



Enhancing Program Performance Using Logic Models

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Health Resources in Action
Advancing Public Health and Medical Research

What is your Theory of Change?



Theory of Change:

How and why a funding investment will address a problem

Problem

- Early career researchers forced to pursue safe research
- Lack of progress towards cure
- Academic research not leading to usable treatments

Long term goal(s)

- Improve lives of people affected by disease
- Drive new directions in research

Pre-conditions/ intermediate outcomes and outputs

- Application process and funding fuel creativity and innovation
- Investigators produce high quality research
- Investigators prioritize experimental approaches on the path toward commercialization
- Community building creates opportunities for collaboration

Key assumptions

- Private research funding makes possible work that would not happen otherwise
- Government and commercial funding of science leaves gaps and/or is inefficient
- Progress will be slow and nonlinear, not everything funded will work
- Some funding will advance progress toward treatments and prevention

Strategies

- What your program funds and criteria to select
- Non-monetary support



Theory of Change:

How and why a funding investment will address a problem

By providing
[x, y, and z],

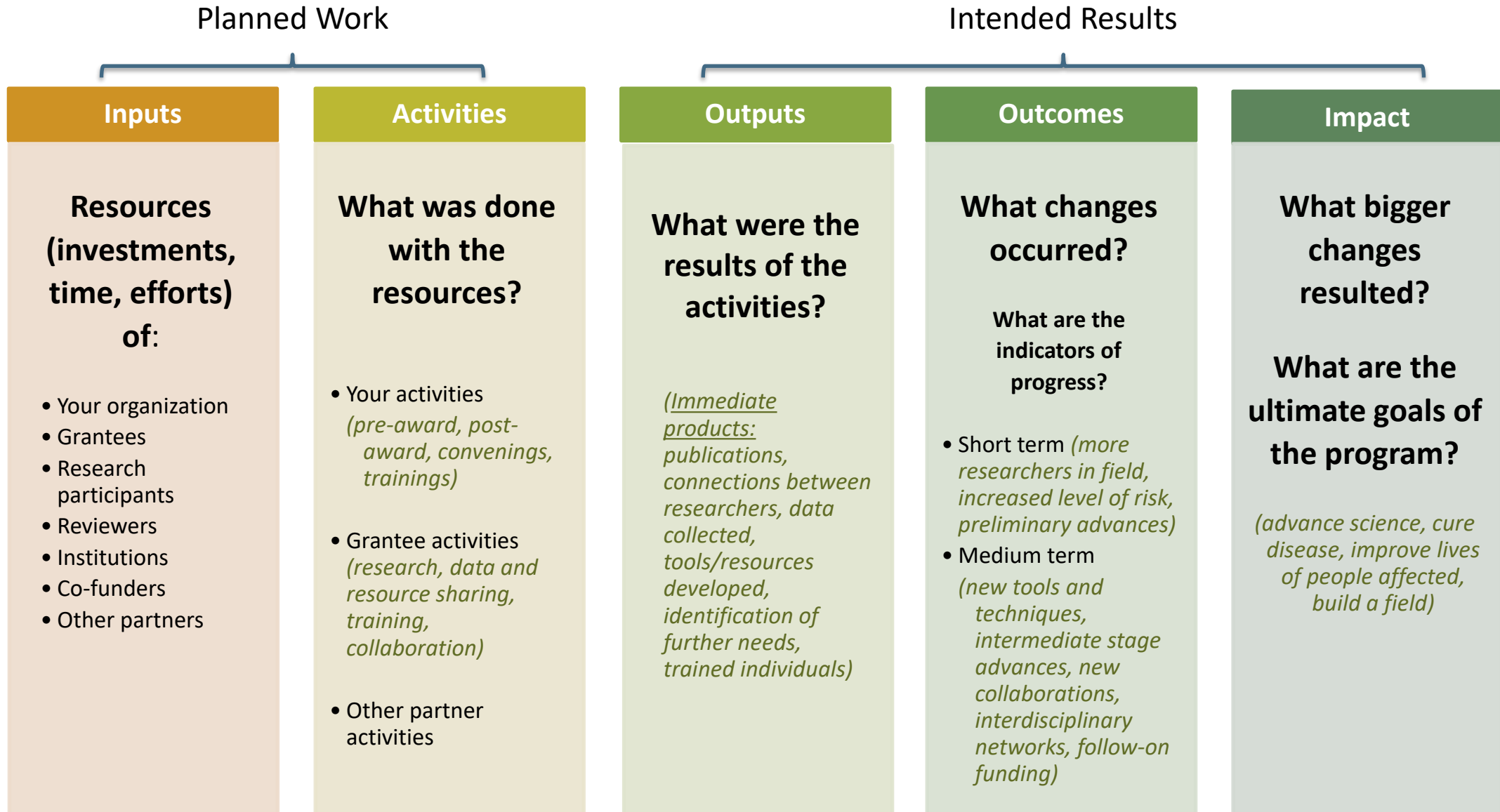
**our investments in
research will**
[intermediate
outcomes,
long term goals].



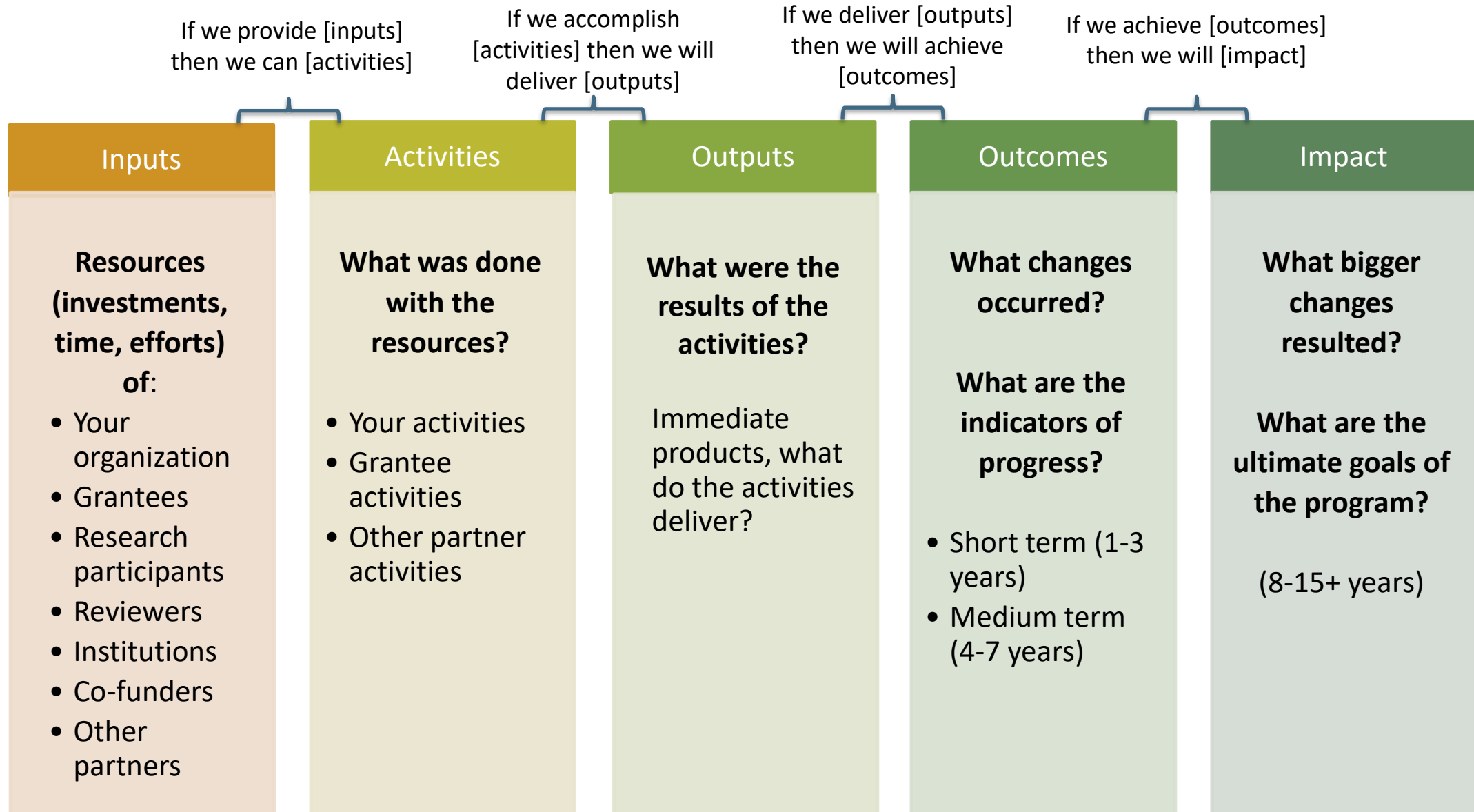
What is your Logic Model?



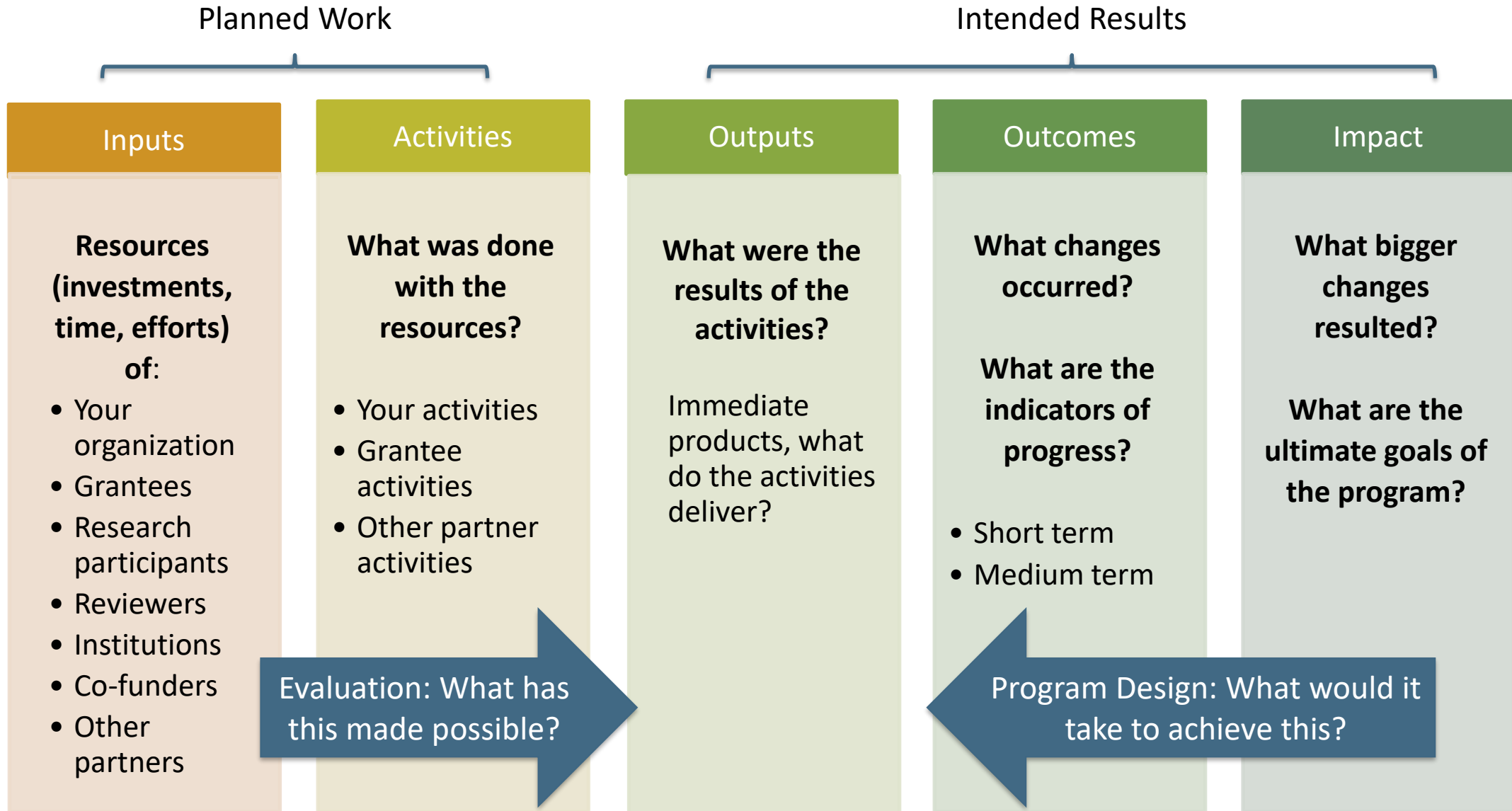
Logic Model: Standard Template



Logic Model: Clarify your logic



Logic Model: Direction of travel

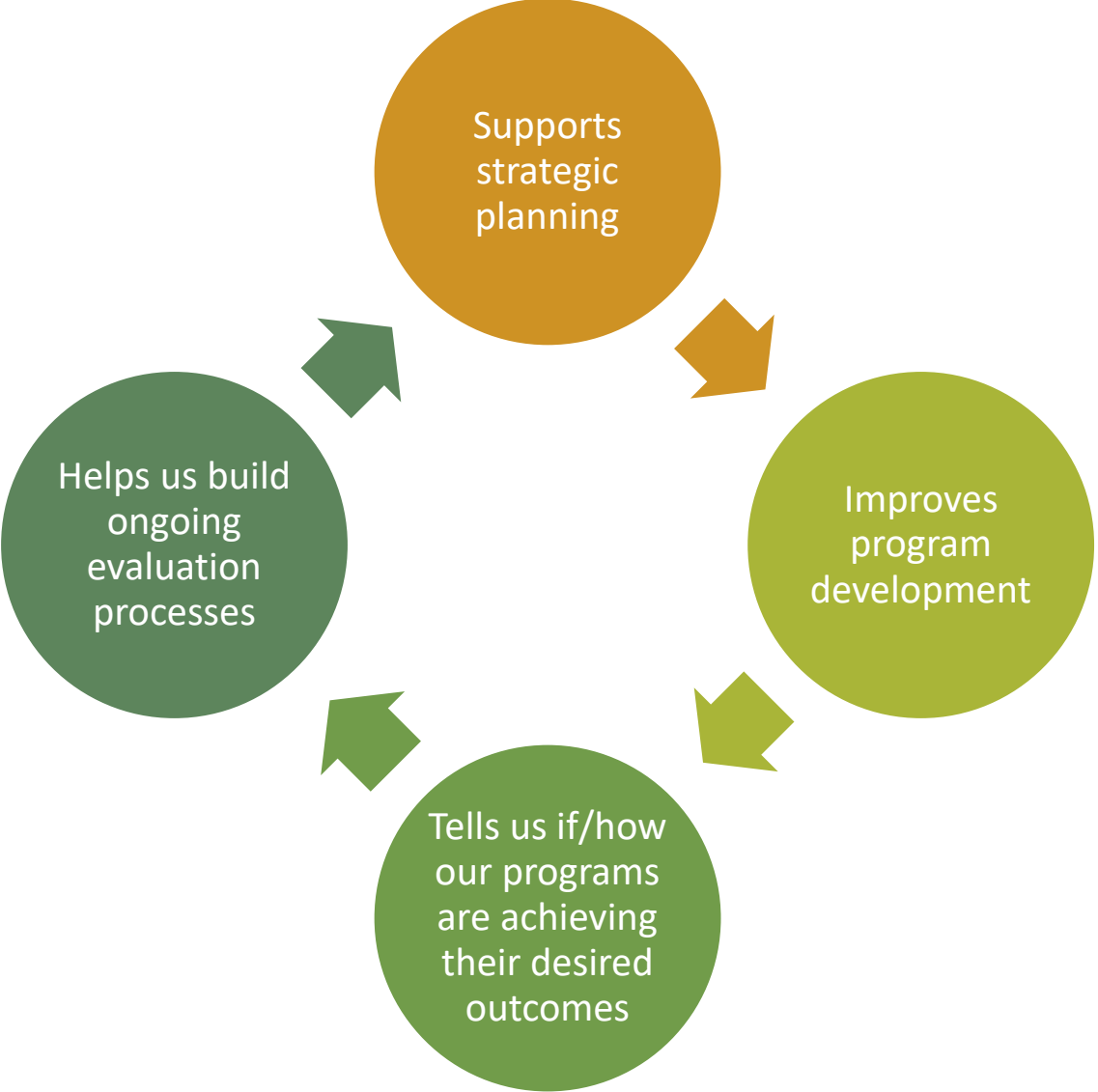


But Wait, There's More!!!

What to do with your logic model



Program design, learning, and evaluation



Types of Evaluation

Process Evaluation

Inputs

Resources (investments, time, efforts) of:

- Your organization
- Grantees
- Research participants
- Reviewers
- Institutions
- Co-funders
- Other partners

Activities

What was done with the resources?

- Your activities
- Grantee activities
- Other partner activities

Outputs

What were the results of the activities?

Immediate products, what do the activities deliver?

Outcome Evaluation

Outcomes

What changes occurred?

What are the indicators of progress?

- Short term
- Medium term

Impact Evaluation

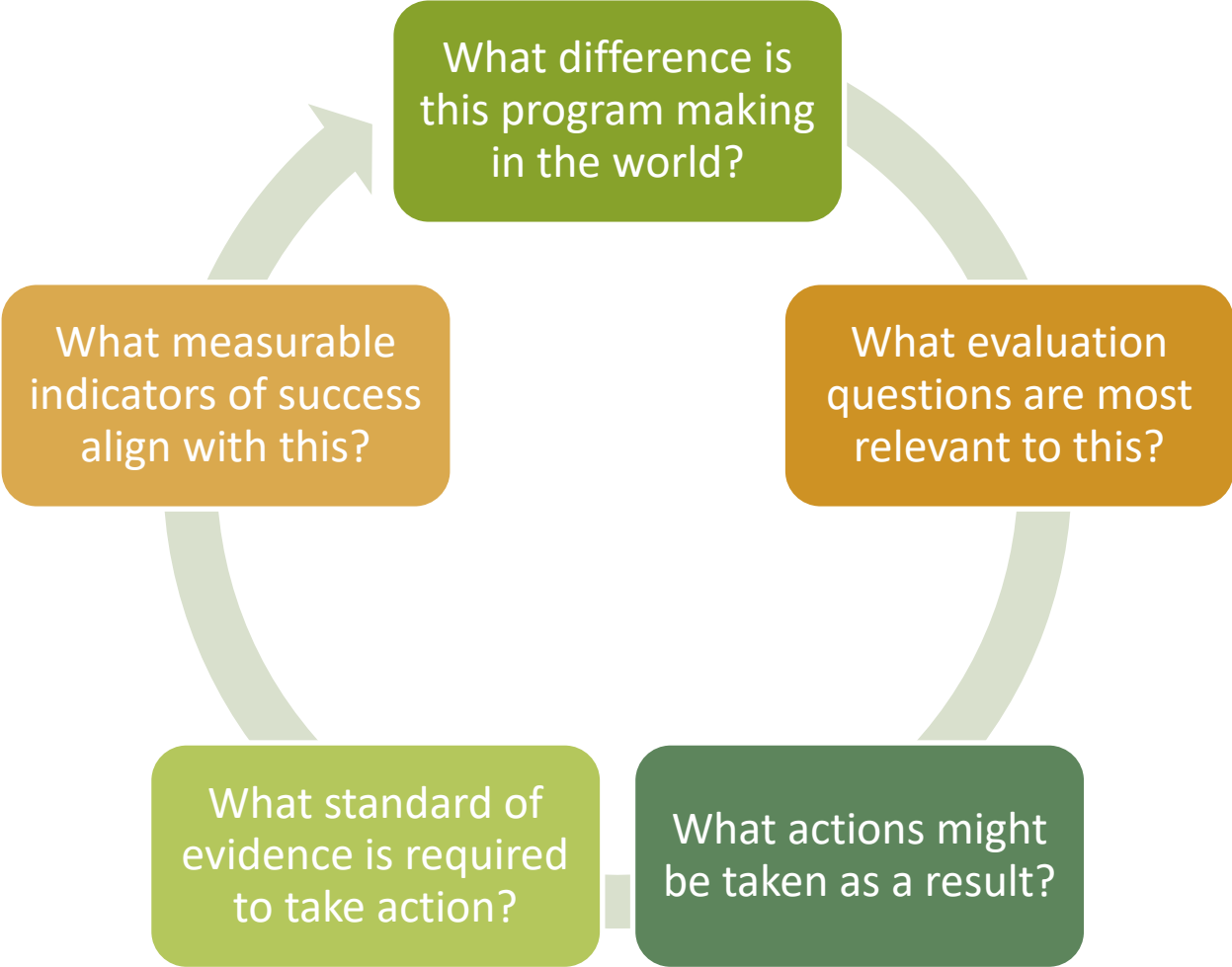
Impact

What bigger changes resulted?

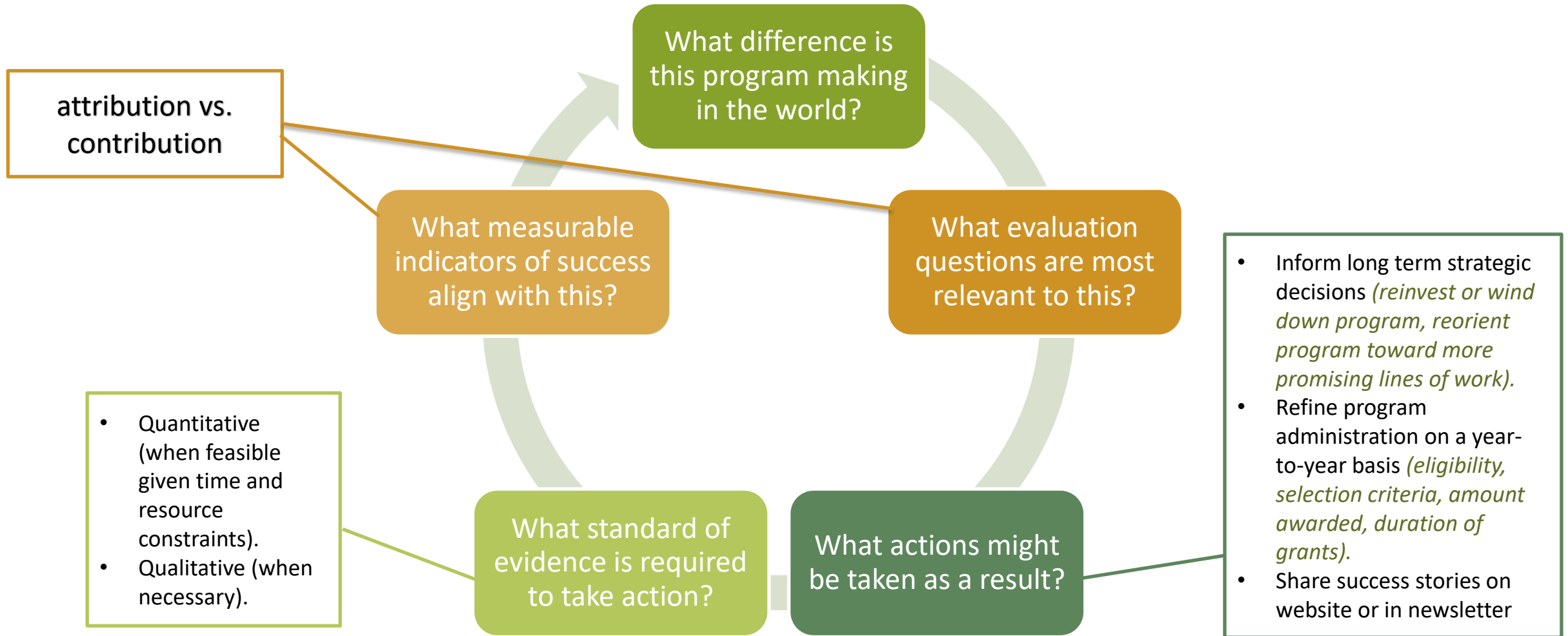
What are the ultimate goals of the program?



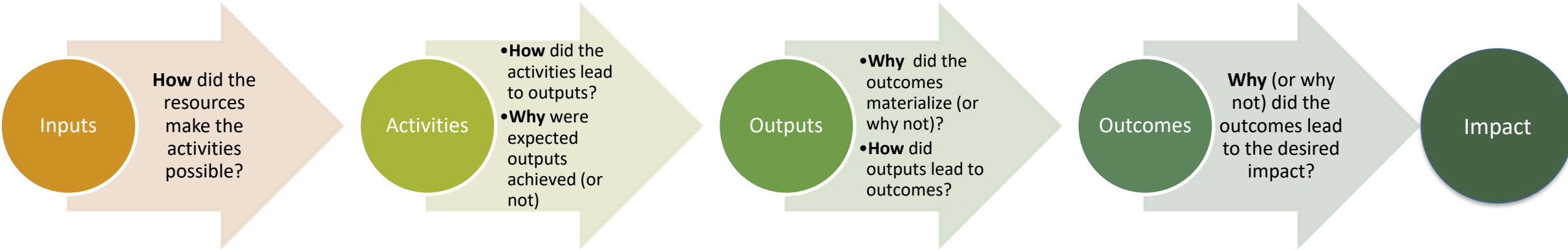
Learning Agenda



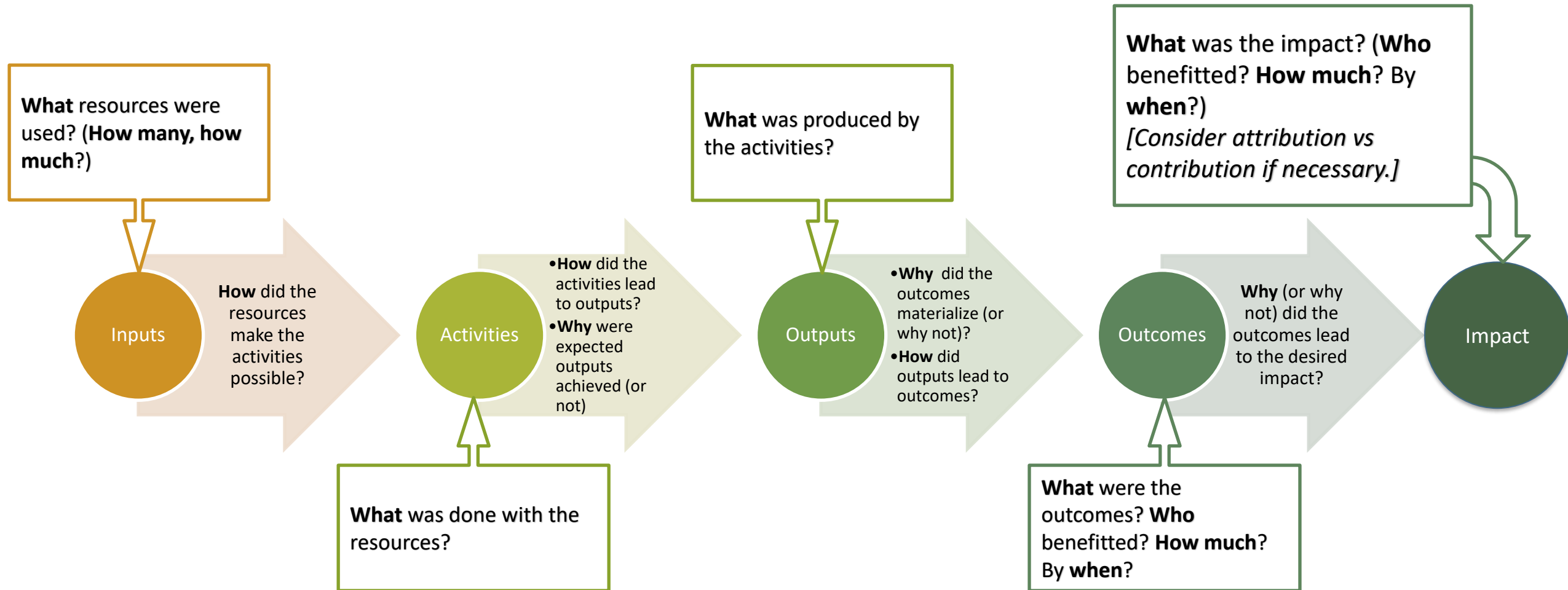
Learning Agenda



What are your evaluation questions?



What are your evaluation questions?



Example evaluation questions based on program goals

Fuel creativity and innovation

- Has the program increased incentivization for **unfunded** junior faculty to think creatively and develop proposals to pursue novel research directions?
- Has the program increased the level of creativity and innovation in **funded** junior faculty research?
- Has the program resulted in more connection across different strands of research among junior faculty in the program area?

Drive new research directions

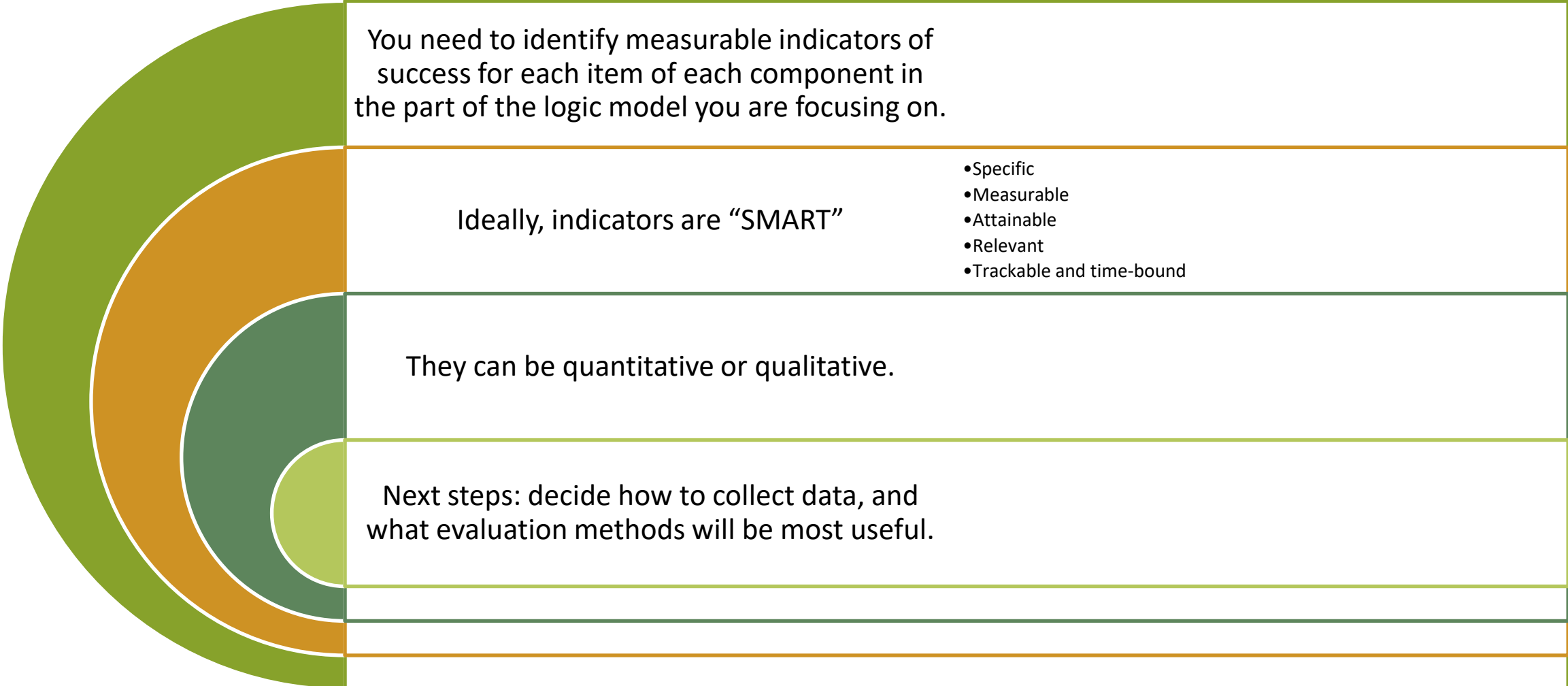
- Are new lines of biomedical research being established as a result of this program?
- Are scientific advances being made in these new directions of research?
- How much NIH and other funding was subsequently invested in the new research directions initially seeded by this program?

Generate Breakthroughs

- Have research breakthroughs been generated as a result of this program?



What evidence will answer your evaluation questions?



You need to identify measurable indicators of success for each item of each component in the part of the logic model you are focusing on.

Ideally, indicators are “SMART”

- Specific
- Measurable
- Attainable
- Relevant
- Trackable and time-bound

They can be quantitative or qualitative.

Next steps: decide how to collect data, and what evaluation methods will be most useful.



Measurable indicators of success (examples)

Short-term

- Publications
- Presentations
- Collaborations
- Resource sharing

Medium-term

- Follow-on funding
- Patents and intellectual property
- Connections across research in field or geographic area

Long-term

- % awardees that stay in research
- % time in research
- Type of research
- Scientific advances



Measurable indicators of success (examples)

Process Indicators

- **Grants awarded:** number, size, location/ recipient institutions
- **New directions in research explored:** number of projects funded involving new directions for investigator, or new directions for science in general; (qualitative) *degree of novelty*
- **Publications:** number, citations/impact, *relevance to the investigator's program-funded research*
- **Presentations:** number, size of audience, type of audience
- **Translational outputs:** patents, credible therapeutic target pathways identified
- **Training of research staff:** number of graduate students, postdocs, technicians
- **Convenings:** number, number of attendees, nature of convening, type of interaction
- **Collaborations funded:** how many, what type

Outcome Indicators

Short term

- How many proposals that scored high on innovation but were not funded by the program were later funded by NIH or others?
- How many novel lines of research generated substantive new learning based on progress reports, publications, patents, and follow-on funding?
- How many projects did not turn out as expected, or resulted in an unanticipated pivot? (*If genuinely high-risk research is funded, it should result in some unexpected results.*)
- How many new collaborations were initiated as a result of convenings?

Medium and long term

- What scientific advances have occurred as a result of the new directions of research seeded by this funding? (How many? How impactful? How soon?)
- What was produced as a result of grantee collaborations? How did they contribute to each other's research direction? What research occurred that couldn't have been done by either investigator alone?
- How much NIH and other funding was subsequently invested in the new research directions seeded by the program?

Impact Indicators

New directions in biomedical research are established

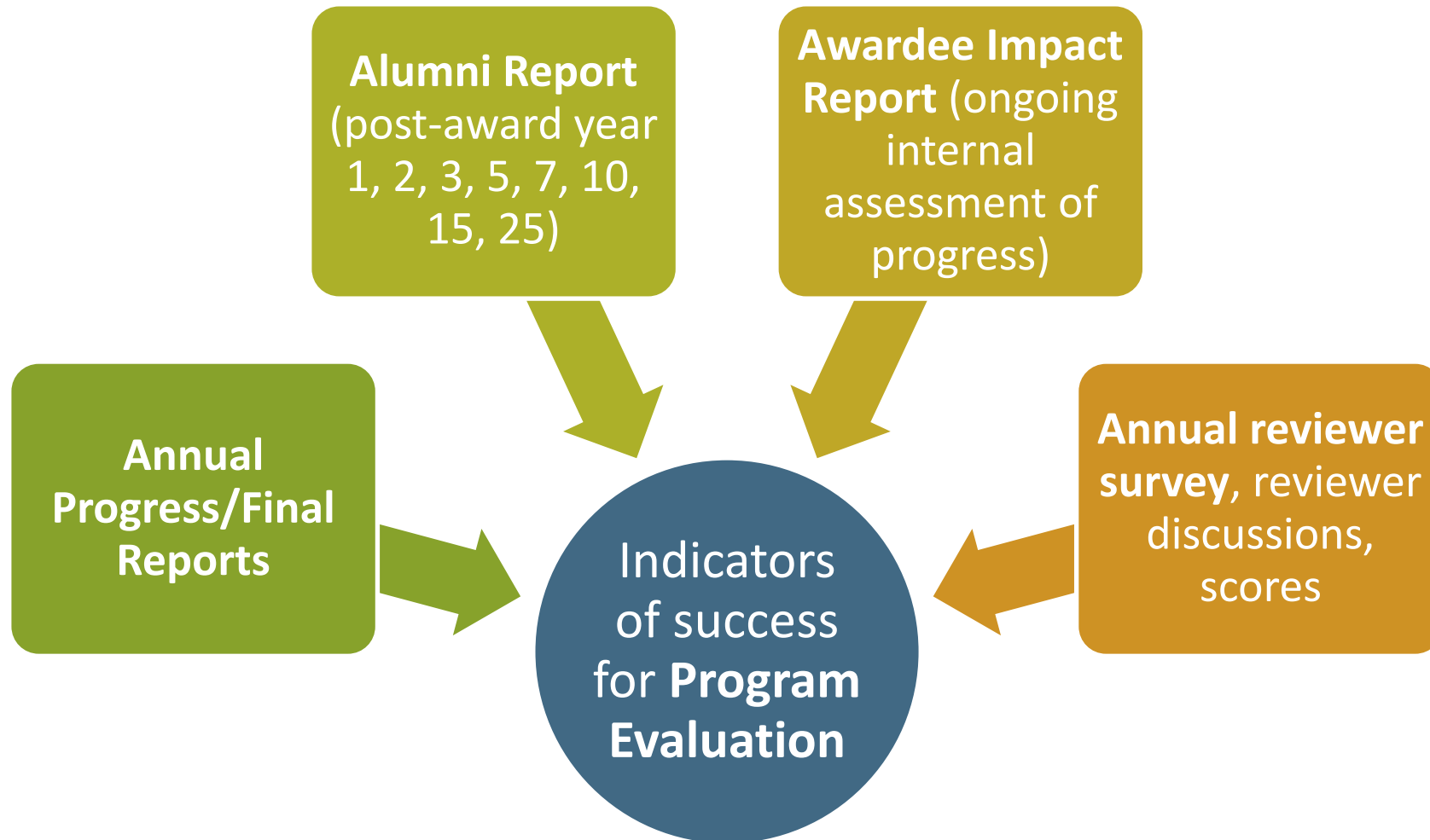
- Which program-seeded research directions have become established lines of research?
- Which have resulted in unanticipated learning (such as subverting an established paradigm)?

Research breakthroughs are generated

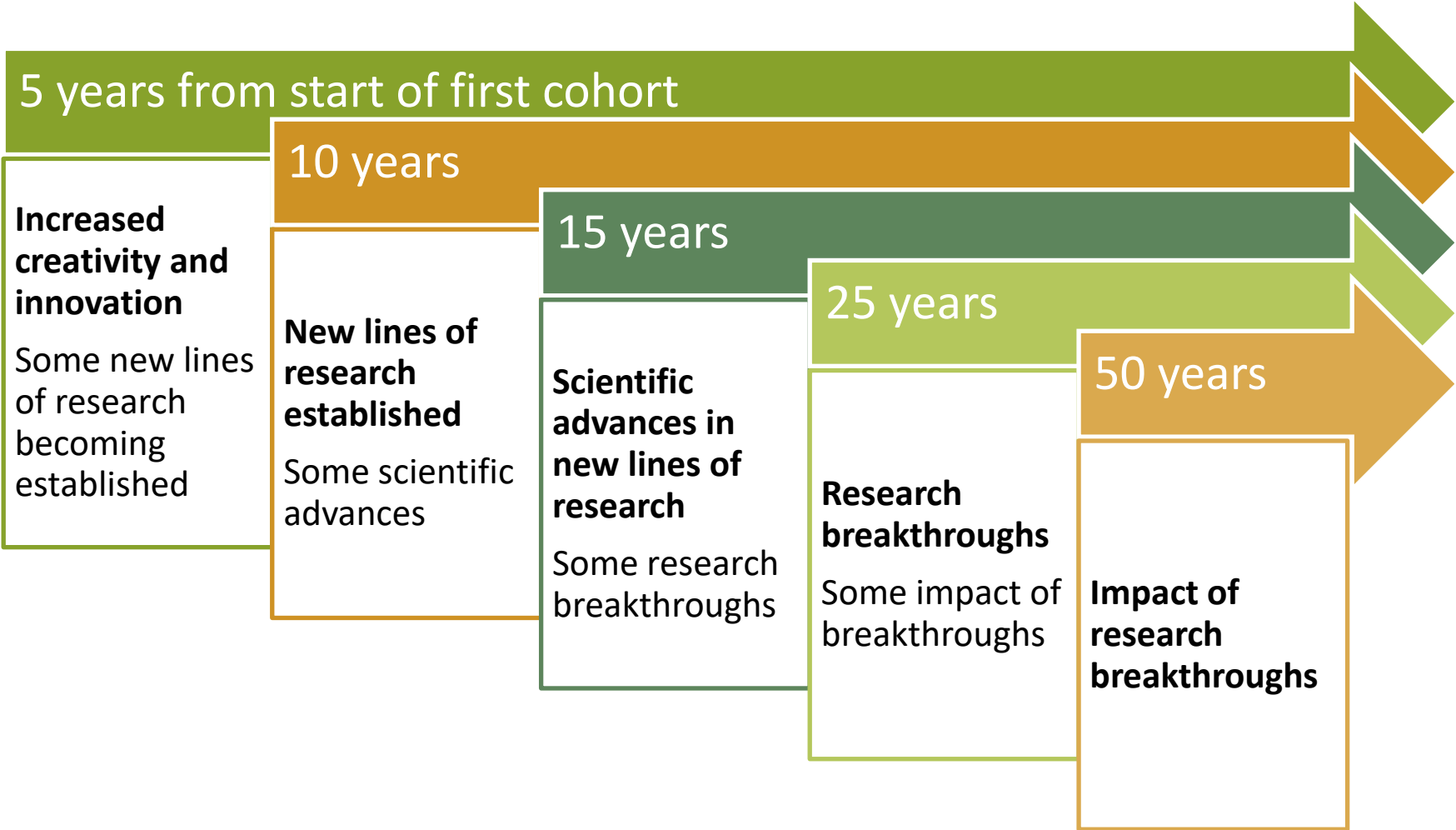
- Which program-seeded research directions have resulted in transformative breakthroughs?



Data collection: How will you collect the evidence you need?



Timeline for Evaluation: What will you know when? (example)





Thank you!

<https://www.healthra.org/resources/logic-models/>

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