

ANNEX 01: DUAL GEOGAME WORKSHOP GUIDES

EXPERT WORKSHOP GUIDE

Title: "Which Mode is Better?"

Objective:

To calibrate and validate a game-based simulation model of Concepción by testing distinct urban mobility scenarios through a geogame. The aim is to generate an expert-informed, calibrated scenario for subsequent participatory planning stages.

Methodological Context:

- This geogame constitutes the first phase of a dual, interconnected strategy employing serious games to foster Socially Sustainable Active Mobility (SSAM) within a Sustainable Urban Planning (SUP) framework.
- Participants comprise urban planning and mobility specialists, tasked with exploring, testing, and critically evaluating the simulated transport modes and their spatial impacts.

Workshop Phases

1) Exploration and Calibration of the Game-based Simulation

- Visual and immersive walkthrough of the game Cities: Skylines.
- Experts identify and assess discrepancies in mobility networks, accessibility, and land-use representation.
- Model calibration is conducted based on spatial, demographic, and functional parameters.

2) Game-based Simulation and Evaluation of Mobility Scenarios

Scenarios: A) Base Scenario; B) Tram Intervention Scenario.

- Experts evaluate the feasibility, potential effectiveness, and spatial implications of each scenario.
- Real-time feedback and structured observations are collected.

3) Consensus-Building and Urban Strategy Co-Design

- Facilitated negotiation session to synthesise findings and propose integrated improvements.
- The refined scenario (Scenario B) is co-designed and formally integrated into the game-based simulation model.

4) Post-Geogame Reflection

- Critical discussion on the utility of the game-based simulation tool and the geogame methodology.
- Critical discussion on the utility of the simulation tool and the geogame methodology.

STUDENT WORKSHOP GUIDE

Title: "Which Scenario Works Best?"

Objective:

To co-create a post-pandemic Sustainable Urban Mobility (SUM) scenario (Scenario C) for the Collao neighbourhood, using the C:S simulation. This scenario will be informed by citizen-proposed alternatives and pre-calibrated, expert-informed simulations (Scenario B).

Methodological Context:

- This participatory activity forms the second phase of a dual, interconnected geogame strategy.
- The initial scenario is grounded in empirical data and expert input, aiming to foster Socially Sustainable Active Mobility (SSAM) through collaborative design.

Workshop Phases

1) Introduction to the Geogame and Game-Based Simulation in Cities: Skylines

- An introductory briefing on the geogame strategy and key concepts of SUP and SSAM.
- Presentation of the expert-informed baseline (Scenario B).

2) Immersive Exploration of the Game-Based Simulation

- An introductory briefing on the geogame strategy and key concepts of SUP and SSAM.
- Presentation of the expert-informed baseline (Scenario B).

3) Decision-Making Exercise

- Participants assume the role of strategic planners.
- In groups, they propose and justify interventions to enhance active mobility within the scenario.
- Consideration of the ethical, social, and practical implications of planning decisions is encouraged.

4) Collaborative Design of Scenario C

- Groups or individuals propose specific redesigns to the urban fabric.
- Scenario C is co-created collaboratively by integrating the proposed changes into the game-based simulation.

5) Reflection and Discussion

- An introductory briefing on the geogame strategy and key concepts of SUP and SSAM.
- Presentation of the expert-informed baseline (Scenario B).

6) Post-Session Survey

- A survey structured into seven thematic sections:
 - A) Game-based simulation Experience
 - B) Role and Decision-Making
 - C) Critical Thinking and Learning
 - D) Collaboration and Participation
 - E) Transformative Experience
 - F) Scenario Comparison
 - G) Overall Evaluation

Utilises a Likert-type scale (1 = Strongly Disagree; 5 = Strongly Agree) supplemented by open-ended qualitative questions.