TRANSFORM

LOCAL TRANSFORMATION TOWARDS A LOW EMISSION SOCIETY

▶▶ **TRANSFORM**
Omstilling til lavutslippssamfunnet
i kommunene

NARRATIVE

The message is clear, world leading scientists have warned us that our current actions are not enough to meet the target of a maximum of 1.5°C increase in temperature since the industrial times. Beyond this level the risk of irreversible climate changes will be immense, likely causing draughts, melting ice caps, and a raising sea level, not even talking about the impact on humanity and our social standards.

As a municipal member it is your responsibility to help reach that temperature target within your municipality by encouraging local households to reduce their emission levels. Review and implement known municipal policies, gain insight into possible changes, and push change to the edge in order to reach the necessary emission targets.

Although municipal members can choose from a variety of policy actions, there will be some challenges with the implementation as many policies require support from varying municipal council members to be approved. As such it is important to discuss the current state of the municipality and pick the mose suitable policies to reach the communal goal.

Even when working together, it is important to keep an eye on the cost society pays for your decision. Change is not always wanted, and municipal inhabitants could oppose the policies supported by the municipality. Change may be necessary but pushing change to the edge too often will drive a society against the system.

THE GAME

The players' collective goal is to reduce the projected temperature increase from 4°C to 1.5°C. They do this by reducing the CO_2 emission which in turn happens through the implementation of new policies. The players have 6 turns to implement policies after which the game ends and they gain a score depending on how successful they were.

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ROLES

In TRANSFORM players take various roles within the municipality, each with their own area of expertise and responsibilities. Each role is associated with official municipal responsibilities, hence managing a set of policy cards relating to the area of influence. The 5 roles are described below.

Planning

The planning department is concerned with the development and designation of land use. This includes the assignment of plots of land, and densification of city areas.

Business

The business department of the municipality focuses on businesses within the municipality by facilitating business development.

Technical

The technical department is responsible for all municipal buildings and vehicles, and technical solutions including water and wastewater mangement. They plan energy use in municipal buildings.

Economy

The economy department can influence policies related to fees, taxes and subsidies. Their focus lies on steering the municipality's inhabitants using economic measures.

Climate

The climate coordinator focuses on municipal climate work and the implementation of climate focused policies. Their role is to plan and facilitate the implementation of climate measures within the area of responsibility of the municipality.

1 Center board

The center board contains the general indicators for the municipality, providing an overview of how well the players are doing. The Center Board contains the approval scale and emission reduction track.

1a Reduced emission

The emission reduction track shows the total level of emission reduced from all sectors combined. Every completed emission block of 8 large emission cubes indicates that 1/5 of reducible emission has been reduced.

1b Approval scale

The approval scale shows the overall approval level for the municipal council. The scale rates from negative to positive, where a fully negative approval level will trigger a lay-off of the municipality, causing the game to end in a loss.
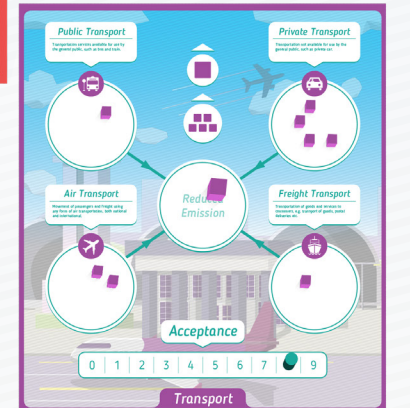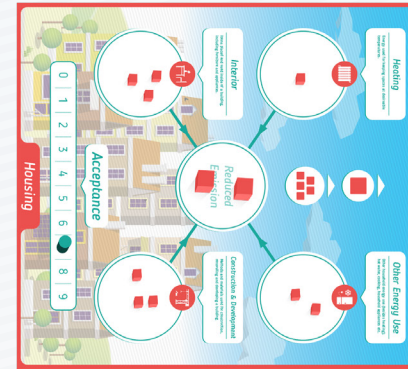
2 Role badges

Role badges indicate the role of the player within the representative Norwegian municipality used in TRANSFORM. These badges show the role's name, description and primary sectors. On the back of the role badge is a short rules overview.

3 Policy cards

Policy cards represent actions or rules that the municipaliy can implement to reduce CO2 emission. After being proposed, policy cards are implemented when they gain enough support. Implemented policy cards can have various effects: changing the acceptance in their sector, reducing emission in one or more sub-sectors or even changing the approval level of the municipality.

4 Support tokens

Support tokens are placed on policy cards to indicate they have political support. Each turn all players get up to 2 support tokens which they can use to support proposed policies.
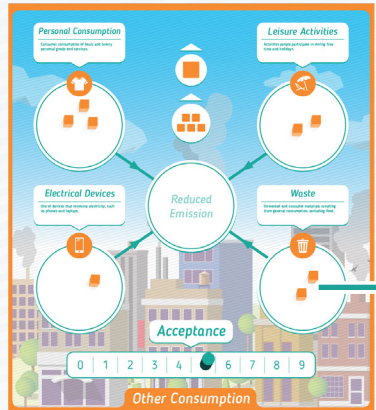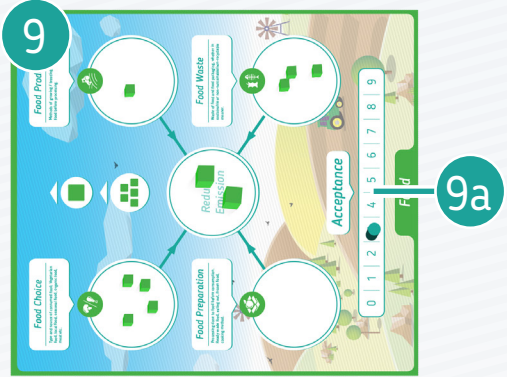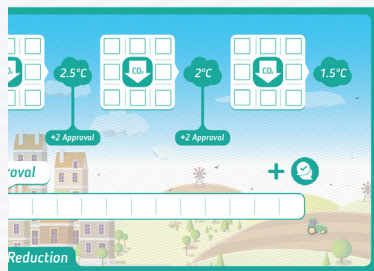
9 Sector board

Sector boards are available for each of the 4 TRANSFORM sectors in the game, they represent a section of the municipality with measurable emission levels. Every sector board consist of an acceptance scale as well as a series of emission groups representing sub-sectors within a sector. The general reduction space stores reduced emission between the implementation and upkeep phase.

9a Acceptance scale

Acceptance scales show the public acceptance of the need for change within a sector. The base level of acceptance can be determined on a municipality basis, where 10 shows a high acceptance level, and 0 represents a low acceptance. This indicator determines how the public responds to new policies that are introduced in this sector.

5 Pens

Pens are used to extend on the current policy cards by noting the values and text required for new or extended cards.

6 Burden cards

Burden cards determine the burden value of a policy based on the policy's burden level.

7 Emission cubes

Emission cubes start the game distributed over sub-sectors. They represent an amount of reducible CO_2 emission in that sub-sector.

Small emission cubes represent roughly 200 kg CO_2 emission per household while large emission cubes represent roughly 1000 kg CO_2 emission per household. 5 small emission cubes equal 1 large emission cube.

8 Empty policy cards

Empty policy cards allow players to introduce their own policies to reduce CO_2 emission. The empty policy cards have a layout identical to complete (6) Policy cards, but allow players to determine the content of the policy themselves.
Implementing empty policy cards works the same as implementing regular policy cards.

SETUP

1. The main board is placed in the center of the table, with the sector boards placed around it.

2. Put emission reduction cubes on each of the sectors' sub-sectors, with colors matching the sector. The amount of emission cubes for the default setup is indicated below, which is based on the household average emission footprint per sector.

🚗 33	📱 5	🍳 41	🔥 8
🚌 5	🗑️ 0	🥗 16	🪑 2
✈️ 67	🏖️ 7	🐟 3	❄️ 4
🚢 0	👕 5	🚜 0	🏗️ 3

3. Determine the current level of municipal approval within the municipality, and place the indicator on that spot of the approval scale. A default municipality should start at the 4th spots from the right side of the scale.

4. Determine the current level of acceptance for all sectors and place the indicator on that spot of the sector's acceptance scale. A default municipality should start with 3 acceptance in all sectors.

5. All players pick one of the 5 roles and take the corresponding role badge.

6. All players take 2 support tokens.

GAME FLOW

The following game flow is recommended to gradually give new players a feel for the game and its systems. If all players have played the game before and feel confident in their understanding of it, they can be given access to complete and empty policy cards starting in turn 1.

Turn 1

Players are only given the complete policy cards assigned to their roles.

Turn 2+

Players can now use empty policy cards to create their own policies. The complete policy cards that have not been implemented may still be used.

VALUES IN THE NARRATIVE

Approval

Approval is the municipality wide opinion regarding the implementation of policies. The approval value provides insight in how positive or negative public perception on past choices is, and whether the municipal inhabitants approve of the changes that have been made. An extremely low approval value indicates high public resistance against choices from the municipality, and possible riots by further negative change.

Acceptance

The acceptance scale shows how willing inhabitants are to accept the implementation of policies in a specific sector. Acceptance provides insight into how willing inhabitants are to accept the burden associated with policies of increased cost levels. Raising the acceptance level, through promotional policies or subsidies for example, can ease public perception of a sector and increase the awareness of the need for change.

Support

Support indicates the required desire of the municipal parties to support a proposed policy. They have no monetary value, but are a general representation of the resources available to a municipal actor. This does not indicate the total financial budget of the municipality, it is focused on availability of resources for emission reduction policies.

A TURN

The turn consists of the following phases, which are played in order. When all phases have been completed move to the next turn.

1. Plan

Players read the policy cards they have available and formulate a plan for the turn together with the other council members.

2. Propose

Players may propose policy cards they have available. If players have access to empty policy cards, these must be filled in before they are proposed. Filling in policy cards may happen in collaboration with other council members. When a policy card is proposed the player places the card in a central location on the table and announces to the other players what the policy does and why they think it is a suitable policy. The player that proposed the policy must then place one of their support tokens on the policy card to support it.

3. Support

Players may support proposed policies by placing one of their support tokens on the policy. A policy cannot receive support from the same role twice, so players may not place support tokens on policies that already contain one of their support tokens. When all support tokens have been placed or players do not wish to place more tokens, move to the implementation phase.

Note: After the first turn players will often mix the propose and support phase, moving back and forth between proposing and supporting policies. At the point the propose and support phase can be combined.

2 **Propose:** A set of policies proposed by different players. The proposing players put their support tokens on the policies.

3 **Support:** The policies gained support from other players. None of the policies can have support from the same player multiple times.
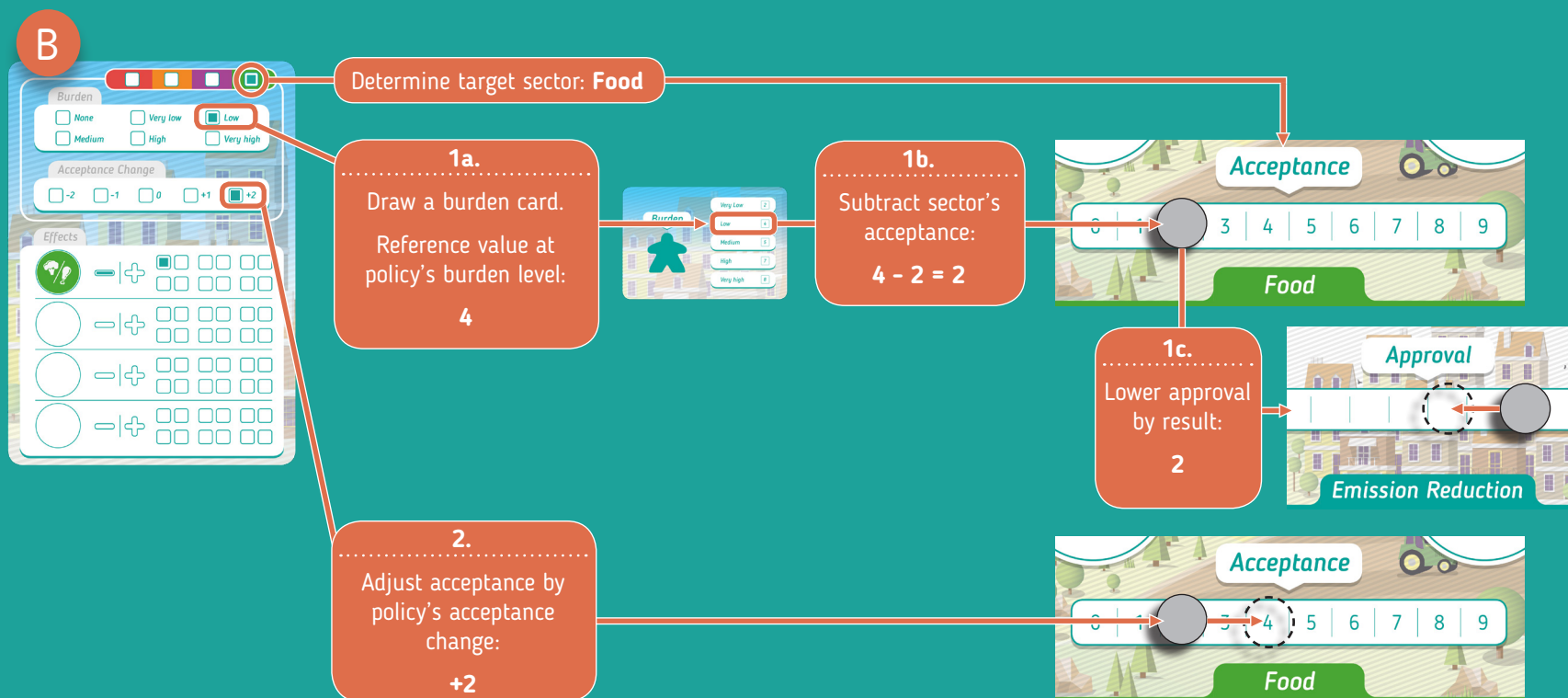
4 **Implementation:** Policy A requires 4 support tokens and only gained 3, so it stays on the table and can be implemented in future turns if it receives more support. Policies B and C received the required amount of support and are implemented.

4. Implement

Look at all the proposed policy cards. The policy cards that are supported by an amount of support tokens equal to the requirement specified on the card are implemented:

1. **Determine the approval change**: Look at the burden level indicated on the policy, If the level is none, skip this step. Otherwise, draw a burden card and take the burden value indicated for the policy's burden level. Next, take the acceptance value of the sector indicated on the policy card. Subtract this acceptance value from the value on the burden card. If the resulting value is higher than 0, subtract it from the approval scale on the central board.

2. **Resolve the acceptance change**: Add the policy's acceptance change to the acceptance value of the sector indicated on the policy. Acceptance cannot go above 9 or below 0.

3. **Resolve the policy's effects**: Policies can have two types of effects, resolve them in the following ways:

   a. **Emission reduction**: Move the indicated number of emission cubes from the target sub-sector (indicated by the icon) to the corresponding sector's reduction space.

   b. **Approval increase**: Increase the approval on the central board by the indicated amount.

4. **Place the policy card on the stack of implemented policies.**

APPROVAL & ACCEPTANCE EXAMPLE

Determine target sector: **Food**

1a.
Draw a burden card.
Reference value at policy's burden level:
4

1b.
Subtract sector's acceptance:
4 – 2 = 2

Acceptance
Food

1c.
Lower approval by result:
2

Approval
Emission Reduction

2.
Adjust acceptance by policy's acceptance change:
+2

Acceptance
Food

Example of approval and acceptance change for the implementation of policy card B.

5. Upkeep

After all policies have been implemented, convert groups of 5 small emission cubes on any sector's reduction space to big emission cubes. Then move any large emission cubes from the sector boards' reduction space to the emission reduction track on the central board. If this completed a milestone (set of 8 large cubes), increase approval by the indicated amount.

All players take support tokens matching their role until they have 2, then the next turn starts.

6. (Optional) Reflect

If the players feel the need to take the time to reflect on what happened during the turn, a reflection phase can be introduced. During the reflection phase the effects the players' actions had can be discussed in detail, including the change in emission reduction, sectors to focus upon, and current acceptance & approval rating. After the first round this will likely be incorporated into the planning phase.

GAME END

There are 3 possible ways for the TRANFORM game to end, each of which is described below.

1. End of turns

When turn 6 has been completed the game ends. The emission reduction track on the main board gives the players an indication of how well they did.

The total emission reduction tracker contains 5 milestones, each indicating a significant amount of reduction in the municipality. Only reduced emission on the center board is counted, with a maximum score of 5.

2. Fully reduced emissions

Filling up the total emission reduction track entirely, thus removing all emission cubes from the sector boards, indicates all reducible emission from the municipality has been reduced, winning the TRANSFORM game.

3. No more approval

As soon as the approval indicator would be reduced below the lowest point on the scale society will lose faith in the council members, and overthrow the current municipal council, resulting in an instant loss of the TRANSFORM game.
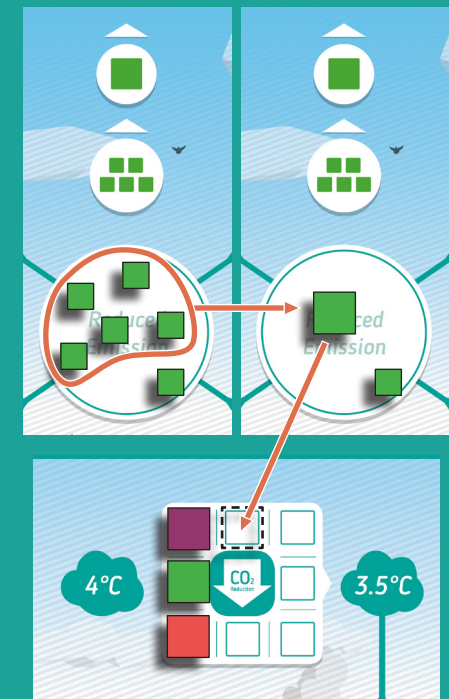
5 **Upkeep:** Reduced emission is converted to large cubes and placed on the center board's emission reduction track.

Game end examples

After turn 6 the game ends, look at the reduced emission to determine the score. In the state shown above the players scored 3.5 out of 5.

Reducing all emission before the last turn ends the game with maximum score.

Approval running out instantly ends the game, resulting in a loss.

MAKING NEW POLICY CARDS

The following section provides a guide for the creation of new policy cards by players, which should be introduced starting in the second or third round. It describes the different parts of a policy card and gives a rough indication of how players should come to values that match their intended policy. Because the effect of policies will depend on the current state of the game, this section can only provide guidelines rather than a fixed set of rules. Discussion between players is encouraged when determining the effects of a policy card.

1. Name

The name should consist of a single line indicating the core focus of the policy.

2. Description

The description must contain the core changes the policy would make, this includes underlying rules, actions undertaken, and a general description to clarify the impact of the policy.

3. Support

In the support section players must indicate the number of support tokens required for the implementation of the policy. A single support token means only the proposing party has to support the policy, where multiple indicate that the support of that number of different players is required to implement the policy.

Title

1 Support food waste recycling

Description

2 Climate friendly waste policies: subsidies for composting food waste, strengthen recycling and reuse schemes

Support

3

1 **Name**: The policy aims to support the municipal households in recycling of food waste, therefore naming the policy "Support food waste recycling" clearly indicates the full extent of the policy's goals.

2 **Description**: The food waste policy aims to support food waste recycling through varying support methods. In the description, information is described regarding the various waste types to recycle and support mechanisms to increase the recycling of these waste types.

3 **Support**: The food waste policy requires minimal effort from the municipality to implement, therefore the policy can be proposed and implemented by a single municipal actor. A single support box is ticked.

4. Sector

The sector must be indicated by ticking the box in front of the desired sector. Players must select the sector most relevant to the current policy. Determining what sector is most relevant should be based on the sector the policy places the highest burden on or changes acceptance in, rather than in what sector the policy reduces the most emission, though this will usually be the same.

5. Burden

Players must tick the box in front of the burden level associated with this policy. Players must use common sense to determine what level of burden would be associated to the policy based on the description and implications this would have on the municipality.

6. Acceptance Change

In the acceptance change level players must determine how strongly the policy would affect the public acceptance of burden associated with future policies in this sector. The players tick the box corresponding to the change in acceptance they deem fit for this policy.

Example 1: Awareness campaigns can be suitable policies for raising acceptance to change within sectors. The +1 or +2 box can be ticked for these types of policies.

Example 2: After a policy with a very high burden level, the public may feel it has done enough, reducing acceptance of further change. The –2 box is ticked for such a policy.

7. Effects

Taking the description of their policy into account, users define how much reduction is possible when implementing the full rules and actions defined. To define emission reduction users must consider the current emission levels within the municipality as well as the already implemented policies, and determine how the current policy could add to this.

Example: If a policy is already implemented to make all private transport electric, then taxes on petrol use in private cars will no longer have any emission effect. No emission changes are ticked.

4 Sector: The food waste policy has the biggest impact on the Other Consumption sector, as such we tick the box with the same color as the Other Consumption sector.

5 Burden: The food waste policy has a very low burden level as the public experiences no or minimal immediate burden from the policy, therefore the box indicating "Very Low" burden is ticked.

6 Acceptance change: Supporting recycling has a very low negative impact on the municipality. There is some positive impact, however this will only provide minimal positive impact on the municipal acceptance, therefore the acceptance change will be 0 or +1.

7 Effects: The food waste policy provides a small incentive to food waste emission reduction and most sub-sectors of Other Consumption. Therefore, a single cube is ticked in all four of these sub-sectors.

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