

Intellectual output 3. Educational support content targeting instructors

Learning sheets for HERA activities

Enhancing arts and sports

Topic: arts, sports, culture, quality of life

Introduction

Culture provides important social and economic benefits. With improved learning and health, increased tolerance, and opportunities to come together with others, culture enhances quality of life and increases overall well-being for both individuals and communities.

This activity simulates the design of a city in which cultural experiences can thrive as a result of effective urban design and quality of life. Students are challenged to design a city that offers opportunities for leisure, entertainment, learning, and sharing experiences with others.



Figure 1. The scenario starts with a new city in which students are called to introduce cultural services.

Context



Figure 2. The initial city that students are called to work on includes residential buildings and parks.

The activity is designed for deployment in wider learning contexts that combine both engineering and economics principles. The simulator is open-ended and allows students to experiment with their own solutions towards achieving the scenario goals.

Participants can assume 1 of 2 foreseen roles. They have a common goal as well as individual goals. The common goal of the

Intellectual output 3. Educational support content targeting instructors

Learning sheets for HERA activities

participants is to create a cultural scene, with enhanced arts and sports. The individual roles and their objectives are:

Role 1: The arts enhancer



Figure 3. The art enhancer introduces cultural services such as museums and educational organizations.

The art enhancer aims at increasing culture activities in the city. The player achieves this by building museums, educational organizations, including schools and universities, and more.

These services promote quality of life in the city and well-being, which makes the city a happier place.

Role 2: The sports enhancer

The sports enhancer aims at increasing sports activities in the city. This player is responsible for building and configuring all athletic stadiums aiming in the best physical situation of the people.

The following figure demonstrates the roles and the interactions between them.



Figure 4. The sports enhancer aims to increase sports activities.

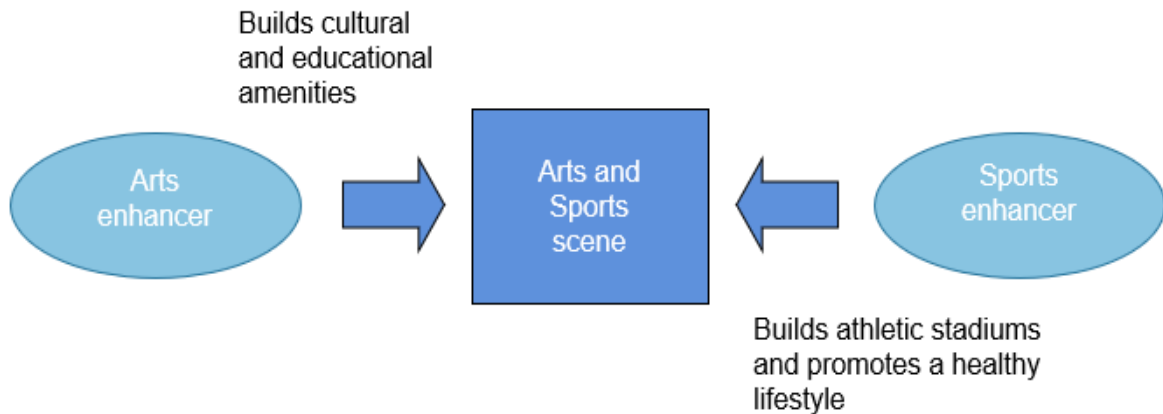
Intellectual output 3. Educational support content targeting instructors**Learning sheets for HERA activities**

Figure 5. Roles, actions, and interactions.

Learning goals

Upon completion of the activities students will:

- Understand and apply concepts related to arts for promoting quality of life.
- Understand and apply concepts related to sports for promoting a healthy lifestyle.
- Have enriched their critical thinking skills, collaboration capacity, independent research skills, and innovative thinking.

Prerequisites

The activity can be introduced to students with minimum pre-required information. It self-contained and all concepts may be introduced by the teacher during briefing. The student needs only to have the curiosity to design a city environment that will make arts and sports flourish.

The activity may be deployed in wide contexts in engineering, economics, and more.

Audience

Culture is relevant to both computer engineering and economics students. Cultural engineering's growth is linked to the development of art and culture, the

Intellectual output 3. Educational support content targeting instructors

Learning sheets for HERA activities

professionalization of its actors, and the growing integration of cultural processes and projects into social-economic continuums.

It integrates art and human genius into a complementary and interdependent approach, necessary for creative, production, infrastructure, organization, and political issues.



Figure 6. The activity addresses engineering and economics students, but may be deployed in broader contexts.

Core concepts

- **Culture:** Arts and other manifestation of human intellectual achievement. In the context of this scenario, culture refers to all activities that promote education, expression, arts, and athletics and foster a high quality of life.
- **Transversal skills:** Collaboration, critical thinking, analytical thinking, innovative thinking.

Description of the scenario



Figure 7. Students are challenged to think creatively to enrich cultural and sports activities that promote well-being.

The scenario encourages students to think of creative ways through which they can create a flourishing environment in their city. To achieve this goal, students need to work collaboratively. The work is divided into roles, none of which has the capacity to achieve all goals individually. However, collectively the team members have all the capabilities required for succeeding in the scenario objective of building an

environment with enhanced arts and sports. This requirement for collaborative work makes the scenario challenging and prepares students for their future professional roles in multidisciplinary teams.

Students are encouraged to experiment with the scenario city, which is pre-built. They are allowed to alter the pre-built city, introducing additional services such as educational

Intellectual output 3. Educational support content targeting instructors

Learning sheets for HERA activities

buildings, internet connectivity, energy plants, fire stations, police stations, health providers, businesses, industry, and more. By adding new elements in the city, students make it more attractive and increase the economic activity towards achieving their collective team objectives for arts and sports enhancement.

Suggested class activity

1. The teacher introduces the HERA game. The teacher then introduces the scenario objectives and the individual role objectives.
2. Students break into teams of 2 individuals, each of whom assumes one of the foreseen roles.
3. Team members brainstorm in order to understand the problem and the parameters within which they have to work. Students are encouraged to come up with as many ideas as possible through brainstorming. Techniques of design thinking could be used for promoting innovative design and the introduction of a human-centered solution that address actual needs of city citizens.
4. Each student logs into the game. Team members individually use the resources available to them and the role capabilities as these are defined in the game scenario to build city infrastructures and services for achieving their individual objectives.
5. The students discuss the game results and their roles; the teacher gives feedback.
6. The teacher may introduce questions for initiating class discussion, such as:
 - What would happen if the city included more businesses?
 - Would you choose a different city plan, and how would the city plan affect economic activity?
 - How would you attract more inhabitants into the city? What services would be desirable, leading to higher city population?
 - How would you measure the happiness of the inhabitants?

Intellectual output 3. Educational support content targeting instructors

Learning sheets for HERA activities

- Does culture and education add to the scenario and promote arts and sports as a result of higher quality of life?

Assessment methods



Figure 8. Students are challenged to think of the benefits of different city plans.

This is a collaborative, open ended activity in which not a single solution exists. The purpose of the activity is to encourage students to think of creative ways to design city services for promoting arts and sports. Self-assessment would offer students the benefit of taking responsibility of their learning. Students may discuss their roles within their group and reach a decision on whether and to what degree they achieved

their goal. Students may further present their solution to the entire class receiving evaluation from their peers. Finally, the class may decide on the more creative solutions among all teams.