



# Impact Assessment: A tool to encourage and measure research translation and impact



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In partnership with our community



**NSW REGIONAL**  
**HEALTH PARTNERS**  
CENTRE FOR INNOVATION IN REGIONAL HEALTH

# Agenda

- Key definitions
- Why measure impact?
  - The problem, Policy shifts, Key initiatives
- Developments in Impact Assessment
- Criticisms of Impact Assessment
- HMRI FAIT
- Expressing the results
- **WORKSHOP!**

# Key definitions

## Research translation

... a process of knowledge generation and transfer that enables those utilising the developed knowledge to apply it. This definition acknowledges that, once generated, knowledge flows can be multidirectional and non-sequential.

## Research impact

... the demonstrable effect from the flows of knowledge between basic, patient and population-orientated research, and clinical trials, that improves human health and quality of life, and generates benefits for the economy, society, culture, national security, public policy, or the environment. **(i.e. a societal perspective)**

**Why measure impact?**

# Evidence of the problem

1. Expected consequence of funding health research => generate a positive impact
2. We want less disease, better care, and improved quality of life and longevity for Australians.
3. Flow of knowledge through the translational pipeline is not optimal.
4. Effective and cost-effective findings not being fully implemented by healthcare systems and not being appropriately used by others.
5. Finite HMR budget - not being spent efficiently or effectively.

# Policy shift in Australia

- **Consequence** of sub-optimal research translation is that health services and patients are not always using or receiving the most effective or cost-effective prevention or treatment
- **Message from governments and major funders (ARC, NHMRC, MRFF, Cancer Institute)** is that the ability to demonstrate research impact (as opposed to academic impact) is becoming exceedingly critical
- More and more, researchers must **facilitate** and **demonstrate** research translation & impact

# Key initiatives in Australia

- **Excellence in Research for Australia (ERA)**
- **Advanced Health Research and Translation Centres Program (AHRTC)**
- **Medical Research Futures Fund (MRFF)**
- **ARC's national engagement and impact assessment framework (EI)**
- **Centres for Innovation in Regional Health (CIRH)**



**Health**  
Hunter New England  
Local Health District



**Health**  
Central Coast  
Local Health District



**Health**  
Mid North Coast  
Local Health District



An Australian Government Initiative

Mater Newcastle



**Impact measurement-  
what's been happening?**

# Impact Measurement

- **Scoping literature reviews**
  - What do existing frameworks aim to do?
  - What methods for impact assessment?
- **Qualitative**
  - Interviews with stakeholders – mainly in the Hunter
  - State & federal government views
  - Expanded to MRIs around AU
  - Attitudes to impact measurements, barriers and enablers; what is being done; what should be done
  - Broader engagements (NHMRC, ARC, MRFF, Brunel University (Payback), Karolinska Institute etc.)

# What is the role of an impact assessment framework?

From the literature:

- Identified objectives grouped into eight (8) categories<sup>1</sup>:
  - Top-down Accountability
  - Transparency / Bottom-up Accountability
  - Advocacy
  - Steering
  - Value for money
  - Management: Learning & Feedback
  - Measure /improve the speed of translation
  - Prospective orientation of a research project \*\*\*\*\*

<sup>1</sup> Deeming, S., A. Searles, P. Reeves and M. Nilsson (2017). "Measuring Research Impact in Australia's Medical Research Institutes: A scoping literature review of the objectives for and an assessment of the capabilities of research impact assessment frameworks." [Health Research Policy and Systems](#)

# Guiding principles for impact measurement

- Capture processes, outcomes and impacts generated across the spectrum of health research from discovery to applied science;
- Encourage research translation;
- Enable the implementation of improvement processes when research translation fails;
- Utilise cost-effective data collection techniques;
- Facilitate communication on research impact.

<table border="1"> <tr><td>YES</td><td></td></tr> <tr><td>PARTIAL</td><td></td></tr> <tr><td>NO</td><td></td></tr> <tr><td>POSSIBLE</td><td></td></tr> </table>		YES		PARTIAL		NO		POSSIBLE		ACCOUNTABILITY – TOP DOWN	TRANSPARENCY/ ACCOUNTABILITY – BOTTOM-UP	ADVOCACY	STEERING	VALUE FOR MONEY	MANAGEMENT / LEARNING & FEEDBACK /ALLOC.	SPEED OF TRANSLATION	PROSPECTIVE ORIENTATION
YES																	
PARTIAL																	
NO																	
POSSIBLE																	
BALANCED SCORECARD																	
CAHS IMPACT FRAMEWORK																	
CIHR IMPACT FRAMEWORK																	
COMPREHENSIVE RESEARCH METRICS LOGIC																	
DECISION MAKING IMPACT MODEL																	
ECONOMIC IMPACT ASSESSMENT (EIA)																	
EXCELLENCE IN RESEARCH FOR AUSTRALIA (ERA)																	
HEALTH SERVICES RESEARCH IMPACT F/WORK																	
HMRI FAIT																	
ITHS KLM/WHO MODEL																	
LEAN/SIX-SIGMA MODELS																	
MATRIX SCORING SYSTEM																	
NHMRC MORIA																	
PAYBACK MODEL																	
PROCESS MARKER MODEL																	
RE-AIM MODEL																	
RESEARCH ENGAGEMENT FOR AUSTRALIA																	
RESEARCH EXCELLENCE FRAMEWORK																	
RESEARCH IMPACT FRAMEWORK																	
RESEARCH PERFORMANCE EVALUATION																	
RESEARCH UTILIZATION LADDER																	
SOCIETAL IMPACT FRAMEWORK																	
TELETHON KIDS INSTITUTE RIF																	
TRANSL. RESEARCH ORGANIZ. PERF. MODEL																	
WEISS LOGIC MODEL																	

# What critics of impact assessment might say

- Influence funding particularly against 'blue sky' research
- Causality - did the research cause the impact?
- Attribution - to what extent did the research contribute to the impact?
- Timing – some impacts take decades to materialise

# Critics of impact assessment might say...

## 1. Favours applied rather than blue sky research

- Engage with other potential users along the pipeline. Basic science can utilise simulation modelling.

## 2. It can be difficult to identify causality

- Impact assessment is not reason to abandon rigorous evaluation with appropriate study design (control group, randomisation, blinding).

## 3. It may be difficult to define the extent of attribution

- Evidence base for attribution / scenario analysis / adjust claimed benefit in cost-benefit analysis

## 4. Timing; impact may take more than a decade to materialise.

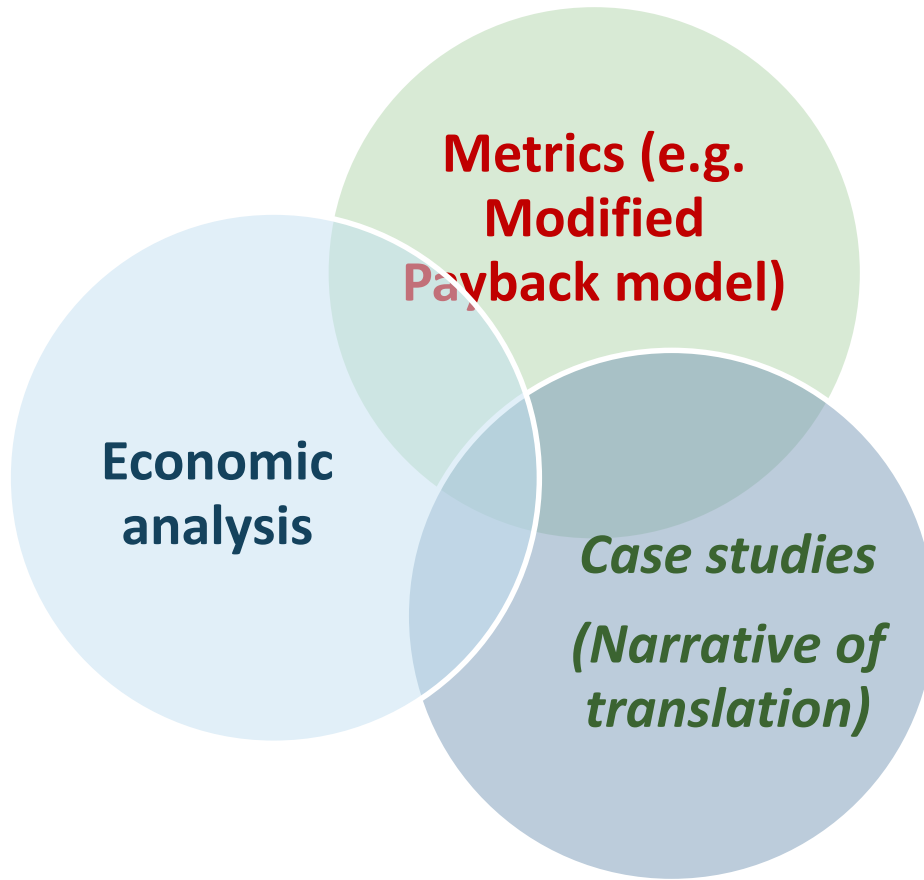
- Interim impacts/ longitudinal study design / follow up / simulation modelling with sensitivity analyses

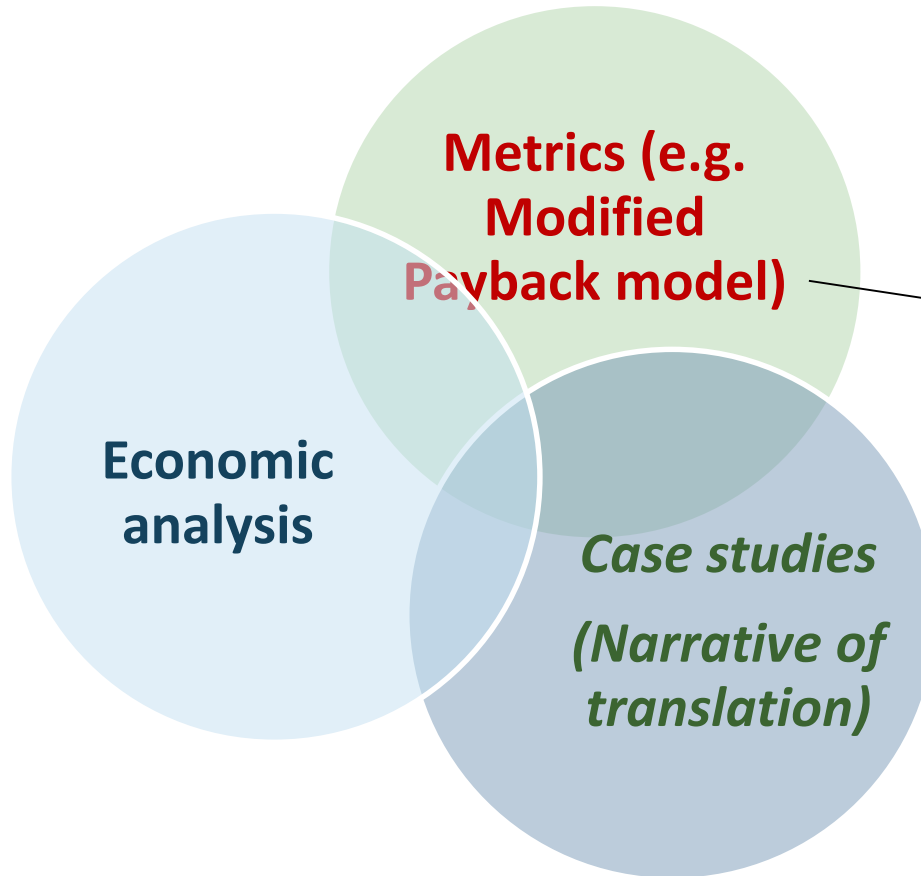
# HMRI

**F**ramework to **A**ssess the **I**mpact from **T**ranslational health research

# FAIT







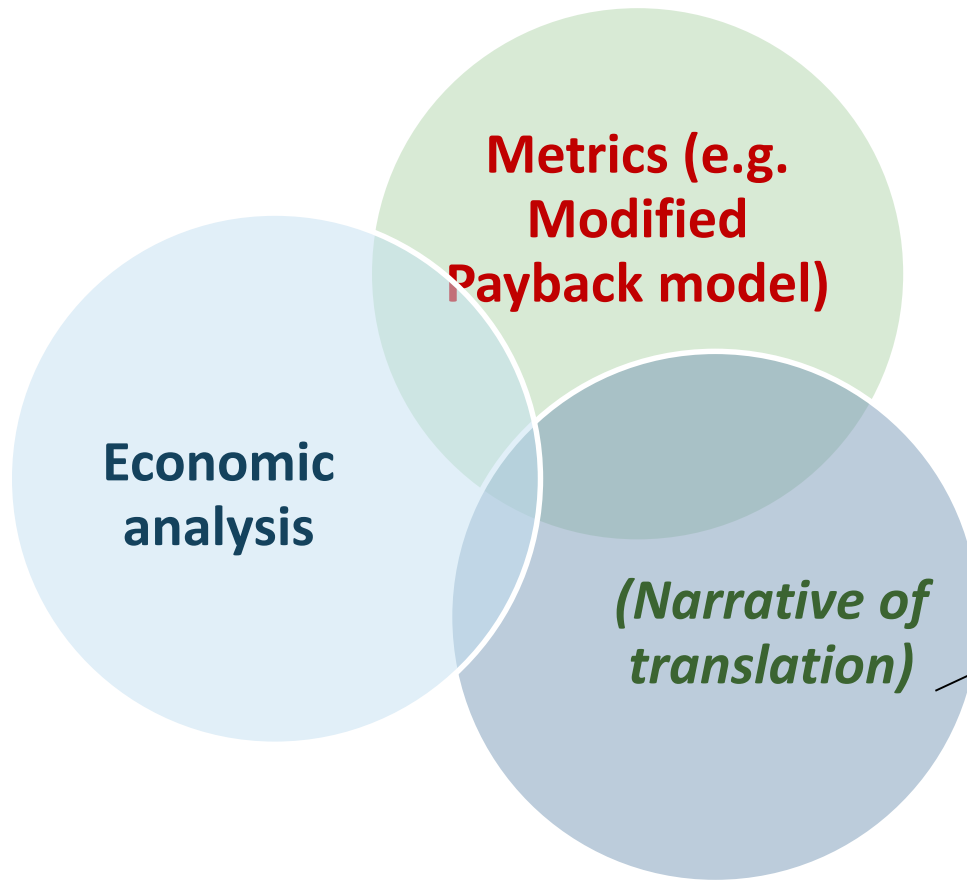
- Domains includes: Knowledge generation, Clinical Implementation, Government Policy,
- Economic Impact
- Community Benefit and any other suitable views of benefit:
- **Module of process and output metrics – represent translational activities and behaviours.**
- **The use of process metrics is set within a performance monitoring and management framework.**

- Favours cost-benefit analysis, an economic metric, easily understood, can be based on actual data &/or 'projected' future values.
- CEA also provides information on value for money.
- Favoured by treasuries & increasingly philanthropy

Economic analysis

Metrics (e.g. Modified Payback model)

Case studies  
(Narrative of translation)



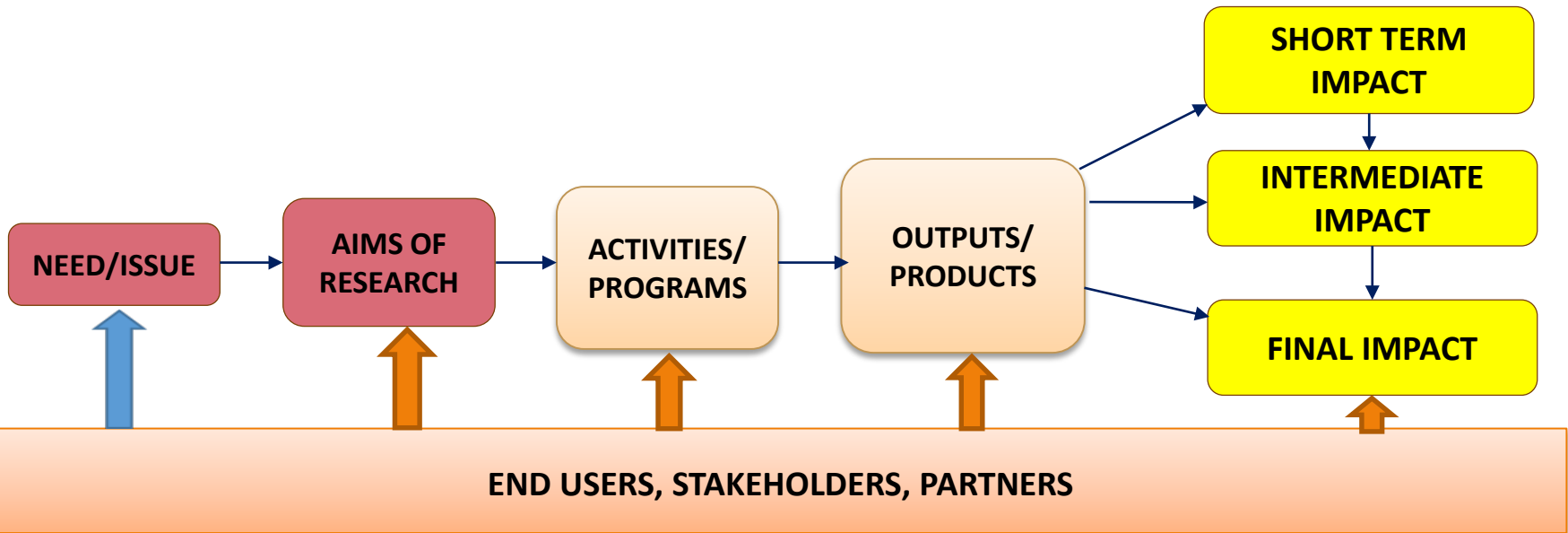
- Good for complex and lengthy translation pathways
- Good for explaining serendipitous research outcomes
- Brings together quantitative results and explains them in context

Metrics (e.g.  
Modified

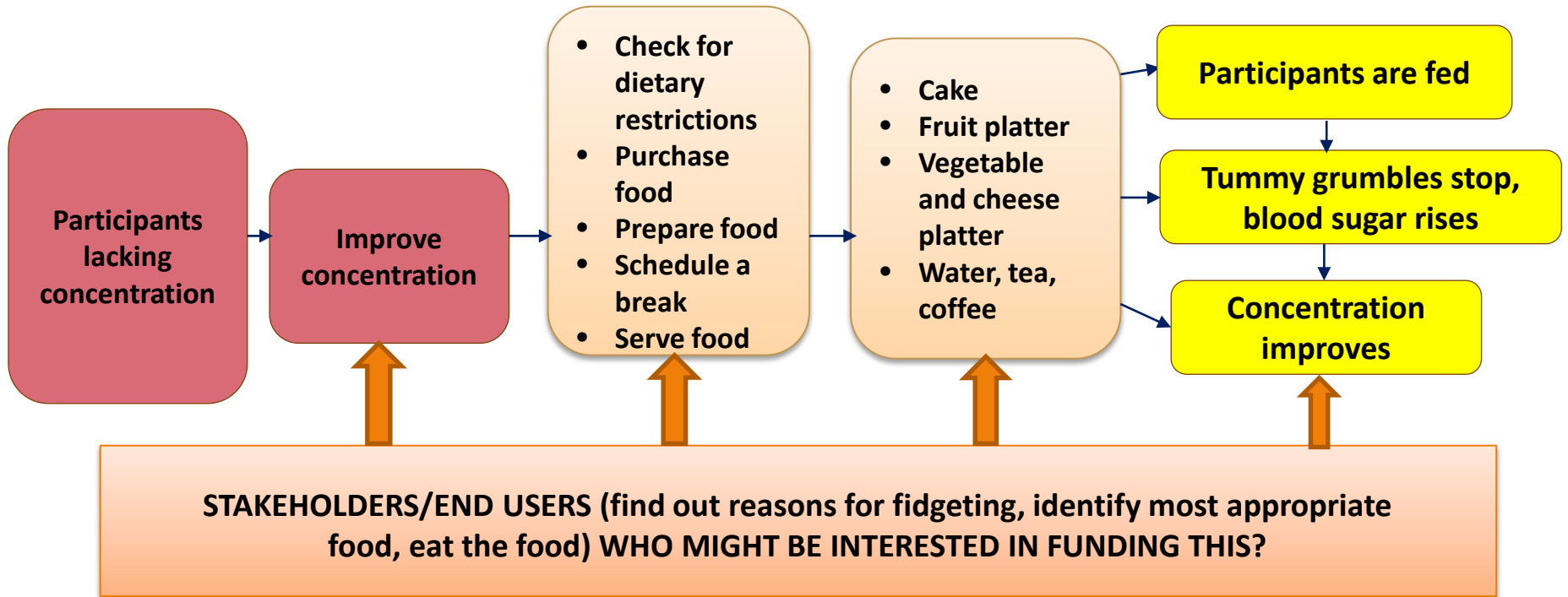
**Logic map supports these methods**

*(Narrative of  
translation)*

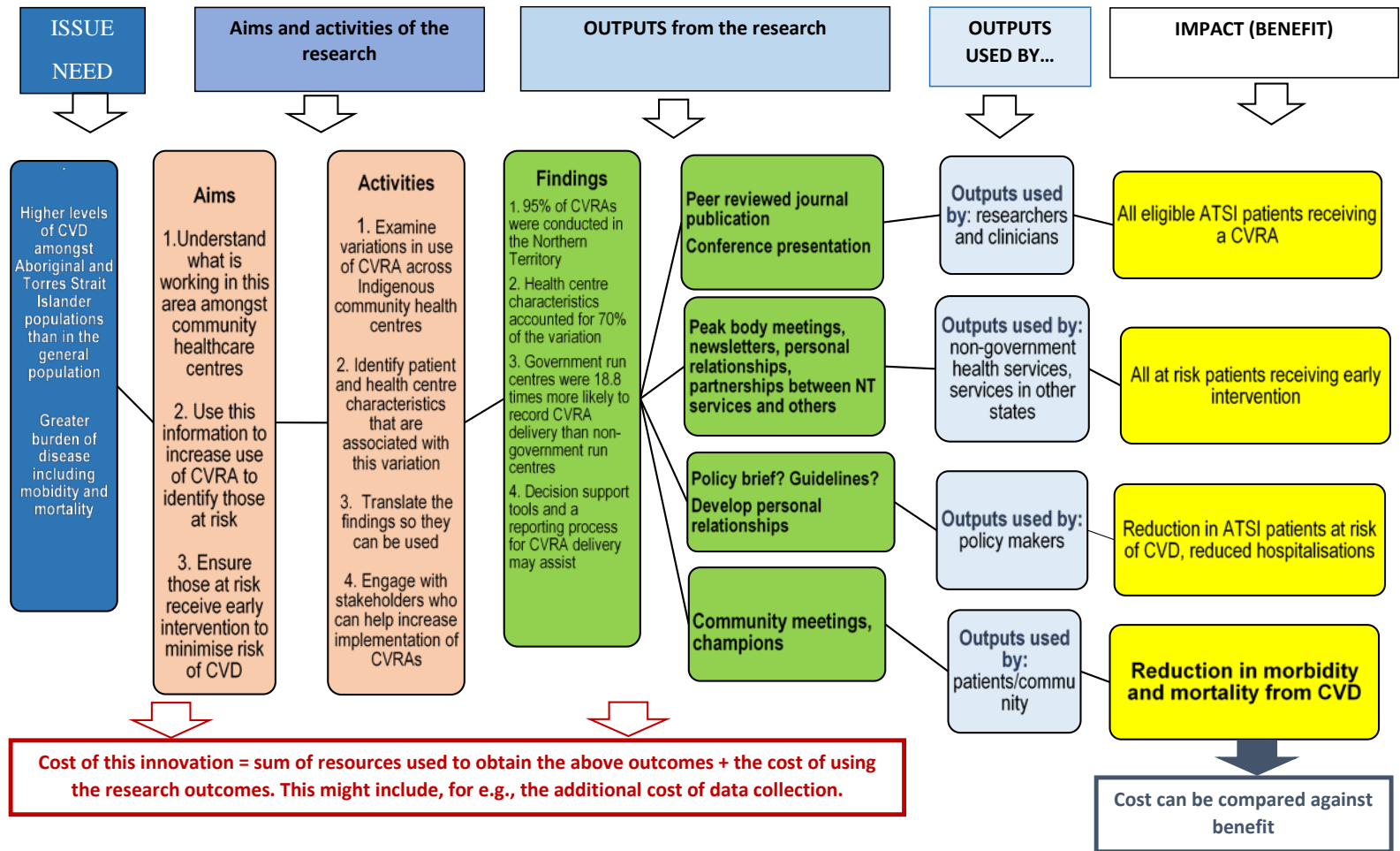
# MODIFIED PROGRAM LOGIC MODEL



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# MODIFIED PROGRAM LOGIC MODEL



NARRATIVE – Describes the Research Pathway to Impact



# Expressing the results from FAIT

Method	Domain	Example of indicators
<b>Modified Payback</b>	<b>Knowledge translation</b>	Number of attendees at a conference or workshop
		Citation index for journal article
	<b>Clinical implementation</b>	Increased delivery of cardiovascular risk assessments to Indigenous adults
		Increased follow up with those at risk
		Reduced complications
	<b>Community benefit</b>	Reduced cardiovascular morbidity amongst Indigenous adults
		Reduced cardiovascular mortality amongst Indigenous adults
		Wellbeing, measures of stress, etc.
	<b>Policy and legislation</b>	Change in localised or state-based policy regarding regular delivery of CV risk assessments for Indigenous adults
	<b>Economic impact</b>	Reduced hospitalisations of Indigenous adults for cardiovascular problems; reduced re-admissions, shorter LOS, reduced need for at home care, able to return to work / usual duties, increased GP consults, etc.

Method	Metric	Example of indicators
<b>Economic assessment</b>	Cost of research	Research budget
	Cost of doing the CVD risk assessments and follow up	Estimated cost of implementation (increased GP consults, medications)
	Benefit that can be converted into \$ value	Projections of reduced CVD episodes, reduced hospitalisations and associated costs for the patient that can be avoided e.g. time off work
	Cost:Benefit ratio	<b>1:2.50 or for every \$1 invested into the program, it delivered \$2.50 of benefit.</b>

Method	Example
<b>Case studies</b>	Narrative on community need, research response, research outcome, research impact

# Thank you

# Questions?

# Workshop

## Starting with the end in mind

# Knowledge from this session

1. The need to logically link each aspect of the research from 'demand for the research/service' through to 'impacts'
2. Set up a program logic model
3. Develop process, output and impact metrics to link aims with impacts
4. Prospectively think about: end-users and their engagement; how research is translated and how impacts are generated.

# Some key questions

1. What is the **demand** for the research / service?
2. What does the research / service **aim** to do? (and will this address demand?)
3. What **activities** will be undertaken?
4. What are the **outputs** from those activities?
5. What is the cost of the research / service?
6. Who will **use** the research outputs?
7. If the outputs are used, what **impacts** are expected?

*And, try to plan for your impact analysis at the start so that the correct data is collected*

# DEMAND FOR YOUR PROGRAM

## DEMAND FOR YOUR PROGRAM

Some questions on demand to consider:

1. **Is there baseline data? Existing literature/evidence about the problem?**
2. **The affected population(s): Where is the demand originating?**
3. **Nature of the demand (i.e. disease burden, gap in knowledge, lack of screening, lack of services, lack of training etc.)**
4. **Size of the problem: How many people are affected?**
5. **Severity of the problem: Is this a severe problem for a few OR is it a mild problem for many?**

# WHO NEEDS TO BE INVOLVED?

STAKEHOLDERS	ENGAGED Y/N

1. The definition of end user/stakeholder is broad. It includes other researchers, the health service, other providers, patients, communities, governments etc.
2. Think about your program and who needs to be involved
3. *Have you already engaged with your stakeholders? Yes / No*



# AIMS OF YOUR PROGRAM

PROGRAM AIMS	
No.	Aim
1	
2	
3	
4	

Some questions to consider:

1. Review demand for your research/project. The aims should relate to this demand.
2. The aims articulate what your research project intends to supply to address that demand.
3. List up to 4 aims for your research project/program to address and write these on the separate sheets provided – only one aim per sheet



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# PLANNED ACTIVITIES FOR YOUR PROGRAM

## ACTIVITIES FOR YOUR PROGRAM

*Activity*

*When?*

1. Review your aims, the activities you list here should directly relate to your aims.
2. You can have several activities to address each aim but list them on the same page as the aim they relate to.
3. At the end of each activity, nominate when it will be undertaken.
4. Think about how you will know (what evidence you can keep) that you have completed each activity.

# ANTICIPATED OUTPUTS FROM YOUR PROGRAM

## PROGRAM OUTPUTS

*Output*

*End-user*

1. For every listed aim, there should be at least one output, if not more
2. An output is always something that someone else can use that is generated from your activity
3. For each output nominate who the end user is

# END USERS USE YOUR OUTPUTS=> CONSEQUENCE?

## IMPACTS FROM USING YOUR RESEARCH OUTPUTS

1. Refer to your listed outputs and end users.
2. Conceptually, if the end user uses this output what benefit might be generated? Be specific.
3. Every output used by an end user should have a consequence or benefit.
4. How will you know if your outputs have had the desired impact
5. Impacts are broad. They include:
  - Knowledge advancement (e.g citation counts);
  - Clinical improvement (e.g. change in practice);
  - Community benefits (e.g. reduced burden from a particular disease)
  - Legislation & policy (e.g new guidelines);
  - Economic (e.g. reduced waste, more efficient service)

# REPORTING BACK

- 1) Please tell us what the demand for your research project is?
- 2) Pick one of the aims and talk us through what the main activities, outputs, end users and impacts you are anticipating?
- 3) Was it useful to develop a program logic model?
- 4) What was challenging about the activity?
- 5) Do you think you will be able to use it to help you focus on research translation and impact?
- 6) Can you give us one example of data you will need to collect to provide evidence of impact?

# THE END