

Titolo presentazione

La Resilienza delle città: Il Progetto RECIPE,
REsilience in art Clties: Planning for Emergencies



SAPIENZA
UNIVERSITÀ DI ROMA

Sapienza per la città intelligente

un processo di condivisione di contenuti, conoscenze, tecnologie
e progettualità, forme e modi dell'agire sociale per le città del
futuro.

RECIPE PROJECT Take Off

Two days ago on 23rd of May in ESA-ESTEC has been held the
Negotiation Meeting/Kick Off of the project
RECIPE Project is going to become one of the ARTES20-IAP
Projects funded by ASI and under ESA Management



The Team



The Advisory Group



- ASI,
- ESA,
- Mibact,
- X Municipio (sede del proof of concept),
- Parco archeologico di Ostia Antica,
- Comune di Prata d'Ansidonia,
- Università dell'Aquila

The Need

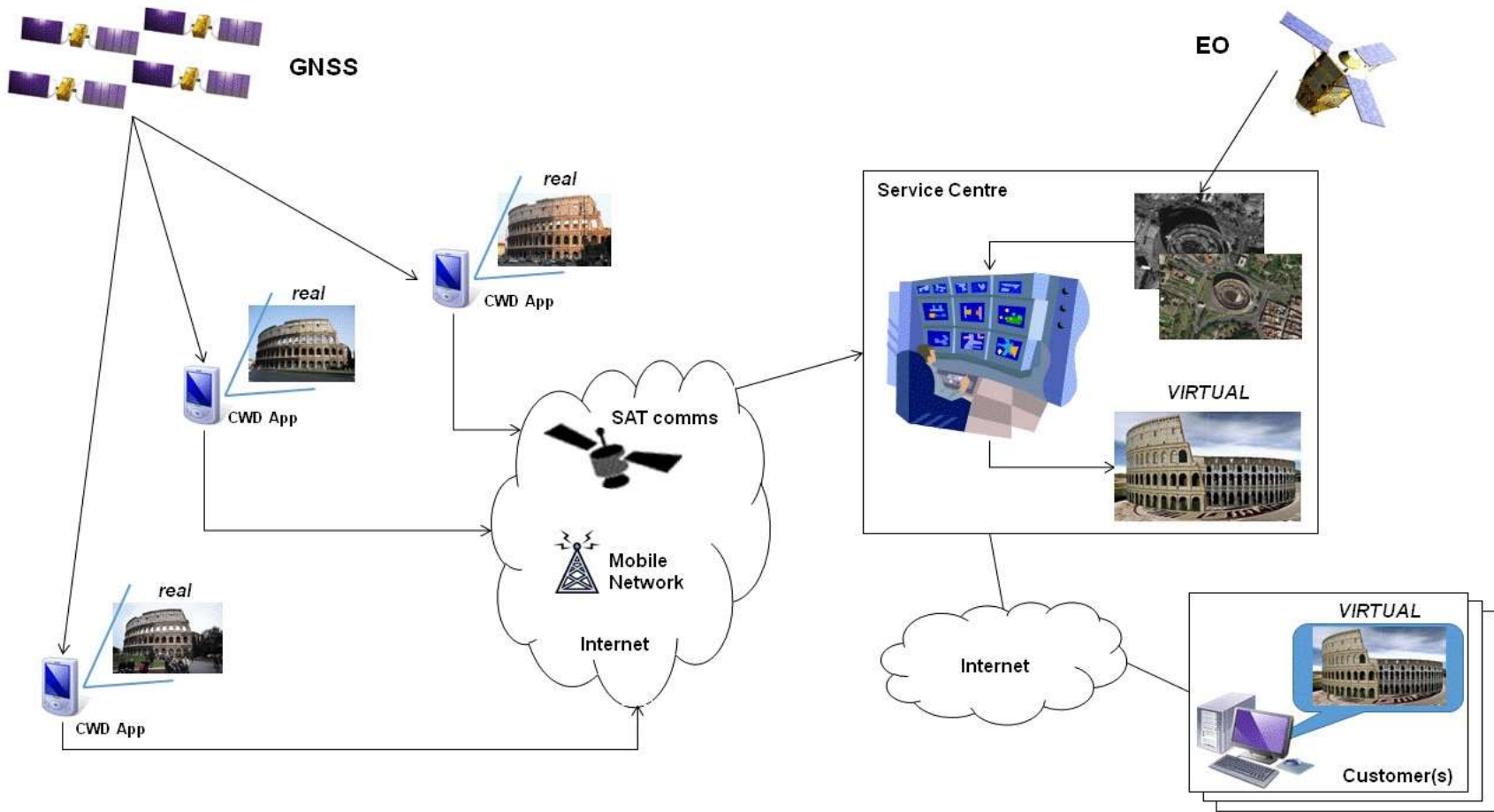
To support the resilience of our historical heritage

- The need of 3D models of monuments, cultural sites and buildings is clear among the archaeological community since many years but it arose at the public opinion attention after the recent recapture of the city of Palmyra the UNESCO world heritage site when began the process of evaluation of the damages caused by the battles and the intentional disruptions of Daesh fighters.
- Similar considerations can be done for the town of Amatrice, Norcia, Accumoli and many others in the central Italy after the dramatic series of Earthquakes which stroke the area.
- 3D models retrieval is today worldwide limited to main monuments and buildings, and their updating are often not performed because the relatively high cost of measurement campaign and processing.

The Service

- The Project will develop and introduce a low cost and innovative service for the provision of 3D model of Cultural Building and Artifacts (e.g. statues or obelisks, ect...), enabled by EO Satellite Images and Digital Photos, taken by portable communication devices like commercial Tablets or Smartphones, geo-referenced through the inside GNSS positioning capability.
- All the collected data (geo referenced ground photos from commercial devices and satellite Images) are inputs of some COTS Software, (more than one solution are currently available in the market, including Open Source solution), which will be installed at a Service Centre. The SW shall select the useful photos to recover the 3D model of the building or artifact.
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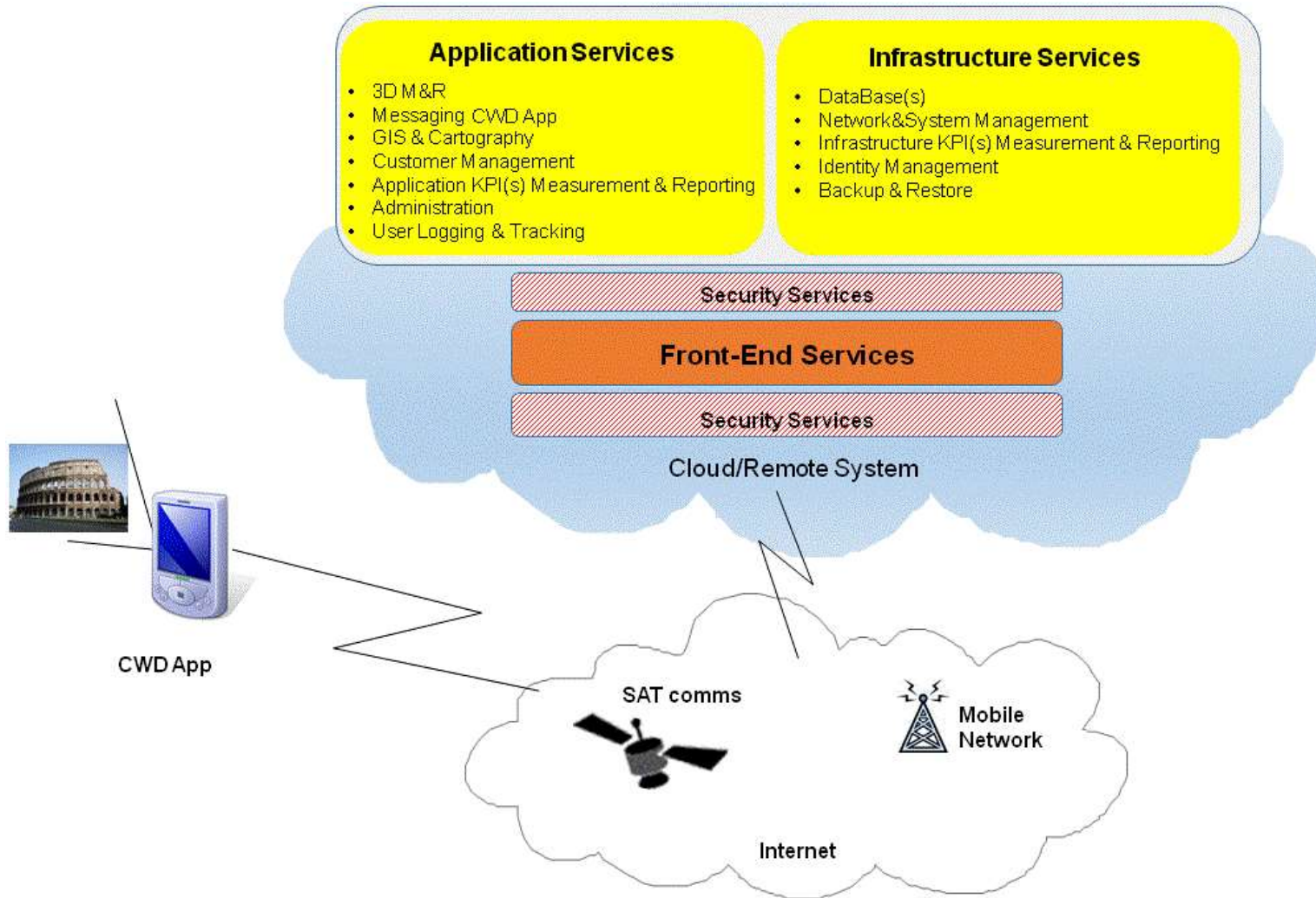
The concept



Satellite Technologies exploitation

Space Asset	Specific Service	Benefits
EO	High resolution Satellite Images	The possibility to produce realistic and usable 3D model from digital photos is enabled by using satellite Images to provide horizontal basic geo-referenced information of the artifact to be modelled. The possibility to use high quality geo referenced raster map from satellite Remote Sensing is one of the Pillar of RECIPE project.
Navigation	Galileo Open Service/ Commercial Service	The possibility to geo-reference, through GNSS inside the tablets or Smartphones, the photos taken by crowdsourcers speeds up the elaboration process, delivering more a better 3D model.
Communication	SatCOM service	During the project the development of tools for professionals will be explored, in particular for archeologists. Since expeditions are conducted in remote areas, satellite communication are one of the suitable mean to guarantee a seamless channel. The possibility to send and receive results live increase the effectiveness in the utilization of time and resources.

Preliminary High Level Architecture



GRAZIE PER L'ATTENZIONE

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