



1. COVERPAGE

TABLE 1: Project and contact details				
Project details				
Project acronym:	CHT2			
Project title:	Cultural Heritage Through Time			
Project website:	cht2-project.eu (domain acquisition still in progress)			
Duration of project	start date:	Sept 1, 2015	End date:	Feb 28, 2018
Contact details project leader (PL)				
Full name <i>(including title)</i>	Gabriele Guidi			
Sex <i>(male/female)</i>	male			
Position Held <i>(including department and institution)</i>	Associate Professor, Dept. of Mechanics, Politecnico di Milano			
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Details other partners (Principal investigators, associate partners, other)				
Partner number	Name of organisation	Type of organisation (academic, government, business, NGO, IGO, etc)	Type contribution of Project	Country/ies represented
1	Politecnico di Milano (POLIMI)	academic	WP1 and WP3 leader - Management; Data collection & 4D model creation	Italy
2	Newcastle University (NCL)	academic	WP5 leader - Dissemination and exploitation	UK
3	Salamanca University- Higher Polytechnic School of Avila (USAL)	academic	WP2 leader - Methodology definition - 4D reconstruction & visualization	Spain
4	Stanislaw Staszic Scientific Association (SSSA)	Non-profit organization	WP4 leader - 3D/4D model publication	Poland



2. DECLARATION BY PROJECT LEADER (PL)

I, as the Project Leader, declare that:

- The attached annual report represents an accurate description of the work carried out in this project for this reporting period
- The project has (tick as appropriate)

	Fully achieved its objectives for the period
X	Achieved most of its objectives for the period with relatively minor deviations*
	Failed to achieve critical objectives and/or is not at all on schedule*

- To my best knowledge, the financial summary that is being submitted as part of this report is in line with the actual work carried out and are consistent with the individual (financial) reporting of the project members towards their national funding agencies.
- All partners, in particular non-profit public bodies, secondary and higher education establishments, research organisations and SMEs, have declared to have verified their legal status. Any changes have been reported under the section on Management.

Period covered by this report: 5 months

Author(s) of this report: Gabriele Guidi

Date of submission: February 3rd 2016

Name of project leader Gabriele Guidi

Signature of project leader:



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4. SCIENTIFIC PROGRESS AND IMPACT REPORT

4.1 PUBLISHABLE SUMMARY FOR THE PERIOD

The **main aim** of the **CHT²** project is to merge heterogeneous information and expertise to deliver enhanced four-dimensional (4D) digital products of heritage sites. **CHT²** is working on the full integration of the temporal dimension, its management and visualization, for studying and analysing Cultural Heritage structures and landscapes through time.

The initial months of this project has not been straight forward. With respect to the time schedule assigned by JPI-Heritage plus, the project has been delayed, primarily due to the bureaucratic overhead required by the funding agency of the Project Leader.

This is the first annual report, which theoretically should cover the period from the **Grant start date** to **31 January 2016**. But as of 31 January no grant had yet been started, due to the additional paperwork requested by the Italian funding agency, namely the Ministry of Education and Research (MIUR). Simply to provide an overview of the advancement of our activities, the sequence of facts up until now are reported below.

On **24 March 2015** we received an email from jpich.call@beniculturali.it, stating that our proposal had been positively evaluated for funding.

On **7 April 2015** POLIMI (the PL unit) administration received a communication from MIUR, about the need to prepare two additional documents for a check at national level, according to the Italian rules. The main document, indicated as “Capitolato Tecnico”, was an Italian version of the Description of Work (DOW) already evaluated by JPI, including the specification of the actual start date. In the same communication it was stated that the PL unit would have been financed only if the financial check by the Italian Court of Audit (Corte dei Conti) and a technical check by an Expert defined by the MIUR, were passed. Due to such checks, and after an informal phone call to the offices of MIUR, we were informed that the first check requires 60 days, and the second up to 30, so we jointly decided with the partners to define M1 of the project as 1 September 2015.

On **22 April 2015** POLIMI administration sent the required documentation to the MIUR, stating that the project would start on 1 September 2015.

By **1 September 2015** no feedback had yet been received by the MIUR, so we started to work on the Consortium Agreement still unsure as to whether the POLIMI unit would actually be financed. Due to the structural difference to standard European projects, we did not use the DESCA model, so we needed some time to sort out a contract layout that was negotiated within the different partner administrations. On **2 December 2015** the signed agreement was approved by all partners.

On **15 December 2015** the POLIMI administration received from MIUR the Financing Decree approved by “Corte dei Conti”. In the attached communication MIUR stated that anyway the financing would have not been started before receiving a positive feedback from the technical expert.

Despite the residual uncertainty regarding the actual receipt of funds for this project, we decided to commence operational activities from 2016, organizing the kickoff meeting in Milan at the end of January 2016.

The KO meeting took place in Milan on **25 January 2016**. Here we had the opportunity to meet each other face to face, to agree the allocation of actual tasks to complete in the 30 months of the project, and the necessary rearrangement of the different WPs in terms of the time schedule.

As a further complication, we realized at the kickoff meeting that, in spite of the official start date jointly agreed, only POLIMI and NCL were officially engaged from 1 September 2015. SSSA and USAL, due to requirements of their own National funding agencies, had to consider 1 January 2016 as their official start date. This involved a rearrangement of the workplan that is specified in the next section. Finally, according to a phone call with the MIUR on 29 January, we discovered that the expert for the final technical check was still not yet appointed, suggesting a further delay in the actual arrival of the project funds at POLIMI.

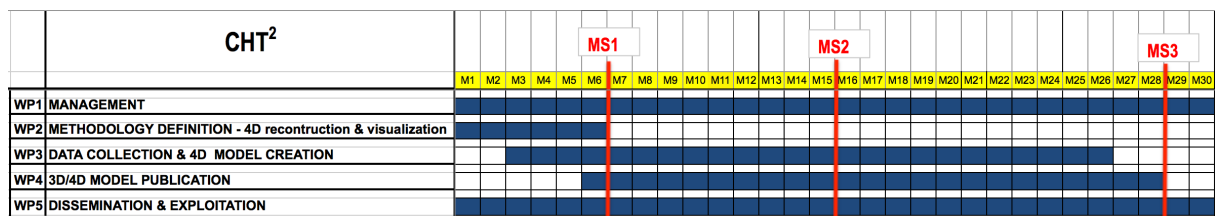
Therefore, this initial period of the project has been primarily dedicated to management activities.

4.2 OBJECTIVES FOR THE PERIOD

The **CHT²** project consists of five interconnected Working Packages (WPs):

- **WP1 – Management (WPL: POLIMI)**, related to the project coordination, the analysis of possible risks and the related mitigation actions and the management of IPR issues;
- **WP2 – Methodology definition (WPL: USAL)**, where the different user categories and needs will be analysed, and both the interdisciplinary methodologies for landscape and architectural scales will be defined;
- **WP3 – Data collection and 4D model creation (WPL: POLIMI)**, where the actual 4D reconstructions will be carried out gathering on the one hand reality-based 3D data and on the other hand archival data, maps, historical images, drawings and paintings representing past configurations of the analysed sites. Based on these data and the methodologies defined in WP2, the 4D models of the case studies will be developed;
- **WP4 – 3D/4D model publication (WPL: SSSA)**, dedicated to the web publication of the 4D representations and the related webGIS;
- **WP5 – Dissemination and exploitation (WPL: NCL)**, supervising the publication of the results by each partner in open-access journals and conferences, the knowledge transfer to non-academic stakeholders, the management of the project website and the dissemination of news about the project through social media platforms such as Facebook, Twitter and Google+. Finally, the organization of a multimedia exhibition at the end of the project for presentation to scholars and common public the capabilities offered by the CHT2 methods.

The following Gantt chart summarizes the initial time scheduling of the five Work Packages planned in the DOW within the 30 months of the project duration.



As explained in the previous section, M1 began on 1 September 2015, therefore this report covers the period to the end of M5. Initially, the first six months of the project were scheduled to complete the methodology definition (WP2), start data collection (WP3), and to arrange a suitable approach for disseminating findings.

In actual fact, the first period has been exclusively devoted to management activities, hence the workplan has been rearranged according to section 4.3.1

4.3 WORK PROGRESS, ACHIEVEMENTS AND FUTURE ACTIVITIES

4.3.1 Progress, changes and remedies

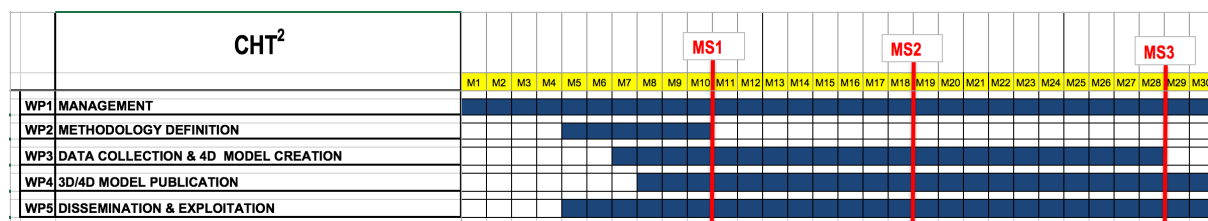
The actual activities done during the first 5 months of this project are:

- dealing with the different documentation to be submitted to the MIUR in order to receive the official acceptance of the project and the relative funding;
- writing, sharing and revising the Consortium Agreement that does not follow the DESCA model but defines a new model compliant with the JPI structure;
- looking after the progress of the ministerial process with emails and phone calls in order to obtain information to be shared with the partners;



- iv) proceed with a procedure for getting internal fund anticipation from Politecnico di Milano for starting the first contract;
- v) managing other financial issues for anticipating funds for the kickoff;
- vi) organizing the kickoff meeting on 25 January 2016;
- vii) rearranging the workplan in a way compliant with the given constraints;
- viii) revising of the actual monuments that will be studied through the 4D analysis and presentation what will be developed within the CHT2 project;
- ix) revising of the actual efforts that all partners can provide, given their budgetary restrictions (eg. USAL will not receive co-financing crucial for supporting their contribution, that should therefore be reconfigured accordingly);
- x) defining the name of the project website (<http://cht2-project.eu>);
- xi) completing the paperwork for acquiring a domain for the project and acquiring the related hosting;
- xii) establishing of a common repository for the project documents (<https://drive.google.com/open?id=0B6ger7nQuJnWWmld2Z4Z0E5b00>).

According to the difficulties outlined in the previous sections, during the kickoff meeting the partners agreed to rearrange the initial work plan, leaving unaltered the total number of man/months over the duration of the project, but rescheduling the same effort according to the schema reported in section 4.3.1.



The changes reflect the actual arrangement of the project, accommodating the different starting times of the various units:

1. The first 4 months of the project were dedicated to solving the bureaucratic issues, and were therefore devoted exclusively on WP1 (management), and in practice the other activities were prevented from starting until these issues were resolved;
2. Such effort has mainly involved the research offices of POLIMI and NCL, with officially no involvement from USAL and SSSA;
3. Due to the prolonged starting phase, the actual technical work on the methodology for the project could only commence after month 4. This is also compliant with the delayed project start of USAL (1 January 2016), that is the WP2 leader, and SSSA, that has a 6 MM involvement here. Basically they both joined the project at M5;
4. The commencement of WP3 has been left two months after the WP2 start, as in the original schema. It therefore becomes M7;
5. In order to avoid squeezing the activities of WP4, we have left its duration over 23 months as in the previous schema, but is now scheduled from M8 to M30, compliant with the active period of SSSA;
6. WP5, dedicated to dissemination, has been shortened in the first phase where there was nothing of note to disseminate, setting its start date at M5.
7. Milestones will assume the same meaning explained in the original workplan, but they will be also rearranged according to the above mentioned shift of activities. Namely: MS1 is moved from M6 to M10; MS2 from M15 to M18; MS3 is maintained at M28.



4.3.2 Deliverables/output

As of 31 January 2016 (M5), no deliverables have been produced, because of the reasons explained in the previous sections.

4.3.3 Contribution to JPI-CH

As of 31 January 2016 (M5), no active contribution to JPI-CH have been produced, because of the reasons explained in the previous sections.

4.3.4 Future activities

The next 12 months of the project (M6-M17 inclusive) will initially focus on the methodology definition (WP2), with milestone 1 due at the end of M10. WP3, data collection will commence two months into the period, providing important feedback to the methodology processes being defined. Publication of the temporal three dimensional models (WP4) will also be staged to run in parallel with these activities. Dissemination and exploitation (WP5) has now commenced, the initial work being on the establishment of the project website (<http://cht2-project.eu>). Specific plans for each WP comprise:

WP1: In addition to the overall project management and the related standard activities, this WP will proceed as follows. Regarding Task 1.1 a management booklet will be prepared including guidelines to use by all partners during the project will be compiled, and delivered at M1 for internal use. This could allow to define uniform processes and templates for all partners. Regarding Task 1.2 a collection of the main IPR constraints in the different countries involved in the project will be prepared.

WP2: The operating methodology will be defined taking into account the two types of 4D reconstruction emerged at the kickoff, that this project aims at: i) creation of time-varying documents/representations based on objective 2D or 3D data captured on measurable scenarios at different times (e.g. 3D models at different times of a collapsing building surveyed during its deterioration; Rephotography); ii) creation of time-varying documents/representations based on mixed sources (e.g. 3D reconstruction of a roman building at different times according to the 3D scanning of its remains integrated by historical sources describing it).

WP3: The operations included in this WP will start at M7, including: i) start collecting actual and historical data related to the landscape/city/building to reconstruct for the 4 case studies chosen; ii) start merging such data according to the strategies developed in WP2 for generating 3D models of the selected asset at different times.

WP4: starts at M8 exploring standards and methodologies for an innovative immersive environment where 3D/4D contents are used to manage, study, analyse and plan actions. The aim of the workpackage is the analysis of existing tools for publishing of 3D models in the Internet. Available software will be tested to find the necessary functionality. A web-based Geographic Information System (GIS) will be built to access, visualize and analyse the collected data in a spatio-temporal way over the World Wide Web.

WP5: Initially the first task to be developed will be Task 5.4 (Website & social media) for developing the project website and the related social media interactions for starting disseminating news about the project progress.

4.4 PROJECT MEETINGS AND INTERNAL COLLABORATION

As of 31 January 2016 (M5), the only meeting organized is the kick-off meeting held in Milan on January 25 and attended by representatives of all partners.

TABLE 4.4: Project internal collaboration and meetings			
List of internal meetings			
Date	Location	Participants	Weblink to periodic reports/minutes (if applicable)
Jan 25, 2016	Milan	POLIMI, NCL, USAL, SSSA	https://drive.google.com/open?id=1HLnZZ2G_73mp0XuGPjkIf2oHvOA7iLSEpZEZ0EjtUXM
Collaboration / communication amongst consortium member			
Type of exchange		Type of organizations involved	Countries involved
ideas		Universities and Associations	Italy, UK, Spain, Poland

4.5 IMPACT: DISSEMINATION, NETWORKING AND KNOWLEDGE TRANSFER

Effectively commencing only 1 month before this report was due, Work Package 5 has not yet produced any significant outputs.

4.5.1 Networking activities (external) and stakeholder involvement.

TABLE 4.5.1: Networking and stakeholder involvement			
Brief description of networking activity / how stakeholders have been involved in the project	Stakeholders involved	Indicate the outcome / impact / opportunity for (transnational) collaboration	Indicate the number of stakeholders reached in each category
	a. Policy makers and influencers b. Cultural Heritage research community c. Parallel (European/international) projects, initiatives and organisations d. Industry, SMEs and Civil Society		
Contribution in refining the decision about the building/structures to analyze with the CHT2 methodology	b. Cultural Heritage research community	Documentation about previous studies supporting the decision, on top of which start the CHT2 activity	4

4.5.2 List of scientific publications.

No publication has been done till now.

4.5.3 List of other scientific outputs

No other scientific outputs have been done till now.

4.5.4 Dissemination and knowledge transfer.

The only dissemination activity started is related with the request of a dedicated domain for the project. But all the website development has not yet started therefore such activity

TABLE 4.5.4: Dissemination and knowledge transfer activities and tools				
Type	Brief description of medium and topic	Brief description of overall impact/benefit	Stakeholders and audience (direct stakeholders, private sector, public sector, the general public etc)	Estimation of number of persons reached
other	Twitter: communication of project kickoff from the account @Nexus6it specialized in 3D tech & Cultural Heritage	262 person actually opened the message	Selected users of technology for cultural heritage, private and public sector, general public	950

5. FINANCIAL SUMMARY FOR THE REPORTING PERIOD

5.1 FUNDS RECEIVED DURING THE REPORTING PERIOD

TABLE 5.1: Funds received			
Date of grant (tranche)	Partner	Funding agency + country	Amount (€)
	POLIMI (Project leader)	MIUR, Italy	€ -
First tranche	NCL (Partner 1)	AHRC, UK	€ 24.424,90
Total Amount	USAL (Partner 2)	MEC, Spain	€ 60.000,00
	SSSA (Partner 3)	MKDN, Poland	€ -
Total of funds received by project during reporting period			€ 84.424,90
Total of funds received by project up until reporting date (from the start onwards)			€ 84.429,90



5.2 SUMMARY EXPENDITURE STATEMENT FOR THE PERIOD

TABLE 5.2: Expenditure	
Item description	Amount (€)
Project Employment costs	€ 18.648,74
POLIMI (Project leader)	€ 8.127,14
NCL (Partner 1)	€ 4.521,60
USAL (Partner 2)	€ 6.000,00
SSSA (Partner 3)	€ -
Project Equipment costs	€ -
POLIMI (Project leader)	€ -
NCL (Partner 1)	€ -
USAL (Partner 2)	€ -
SSSA (Partner 3)	€ -
Project publications costs	€ -
POLIMI (Project leader)	€ -
NCL (Partner 1)	€ -
USAL (Partner 2)	€ -
SSSA (Partner 3)	€ -
Project Travelling costs	€ 1.920,60
POLIMI (Project leader)	€ 243,50
NCL (Partner 1)	€ 812,34
USAL (Partner 2)	€ 448,72
SSSA (Partner 3)	€ 416,04
Project Other costs	€ -
POLIMI (Project leader)	€ -
NCL (Partner 1)	€ -
USAL (Partner 2)	€ -
SSSA (Partner 3)	€ -
Project Overheads Financial, Scientific, Administrative Support Fee (if applicable)	€ 16.315,81
POLIMI (Project leader)	€ 4.063,57
NCL (Partner 1)	€ 12.252,24
USAL (Partner 2)	€ -
SSSA (Partner 3)	€ -
TOTAL EXPENDITURE	€ 36.885,15