The aim of c-Space is to create new technologies aiming at supporting creativity processes. The 3D reconstruction framework of c-Space leverages on videos recorded with mobile devices for the creation, in nearly real-time, of a continuously evolving 3D model (3D plus time) of the corresponding real scene. The adaptive and affective content access module helps the creative process by reducing the time needed to find the appropriate and at the same time increasing its quality. It relies on affective computing to detect emotions, which in turn help creators to iterate and improve the quality of their design. Lastly, c-Space introduces also new visual paradigms based on interaction with pico-projected content. In contrast to traditional augmented reality strategies that require the user to wear head-mounted displays, mobile content projections are not limited to users wearing the AR devices and path new way in the augmentation of the surrounding environment with new scenarios for collaborative experience.

**S&T OBJECTIVES**

- **Objective 1:** To allow interactive near real-time 3D reconstruction of real scenes from pictures and live video streams coming from multiple users.
- **Objective 2:** To deliver a mechanism based on crowdsourcing that promotes reconstruction of 3D scenes for different creative purposes.
- **Objective 3:** To ensure the very high-quality visualization of content within an Augmented Reality application for portable devices (smartphones, tablets) that accounts for real geometry of surrounding space.
- **Objective 4:** To deliver a more immersive experience and create new visual computing paradigms based on interaction with content projected in the real environment that surrounds the user.
- **Objective 5:** To facilitate intuitiveness and user friendliness through a dialog-based interaction founded on affective computing paradigms.
- **Objective 6:** To develop a system that can be run on consumer mobile technology, either already available today or that is set to reach the market shortly (e.g., pico-projectors).
- **Objective 7:** To define a business model that can ensure low-cost 3D modelling software as a service, thus allowing cost-effective, IT-asset-free operations, facilitating adaptation to varying market demand.
- **Objective 8:** To develop low-level technology that is then further specialized to respond to requirements of individual creators as well as specialized SMEs in 3 domains: architecture, advertisement, cultural tourism.
- **Objective 9:** To demonstrate c-Space in the following real life scenarios with involvement of the following SME partners of the project.

**TIMELINE**

- **KICK-OFF:** November 2013
- **4D RECONSTRUCTION:** January 2015
- **AFFECTIVE CONTENT:** April 2015
- **WEB API:** July 2015
- **AR APPLICATIONS:** October 2015
- **1ST PUBLIC RELEASE:** January 2015
- **END OF PROJECT:** May 2016

**CONSORTIUM**

Dr. Raffaele De Amicis  
Project Coordinator  
Office: +39 0461 283395  
Fax: +39 0461 283398  
Mobile: +39 3316 104569  
coordinator@c-spaceproject.eu

**PARTNERS**