STSM Report

REFERENCE: Short Term Scientific Mission, COST TD1201
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1. Purpose of the STSM

The purpose of the STSM visit "*Investigation of 3D modelling workflows in CH with the object of development of key concepts and definitions*" in London was to identify similarities and differences of typical working processes and methodologies in the field of CH 3D modelling and visualisations. Based on this, general phases of a process and strategies in the methodology should be defined. Moreover, the principles of London Charter should adopted to scope of the 3D computer models. The results of both aspects - investigation and transfer - would be a basis for further research related to key concepts and definition.

2. Description of the main results

2.1. Introduction
The work and the approach of the investigation were characterized by two sequential parts:

- Practical part: Analysis, evaluation and comparing of different project of the HOST- institute

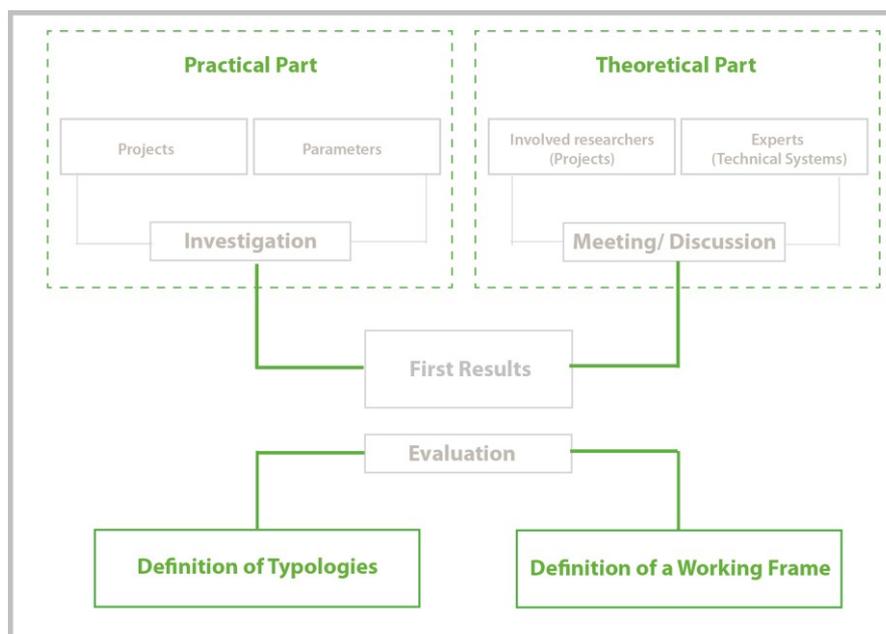- Theoretical part: Workshop and discussion with the HOST institute

Figure 1 - Visualisation Project Process

2.1. Investigated projects

As a first step of her work, the applicant investigated the following four projects of the HOST institute:

- Body and Mask in ancient space
- Oplontis visualisation project
- Roman coins
- The Skenographia project

2.2. Parameters

The investigation of these projects based on the defined objectives parameters, e.g. background, context, timeline as well as intention of the project; involved people; application field and possibility; type of 3D visualisation method; technical system/aspects; methodology and steps of the working process.

2.3. Results

Based on this investigation it was possible to generate results in two main topics:

1. Definition of types of CH visualization
2. Definition of a process as an input-output-schema

2.3.1 Definition of different types of CH visualization

Based on the investigation during the STSM visits in Sarajevo and London, earlier research of the applicant and her experience in 3D models in CH, the applicant defined eight types of CH visualizations (figure 2).
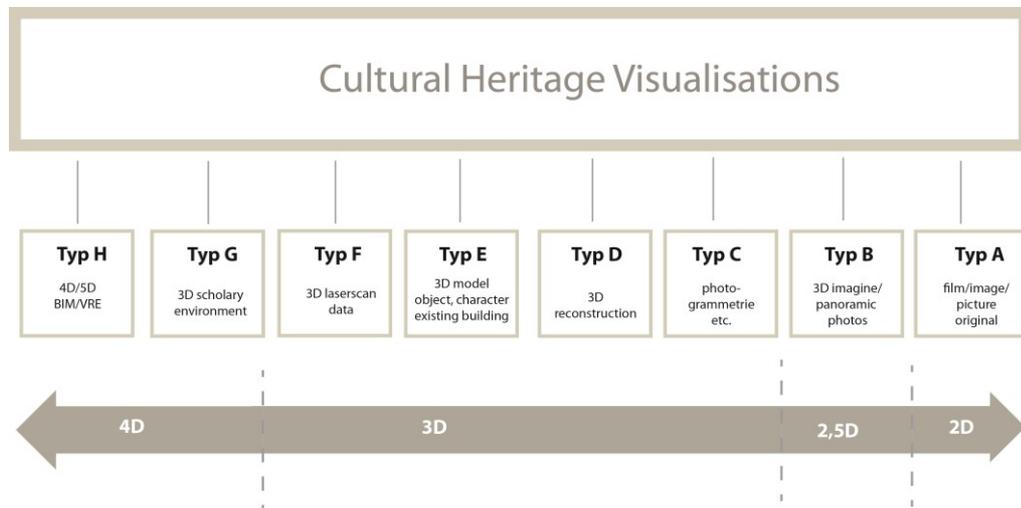

Figure 2: Types of CH visualisation (schema), Mieke Pfarr-Harfst

Typ A: Images, renderings or films resulting from a 3D dataset; original film or image as a Cultural Heritage object itself

Typ B: 3D imagine or panoramic photos as a 2,5D visualisation

Typ C: 3D data resulting from photogrammetry

Typ D: 3D reconstruction of a no longer existing building or object

Typ E: 3D model of an existing building or objects; 3D model of character as an avatar

Typ F: 3D data resulting from laser scanning as a preservation and recording method

Typ G: Virtual Research Environments or 3D Scholarly Environments

Typ H: BIM and Heritage BIM

2.3.2 Investigation of the working processes of the projects

With the results of both STSM visits in London and Sarajevo it was possible to define a framework of a working process, which consists of four main phases and the background of the project as a frame (figure 2). The four projects phases are preparation, data collecting, data processing and finishing. The applicant defined three milestones within this framework.

One important principle of the working process is the principle of input-output, which defines the next steps and the interaction between the work packages.
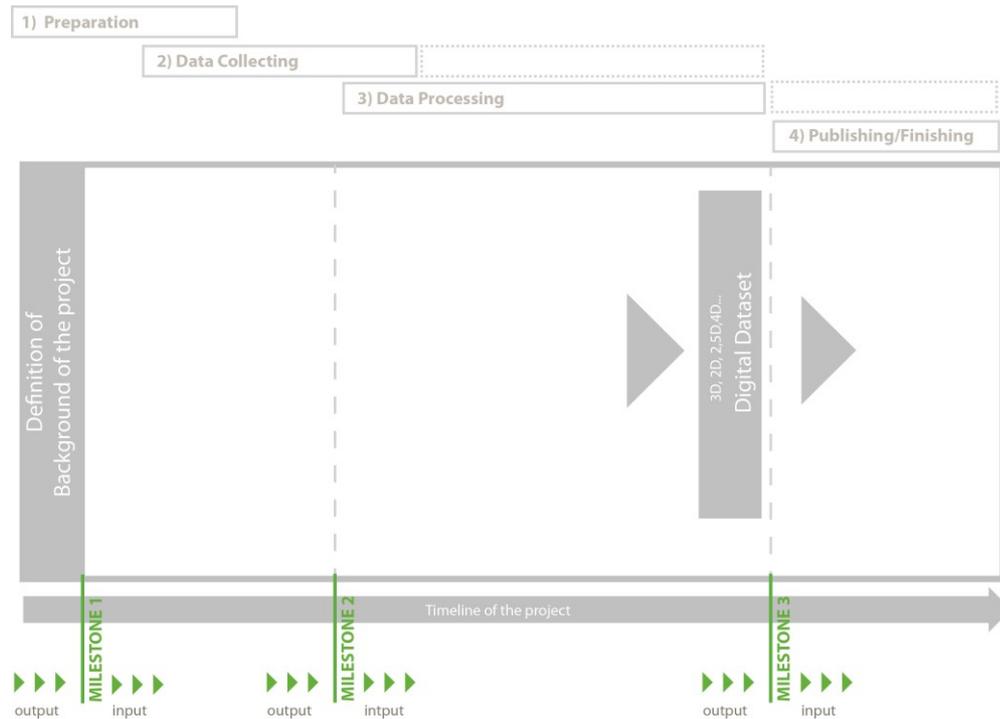

Figure 2: Workframe, M. Pfarr-Harfst

The applicant identified two principles of interaction between the work packages, the linear and circular process.

The differences within the working processes are a result of the background of the project.

These results are a basis for further research, so it is necessary to investigate the crossing points of the milestones, working phases and the work packages as well as the different visualisation method.

The milestone and the input-output principle could be a starting point for further research in relation to define guidelines and strategies.