

An amazing way to develop sustainable cities concept in the citizens of the future

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DIGITgame is a project founded by the E.U. in the framework of Erasmus+ program. The project intends to improve scientific skills and competence through more effective, innovative teaching methods. The strategy, elaborated by the project Consortium of Italian, Turkey and England partners, to reinforce learning skills is based on Smart City projecting actions by the development of a didactic minigame with challenges based on the scientific concepts acquired.

The core idea is to involve students in projecting a city "smart", designed as a minigame-challenge, focused on main crucial elements called "smart city assets".

Variables constitute the "ecological framework" characterized and managed by the sustainable chooses and equilibrium on **Assets** use.

Assets and Variables are didactically referred to some basic concepts closely interlinked:

-CO₂ and energy balance (green transports/solar panels/recycled stations)

-The role of plants in this balance

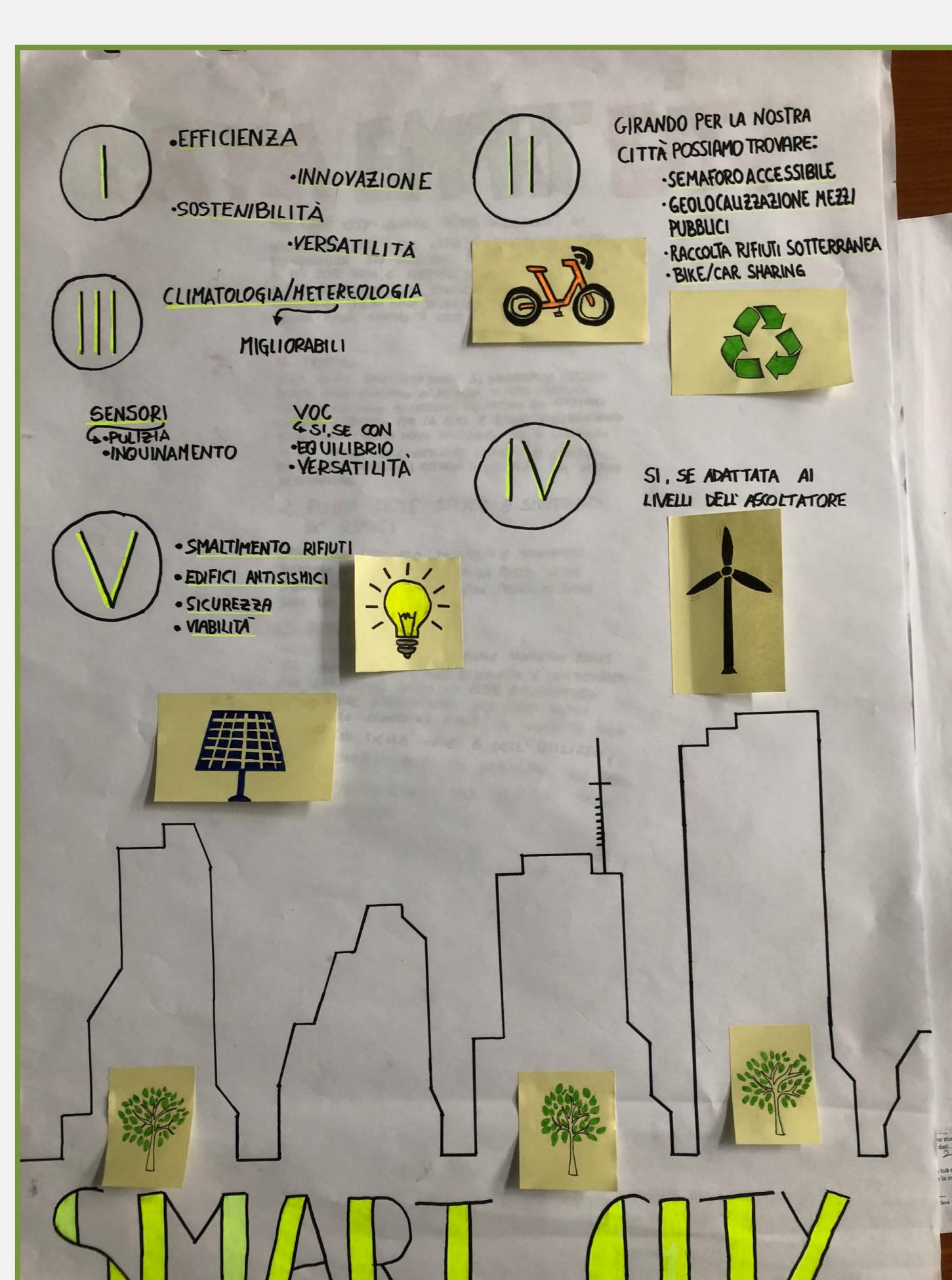
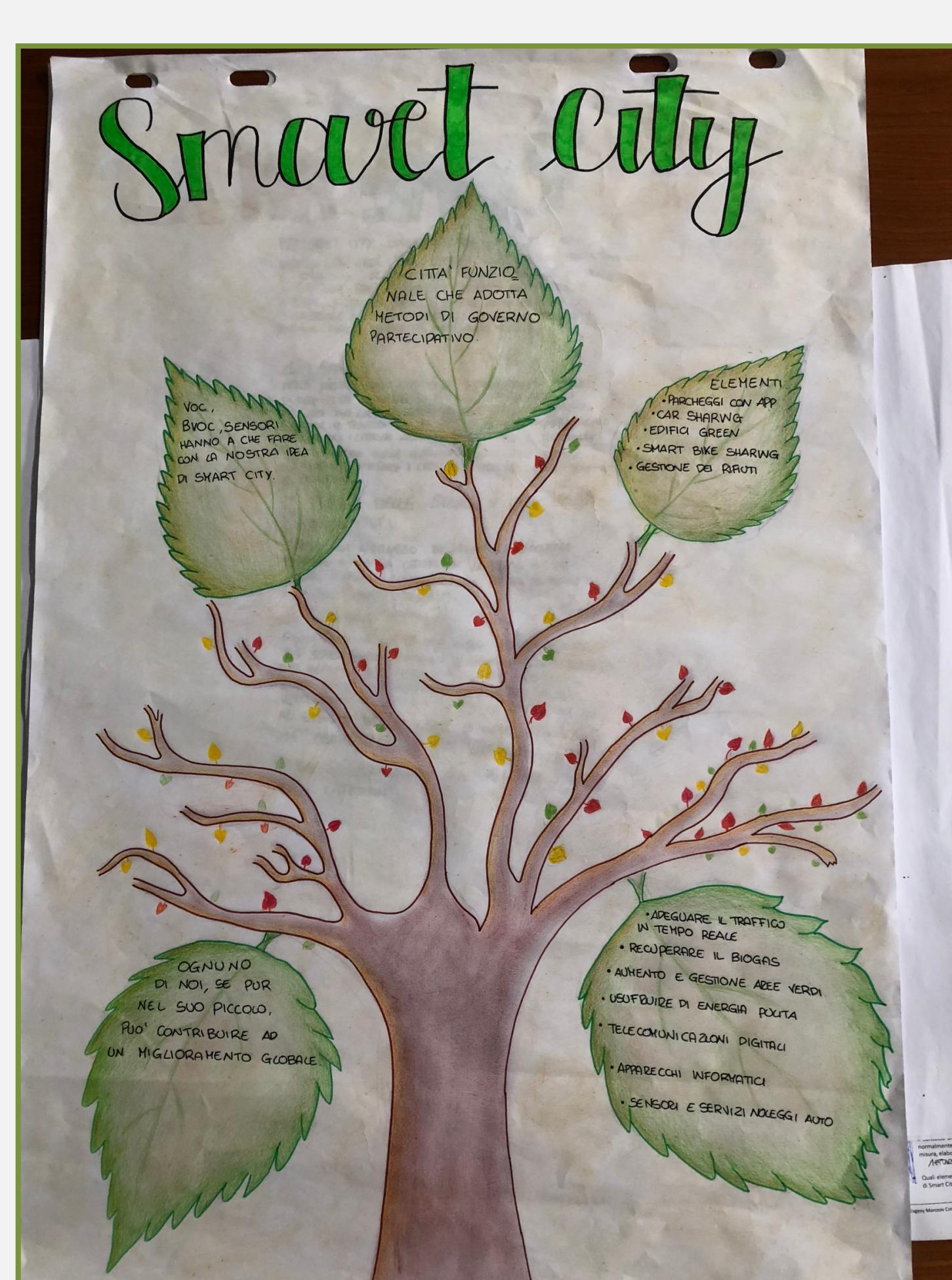
- evaluation of urban plants growth conditions (trees/weather/stations/climate/smart buildings/industrialization)

VARIABLES	ASSETS
Climate - Three Types: Dry and windy / Hot and humid / Humid and cold (no seasons - yearly average)	Recycle Stations (they will buy and place them once the answer some questions) – related to Smart City
Industrialization - Three Types: Low / Medium / High	Trees (10 from Italy - 10 from Turkey) (some features of assets will be set as unchangeable) – related to VOC
Level of Green: Low / Medium / High	Weather Stations: One basic - One more advance (students will answer questions to modify their station from basic to advance)
Green Transport: Yes or Not	Questions about green transport and cars to increase money or score
	Solar Panels (the energy that is produced increases the score. The solar panels have to be buy)
	Smart Building (elements – for a fee - to build the house to increase the score and happiness)



The challenge is to balance economical aspects (game score and coins) and ecological level (happiness) in designing a green city. **Score**, **coin** and **happiness** values of each assets are defined by the students after **thematic frontal classes** with experts on each single game asset.

The project aim is to involve students by gamification in **deepening urban ecosystem equilibrium** and at the same time crate a **consciousness in young citizens** and future urban manager and policy makers.



Lessons were unconventional and the experts selected in a more wide E.U. Context (LIFE project MOTTLES).

Students take the core idea of the project summarizing the acquired knowledge and underlining the links between different concepts and solutions.