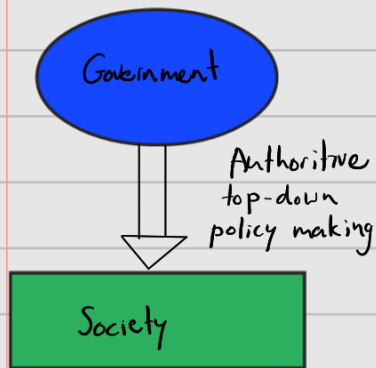


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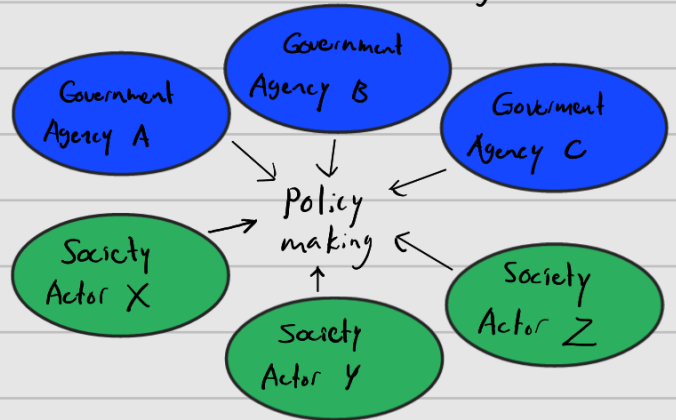
Governance of Problems

Problem Situation

A: Single-actor policy setting



B: Multi-actor policy setting

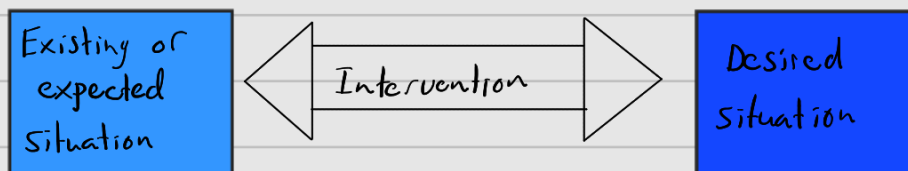


Policy Problem

- Problem

1. Gap or discrepancy between existing (or expected) and desired situation.
2. A perspective on a (partial) solution or intervention, which creates a dilemma how to best close the gap.

- Policy problem = problem in the public domain.



- Most problems do not have one desired situation or one capable solution/intervention.

Problem Formulation = Problem Perception

- How actors perceive (and formulate) a problem is based on frames that filter information.
- A problem formulation encompasses (NL. omvat) ideas about:
 1. Existing and/or expected situation (possibly incl. bottlenecks and opportunities)
 2. Desired situation
 3. Preferred solution/interventions

From Problems to Public Policy

Public policy:

- Aims to solve or mitigate problems in the public domain
- Specifies to achieve:

What
(policy goals)

How
(resources and
instruments)

By Whom
(Which actors)

Element	Definition	Why important?
Resources	Practical means to achieve objectives, such as relations, knowledge, manpower, etc.	Problems are solved in networks of interdependent actors
Perceptions	An actors' image of the world around them	Problems are not objective givens
Values	Direction an actor likes to move; rooted in norms and interests	Problem formulations are value-laden

Governance

Definition: modification and extension of "public policy"

- As resources are spread, problems often need to be solved in interaction between mutually dependent actors (public and private)
- Governance context formed by diverse actors:
 - At multiple levels and scales
 - With diverse problem perceptions and goal ambitions
 - Who can employ various strategies and instruments

Governance of multi-actor problems is about: How to best deal with problems that involve a variety of mutually dependent people and organizations.

Actor or Stakeholder?

Actor

General:
A participant in an action or process.

Specific:
A social Entity, a person or an organization, able to act on or exert an influence on a decision.

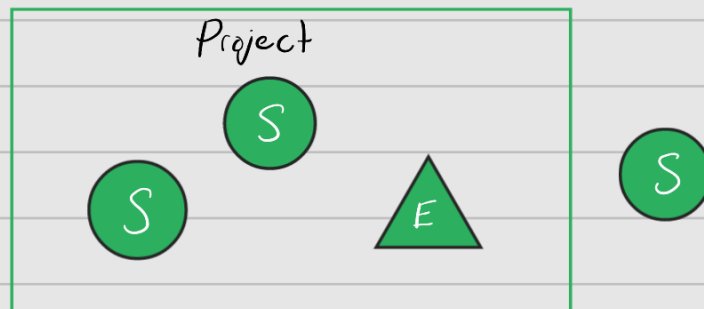
Stakeholder

Individuals, groups and organizations that:

Are affected by a decision or action

Can affect a decision or action

- A stakeholder does not need to be an actor or participant
- Not all participants are stakeholders (e.g. external consultant)



Stakeholder Participation

Planning processes can be:

Expert driven or analytical process

Decisions are primarily based on rational analysis; experts:

- define the challenge
 - provide knowledge
 - prepare solutions
- } strict procedure and steps

Societal stakeholders are informed or consulted

Communicative, interactive or participatory process

- Focus on stakeholders needs and mutual learning
- Experts facilitate and support an interactive process
- Societal stakeholders advice, co-produce or co-decide → open-ended process

2 Problem Types

	Type 1	Type 2
Problem owner	Single	Multiple
Problem definition	Single	Multiple conflicting
Number of players	Small	Large number with conflicting interests
Alternative solutions	Few	Unlimited number
Assessment of solutions	One is objectively best	Unclear 'best option'



Seldom applies to CE problems

Problem Complexity

Different ways problems can be complex:

1. **Technical** or **substantive** dimension → knowledge base or content
2. **Social** and **normative** dimension → values and norms linked to perceptions
3. **Institutional** dimension → The multi-actor context due to spread of resources; problems cut across sectors, each with own legislation and procedures.

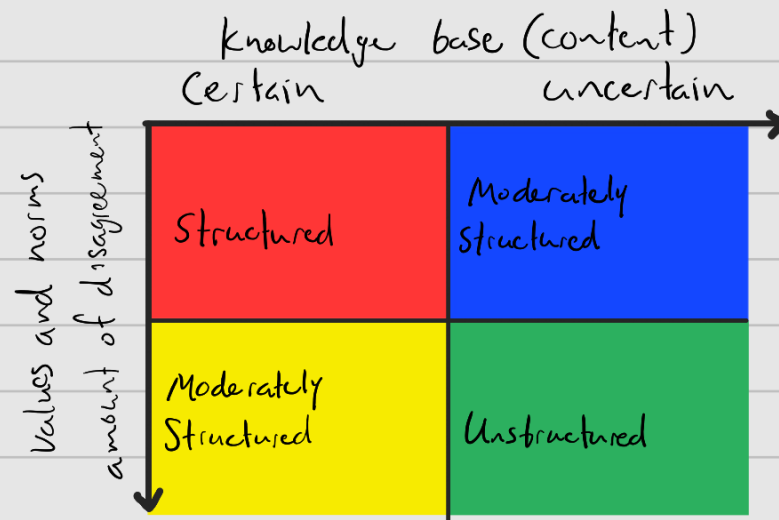
1. Technology & Knowledge

- Most complex technical problems solved by technical or engineering solutions.
- Solutions can have major impacts (causing new problems)
- When the knowledge base is uncertain:
 - More research may increase uncertainty (more problems)
 - Information may be controversial because underlying facts or normative standards are controversial

2. Social & Normative elements

- More actors → more relationships, opinions, conflicts: may disrupt problem solving
- Objectivity is an illusion: information is loaded with value choices
- Ambiguity: impossible to distinguish between valid and less valid interpretations
- Diverging problem perceptions + overload of information, confusion, knowledge conflicts → knowledge and information is judged differently.

Problem Types: Structured vs. Unstructured



Structured

- No social conflicts
- Technical solutions and knowledge are available
- Relevance and contents are agreed upon
- Analyse the problem → apply the solution
- Providing information suffices: active participation of stakeholders is not needed

Moderately structured (uncertain)

- Interests and objectives are aligned
- Knowledge is lacking
- How to improve:
 - Invest in research
 - Involve important stakeholders

Moderately structured (Disagreement)

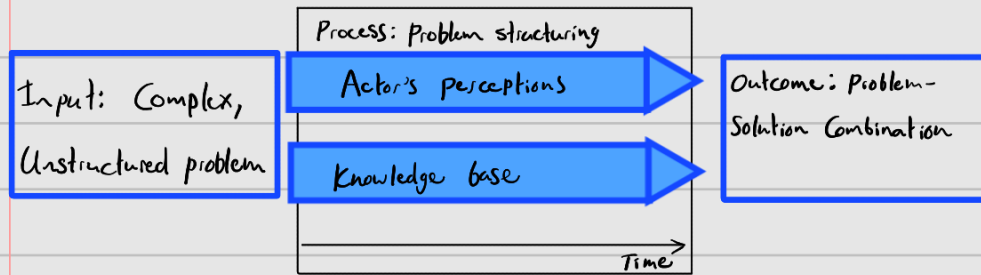
- Knowledge and technical solutions are available
- Conflicts about application
- How to improve:
 - Invest in good communication and extensive consultation
 - Focus on clarifying values and arguments
 - Engage with stakeholders
 - Explore whether issues are important/urgent
 - ↳ if not, no action = best action

Unstructured

- Values are disagreed upon
- Knowledge is uncertain and/or contested
- How to improve:
 - Invest in process and interactive analysis
 - Knowledge has to be negotiated
 - Involve actors

Most CE problems are Unstructured

Unpacking an Unstructured Problem



- Problems are not exactly formulated or solved → become more structured

Frames

Definition: "encompass ideas of actors about facts, interests, norms and values regarding their environment and the problems and opportunities within it."

- How actors perceive a problem is based on frames that filter information.
- Unique for each individual but often shared by groups of people.

Different types of knowledge

	degree of significance and meaning of knowledge base	
Agreed scientific validity of problem-solution combination	Yes	No
	yes	No
yes	Negotiated knowledge	Superfluous* knowledge
No	Negotiated nonsense	Ambiguity**

* Superfluous = unnecessary

** Ambiguity = open to more than one interpretation

Negotiated Knowledge

- Created if actors have the opportunity to contribute to the process with their own information and values.
- Includes various knowledge sources.

2

Identifying Stakeholders

Steps in Stakeholder Analysis

	Reed et al. (2009)	Enserink et al. (2022)
Context Analysis	Social and natural phenomena affected by the decision or action	Problem formulation from the perspective of the problem owner and the analyst
Identification	Methods to identify any kind of stakeholder and their stake	Actor identification techniques to prepare inventory
Stakeholder analysis	Analytical (top-down) and reconstructive (bottom-up) categorisation methods & methods to investigate relationships	- Formal tasks, authorities and relations - Interests, objectives and perceptions - Mapping resource interdependencies
Implications	Recommendations on activities and engagement	Implications for the problem formulation

Stakeholders Groups In Water Management

- Institutional and regulatory actors (central and subnational authorities, regulators)
 - River basin organizations
 - Non-for-profit actors (NGO's, trade unions) → Also for non-human stakes
 - Civil society (consumers & associations, civil society at large)
 - Private actors (businesses depending on water, profiting from water chain, selling water-dependent products)
 - Service providers (public and private)
- } Beneficiaries? Losers?
 } Future generations?

Rationales Behind Stakeholder Analysis

1. **Normative**: focus on legitimacy involving key and/or representative actors and empowerment
 - People have the right to be involved in the management of their environment
 - People have diverse perspectives; the truth is socially constructed
2. **Instrumental**: focus on better outcomes, e.g. more robust knowledge base
 - Instrumental outcomes may result from normative approach as well
3. **Descriptive**: describing the relationship between a phenomenon and its stakeholders; always in combination with one of the above approaches.

How to Prepare an Inventory of Stakeholders

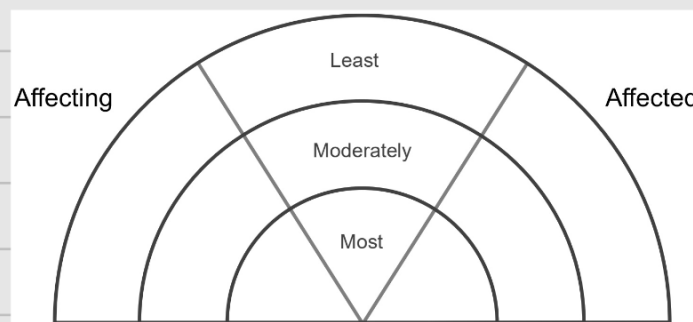
- Common sense: Look at maps of an area & ask the client
- Use written sources together with data collection on-site
- Consider focus groups and interviews
 - ↳ interviews with initial stakeholders to identify new ones (snow-ball sampling)
- Expert opinion
- self-selection

Approaches for Creating a Comprehensive List

Imperative	Actors who feel strongly enough about a certain policy problem or issue to act on their feelings.
Positional	Actors with a formal position in policy making
Reputational	Key informants related to the policy problem identify important actors
Social participation	Actors who participate in activities related to a policy issue
Opinion leadership	Actors who tend to shape the opinions of other actors
Demographic	Actors by such characteristics as age, sex, occupation, religion, level of education, residence etc.
Problem diagram and the causal map	Actors and factors inside the system , as well as in the environment of the system

Rainbow Diagram

- Actors can influence or be influenced by your project
- A rainbow diagram can be useful to categorise actors according to the degree they can affect or be affected by your project:



Questions When Preparing a Rainbow Diagram

- Start questions:

- To what extent are individuals, roles or groups affected
- Is this positive or negative?
- Can they influence the decision?

- Follow-up questions:

- Gains and losses by different stakeholders?
- Level of influence that some have and others don't
- How to engage stakeholders who are not supportive of project goals?

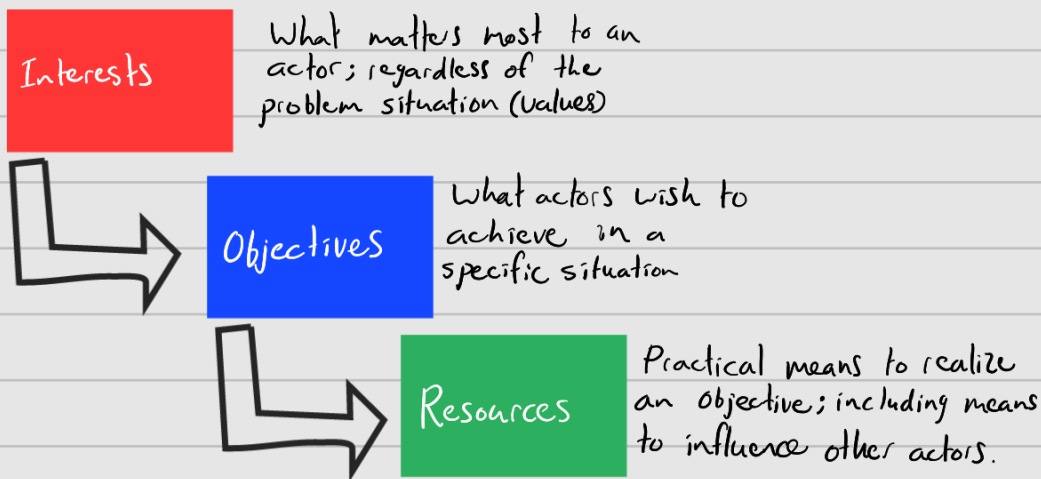
Tips for Making an Inventory

- Rule of thumb: 10 to 20 actors is useful
- In case of key organizations, you may want to include units of the organisation as separate sector
- Choose an organization level as high as possible
- However, grouping a lot of actors is not useful ("government")
- Make sure your analysis is in line with your level of analysis

3

Characteristics of Stakeholders

Key Actor Characteristics



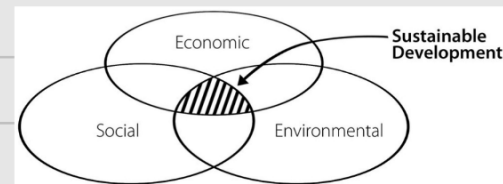
These 3 characteristics determine the problem formulation (perception) of an actor

Interests:

- Can be used as categories in stakeholder analysis
- In most countries, different groups or organizations protect different kinds of interests

Ask:

- How is this problem important to this stakeholder?
- How is this stakeholder perhaps affected?
- Why does this stakeholder care?



Objectives:

- What a stakeholder strives to achieve to protect or realize an interest
- Differ depending on situation
- Direct link to criteria and means
 - To use them as basis for criteria
 - What is a means for one actor, can be an objective for another
- Ask:
 - What does the stakeholder want to achieve with regards to the problem situation?
 - Any specific costs and benefits that are relevant?

Means-Ends Analysis

- **Start**: dissatisfaction with actual situation as a verb sentence that reflects the desired situation.
- **Next**: how can this be achieved
- **Keep in mind**: can be formulated rather narrow or very broad/abstract

Example in Enserink et al, 2022 (p. 59-60)

- Situation: a farmer whose crops get lost due to a lack of rain
- Farmers' focal objective (fundamental "end" / desired situation) *could* be: **have enough water to sustain my crops even in dry summers.**
- How? "Store water" OR "Switch to drought-resistant crops"

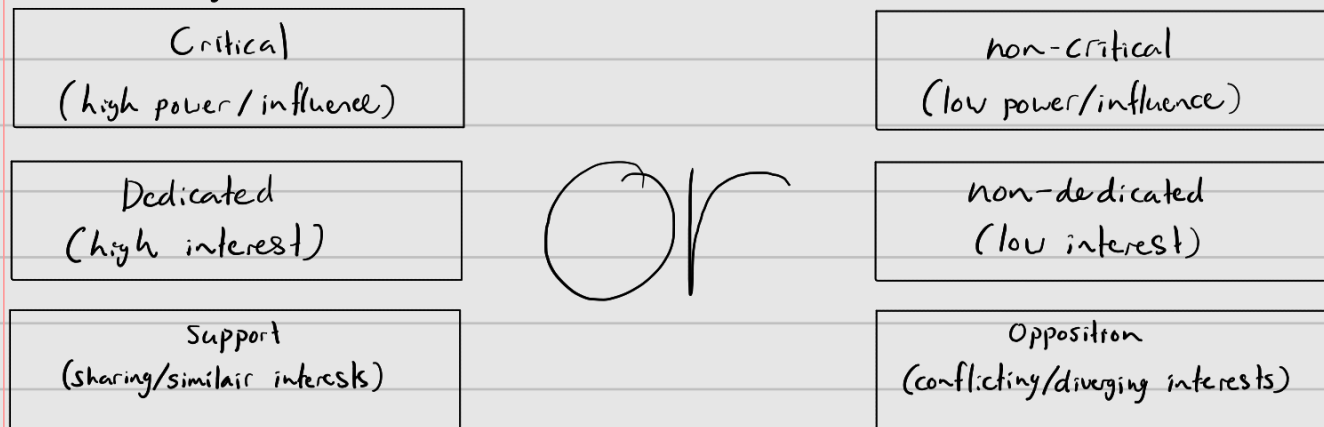
Demarcating a Problem

- Alternative objectives for last example:
 - have sufficient income (broad) → changes everything; perhaps addressing irrelevant issues and adding too much complexity
 - have enough water to irrigate my broccoli and onions → perhaps too narrow, reducing the number of different, possible actions too much
- **Spatial demarcations**: depends on interacting impacts → consider "flows" from the area to the outside world and vice versa.
- **Temporal demarcations**: depends on time frame of the question as well as solutions.

On Whom Do You Critically Depend?

- Which actors have **important resources**?
- Are resources **replaceable**?
- Which actors have **blocking power**?
- Do actors have **similar characteristics** as the problem owner?
- How **dedicated** are actors to using the resources they have?
- Is the problem **important and urgent** to them?
- Does it yield **costs and benefits**?

Schematizing Actors



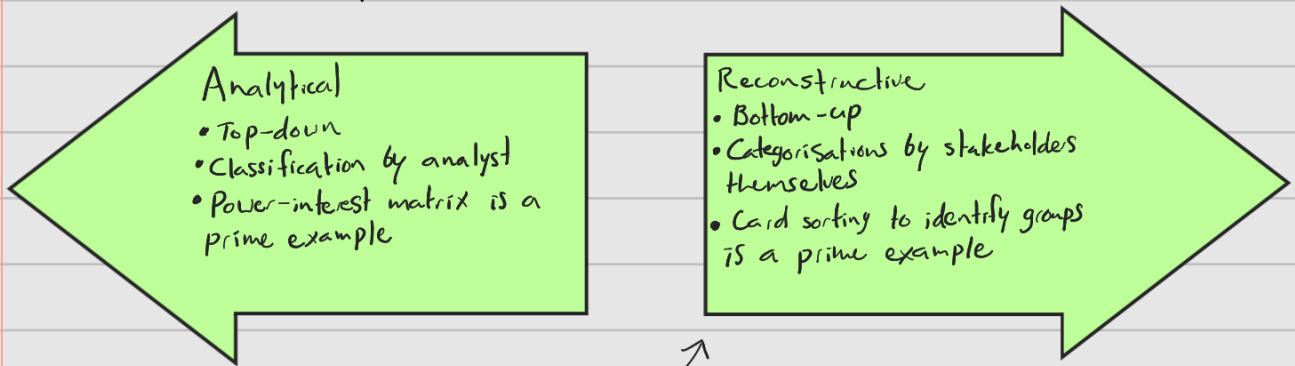
Categorizing Stakeholders



4

Methods for Stakeholder Analysis

Approaches to Analysis



Stakeholder-Led Categorisations (Reconstructive)

- Developed in response to limitations of analytical methods
- To better reflect stakeholder concerns
 - Involving large groups is possible, but requires a lot of resources
 - Costly in terms of research, but contributes to trust and relationships
- Methods:
 - **Card-sorting**: Stakeholders themselves select relevant stakeholders and put them in categories, add new ones if missing.
 - **Q methodology**: makes use of statements to identify discourses; also based on empirical analysis of stakeholder perceptions.
 - **Strategic Perspectives Analysis**: goals of stakeholders are identified (through interviews or workshops) and grouped.

Methods to Investigate Relations

- **Actor-linkage matrix**: simple and flexible overview whether stakeholder relations are e.g. conflict, complementary or cooperation.
- **Social Network Analysis (SNA)**: relational ties (who knows who) are measured through questionnaires, structured interviews or observation.
 - Yet, be aware: Strong ties allow for easy collaboration; weak ties may hamper collaboration due to lack of trust and understanding. However, diverse information, new ideas and learning benefit from weak ties.
- **Knowledge mapping**: who knows what
 - Combination with SNA is beneficial

Where Should an Analyst Go for Information?

- Document analysis

- Websites, annual reports, policy documents
- Less useful to understand actor perceptions, informal relations and power etc.

- Interviews with important actors and key informants

- Requires time and resources
- Actors can be unwilling to participate, respond strategically, may not have a clear opinion

- Surveys

- Estimations by the analyst (last resort)

- Best avoided; better indicate that information is lacking

Weighting Alternatives

Multi-Criteria Analysis (MCA) and Monetary Valuation

- MCA is not limited to but generally includes monetary valuation of impacts.
- Key characteristics of monetary valuation:
 - Net future impacts are discounted to present value
 - ~~Cost effective~~ → least costly alternative; not just construction costs but also of e.g. selling electricity, buying water, compensating movers!
 - Cost-benefit analysis → expected impacts (positive and negative)
 - Valuations are based on willingness to pay → citizen preferences
 - Widely applied, also in CE projects, but limitations

Measuring in Monetary Values - Advantages and Disadvantages

- Cost-benefit analysis:

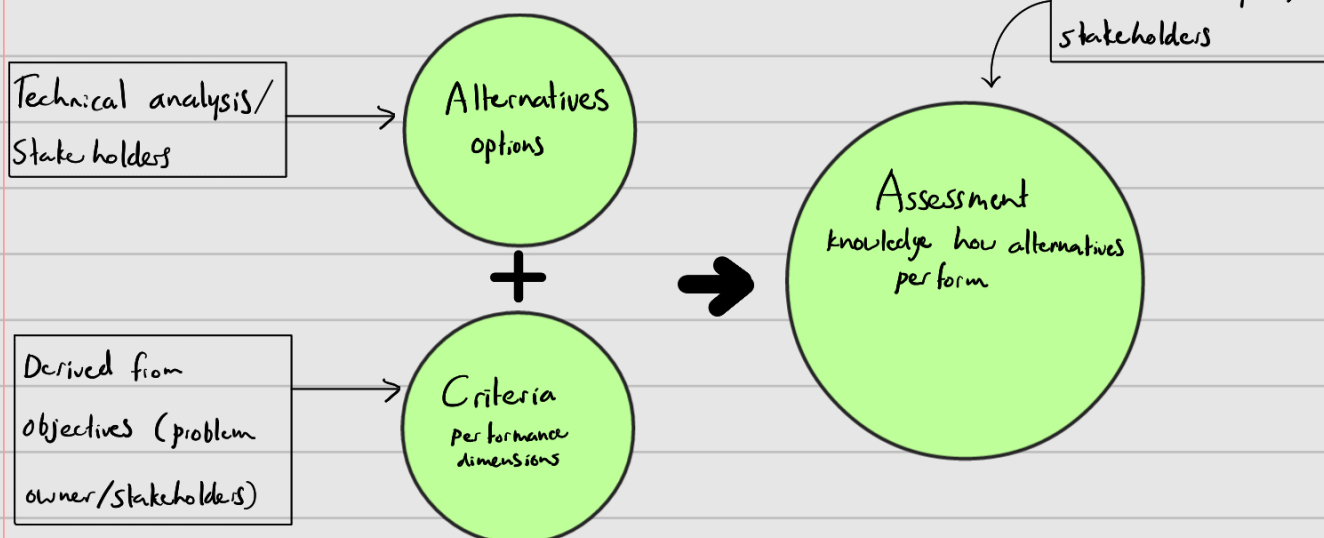
Advantages

- Ability to calculate and find preferred alternative using one scale
- Based on preferences of citizens, considering gains and losses of all groups considered

Disadvantages

- Should decisions be taken based on current preferences? What about consumers without buying power?
- Data availability might be insufficient
- Not everything can be calculated in monetary terms (e.g. achievability, social cohesion)
- Integration of all impacts; what about externalities and market failure?

Ingredients for MCA



Identifying Criteria

- Number of criteria typically range between 6-20; >8 ? $\rightarrow$ grouping is needed
- They should be measurable
- Complete; no major aspects overlooked
- Concise; no duplicates, no double counting
- Assessed independent of each other

MCA - Advantages and Disadvantages

Advantages

- Transparent and explicit; open to analysis and change
- Preferences and expert knowledge are easily integrated
- Communication means, internally and externally, during and afterwards
- Compared to monetary valuation:
 - No need to monetize when that's difficult
 - Externalities are taken into account

Disadvantages

- Relative scores can be misleading:
 - Is the lowest value always of zero value?
 - Extreme alternatives influence the relative score
 - Adding an extreme alternative has influence
- Linear normalisation can be misleading:
 - Is the value of outcomes linear?
- Vulnerable for adding extreme alternatives
- Political manipulation in setting weights