

Appendix III: Game manual

Developing a Burrow of Tomorrow



Serious game

A serious game is a game that is designed with a primary purpose other than entertainment. In our case the goal of the serious game is two fold. One, to help with the goals of the municipality of Amsterdam to make the neighborhoods more sustainable. And two, to create a nicer living environment for its inhabitants. We believe that to create a Burrow of Tomorrow (BoT) as many different actors need to be involved. But we have also noticed a lack of interaction between different stakeholders. By getting all the stakeholders around the same table and playing a game, we create an informal environment and a level playing field. Furthermore some initiatives from the municipality get a lot of resistance from the inhabitants if they are implemented from top down. But if the initiatives are created bottom up, together with the inhabitants and therefore are made accessible and tangible for the citizens to choose from, this creates a lot more support base in creating sustainable urban communities. The game aimed to be played with a diverse group of people within one neighbourhood, together with innovation experts and policy makers of the municipality.

Preparations

Preparations online:

The online version of the game is played via the platform Miro.com. Miro is an online visual collaboration platform for teamwork. For the online version a video communication platform is also needed, like Zoom, Microsoft Teams or another platform of choice. When playing this game online it is best to screen share the Miro board and have an extra person for technical support who can facilitate the miro board. Make sure to familiarise yourself with the tools of Miro to ensure a smooth game.

Preparations offline:

Print all the posters on A3 size paper, get enough post-its and pens for everyone.

Amount of participants and group composition

This game is most optimal when it is played in small groups of 4 to 8 participants, so everyone could have a contribution. It is advised to split larger groups into smaller groups and try to keep them as diverse as possible in age, education, gender and profession, and divide the people that are working at the municipality and innovation experts over the groups.

Instruction Manual - Serious Game

Miro board: https://miro.com/app/board/o9J_INJWu9s=/

Legend: All text in black is the explanation of the round. Text in grey is our reasoning and additional information.

Introduction game: Serious game: developing a Burrow of Tomorrow

Within the astounding world of nature you can find a lot of creatures that live in burrows. They build these burrows not only for shelter, but these burrows house their whole society as well. A burrow is an organic, bottom-up and co-created ecosystem. Within a world of depleting resources and pollution, how nice would it be to create a similar habitat for humans? A burrow which makes use of its surroundings and re-uses its resources for different purposes. An independent ecosystem, from the people, by the people.

Commissioned by the municipality of Amsterdam. We created a concept for the neighborhood of the future, which is climate adaptive, circular and inclusive. Our concept called the "Burrow of Tomorrow" is a strategy in which inhabitants of a neighborhood are encouraged to create their own sustainable urban community.

Introduction game: The strategy

Stage 1: The recruitment of involved citizens

In this stage active citizens such as social and economic entrepreneurs and community leaders, are attracted.

Stage 2: Forming a team and generating ideas

In this stage the active citizens will explore ideas and opportunities with support of innovation experts and the municipality. Ideally they will form smaller groups working on different projects.

Stage 3: Carrying out projects

The BoT team will continue as an active group suggesting and carrying out projects that will create a more sustainable, climate adaptive, livable neighborhood.

In order to help and motivate citizens, and to make tangible ideas accessible as first steps towards a sustainable urban community, we created a serious game. This game will in small steps provoke dialogue and new ideas for a better neighborhood. This game is facilitated and supported by the municipality and innovation experts. At the end of the game some projects and their first steps are formulated

Introduction game: time schedule

Briefly walk through the planning of the game

Round 1: Introduction round

In this round the participants but also the moderator(s) of the game introduce themselves by stating: Their **name, job title, a fun fact** and a **core quality** they possess that could be beneficial to the project.

Furthermore the participants are asked to name a **positive** and **negative aspect** of their living area. Then the participants are asked to vote on these positive and negative aspects to get a picture of which positives they want to focus on in their neighbourhood and which negative aspects they want to tackle in their neighbourhood.

We ask the participants of the game to introduce themselves to get to know each other a little bit. Also we ask them to say something light to create an informal atmosphere that ensures a safe space for the participants. This establishes that in next rounds the participants are more prone to come up with out of the box-, but also innovative ideas, without having a fear of being dumbfounded. We ask a core quality to get an overview of the skills already present within the neighbourhood. From this point it is easier to start the projects.

In addition, we want to create a small discussion about their current neighbourhood and with this discussion we want the participants to get global themes and values for their own BoT and what the opportunities of such a BoT might be. We realized, however, that some participants might be more introverted than others and therefore make all the participants vote, so that everyone can have their input.

Round 2: Introduction neighbourhood

The moderator explains the neighborhood in a small story to give context and a description of the neighbourhood. He/she should introduce the general demographics and also the physical boundaries of the neighbourhood. Also make sure to integrate some of the positive and negative aspects decided upon in the previous round, to give more context to an already existing neighbourhood.

We do this to give the inhabitants a factual understanding of the neighbourhood e.g. not all people know the boundaries of the neighbourhood. Furthermore it can be used to give the policy makers insight in the perceived problems in the neighbourhood. And the story can be used to nudge the inhabitants to focus on problems known by the municipality e.g. high ground water level or crime. This could then be integrated in the summary of the neighborhood. Also the core values of a BoT come forward in this round. These core values are social, sustainable and climate adaptation.

Round 3: Exploration round

In this round the moderator asks the participants if they already are familiar with sustainable or citizen initiatives they have heard of or read about. The participants are asked to place those initiatives on the board.

This round is aimed to get them in the brainstorming mindset, but also expose the citizens to new initiatives. This will give them a stimulus but also a reference for the next round.

Round 4: The Doughnut economy

This round is to focus the game and participants on one of the pillars of the BoT, the doughnut economy. This round includes a short introduction and clarification about the doughnut economy, making sure the participants think of sustainability and climate adaptiveness for the upcoming round. Discuss with the participants what they want to focus on and highlight these wedges with a marker.

"The Doughnut economy is a visual framework for sustainable development. On the outside ring it depicts the planetary boundaries. These should not be overshoot. The inside ring shows human life essentials like healthcare and education. These should be fulfilled. The aim is to develop in the middle of these conditions"

In some groups people tend to focus only on social initiatives. This round puts emphasis on the sustainability developments to neighbourhood needs next to the social initiatives. Of course every neighbourhood is different and therefore the participants are asked to highlight what they think is important for their own neighbourhood.

Round 5: Idea round

This round is for the participants to freely think about the initiatives they want in their BoT. The participants are asked to imagine a time travel to the year 2040 and think about what their ideal neighborhood will be like. They are then asked to think about the aspects, initiatives and ideas that lead to this ideal living environment. Their answers, the ideas put on the blue squares, are the building blocks for the next round.

Pay attention that the ideas are specific and concrete solutions, e.g. less congestion is not a solution by itself. But think of how that problem can be solved, e.g. car free streets is a solution to that problem. Also a more specific idea is easier to score in the next round and is more likely to be executed in the future. Time travel is used to get them to also think of more innovative ideas. We found out that they move out of their mundane way of thinking (e.g. dog poo on the street) and really stretch their imagination on what could be really beneficial for their neighbourhood on the aspects of social cohesion, climate adaptiveness and sustainability..

Break

Give the participants a short break. This is also done to separate the previous round and the next from each other. This break also gives the moderators time to set up the upcoming rounds.

Round 6: Analysis round

This round is to give a simple indication of the costs of all the building blocks made in round 5. Walk through all the initiatives and score them by dragging the yellow number on the initiative. Do this according to the following guidelines.

1) A small project

This could be done just by the neighborhood themselves, and should take no more than a couple of months to execute. And should not cost more than a couple thousand euros

2) Medium sized project

This is a project that should be done collaboratively with the citizens and with active help from the municipality. It should take not more than five years and should cost no more than hundred thousand.

3) Big project

This is a project that could be done in collaboration with multiple neighbourhoods together and with the municipality. These projects could take more than 5 years and could cost a couple of millions.

The ideas do not need to check all the boxes but it should be decided where the idea fits in best. Some discussion is nice but this round can take a long time. The exact price can not be determined in this phase so make sure the participants do not stay stuck on a particular building block. Pricing can also help with specifying the scale of the project. If the participants choose to make it cost 3 points the project can be larger than if they execute it as a 2 point building block. The idea of this round is also to give an idea about the scale of the projects. participants will realise that they could do the smaller projects themselves and could make a start with that.

Round 7: Matching opportunities

The participants are asked to check if two building blocks can be put together into the same project where combined effort will result in an even more beneficial idea. (e.g. green rooftops with PV panels). With the matching opportunities participants can combine initiatives that reinforce each other. Beware: participants can only combine two initiatives and they should give a new score to the matched opportunities, because this could change in terms of size and budget.

This round is to trigger the idea of integral and holistic approaches that are necessary for the realisation of the BoT. This is not a grouping exercise, so make sure there is really an added benefit of combining the initiatives. Only rarely it is really beneficial to group more than two initiatives together.

Round 8: Your BoT

In this round the participants select a certain amount of building blocks they made in round 5 and based on the prices of those building blocks. The selection is as follows: they can choose one initiative with the cost of 3, two initiatives with the cost of 2 and three initiatives with a cost of 1. They can also use the matching opportunities from the previous round, which counts as one initiative.

The selection is limited on purpose to create discussion and friction between the participants, but also for the participants to realise they can bring together their expertise and enthusiasm to create the BoT. The deviation between different points of initiatives is done to create different time scales. At first it is easier to execute the simpler initiatives but some of the more difficult initiatives do not need to be forgotten.

Round 9 Evaluation

After the game five main questions will be asked to trigger some interesting ideas and make a start on the working groups that could be formed to make a start on their BoT. The questions are:

- If you reflect on the results of the serious game, what are the core values of your discussions?
- If you want your neighbourhood to become a BoT, what could be a logical first step to take?
- Who could help you with making a start on your own BoT?
- What working groups could be formed within your BoT?
- Who wants to participate in one of these working groups and whose qualities could contribute to the working groups?

The evaluation is to give a summary of what has been achieved and how the participants could continue from this point on. (e.g. creating starting points for projects and working groups).