



## NegoDesign Tool User Manual

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# Summary

The NegoDesign tool manual provides a comprehensive guide for users to effectively utilise this digital platform that is used in collaborative urban planning and design. This serious game facilitates participatory planning by allowing participants to collaboratively design, vote on, and therefore select the most optimal planning solutions for certain areas.

This manual outlines the tool's features, including its geodesign principles, serious games elements, thus simultaneously enabling entertainment, collaboration and education.

By explaining the hardware and software requirements, user roles, and tutorial resources, the manual ensures that users can easily access and navigate the platform. Whether it is used as a game to educate and engage participants only or it can be integrated into larger planning activities, the NegoDesign tool promotes inclusive and collaborative planning, making urban planning processes more accessible and interactive for diverse audiences.

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# 1/ About the tool

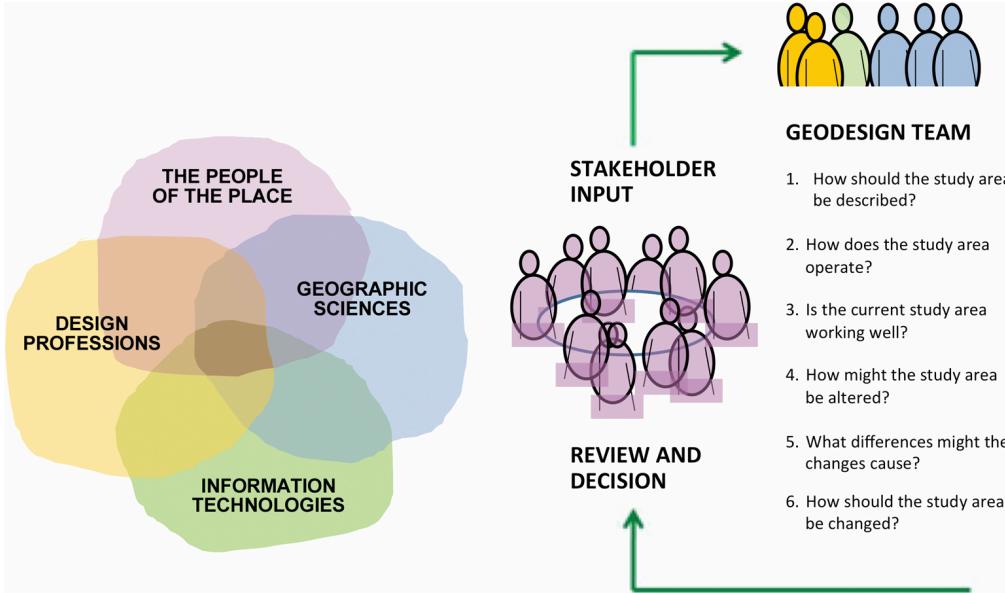
The NegoDesign tool is a digital serious game that facilitates collaborative urban planning. This free and user-friendly tool allows groups and individuals to plan specific spatial solutions based on pre-defined, economically evaluated measures. Its collaborative feature enables participants to vote on the most optimal projects selected by other groups, fostering a transparent and justful participatory planning process.

The tool can be applied in various planning areas, such as addressing climate hazards, enhancing social infrastructure, improving public spaces, thus promoting sustainable urban development.

The NegoDesign tool was created in the Unity game engine, a robust platform widely used for creating interactive applications and games.

## 1.1 Geodesign

The NegoDesign tool finds its roots in the principles of geodesign, a field that integrates geographic analysis with the collaborative planning process to create more informed and sustainable planning decisions. Geodesign is facilitated by geographic information systems (GIS) to analyse environmental, social, and economic data, thereby guiding decision-makers towards more effective and sustainable design.



Source: A Framework for Geodesign: Changing Geography by Design

Building on such foundations, NegoDesign implements geodesign methodologies to create collaborative planning solutions. This connection to geodesign ensures that NegoDesign users benefit from a possibility to select, negotiate and vote on the most suitable planning solutions that targets the working area.

## 1.2 Serious games

As NegoDesign presents an interactive, and design friendly tool, it is therefore seen as a part of serious game concept. Such a concept is designed for the purpose of not only entertaining, but also for educational, training and problem solving purposes. Serious games use engaging and interactive elements to simulate real-world situations, helping people to learn and work together.

Therefore, NegoDesign does this by offering a digital platform where users can plan and design spaces together. With features like project design selection and voting, it makes the planning process interactive and fun. Users can try out different design ideas and see their effects without any real-world risks. This game-like approach not

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only makes planning more enjoyable but also helps users understand complex planning issues better, leading to more thoughtful and inclusive designs.

## 2/ Requirements

### 2.1 Hardware

To use the NegoDesign tool, the following hardware requirements are needed:

**At least 4 desktop or laptop computers:** The NegoDesign tool is designed to run on a standard desktop or laptop computer.

**Stable internet connection:** A reliable and stable internet connection is crucial for accessing the NegoDesign platform.

Additionally, the NegoDesign tool does not require any specific hardware setup or installation on the user's computer, as it is entirely web-based.

### 2.2 Software

The NegoDesign tool can be run on any modern web browser (Google Chrome, Microsoft Edge, Mozilla Firefox, etc.) This allows users to access the tool without need for any specific software installation.

By meeting the simple both hardware and software requirements, users can ensure an optimal experience with the tool.

### 2.3 Participants

The NegoDesign tool is primarily designed for stakeholders, but can be also used by citizens. It offers up to 4 virtual rooms that represent distinct groups of participants. Each group presents a specific “player” of the game. Therefore, each group allows

only one user to interact with the tool directly, although each group can involve numerous participants.

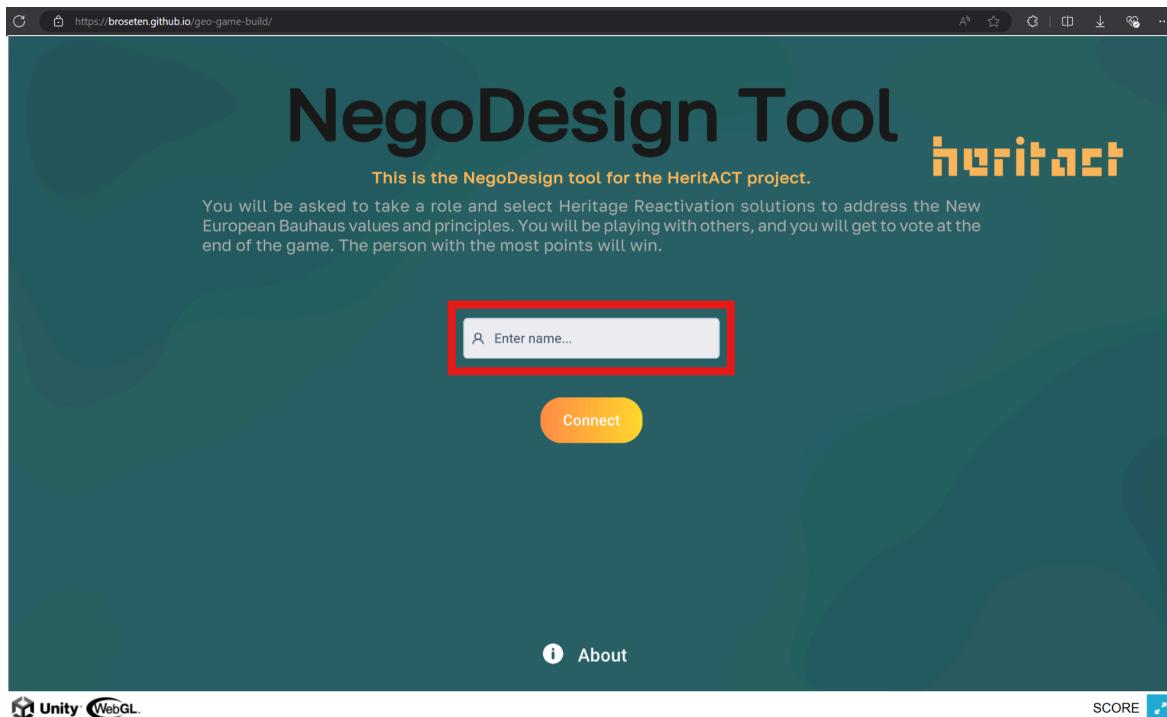
## 3/ Tutorial

### 3.1 How to run the game

In order to run the game, a user should have a desktop or laptop computer, a stable internet connection and any modern web browser installed on an operative system (Google Chrome, Microsoft Edge, Mozilla Firefox, etc.).

In a web browser, a user should click on the following link in order to run NegoDesign tool: [heritactproject.github.io/NegoDesign](https://heritactproject.github.io/NegoDesign)

The link directs a user to the game's main screen, where each user/group should enter their name in order to connect to the server and start the game.



## 3.2 How to play the game

The objective of the game is to develop the most valuable spatial solutions for all participants. The game is played in three rounds, during which each group selects their preferred planning solutions from a predefined drop-down list and places them on the map. Each round includes a voting phase, allowing every group to vote for the solutions they consider the most optimal.

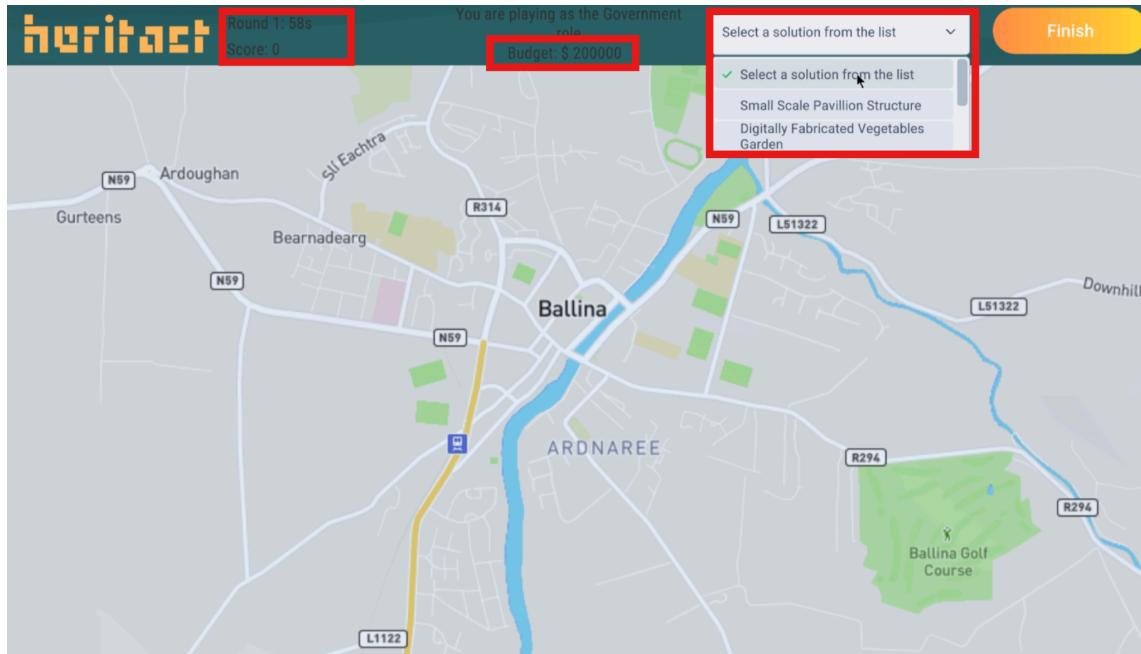
The game is operated entirely with a mouse, managing both the planning and voting phases. Groups can select predefined solutions from a drop-down list with a single click and place them in the desired location on the map with another click. During the voting phase, each group can vote for the best solution by clicking on any icon on the map, excluding their own.

A step-by-step guild is presented below:

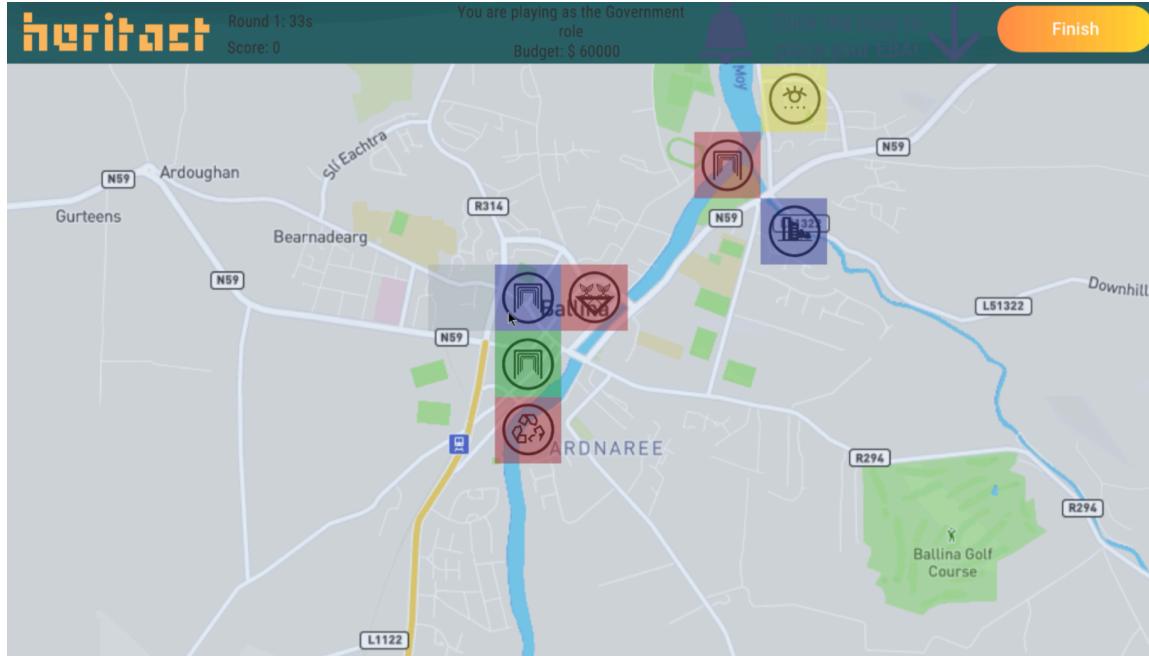
1. Each group should select one of the stakeholders they present: 1) Government, 2) Developer, 3) Environmentalists, and 4) Young People



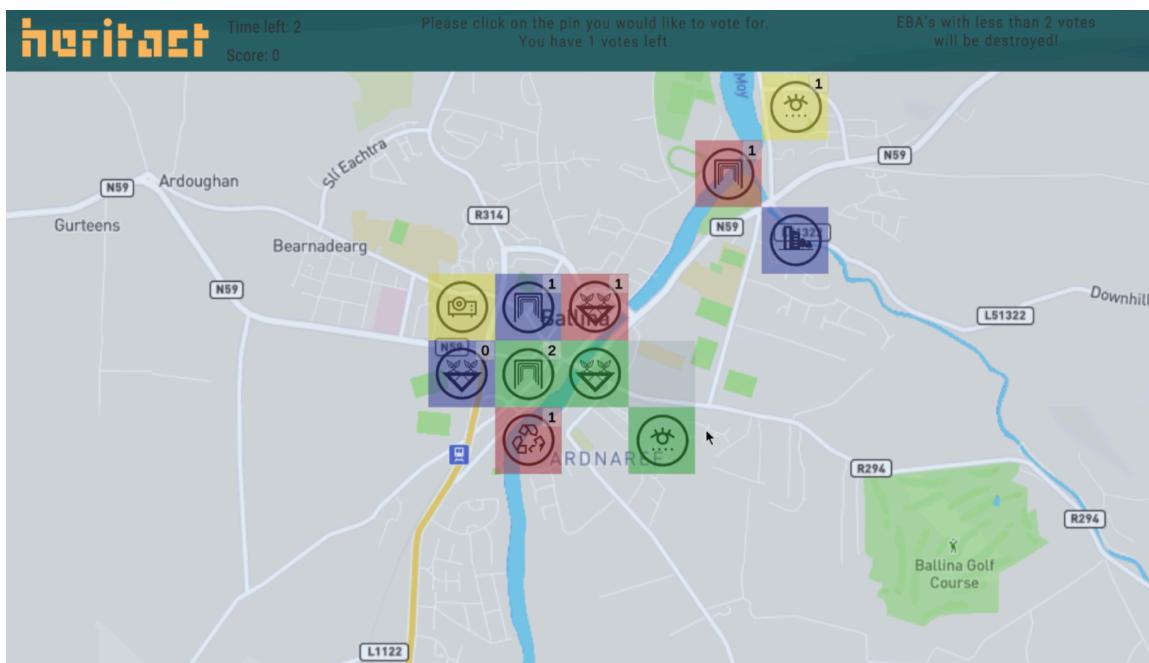
2. When the game starts, the map as the working area is presented. At the top of the window, it is displayed: 1) the current round number and the remaining time, 2) the available budget, and 3) a list of predefined planning solutions.



3. After selecting the desirable solutions, each group can place it on the map. The solution is presented in the form of an icon. Each icon has a different colour that marks the planning solutions of each stakeholder.

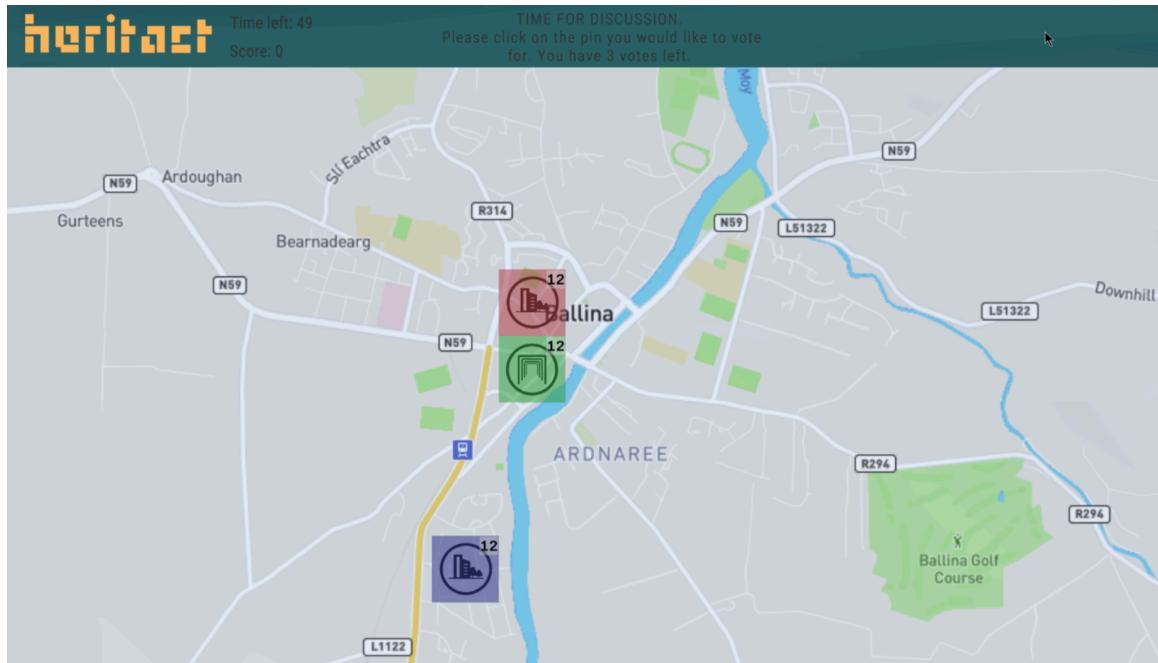


- After the round is over, it is time to vote. Each group can spare two votes on the solutions that they find the most optimal, except their own. Each solution with two or more votes remains in the next rounds.



- Although the second round is the same as the first, the third round is dedicated to voting only, where the solutions with two or more votes from the

previous two rounds are shown. On such a basis, each group could spare the final vote for a desirable solution.



- After final voting is over, the game displays the end game screen, presenting the final results of each group (stakeholder).



The following video presents a comprehensive tutorial on how to use The NegoDesign tool more briefly:

#### [NegoDesign Tutorial - English](#)

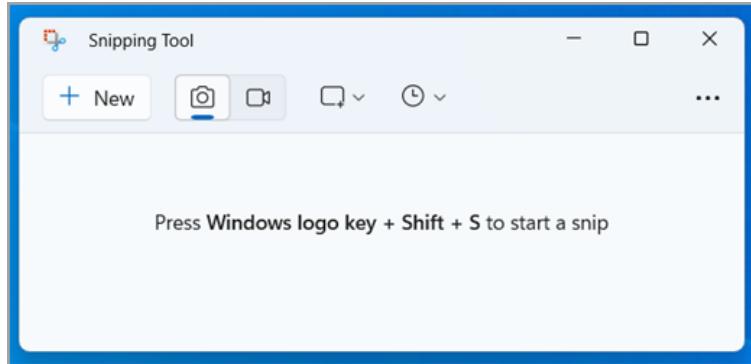


## 4/ Outputs

### 4.1 Exports from the game

During the game session, each group can take screenshots or record a video during each session. This allows the users to easily save and share visual representations of their collaborative work, in order to review the process of each group's collaborative planning and/or voting process.

In order to capture a screenshot or start recording when using Windows OS, the user should press the **Print Screen key** or **Windows logo key + Shift + S** on the keyboard. This option will automatically start a Snipping tool that opens a small window on the top of the screen, enabling users to choose whether they want to capture a screenshot or record the video. The feature enables the user to determine to capture/record the entire screen, or just a portion of the screen. With the click and drag option, the user determines the screen portions and the Snipping tool will capture a screenshot. The record option requires the user to click on the 'Start' option in order to begin with the recording.



After the process is complete, the new window will appear in order to determine what the user should do with the capture. Such an option allows the user to save the capture, copy, edit or retake the capture.

While NegoDesign at the moment does not support more complex export formats or detailed data outputs, the screenshot functionality provides a quick and simple way to document and communicate design ideas.

## 5/ Facilitating a workshop

The NegoDesign tool is conceptualised as a discussion-driving tool based on a serious game approach. This approach involves three stages:

**Briefing Session** (approximately 15 minutes): Participants are introduced to the tool and its objectives.

**Tool Usage:** Participants play the game, employing it to navigate and negotiate spatial design options.

**Wrap-Up Session (Debriefing):** The session concludes with a discussion, using the game's results to support and inform the negotiated design process.

### 5.1 Only the game

The NegoDesign tool can be used purely as a game, providing an engaging and educational experience for users. There, participants can explore the principles of urban planning and design in a playful and interactive environment. By experimenting with different design scenarios and receiving feedback through the tool's voting and collaboration features, users can learn about the complexities and challenges of spatial planning in a fun and risk-free setting. This gamified approach not only makes the planning process enjoyable but also helps to raise awareness and understanding of urban design principles among various audiences including both children and adults.

## **5.2 The game as part of a bigger activity**

In addition to its role as a standalone gamification toolkit, the NegoDesign can also be integrated into broader planning processes and larger activities. It complements other planning tools and methodologies by offering a platform for participatory design, which can enhance traditional planning approaches. Whether used in conjunction with other planning systems such as Geodesign, NegoDesign adds value by promoting transparency, fostering stakeholder engagement, and providing a visual representation of potential designs. This versatility makes it a powerful component of any comprehensive planning strategy, supporting a more informed and collaborative planning process.