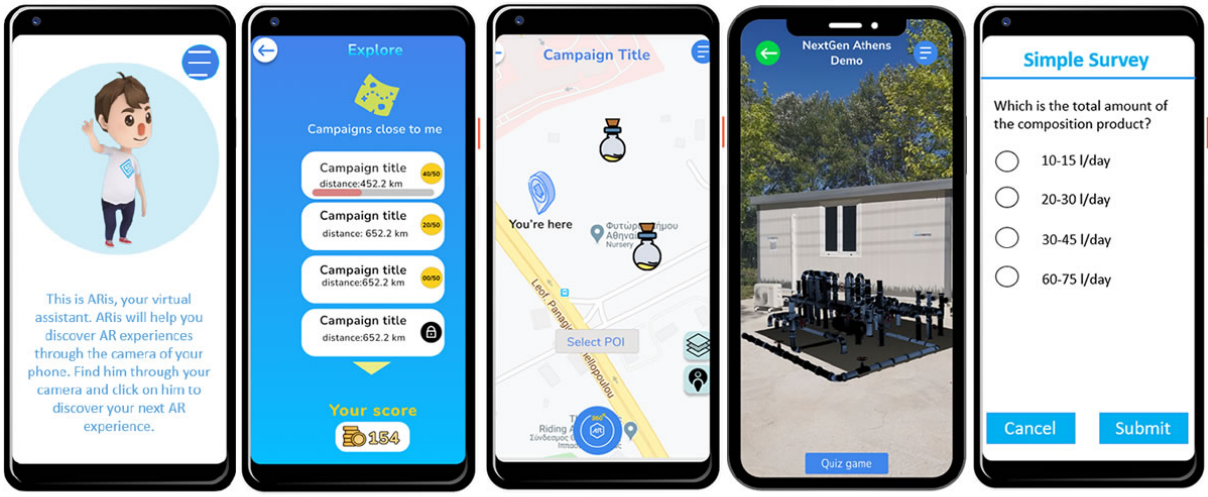
Product factsheet

MobileAR solution for citizen engagement towards CE approach

Software solution



Description

The AR application (CircuIAR) used in this study is developed in the NextGen project's framework (H2020) to improve citizen awareness and engagement towards CE principles. CircuIAR is compatible with Android smartphones and requires Global Positioning System (GPS) tracking as it supports both marker and location-based applications to overlay the digital data. The digital data consist of single image and video reveal, image gallery and multiple videos, and static three-dimensional (3D) models.
The mobile application user can use finger gestures for object manipulation (both rotation and positioning) on their smartphone's touch-based display. A virtual assistant guides the user, and gamification and learning elements ensure a captivating and fun yet educative and engaging experience. Surveys and quiz questions embedded in the AR experiences challenge the user's understanding and provide feedback to enhance the process's learning effectiveness.

Target audience

Researchers, students

Actors, their roles and interactions

CircuIAR will guide the user based on input data in the following categories: (a) Components of the physical system. (b) Flows of water, energy, and materials. (c) Actors involved, including water utilities, industries, technology providers, end-users, and (d) Roles of the actors and their interactions. This is achieved through the AR app, enabling the users to retrieve the most relevant content related to their profile, specific search and show the tangible and intangible elements of the NextGen innovations. The goal is to inform key stakeholders on the necessity of circular water interventions and the goals of NextGen as a whole; to inform and engage stakeholders in specific tasks of NextGen related to each pilot and the participation of end-users in it; to inform key stakeholders on the technological aspects of each pilot and the needs of the end-user; to engage the participants on integrated circular water frameworks, in order for them to be able to: (a.) identify their role in the circular water value chain, (b.) reflect on their part in the general picture of integrated circular water management; and to promote the idea of circular water interventions as part of a broader water-aware policy to key authorities and legislative bodies to ensure efficient and long-term solutions for all users.

Unique selling points

Although the app is based on specific demonstration sites and influenced by their major local characteristics of interest regarding water in the CE, on the other perspective is generic enough to be played beyond these cases.

The circular approach of water resources is considered by citizens, worldwide, as a viable means of sustainable management of urban water resource cycles. Due to climate change and extreme weather phenomena more citizens are affected by environmental issues. The CircuIAR app is a user-friendly app, that provides the citizens with the opportunity to participate in a learning process about the innovative and transformational circular economy solutions and systems that challenge embedded thinking and practices around resource use in the water sector.

Technical requirements

CircuIAR app currently runs on smartphones running Android Oreo or higher. To ensure that the AR app is installed on your mobile device, allow the app to be installed from Unknown Sources in Android or “trust” unknown sources. The user should allow location and camera settings while using the app.

Software data

- Version: CircuIAR_0.006 (Last update: 2021-03-20)
- Initial release: 2020
- Operating environments:
  - SaaS - Web application
  - Android
- License type: Commercial

Publications

- Testing AR to increase public engagement in water reuse
- Testing Augmented Reality To Increase Public Engagement In Water Reuse

Technologies applied by the product

- **Energy recovery technologies**
- **Nutrients/Material recovery technologies**
- **Water recovery technologies for water reuse**

Costs

Free demo (non-commercial use)

Technology Readiness Level

Level 6 (Last update: 2021-03-20)

Case Study applying the product

Athens, Greece

https://mp.watereurope.eu/d/CaseStudy/1

Related tags

rethink | communities of Practice | engagement | innovations | interdisciplinary | participatory approaches | IT