ARTD Program Logic

Putting the logic back in program logic

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ARTD CONSULTANTS

Evaluation is the process of determining the merit, worth and value of things, and evaluations are the products of that process.

Michael Scriven
Evaluation Thesaurus, Page 1

6 questions for any evaluation

What is this program trying to achieve and how i.e. what is the program logic?

What is the purpose of the evaluation and what resources do we have?

Which parts of the program logic do we need to investigate?

What would success look like?

What data do we have already and what will we need to collect?

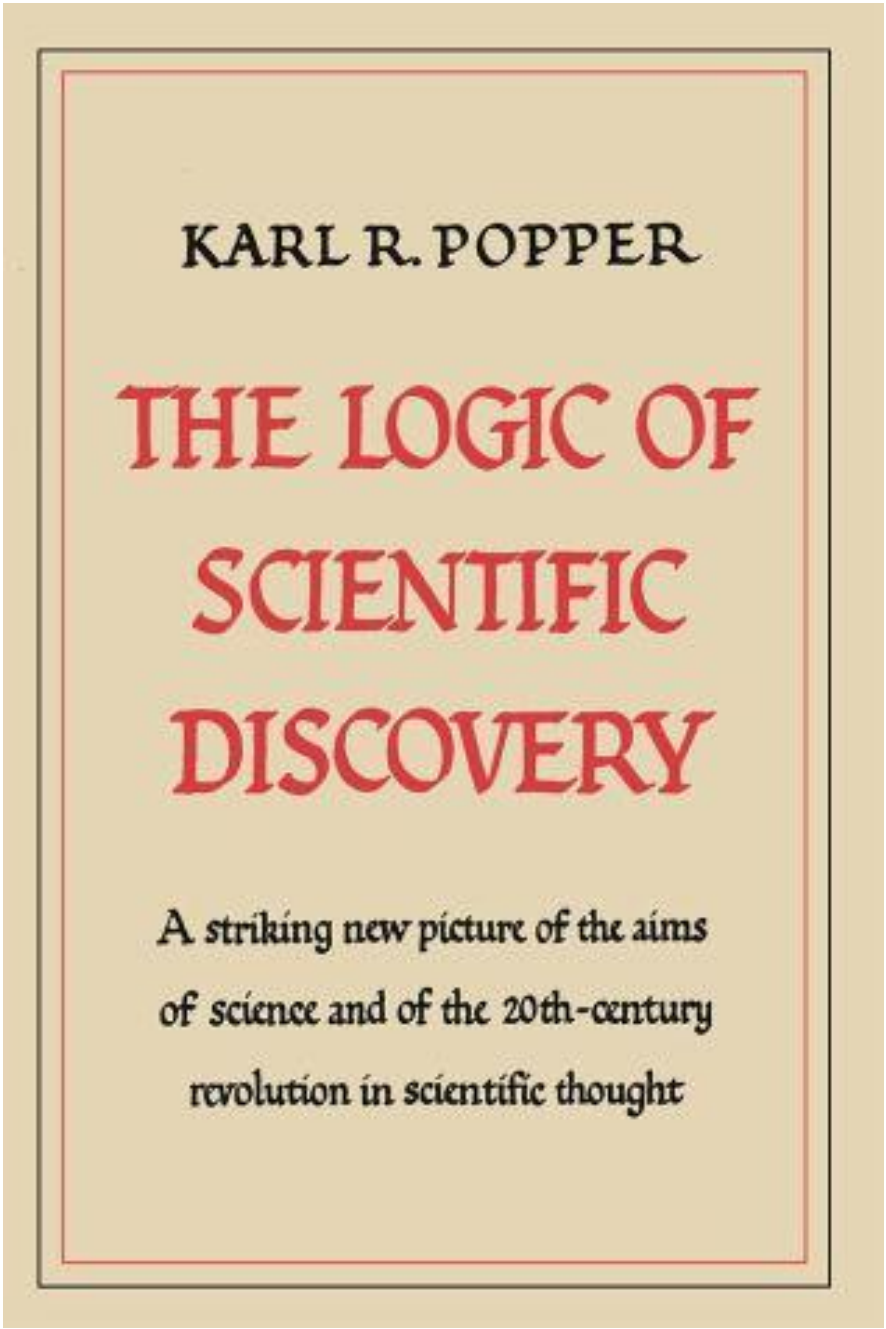
Who will do what & when?

Programs and their Logic

- On the ARTD approach a program is an argument about the merit or value of a course of action – 'if we do x we will achieve y'
- This course of action is intentional. We don't think it's the only way, but it is the way we have selected.
- The logic of the argument is that by doing x we will bring about *conditions 1,2,3…* that will be sufficient for ensuring that y follows.
- *Why* these conditions (or premises in the argument) are thought to be sufficient for an outcome is often based on theories
  - Different things work for different people—the causal powers that give rise to these conditions are abstract concepts – like love – they are invisible but powerful and work differently in different contexts.
  - *Why* these conditions are thought to be *sufficient* is often referred to as a 'theory of change'.
  - *Why* each component is considered *necessary* to bring about the may be based on theories about the world or just simple logic.
- Program logic is a rendering of this complexity into the conditions that are thought to be *necessary* in order for the program to be *sufficient* for an intended outcome.

Theory provides important warrants or justifications for components of a program. But theory is subordinate to logic.

Remember, Karl Popper's book was on the logic of scientific discovery, not the science of logical discovery.



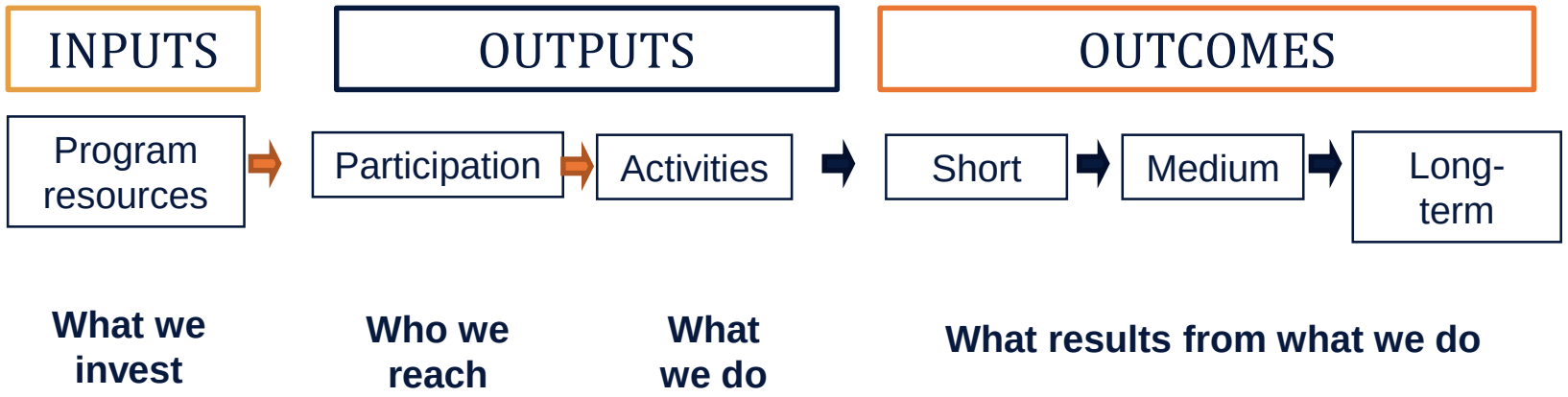
Program logic and evaluation

- The first task of evaluation is determining if the program argument is sound i.e. valid and well-grounded
- If it is sound, or effective it will be *sufficient* to bring about intended short-term outcomes
- This implies two steps
  - Validity: does it make sense on paper - if all the premies or conditions did occur would the short term outcome follow with a high degree of probability?
  - Well-groundedness: Does it work in reality - were all the conditions brought about, or was there variation that needs to be explained?
- A third step might be to question if it is efficient, is each component actually *necessary*?
  - This can be determined by observing situations where the outcome occurred and determining if the condition in question was always present.

In its simplest form…

Program logic shows the connections between:

- The resources that go into a program.
- The activities the program undertakes.
- The changes or benefits that result.



Complete this sentence

- I know, I have an idea about what I should do…

- to get a better hair cut next time.
- to learn more about what stakeholders think of our program.

- Did you come up with a theory or did you come up with a course of action that was, or could be, justified by a theory?

Program logic vs. theory of change

- Many of the 'why' questions will require theory – e.g. why do we expect if mothers engage with the program they will form better relationships with their children
- But in most program logics what is often missing is an explicit theory of causality
- A program logic does not display a 'casual chain' but a casual package or recipe as per Nancy Cartwright

What do we mean by ‘caused’

- The presence of something is invariably followed by the presence of something else (**successionist**) [simple change]
- The configuration of certain somethings immediately brings about a new something (**configurationalist**) [complicated change]
- The presence of something with certain latent powers in contact with the latent powers of something else creates a new something (**generative**) [complex change]

Role of theory

- Why the program is needed/the problem being addressed (i.e. the situation analysis)
- The social science theory or theories that sit at the heart of the program in terms of
  - an understanding of the nature of the problem for the target group
  - why program activities are considered necessary to generate outputs
  - why the collection of outputs are considered sufficient for generating short-term outcomes for the target group.
  - why the short term outcomes, in addition to the external factors, are likely to contribute towards the intermediate and longer term outcomes.

Program components as INUS conditions

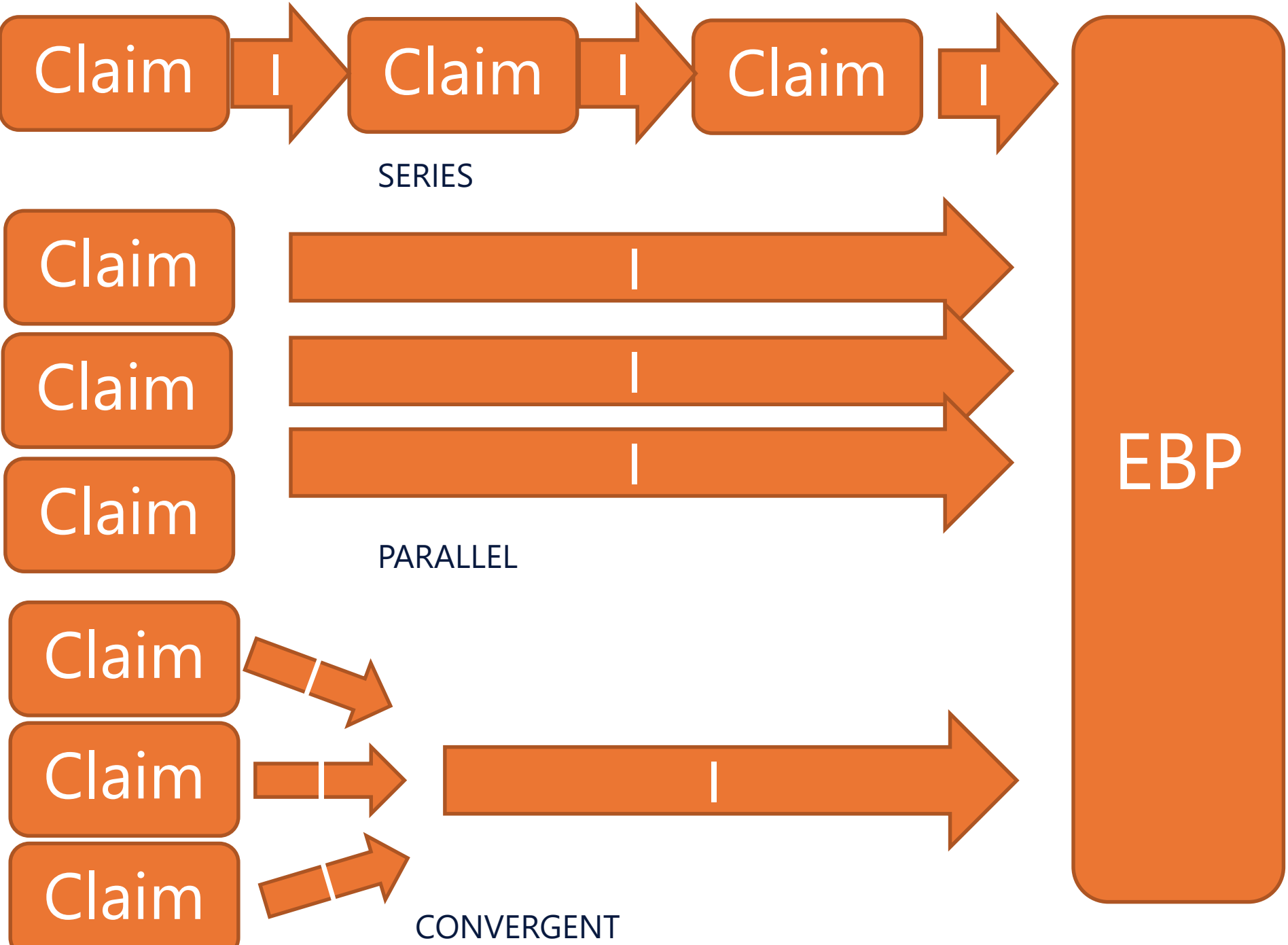
- A program is not the only way to achieve something but it must be sufficient.
- Each component (i.e. output) is an insufficient but non-redundant part of an unnecessary (i.e. there are other ways), but sufficient condition (i.e. the program) for an outcome
- A program has components that we think are necessary and when all achieved are sufficient for bringing about some outcome.
- IMPORTANT: Components are written as conditions ‘who or what achieves, or is in, what state’
- Remember at this 101 level we are not focusing on the ‘why’ of each component at this stage or ‘when it works and for whom’ because we are focused on the conditions, not how or why they are brought about.

The form of the Program logic argument

- Logic = Outputs + Assumptions = SHORT term outcomes

Outputs must be *necessary* to constitute the program (i.e. unleash some casual force) and collectively they must be *sufficient* for the intended SHORT term outcome to occur.

- Theory = what are the root causes of a problem that are to be addressed in a program and for whom they are a problem (hint: this should be the target group for the program)
- Theory = why, when and for whom Outputs are achieved.
- Theory = why, when and for whom SHORT term outcomes lead to or *contribute* to MEDIUM term outcomes in addition to External Factors.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Evaluating a program logic

- An argument to be sound must be valid and well grounded.
- Did each condition occur (at all times and in all places?)
- Was each condition actually necessary?
- Was the combination of ‘necessary’ conditions sufficient for the short term outcome
- Was the short term outcome sufficient or does it contribute to longer term outcomes?

Translating terms

- Inputs = things we will need to get this program off the ground
- Activities = what we do, the means to an end.
- Outputs = the ends to which our means are directed AND the premises in an argument.
  - Outputs and other premises are written in the form of condition states—'who or what is in what state'
- Assumptions: implicit premises on which we are relying but not really doing anything about, at this stage
- Outcomes (immediate) = the claim i.e. that which the conditions are through to be sufficient for bringing about.
- Medium or longer term outcomes = a second claim that moves from the immediate intended outcome to include external factors. Programs will be contributory if they provide a condition which is nether necessary or sufficient. But they may provide a necessary condition or a sufficient condition.
- External factors = other parts of a casual package leading to a medium or longer term outcome in addition to the immediate intended outcome
- Theories of change = a special case of the broader class of warrants, or reasons to accept the premises (condition states) will if all brought together, lead to the outcomes.

Evaluating a program logic

- Evaluation helps us assess the adequacy of the argument structure and warrants (validity) and the truth or falsity of the premises (well-groundedness)
  - Conditions not always brought about? Failures of implementation GOTO *process evaluation* OR failures of theory (i.e. warrants do not hold in all times at all places) GOTO *Realist evaluation*.
  - Conditions are insufficient for short term outcomes? explore unfounded assumptions and contextually constrained mechanisms GOTO *Realist evaluation*.
  - Conditions might not be necessary? GOTO *QCA*
  - Short term outcomes not sufficient for longer term outcomes – very common, incomplete causal package and/or overpowering external factors. Construct a *second argument*.

Exercises

Individual activity 1:

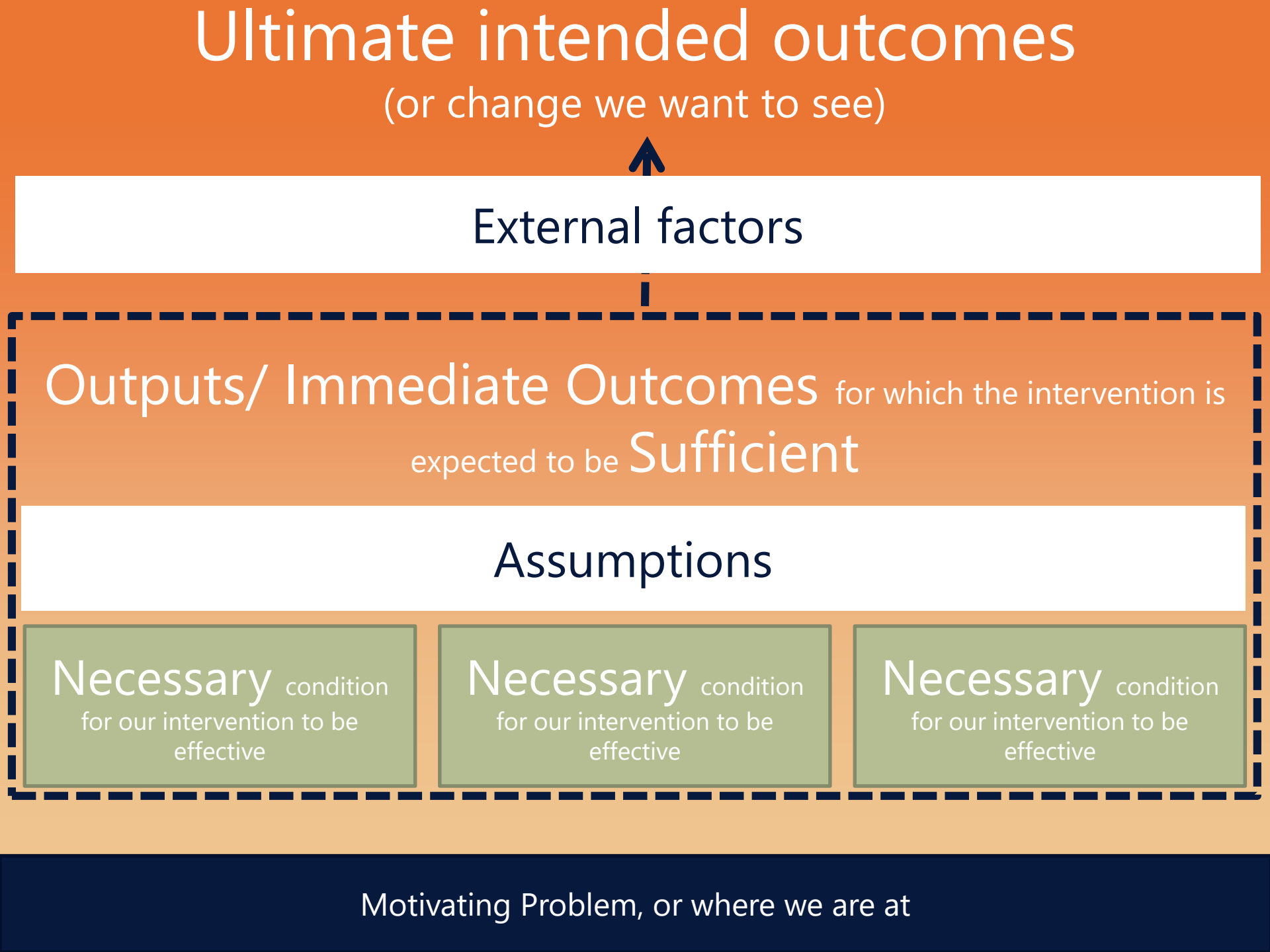
What is this program all about – i.e. what is it trying to achieve and for whom?

What is the need for the program? – i.e. what is the problem its trying to address?

Which parts of the program are you most concerned about – i.e. what are key risks to be managed?

What questions do you think key stakeholders will be asking about the program?

Examples


Ultimate intended outcomes
(or change we want to see)
External factors
Outputs/ Immediate Outcomes for which the intervention is expected to be Sufficient
Assumptions
Necessary condition for our intervention to be effective
Necessary condition for our intervention to be effective
Necessary condition for our intervention to be effective
Motivating Problem, or where we are at

External factors include:
- Home factors do not outweigh confidence and life skills gained during Midnight Basketball
- External community tension does not outweigh opportunity to build relationships between different groups
- Community perspective on young people

Marginalised, vulnerable and at-risk young people are more engaged with their community, and have improved life skills, confidence and readiness for work

Local community has greater confidence to engage with marginalised youth and experiences reduced anti-social behaviour

Ultimate Outcomes

Young people experience long term benefits ↔ **Local community experiences long term benefits**

Contributory Conditions

Young people benefit from participating in Midnight Basketball ↔ **VMC and tournament night volunteers benefit from facilitating Midnight Basketball**

Sufficient Conditions

A fun, safe and professional 8 week tournament is run

VMC gains confidence to run MB tournaments over the two year period

VMC and community have capacity to implement Midnight Basketball

Young people who would most benefit sign up for Midnight Basketball

Comprehensive range of local groups working with marginalised youth identify suitable participants for Midnight Basketball

Community commits to take on Midnight Basketball

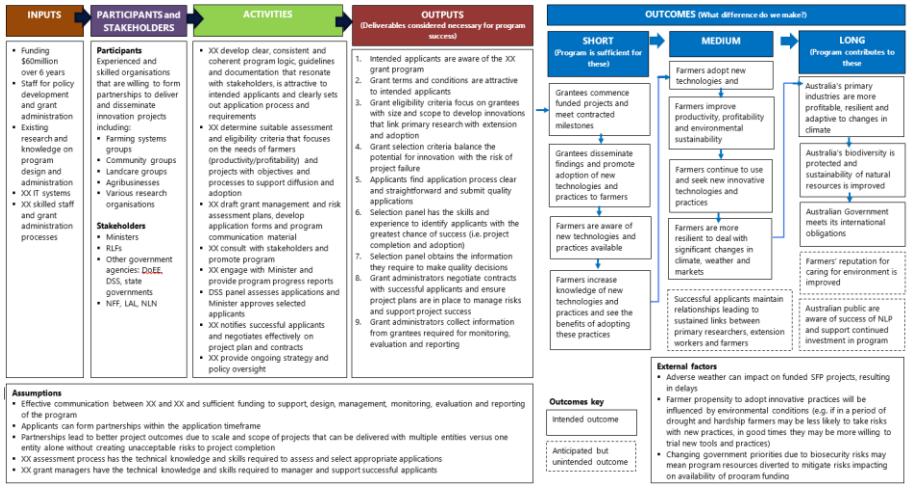
At least one member of a reputable community organisation wants Midnight Basketball to run in their local community

MBA provides oversight and mentoring of VMC

Necessary Conditions

Marginalised, vulnerable and bored 'at-risk' youth face barriers to learning positive behaviours and gaining opportunities that would break the cycle of disadvantage

Problem



OUTPUTS
(Deliverables considered necessary for program success)

1. Intended applicants are aware of the XX grant program
2. Grant terms and conditions are attractive to intended applicants
3. Grant eligibility criteria focus on grantees with size and scope to develop innovations that link primary research with extension and adoption
4. Grant selection criteria balance the potential for innovation with the risk of project failure
5. Applicants find application process clear and straightforward and submit quality applications
6. Selection panel has the skills and experience to identify applicants with the greatest chance of success (i.e. project completion and adoption)
7. Selection panel obtains the information they require to make quality decisions
8. Grant administrators negotiate contracts with successful applicants and ensure project plans are in place to manage risks and support project success
9. Grant administrators collect information from grantees required for monitoring, evaluation and reporting

O

SHORT
(Program is sufficient for these)

Grantees commence funded projects and meet contracted milestones

Grantees disseminate findings and promote adoption of new technologies and practices to farmers

Farmers are aware of new technologies and practices available

Farmers increase knowledge of new technologies and practices and see the benefits of adopting these practices

Logic

Theory

Smart Farming Partnerships Program logic

Need for the program: In the context of increased climate variability, farmers need to have the technology and tools to adapt and implement sustainable agriculture practices. Innovation in agriculture, fisheries and aquaculture is essential to protect the natural resource base while increasing productivity and profitability of primary industries and regional communities. Individual farmers generally don't have the resources or incentives to develop new technologies for adaptation and organisations that are interested in developing, trialling and implementing agricultural innovations often don't work together to deliver innovation projects of sufficient scale and complexity to meet the industry challenges of the future. Additionally, the Australian Government needs to meet its obligations under international treaties including conventions on climate change, biological diversity and desertification that will require the development and uptake of innovative technologies and practices.

Program objective: The Smart Farming Partnerships Program aims to enhance agricultural innovations that will drive growth in productivity; protect Australia's biodiversity; improve sustainability of natural resources; and assist Australia meet its obligations under relevant international treaties.

INPUTS

- Funding $[illegible]0million over 6 years
- Staff for policy development and grant administration
- Existing research and knowledge on program design and administration
- DSS IT systems
- DSS skilled staff and grant administration processes

PARTICIPANTS and STAKEHOLDERS

Participants

Experienced and skilled organisations that are willing to form partnerships to deliver and disseminate innovation projects including:

- Farming systems groups
- Community groups
- Landcare groups
- Agribusinesses
- Various research organisations

Stakeholders

- Ministers
- RLFs
- Other government agencies: DoEE, DSS, state governments
- NFF, LAL, NLN

ACTIVITIES

- DAWR develop clear, consistent and coherent program logic, guidelines and documentation that resonate with stakeholders, is attractive to intended applicants and clearly sets out application process and requirements
- DAWR determine suitable assessment and eligibility criteria that focuses on the needs of farmers (productivity/profitability) and projects with objectives and processes to support diffusion and adoption
- DAWR draft grant management and risk assessment plans, develop application forms and program communication material
- DAWR consult with stakeholders and promote program
- DAWR engage with Minister and provide program progress reports
- DSS panel assesses applications and Minister approves selected applicants
- DAWR notifies successful applicants and negotiates effectively on project plan and contracts
- DAWR provide ongoing strategy and policy oversight

OUTPUTS (Deliverables considered necessary for program success)

1. Intended applicants are aware of the SFP grant program
2. Grant terms and conditions are attractive to intended applicants
3. Grant eligibility criteria focus on grantees with size and scope to develop innovations that link primary research with extension and adoption
4. Grant selection criteria balance the potential for innovation with the risk of project failure
5. Applicants find application process clear and straightforward and submit quality applications
6. Selection panel has the skills and experience to identify applicants with the greatest chance of success (i.e. project completion and adoption)
7. Selection panel obtains the information they require to make quality decisions
8. Grant administrators negotiate contracts with successful applicants and ensure project plans are in place to manage risks and support project success
9. Grant administrators collect information from grantees required for monitoring, evaluation and reporting

OUTCOMES (What difference do we make?)

SHORT (Program is sufficient for these)

- Grantees commence funded projects and meet contracted milestones
- Grantees disseminate findings and promote adoption of new technologies and practices to farmers
- Farmers are aware of new technologies and practices available
- Farmers increase knowledge of new technologies and practices and see the benefits of adopting these practices

MEDIUM

- Farmers adopt new technologies and
- Farmers improve productivity, profitability and environmental sustainability
- Farmers continue to use and seek new innovative technologies and practices
- Farmers are more resilient to deal with significant changes in climate, weather and markets
- Successful applicants maintain relationships leading to sustained links between primary researchers, extension workers and farmers

LONG (Program contributes to these)

- Australia's primary industries are more profitable, resilient and adaptive to changes in climate
- Australia's biodiversity is protected and sustainability of natural resources is improved
- Australian Government meets its international obligations
- Farmers' reputation for caring for environment is improved
- Australian public are aware of success of NLP and support continued investment in program

Outcomes key

- Intended outcome
- Anticipated but unintended outcome

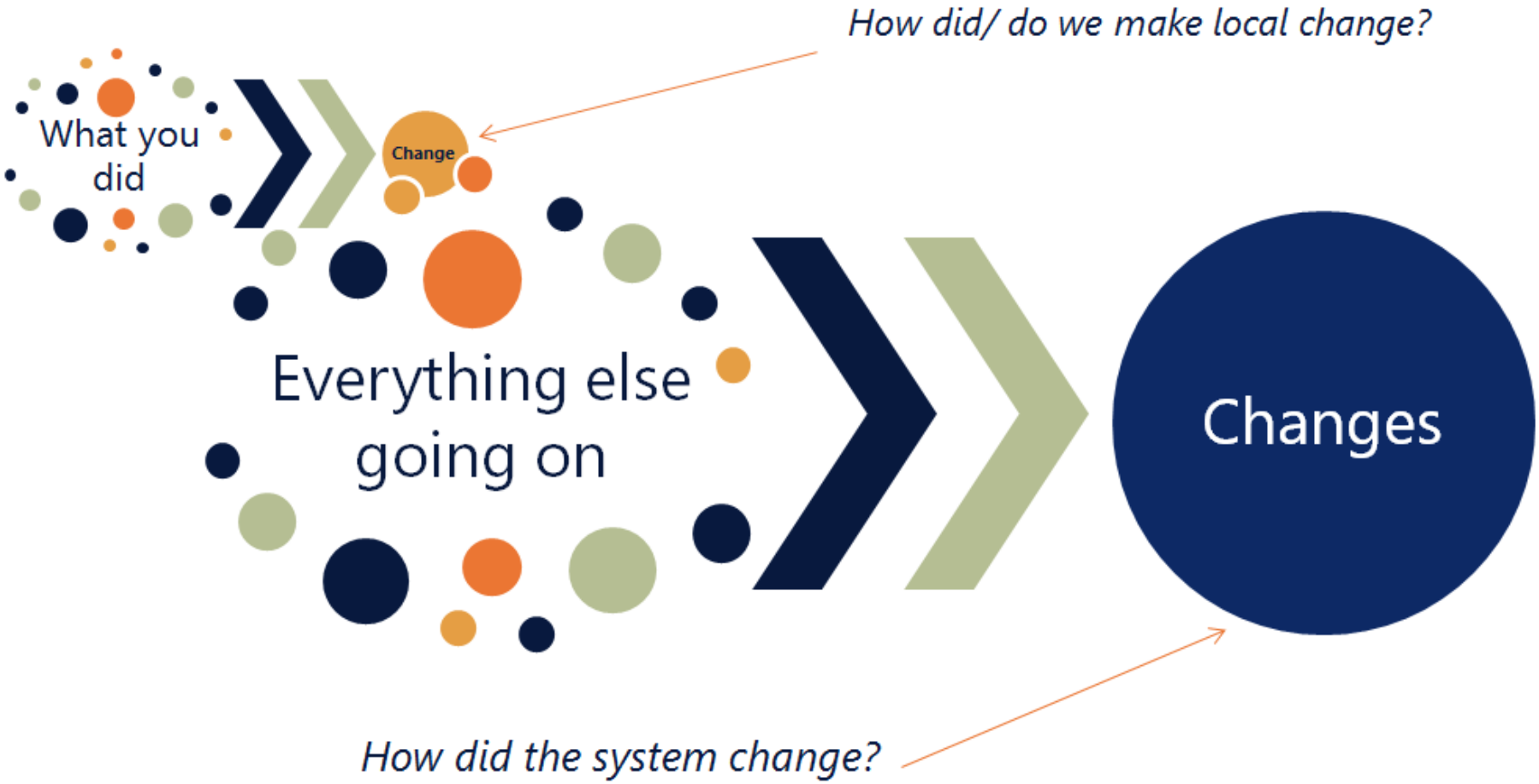
Assumptions

- Effective communication between DAWR and DSS and sufficient funding to support, design, management, monitoring, evaluation and reporting of the program
- Applicants can form partnerships within the application timeframe
- Partnerships lead to better project outcomes due to scale and scope of projects that can be delivered with multiple entities versus one entity alone without creating unacceptable risks to project completion
- DSS assessment process has the technical knowledge and skills required to assess and select appropriate applications
- DSS grant managers have the technical knowledge and skills required to manager and support successful applicants

External factors

- Adverse weather can impact on funded SFP projects, resulting in delays
- Farmer propensity to adopt innovative practices will be influenced by environmental conditions (e.g. if in a period of drought and hardship farmers may be less likely to take risks with new practices, in good times they may be more willing to trial new tools and practices)
- Changing government priorities due to biosecurity risks may mean program resources diverted to mitigate risks impacting on availability of program funding

Argument 1 – immediate outcomes



Argument 2 – longer term outcomes

External factors include:
- Home factors do not outweigh confidence and life skills gained during Midnight Basketball
- External community tension does not outweigh opportunity to build relationships between different groups
- Community perspective on young people

Ultimate Outcomes

Marginalised, vulnerable and at-risk young people are more engaged with their community, and have improved life skills, confidence and readiness for work

Local community has greater confidence to engage with marginalised youth and experiences reduced anti-social behaviour

Contributory Conditions

Young people experience long term benefits
- Increase self confidence and positive relationships
- Increase perceived and actual control to practice life skills
- Are socialised into mainstream society
- Are diverted from negative trajectories of crime, alcohol and drug abuse

Local community experiences long term benefits
- Gains capacity to engage disadvantaged young people

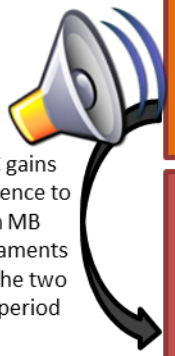
Sufficient Conditions

Young people benefit from participating in Midnight Basketball
- Rise to meet high expectation learning environment
- Increase social and life skills through explicit and implicit education
- View mainstream future paths as possible and accessible
- Enjoy positive activity during peak periods for anti-social behaviours

VMC and tournament night volunteers benefit from facilitating Midnight Basketball
- Have more positive view of young people and their ability to contribute to the community

Necessary Conditions

A fun, safe and professional 8 week tournament is run
- 6 teams of 10 young people are made up of mixed genders, ages and skill levels – different peer groups interact in a positive setting
- Each team plays 3 games of association basketball each Friday night
- Young people eat a hot nutritious meal
- "No Workshop, No Jump shot" – young people attend workshops focussing on essential life skills
- Friday night service gap is filled from 7:30-12:00pm
- High expectation environment created through code of conduct developed by young people, professional basketball rules, stadium, referees and uniforms
- Volunteers and young people develop trust and respect for one another
- Bus delivers young people home safely at the end of the evening
- Closing ceremony recognises participation and achievement



VMC gains confidence to run MB tournaments over the two year period

VMC and community have capacity to implement Midnight Basketball
- VMC members understand MB philosophy, principles and program model and have the skills to fill one of 8, pre-defined, structured roles
- VMC has viable business plan with tournament-night volunteer recruitment strategy, fundraising strategy, transport home, professional security , hot nutritious meal, workshop plan, recruitment of professional referees
- VMC is contracted by MBA and receives seed funding, support and resources
- A diverse group of community volunteers (min 15) sign up for MBA and pass WWC checks

Young people who would most benefit sign up for Midnight Basketball

A diverse group of marginalised youth sign-up for Midnight Basketball (up to 60)

Comprehensive range of local groups working with marginalised youth identify suitable participants for Midnight Basketball
- Assured that Midnight Basketball will not compete for funding
- Understand who is 'suitable'

Community commits to take on Midnight Basketball
- Community has indoor two-court stadium with attached workshop room and is able to commit to a two year program
- Volunteer Management Committee (VMC) formed from diverse community sectors that represent the collective wisdom of the community – not just the youth sector
- Key local community stakeholders believe that MBA is viable, safe, and addresses their issues (e.g. Mayor, Police Local Area Command, Local Basketball Association)

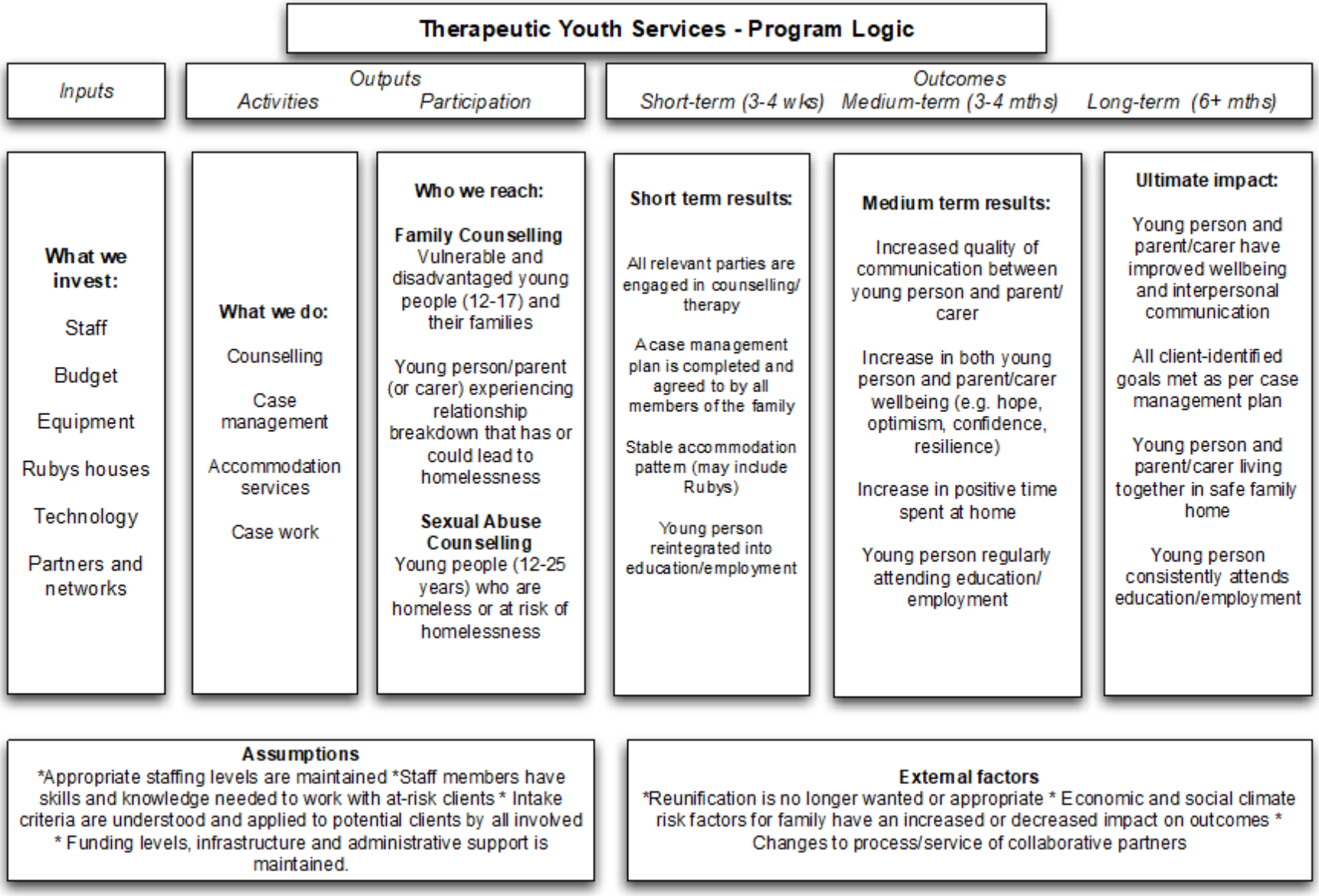
At least one member of a reputable community organisation wants Midnight Basketball to run in their local community

MBA provides oversight and mentoring of VMC

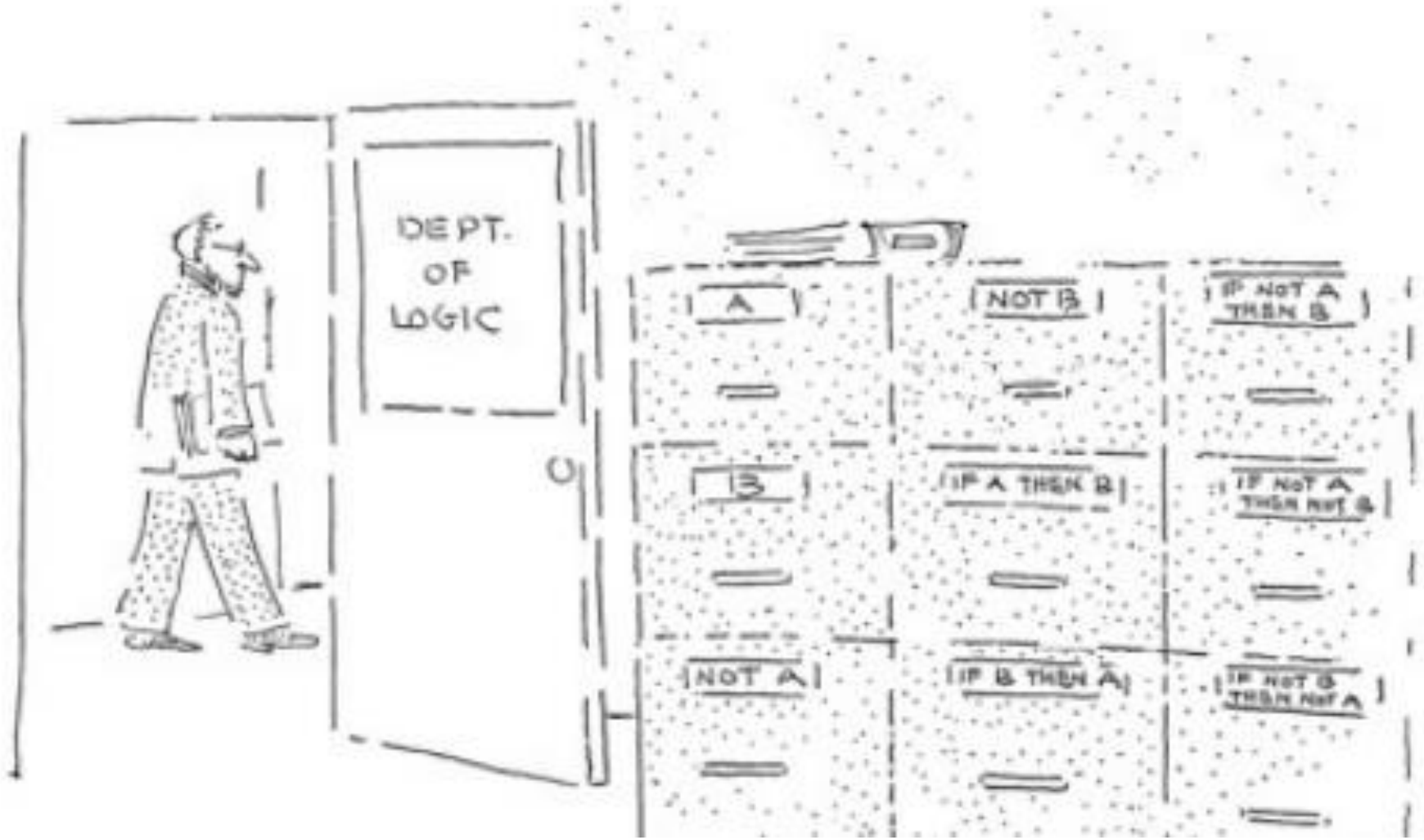
Problem

Marginalised, vulnerable and bored 'at-risk' youth face barriers to learning positive behaviours and gaining opportunities that would break the cycle of disadvantage

Is this logical?



Is your program logic logical?



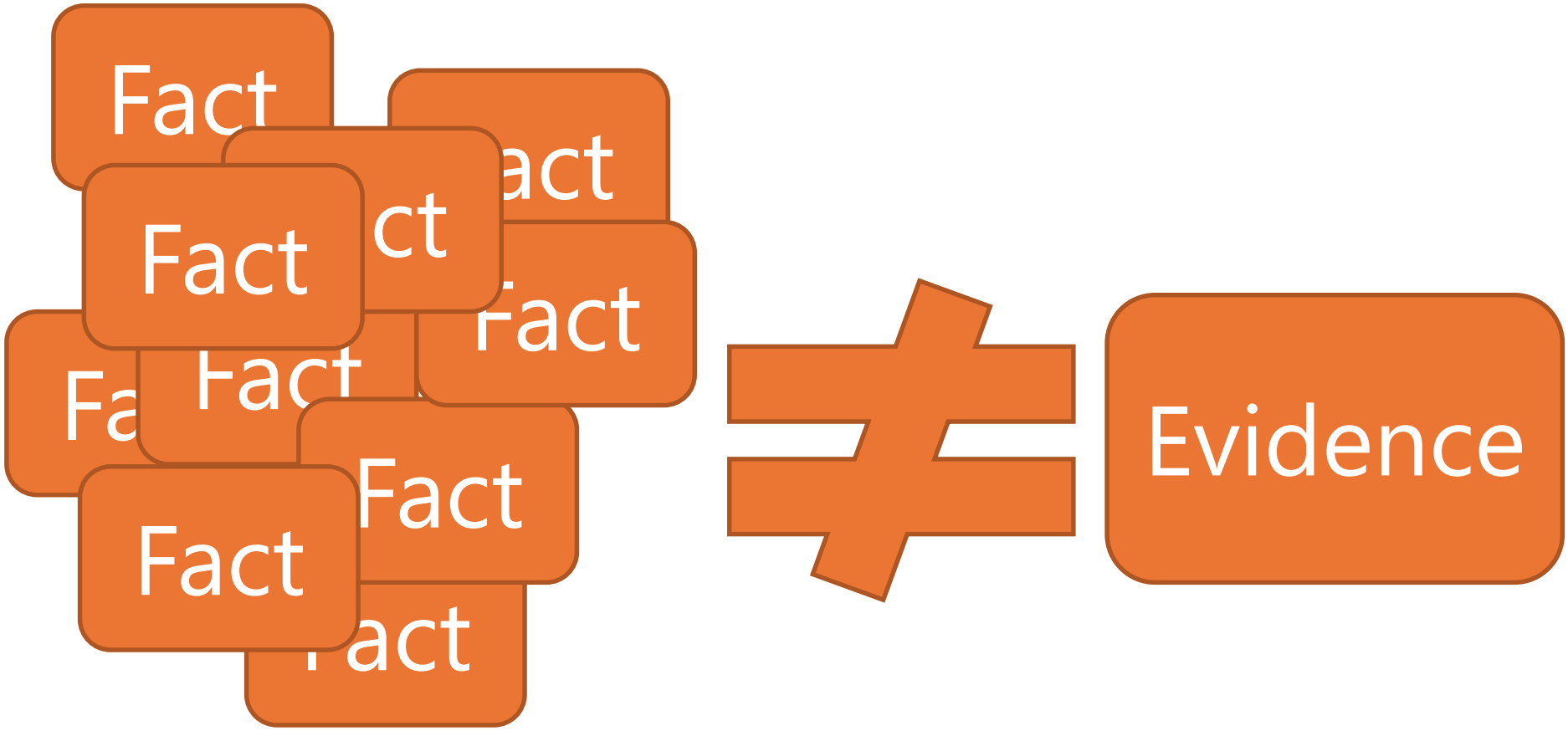
What is this all about

- My work is mostly with non-evaluator public servants who need an accessible approach to evaluation.
- I have struggled to find a satisfying account of program logic, program theory, theories of change, theories of action in evaluation.
- My conclusion is that while theories are a very important, programs are first and foremost *arguments* about a course of action – not theories.
- A argument consist of a claim and reasons to support that claim.
- A program is an argument that if we do x y will be achieved – this is how ministers and public servants and the general public will evaluate a policy or program. WoundIt it be great to make public policy and programs more accessible to ciizens by increasing the focus on the adequacy of the argument being made?
- These reasons are in the form of facts that become evidence for a claim because of some warrant or justification that allows us to draw the conclusion. In many cases the facts become evidence of something because they align with a certain theory.
- Theory while very important is subordinate to logic. A theory is a special case of a broader category of warrants or reasons to think something might be a good idea.
- Theories are very useful for explaining why different parts of a program are effective, why apples can address vitamin c deficiency, why placing them on peoples desks increases consumption. But there is no usually one theory or a theory of change.
- Theories are best at explaining the nature of a problem, and providing justification for the efficacy of some course of action BUT the course of action itself is better understood as an argument. No need to get stuck on 'T' or 't' theory.
- A program may be understand an argument about cause and effect. I find the most useful way of thinking about causa and effect is to use a configurationlist theory of causality where the program is an INUS condition for a short term outcome.
- On this account a program logic does not display a 'casual chain' but a casual package or recipe as per Nancy Cartwright.
- A program is composed of a series of conditions or outputs that are considered necessary to constitute the program – that if all achieved will be sufficient for bringing about an immediate or short term outcome.
- A sound argument is valid and well-grounded.
- A program is valid if it is considered that if all the conditions came about the outcome would follow with some degree of certainty. We must note the many implicit premises or assumptions that we are also making.
- A program is well-grounded if these premises do come about.
- Program logic and needs analyses can help work out if the argument is valid – often drawing on theories about the way the world is or why certain things work.
- There are different forms of argument structure, in series, parallel and convergent. Program logic can handle all of these.
- Empirical data can help work out if the if the argument is well-grounded
- Analysis can help work out if all components were actually all necessary.
- If the program is sound then the short term outcomes will follow with a reasonable degree of certainty if the outputs were all achieved.
- The extent to which the short term outcomes lead to medium or longer term outcomes is another argument. Here the short term outcome is one premise, program activities may provide additional conditions. External factors will provide the other premises. Here the argument is of the form, if we generate these short term outcomes then given the external conditions we x,y, we expect the program will either contribute towards, or in the stronger sense, be sufficient to acehive Z.

Slides about Evidence Based Policy

Putting evidence in evidence-based policy

- Evidence is always evidence *for* something.
- Evidence is usually something we can observe that gives us a reason to believe something that is harder or not possible to observe
- Facts become evidence for claims through logic and argumentation
- Facts do not support a program, evidence supports a program and evidence is part of an argument for something.
- Program logic when composed of necessary and sufficient conditions provides an argument structure than can be evaluated.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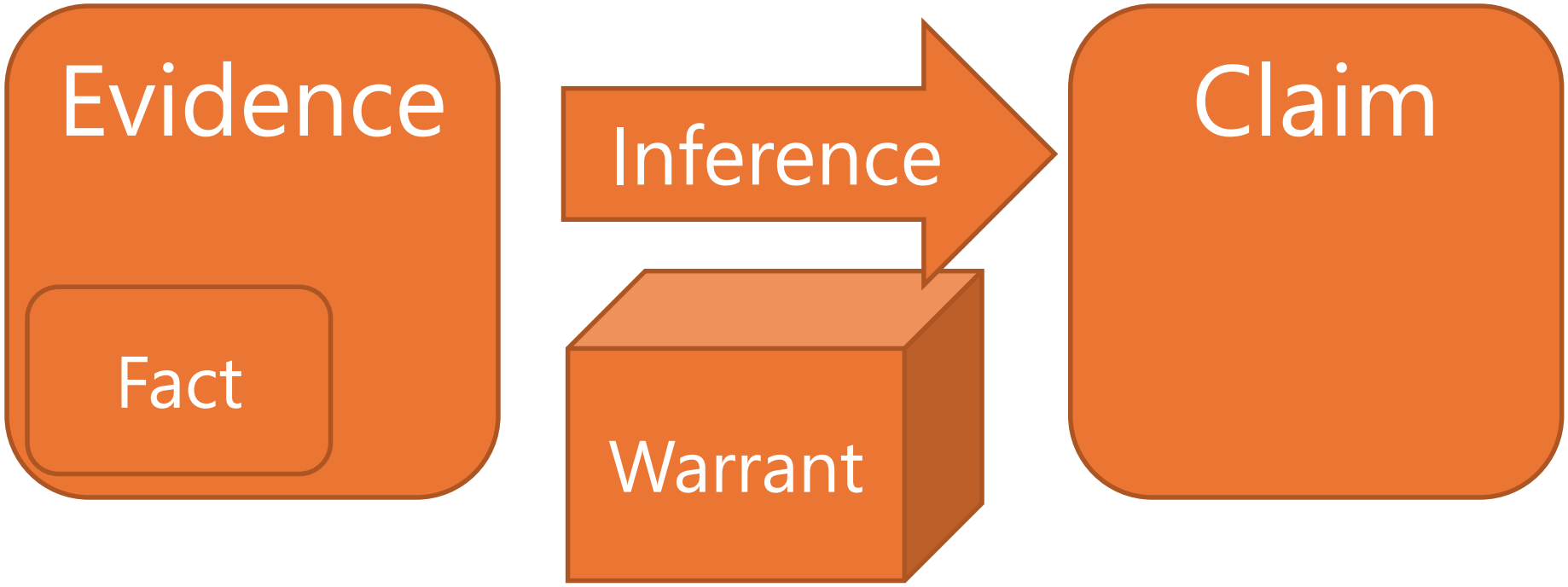
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