

Social contagion as a means to transitions

Design for Social contagion

Framework + Toolkit

The 'Design for social contagion' framework and toolkit help municipalities to devise persuasive and tactical interventions that can stimulate social contagion of a positive attitude towards the energy transition amongst residents. These help in overcoming apprehensions and barriers that lead to procrastination and inaction amongst residents.

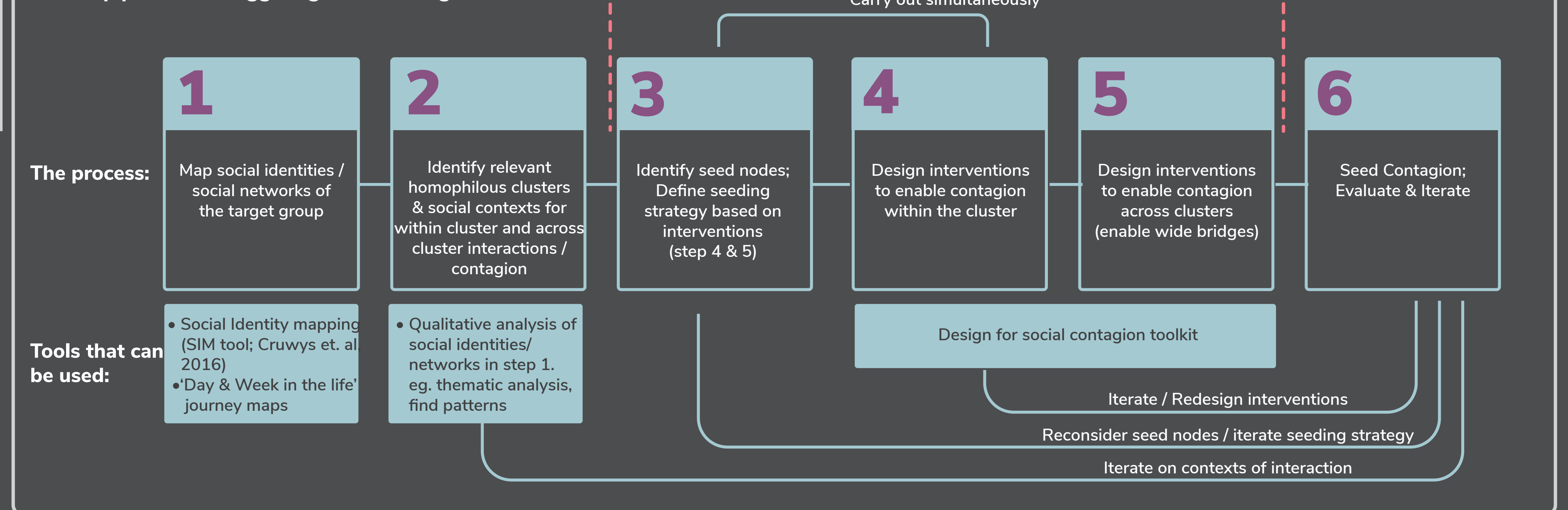
Design for Social contagion framework

To ensure positive outcomes and a far reach, the social influence and social contagion process needs to be well-curated and designed for. The 'Design for social contagion framework' outlines actionable steps to design the contagion process. It includes 3 key elements that need to be thought off while shaping the contagion, and a 6-step process that helps to visualise (and design) how the contagion will unfold in a particular context. The framework builds on complex contagion theory.

(Define the) Elements of a contagion



6-Step process of triggering social contagion



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Design for Social contagion toolkit

The 'Design for social contagion' toolkit (presented subsequently) helps in defining the 'Strategy element (E3)' of the framework and aids in designing the interventions for contagion (Step 4 & 5 of the process). The interventions can be designed for both, the attitude formation phase and the decision-making phase. In the attitude formation phase, several small interventions need to be designed, which engage the users over a longer time and build commitment; overcoming the apprehensions and other barriers to adoption. In the decision-making phase, interventions can be designed to build social pressure, prompting positive decisions.

The toolkit consists of 3 elements :

- 1) A deck of inspiration cards.
- 2) A set of 5 design canvases (that guide the design process); and
- 3) A handbook (that outlines how to use the cards and canvases to design interventions)



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[Download the toolkit](#)

This toolkit and framework are developed by Jesal Shah as a part of her Strategic product design master thesis 'Social contagion as a means to transitions' at Delft University of Technology, under the guidance of Dr. Rebecca Price, Dr. ir. Jotte de Koning and Mr. Jacco Kwakman. It was developed using Reyeroord (a pilot neighbourhood in Rotterdam) as a case study, for Gemeente Rotterdam.

[Contact the designer](#)

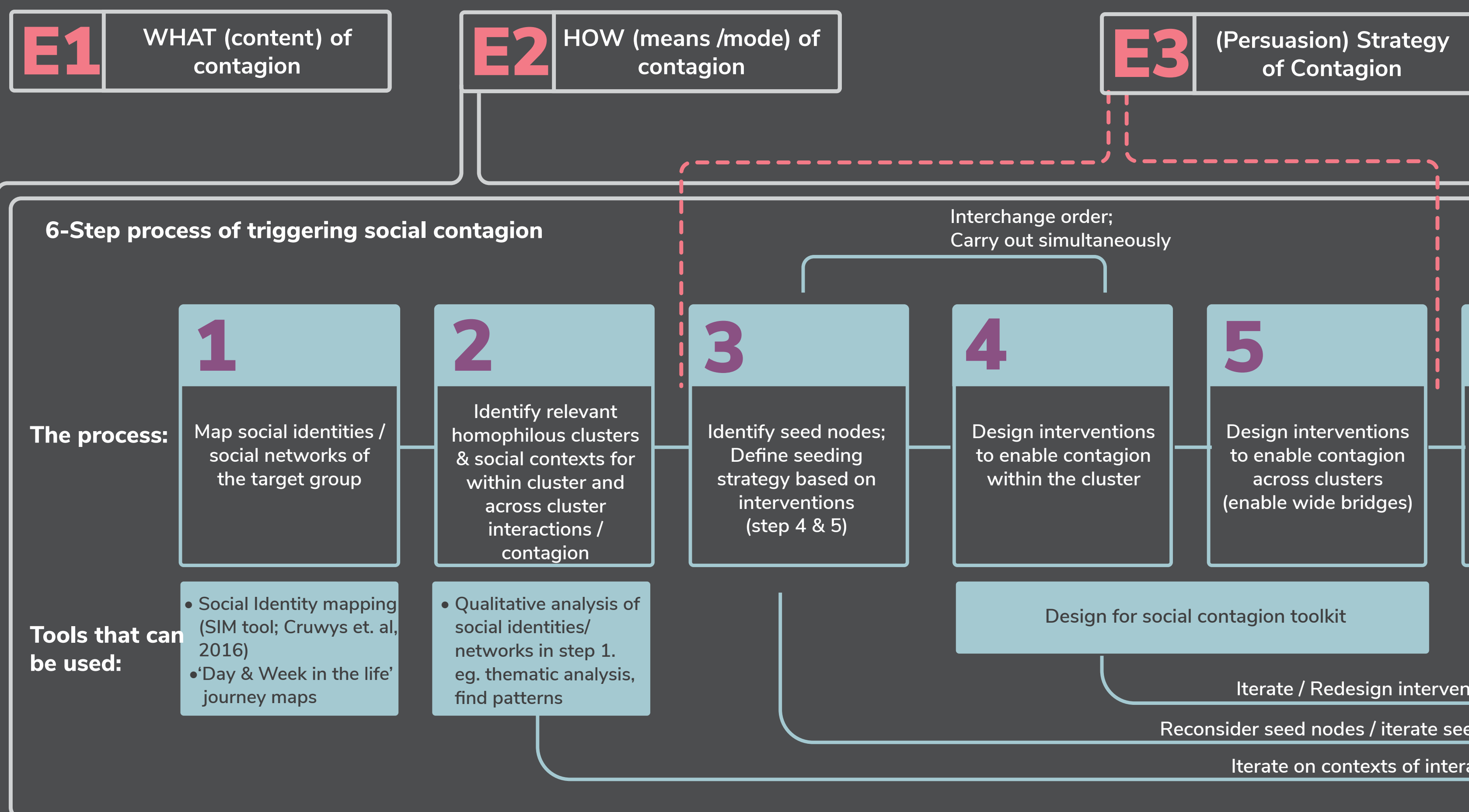
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Design for Social contagion framework

(Define the) Elements of a contagion



E1 What

This includes defining the content or the target behaviour that needs to be spread amongst a population. In the case of gas discontinuation in the built environment, the WHAT can be the contagion of positive attitudes or decision towards shifting to greener energy alternatives. It can also be determined by understanding the residents' motivations and apprehensions towards the gas discontinuation.

E2 How

The HOW refers to the means / mode of contagion. This includes visualising and designing the network dynamics of the contagion – how the contagion will unfold, who will initiate it, how will it spread, where will the contagion take place. The 6-step process outlined subsequently helps in defining this element of the contagion.

E3 Strategy

While the HOW component refers to identifying the who's and visualizing the process of how the contagion will unfold, the strategy component involves devising persuasive and tactical ways of inducing the behaviour. This component goes hand-in-hand with step 3, 4 and 5 of the 6-step process described. The inspiration cards in this 'Design for social contagion toolkit' help to define this element.

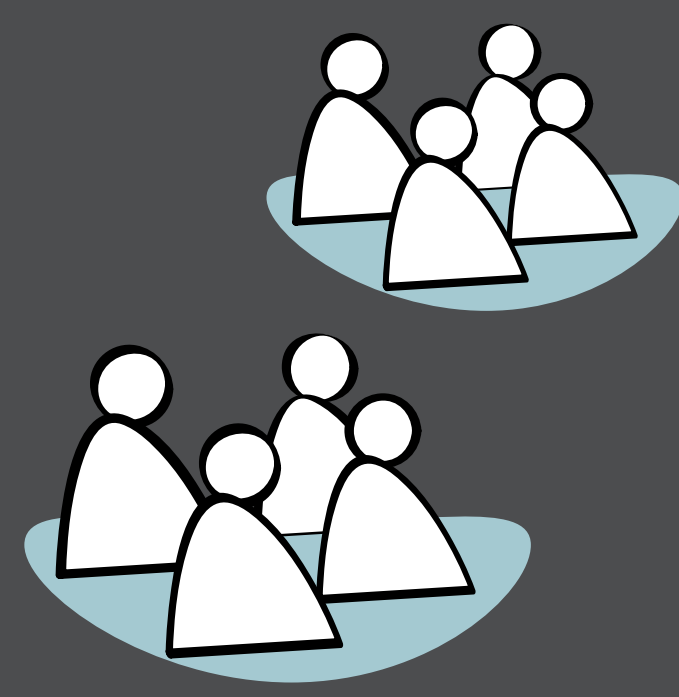
1 Map social identities & networks of the target group

In order to understand how contagion can be seeded, the first step is to understand people's social networks; which can be defined using their social identities. Use tools such as Social Identity Mapping (SIM tool; Cruwys et. al, 2016), Ethnographic Social network mapping (Trotter II, 1999) or methods like Day-in-the-life or Week-in-the-life mapping to identify the target group's social identities and the social networks these engender.



2 Identify relevant homophilous clusters & social contexts

Analyse (qualitatively) the social identities and networks derived in step 1 to define relevant homophilous clusters (groups where individuals have similar characteristics, e.g. cultural background, physical appearance, tastes etc.). Based on the clusters identify two types of social contexts where interactions to spread the behaviour can take place-1) which enable spread of behaviour within each cluster; 2) which enable spread of behaviour across different clusters.



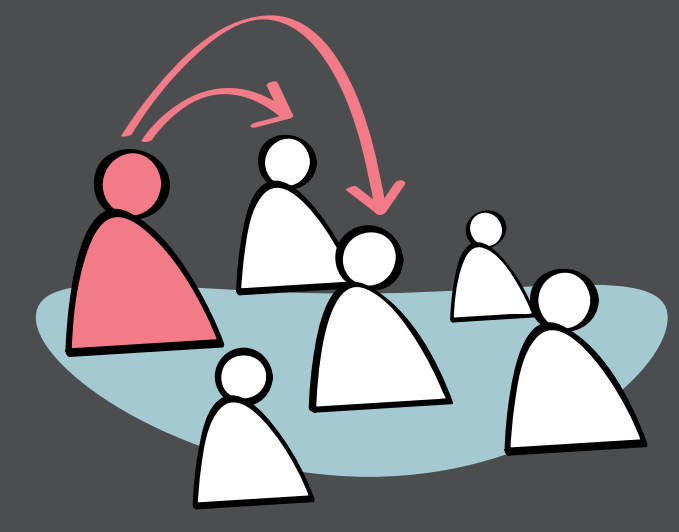
3 Identify seed nodes; Define seeding strategy

Having identified the social networks and contexts of contagion, the next step is to identify seed nodes (people who can initiate the contagion; within and across clusters). These can be selected based on the intent & content of contagion e.g., most influential people, people with biggest networks, people already activated, entrepreneurial & active people etc. This step goes hand-in-hand with steps 4 & 5. Define seeding strategy. Use clustered seeding.



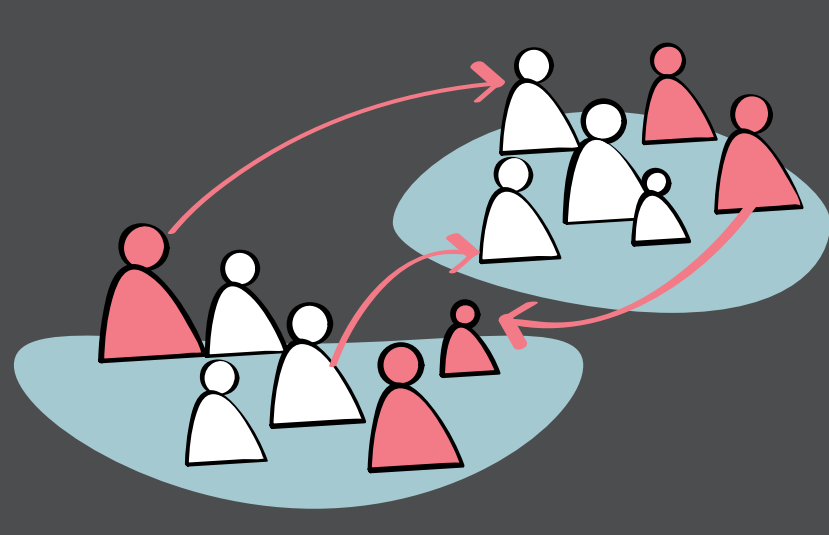
4 Design interventions to enable contagion within the clusters

Use this toolkit to design (facilitate) interactions (in the identified social contexts) between people within a cluster. (Note: people need reinforcement from multiple sources before they adopt the behaviour; design interventions accordingly).



5 Design interventions to enable contagion across clusters

Use this toolkit to design (facilitate) interactions (in the identified social contexts) between people from different clusters. For effective spread of the behaviour ensure there are wide bridges (maximum number of overlapping ties between the clusters).



6 Seed the contagion; Evaluate & Iterate

After seeding the contagion, evaluate the spread and effect of the interventions. If required, iterate on the interventions, seed the intervention in different social contexts or use a different seeding strategy.



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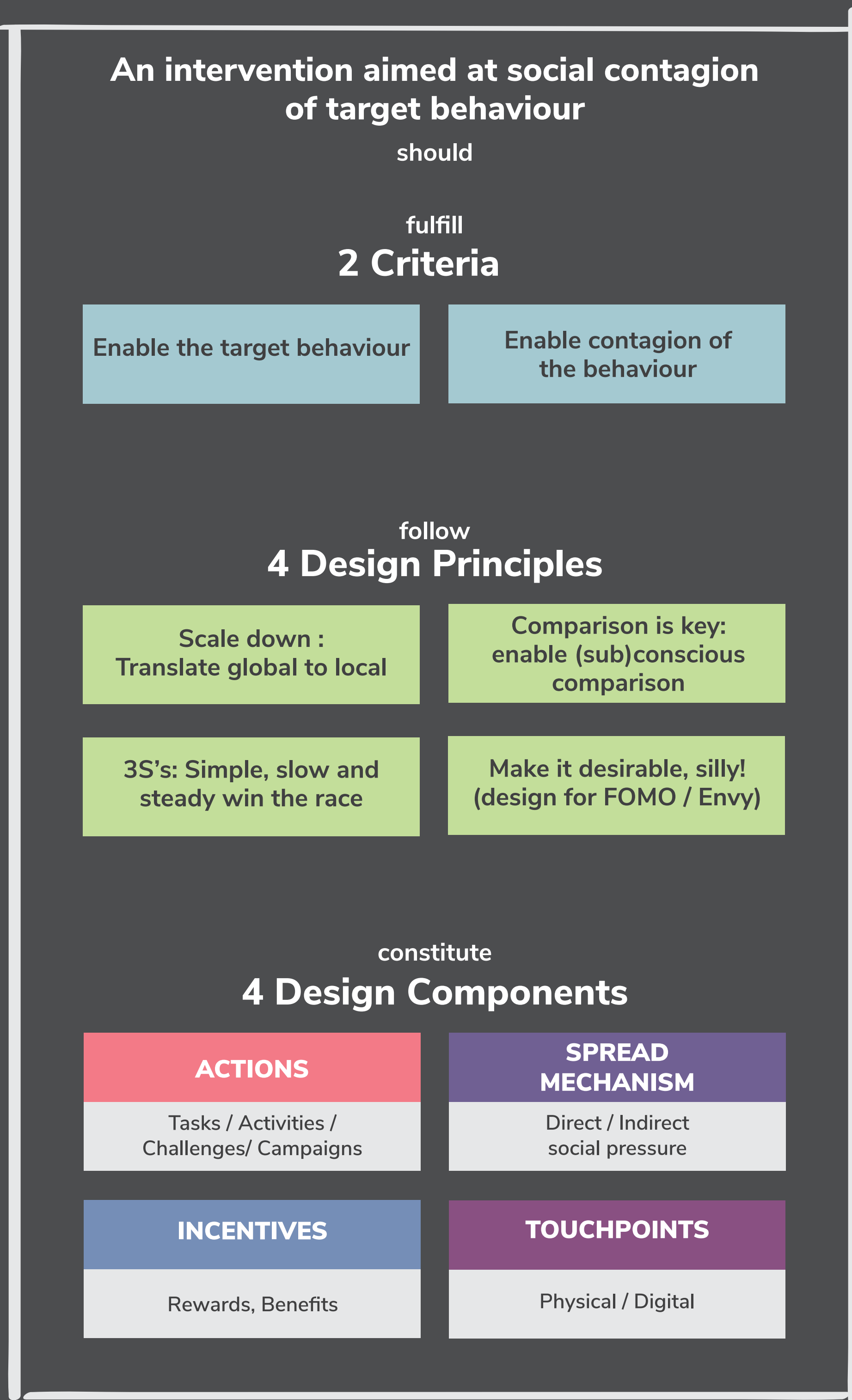
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Design for Social contagion toolkit



Inspiration cards



Anatomy of an intervention

The three components of the toolkit help you design interventions to enable social contagion of the target behaviour. Each intervention should:

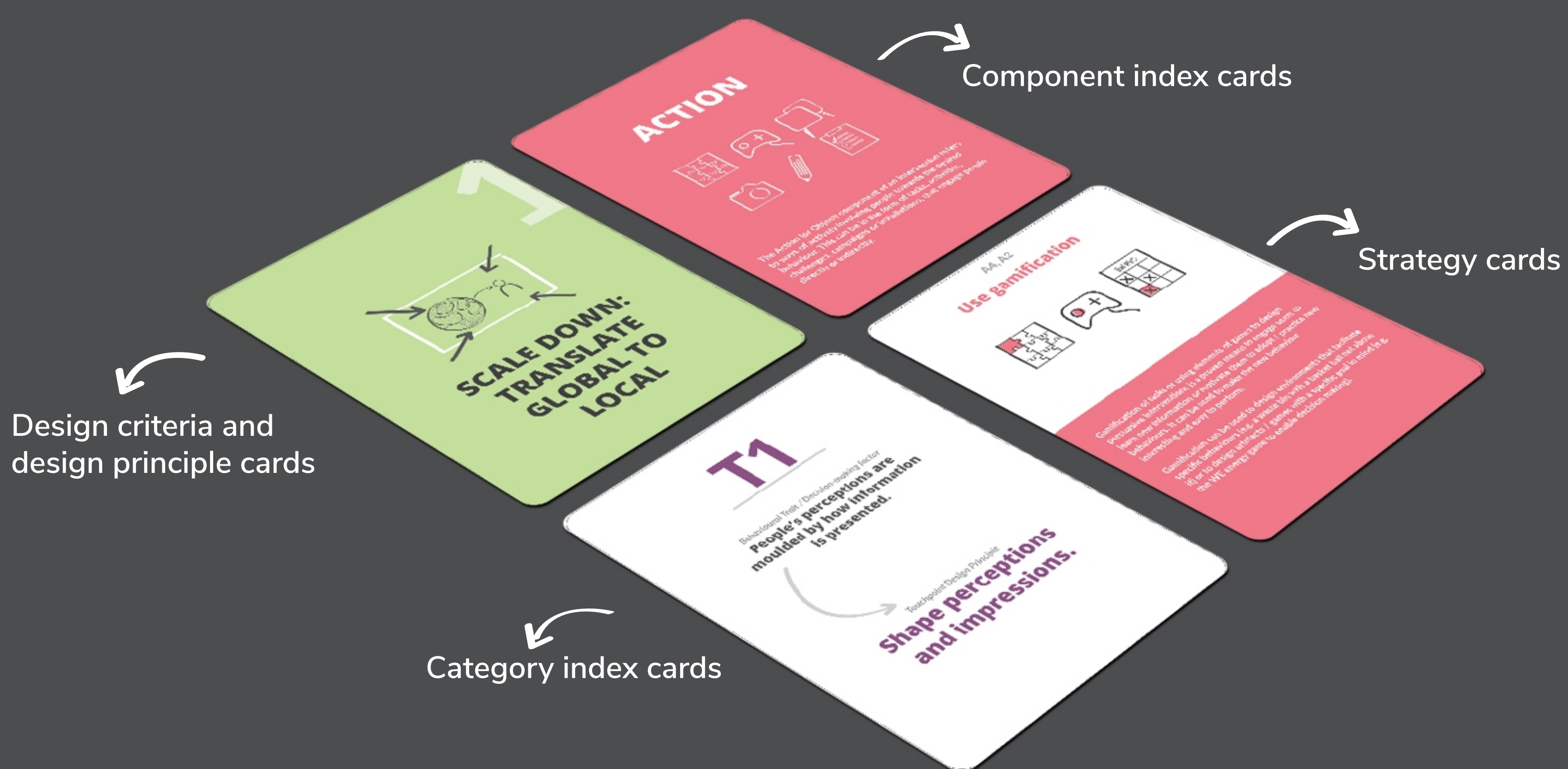
- Fulfill 2 criteria
- Follow 4 design principles
- Constitute 4 design components

These form the anatomy of intervention. Explanation of these design criteria, design principles and design components is captured in the inspiration cards along with examples of persuasive strategies that can be used to design these components (Action, Spread Mechanism, Touchpoints and Incentives).

Types of Inspiration cards

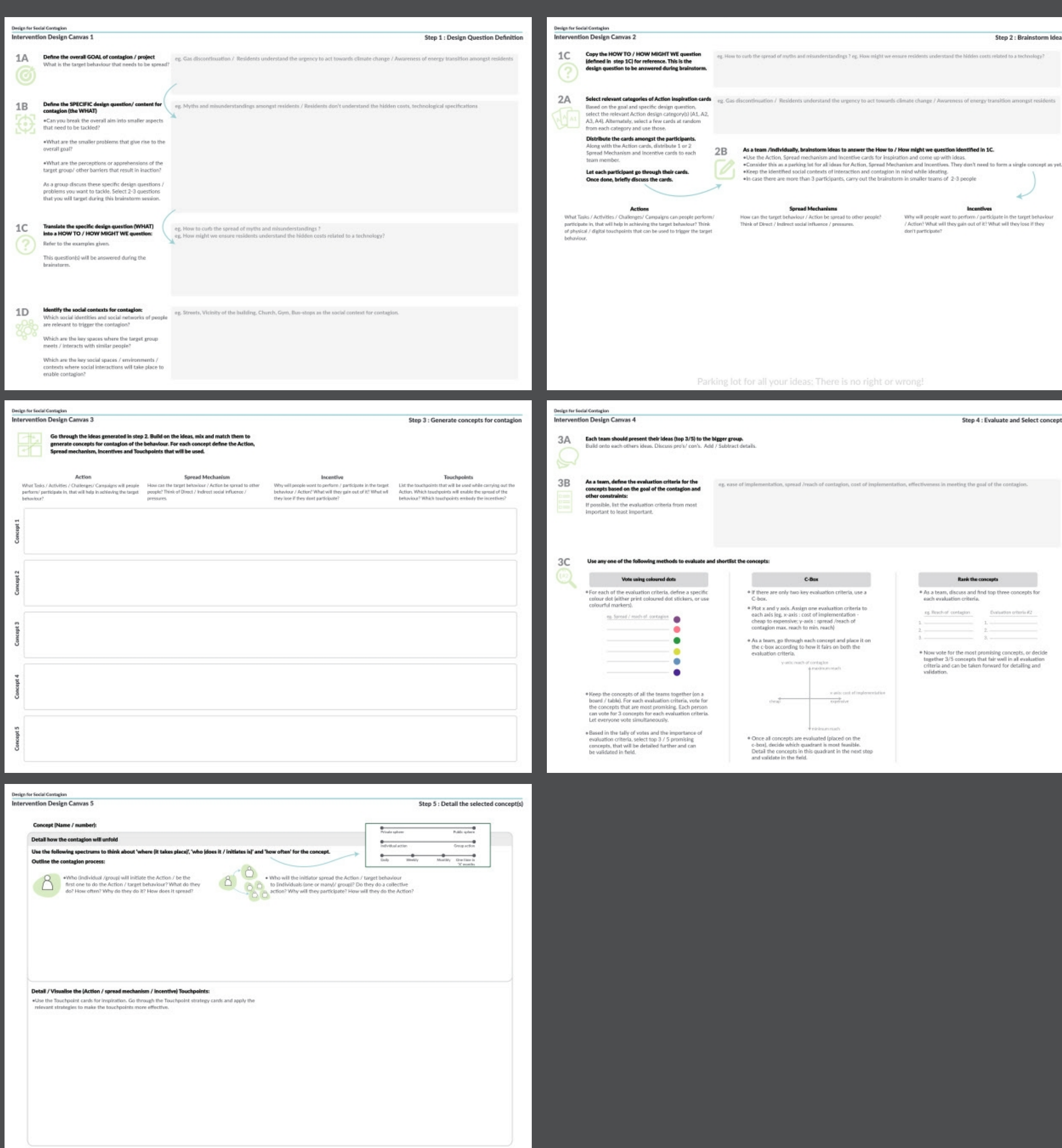
There are 4 types of inspiration cards in the deck:

- 1) Design criteria and design principle cards
Explain each of the design criteria and design principle
- 2) Component index cards
Explain each of the design component.
- 3) Category Index cards
The persuasive strategies that can be used to design a particular design component are categorised based on key component design principles. Each category has an index card which outlines the component design principle (A1, A2, T1, T2 etc.) and the strategies that fall under it.
- 4) Strategy cards
Explain different persuasive strategies that can be used to design the components.



[Download the cards](#)

Design canvases



A set of 5 design canvases guide the process of designing interventions during a creative session. Each canvas covers one step of the design process, namely:

- 1) Define design question
- 2) Brainstorm ideas
- 3) Generate concepts for contagion
- 4) Evaluate and select concepts
- 5) Detail the selected concepts

A step-by-step explanation of the canvases, and how to use these along with the inspiration cards is provided in the handbook.

[Download the canvases](#)

[Download the handbook](#)

[Download the full toolkit](#)

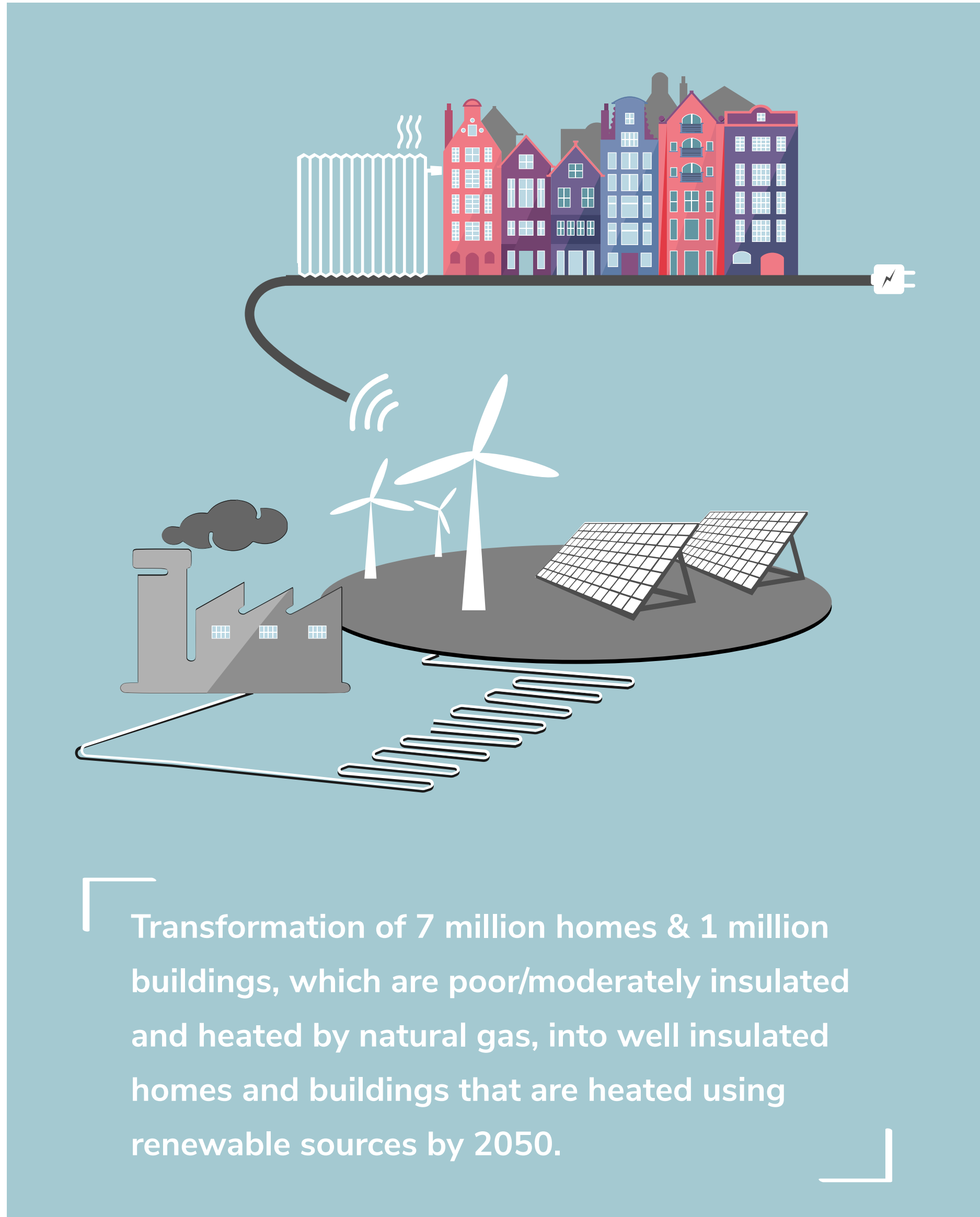
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The energy transition

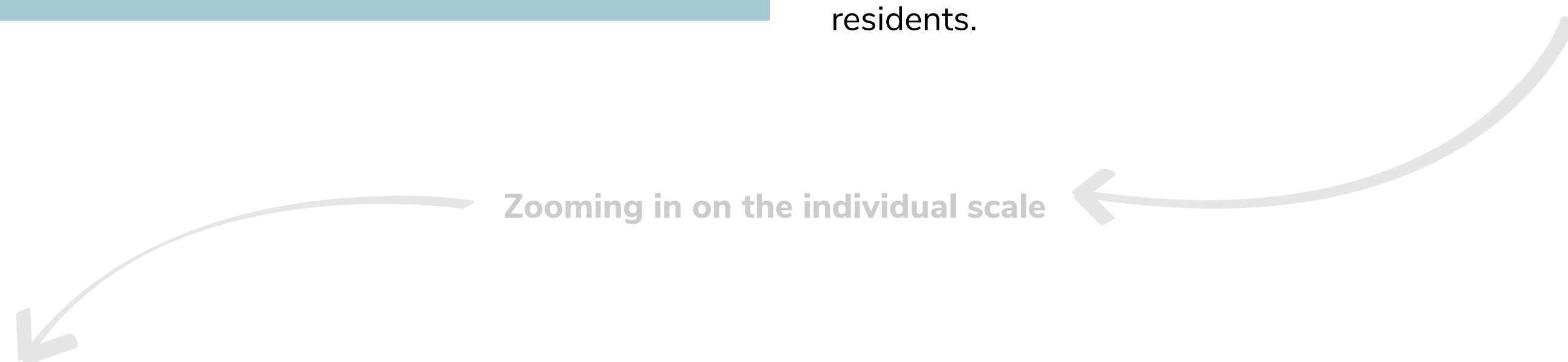


In the wake of global warming and the earthquakes in Groningen, the government of Netherlands has set the goal to reduce greenhouse gas emissions by 49% in 2030 compared to 1990 levels. An energy transition in the built environment is identified as one of the means to achieve this goal. The vision includes the transformation of 7 million homes & 1 million buildings, which are moderately insulated and heated by natural gas, into well insulated buildings that are heated using renewable sources.

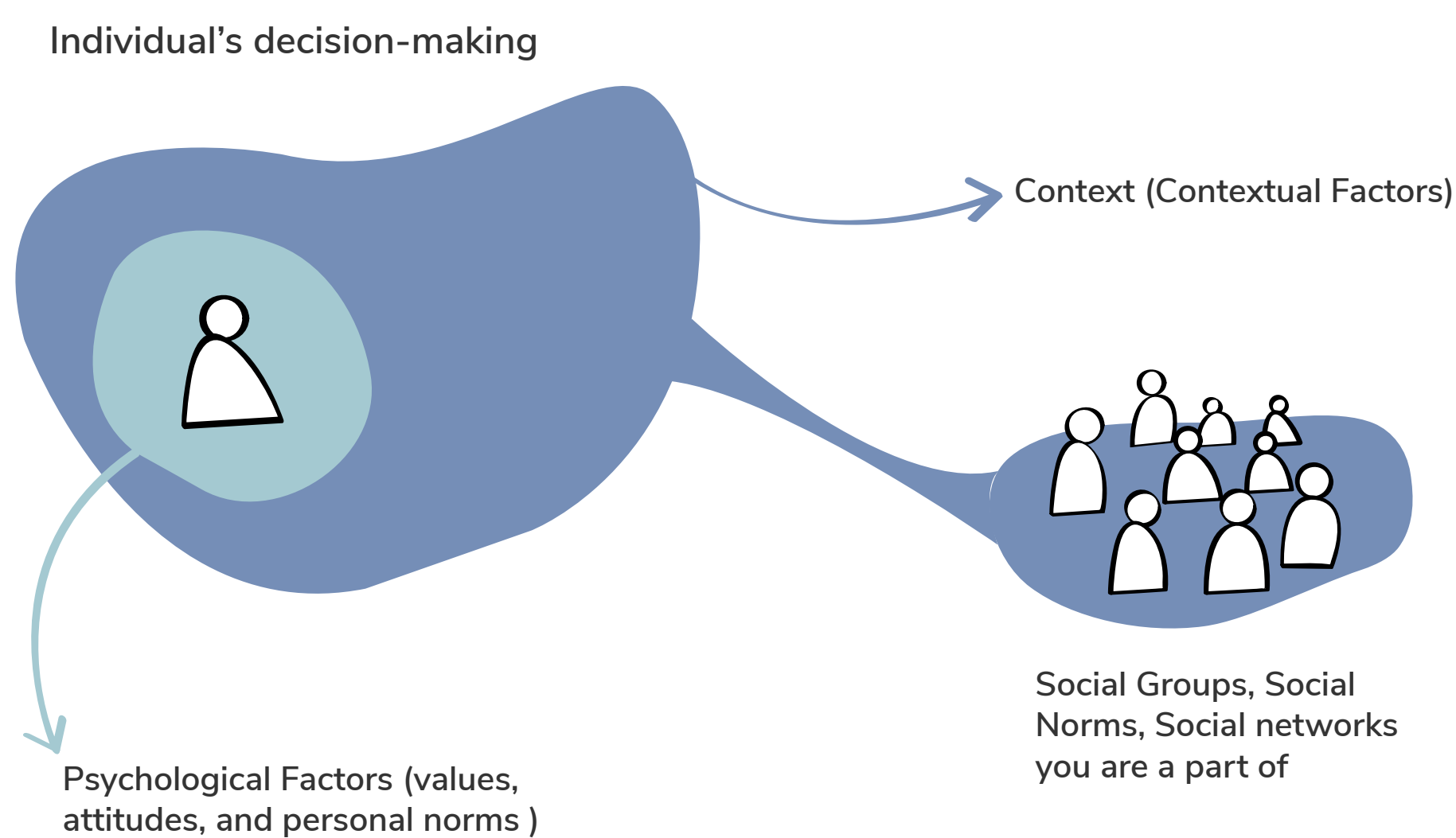
Since alternate technologies are already available in the market, the government plans to adopt (to begin with) pricing and subsidising measures to enable the transformation – (financial) incentivisation being the key strategy. The challenge here is that large scale adoption is a necessary condition to regulate the prices, even if the technology is economically viable. Moreover, the provision of subsidies & funding, and the presence of technological alternatives does not imply that households will actively opt for gas discontinuation.

At the micro scale, the transition involves (financial) investments in terms of infrastructural changes, time and energy by the residents in order to upgrade the wiring, insulation as well as heating sources. The return on this investment is not visible in the immediate future and poses uncertainty in financial savings in the long-term. It also entails short-term inconveniences in routines. Thus, even if residents have a positive attitude towards the energy transition, given this perception of inconvenience and uncertainty, it does not reflect in their choices towards transitioning away from natural gas.

Hence, the transition is predominantly a social challenge (a societal transition) wherein participation of a critical mass is a pre-requisite to achieve the set goals. It is clear that solely top-down (policy-driven) solutions are not enough to motivate the critical mass. Bottom-up, socially-driven interventions are required to activate residents.



Social influence on an individual's decision-making



Several theories within the domains of psychology, sociology and anthropology highlight that an individual's actions, behaviour and decisions are influenced by contextual factors, especially the social groups they belong to, and the social norms that these ensue. These argue that individual decisions are 'constructed' or determined by social and technological systems wherein needs, attitudes, and expectations are not individual in nature but are embedded in ongoing relations and networks of relations.

People are strongly influenced by the (in)action of others, which implies that one would act only if several others have chosen to act. People have the tendency to imitate behaviors of others who are either in their vicinity (belong to similar social groups), or whom they aspire to be. Here, one's social identity, social networks and the social norms these ensue are the building blocks of social influence, and constitute an important leverage point in shaping people's behaviours. Thus, social influence (social contagion) is a means of scaling up the desirability, acceptance and adoption of greener energy alternatives.

This project explores and builds upon this social construction of an individual's decision-making process and its building blocks. It highlights how social influence processes, and the phenomenon of social contagion can be used to activate citizens towards the energy transition.

[View resources to see how to apply social contagion >](#)