



# 3D & Cultural Assets



## Cultural Assets ?

Painting  
Statue  
Building  
Museum  
Books  
Church  
Monuments  
Archaeological Site  
.....



## Cultural Assets Problems ?

- Conservation
- Restoration
- Accessibility
- Usage
- Re-use
- Reconstruction
- Cross collection
- .....



## 2D or 3D ????????

- In real life we see in 3D.
- Books, newspapers, photos, paintings are mainly limited to 2D.



## 3D & Cultural Heritage



### Perspective

**14 Century & Renaissance  
Mathematical basis**

## 3D & Cultural Heritage



### Depth

**The other side**

**The Lighting**

## 3D & Cultural Heritage

**Accessibility**

**Virtual Museum**

**Physical accessibility**

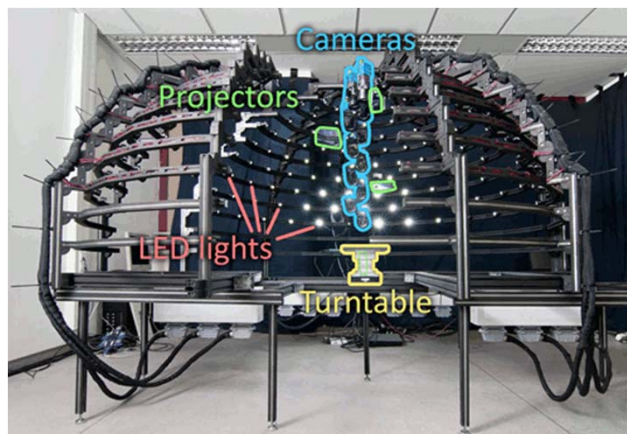
**Catacombs (ROVINA projects)**



Research and  
Innovation

## 3D & Cultural Heritage

**Practically how do we do that?**

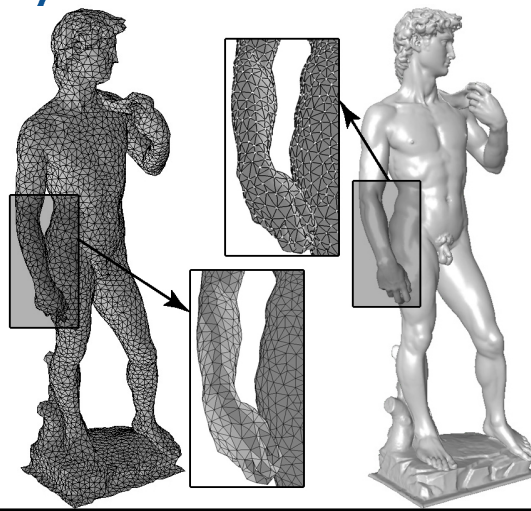


Research and  
Innovation



## 3D & Cultural Heritage

Practically how do we do that?



## 3D & Cultural Heritage

Practically how do we do that?





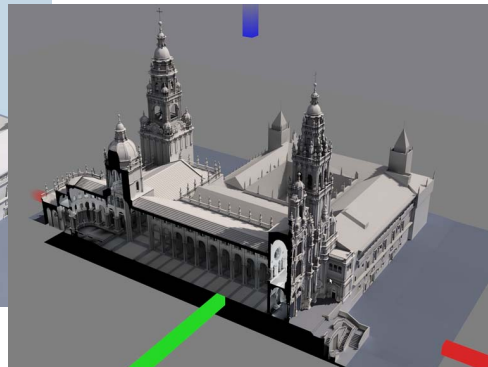


## 3D & Cultural Heritage

### Practically how do we do that?



[http://videalab.udc.es/en/3dv\\_cathedral](http://videalab.udc.es/en/3dv_cathedral)

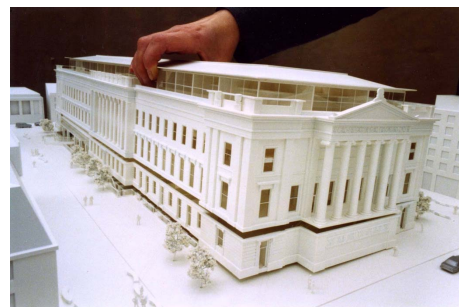


Research and  
Innovation



## 3D & Cultural Heritage

### 3D PRINTING et COPYRIGHTS



Research and  
Innovation



## H2020 - Reflective 7 a

### a) RESEARCH ON COST-EFFECTIVE TECHNOLOGIES FOR ADVANCED 3D MODELLING TO ENHANCE THE UNDERSTANDING OF CULTURAL HERITAGE – Research and Innovation actions.

#### Target:

- New methods and tools for automated 3D modelling and analysis of physical cultural resources and assets beyond simple digital reconstruction. High-fidelity models of objects (surface; transparency; dimensions etc.)



Research and  
Innovation



## H2020 - Reflective 7 a

### a) RESEARCH ON COST-EFFECTIVE TECHNOLOGIES FOR ADVANCED 3D MODELLING TO ENHANCE THE UNDERSTANDING OF CULTURAL HERITAGE – Research and Innovation actions.

#### Potential areas:

- consolidation of imperfect data,
- spatio-temporal analysis,
- modelling/simulation of material degradation,
- joint reconstruction within and across collections,
- semantic-aware representation



Research and  
Innovation

16





## H2020 - Reflective 7 a

### **a) RESEARCH ON COST-EFFECTIVE TECHNOLOGIES FOR ADVANCED 3D MODELLING TO ENHANCE THE UNDERSTANDING OF CULTURAL HERITAGE – Research and Innovation actions.**

**Work should facilitate:**

**Creation of high-fidelity models of challenging features (transparency, size...)**

**This should be validated by testbeds with regards to the practical application and analytic potential of the new models for research, interpretation, scholarship and innovation in curation and dissemination.**

**This should lead to a better understanding of European tangible cultural assets by researchers and citizens.**

Research and  
Innovation

17



## H2020 Reflective 7 b

### **b) DEVISE STANDARD FORMATS FOR THE SEMANTIC-AWARE 3D MODELLING OF EUROPE'S CULTURAL HERITAGE FOR RESEARCHERS AND PRACTITIONERS – Coordination and Support actions.**

**Target:**

- **Extend or develop standard formats of 3D semantic-aware objects with a view to improve their archiving and reusability.**
- **The proposed formats should enable easy exchange and use of 3D models that have been acquired or generated by a wide range of devices or software.**

Research and  
Innovation

18



## **H2020 - Reflective 7**

**Budget: 14 M€ (a+b) with a max of 2M€ for b.**

- a) Research and Innovation actions.**
- b) Coordination and Support actions.**

### **CALENDAR**

**Reflective 7: 3D**

**Publication date: 11/12/2013**

**Deadline: 30/09/2014 at 17:00 Brussels time**



## **H2020 Research and innovation actions**

**Description:** Action primarily consisting of activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service or solution. For this purpose they may include basic and applied research, technology development and integration, testing and validation on a small-scale prototype in a laboratory or simulated environment.

**Projects may contain closely connected but limited demonstration or pilot activities aiming to show technical feasibility in a near to operational environment.**  
**Funding rate: 100%**



## H2020 Coordination and support actions (CSA)

**Description:** Actions consisting primarily of accompanying measures such as standardisation, dissemination, awareness-raising and communication, networking, coordination or support services, policy dialogues and mutual learning exercises and studies, including design studies for new infrastructure and may also include complementary activities of strategic planning, networking and coordination between programmes in different countries.

**Funding rate: 100%**



21



### **Creativity website:**

**[http://cordis.europa.eu/fp7/ict/creativity/creativity\\_en.html](http://cordis.europa.eu/fp7/ict/creativity/creativity_en.html)**

### **Digital Agenda for Europe:**

**<https://ec.europa.eu/digital-agenda/en/creativity-media/cultural-heritage>**

### **Connecting Europe Facility:**

**<https://ec.europa.eu/digital-agenda/en/connecting-europe-facility>**

### **Info Day (23 January 2014)**

**[http://cordis.europa.eu/fp7/ict/creativity/call1-infoday\\_en.html](http://cordis.europa.eu/fp7/ict/creativity/call1-infoday_en.html)**

**emails: CNECT-digicult@ec.europa.eu  
CNECT-Creativity@ec.europa.eu**

**Twitter: @digicultEU & @ICTcreativityEU**



22

## 3D & Cultural Heritage

