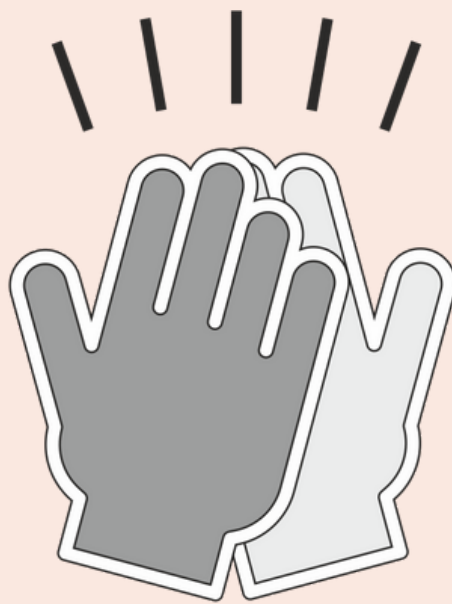




Erasmus+

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**HIGH 5**

**INTEGRATED  
DESIGN**

**CITY GAME**

2022



## INTEGRATED DESIGN - City game (English language version)

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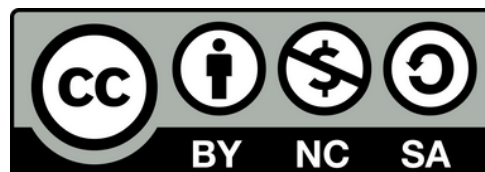
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## City game - overall concept description

The general idea behind city games is to provide a gamified way of exploring the city or part of it in an engaging and fun way. Within the HIGH 5 project that idea was used for several purposes:

- Initial stimulus of further cooperation – the dynamics of both team cooperation and problem-solving are rather slow in the initial period. The use of common group activity may be a good starting element for both mentioned processes.
- Way of team building – a set of exercises and challenges that involve all members of the team, and allow them to know each other also in an informal way.
- Socializing elements of the longer team activities – especially in the case of solving interdisciplinary problems in a multinational/multicultural environment it is important that the members will not only exchange information but build on each other's experiences, ideas and thoughts. In that way, it is rewarding to ensure the smooth formation of informal bonds within the group.
- Getting acquainted with the general issues of sustainable development and some elements of a circular economy or Integrated Design itself – through the set of short tasks students can broaden their horizons in the key fields of their future projects.
- Possibility to learn about the culture/history/unique places of the place where the summer school or other longer (at least a few days) group activities can take place.

To fulfill the above, the city game within the HIGH5 project was designed as a general concept of field tasks related to team building, sustainable development, and Integrated Design, as well as the location of the city game. It was tested in the international teams during summer schools in Volos and Aveiro.

For the sake of digitalization (common storage of results in form of photos movies etc.) and live view of the progress the two options were verified:

1. Usage of an online platform for collaborative problem solving - the idea developed within the Erasmus+ project Design4Climate (<https://design4climate.e-ce.uth.gr/#/home>)
2. Common Facebook group.

Of course, the more traditional approach with verification of tasks/their proof at the final destination is also possible.

The city game concept requires guiding the teams through the location by setting the order of checkpoints (the whole set known at the beginning) or providing the clues enabling them to reveal the next checkpoint. In that case, also the help of additional applications may be useful. You can select for example:: Avastusrada made by Tallinn University in cooperation with Environmental Board(<https://avastusrada.ee/en>) or Beaconing (<https://atcc.beaconing.eu/>).



## City game mechanics - gamification

Since gamification is adding game mechanics into nongame environments the whole idea of city games with checkpoints and related tasks fulfills the main requirement. For the sake of further motivation, the idea of competition between teams can be introduced simply by promoting the order of completing the whole tour or giving additional points for some actions.

To start with the city game as a teaching tool it is important to set up the general rules of the city game that should be distributed among the teams and provide necessary basic information like:

- Time and location of meeting point (it does not have to be the starting point of the city game).
- Duration of the game
- Constraints related to game finalization (is the order of completion significant, are there any tasks that are compulsory)
- Clear definition of existing ways of gathering points (e.g. compulsory and bonus tasks)
- Availability of supportive equipment, materials or applications (e.g. applications leading through checkpoints, ways of storing data/proving tasks realization).

The exemplary rules are provided below in figure 1:

## City Game - rules


The main goal of that city Game is to explore the city of **XX** while fulfilling the tasks related with team building, sustainable development, circular economy and Integrated design.

- All the rules will be explained only on the **START LINE** (*so ask questions wisely*)
- The city game starts within 15 minutes (12:00), and all teams have up to 4 hours to complete it (16:00).
- Each team will gather points for:
  - Whole game tasks (**up to 10 points for each**)
  - On path tasks (**up to 10 points for each**)
  - Bonus task - **no more than one of each kind** (the list of bonus tasks will be revealed during city exploration)

**Proved with picture or movie or worksheet**

The order of teams on the final line will be related with **additional bonus** (**not related with any points for final score bord**).

- You will be provided with the set of materials that will be helpful during your City Game. The materials designated for the specific task are packed together in separate bags (remember use just those materials) and all the others can be used without space and time limitations (except mentioned specific tasks).
- As a supportive platform the **YY** will be used. Please sign in now, check it and inform me in case of any problems.












Figure 1. Exemplary general rules of the city game.



## City game tasks

The idea of exploring the given location while getting to know team members and getting acquainted with new areas such as sustainable development and/or Integrated design should be a balanced activity. The recommended approach is to arrange about 10 checkpoints but only about half should be related to challenges longer than 2-3 minutes to not exhaust the groups. In general, there are three groups of tasks to be realized during the city game:

### Whole game tasks - related to team building:

1. Invent a team logo and visualize it. Additional constraints can be added to that task such as the necessity of providing a 3D model, usage of colors only from the flag of the country/ies of team members or location of the city game, the world HIGH must be included, etc.
2. Create a team name. An additional constraint can be added to that task such as: including the first letters of the name of each group member, the name should be (or include) a palindrome, including letters of the city of the game

### On-path tasks - challenges related to sustainable development, circular economy, Integrated design, or location of the checkpoint

1. Water transportation - The aim of the task is to fill as many cups as possible with provided water under the given limitations and with the use of limited resources. The main rules are as follows:
  - The cups cannot be moved out of the marked area
  - The team members cannot leave the marked areas during the trial
  - The bottle of water can be handled only by the person in the first area
  - You can use the materials (green bag) to help yourself in the trial
  - The materials touched by a person in one zone cannot be passed to another
  - Only water can freely pass through zones

The visualization of the exercise setup and summary of rules is presented in figure 2.

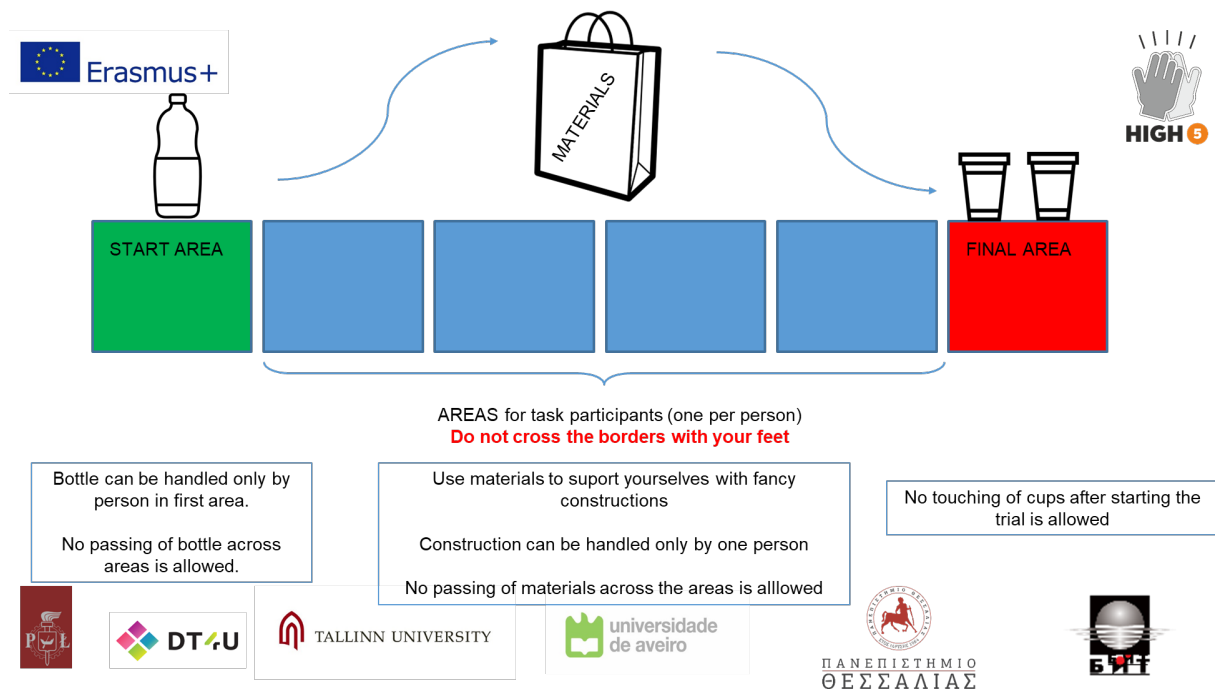


Figure 2. Water transportation setup.

The exemplary materials for that challenge are as follows:

- 1-5 paper cups
- 1 bottle of water
- 1-3 scissors
- aluminum foil
- 2 coffee filters
- polymer tubes (1-2 pieces of length adjusted to the distance between the areas)
- 5-10 skewers
- disposable wooden spoon
- compostable garbage bag
- protective glove
- rubber bands
- 1-5 paper straws
- connectors: adhesive tape/paper clips/binder clip

The exact number and type of materials should be adjusted based on the experience of the teacher and knowing students' abilities, nevertheless in all cases the materials should involve pieces of length no larger than the size of one zone; various selection tubes, pipes, or containers.



2. Bananometer - The aim of the task is to measure something or count the distance in the measuring unit of bananas. The idea is to provide the team with bananas and a challenge like: measure the total height of all team members; measure the length of the bridge; measure the shortest park alley starting from the pound and heading west.
3. Immersion tasks - This is a possibility for the teams to step into the shoes of blind person via short challenges that must be fulfilled with covered eyes:

#### **Filling the glass with water**

Person is standing/seating near the table. After covering eyes the bottle and 3 paper cups (in stack) are placed on a table. Task: "Fill 3 glasses with water and place one on for the person sitting on the left one for the person on the right and leave one for yourself". After completion: "drink water from your cup".

#### **Selection and segregation**

After covering eyes, person is asked to:

- segregate provided materials into groups. E.g. pens, pencils, and toothpicks into 3 cups/ apples, orange/mandarins and lemons into 3 pits
- select the ripe e.g. banana from the provided (the fruits should be in various stages of maturation)
- arrange pencils from the longest to the shortest
- find from the provided coins 2.35 €
- Try on, select and motivate the choice of bracelet

#### **Park walk**

Person is standing in the middle of the park path. After covering eyes and turning around, he/she should complete one of the following tasks:

- Find a bench in the park and sit on it
- Throw the trash to the bin
- Collect a bouquet of flowers

#### **Clothes**

After covering eyes, person should:

- change socks from left leg to right
- hang the laundry on the dryer (at least 1 pair of trousers, T-shirt, 2 pairs of socks and underwear)

#### **General schematics**

After covering eyes, person should:

Sign in the left lower corner of 3 pages;

Take all the objects from the bag and put them inside another;

Break the chocolate bar into 5 equal pieces;



### Leading the blind partner

Lead the person with covered eyes through the path with: stairs, uneven surface, (e.g. cobblestones) narrow passage.

4. Shrank World - It is an on-line questionnaire ([Shrank World](#)) concerning general issues of the world like number of people speaking with given languages or suffering from malnutrition. To better understand the meaning of the answers the initial assumption is formed: "The whole world was reduced to a village of about 100 inhabitants".
5. Think over and DO - This is a combination of prototyping challenge and introduction to human oriented problem solving methodologies like Integrated Design or Design Thinking within the green area topic. The main task is to prototype a solution for the given problem that should take into consideration selected by the team group of receivers and specific condition of usage. Among the exemplary tasks are:
  - "propose the way to purify water"
  - "making fun of throwing rubbish"
  - "get rid of cigarette buds"
  - "beach party without litters"
  - "green transport"
  - "usage of roof tops"
  - propose the way to collect and transport water on high distance"

In case of each topic the selection of target group and initial constraints will affect the final solutions. While working with the first topic ("propose the way to purify water" ) the teams may think over such aspects as: scale of the solution (usage for one person or commonwealth) , type of water to purify (running water/lake water etc.), constraints related with surrounding or weather (solution for mountain tracks or city), users (their age, sex, hobby, customs) etc.

For the sake of that exercise the following set of prototyping materials can be selected:

- 2 cups
- 1 A4 paper
- 5 paper straws
- 5 paper clips
- 3 binder clip
- 2 paper coffee filters
- Piece of aluminum foil 500 mm
- 1 adhesive tape
- 5 rubber bands
- 5 barbecue sticks/skewers

The exact number and type of materials should be adjusted based on the experience of teacher and knowing students' abilities, nevertheless in all cases the materials that acts as binders (paper clips, rubber bands, etc.), supporters (straws, skewers, etc.) and surface fillers (paper, foil etc.)

6. Location related tasks - tasks and questions revealing the history, fun facts, touristic information directly in connection with the giving place





- a. Count the number of windows in building X
- b. List the number of animals presented on the monument?
- c. When was that location transformed into a museum?
- d. When was that location built?
- e. Which VIP is related to that location?
- f. What remarkable and useful landmark can you see from here?
- g. What sport club emblem is visible on the graffiti?
- h.

**Bonus tasks** – additional activities that can be done within the city game time limit:

1. (2,5 point) Make a Flying HIGH 5.
2. (5 points) Make a Flying High 5 with a stranger.
3. (2,5 points) Make a column - 3 members of a team standing one on another.
4. (2,5 point) Encourage strangers to do Fancy faces (take pictures before and after).
5. (2,5 point) Exchange clothes (et least 3 pieces) with each other, (take pictures before and after).
6. (2,5 point) One team member should stand on head keeping straight legs not touching any surface.
7. (2,5 point) 4 members of a team should make a pose but only one leg and two hands can touch any surface.
8. (2,5 point) Eat local special.
9. (2,5 point) Locate the whole team near the monument.
10. (5 points) Recreate the poses of the monument (take pictures of the monument and the pose).
11. (2,5 point) haiku (short poem with 5/7/5 syllables) concerning a given topic (e.g summer school).
12. (2,5 point) Calculate your lunch CO2 level here <https://myemissions.green/food-carbon-footprint-calculator/>.
13. (2,5 point) Take a photo of your dish.
14. (2,5 points) Buy a magnet related to the location of the city game.
15. (2,5 points) Take a photo of a team member in a phountain.



## Closing remarks

Not only the number and kind of tasks will affect the level of team tiredness but also availability of food/drinks, overall distance between the checkpoints, and the weather conditions. The recommended duration of the city game should be the resultant of following factors:

- Distance - it is wise to assume that although walking pace is about 5km/h the teams should be talking with each other, filling the **Whole game tasks**, sightseeing etc making that speed lower (rather 3km/h)
- Each challenge (like Water transportation or think over and DO) requires additional 15-20 minutes. Obviously such tasks can be done within a few minutes but teams will be working on their own so additional time is necessary to understand the task and elaborate the consensus solution.
- Lunch time requires 1-1.5 of additional time. Although it seems much exaggeration remember that eating will be the least time consuming activity, beside selecting right time to make a “meal break”, a type of food appropriate for all members, local, time of serving dishes (especially in case of tourist destinations) etc.
- Extreme weather conditions (rain, storm, heavy heat). There is no good approximation for such random occasions. It is wise to stay in contact with all the teams so as to limit the city game workload (number of checkpoints, type of tasks, location of finish line) in case of too harsh conditions

Planning the city game remember that it is a gamified activity so all bonus aspects will increase teams motivation as well as raise the overall reception of it. The extra content may include:

- possibility of getting free drinks/snacks etc. The easiest way is to arrange a password/key sentence with the given restaurant/shop that will give each time some amount of credit. Passwords can be easily distributed after fulfilling a given tasks or revealed at some checkpoint
- providing an initial set of materials but with no explanation of the reason for giving such objects. In that way the curiosity of teams may be boosted. In the case of planning the Bananometer task it is nice to confuse the teams by also adding other fruits or vegetables.
- providing a set of materials but without a division to tasks. In that way students are directly getting acquainted with the idea of sustainability-using the materials but remembering the future.
- Additional paths to explore that can be introduced as treasure map, collection of hints or even the bonus task related with exact location.