

Intervention in the Social Acceptance of Energy Infrastructure: the role of compensation



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A photograph of a nuclear power plant situated in a rural landscape. Two large, white, hyperboloid cooling towers are prominent on the right, emitting thick white plumes of steam. To their left is a smaller, white, dome-shaped containment building. Further left, a tall, thin smokestack rises into the sky. The plant is surrounded by green fields and trees. In the foreground, there are several white houses with red-tiled roofs. The background shows rolling hills under a clear blue sky.

Social Acceptance of Energy Infrastructure

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Social acceptance of new infrastructure occurs when the welfare decreasing aspects of the project are balanced by welfare increasing aspects of the project, to leave each agent [...] better off and supportive of the project

“

Cohen et al., 2014



Social Acceptance

what is social acceptance?

- global problem, local solution
- public responses to energy infrastructure
- political – community – market
- variables
 - visual impact
 - landscape value
 - land-use
 - costs-benefits
 - decision-making





Social Acceptance

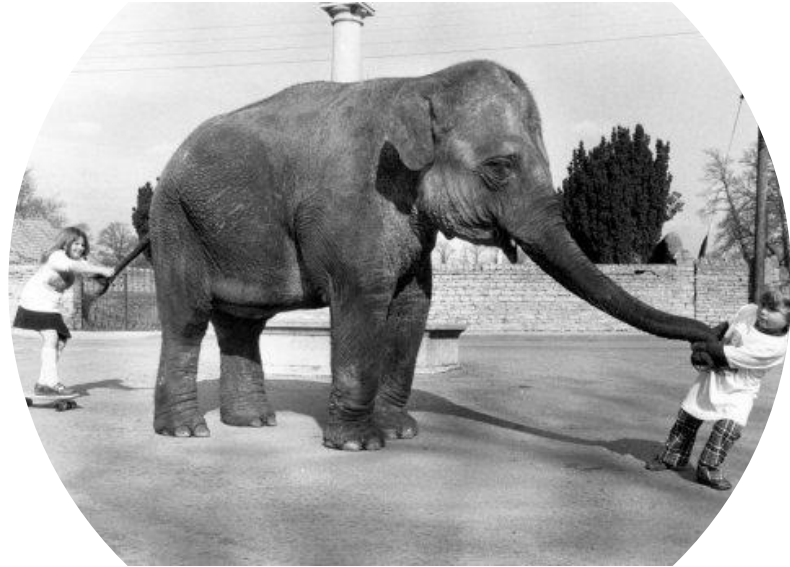
what are the limitations of social acceptance?

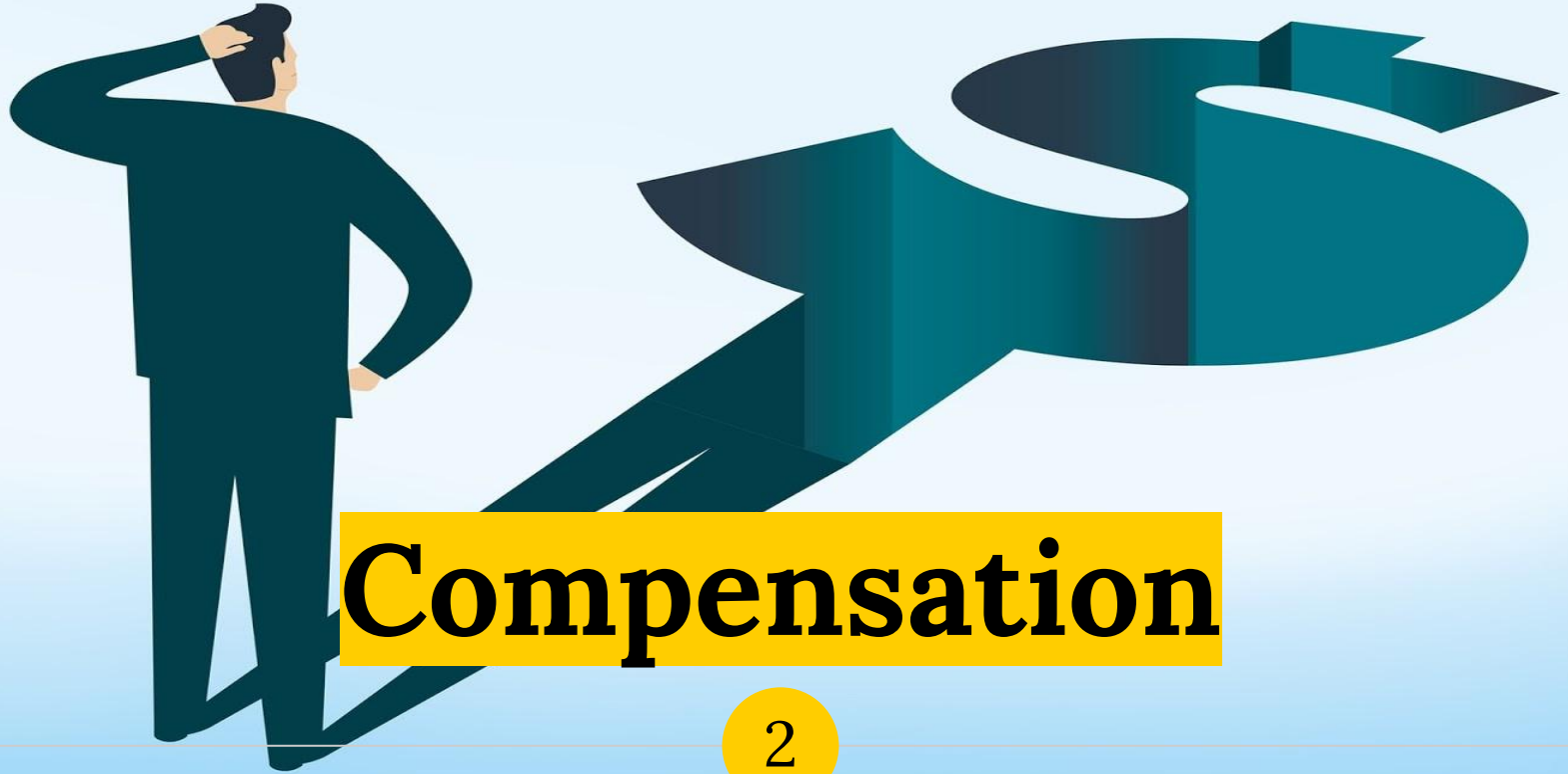
- how to explain connection between variables and public responses?
- frameworks
 - NIMBY
 - psychological explanation
 - place identity
 - discourse
 - political and economic models
- descriptive – explanatory – predictive?
- from passive to active

● Social Acceptance

intervention strategies

- institutional capacity to address legitimate concerns
- participation in planning process
- compensation





Compensation



Compensation

why is understanding compensation important?

- ◉ counterbalancing payment or action
- ◉ broad range of mechanisms and arrangements
- ◉ energy transition: proliferation of energy infrastructure = more potential conflicts
- ◉ public response of local communities crucial for planning success

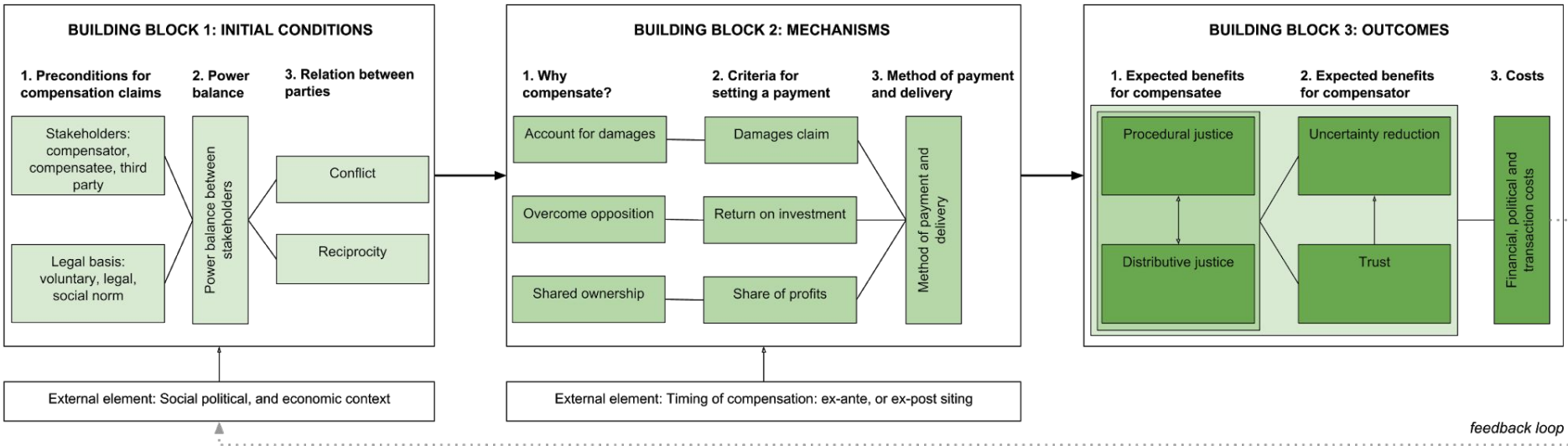
Research questions

1. Under what conditions are local communities, regulators and developers more willing to accept compensation measures?
2. How do different compensation mechanisms affect social acceptance?



Compensation across disciplines

Terminology	Disciplines	Compensation Mechanisms	Reason for Demanding Compensation	Expected Response to Compensation	Major Limitation
Linked Development	Urban Studies	Direct non-monetary	External funding for public services	Planning permission	Disconnected from need of affected community
Section 37 (Canada)	Urban Studies	Direct monetary Direct non-monetary	External funding for public services	Planning permission	Unequal distribution of benefits
CBA	Urban Studies	Indirect monetary Direct+indirect non-monetary	Funding for community needs	Social acceptance	Lack of representation of weaker groups
HCC	Infrastructure Planning	Direct+indirect monetary Direct+indirect non-monetary	Internalization of externalities	Planning permission Social acceptance	Long-term implementation, misrepresentation of community
Community Benefits	Energy Infra. Planning	Direct monetary Indirect non-monetary	Internalization of externalities	Social acceptance	Power imbalances between developer and community
Land Value Capture	Transportation Studies	Indirect monetary	Internalization of future externalities	Planning permission	Inaccurate estimation of land value rise
Mitigation Banking	Ecology	Indirect monetary	Offset of ecological impacts	Planning permission	Monetize ecological losses



Typology of Compensation Trajectories

BUILDING BLOCK 1: INITIAL CONDITIONS

1. Preconditions for compensation claims

Stakeholders:
compensator,
compensatee, third
party

Legal basis:
voluntary, legal,
social norm

2. Power balance

Power balance between
stakeholders

3. Relation between parties

Conflict

Reciprocity

External element: Social political, and economic context

BUILDING

1. Preconditions for compensation claim:

Stakeholders:
compensator,
compensatee, third
party

Legal basis: voluntary,
legal, social norm

External element

BUILDING BLOCK 3: OUTCOMES

1. Expected benefits for compensatee

Procedural justice
↕
Distributive justice

2. Expected benefits for compensator

Uncertainty reduction
↑
Trust

3. Costs

Financial, political and transaction costs

feedback loop

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External element: Social political, etc.

BUILDING BLOCK 2: MECHANISMS

1. Why compensate?

Account for damages

Overcome opposition

Shared ownership

2. Criteria for setting a payment

Damages claim

Return on investment

Share of profits

3. Method of payment and delivery

Method of payment and
delivery

External element: Timing of compensation: ex-ante, or ex-post siting

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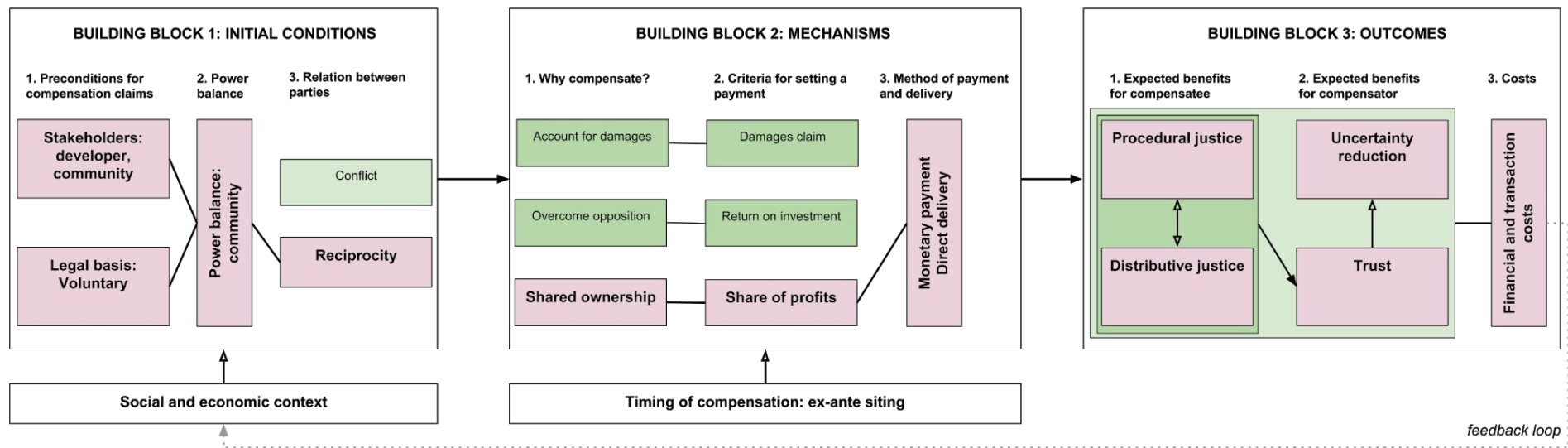
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costs

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Hypothesis: High Compensation, High Social Acceptance Trajectory

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community

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Reciprocity

Social and economic context

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Monetary payment
Direct delivery

Timing of compensation: ex-ante siting

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Social and economic context

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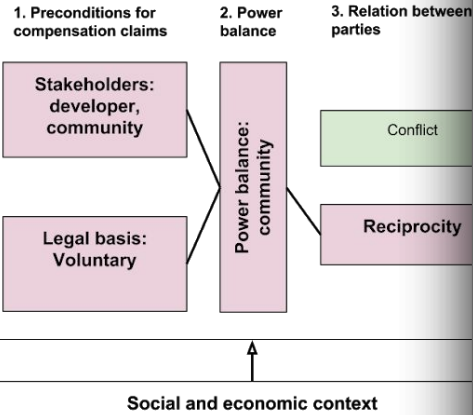
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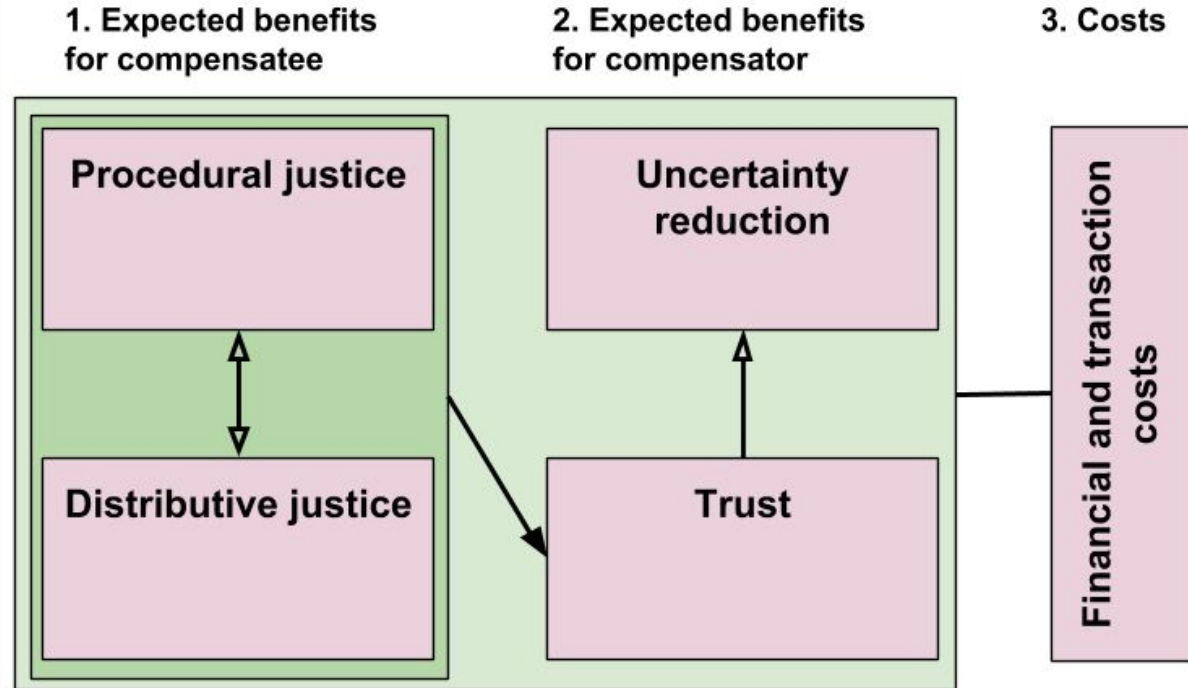
Financial and transaction costs

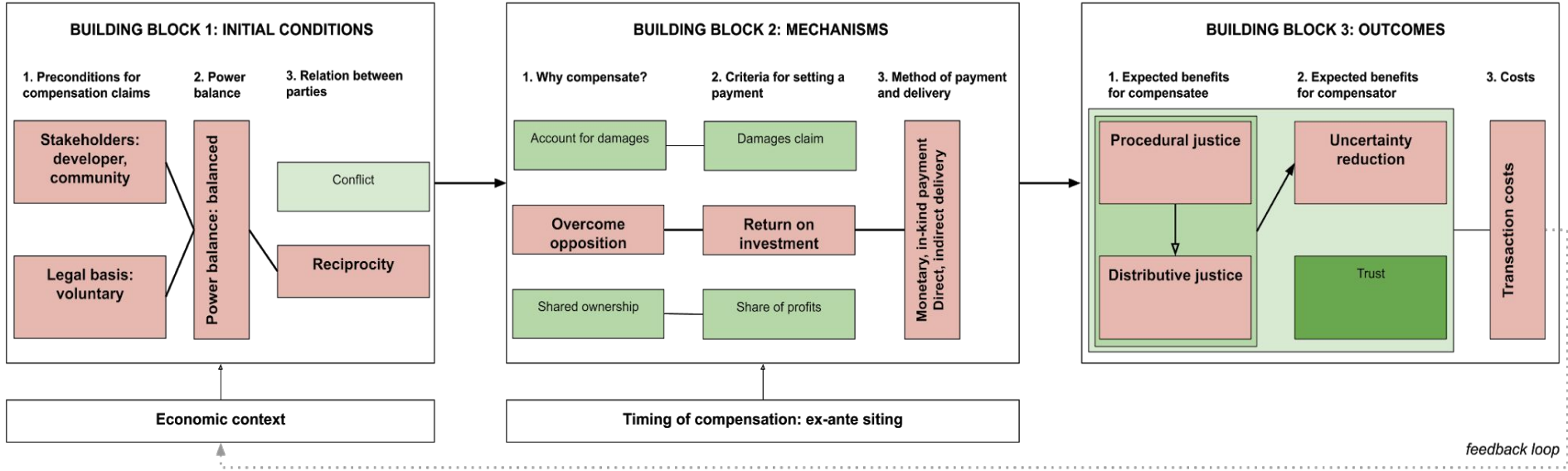
feedback loop

BUILDING BLOCK 1: INITIAL CONDITIONS



BUILDING BLOCK 3: OUTCOMES





Hypothesis: Low Compensation, High Social Acceptance Trajectory

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Economic context

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Monetary, in-kind payment
Direct, indirect delivery

Timing of compensation: ex-ante siting

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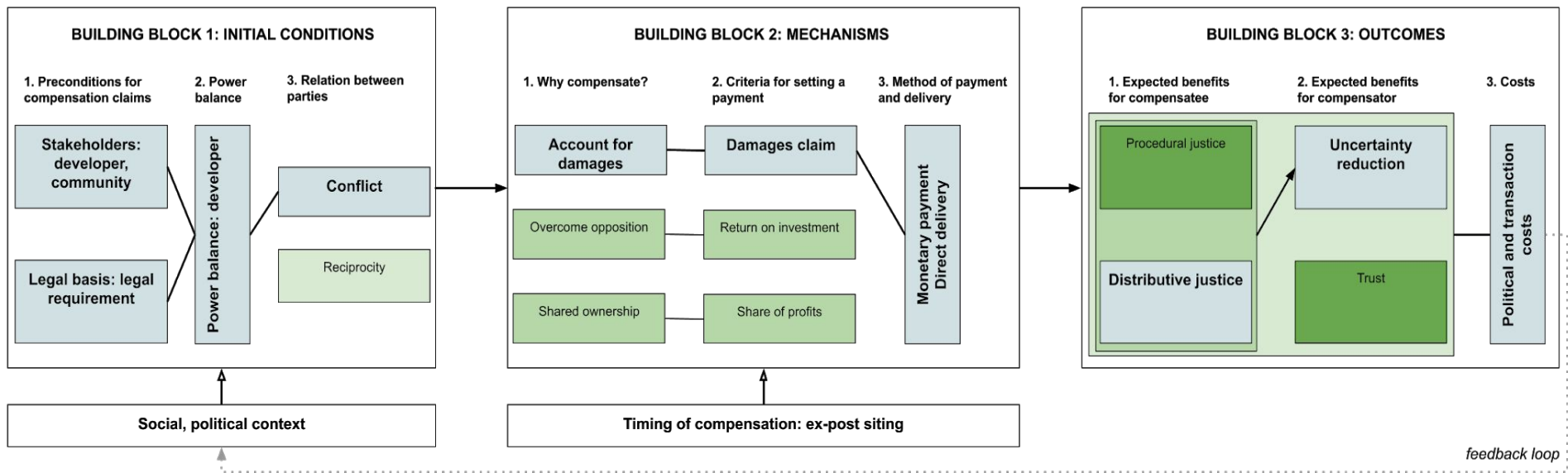
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Hypothesis: Low Compensation, Low Social Acceptance Trajectory

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Thanks!

Any questions ?

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