

An Introduction to the Tuscan Technological District on Cultural Heritage and the Sustainable City

June 2013



A Triple Helix



The mission of the Tuscan Technological District on Cultural Heritage and Sustainable City: coalescing entrepreneurial, research and societal forces around:

- a) A vast cultural and landscape heritage and a large system of research applied to this heritage
- b) A distinguished tradition of a good life-style where cultural heritage is part of the identity of communities
- c) Active and healthy artisan capabilities and growing SMEs-research relations

The Tuscan heritage: Behind and beyond the beauties

UNESCO World Cultural Heritage Sites

- *Centro Storico di Firenze* (1982)
- *Piazza del Duomo di Pisa* (1987)
- *Centro Storico di San Gimignano* (1990)
- *Centro Storico di Siena* (1995)
- *Centro Storico di Pienza* (1996)
- *Val d'Orcia* (2004)

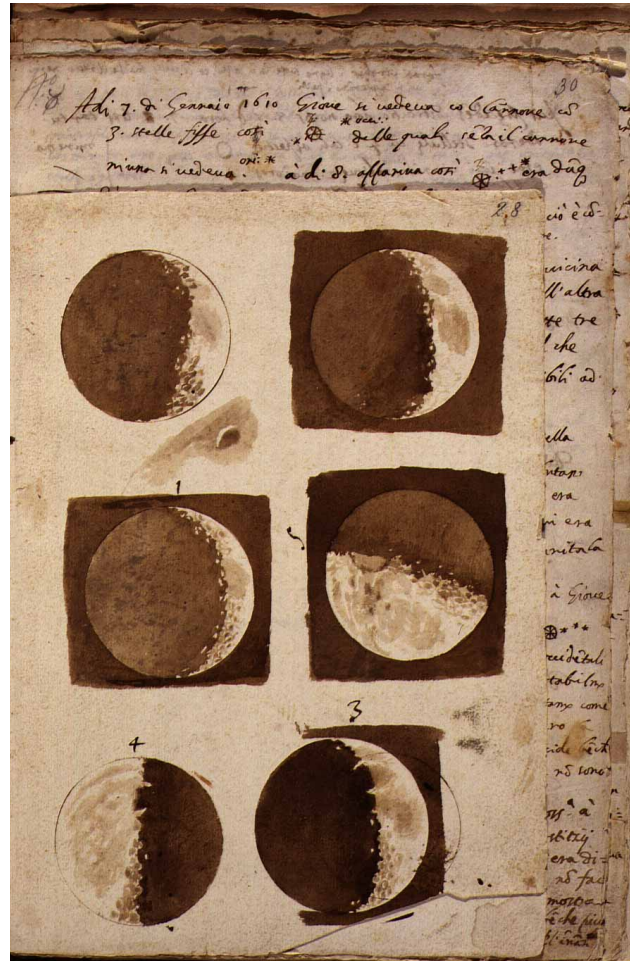


UNESCO SITE "VAL D'ORCIA"

.... A human and holistic approach to arts, science, and society ...



David
by
Michelangelo
Buonarroti



Moon drawings
by
Galileo Galilei

Tuscany Grand duchy



**1786 abolition of the
Death penalty
for any crime
in the Grand Duchy of
Tuscany**
– the first State in the
world to abolish capital
punishment

... Which in present times means: hard sciences and material know-how for conservation of CH ...

In reaction to the flood in Florence in 1966, the establishment of the systematic combination of hard science and artisan skills applied to the restoration of cultural heritage



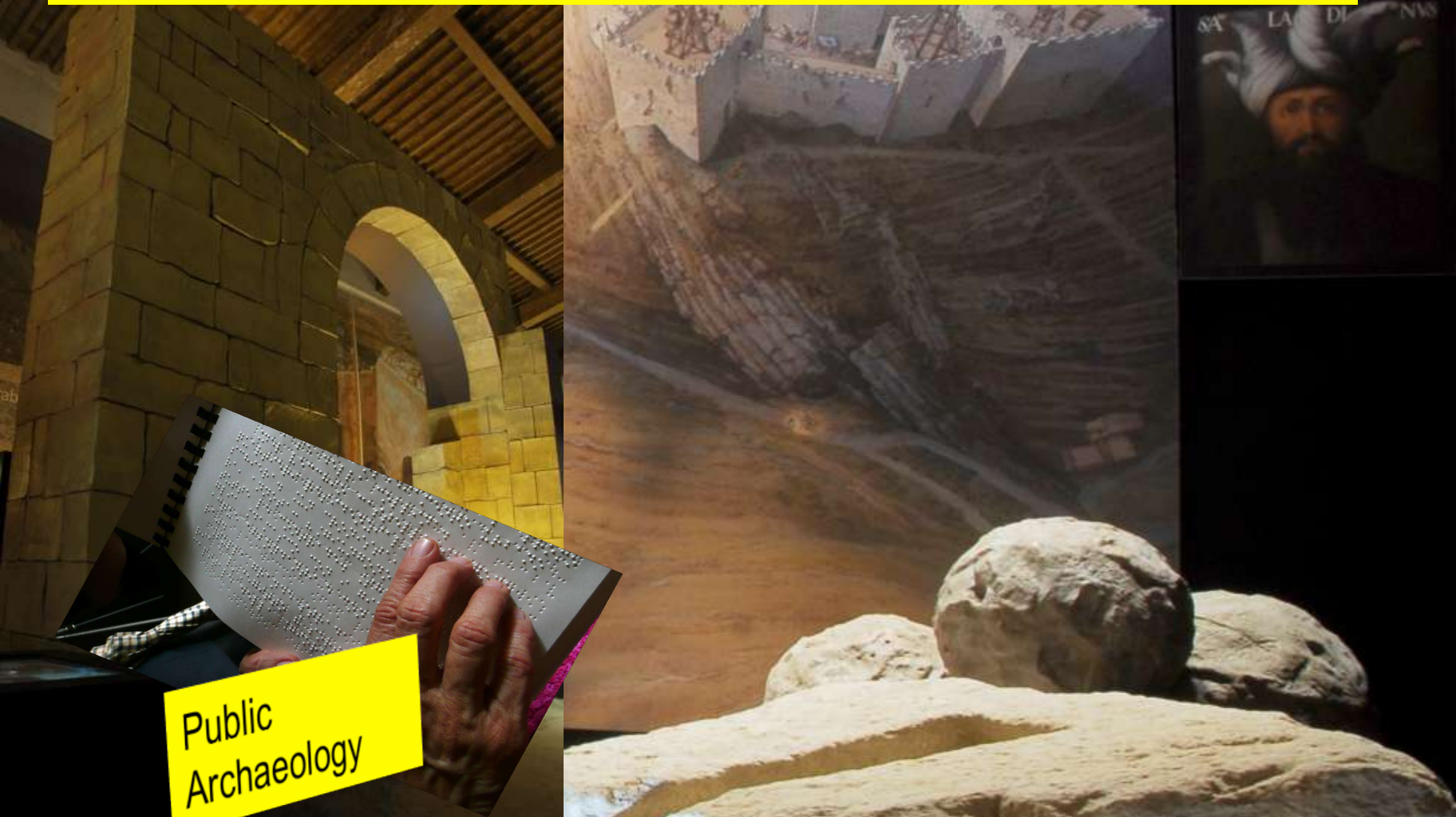
Polis è una operazione finanziata nel quadro del POR FESR Toscana 2007-2013 e PAR FAS 2007-2013



... but also Social engagement in Cultural Heritage ...

From communication to development

International Exhibition *From Petra to Shawbak*. 2009, Florence, Palazzo Pitti
(www.frontierarchaeology.eu)



... and an integrated view of a Europe with its many languages
and different cultures



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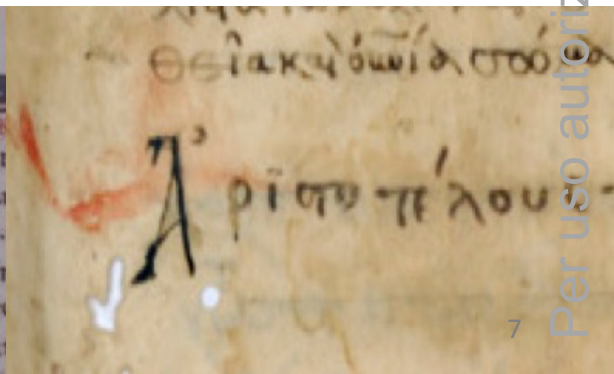
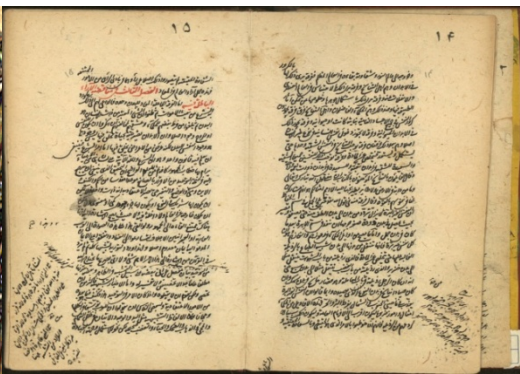


GRAL
CENTRO PER LO STUDIO DELLA TRASMISSIONE
DEI TESTI FILOSOFICI E SCIENTIFICI
DELLA TARDA ANTICHITÀ
AL MEDIOEVO ISLAMICO E CRISTIANO
(DAL GRECO AL SIRIACO, ALL'ARABO E AL LATINO)


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In regards to production and enterprise / 1

The Tagliacarne Institute (2009) has mapped the productive activities more related to the application to Cultural Heritage into 5 clusters (based on the ISTAT classification of ATECO codes at 4 digit level):

- Heritage and cultural activities (regulatory bodies on cultural heritage, cultural and educational organizations, museums)
- Creative Industry (publishing, audiovisual, multimedia)
- Food and wine as typical products
- Industrial and artisan productions related to conservation and fruition of artistic goods
- Architecture, design and construction-rebuilding activities related to monuments

(Istituto Guglielmo Tagliacarne (2009). *Il sistema economico integrato dei beni culturali* Roma: Unioncamere e Ministero per i Beni Artistici e Culturali)

In regards to production and enterprise / 2

An estimation of the Tagliacarne Institute (2009) in Tuscany on the entity of economic activities related to cultural heritage (see above - tourist industry and mobility sector *excluded*):

- Added value of about 11 billion euro (12.8% of the national total)
- Occupation of about 270,000 people (15.9% of the national total)

Polis – *the Tuscany regional Pole on innovation for the Sustainable City*

A structured network supported by the Tuscany Region aimed at increasing the relationship between research and production in the fields of cultural heritage and sustainable cities (see above, plus innovative businesses in the sectors of tourism and mobility). From its creation in *July 2011, till now*, Polis has aggregated 500 companies operating in Tuscany in these fields, and facilitates the matching of innovation and the capabilities of Universities and public Research organizations in Tuscany.

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DiT-BeCS : the Tuscan Technological District on Cultural Heritage and Sustainable City

It has been formally constituted (August 2011) by the Tuscany Regional Government on a view of the possibility of long term strategies concerning:

- the coalescence of entrepreneurial, research and societal forces in the fields of cultural heritage and sustainable city
- the development and/or strengthening of systems of production and research rooted in regional traditions and open to international markets and cultural exchanges

The constitution of DiT-BeCS has been strongly advocated by the Municipality of Florence

The elaboration of project perspectives has been assigned to a Joint Committee of Entrepreneurs and Researchers (see last slide), *tied to and supported by Polis*

In January 2012 the Joint Committee defined a chart of project perspectives (next slides)

All such perspectives have the basis of a rich set of previous experiences of research in Tuscany; the same perspectives are used in national and international programmes for funding combining enterprises and public research. They nowadays are also helping the Tuscany regional Government in the definition of Smart Specialization Strategies

Project perspectives: line 1 Recovery and development of sites of life and arts

Recovery, conservation and socio-economic rehabilitation of historical and artistic complexes (villages, historical centers):

- Classification of the territory and its architectonic fabric, use and industrialization of new technologies in conservation and fruition;
- Development and application of systemic approaches to conservation; integration of enterprises culturally sensitive in applications on historical and artistic monuments;
- Development of management protocols and certification of sustainable and green buildings; development of training and communication skills
- Transversal infrastructures: Certification Centre, authentication and traceability of cultural heritage artefacts; documentation of cultural heritage; school for the management and techniques for the conservation and enhancement of cultural heritage

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Project perspectives: line 2 social museum and smart tourism

(inserted within the industrial projects of the National technological clusters on Smart communities, acknowledged by the Ministry of Education and University – MIUR)

Training and Technologies for an increase in the fruition of Cultural and Landscape Heritage:

- Social museum: instruments and programmes for museum institutions and territories with a high historical and landscape density to promote relationships and new cultural and training initiatives
- Advanced technological infrastructure for the efficient transmission of visual information and communication between a large number of users
- Hub for tourists, training on networking, instruments and programmes throughout Tuscany, on various levels, to promote the life-style and typical products of our culture
- Use of specific IT products for the documentation of cultural heritage.

Project perspectives: line 3 smart mobility

Smart mobility in territories with a high cultural heritage and landscape assets density: contemporary sustainable territories, open to the challenges of globalisation, in urban and rural contexts and on specific mobility topics

- Infomobility integrated with the development of environmental sensors, integrated telecommunications systems, protocols and regulations;
- City logistics in historical center with a high cultural heritage and tourism assets density
- Electric Mobility and railway integration car sharing, bike sharing, tram train; enlargement of the theme to the smart land, in territories with different urban density but elevated historic density.

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Driving the applications

Five types of players/drivers should be involved in the application of the projects perspectives to specific cases (a pentagon):

- Researchers, both in humanistic studies and in technologies and methodologies for conservation
- Enterprises as owners and developers of technologies
- Policy makers and managers of cultural institutions defining public/collective support, guidelines to action and norms
- Owners of artistic artifacts
- Finance Institutes (private and public- national or foreign foundations, etc....)

Tuscan Technological District on Cultural Heritage and the Sustainable City

Steering committee(Established on 10 /08/2011 - Delibere della Giunta regionale toscana n. 539 del 27/06/2011 e n. 705 del 1/08/2011)

President Leonardo Masotti (El.En. spa)

Leader of associated Pole: Marco Bellandi (Fondazione per la Ricerca e l'Innovazione)

Enterprise System

Alvaro Andorlini (Targetti Poulsen spa)

Fabio Faggella (Cooperativa Archeologia)

Gianmarco Piacenti (Piacenti Restauro)

Luca Tavani (Hyperborea)

Research System

Vincenzo Barone (Scuola Normale Superiore di Pisa)

Giuliano Benelli (Università degli studi di Siena)

Alberto Del Bimbo (Università degli studi di Firenze)

Renzo Salimbeni (CNR-IFAC)

Cultural institutions and foundations

Paolo Galluzzi (Museo Galileo)

Maddalena Ragni (Direttore generale per il paesaggio e le belle arti MIBAC)

Maria Rosa Tiné (Università degli studi di Pisa, in rappresentanza di Consorzio Interuniversitario Italian Culture on Net, Fondazione Centro Arti Visive Pietrasanta, Fondazione ente cassa di risparmio di Livorno, Fondazione ente cassa di risparmio di Pisa, Museo della Grafica di Pisa)

Regional representative: Gian Bruno Ravenni

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