Project Outline

Guidelines

1. General motivation for the study
   - Argue why is it relevant to conduct a sustainability assessment in the context of the selected cities, i.e. your thematic 'red thread' (e.g. "Swiss cities"; "Mediterranean cities", etc.)
2. Selection of cities for comparison
   - Make explicit the criteria for the selection of the four cities
   - Describe shortly the sustainability issues specific for these cities, backed up by sources (newspapers, policy reports, scientific literature etc.). You can summarise them, for instance, in a table (lecture 3).
3. Research question
4. Definition of a "sustainable city" assumed for the study
   - Rely on an established definition of sustainability (lecture 1) and translate it to your study context (e.g. a sustainable desert city is a city which….)
5. Conceptual framework:
   - The conceptual framework is a graphic representation that should be based on a finite set of conceptual categories; i.e. domains and goals (lecture 3)

- Bibliography

The outline should be approximately 2 pages (not including bibliography)

Referencing and Formatting

Referencing

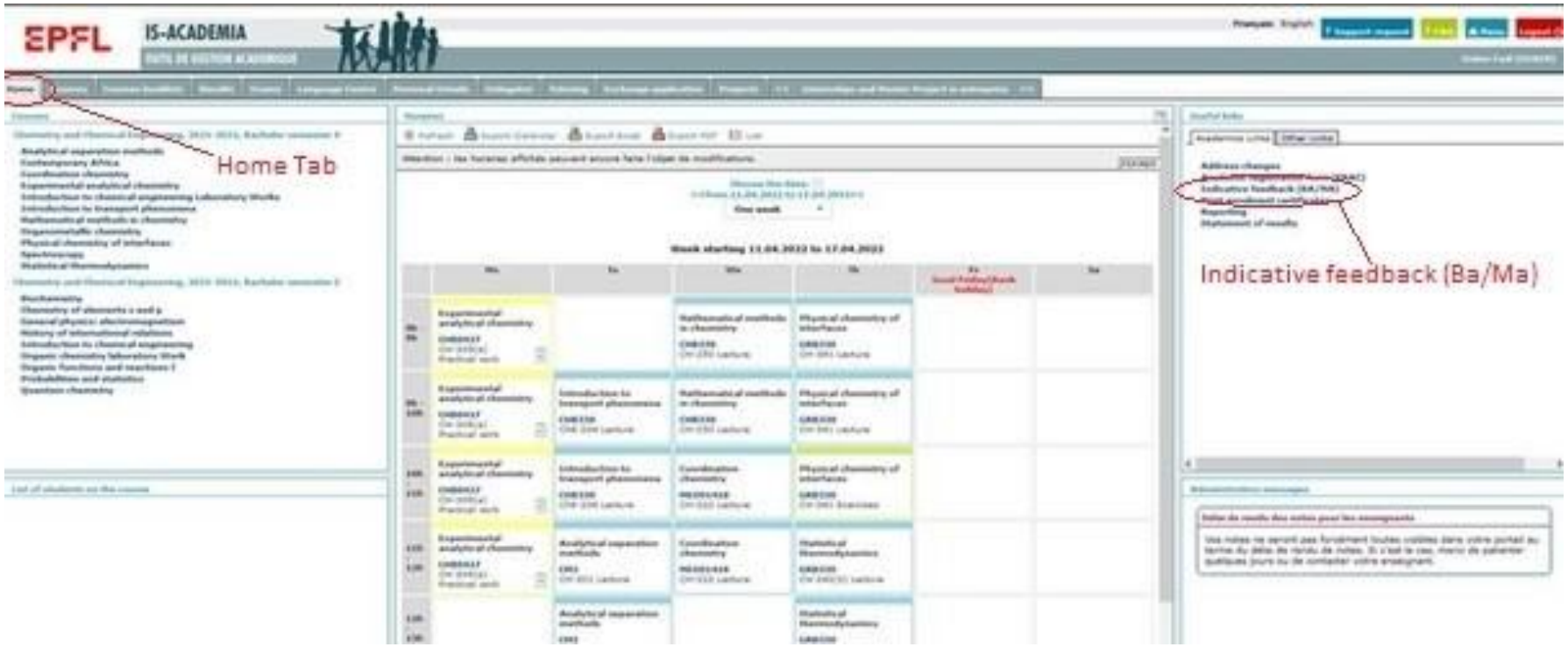
- You need to cite every data source and external statements, opinions you refer to in your project, this holds also true for research methods you use.
- For in-text citation:
  - Direct quotes you need to cite in quotes: *"citation" (author year: page)* (=Harvard Style)
  - Indirect quotes you need to reference at the end of the sentence with *(author year: page)* or: *According to Author (year: page), ...*
- Please add a reference list (Harvard style)
  - *Barker, R., Kirk, J. and Munday, R.J., 1988. Narrative analysis. 3rd ed. Bloomington: Indiana University Press.*
  - *Boughton, J.M., 2002. The Bretton Woods proposal: a brief look. Political Science Quarterly, 42(6), p.564.*
- Harvard citation style: http://libweb.anglia.ac.uk/referencing/harvard.htm

Formatting of the Outline

- Please use a clear style like arial, calibri or similar, size 11 pt, spacing 1,5
- Please number and label all your tables and figures

Helping improve the course!

- Explanations and instructions: https://www.epfl.ch/education/teaching/fr/soutien-a-lenseignement/ressources-etudiants/#indicativefeedback
- Link in IS-Academia: https://isa.epfl.ch/imoniteur_ISAP/!etuevalreponses.htm










Sustainability Assessment of Urban Systems

(ENV-461) – BS 170

4: Participation in sustainability assessment

Lecturers:

Prof. Dr. Claudia R. Binder

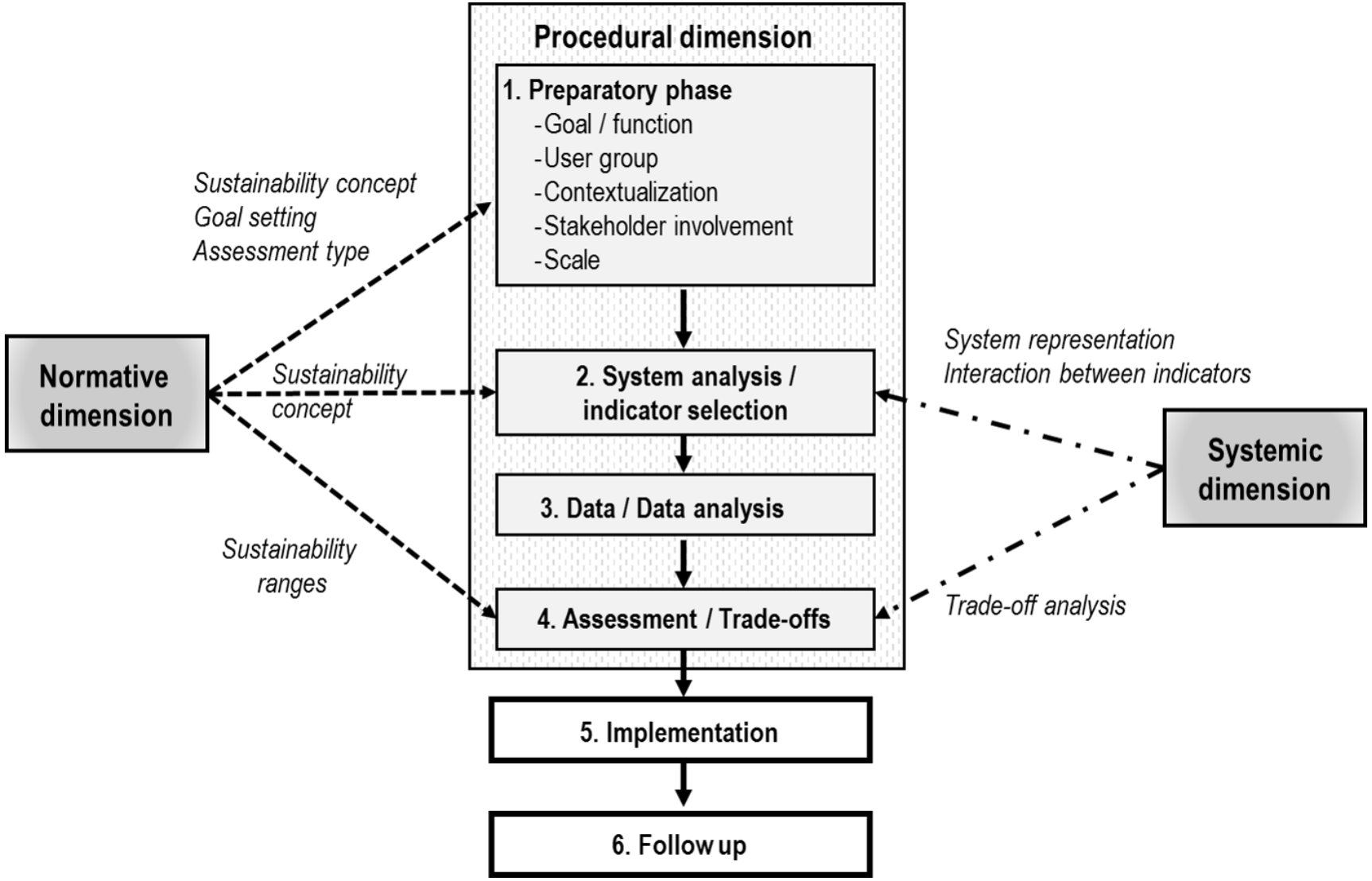
Assistants:

Gloria Serra Coch, Ankita Singhvi, Giulia Frigo, Simon Ladino Cano, Hanbit Lee

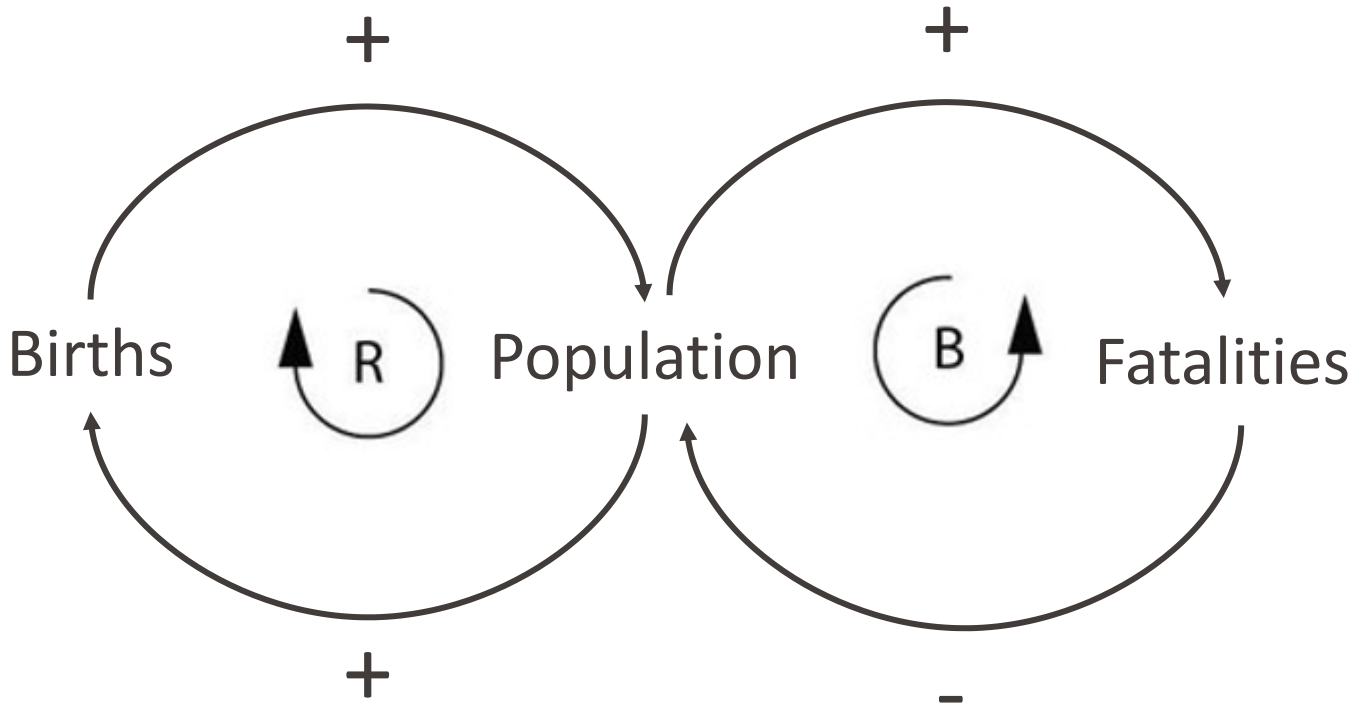
This lecture was supported by Dr. Livia Fritz

Laboratory on Human-Environment Relations in Urban Systems

Last week recap



Identifying relationships between elements: Causal loop diagramm



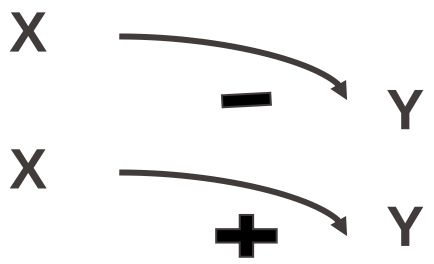
Identifying relationships between elements: Causal loop diagramm

- The arrows in a causal loop diagram are label + or – depending on whether the causal influence is positive or negative!

- Two variables change in the **same direction**: positive polarity

- Two variables change in the **opposite direction**: negative polarity

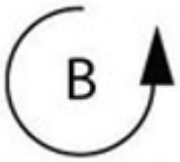
Polarity and feedback loops



When X increases, Y decreases

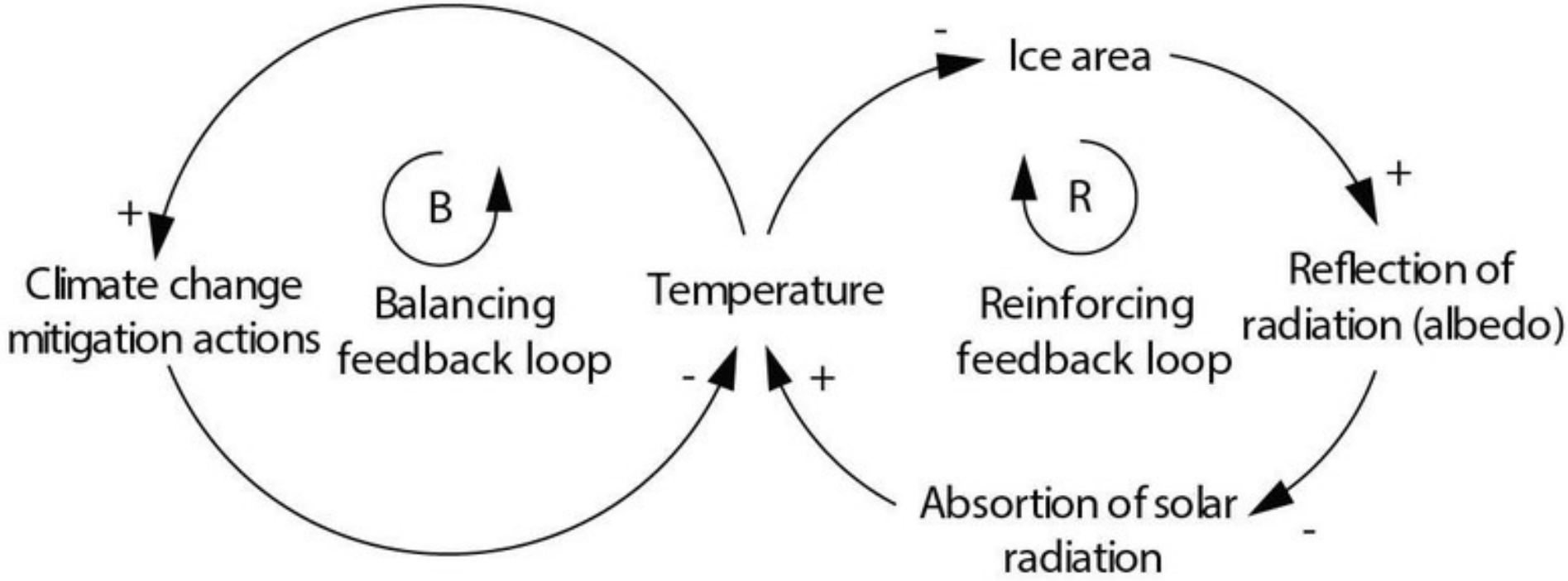
When X increases, Y increases

Escalating / reinforcing feedback:
Feedback is reinforcing, if a loop consists of causalities with positive polarity only or an even number of negative polarities



Balancing feedback:
Feedback is balancing, if a loop consist of an uneven number of negative causal relations.

Example of reinforcing and balancing feedback loops



Bossel, H. (2007). Systems and models - complexity, dynamics, evolution, sustainability. Nordestedt, Germant: Books on Demand GmbH.

Laurenti, R (2016). The Karma of Products: Exploring the Causality of Environmental Pressure with Causal Loop Diagram and Environmental Footprint

Program of the course

Lectures : BS 170 on Wednesdays, 13:15 – 16:00 (Lecture + Exercise)

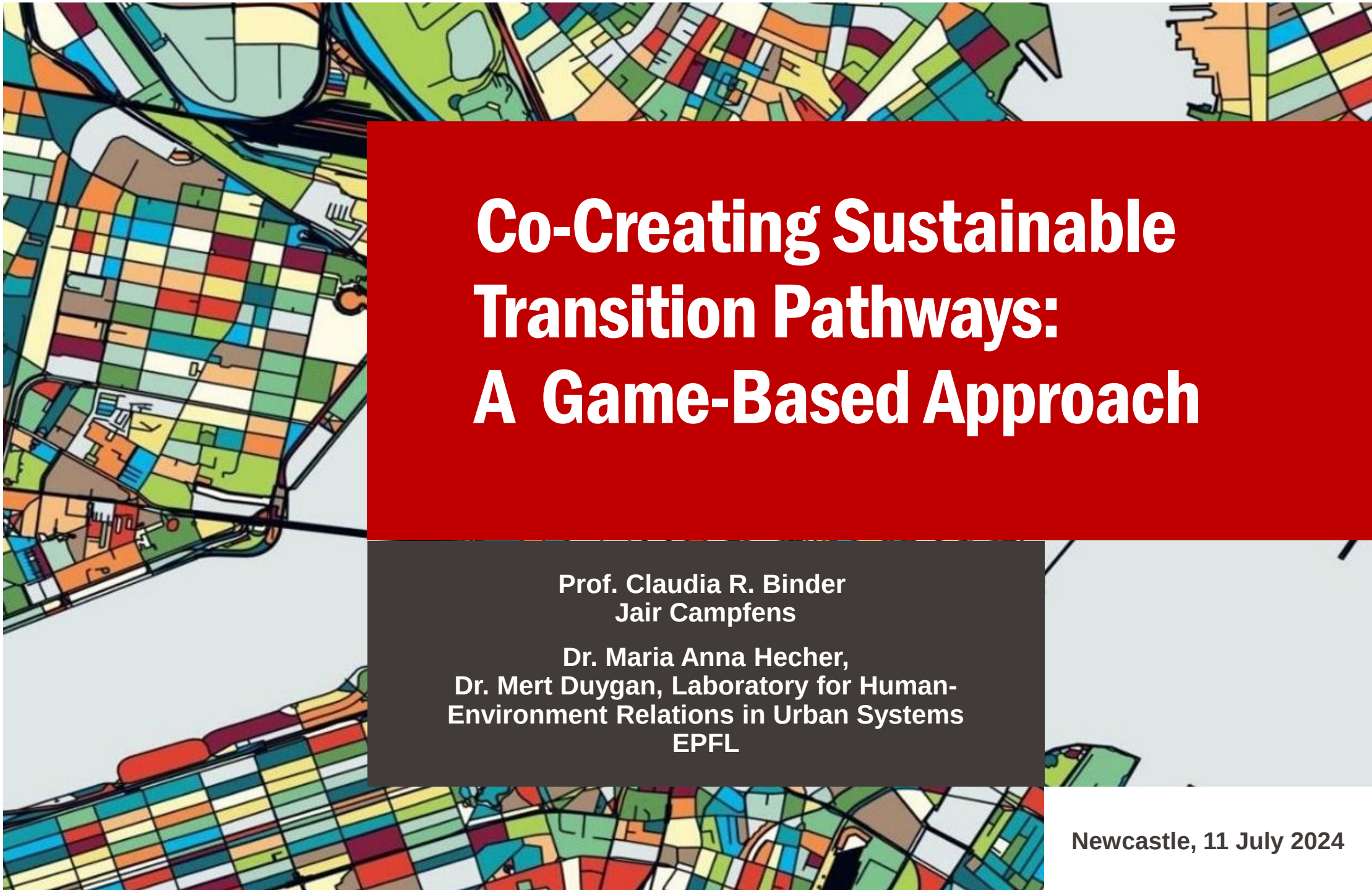
n°	Date	Session	Milestones Project
1	19/02/2025	**Introduction** into sustainability and SA	
2	26/02/2025	**Sustainability issues** in **urban systems**	
3	05/03/2025	**Key steps in SA #1**: SSP, normative dimension, frameworks	**Groups formed**
4	12/03/2025	**Key steps in SA #2**: Systemic dimension	
5	19/03/2025	**Key steps in SA #3**: Participatory dimension	**Submission - Outline 19.03**
6	26/03/2025	**Deriving indicators (1/2)**	
7	02/04/2025	**Deriving indicators (2/2)**	
8	09/04/2025	**Influence matrix**	
9	16/04/2025	**Multi-Criteria Analysis**	
	23/04/2025	**Easter break**	
10	30/04/2025	**Deriving policy recommendations**	
11	07/05/2025	**Policy implications**	
12	14/05/2025	**Sustainability Assessment in practice**	
13	21/05/2025	**Exam**	
14	28/05/2025	**Presentation of semester work_2**	

* May be updated depending on the number of students enrolled

Goals of today's seminar on participation

Binder & Heinrich

- Understanding the **relevance of participation** throughout a sustainability assessment process
- Reflecting on **when, who and how** to involve actors in a sustainability assessment
- Being aware of the **strengths and limitations** of participatory approaches



Co-Creating Sustainable Transition Pathways: A Game-Based Approach

Prof. Claudia R. Binder
Jair Campfens

Dr. Maria Anna Hecher,
Dr. Mert Duygan, Laboratory for Human-Environment Relations in Urban Systems
EPFL

Newcastle, 11 July 2024

Origin

Sustainability Assessment of Urban Systems

Laboratory on Human-Environment Relations in Urban Systems

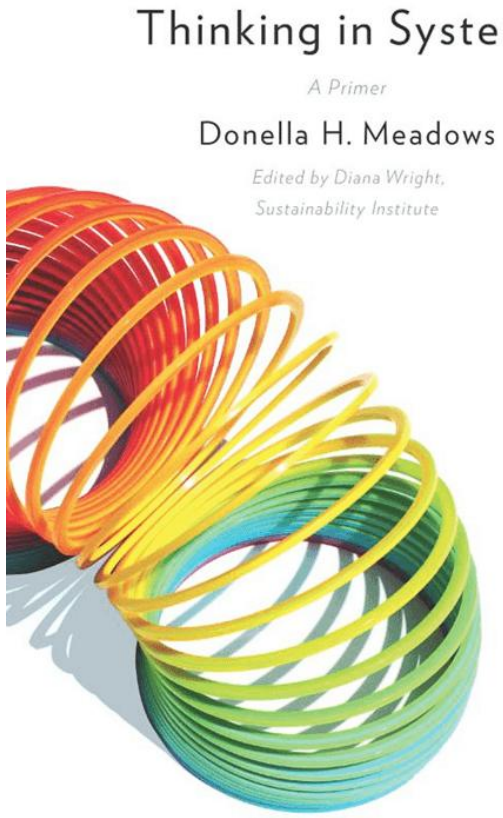
La Fresque du Climat

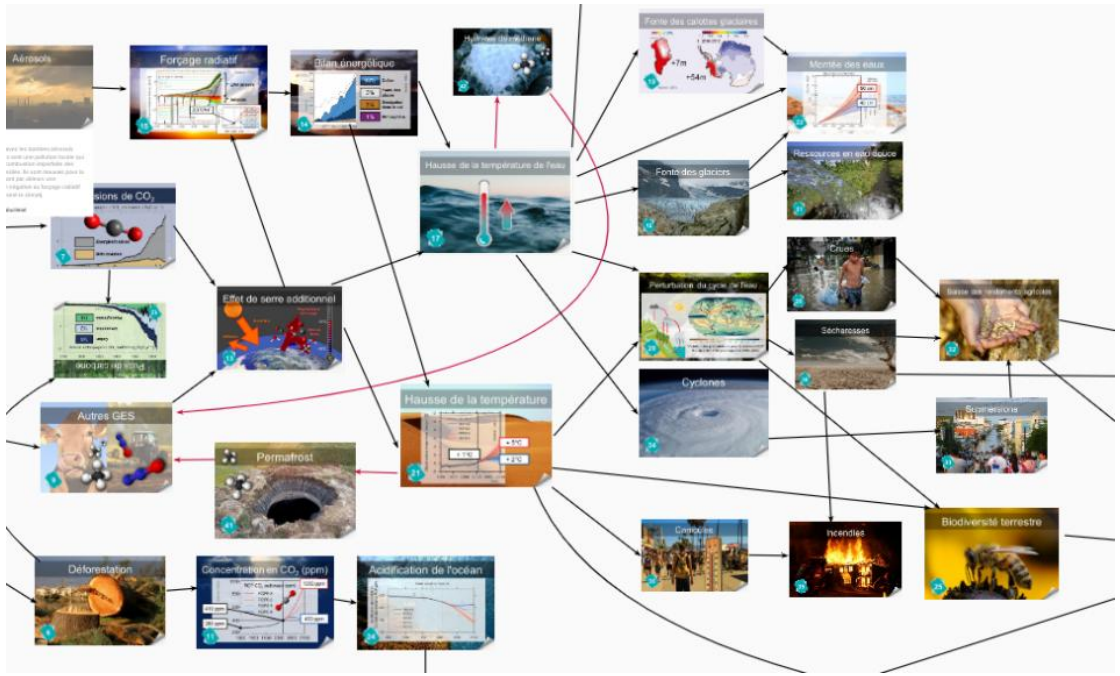
Founded: December 17, 2018, by **Cédric Ringenbach**

Purpose: Raise awareness on **climate change** based on **IPCC reports**

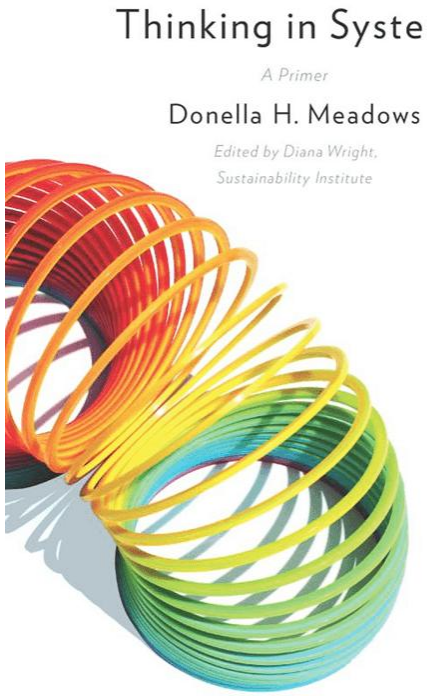
Impact: 300,000+ participants, 13,000 volunteers, 50 countries, 35 languages

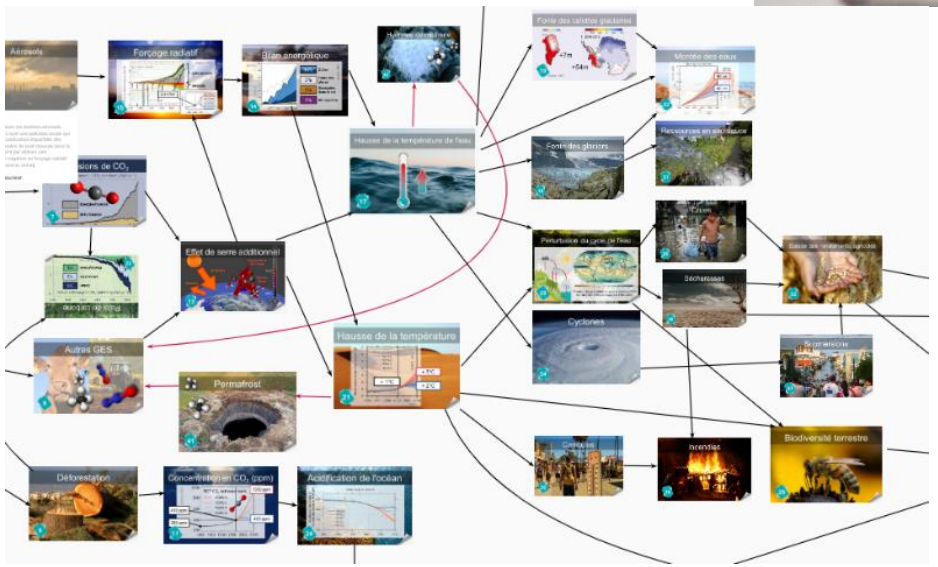
La Fresque du climat and 'System Thinking'





La Fresque du climat and 'System Thinking'





What is new?

+ Polarities of linkages (+/-): Trade-offs
+ Feedback loops
+ Measures to intervene

Game-based approach

Sustainability Assessment of Urban Systems

Laboratory on Human-Environment Relations in Urban Systems

Aims

Developing a common system understanding

I. Developing the components of the energy system and their interactions.

II. Co-creating potential measures for the energy transition.

III. Identifing trade-offs of the proposed measures

Setting

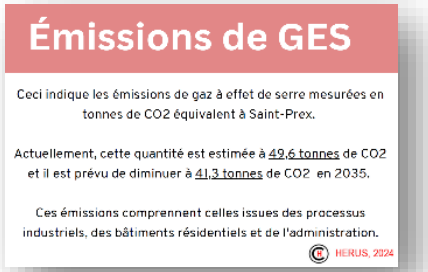
Cards describing the system

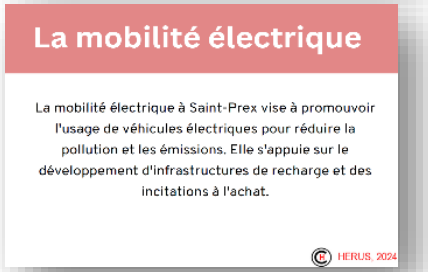
4-9 participants per group

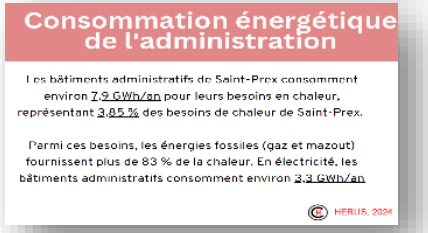
1 moderator per group

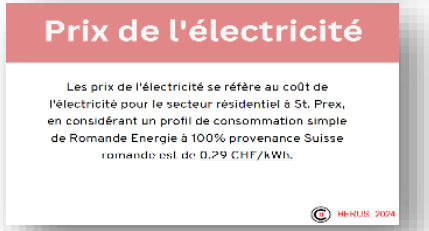
Approximately 2 hours

Cards describing the system: System Understanding

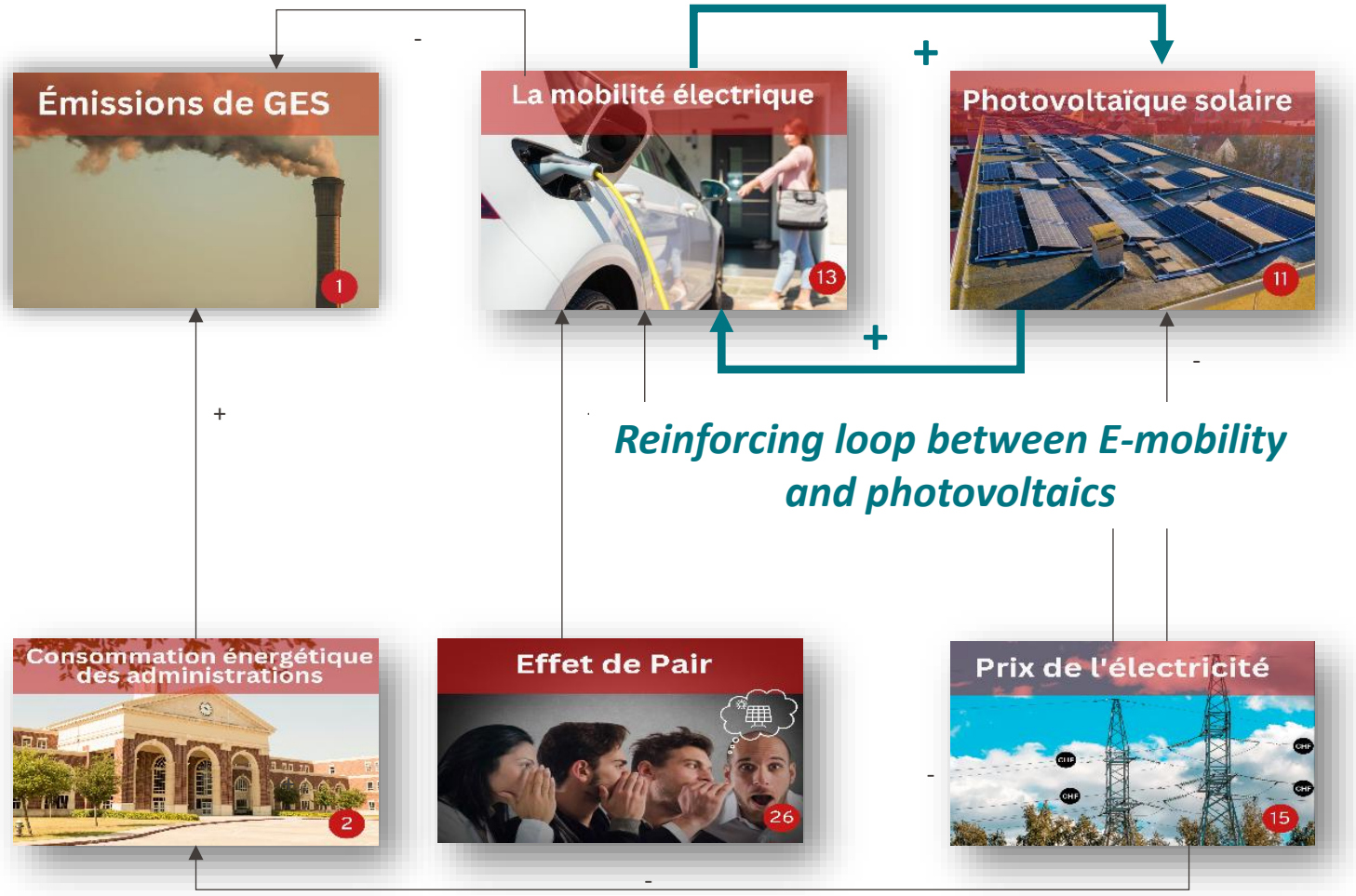




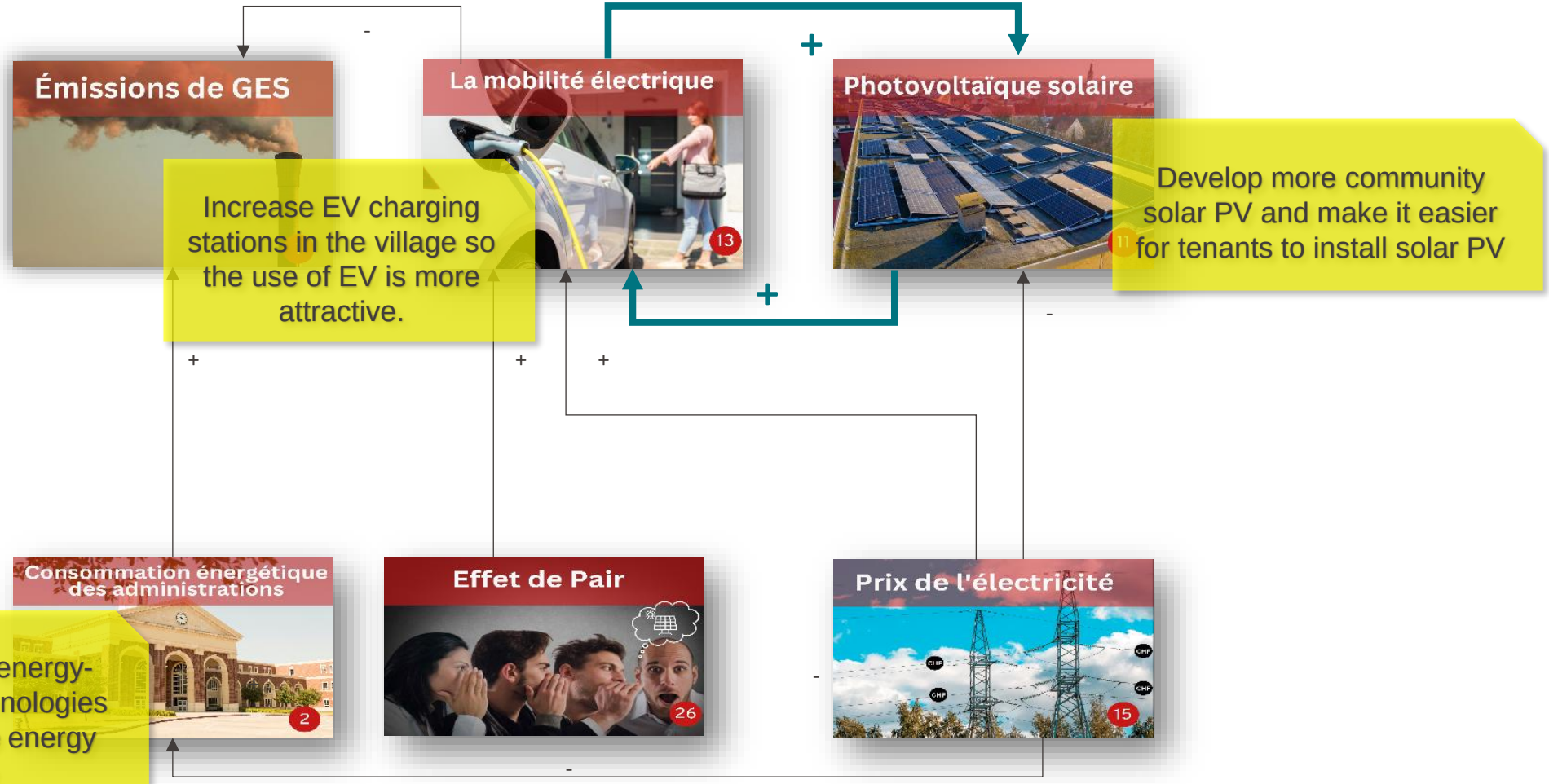




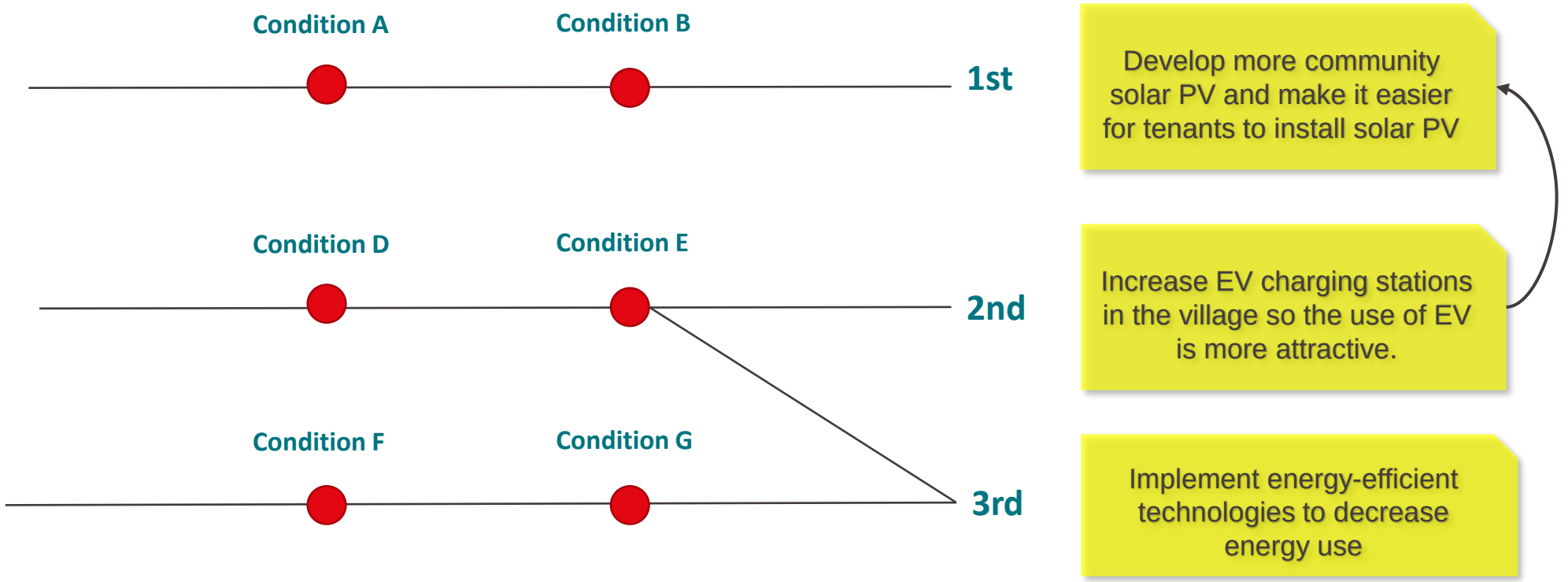
Interlinkages and feedback loops

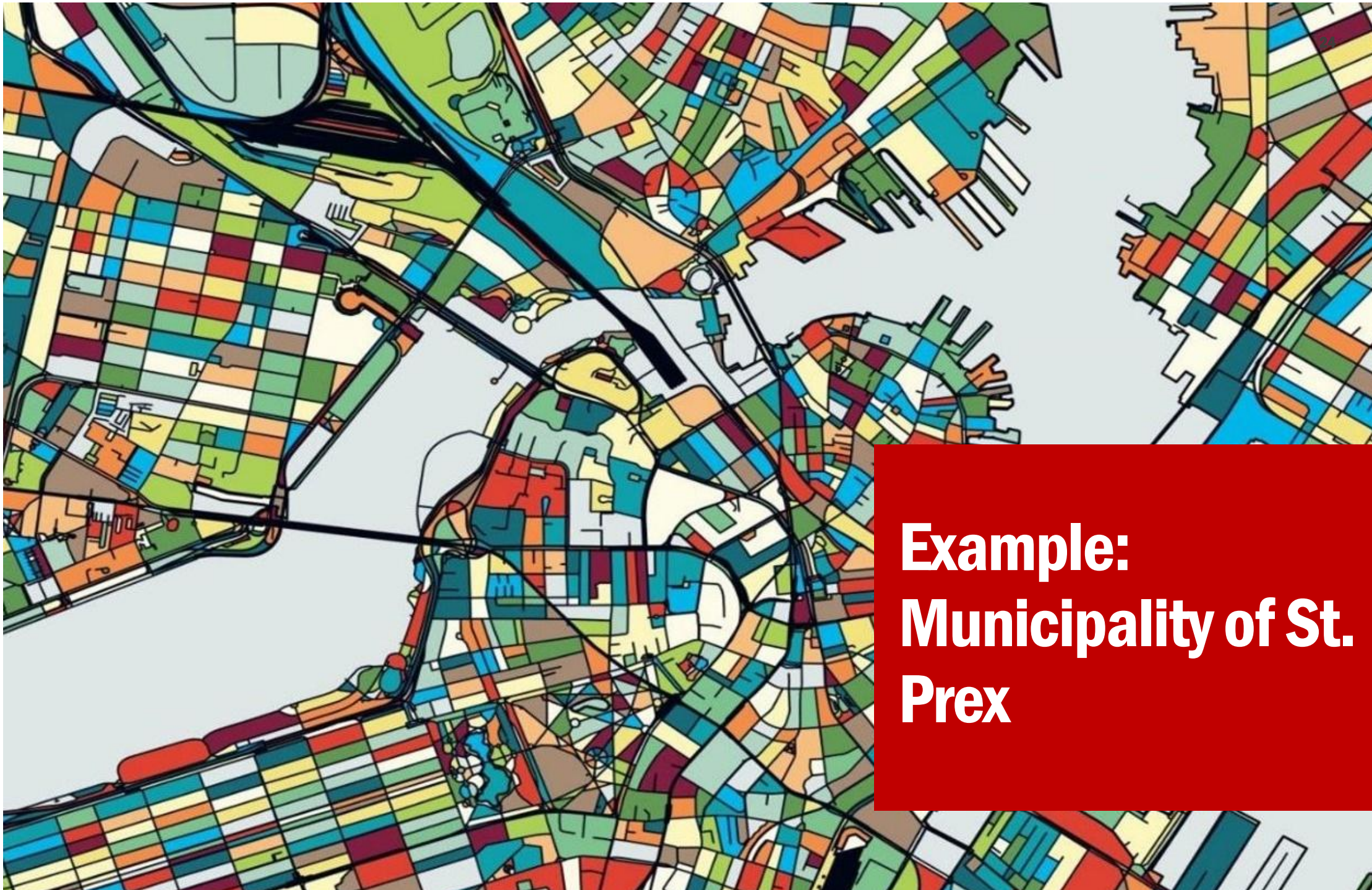


Identification of Measures



Prioritization of Measures





Example: Municipality of St. Prex

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Characteristics of St. Prex

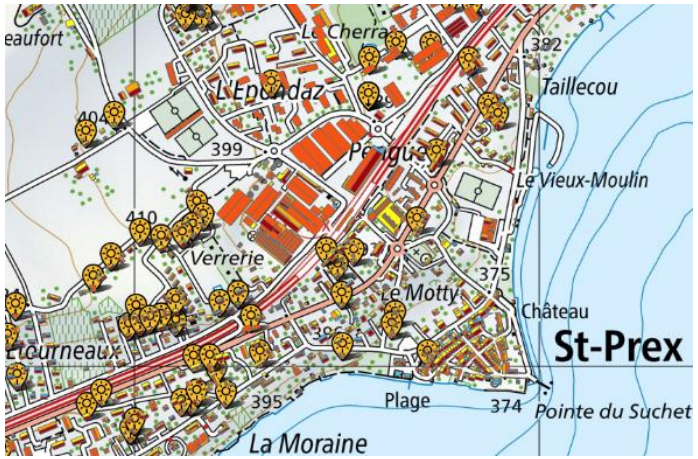
The commune of St. Prex (6,000 inh.) is located on the shores of Lake Geneva.

Large industries in scope, impacting energy needs:

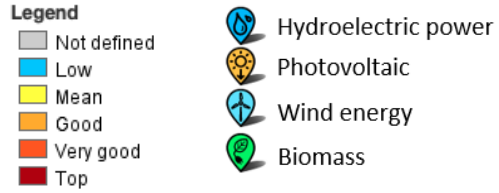
- 70% of the total electricity need
- 78% heat need

Vast agricultural area

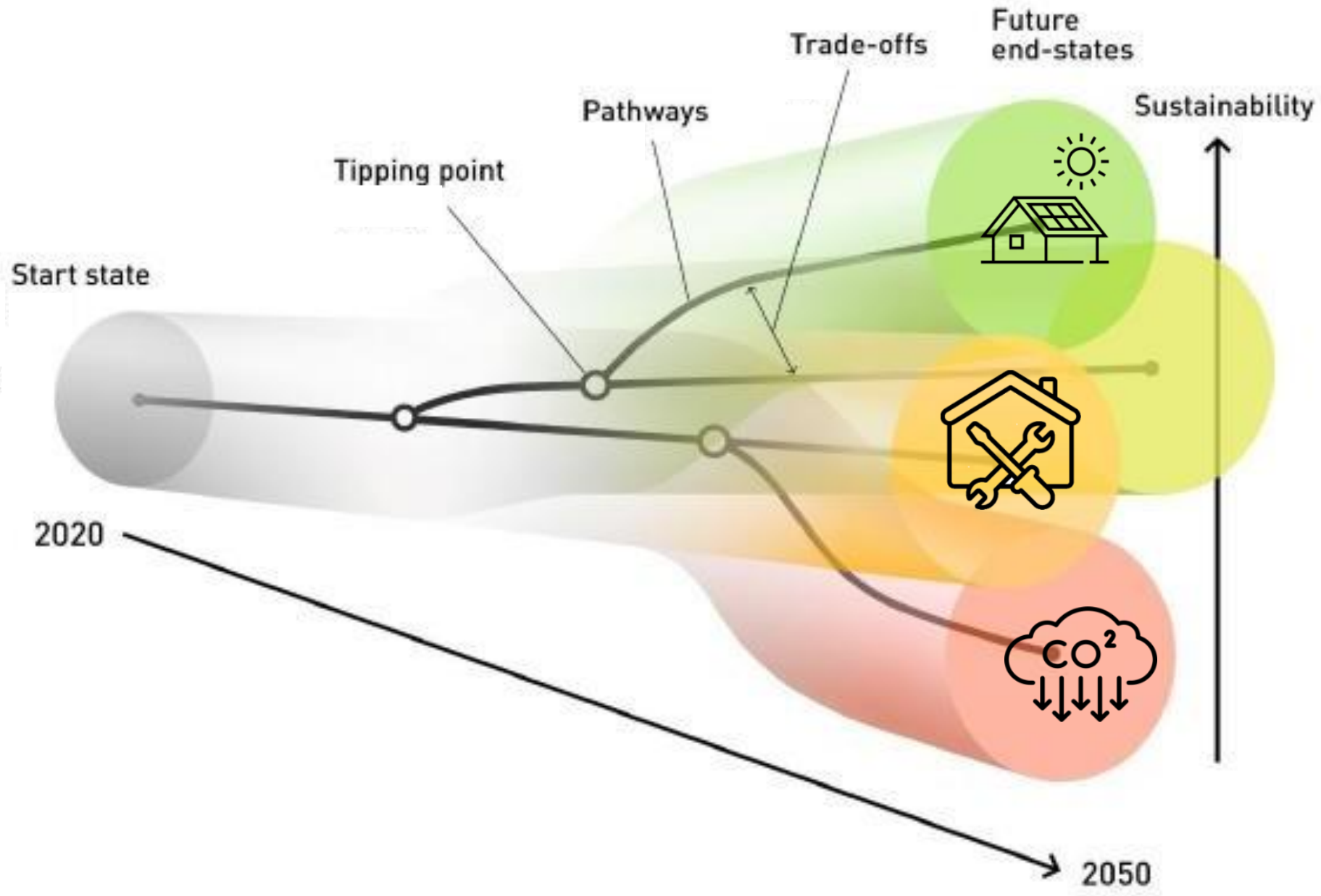
No energy transition subsidies in place.



Source: https://map.geo.admin.ch



Goals of St. Prex



Commune de Saint-Prex

Binder & Campfens

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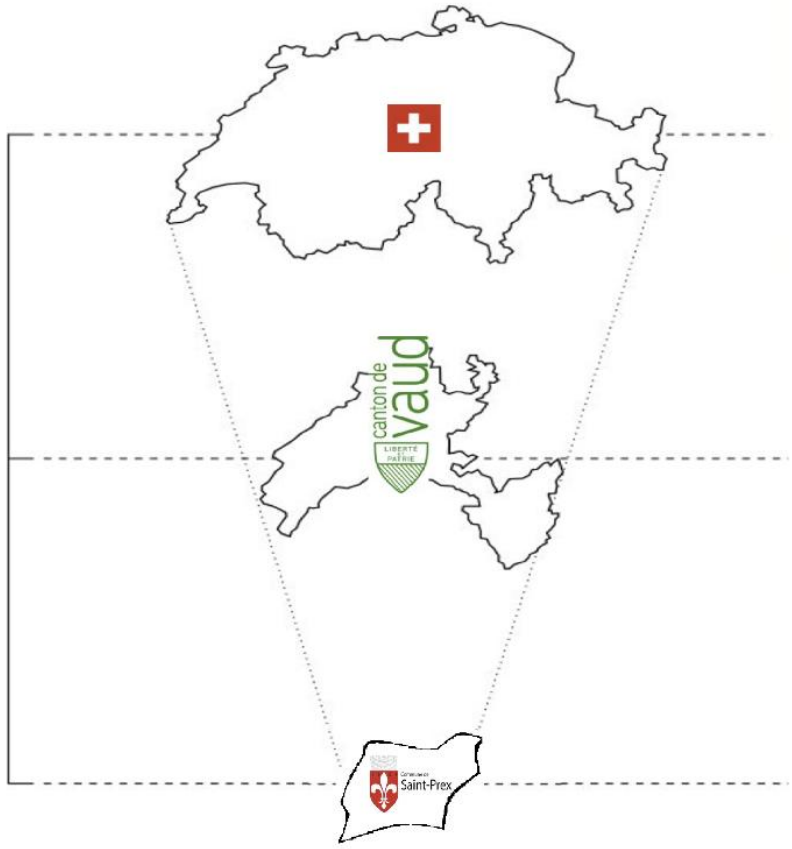
Energy targets and regulations



Objectif d'une Suisse neutre pour le climat en 2050

Loi fédérale relative à un approvisionnement en électricité sûr reposant sur des énergies renouvelables (acte modificateur unique)

Direction Générale de l'Environnement - Vaud

Perspectives chaleur

Perspectives de valorisation du potentiel de chaleur renouvelable du canton de Vaud

Lausanne, le 13.07.2021 / VD08032

DGE - Direction de l'énergie de l'Etat de Vaud

palm Agglomération Lausanne-Morges

PLANIFICATION ENERGETIQUE DU PROJET D'AGGLOMERATION LAUSANNE-MORGES

VOLET 1 :

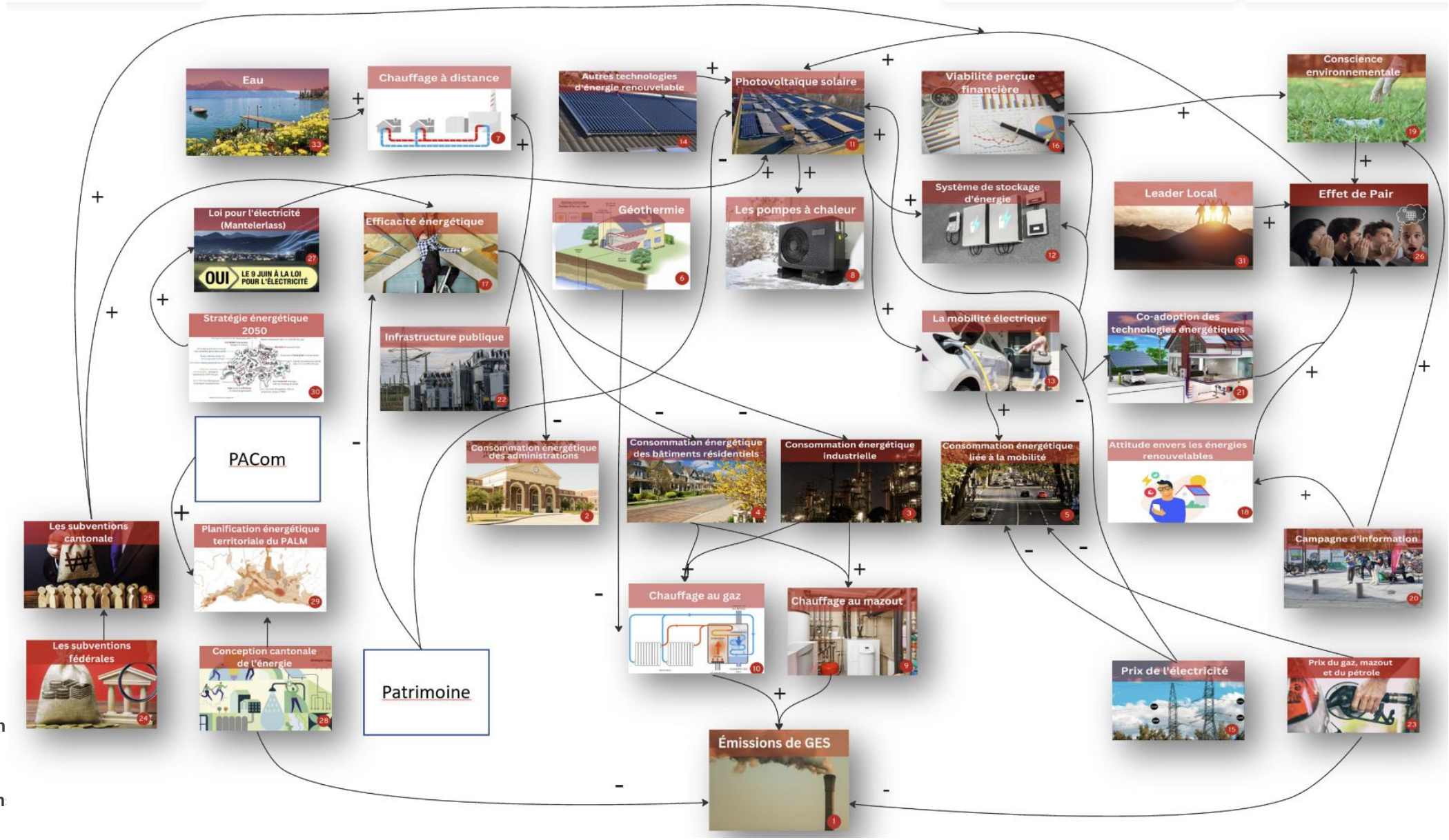
DIAGNOSTIC ENERGETIQUE DU TERRITOIRE

Common system understanding
Participants

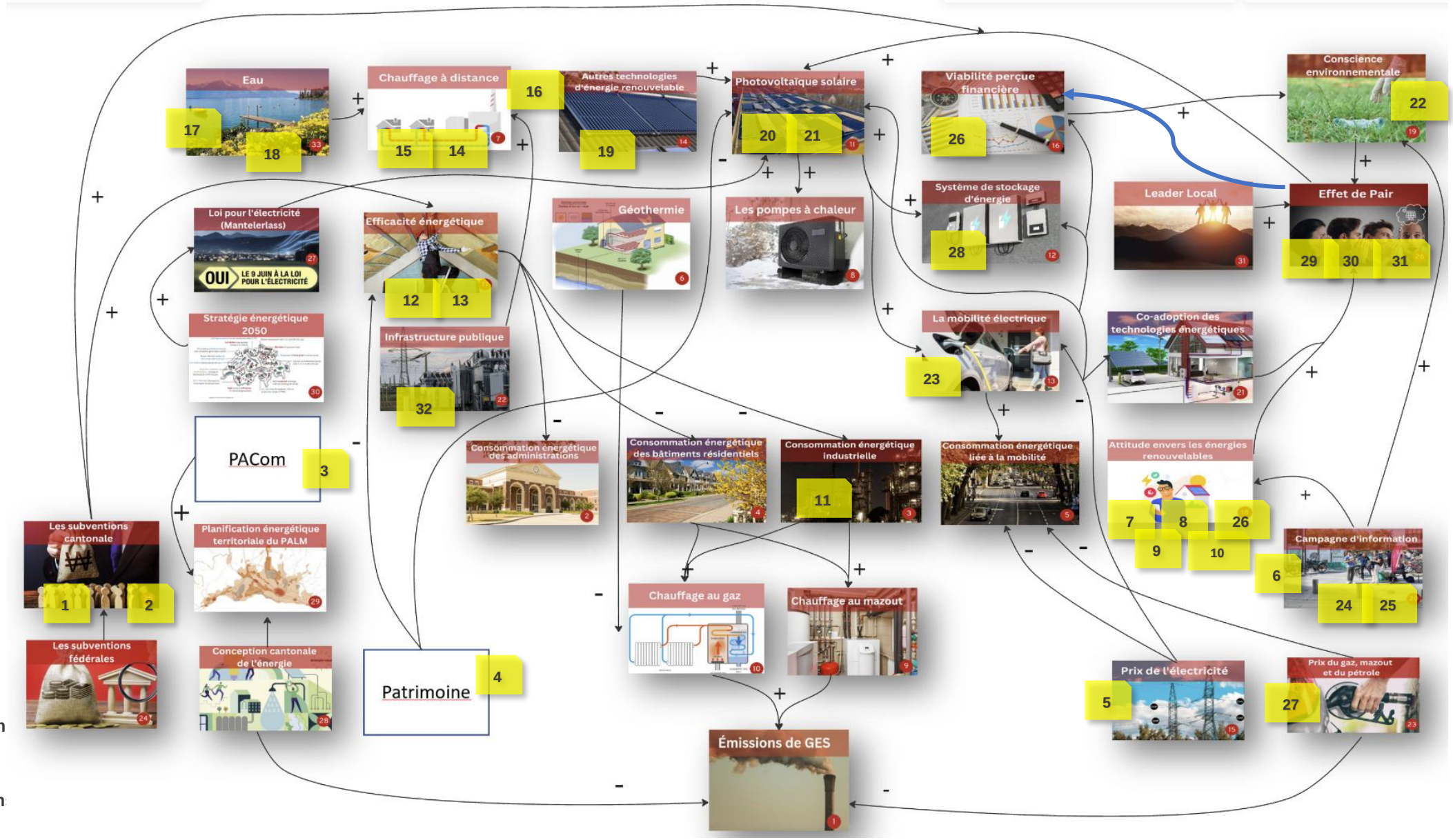
- **Industry** (11)
- **Academia** (5)
- **Communal** (11 municipality St. Prex)
- **Cantonal** (3 canton Vaud)

Causal loop diagram of energy system of St-Prex (1)

Causal loop diagram of energy system of St-Prex (2)



Identified Measures



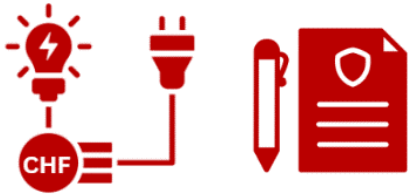
Identified measures

Les technologies énergétiques renouvelables

12 interventions

Règlements et aspects financières

10 interventions



Comportement et attitude

10 interventions

1. Mettre en place des subventions communales pour les énergies renouvelables/efficacité énergétique
2. Subventions communales pour la rénovation énergétique des bâtiments
3. Réglementation et traitement sous le PaCOM
4. Stratégie énergétique patrimoniale
5. Augmentation du prix de l'électricité
6. Communiquer sur la sobriété
7. Sensibilisation/participation
8. Développement des communautés énergétiques à St Prex
9. Subventions communales
10. Organiser des démarches de sensibilisation pour les citoyens (transition énergétique, isolation des bâtiments)
11. Optimiser les solutions avec les industries
12. Informer les habitants sur les opportunités de sponsoriser les CICB
13. Workshops pour les propriétaires avec les intervenants de la rénovation
14. Créer une structure pour développer le CAD et lever les fonds nécessaires
15. CAD avec eau du lac + froid en cité
16. Réaliser un chauffage à distance pour les bâtiments du bourg + éventuelle zone industrielle
17. Utiliser l'eau du lac et valoriser éventuellement les zones de chaleur fatale
18. Utilisation de la CAD pour la substitution de mazout
19. Procédures simplifiées
20. Accès possible au PV pour les locataires + bonus de recharge
21. Échange/synchronisation des données électriques
22. Accompagnement bilan carbone des particuliers
23. Plan intégré mobilité. Stationnement pour voitures électriques, pistes cyclables, subventions, campagnes
24. Interviewer des adopteurs solaire PV
25. Aller voir les bâtiments F&G appropriés
26. Améliorer attitude dans les foyers
27. Taxes sur les énergies fossiles
28. Développement scientifique
29. Bilan CO2 du coaching
30. Communication incitative
31. Appel d'offres groupés
32. Infrastructure pour géothermie et CAD

Action fields

1. Transition Énergétique des Bâtiments

- Rénovation des systèmes de chauffage et amélioration de l'efficacité énergétique pour les bâtiments municipaux.
- Augmenter rapidement l'installation de panneaux solaires et de pompes à chaleur (PAC) dans les bâtiments résidentiels.

2. Mobilité durable

- Organiser des « Journées sans voiture » dans les centres urbains pour réduire les émissions.
- Installer des stations de recharge et des parking dédiés aux véhicules électriques.
- Développer davantage de voies cyclables pour encourager ce mode de transport durable.

3. Règlements et Aspects Financiers

- Mettre en place des subventions municipales pour les énergies renouvelables et l'efficacité énergétique des bâtiments résidentiels.
- Faciliter l'accès aux panneaux photovoltaïques pour les locataires et offrir une prime de tarif de rachat.

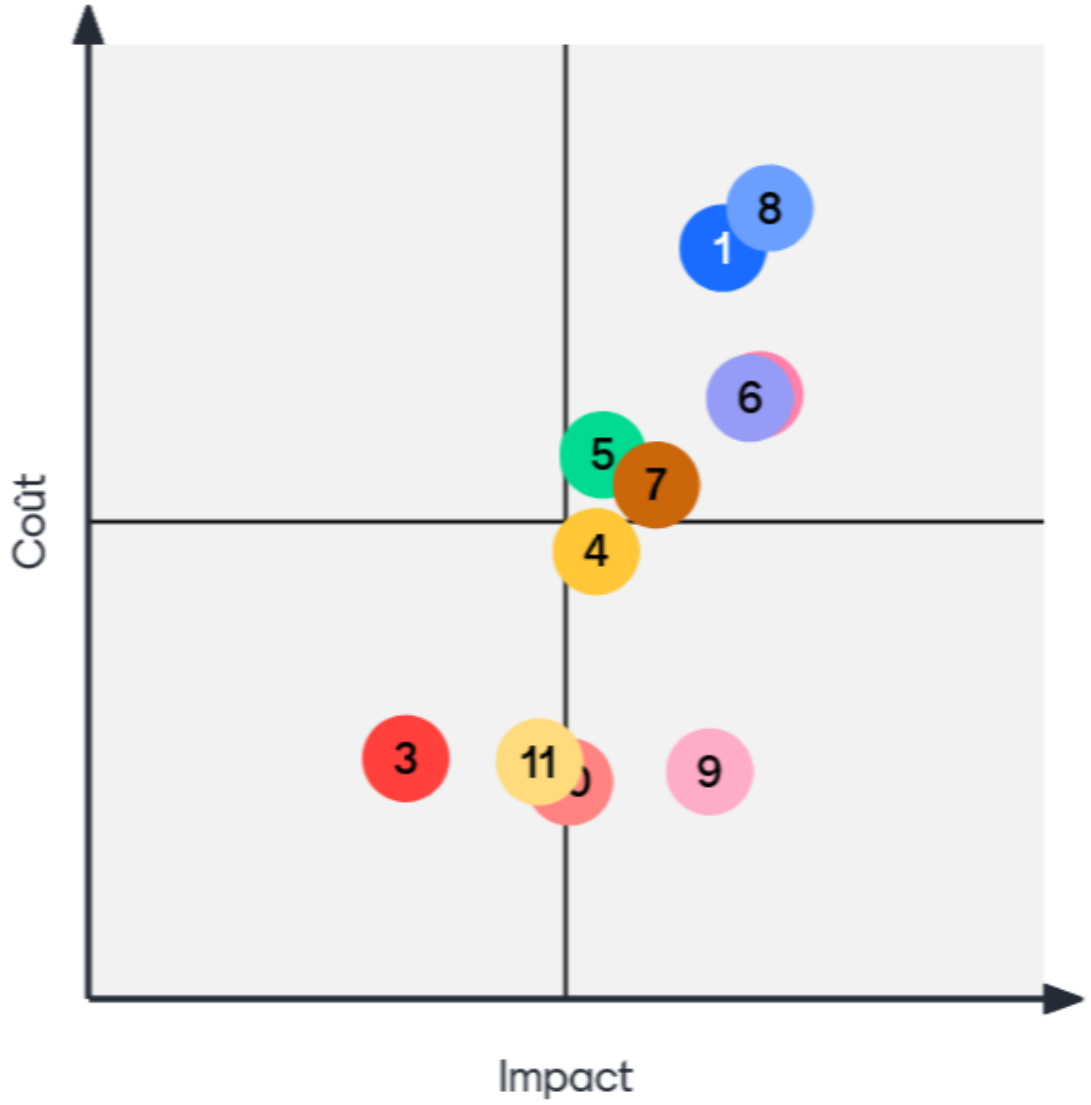
4. Chauffage à Distance (CAD)

- Réaliser une installation de Chauffage à Distance (CAD) à St Prex en utilisant des sources d'énergie fiables et durables.

5. Comportement et Attitude

- Renforcer l'éducation sur le climat et l'énergie dans les écoles et les administrations.
- Sensibiliser et encourager la participation en réalisant des interviews avec des adoptants de panneaux solaire.
- Organiser des ateliers ou une petite foire commerciale où les acteurs concernés par la rénovation de bâtiments sont présents.

How do you evaluate the measures in term of impact and costs?



1 Rénovation énergétique des bâtiments municipaux

2 Augmentation du rythme d'installation de pompes à chaleur et de panneaux solaires dans les bâtiments résidentiels

3 Organisation de "Journées sans voitures"

4 Installation de stations de recharge pour les véhicules électriques

5 Développer d'avantage de voies cyclables

6 Subvention pour les énergies renouvelables et l'efficacité énergétique

7 Faciliter le recours aux panneaux solaires pour les locataires et offrir une prime au tarif de rachat

8 Construire un réseau de chauffage à distance à St-Prex

9 Renforcer l'éducation sur le climat et l'énergie dans les écoles et l'administration

10 Sensibiliser et encourager la participation en réalisant des interviews avec des adoptants de panneaux solaire

11 Organiser des ateliers ou une petite foire commerciale avec les acteurs de la rénovation énergétique

26 respondents

When do you think the implementation will occur?

Participation

Theoretical input

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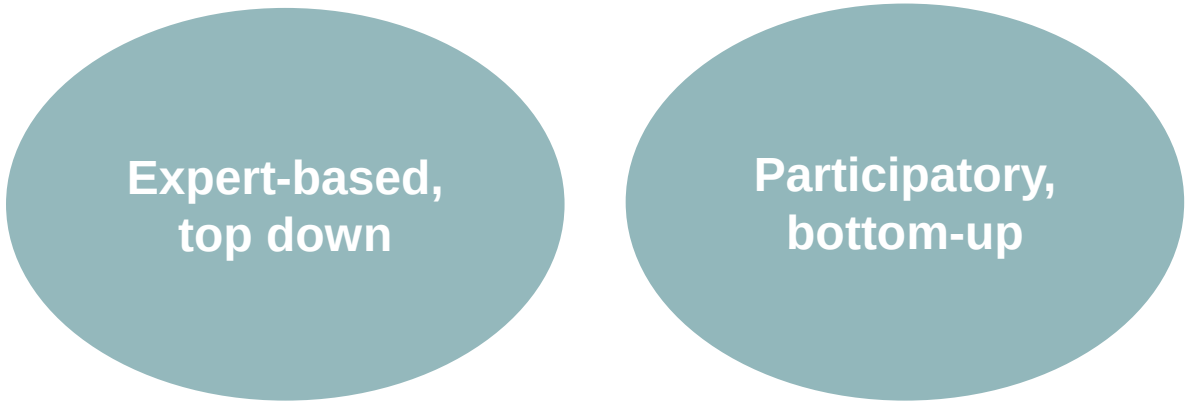
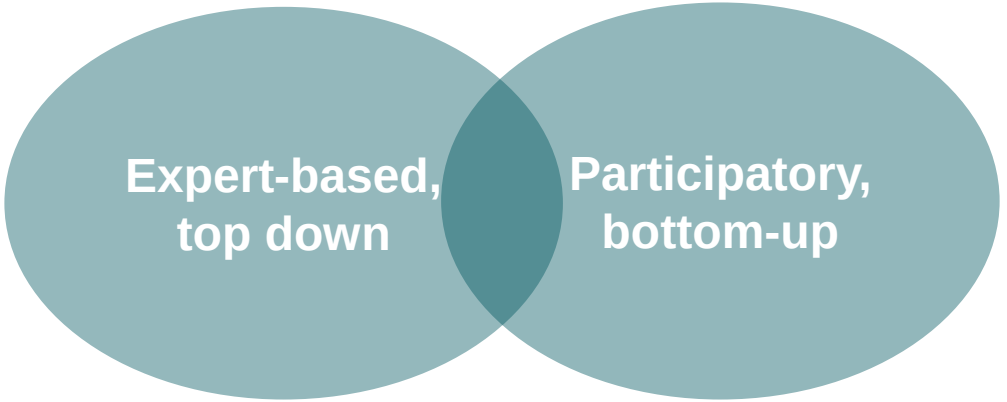
	Expert Approach	Participatory Approach
1. Preparatory phase		
Goal	Assessing the sustainability of a city and identifying points of action	
User group	Policymakers and city planners	
Function	**Benchmarking**, evaluating, monitoring	Evaluating, steering, monitoring
Participation	Informative, consultative	Co-development
Actors	Experts	Experts and stakeholders
2. System analysis		
System boundaries	**Data-dependent**	**Problem-dependent**
Indicator selection	Sustainability concept and system-based	
System representation	Clustering and scoring of cities	Causal loop diagrams
3. Data measurement and analysis		
Data	Official statistics, longitudinal data	Also qualitative data for one year possible
Method	Data Analysis	Interviews, workshops, system analysis
4. Assessment		
Thresholds	Scientific, international goal-setting	Contextualised goal representation
Trade-offs	Correlations	Impact matrix, workshops
Weighting	Stakeholder involvement	Stakeholder involvement

Assessment type



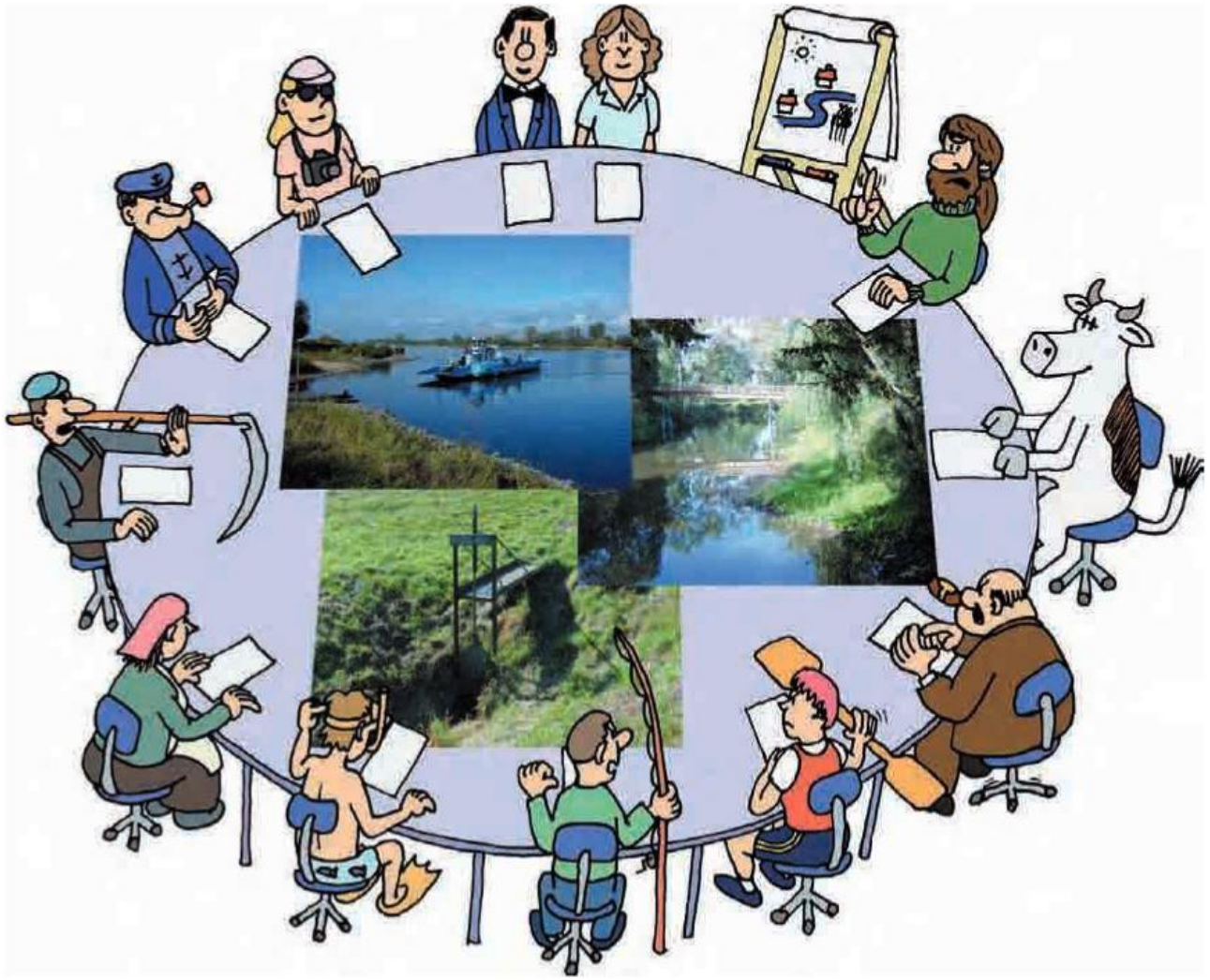
(Reed et al. 2006; Binder et al. 2020)

Assessment Type



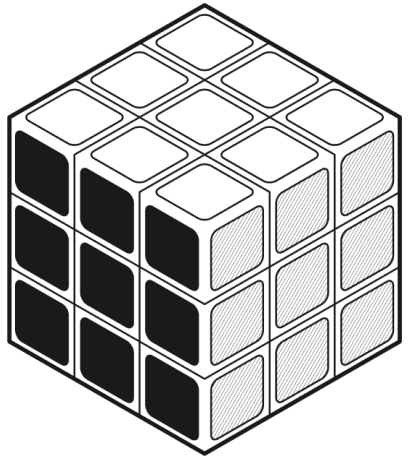
(Reed et al. 2006; Binder et al. 2020)

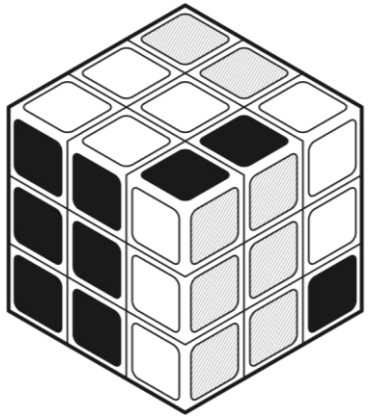
Participation means …

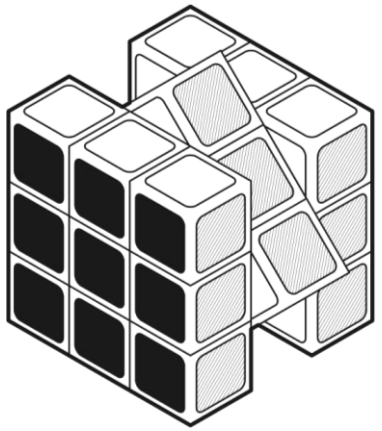


… the inclusion of diverse knowledge and values in decision-making about complex problems (Reed 2008)

Why: motivation for participation in sustainability assessment







‘simple’ and ‘well-structured’

- Goals are clear
- Means to achieve the goals are known

‘complex’ and ‘ill-structured’

- Goals are unclear
- Multiple possible solution paths
- Non-linear cause-effect relations, unknowns and uncertainties
- Many inter-relations, trade-offs

Source: based on Pearce and Ejderyan 2019

Why: motivation for participation in sustainability assessment

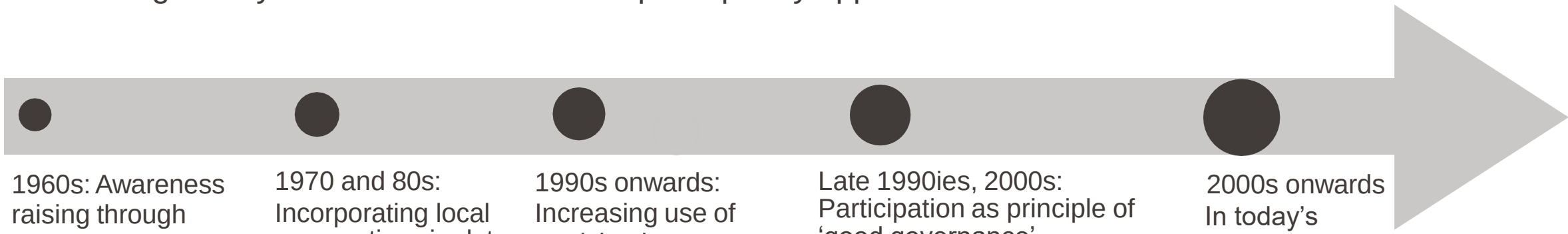
Public participation in sustainability assessment is considered important in order to:

- protect the **legitimate interests of the local citizens**
- tackle **complexity, uncertainty and value-laden preferences**
- increase **credibility** of an assessment
- include valuable and more diverse **knowledge** in the assessment
- enhance **shared understanding** and social learning
- …

Source: Gibson et al. 2005

Why: Contextualisation

- Participatory approaches are not unique to sustainability assessment, but part of a “participatory turn” in governance
- Long history and different traditions of participatory approaches in Global South and Global North



1960s: Awareness raising through participation, environ. movements (critique of modernization theories)

1970 and 80s: Incorporating local perspectives in data collection and planning, Agenda 21) e.g. participatory rural appraisal

1990s onwards: Increasing use of participation as a norm in the sustainable development agenda;

(e.g. United Nations Rio Declaration in 1992)

Late 1990ies, 2000s: Participation as principle of ‘good governance’, introduced in legal and political frameworks in environmental domain e.g.

- Aahrus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters;
- EC Water Framework Directive;
- Bellagio STAMP Principles for sustainability assessment and measurement

2000s onwards In today’s sustainable development, participation is a a key approach, in particular regarding the integration of local knowledge with science. Eg.,

- UNESCO Ocean Decade
- UN SGDs

➔ Participation has become loaded with different meanings
➔ There are different typologies of participation which have different associated approaches

Source: Reed 2008, Van den Hove 2003, Lawrence 2006

What: Typologies of participation

(A) Typologies based on motivations/rationale of involvement	(B) Typologies based on intensity of involvement	(C) Typologies based on communication flows	…
e.g. normative, substantive, instrumental (Fiorino 1989)	e.g. information, consultation, collaboration (Arnstein 1969)	e.g. one-way and two-way information flow (Rewe and Fewer 2005)	

Any typology presupposes a decision of the initial group of actors – "**the assessors**" - to "**invite publics**" (Wynne 2008)

➔ in this understanding participation processes are **structured processes**

➔ those in charge of a sustainability assessment are the "**architects" of participation** (Felt et al. 2012)

(A) Typologies based on motivation and rationales

Motivations for participatory processes in general:

- **Normative:** participation as an end in and of itself
- **Substantial:** participation aimed at achieving better ends
- **Instrumental:** participation aimed at securing particular interests/ends

What does this mean for sustainability assessment?

E.g. to uphold democratic principles and ideals

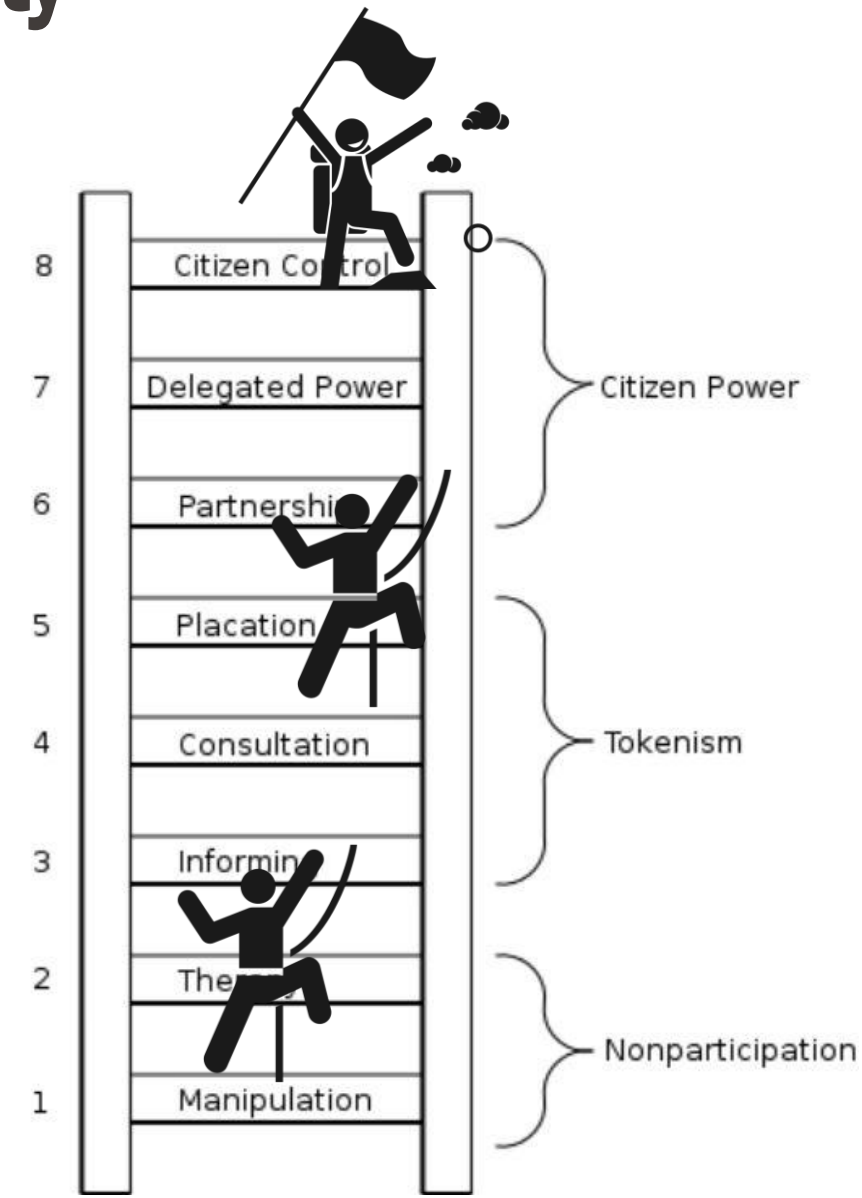
E.g. to enhance context sensitivity by including local knowledge of the system is included

E.g. to increase acceptance of decisions taken on the basis of the assessment

Source: Fiorino, 1989

(B) Typologies based on intensity

- Developed in the context of community planning in the US in the 1960s
- Participation = **redistribution of power** to citizens, sometimes called **intensity of involvement**
- Normative idea of participation: “the more, the better”



Source: Arnstein 1969

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(B) Typologies based on intensity

INCREASING IMPACT ON THE DECISION →

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

Assessor's action

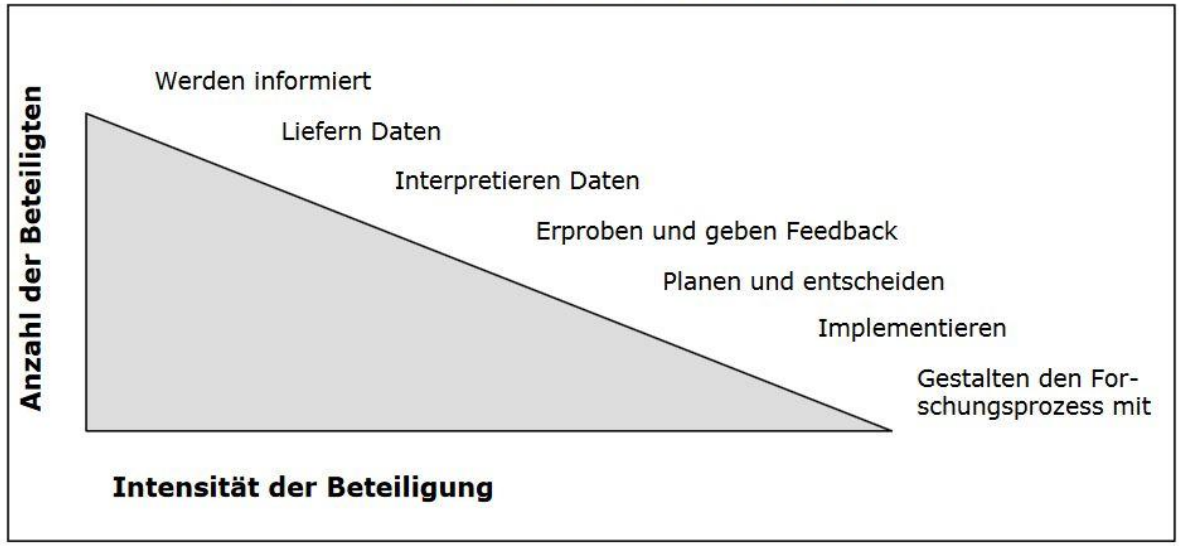
Assessor's relationship with the public

Source: International Association for Public Participation

(B) Typologies based on intensity

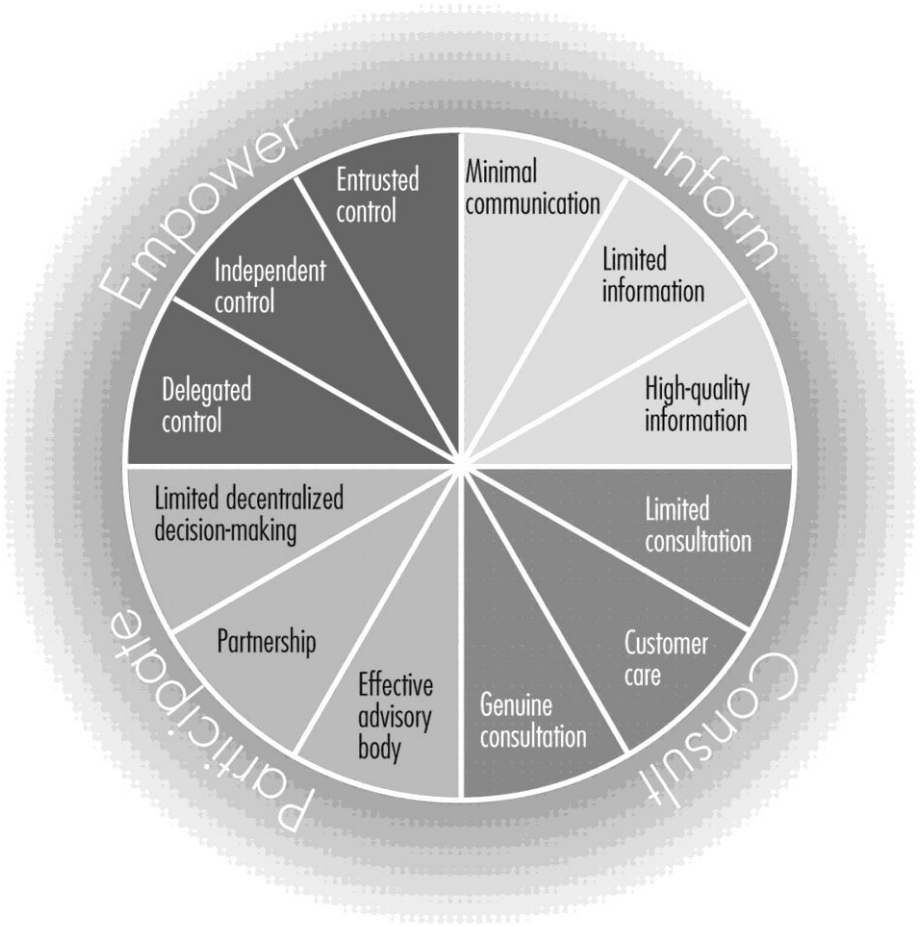
Indirectly proportional link between number of participants and intensity of involvement

Abbildung 1: Zusammenhang zwischen Anzahl der beteiligten Akteure, ihrer Funktion im Projekt und der Intensität der Beteiligung (LITKE 1991: 125, verändert)



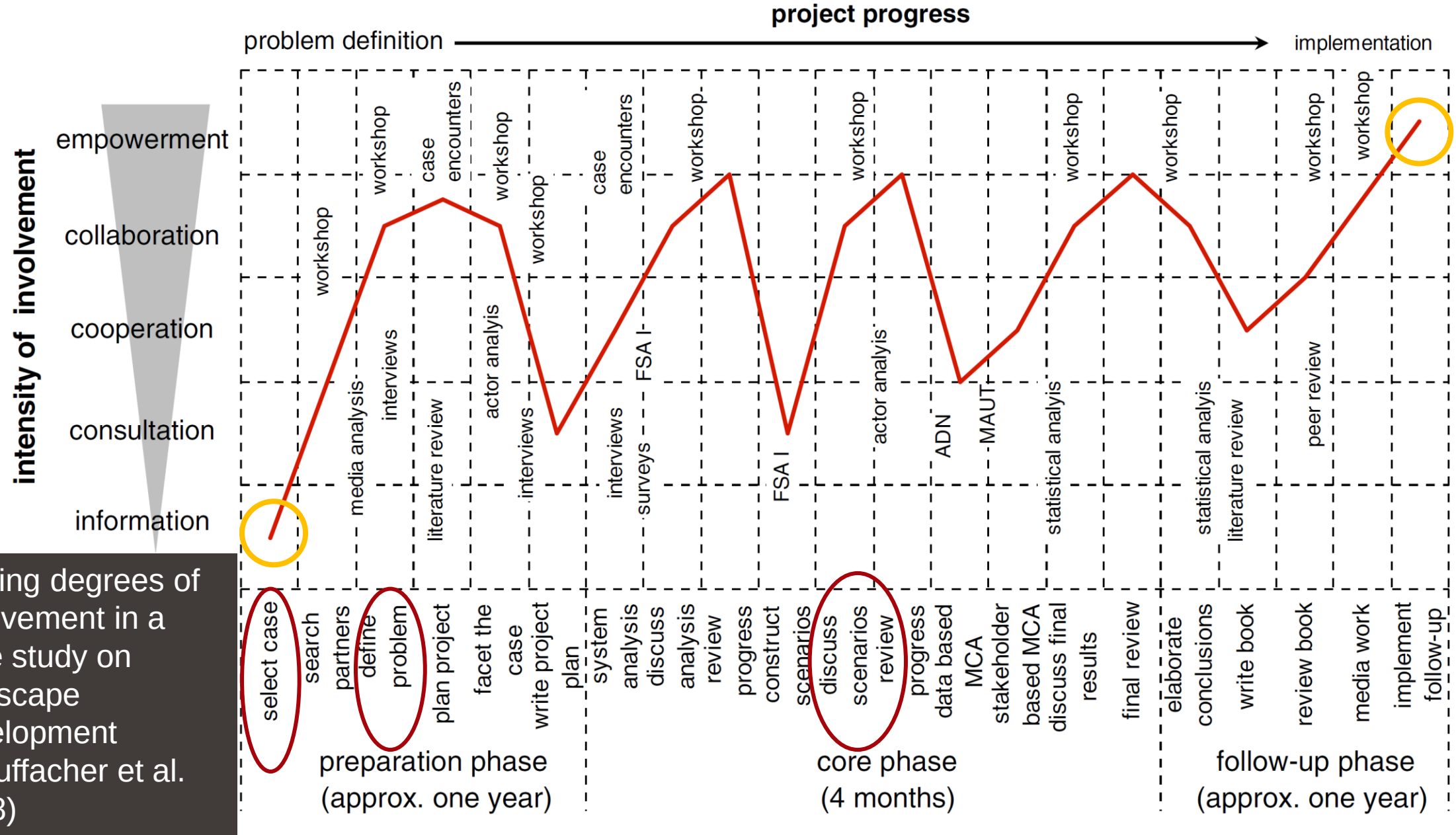
Source: Böckmann et al. 2005

The Wheel of Participation



Source: Davidson 1998

(B) Typologies based on involvement



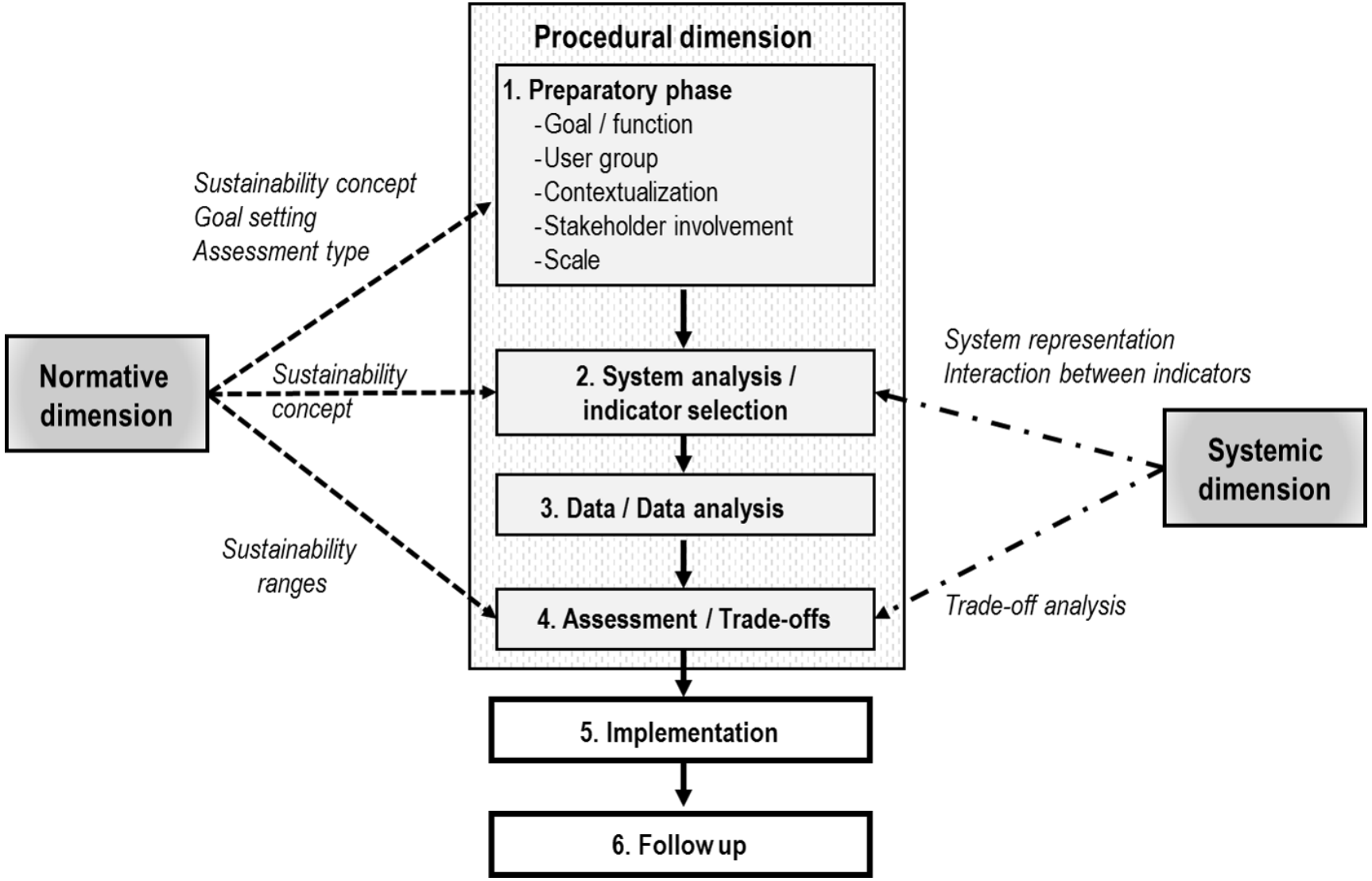
Varying degrees of involvement in a case study on landscape development (Stauffacher et al. 2008)

(C) Typologies based on communication flow

Figure 1. The three types of public engagement.

Source: Rowe and Fewer 2005

When: participation in phases of sustainability assessment



When: participation in phases of sustainability assessment

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Joint system analysis

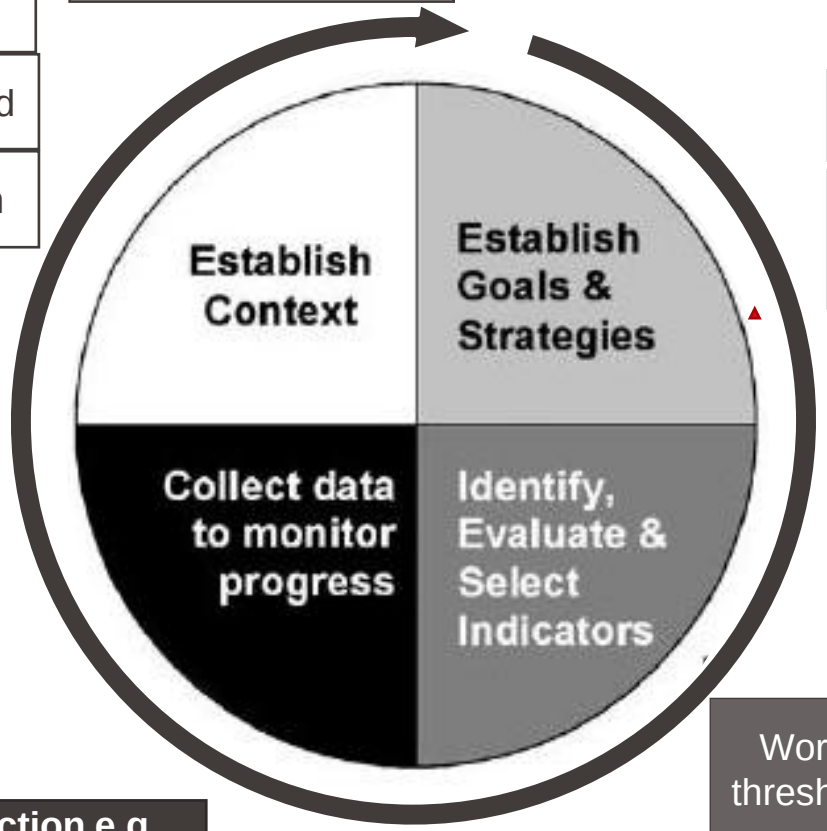
Joint problem framing

e.g. soft systems analysis

Actor selection

Power-interest grid

Rainbow diagram



Joint definition of sustainability	**Joint goal setting**
e.g. soft systems analysis, sustainable livelihood analysis	e.g. participatory scenario and vision development

Workshops to identify or weight indicators or criteria

e.g. as part of Multi Criteria Assessment

Joint development of policy measures

E.g. Citizen juries, citizen conferences

Workshops to define thresholds for indicators

Data collection e.g. through citizen science

Different scope for shaping the content or procedure of the assessment !

Source: Reed et al. 2006

Who: participant selection approaches

Participants can be selected based on:

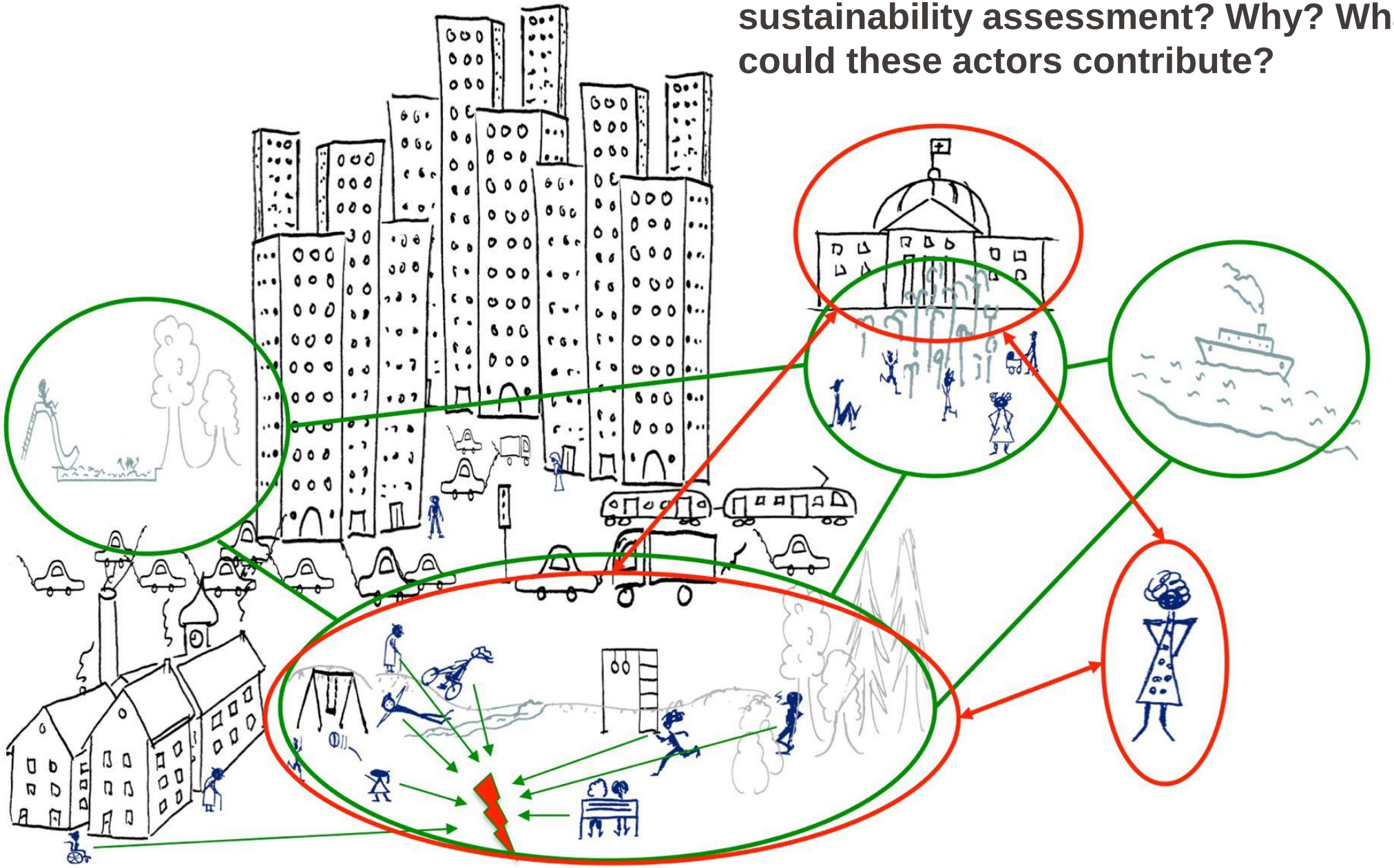
- their (perceived) political *influence*,
- their issue-specific *expertise*,
- the envisaged *plurality of perspectives* to be present in the process,
- the degree to which participants *are affected* by or can affect the outcome of the assessment process,
- the perceived *legitimacy* of their claims regarding the issue at hand,
- *representativeness*
- their integrity or enthusiasm, ….

Two examples:
- The rainbow diagram
- The power-interest grid

Who should be involved?

Source: Hage, Leroy, & Petersen, 2010; Reed et al., 2009

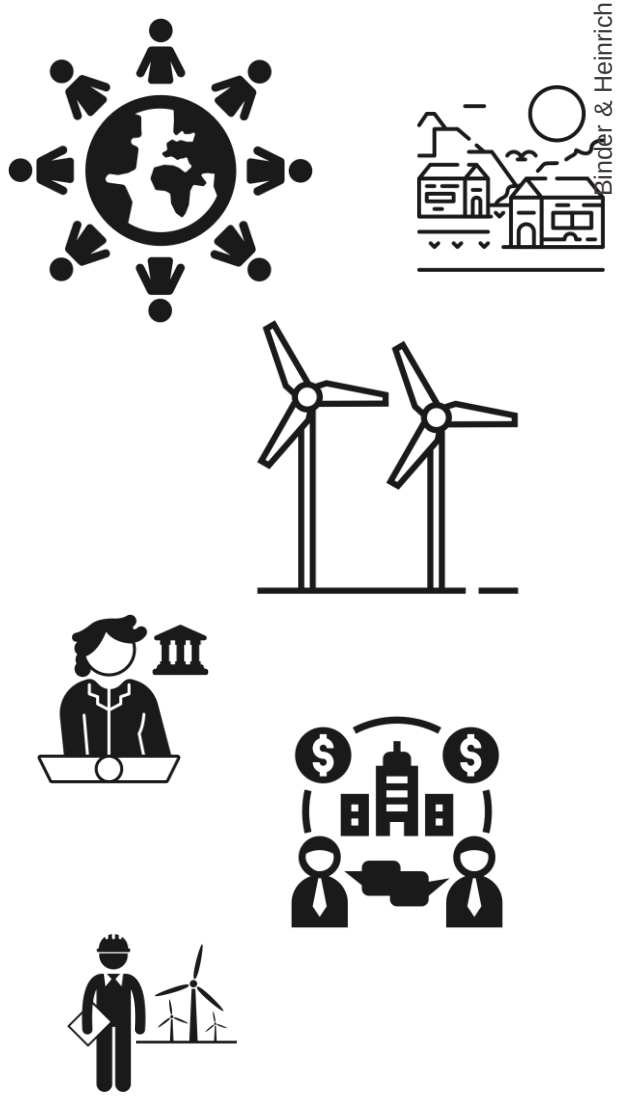
Who could you involve in your sustainability assessment? Why? What could these actors contribute?



Rich picture on an urban planning problem situation (Image: C. Pohl)

Who participates ?

- **General public**, all individuals who are not directly affected by the issue, although they may be part of public opinion on it;
- **Observing public**, which includes the media, cultural elites and opinion leaders who may comment on the issue;
- **Directly affected public**, including individuals and unorganized groups that experience direct, positive or negative, effects from the policy outcome;
- **Decision-makers,** including the actors with the power to decide
- **Stakeholders**, the organized groups which are or will be affected by or that have a strong interest in the outcome of a decision.
- **Non-scientific experts**
- **OR researchers: if the assessment is initiated and conducted e.g. by policy-makers, researchers can be invited to participate**

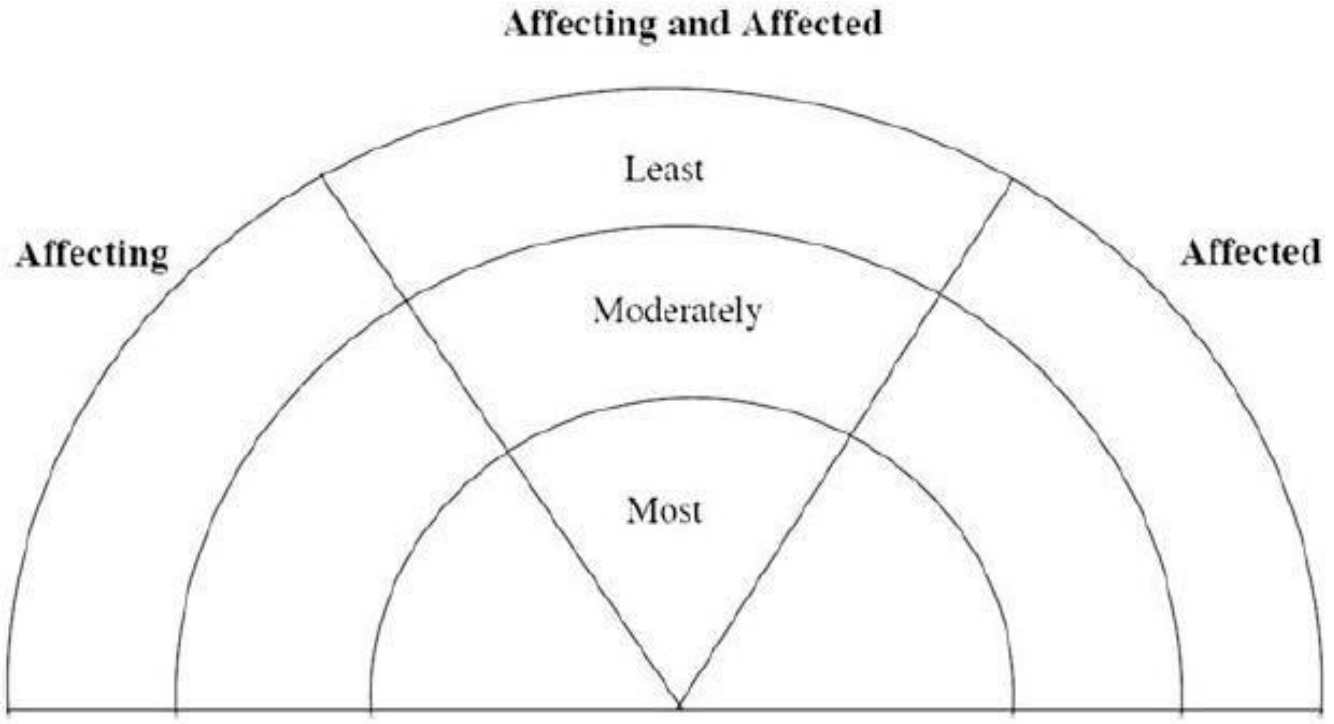


Source: CEECEC Glossary

Who: selection approaches

- can be done in focus groups, or
- individual interviews and snowball sampling, or
- by self-selection (e.g. online invitation)
- … until saturation is reached

The rainbow diagram: classifying actors according to the degree they can affect or are affected by a problem or action

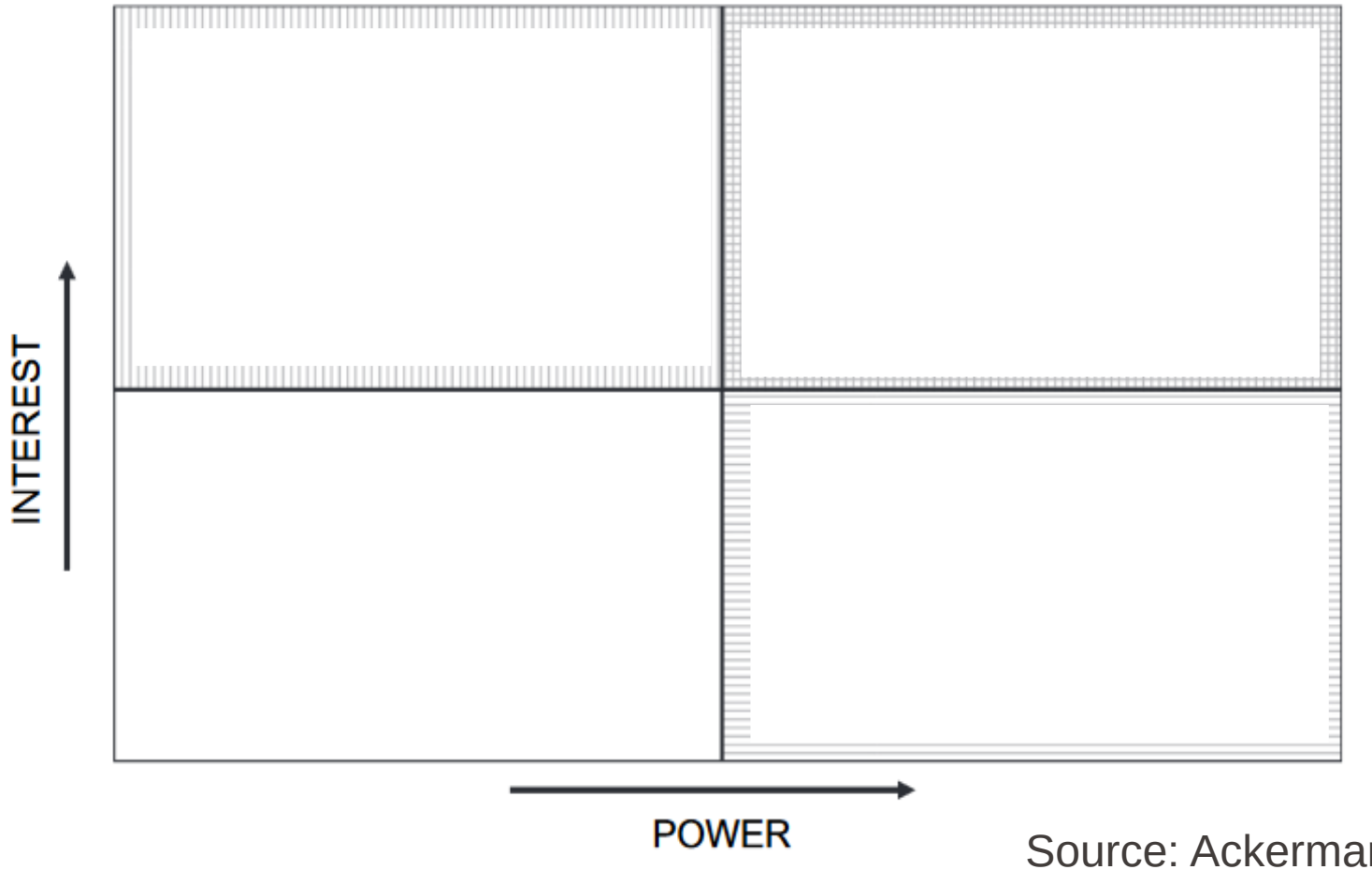


Participants' position to the subject of assessment

Source: Reed et al. 2009, based on Chevalier and Buckles, 2008

Who: selection approaches

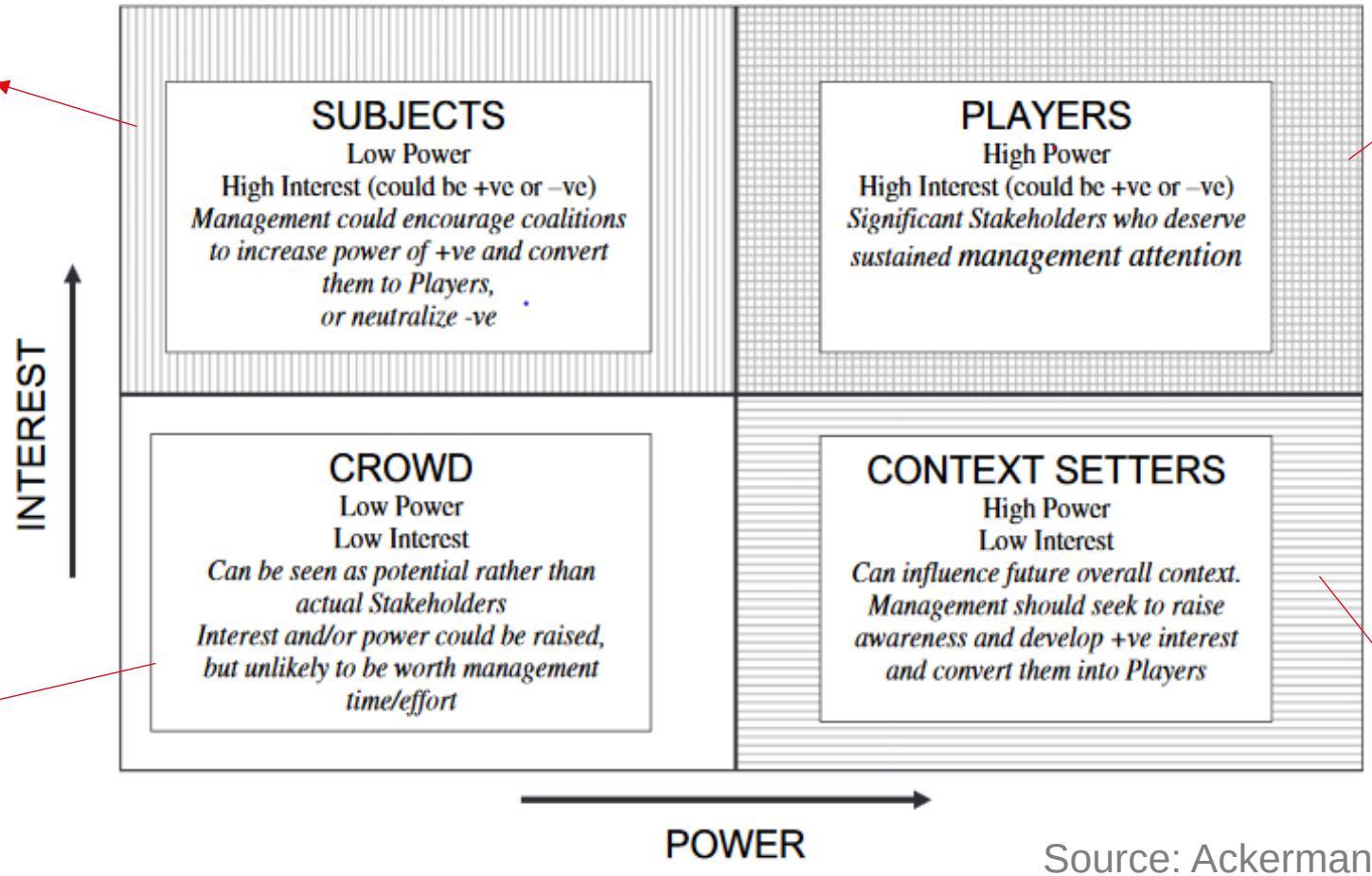
- **The power-interest grid** classifies actors according to their **interest** in the problem or **action** as well as their **influence/power** over it



Source: Ackermann and Eden, 2011

Who: selection approaches

Often the marginal actors that projects want to empower



Should be actively groomed

No active consideration required

Can be a risk, should be actively monitored and managed

Source: Ackermann and Eden, 2011

Who: selection approaches

This grid
⊕ allows to prioritize actors for inclusion and also makes **power visible**, but
- there is the risk of **focusing on the actors** directly involved, thus reducing **diversity of opinions**

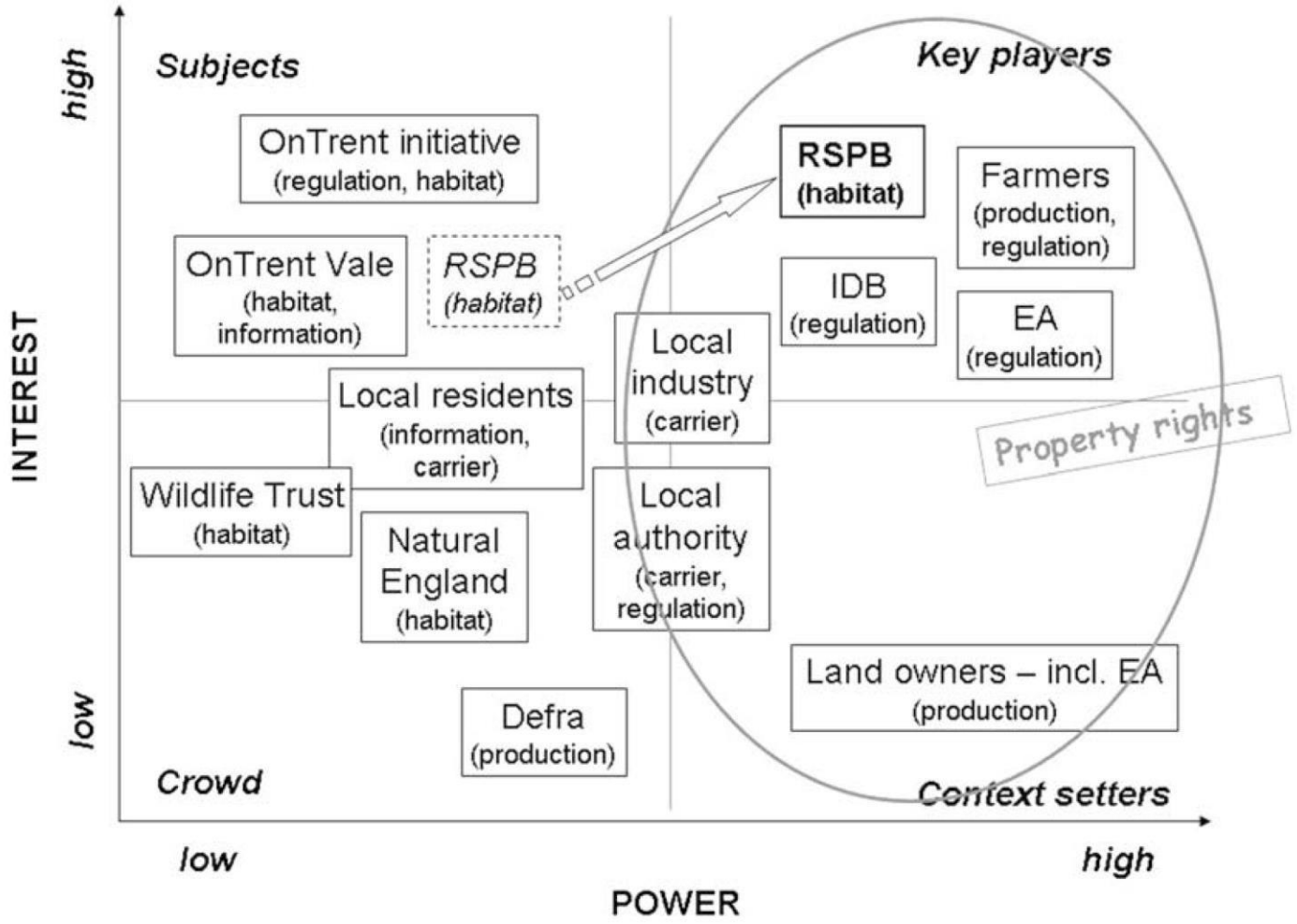


Fig. 4. Interest–influence matrix for Integrated Management of Floodplains RELU Project showing stakeholders with property rights.

Source: Reed et al. 2009

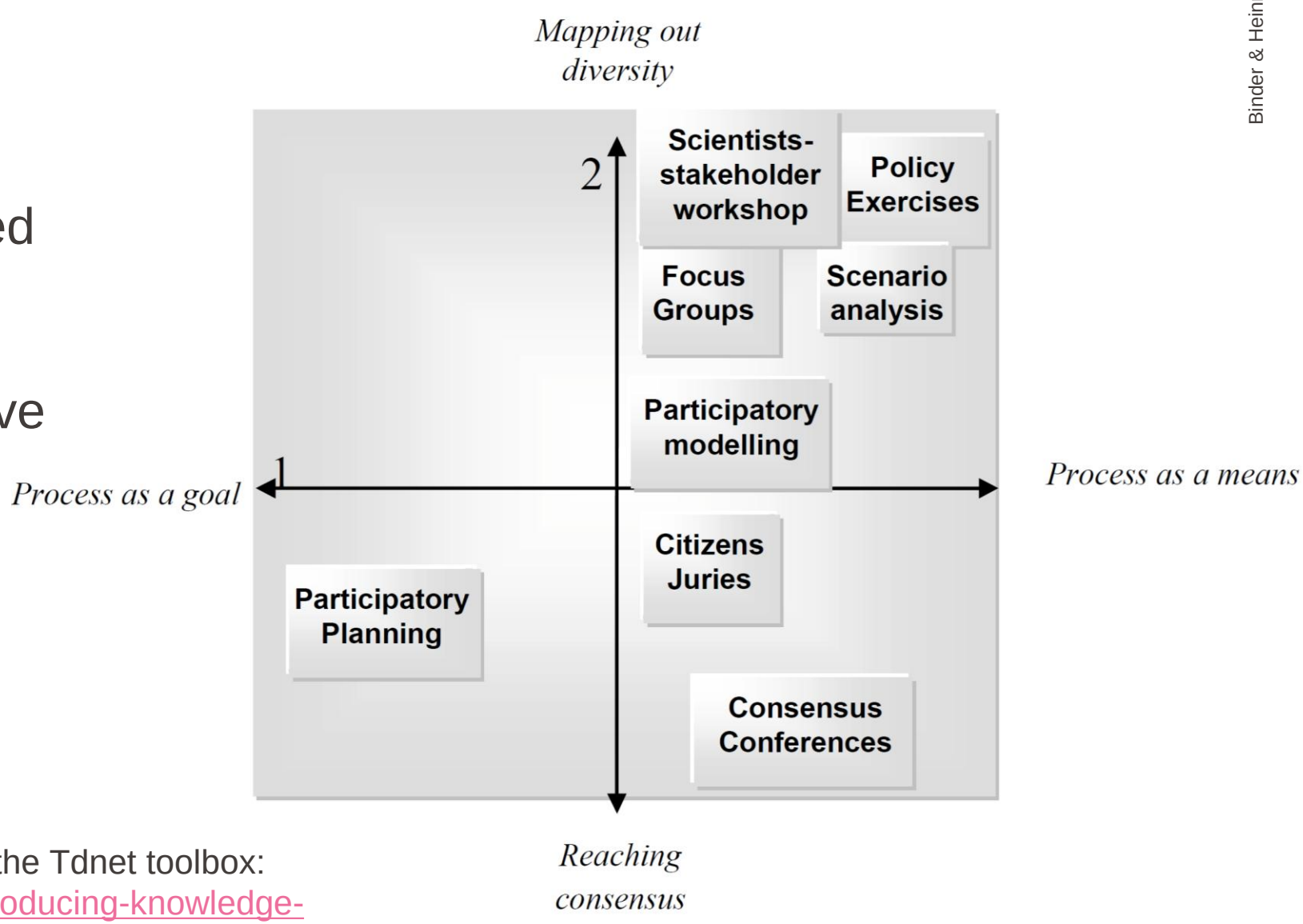
Who: selection approaches

Identifying stakeholders

Mapping key stakeholders: illustration 1 (Sustainable finance - Geneva)

How: participatory methods

- Goals can be reached through **different methods**
- Different methods give **different roles** to participants
- Several methods **can be combined**



→ You can find useful tools in the Tdnet toolbox: https://naturalsciences.ch/co-producing-knowledge-explained/methods/td-net_toolbox

Van Asselt Marjolein and Rijkens-Klomp 2002

Binder & Heinrich

What for: (Potential) Effects of participation on environmental decision-making

Sub-stantive

- more pertinent choices from the environmental/technical/economic point of view
- more socially acceptable choices

Proced-ural

- improvement of the quality of the informational basis of decision processes
- better conflict management
- increased legitimacy of the decision process
- Increase of the power of influence of less organized interests

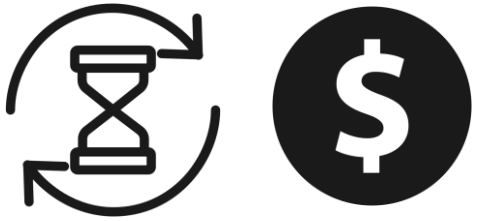
Context-ual

- better information and increased awareness of the wider public
- improvement of strategic capacity of decision-makers
- changes in the perception and conceptualization of the social context
- modification in traditional power relations and conflicts
- reinforcement of democratic practices
- Increased trust of actors in institutions

Binder & Heinrich

Van den Hove 2003

Challenges of participation



Perceived inefficiencies

Participation ‘fatigue’, lasting commitment and the ‘usual’ suspects

Lack of financial and time resources or skills (e.g. facilitation?)

Power imbalances

Privileged knowledge or value claims and unequal resources to engage

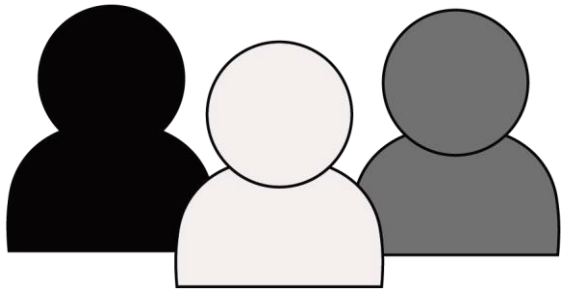
Tensions between different goals and incompatible expectations

Dysfunctional consensus and contrasting values

Opportunities of participation

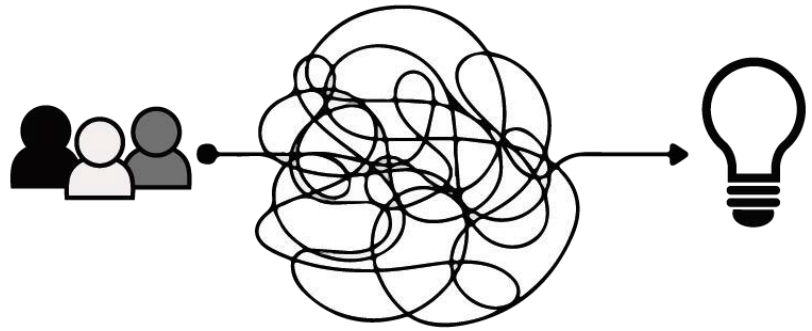
Empowerment

Participants feel ownership and responsibility towards the research



Diversity

The enrich the research with different knowledge and experiences



Tackling complexity

Different ideas produce more opportunities to tackle complex problems

Binder & Heinrich

Best practices

Participation processes need to be tailored to the context, but some principles of 'good' practice:

- Participation should be considered **as early as possible**
- Relevant **stakeholders** need to be **analysed** and **represented** systematically
- Clear **objectives** for the participatory process **need to be set**
- **Methods** should be **tailored to the decision-making context**, considering the objects, types of participants and appropriate level of engagement
- Highly skilled **facilitation** is essential
- Local and scientific knowledge **should be integrated**
- Participation should be institutionalized

Source: Reed 2008

Best practices

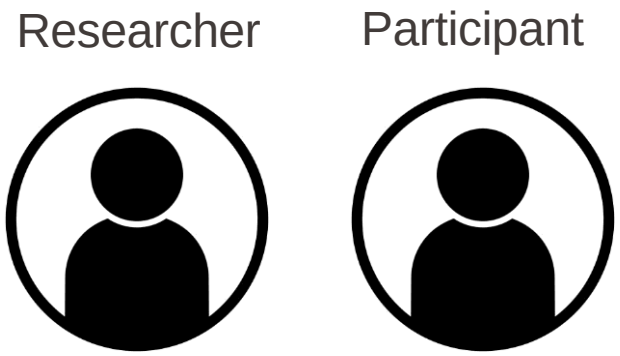
Check list in preparation of a participation activity

- Have a clear **understanding of what you expect to test**, validate or survey through a participation activity.
- Analyse the **power dynamics**, assess how any **imbalance can impact the result** of your activity and how this can be levelled up.
- Ensure your participants have **a clear understanding of why they are participating** in order to contribute effectively.
- Ensure your participants' **perception enables** them to participate effectively.
- Ensure participatory activities are **designed from your participants' perspective** (e.g., have your participants the ability to participate?)

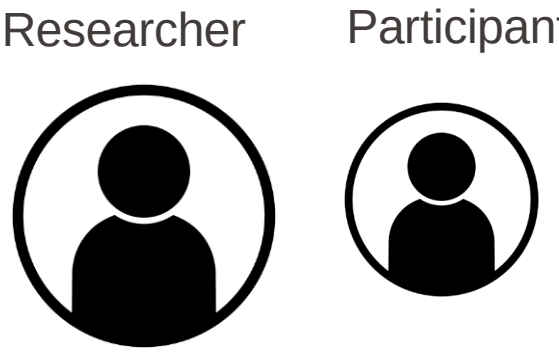
Best practices

Perceived Power Imbalances

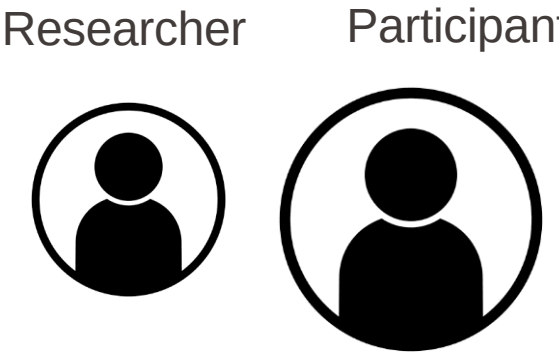
- The role that your participants perceive to have in an activity can influence any result (e.g., provide data, contribute to the design, etc.)
- Assessors and the participants' bias and assumption might invalidate your study.



Ideal perceived roles of participation



How a participant might feel when collaborating with assessors



How assessors might feel when engaging with a participant

Participation in Sustainability Assessment

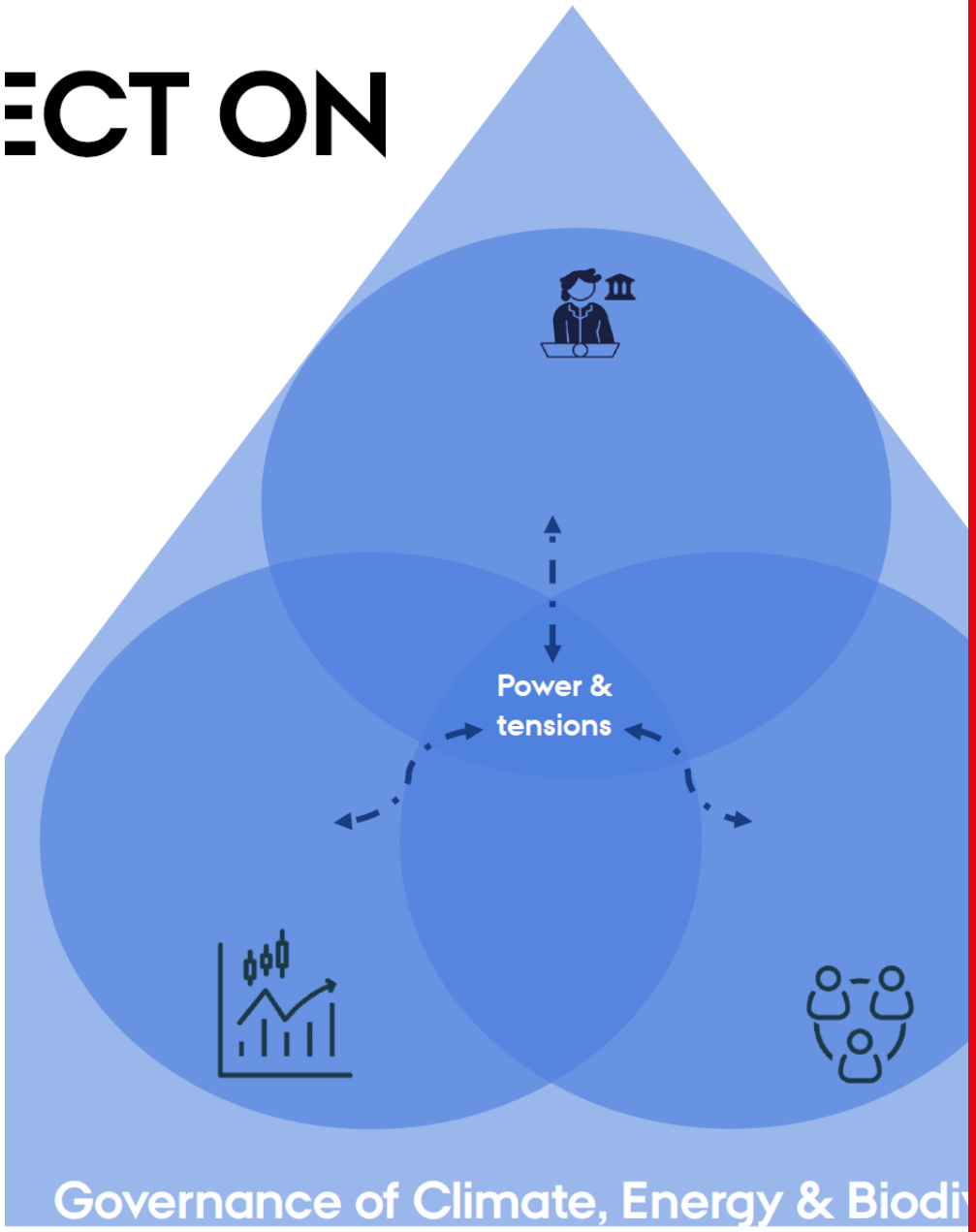
Wrap-up:

- **Iteration** of expert-based and participatory steps possible
- Participation throughout SA implies decisions **on who is involved,** and which kinds of **knowledge and values are included/excluded**
- Decisions affect SA **outcomes** and its **course of action**
- Need for **transparency** about decisions for in- and exclusion

Laboratory on Human-Environment Relations in Urban Systems

Reed et al. 2006

And what about power in participation?

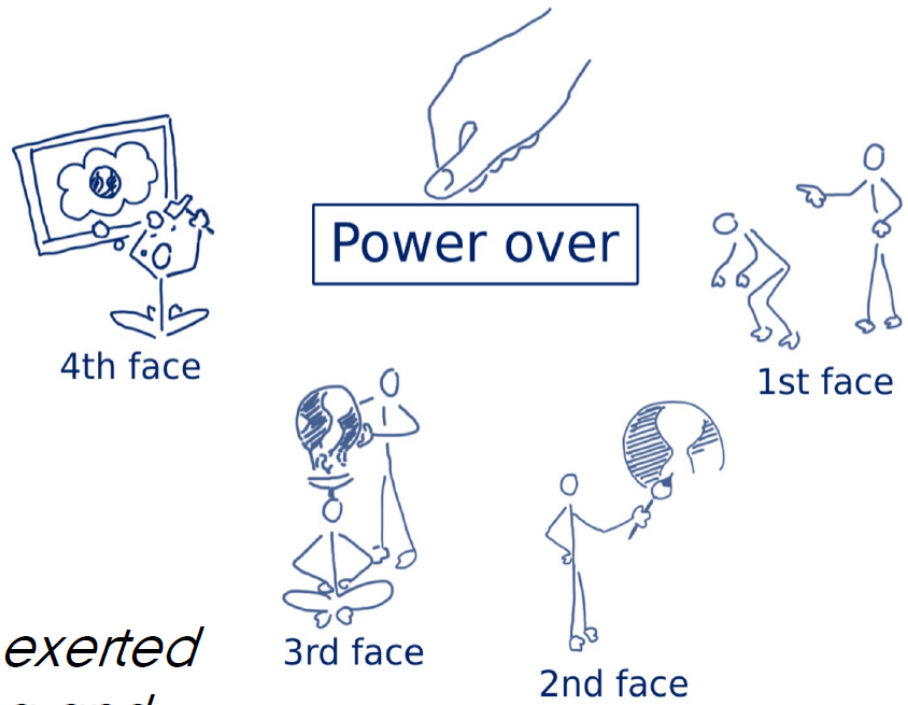


POWER OVER

INSTRUMENTAL

1st face: power as the capacity to directly influence actions of less powerful actors

4th face: power and knowledge are co-constitutive



DISCURSIVE

3rd face: power is exerted through influencing and shaping the formation of ideas, norms and intentions

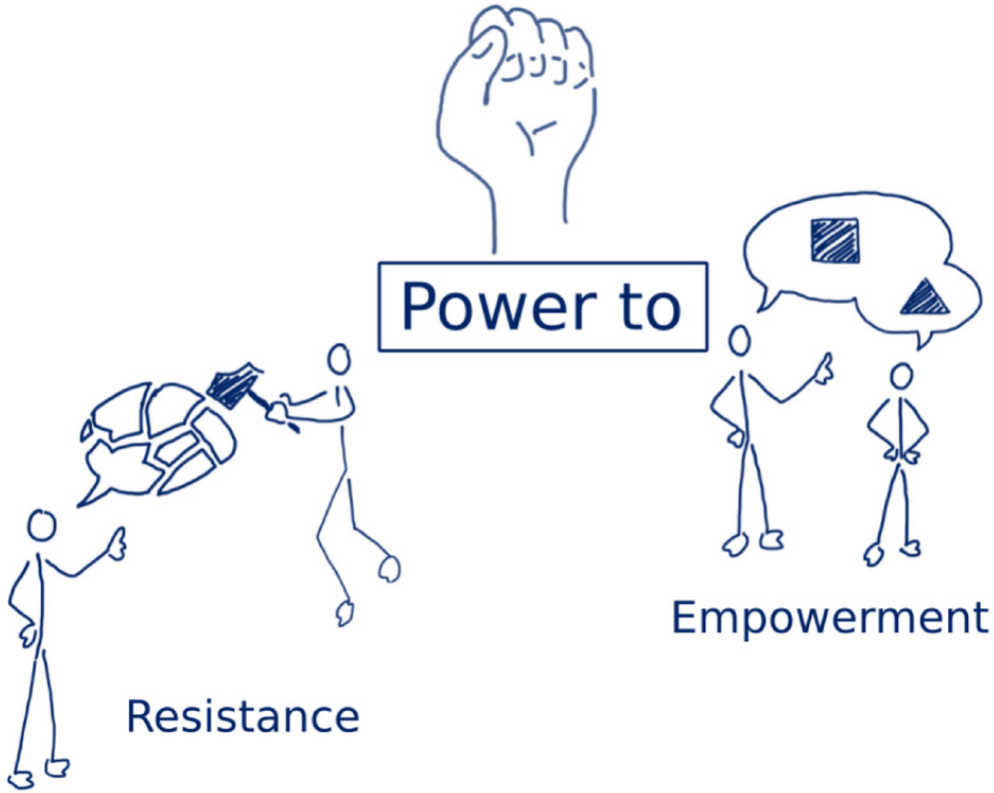
STRUCTURAL

2nd face: power means being able to set the agenda, rules and structures of interaction

Illustration: Fritz & Meinherz 2020b

POWER TO

- **individual capacity** of an actor to achieve their goals
- capacity of an individual actor to form and shape processes despite resistance (Haugaard, 2002)
- roughly synonymous to "empowerment" (Partzsch, 2015) – often focused on outcomes of a process or action
- positive connotation of power



Binder & Heinrich

Illustration: Fritz & Meinherz 2020b

POWER WITH

- **capacity to collectively** learn and act
- refers to *"the building of a common ground between different interests"* (Eyben et al., 2006)
- power is *"the human ability not just to act but to act in concert"* (Arendt, 1970, p. 44)
- productive forces of power, "win-win"

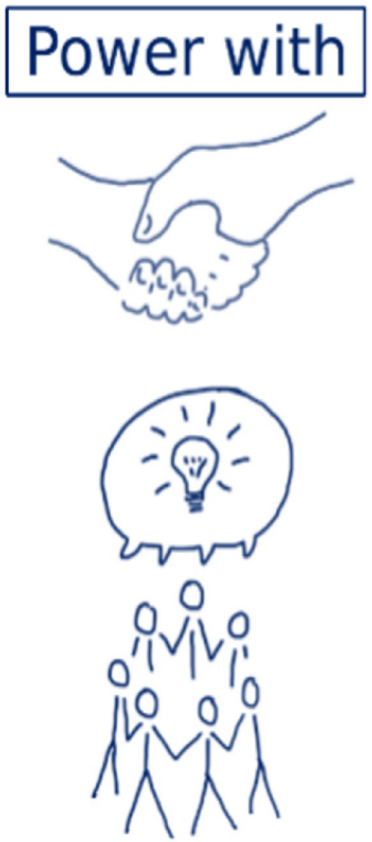
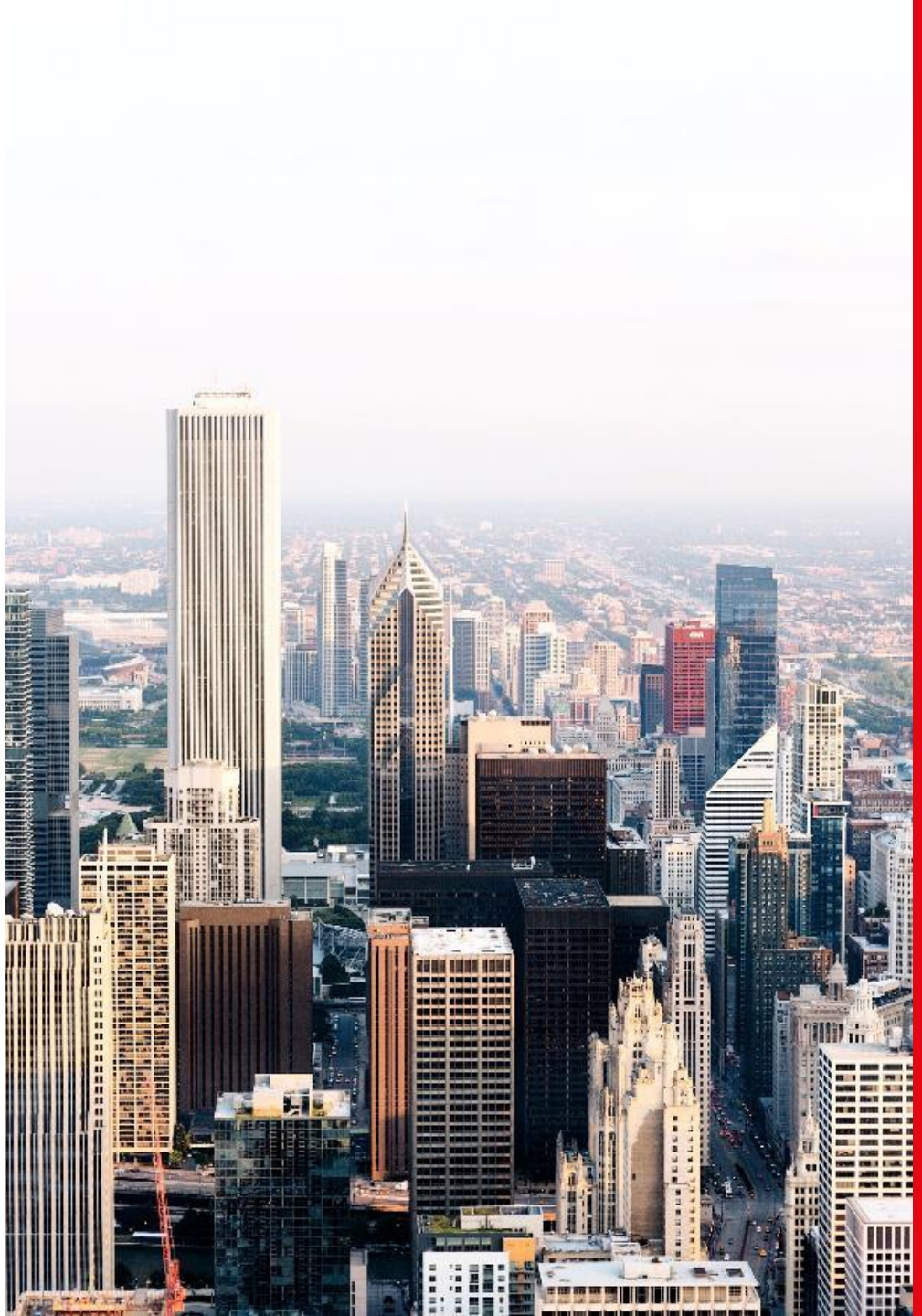


Illustration: Fritz & Meinherz 2020b



The future will be shaped by what we value, what we envision, and who surrounds us.

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Sustainability Assessment of Urban Systems

Laboratory on Human-Environment Relations in Urban Systems

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