



istemi[®]
materials testing

IDO

Digital Identity of the Artwork

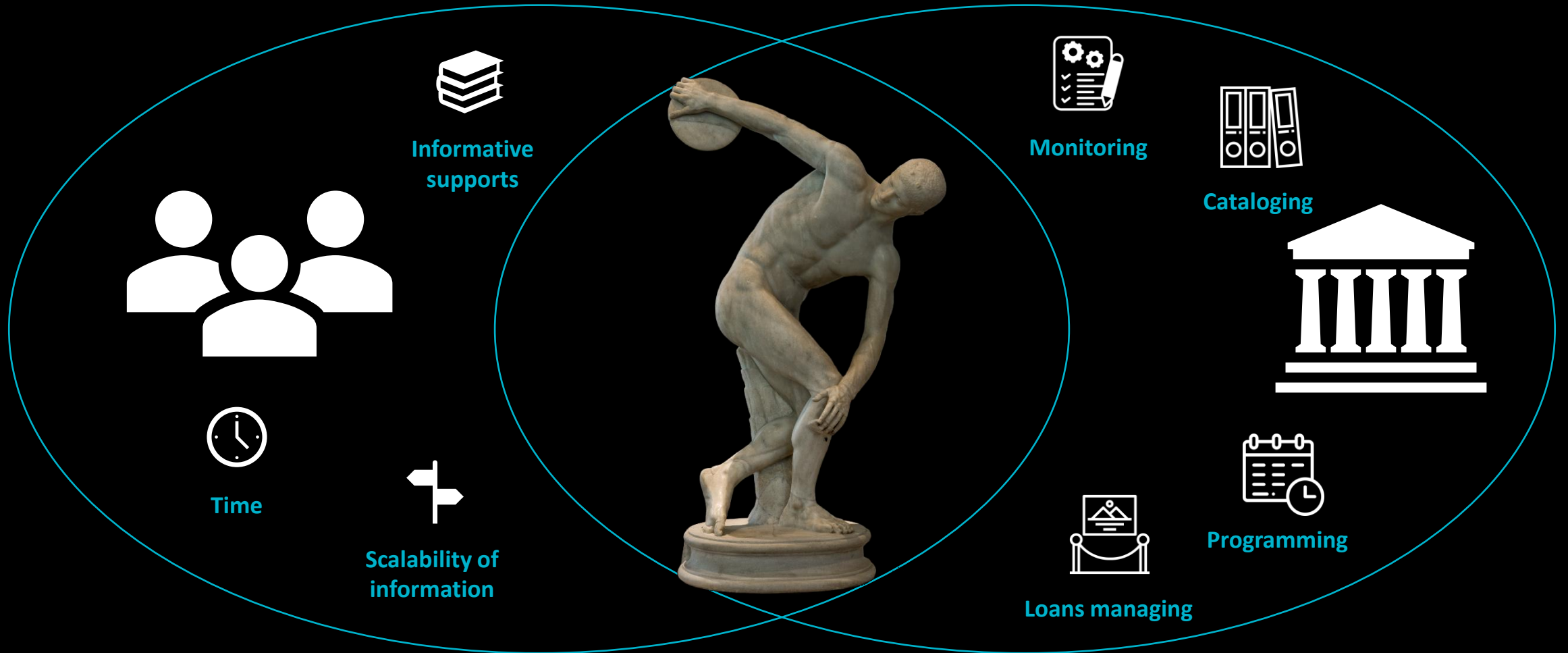
“From 2D to 3D: data, images and creativity to built digital worlds”

Team:

Eduardo Caliano

Chiara Gallo

Waseem Afzal



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DATA PRODUCT



[IDO](#)

WORKFLOW

IMPORT DATASET

Load the full image dataset from the specified source

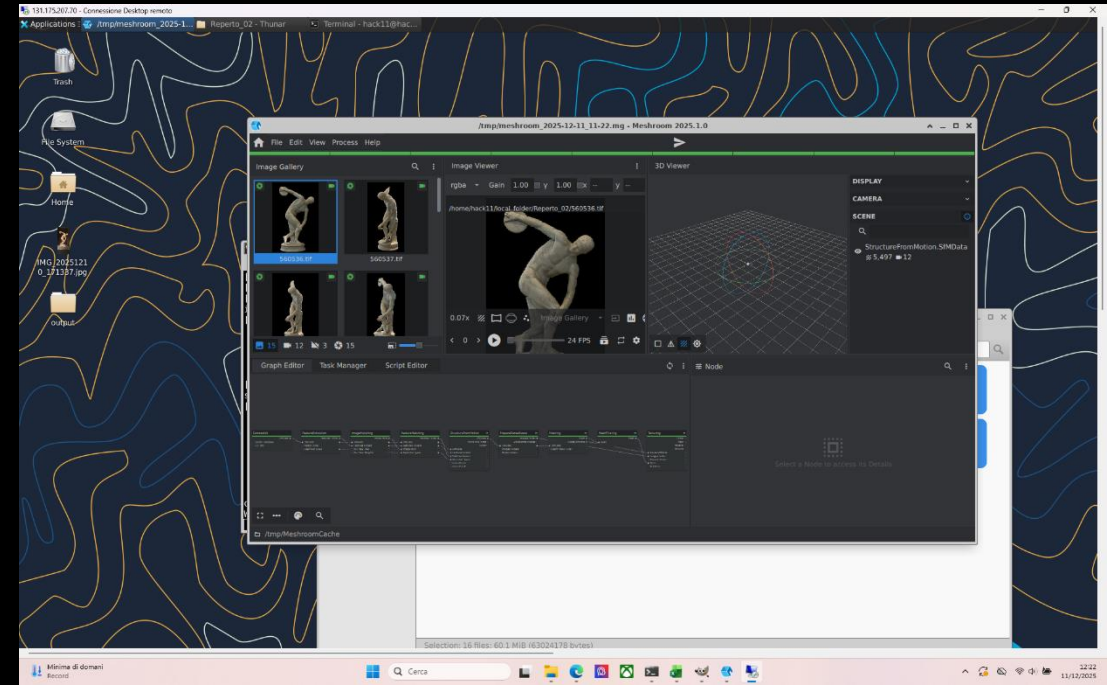
Filter Images by Resolution/Dimensions

Select only those that match the target resolution (width × height)

Exclude or flag images that do not meet the dimensional criteria

Background Removal (Pre-processing)

Apply background removal processing to all selected images using **rembg** library and export it



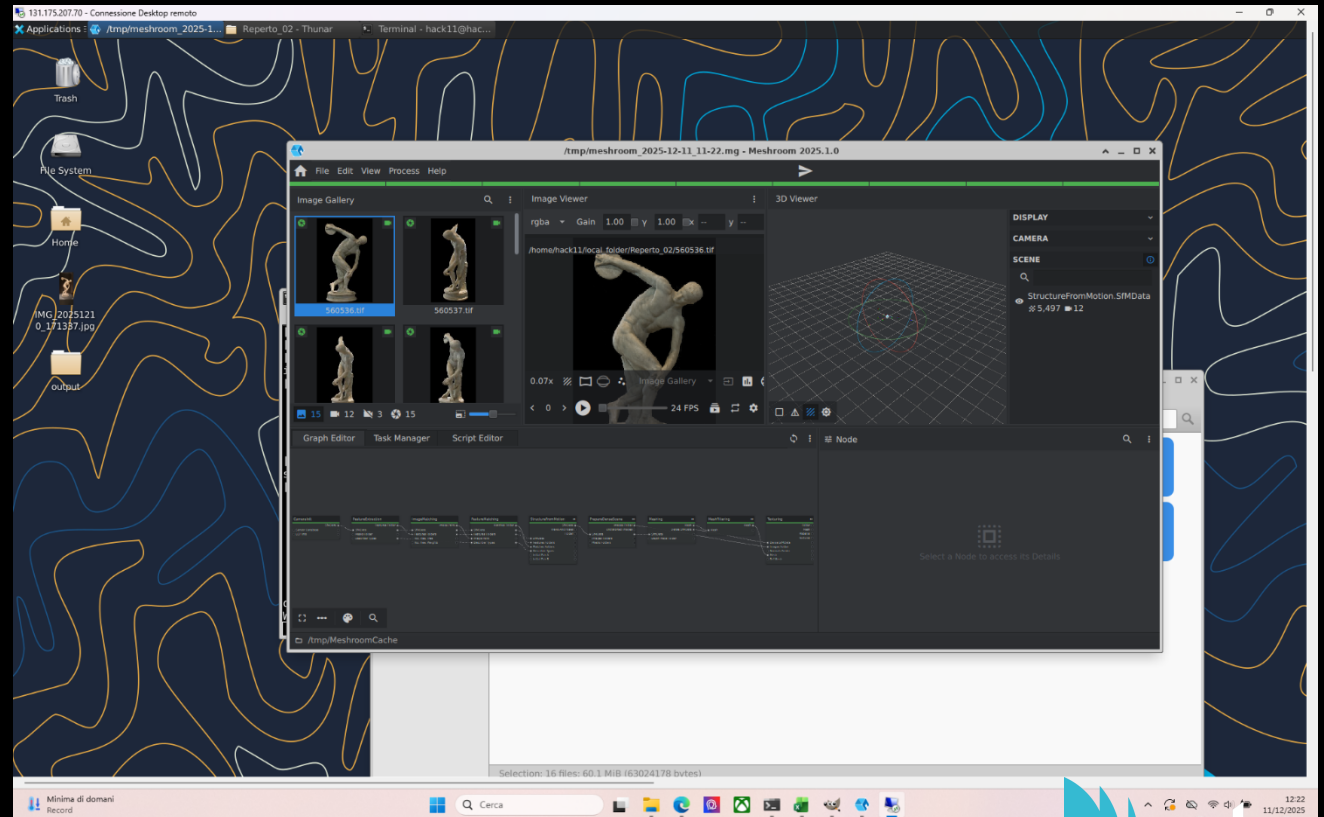
WORKFLOW

3D RECONSTRUCTION

3D Reconstruction with **Meshroom** [OPEN SOURCE]



Feed the pre-processed image set into **Meshroom**



WORKFLOW

POST-PROCESSING

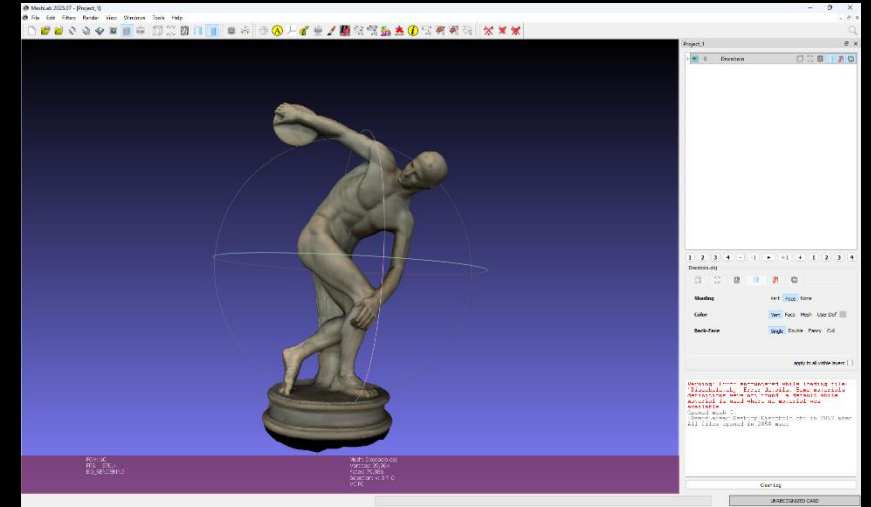
Import the reconstructed model into **MeshLab** [OPEN SOURCE]



Clean and refine it by applying operations, such as
Removing isolated vertices / noisy elements;
Smoothing and re-meshing;
Hole filling;
Export the optimized model;
Convert Model to GLB (optional).



Import and Visualize the Model in the Web Viewer



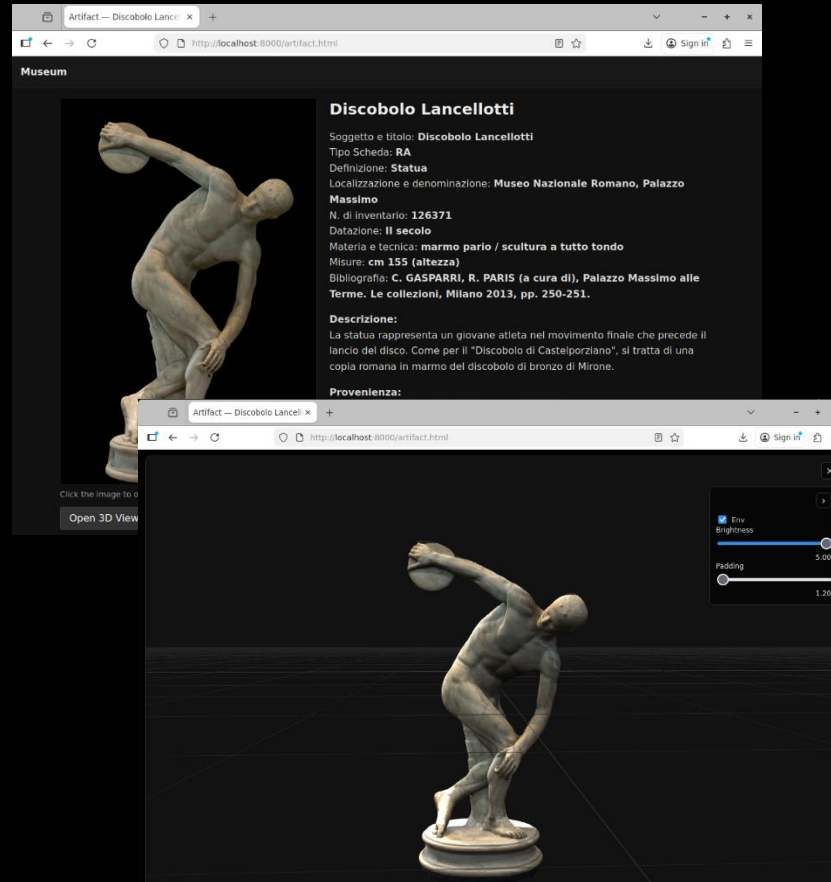
WORKFLOW

INTEGRATION WITH DpaaS

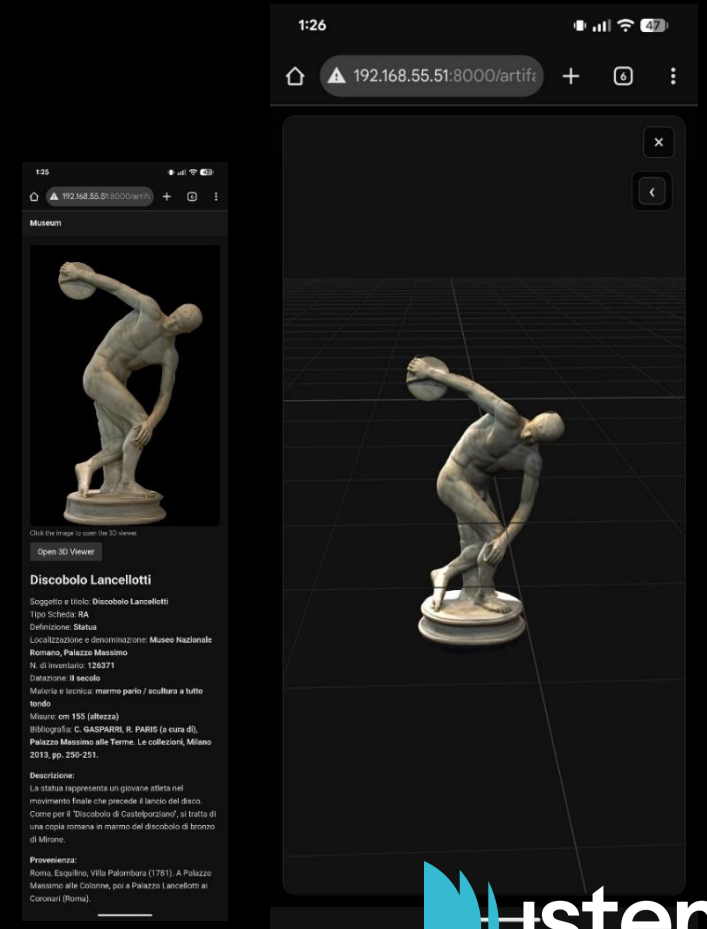


IDO discobolo

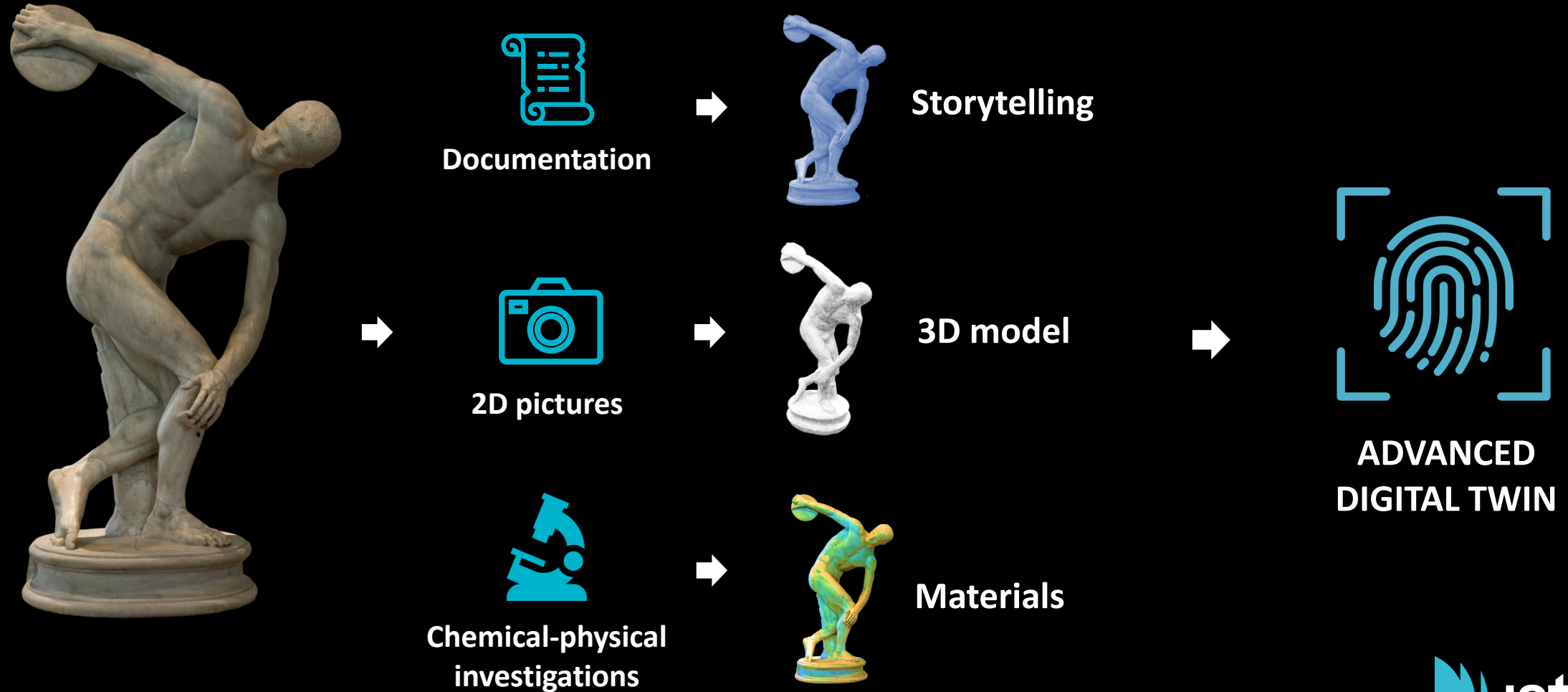
FROM PC



FROM MOBILE



IDO - Digital Identity of the Artwork



IDO - Digital Identity of the Artwork

What's its structure?



What's its chemical composition?



It has any alterations and degradation form?



IDO - Digital Identity of the Artwork



Advanced Digital Twin



Benefits



Fruibility



Autenticity



More advantages



Managing, monitoring, restoring, planning



Condition & facility report



Information scalability



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