

# ANNEX 01: DUAL GEOGAME WORKSHOP GUIDES

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## 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.

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### **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.
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### **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.
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## **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).

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### **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.
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### **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.