Funded by
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D4RUNOFF

SERIOUS GAME

Designed & developed by

Unversity of Cantabria

ITG | Technology Centre

Access the game

Contact

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Making Cities Safer with Nature-Based Solutions (NBS)

Game overview

Welcome to the D4RUNOFF Serious Game! In this interactive experience, you become an urban planner, working to protect your city from urban runoff, floods, and pollution. Your mission?

To install Nature-Based Solutions (NBS) — such as green roofs, rain gardens, and permeable pavements — in the right places across the city.

This serious game is suitable for users aged 16 and above, but it is recommended for those over 18 due to the final survey component.

But there's a twist

You have a limited budget and a limited number of workers, so you'll need to make smart, strategic decisions.

How to Access and Play the Game

Step by step instructions

- **Go to the Game Website: https://devd4runoff.itg.es/**
- **First Time?** Register! Click "Sign up" Fill in the required fields: your name, email, and password & create your avatar

Important: You must choose one of the three pilot cities: Odense (Denmark) Santander (Spain), Pontedera (Italy)

- Log In using your email and password & Click "Sign in"
- **Start the Game**
  After logging in, you'll land on the platform homepage. Click on the "Social Module". The Serious Game will now launch in your browser, based on the city you selected during registration

How does the game work?

The game takes place over three rounds to help you learn about different types of NBS, implement appropriate NBS in areas where stormwater management is problematic, evaluate the results and receive rewards.

Round 1

Install **one NBS** in each of the 10 Action Zones across the city that face water management issues. A tutorial will guide you throughout the game

While playing, learn about different types of NBS and how they help manage stormwater in cities — and earn rewards based on your performance.

Round 2

Install **1 to 3 NBS** per Action Zone.

This round begins with unspent resources from Round 1 plus the new rewards earned. The NBS implemented in Round 1 remain installed in Round 2, although you have the option to change them or install more NBS in the new Round.

The mechanics of Round 2 are identical to Round 1 — only the number of possible installations increases.

Once finished, you can end the round and receive new rewards.

Round 3

Goal: Install **1 to 5** NBS per Action Zone.

The game mechanics remain the same as in previous rounds,
At the end of this round, you will receive your final score, and you will be asked to complete a survey about the game experience and your opinion on D4RUNOFF topics.

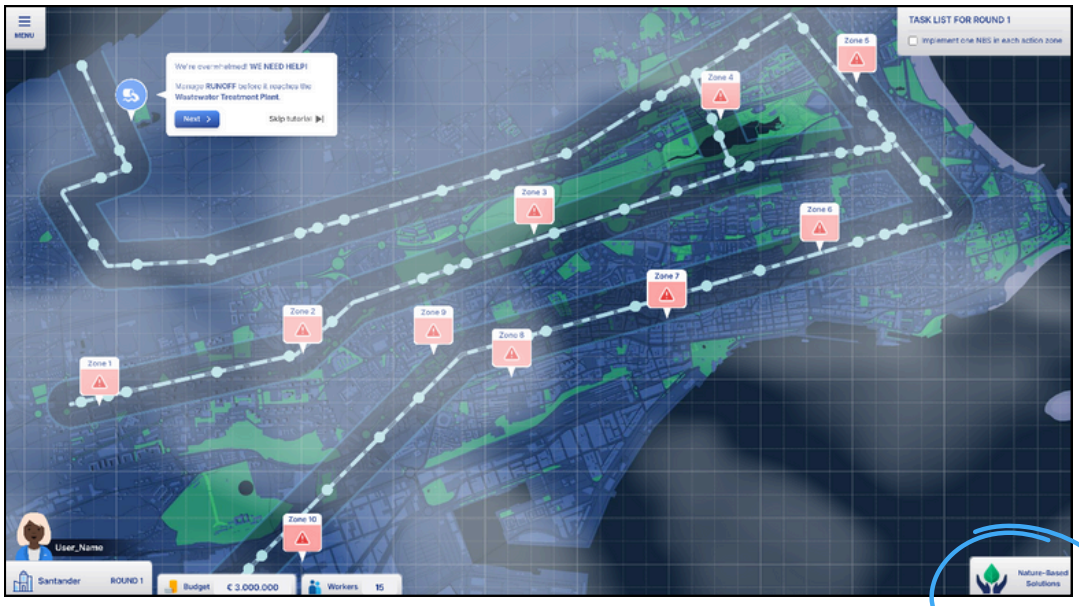
Useful recommendations

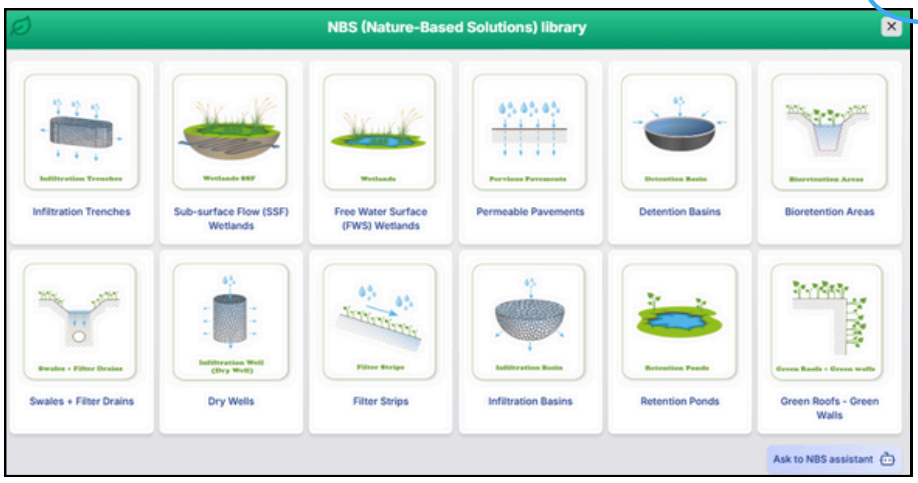
The following three stages are simple recommendations for a more effective gameplay experience.

Teaching and Learning stage

Remember to explore:

- The NBS Library & learn the characteristics and benefits of 12 NBS types.
- The 10 Action Zones & assess the specific stormwater problems in each area.
- The button called “Ask to the NBS Assistant” to ask questions and clarify doubts



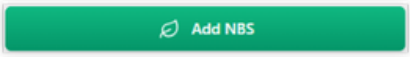


Design and Implementation stage

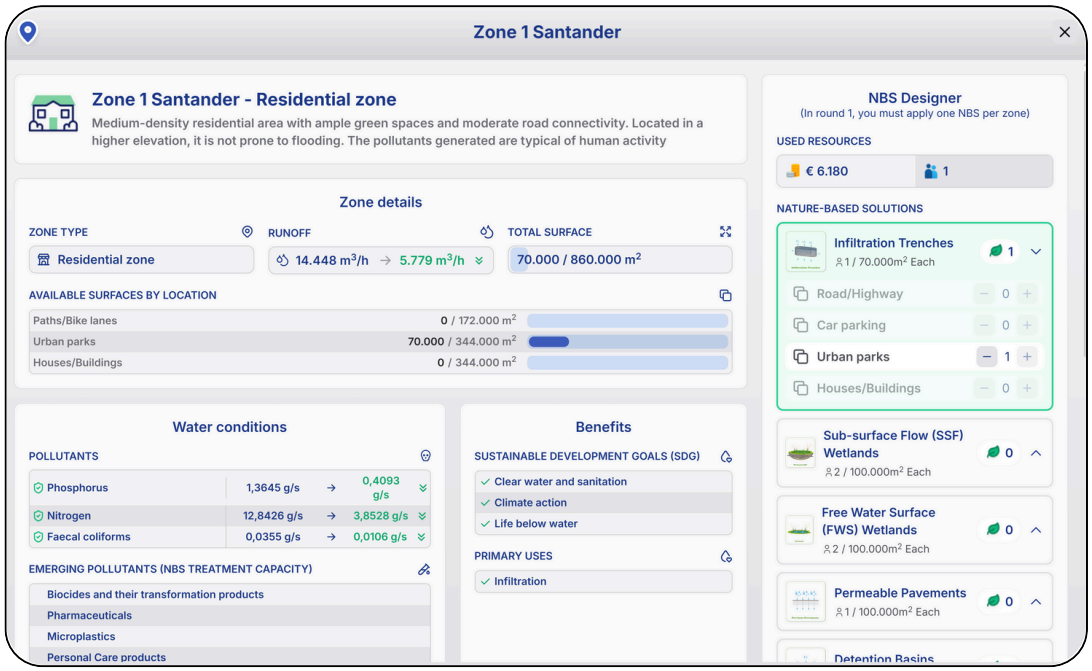
Decide on which Nature-Based Solution(s) are best suited to improve runoff water quantity and quality in each Action Zone.

Steps:

- Click on the **Action Zones** to install a NBS to address runoff and pollution-related issues.
- Click on the **Add NBS bottom** to access the different types of NBS that can be installed in that specific zone based on its particular characteristics.



- Select the NBS you wish to install from the available options.
- The different locations where the selected NBS can be installed within the chosen Action Zone are displayed. Click the **"+" icon** to add the NBS to the desired location.
- Explore the potential impact of installing the selected NBS. If you are satisfied, click on "**Apply NBS**", if not click on "**Discard Changes**"



Results and Awards stage

At any point during the game, you can check the performance of the **Wastewater Treatment Plant** and see how it has improved with the installation of the NBS.

Once you're satisfied with the configuration of the NBS installed across the city, click the **"Finish Round"** button.

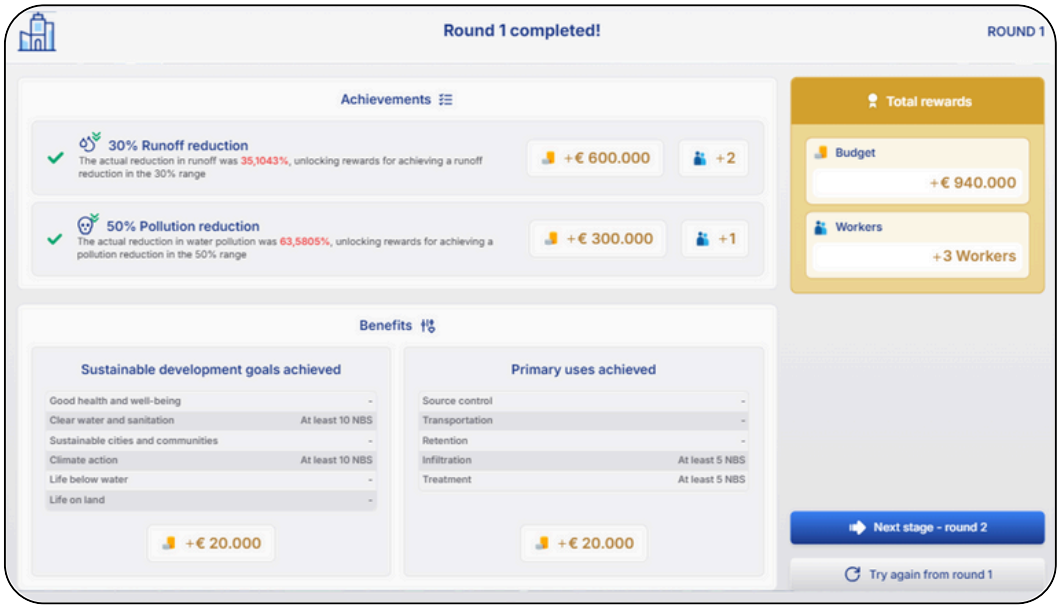
Once the Round is finished, a new window will appear displaying the following information:

Achievements: Runoff reduction, pollution reduction.

Benefits: Sustainable development goals (SDGs), primary uses.

Total rewards earned: Budget, workers.

From this screen, you can choose whether to proceed to the next Round or replay the current one.

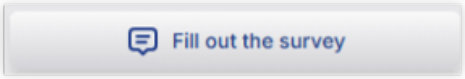


Results and Awards stage

After completing the last Round (Round 3) you have three options:

- Click on the **See leaderboard** bottom to view a ranking that compares your score with other users.

- Complete a short **Survey** by clicking on Fill out the survey



- Click on the **Reply the game** buttom to give it another try and aim for a better score!

Ready to play?

Join others across Europe in testing how NBS can make cities more resilient, sustainable, and livable.

Whether you're a student, a teacher, or just curious — this game is for you!

Let’s build better cities, one green solution at a time.

Contact: d4runoff@itg.es

Find out the game: https://d4runoff.eu/resources/

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