across activities

Samples

A mock *Implementation Work Plan* and a mock table for the Proposed Budget and Resources are provided in Appendix 1 and Appendix 2 of this document, respectively.

TABLE 2. Proposed Budget and Resources

Name of Program:			RIA Activity				Estimated Time (in Days)			Estimated Disbursements ($)		GRAND TOTAL
Resources	Initials	Rate/Day	RIA Project Managment	RIA Plan	Data Collection & Analysis	Reporting & Communicating	Managing the RIA	Tota Estimated Time	Total Estimated Cost			
Name (Position/Role)												
Name (Position/Role)												
Name (Position/Role)												
Etc.												
Sub-total	n/a	n/a										
Disbursements	n/a	n/a										
Travel	n/a	n/a										
Long Distance	n/a	n/a										
Materials	n/a	n/a										
Courier/Shipping	n/a	n/a										
Translation Services	n/a	n/a										
Etc. (specify)	n/a	n/a										
Sub-total	n/a	n/a						n/a		n/a		

Sample of a Proposed Budget and Resources Table

PROPOSED RESOURCES and BUDGET								
Name of Program: Independent Investigator Program								
					RIA Activity			
Resources	Initials	Rate/Day	RIA Project Managment	RIA Plan	Data Collection & Analysis	Reporting & Communicating	Managing the RIA	Tota Estimated Time	Total Estimated Cost
			Estimated Time (in Days)						
Mary Smith Project Manager	MS	900	1	0	0	0	12	13	$ 11,700
John Jones Assessor	JJ	1000	6	4	16.5	6.75	6	39.25	$ 39,250
Heather Atkins Analyst	HA	1200	0	2.5	15	2.5	0	20	$ 24,000
Freddy Simpson Research Assistant	FS	800	2	2	12	3	0	19	15,200
Sub-total	n/a	n/a	9	8.5	43.5	12.25	18	91.25	90,150
			Estimated Disbursements ($)						
Disbursements									
Travel	n/a	n/a	500	150	800	300	0	n/a	1,750
Long Distance	n/a	n/a	0	50	100	0	0	n/a	$ 150
Materials	n/a	n/a	200	200	800	450	150	n/a	$ 1,650
Courier/Shipping	n/a	n/a	75	0	0	150	0	n/a	$ 150
Translation Services	n/a	n/a	0	0	500	0	0	n/a	$ 500
Consultants	n/a	n/a	0	1200	0	0	0	n/a	$ 1,200
Sub-total	n/a	n/a	2,200	1,600	2,200	900	0	n/a	$ 4,350
						GRAND TOTAL		n/a	$ 94,500

TEMPLATE: Research Impact Assessment – Implementation Work Plan

Name of Program:																	
ACTIVITIES	**YEAR 1**					**YEAR 2**											**Etc.**
	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Etc.
RIA Initiation																	
Identify and engage stakeholders																	
Identify factors driving the RIA																	
RIA kick-off meeting																	
RIA Plan																	
Identify framework																	
Identify RIA purpose																	
Identify RIA questions																	
Identify indicators																	
Develop data collection plan																	
RIA Plan completed and communicated																	
Data Collection & Analysis																	
Method 1																	
Method 2																	
Method 3																	
Method 4																	
Data management (cleaning, coding, etc.)																	
Data analysis																	
Reporting and Communications																	
Identify and engage audiences																	
Develop report																	
Develop communications																	
Report released/communications delivered																	
Managing the RIA																	
Manage the resources																	
Progress updates to stakeholders																	

MY NOTES

Sample of a Research Impact Assessment – Implementation Work Plan

Name of Program: Independent Investigator Program																
ACTIVITIES	**2014**	**2015**												**2016**		
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
RIA Initiation																
Identify and engage stakeholders																
Identify factors driving the RIA																
RIA kick-off meeting																
RIA Plan																
Identify framework																
Identify RIA purpose																
Identify RIA questions																
Identify indicators																
Develop data collection plan																
RIA Plan completed and communicated																
Data Collection & Analysis																
Method 1																
Method 2																
Method 3																
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Data management (cleaning, coding, etc.)																
Data analysis																
Reporting and Communications																
Identify and engage audiences																
Develop report																
Develop communications																
Report released/communications delivered																
Managing the RIA																
Manage the resources																
Progress updates to stakeholders																

Training Course on Research Impact Assessment

READINGS AND RESOURCES

Version 5.0

A list of recommended readings, web resources & tools, relevant journals, and professional organizations.

INTRODUCTION

In affiliation with the International School on Research Impact Assessment (ISRIA, the School), the *Training Course on Research Impact Assessment* (Course) has compiled a selected list of key readings, web resources and tools, relevant journals, and professional organizations to complement the teachings of the Course. As a result, the Readings and Resources are not intended to be an exhaustive list of available literature and resources on the topic of research impact assessment.

Through the ongoing development of a community of practice in research impact assessment and in recognition of the increasing literature and resources in this rapidly expanding area, we intend to update the *Resources and Readings* with each iteration of the School and Course, as informed by faculty and participants.

RECOMMENDED READINGS

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22. Health Economics Research Group, Office of Health Economics, RAND Europe. 2008. *Medical Research: What's it worth? Estimating the economic benefits from medical research in the UK.* London: UK Evaluation Forum.

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24. Hinrichs S, Montague E, Grant J. 2015. *Researchfish: A forward look. Challenges and opportunities for using Researchfish to support research assessment.* Policy Institute, King's College London.

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MY NOTES

WEB RESOURCES AND TOOLS

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Evidence database, funding opportunities, jobs, etc.

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27. W. K. Kellogg Foundation. 2006. *Logic model development guide.*

28. W. K. Kellogg Foundation. 2004. *Evaluation handbook.*

29. Western Michigan University. Evaluation Center. *Evaluation Checklists.*
    - Of particular note:
    - Key Evaluation Checklist by Michael Scriven
    - Qualitative Evaluation by Michael Quinn Patton
    - Utilization-Focused Evaluation by Michael Quinn Patton

30. Zotero Research Impact Library.
    A collection of references related to assessment of research impact with an emphasis on biomedical research. Tags group literature by sub-categories.

MY NOTES

RELEVANT JOURNALS

1.	American Journal of Evaluation http://aje.sagepub.com	[Subscription required]
2.	Canadian Journal of Program Evaluation http://cjpe.ca	[Open access]
3.	Evaluation - The International Journal of Theory, Research and Practice http://evi.sagepub.com	[Subscription required; some open access articles]
4.	Evaluation and Program Planning http://www.journals.elsevier.com/evaluation-and-program-planning	[Subscription required; some open access articles]
5.	Evaluation Review http://erx.sagepub.com	[Subscription required; some open access articles]
6.	Health Research Policy and Systems http://www.health-policy-systems.com	[Open access]
7.	Implementation Science http://www.implementationscience.com	[Open access]
8.	Journal of MultiDisciplinary Evaluation http://journals.sfu.ca/jmde/index.php/jmde_1	[Open access]
9.	Practical Assessment, Research & Evaluation (PARE) http://pareonline.net	[Open access]
10.	Research Evaluation http://rev.oxfordjournals.org	[Subscription required; some open access articles]

PROFESSIONAL ORGANIZATIONS

1. AfrEA (African Evaluation Association) http://www.afrea.net/aboutafrea.html
2. American Evaluation Association http://www.eval.org
    - Research, Technology and Development (RTD) Evaluation Topical Interest Group (TIG) http://comm.eval.org/researchtechnologyanddevelopmenteval/home
3. Australasian Evaluation Society (AES) http://www.aes.asn.au
4. Brazilian Monitoring & Evaluation Network http://redebrasileirademea.ning.com
5. Canadian Evaluation Society http://www.evaluationcanada.ca
6. Danish Evaluation Society http://www.danskevalueringsselskab.dk
7. Dutch Evaluation Society http://www.videnet.nl
8. European Evaluation Society http://www.europeanevaluation.org
9. EvalPartners http://www.mymande.org/evalpartners
10. Finnish Evaluation Society http://www.sayfes.fi/in+english/
11. French Evaluation Society http://www.sfe-asso.fr
12. German Society for Evaluation Standards http://www.degeval.de
13. International Development Evaluation Association (IDEAS) http://www.ideas-int.org
14. International Organization for Cooperation in Evaluation (IOCE) http://www.ioce.net
15. International Program Evaluation Network (Russia and newly independent states) http://www.eval-net.org
16. International Society for Performance Improvement http://www.ispi.org
17. Israeli Association for Program Evaluation http://www.iape.org.il
18. Italian Evaluation Association http://www.valutazioneitaliana.it
19. Japan Evaluation Society http://evaluationjp.org/english/index.html
20. Malaysian Evaluation Society http://www.mes.org.my

21. Polish Evaluation Society http://www.pte.org.pl

22. Red de Evaluación de America Latina y el Caribe http://noticiasrelac.ning.com

23. South African Monitoring and Evaluation Association http://www.samea.org.za

24. UK Evaluation Society http://www.evaluation.org.uk

25. Swiss Evaluation Society http://www.seval.ch

MY NOTES

CONFERENCES, TRAINING AND NETWORKING OPPORTUNITIES

1. European Summer School for Scientometrics (ESSS 2017)
   http://www.scientometrics-school.eu/

2. Leiden University: Centre for Science and Technology Studies (CWTS)
   Courses on bibliometrics, measuring science and research performance, network and citation analysis http://www.cwts.nl

3. International School on Research Impact Assessment

http://www.theinternationalschoolonria.com/

https://twitter.com/ResImpactSchool

https://www.linkedin.com/groups/International-School-on-Research-Impact-5180935/about

Training Course on Research Impact Assessment

GLOSSARY

Version 5.0

Terms, definitions and acronyms commonly used in the School and regional training courses in research impact assessment.

DEVELOPING A COMMON LANGUAGE

Introduction

Developing a community of practice in research impact assessment (RIA) requires the use of a common language to achieve a shared understanding. This glossary provides definitions of terms and phrases that are commonly used throughout the International School on Research Impact Assessment (ISRIA; the School), and Training Course on Health Research Impact Assessment (Course). In so doing, this *Glossary* aims to facilitate effective communication through a shared use and understanding of these terms and phrases.

The *Glossary* outlines the method used in its development and also highlights documents in the Toolbox in which several *Glossary* terms are used. The *Glossary* also includes:

- Key terms and definitions
- Acronyms
- Source of references for the terms used in the *Glossary*

The *Glossary* aims to improve clarity and minimize misunderstanding among participants when communicating with each other about concepts and theories of RIA. It can be also be used as a reference for several tools in the Toolbox that were designed based on best practices in order to increase participants' skills and capacities in RIA planning.

The *Glossary* does not aim to become the standard lexicon for RIA internationally, since each country, region, practitioner and organization are likely to want to use language that aligns with their particular context, experiences and existing approaches. Nonetheless, it is anticipated that this *Glossary* can provide some shared understanding of important terms and phrases that underpin RIA wherever it is put in place, thereby supplementing the specific language used across organizations internationally.

Method

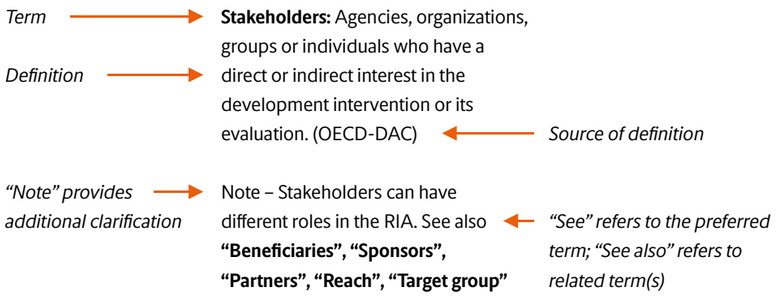
The *Glossary* was developed from a collection of terms and phrases in existing influential glossaries and documents (see Sources). Given the international focus of the School, careful consideration was given to sources that are relevant on an international and/or national level rather than focusing on regional sources. In particular, some of the more common sources that were used to inform this *Glossary* were published by the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD-DAC), the Environmental Protection Agency (EPA) in the United States, the World Bank, RAND Europe, and the United States Agency for International Development (USAID).

Each term and associated definition in the *Glossary* was also selected based on relevance to, and in alignment with, the School's curriculum and materials as deemed by the School Director and Program Director. The terms, definition, and sources were also reviewed for accuracy by the Research Librarian at Alberta Innovates. Please note: for consistency, the spelling of some words have been changed from how they appear in the source material to how they appear in the

Glossary (e.g., programme vs program, organisation vs organization). This does not alter the definition.

As illustrated in Figure 1, the source of each term is referenced after the definition for the term. ISRIA served as the source for terms that were used in the School in more of an operational nature (e.g., program stage of development). Where there are terms that can be used interchangeably for a concept, both terms are referenced by including the word "see" to denote the preferred term and the words "see also" to identify the related term(s) in the *Glossary.* Square brackets (i.e., "[ ]") were also inserted into the definitions of some terms in order to clarify the meaning of term provided by the source. If additional clarification was required, a "note" was placed after the definition and source

Figure 1. Anatomy of a definition



Participants' Toolbox

The Toolbox, accessible via the Course portal (http://itcria.aihealthsolutions.ca) is composed of several documents ("tools") that contain terms that are outlined in the *Glossary.* Since several of these tools are used when developing a RIA Plan, the *Glossary* can serve as an important reference document to assist in developing a shared understanding of terms used within the RIA Plan among the primary assessment stakeholders. Specifically, the tools in the Toolbox that are used for the development of RIA Plans are:

- Research Impact Assessment Plan
- Research Impact Assessment Plan – Guidelines
- Research Impact Assessment Plan – Summary Matrix
- Research Impact Assessment – Implementation Work Plan

MY NOTES

GLOSSARY OF KEY TERMS

A

Accountability: To show that money and other resources have been used efficiently and effectively, and to hold those using resources to account. (Adapted from RAND Europe)

Activities: Actions taken or work performed through which inputs, such as funds, technical assistance and other types of resources are mobilized to produce specific outputs. (OECD-DAC)

Advancing knowledge: Outcomes/impacts that contribute to the scientific literature, including new discoveries and breakthroughs, as well as collaborations/partnerships that resulted from or were directly linked to the research. (Alberta Innovates)

Advocacy: To demonstrate the benefits of supporting research, enhance understanding of research and its processes among policy-makers and the public, and make the case for policy and practice change. (RAND Europe)

Allocation: To determine where best to allocate funds in the future, making the best use possible of a limited funding pot. (RAND Europe)

Analysis [and Learning]: To understand how and why research is effective and how it can be better supported, feeding into research strategy and decision making by providing a stronger evidence base. (Adapted from RAND Europe)

Applied research: Original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective. (OECD-Frascati)

Assessment: A synthesis of facts, which arise from the evaluation process, and judgments. (ETAN Expert Working Group)

Attribution: The assertion that certain events or conditions were, to some extent, caused or influenced by other events or conditions. This means a reasonable [causal] connection can be made between a specific outcome and the actions and outputs of a government policy, program, or initiative. (EPA)

B

Baseline data: Initial information on a program or program components collected prior to receipt of services or participation activities. Baseline data are often gathered through intake and observations and are used later for comparing measures that determine changes in a program. (EPA)

Baseline study: An analysis describing the situation prior to a [program], against which progress can be assessed or comparisons made. (OECD-DAC)

Basic research: Experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view. (OECD-Frascati)

Beneficiaries: The individuals, groups, or organizations, whether targeted or not, that benefit, directly or indirectly, from the [program]. (OECD-DAC)
See also **“Partners”, “Reach”, “Sponsors” “Stakeholders”, “Target group”**

Bibliometrics: A set of methods used to derive new insight from existing databases of scientific publications and patents. (Science-Metrix)
See also **“Scientometrics”, “Technometrics”**

C

Capacity Building: Outcomes that lead to an increased ability to conduct research including the development of research skills

in personnel and trainees, enhancement of research infrastructure, and acquiring financial support. (Alberta Innovates)

Case study: [A]n approach to research that facilitates exploration of a phenomena [sic] within its context using a variety of data sources. This ensures that the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon revealed to be understood.
(Baxter & Jack)

Contribution: Determining if the program contributed to or helped to cause the observed outcomes (Almquist)
Note – This differs from **"Attribution"**, which looks for the proportion of observed impacts that are caused by a program.
See also **"Contribution analysis"**

Contribution analysis: Explores attribution through assessing the contribution a program is making to observed results. It sets out to verify the theory of change behind a program and, at the same time, takes into consideration other influencing factors. [This] provides reasonable evidence about the contribution being made by the program. (Mayne)
See also **"Contribution"**

Cost-effectiveness: Comparing similar interventions based on cost and effectiveness. For example, impact evaluations of various education programs allow policy makers to make more informed decisions about which intervention may achieve the desired objectives, given their particular context and constraints. (World Bank)

Cross sectional (study): A cross-section is a random sample of a population, and a cross-sectional study examines this sample at one point in time. Successive cross-sectional studies can be used as a substitute for a longitudinal study. (Frechtling et al.)
See also **"Longitudinal (study)"**

E

Econometrics: The application of statistical methods to the study of economic data and problems. (Merriam-Webster)

Economic returns: The economic value associated with the impacts of a policy, program or research. (Adapted from Buxton et al.)

Evaluation: The process by which the quality, implementation, target relevance and impacts (outcomes) of programs are investigated, interpreted and examined. (ETAN Expert Working Group).
See also **"Process evaluation", "Formative evaluation", "Summative evaluation"**

Evidence: Information that increases the probability of the truthfulness or accuracy of a proposition. Examples of evidence may include but are not limited to, performance measurement, research studies, program evaluation, statistical data series, and data analytics. Evidence can be quantitative or qualitative and has varied degrees of reliability. The credible use of evidence in decision-making requires an understanding of what conclusions can be drawn from the information, and equally important, what conclusions cannot be drawn from it. (OMB)

Evidence-based decision making: A philosophy of management that emphasizes the importance of using defensible evidence as a basis for making decisions – sometimes associated with performance management. (McDavid et al.)

Ex-ante (evaluation): An evaluation that is performed before implantation of an intervention. (OECD-DAC)

Ex-durante (evaluation): An evaluation that is performed during an intervention or program. (Alberta Innovates)

Ex-post (evaluation): Evaluation of an intervention after it has been completed. It may be undertaken directly after or long after completion. The intention is to identify the factors of success or failure, to assess the sustainability of results and impacts, and to draw conclusions that may inform other interventions. (OECD-DAC)

Experimental development: Systematic work, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed. (OECD-Frascati)

F

Formative evaluation: Evaluation intended to improve performance, most often conducted during the implementation phase of projects or programs. Formative evaluations may also be conducted for other reasons such as compliance, legal requirements, or as part of a larger evaluation initiative. (OECD-DAC)

G

Goal(s): The higher-order objective to which a development intervention is intended to contribute. (OECD-DAC)
See also **"Objective(s)"**

H

Health impact: An effect that causes or contributes to change(s) in health and/or the health system. (Alberta Innovates)

I

Impact: Positive and negative, primary and secondary long-term effects produced by an intervention, directly or indirectly, intended or unintended. (OECD-DAC)
Note – Specific frameworks and tools describe impact differently; e.g., CAHS includes outputs and outcomes whereas others consider impact to be short-, mid- and/or long-term outcomes or after long-term outcomes.
See also **"Outcome", "Output"**

Impact assessment: Assesses the changes that can be [linked] to a particular intervention, such as a project, program or policy, both the intended ones, as well as ideally the unintended ones. Many [impacts] of programs are influenced by external factors, including other national, regional, and local programs and policies, as well as economic or environmental conditions. Thus, the [impacts] observed typically reflect a combination of influences. Correspondingly, the central challenge in carrying out effective impact evaluations is to identify the causal relationship between the project, program, or policy and [subsequent impacts] (ISRIA 2014, World Bank, GAO 2012)

Impact evaluation: See **"Impact assessment"**

Impact narrative: A qualitative description of research pathways leading to a diverse range of impacts from research, such as effects on the economy, society, culture, public policy or services, health, the environment or quality of life. (Adapted from Kings College London and Digital Science)

Implementation evaluation: See **"Process evaluation"**

Indicator: A variable that measures a phenomenon of interest to the evaluator. The phenomenon can be an input, an output, an outcome, a characteristic, or an attribute. (World Bank)
Note – [An indicator can be either] a quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect the changes connected to an intervention, or to help assess the performance of a development actor. (OECD-DAC)

Informing decision making: The effect of outputs on the making of policy, practice, product and services, or process decisions for the purpose of moving research and innovation towards broader impacts. (Alberta Innovates)

Innovation: The implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations [...] A common feature of

an innovation is that it must have been implemented. A new or improved product is implemented when it is introduced on the market. New processes, marketing methods, or organizational methods are implemented when they are brought into actual use in the firm's operations. (OECD/Eurostat)

Input: Inputs include the labour (the range of skills, expertise and knowledge of employees), capital assets (including land and buildings, motor vehicles and computer networks), financial assets, and intangible assets (such as intellectual property which are used in delivering outputs). (OECD 2009)

Internal rate of return (IRR): Equates a dollar of investment in R&D to the present value of the marginal productivities of that investment in the future. (Hall et al.) The IRR is a convenient way of representing the return to the original research investment, and has the pragmatic advantage that it is the method used in the published empirical literature on the GDP impact of research. (Buxton et al.)

K

Knowledge translation: A dynamic and iterative process that includes synthesis, dissemination, exchange and ethically-sound application of knowledge to improve the health of Canadians, provide more effective health services and products and strengthen the health care system. (CIHR)
Note – It should be noted that this definition holds true for the application of knowledge for practical purposes outside of health too.

L

Logic model: A diagram and text that describes and illustrates the logical (causal) relationships among program elements and the problem to be solved, thus defining measurements of success. (EPA)

Longitudinal (study): An investigation or study in which a particular individual or group of individuals is followed over a substantial period of time to discover changes that may be attributable to the influence of the treatment, or to maturation, or the environment. (Frechtling et al.)
See also **"Cross-sectional (study)"**

M

Monitoring: A systematic process of collecting and recording information on the progress and direction of ongoing actions, generated mainly for management purposes. (ETAN Expert Working Group)

Measure: See **"Indicator"**

Mixed methods: The mixture of qualitative and quantitative approaches in many phases in the research process. (Creswell & Plano Clark)

O

Objective(s): Specific results or effects of a program's activities that must be achieved in pursuing the program's ultimate goals. (EPA)

Outcome: Changes or benefits resulting from activities and outputs. For example, short-term outcomes produce changes in learning, knowledge, attitude, skills or understanding. Intermediate outcomes generate changes in behavior, practice or decisions. Long-term outcomes produce changes in condition. (EPA) See also **"Impact"**

Output: The products or results of the activities. These might include, for example, how many people a project has affected, their ages and ethnic groups or the number of meetings held and the ways in which the findings of the project are disseminated. (Adapted from WHO)
See also **"Impact"**

P

Partners: The individuals and/or organizations that collaborate to achieve mutually agreed upon objectives. (OECD-DAC)
See also **"Beneficiaries", "Reach", "Sponsors" "Stakeholders", "Target group"**

Performance management: The systematic process of monitoring the achievements of program activities; collecting and analyzing performance information to track progress toward planned results; using performance information and evaluations to influence decision-making and resource allocation; and communicating results to advance organizational learning and communicate results to stakeholders. (USAID)

Process evaluation: This form of evaluation assesses the extent to which a program is operating as it was intended. It typically assesses program activities' conformance to statutory and regulatory requirements, program design, and professional standards or customer expectations. (GAO 2011)

Project: Time-bounded efforts, often within a program. (Scriven)

Program: A set of related, purposive activities that is intended to achieve one or several related objectives. (McDavid et al.)

Program stage (of development):

- **Early** (the program is currently being developed or was recently developed and implemented, typically with a time frame of less than 3 years)
- **Stable** (the program has been operational for several years, typically with a time frame between 3-5 years)
- **Mature** (the program is well established and has been operational for a prolonged time, typically with a time frame of more than 5 years).

Note – Years are typical estimates based on a 5-year program; however, will change pending the duration of the program. (ISRIA 2014)

Program theory: A description of a program that reflects how and why the set of program activities are intended to lead to outputs and immediate, intermediate and longer term effects over a specified period. (UNESCO)

Q

Questionnaire: Forms used in a survey design that participants in a study complete and return to the researcher. Participants mark answers to questions and supply basic, personal or demographic information about themselves. (Creswell)

R

Reach: The beneficiaries and other stakeholders of a [program]. (OECD-DAC)
See also **"Beneficiaries"**

Research and experimental development (R&D): Creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications. R&D covers three activities: **"Basic research"**, **"Applied research"**, and **"Experimental development".** (OECD)

Research, technology, and development (RTD): See **"Research and experimental development"**

Research impact assessment (RIA): Assesses the changes that can be linked to a particular research program (e.g. funding, intervention, portfolio), both intended and unintended ones. (ISRIA 2014) See also **"Impact Assessment"**

Research impact assessment (RIA) plan: A written document describing the overall approach or design that will be used to guide an [assessment]. It includes what will be done, how it will be done, who will do it, when it will [be] done, and why the [assessment] is being conducted (Adapted from EPA)

Return on investment (ROI): A measure of the (traditionally) financial return from a research investment. For financial return on investment, ROI is presented as a % of the costs that the net financial return represents (i.e. ROI = [benefits – costs]/costs). (ISRIA 2014)
See also **"Social return on investment"**

S

Scientometrics: Scientometrics is used to measure scientific activity based on scientific papers. (Science-Metrix)
See also **"Bibliometrics", "Technometrics"**

Social Return on Investment (SROI): A framework for measuring and accounting for [the] much broader concept of value; it seeks to reduce inequality and environmental degradation and improve wellbeing by incorporating social, environmental and economic costs and benefits. (SROI Network)

See also **“Return on investment”**

Socioeconomic impacts: Outcomes of benefit to the economy and to the well-being of the population, including social and economic impacts related to research activity, the commercialization of research findings, and the benefits of improved health. (Alberta Innovates)

Sponsor(s): The individuals, groups, or organizations that provide the financial or other resources required for the evaluation. (Yarbrough et al.)
See also **“Beneficiaries”, “Partners”, “Reach”, “Target group”**

Stakeholders: Agencies, organizations, groups, or individuals who have a direct or indirect interest in the [program] or its evaluation. (OECD-DAC)
Note – Stakeholders can have different roles in the RIA.
See also **“Beneficiaries”**, **“Sponsors”**, **“Partners”, “Reach”, “Target group”**

Summative evaluation: A study conducted at the end of an intervention (or a phase of that intervention) to determine the extent to which anticipated outcomes were produced. Summative evaluation is intended to provide information about the worth of the program. (OECD-DAC)

Survey (research design): See **“Questionnaire”**

T

Target group: The specific individuals or organizations for whose benefit the [program] is undertake. (OECD-DAC)
See also **“Beneficiaries”, “Partners”, “Reach”, “Sponsors”, “Stakeholders”**

Technometrics: A proxy measure for innovation based on patents. (Science-Metrix)
See also **“Bibliometrics”, “Scientometrics”**

Theory of Action: See **“Program theory”**

Theory of Change: See **“Program theory”**

Triangulation: The use of three or more theories, sources or types of information, or types of analysis to verify and substantiate an assessment. (OECD-DAC)

Value for money: The optimal use of resources to achieve the intended outcomes. (NAO)
Note – Different frameworks and performance management systems can define differently. For example the Treasury Board of Canada equates value for money as relevance and performance (economy, efficiency and effectiveness) (Treasury Board of Canada Secretariat).

V

Unit of analysis: The level at which assessment information and measures are taken and analyzed. (Yarbrough et al)

U

MY NOTES

ACRONYMS

Terms & Phrases:

AHRIS	Alberta Health Research and Innovation Strategy
IRR	Internal rate of return
KT	Knowledge translation
RIA	Research impact assessment
ROI	Return on Investment
SROI	Social Return on Investment

ACRONYMS

Organizations & Entities:

AH	Alberta Health
AHS	Albert Health Services
AQuAS	Agency for Health Quality and Assessment of Catalonia
Arc	Arthritis Research Campaign
CAHS	Canadian Academy of Health Sciences
CDC	Centre for Disease Control and prevention (US)
CIHR	Canadian Institutes of Health Research
EDT	Economic Development and Trade – Government of Alberta
ERA	Excellence in Research for Australia
GAO	Government Accountability Office (US)
HERG	Health Economics Research Group, Brunel University
ISRIA	International School on Research Impact Assessment
NAO	National Audit Office (UK)
NAPHRO	National Alliance of Provincial Health Research Organizations
NSF	National Science Foundation
OECD	Organisation for Economic Co-operation and Development
OMB	Office of Management and Budget (US)
REF	Research Excellence Framework
STARmetrics	Science and Technology for America's Reinvestment: Measuring the Effect of Research on Innovation, Competitiveness and Science

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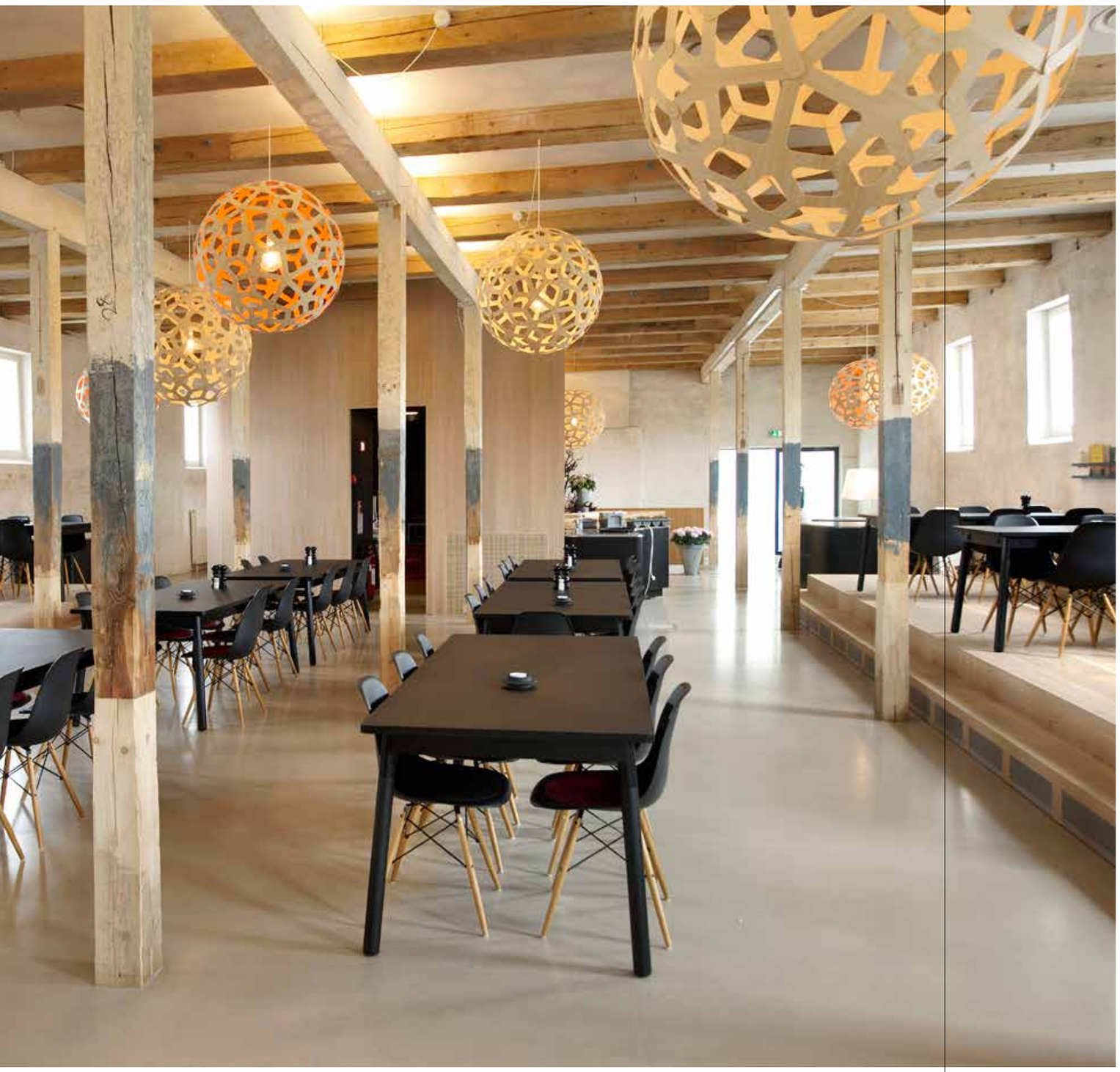

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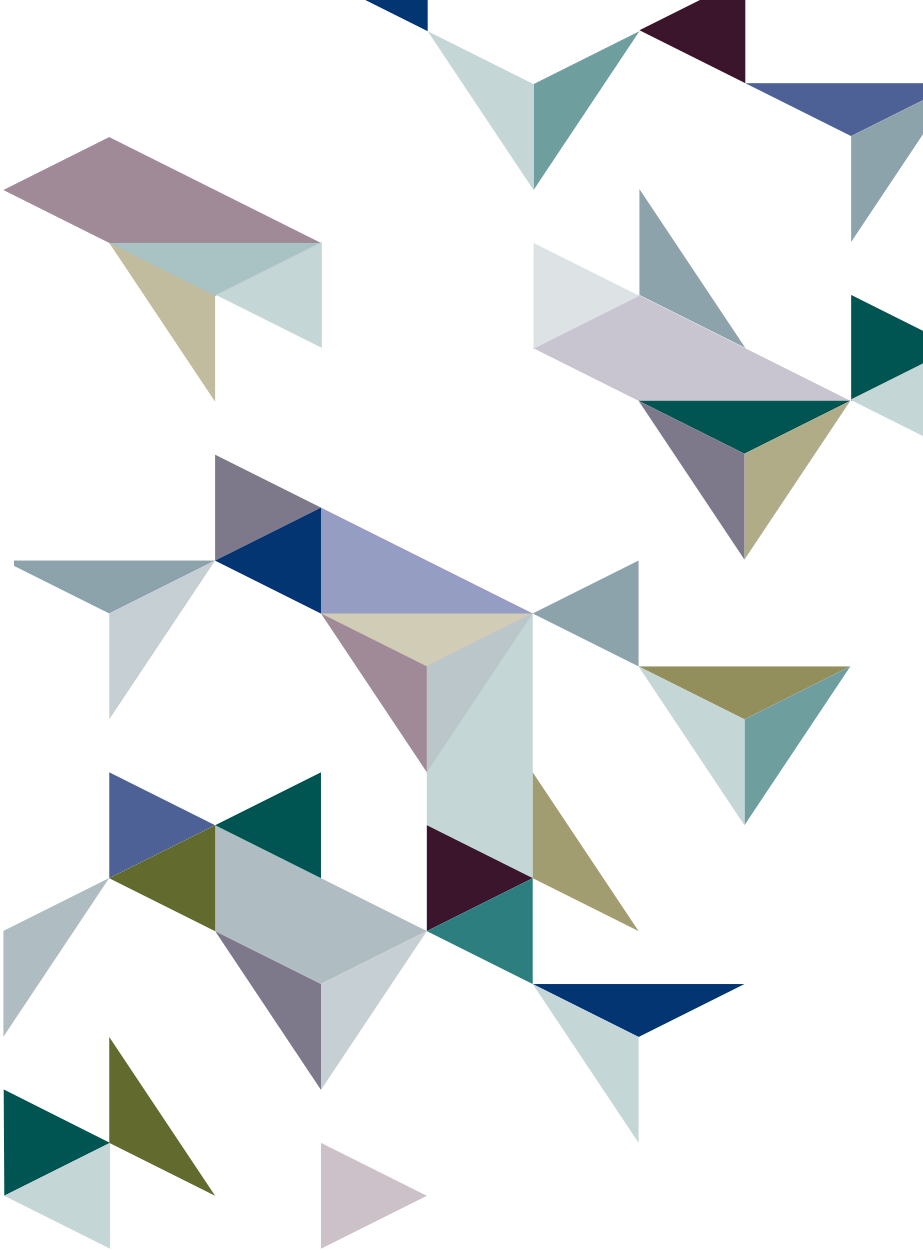

UNDERSTAND THE CONTEXT

IDENTIFY THE ASSESSMENT PURPOSE

DEFINE INDICATORS OF SUCCESS

DEVELOP THE DESIGN, METHODS & DATA COLLECTION

COMMUNICATE AND USE FINDINGS

MANAGE THE ASSESSMENT

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