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Social Sciences & Humanities



Maastricht University

Interfaces for 3D Scholarly Editions

A New Paradigm for Three-Dimensional Scholarship

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What are 3D Scholarly Editions?

- Papadopoulos, C., & Schreibman, S. (2019). Towards 3D Scholarly Editions: The Battle of Mount Street Bridge. *Digital Humanities Quarterly*, 13(1). <http://www.digitalhumanities.org/dhq/vol/13/1/000415/000415.html>
- Schreibman, S., & Papadopoulos, C. (2019). Textuality in 3D: three-dimensional (re)constructions as digital scholarly editions. *International Journal of Digital Humanities*, 1(2), 221-233. <https://doi.org/10.1007/s42803-019-00024-6>



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What are 3D Scholarly Editions?

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Vincent van Gogh *The Letters*

by period by correspondent by place with sketches

Search keyword or number(s) Advanced search Search results

Van Gogh as a letter-writer Correspondents Biographical & historical context Publication history

About this edition Chronology Concordance, lists, bibliography Book edition

163 RM12 006 003 « 162 | 164 »

To Theodorus van Gogh and Anna van Gogh-Carventus. Brussels, on or about Wednesday, 16 February 1881.

SEARCH THIS LETTER PRINT

original text + line endings facsimile translation notes artworks

original text + line endings facsimile translation notes artworks

Brussels, Feb. 1881

163 Br. 1990: 162 | Cl.: 141 From: Vincent van Gogh To: Theodorus van Gogh and Anna van Gogh-Carventus Date: Brussels, Wednesday, 16 February 1881 more...

Dear Pa and Ma, I received your letter and was glad to have it, for I had already been looking forward to it, especially because of Pa's indisposition. It's fortunate that he's starting to get better. Things continue to go quite well with my work, although it's still imperfect and must improve a lot. I found a very good illustration of a skeleton in that painter's studio. Because such things are fairly difficult to find, I asked him whether he'd give it to me for a day or two in order to copy it. At first he objected, probably because he thought that I wouldn't be able to do it or that it would take me too long, but I insisted on having it and he allowed me to. That was last Sunday afternoon, and as soon as I got home I started on it, and on

Vincent van Gogh – The Letters

Letters 1916-1923

Search Letters 1916-1923

About Explore the collection Visual Exploration Transcribe letters Resources Community

Letter from James Joseph Walsh to John Quinn, 29 June 1923

Letter information

From: James Joseph Walsh Date Sent: 29 June 1923 Sent from: 110 West 74th Street, New York, US Recipient: John Quinn Written in: English Pages: 3 Source: New York Public Library Manuscripts and Archives Division Original collection: James Quinn Memorial Collection, Box 7, 14

Page transcription

Jan. J. Walsh M.D. 110 West 74th Street New York

Letters 1916-23

THOMAS MACGREEVY AND GEORGE YEATS A Friendship in Letters

Letter from George Yeats to Thomas MacGreevy (June 1922)

THOMAS MACGREEVY 124 PRINCE STREET, DUBLIN, IRELAND Telephone: LANSBURY 3405-1427 Telegrams: "TRIGRAMS" BUNRADD, LONDON.

Dear Mr. Thomas Corcoran MacGreevy:

In a sense you are right. The cancer in our "head" which really happened was that which stands in the gutter waiting for the 27th. It was not over the air. The right foot being black green & swollen & throbbing in Paris no kind remedy with some, I think Corcoran will be more pleased. Really it would be wiser to go to Paris & not be able to see your people at all & I'll be right.

Meanwhile I am very busy I can't accept your offer & you are very absurd if you think I have invented a reason to avoid "happened circumstances".

The place is a bonded with water.

water who all look at it they never doubt & never worried and they from a completely different look which I believe somewhat odd. They make me feel very bad & normal & quite disagreeable health. Last night one of them said "The only person in the sea his history when from his supposed sea in particular dead". And the young man in the water wants me to attend to send me to hospital to bleed my eyes.

Yours etc.

Thomas MacGreevy and George Yeats – A Friendship in Letters

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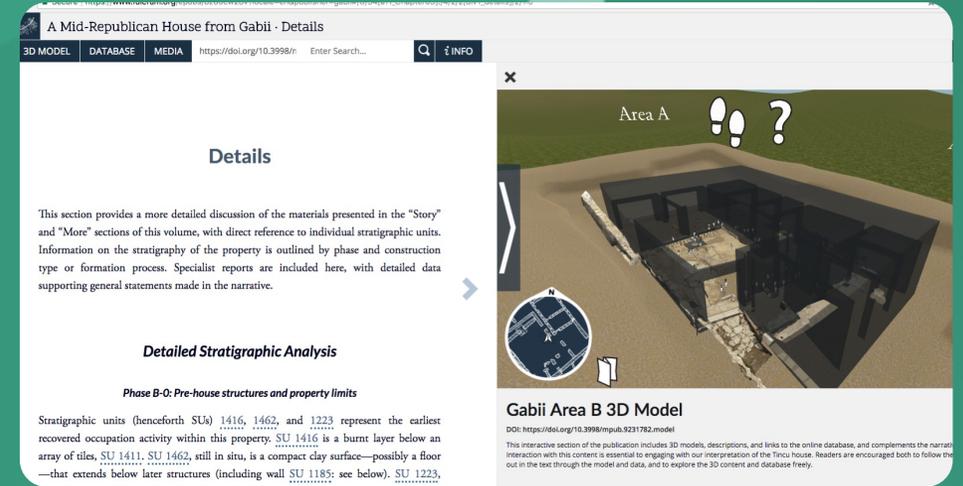
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What are 3D Scholarly Editions?



Hadrian's Villa, Virtual World Heritage Laboratory



Gabii Project – Michigan University Press



Early 3D Scholarly Edition Prototype for House 1, Koutroulou Magoula, Greece



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What are 3D Scholarly Editions?



Early 3D Scholarly Edition Prototypes for the Battle of Mount Street Bridge



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3D Scholarly Editions: A Tentative Definition

- *Knowledge sites that provide a framework for 3D scholarship and the communication of the results, speculations, and thesis of and around that scholarship.*
- *They provide contextualisation and annotation about the 3D models and the objects/worlds they represent.*
- *This scholarship is presented within a single spatio-temporal environment that is immersive, multivariant, and multisensorial.*



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What's out there?



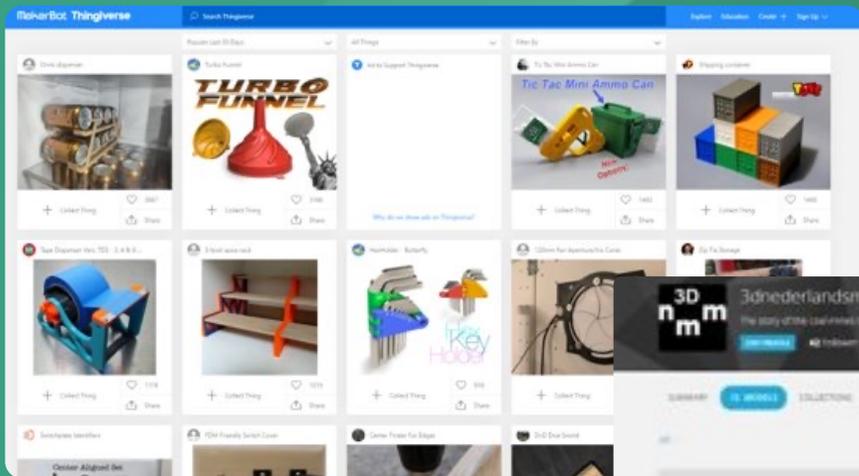
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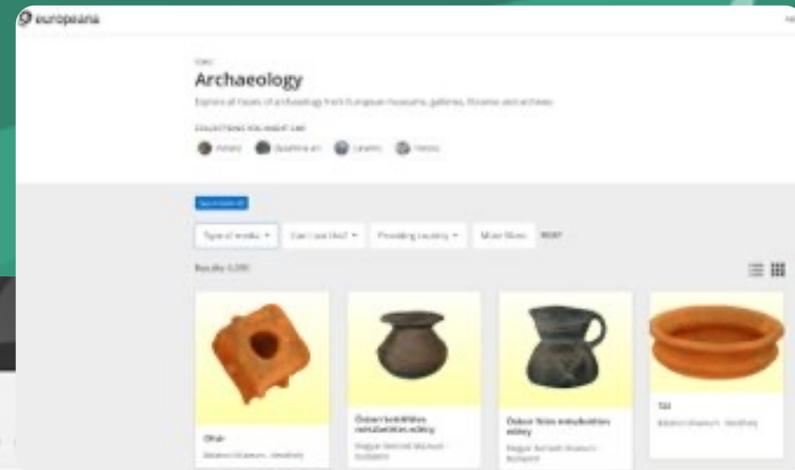
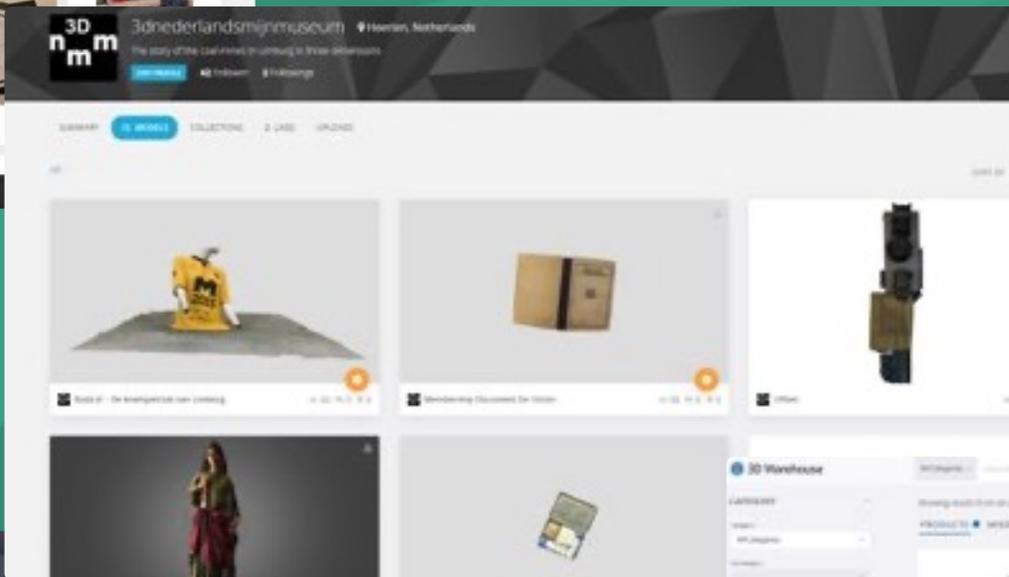


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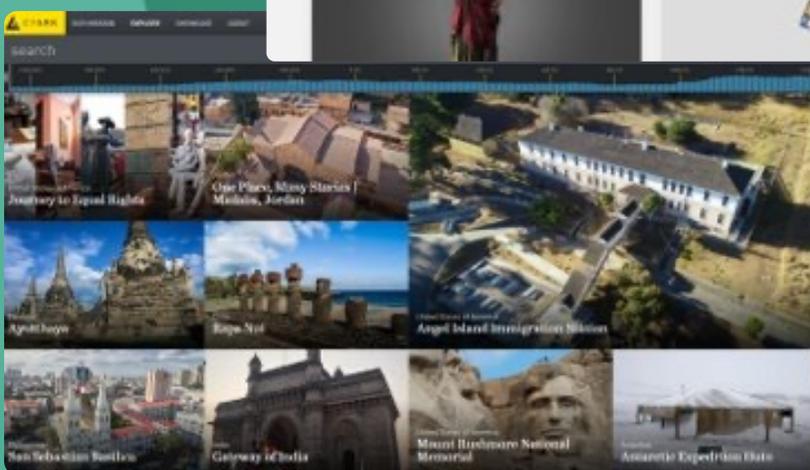


Thingiverse

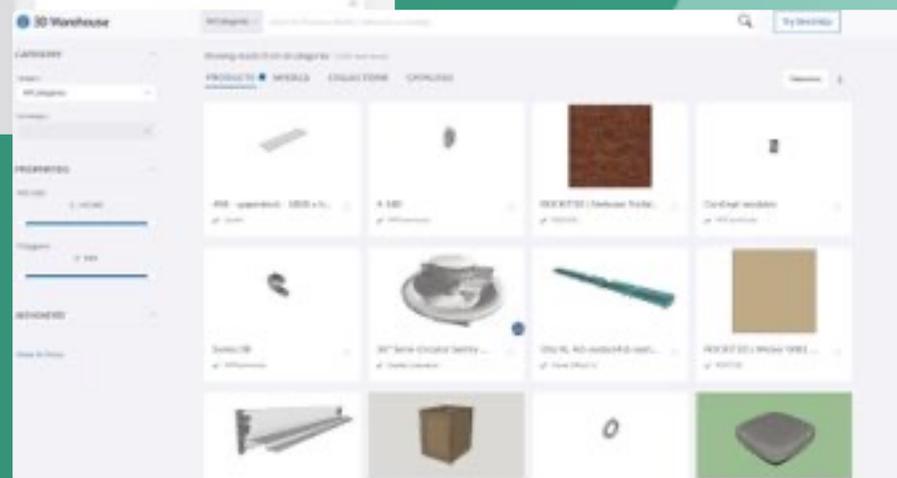
Sketchfab



Europeana

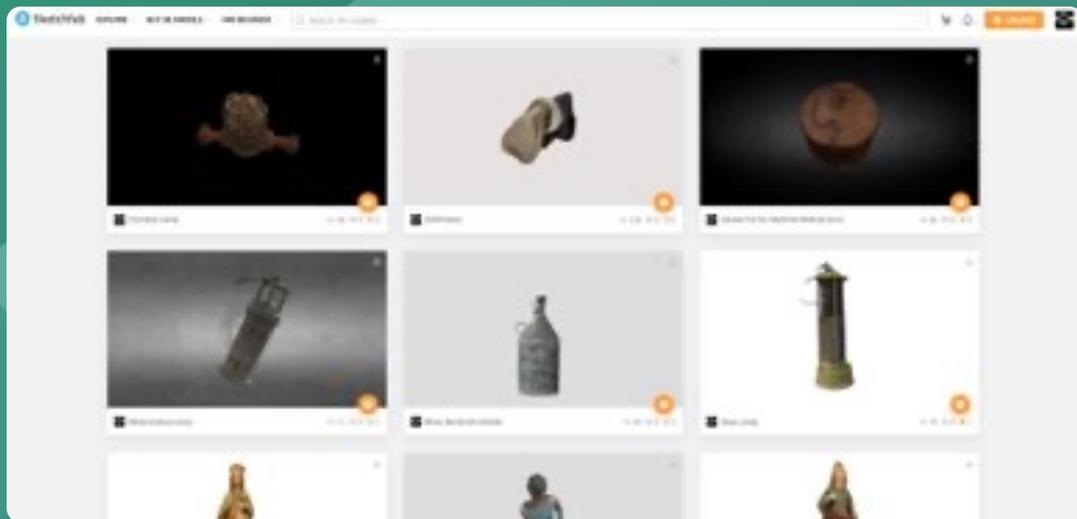


Cyark



3D Warehouse

Sketchfab



Sketchfab
viewer
embedded in
Europeana



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<https://sketchfab.com/> 

Sketchfab – Object Level



Houten beeld Barbara
3D Model

 **3dnederlandsmijnmuseum** 75 492 12

[Download 3D Model](#) [Add To](#) [Embed](#) [Share](#)

Triangles: **2M** Vertices: **1M** [More model information](#)

This wooden statue, created by J. Thissen & Son in Roermond in 1909, was given to the Nederlands Mijnmuseum by the last director of the state mine Emma (1911-1973) in the Limburg mining region. The statue is 1.15 m high and its base measures 32x27 cm.

Saint Barbara is shown with typical attributes like the tower, the sword and the chalice (see hotspots for iconographic information).

According to the legend, Barbara's pagan father, Dioscorus kept her prisoner in a tower. When he discovered that she had converted to Christianity, he denounced her publicly and beheaded her with his sword when she refused to renounce her faith. After the murder he was struck by lightning. Therefore, the martyr Barbara was adapted as the patron saint of people who worked with explosives. When explosives were increasingly used in mining, Saint Barbara became the patroness of miners. The workers and their families prayed to the saint for her protection.

3D model created by: Weber, Julia

License: [CC Attribution](#) [Learn more](#)

Published 2 years ago

Uploaded with [Agisoft Metashape](#)

Cultural Heritage & History 3D Models

[tower](#) [netherlands](#) [mining](#) [saint](#) [statue](#) [chalice](#) [martyr](#) [patron](#) [wood](#) [sword](#) [sbarbara](#)

 A, S, V, moornraft, boltes-registritz and 9 others liked this model

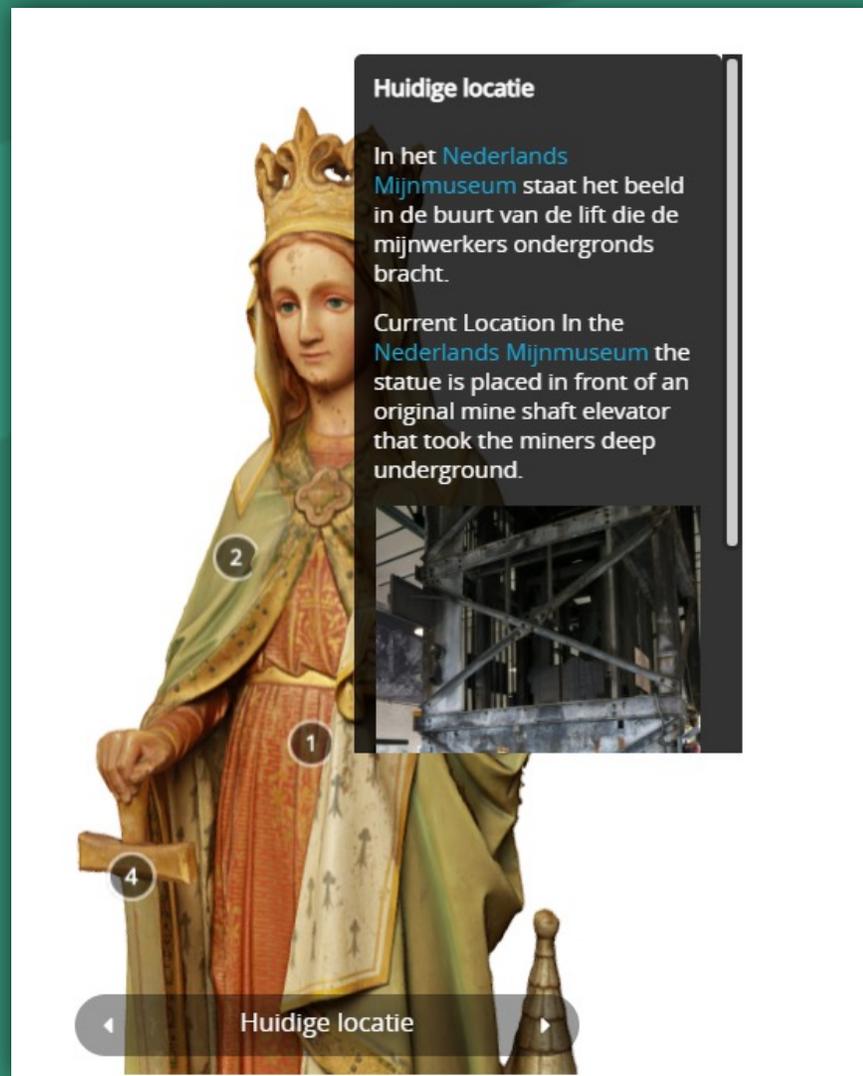
<https://sketchfab.com/3d-models/houten-beeld-barbara-528207c10a7441baba4cbb300d2cf3f0>

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Sketchfab – Object Level – Annotations

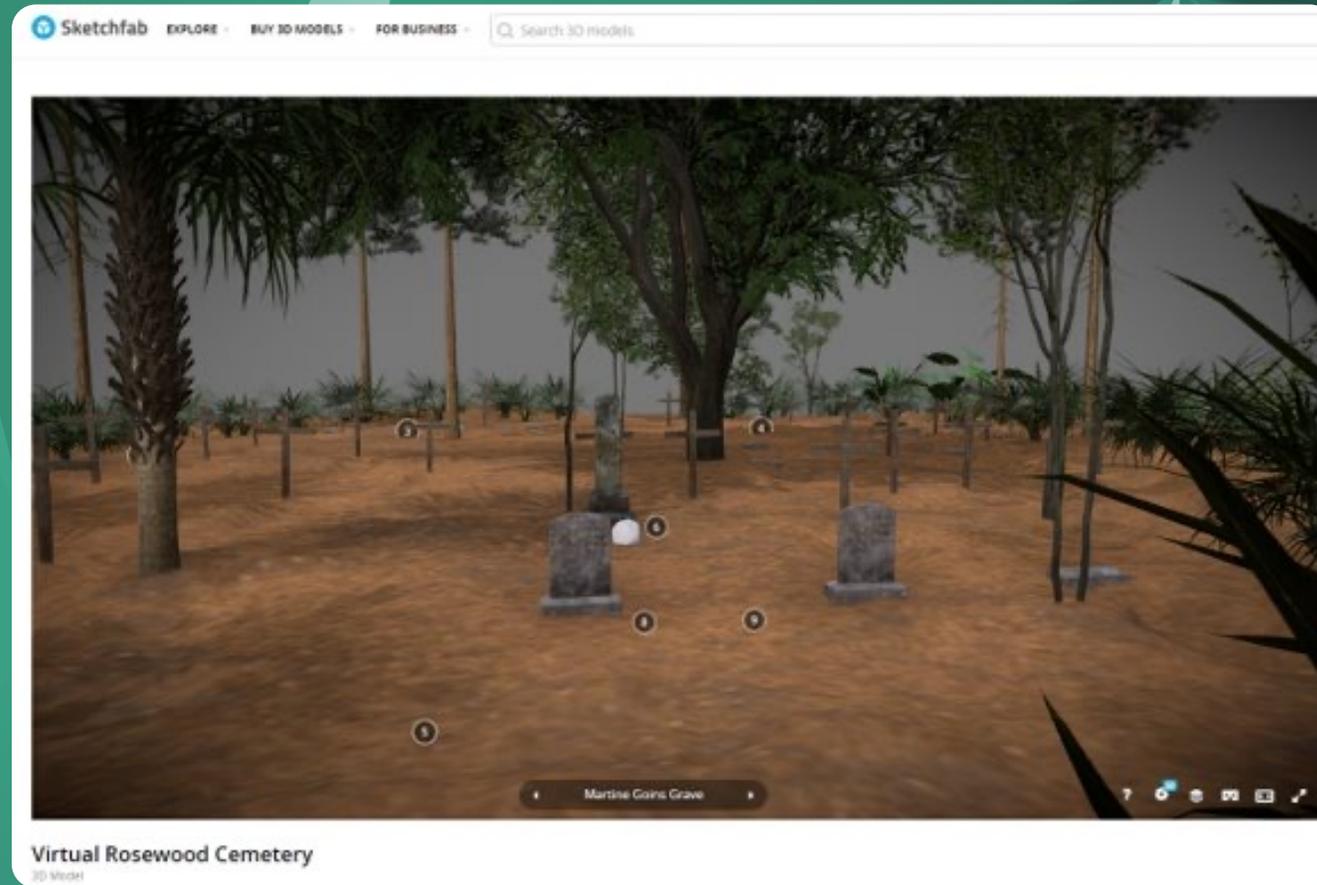


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Sketchfab



"I chose to share the model via Sketchfab, because the site allows anyone with a relatively robust internet connection to access the content via a website or app for Android or iOS devices. As such, it is available to a far wider range of people than publishing the information via a static webpage or downloadable program to run on your local computer."

Furthermore, Sketchfab allows visitors to explore the content in a variety of formats, including a webpage, virtual reality goggles, or an augmented reality experience."



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<https://sketchfab.com/3d-models/virtual-rosewood-cemetery-3cbb80a2442042818b2759281e9985e8>
González-Tennant, E. 2021. Tech Memo—Building the Virtual Rosewood Cemetery, The SHA Newsletter, 54(1): 18-19

Features of (some) existing Online 3D Viewers

Feature	Smithsonian Voyager	ATON	3DHOP	Kompakkt	Virtual Interiors
Zoom	✓	✓	✓	✓	✓
Rotation	✓	✓	✓	✓	✓
Walk around/through the 3D model	✓	✓	✗	✗	✓
Add, Remove or move parts of the 3D model	✗	✗	✗	✗	✓
Wireframe view	✓	✗	✗	✗	✓
Texture View	✓	✓	✓	✓	✓
Take Screenshot	✓	✓	✓	✗	✗
Annotation of text	✓	✓	✓	✓	✓
Annotation of image	✓	✓	✓	✓	✓
Change field of view	✓	✓	✓	✗	✓
Measure the 3D model	✓	✓	✓	✗	✗

Feature	Smithsonian Voyager	ATON	3DHOP	Kompakkt	Virtual Interiors
Download of the 3D model	✓	✗	✗	✗	✗
Timeline	✗	✓	✗	✗	✗
DOI (digital object identifier)	✓	✗	✗	✓	✓
Dynamic Lighting	✓	✓	✓	✗	✓
Cut-through sections	✓	✗	✓	✗	✗
Export the cut-through profile	✗	✗	✗	✗	✗
Layers for enhanced visibility and inspection	✗	✓	✓	✗	✓
Toggle alternate hypothesis	✗	✗	✗	✗	✓
Certainty Index	✗	✗	✗	✗	✓



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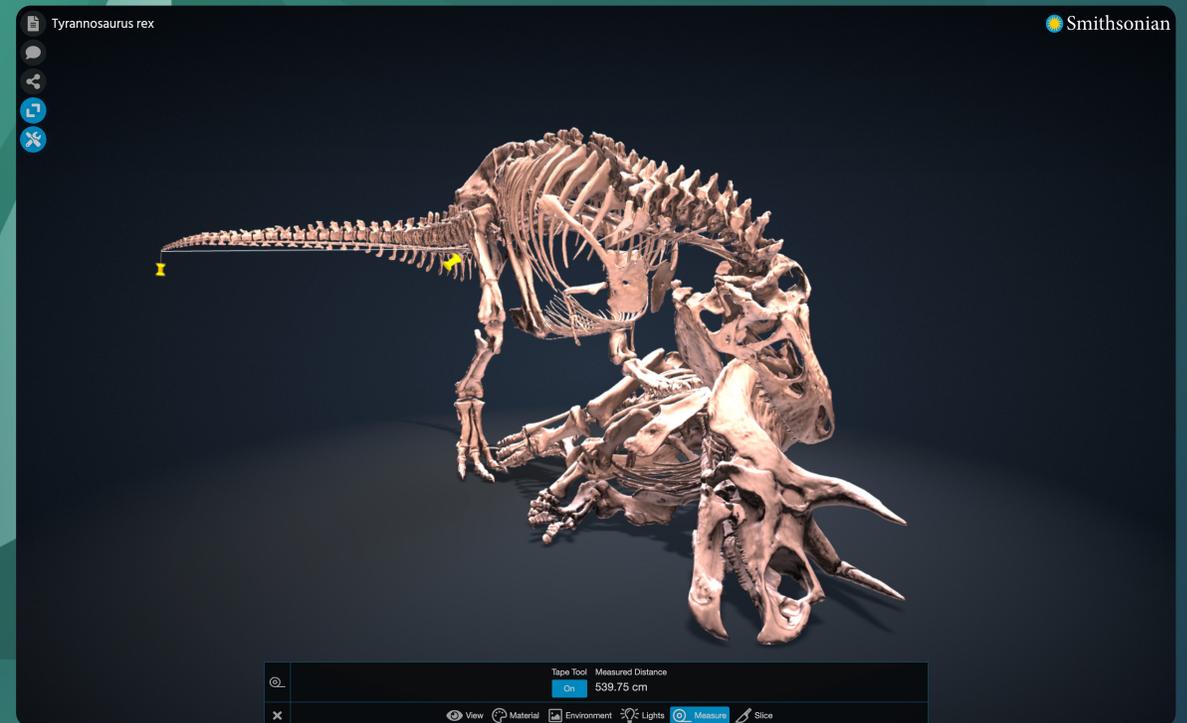
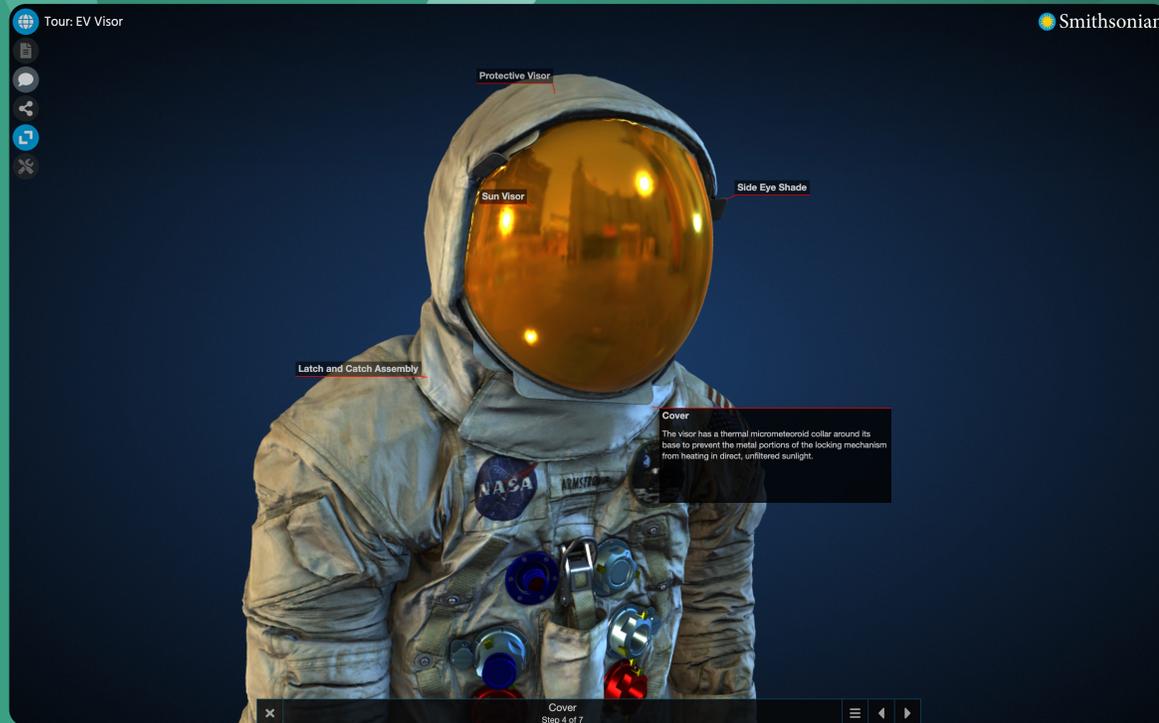


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Voyager



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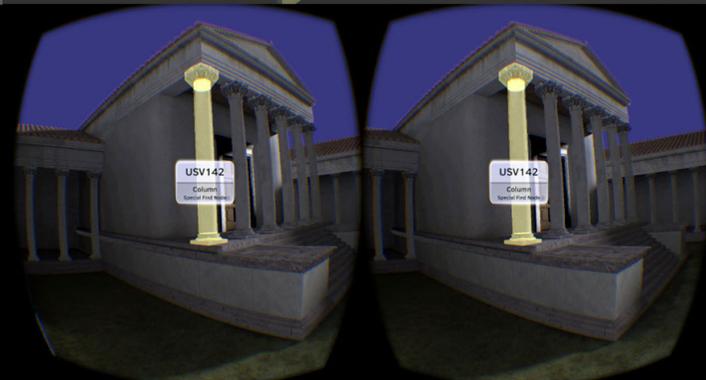
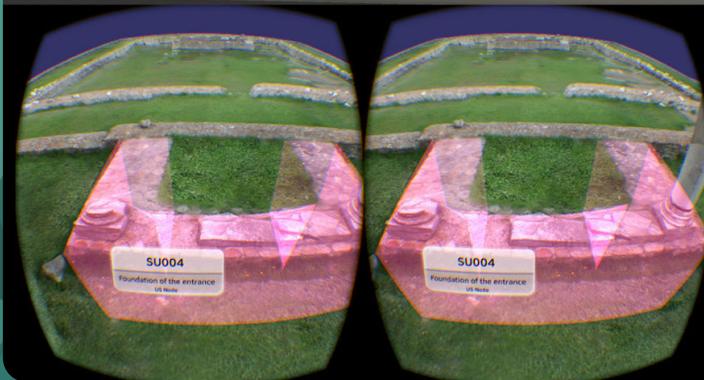
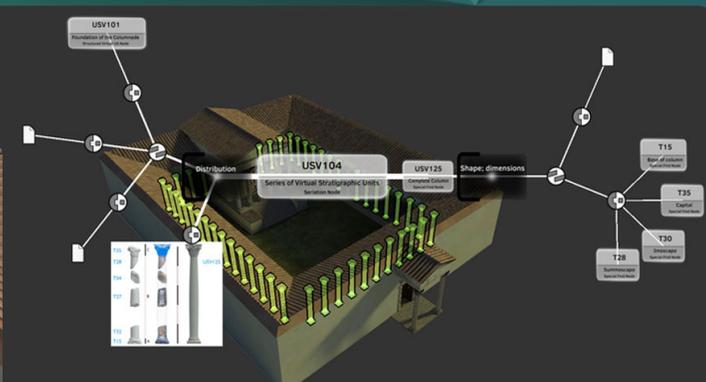
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ATON



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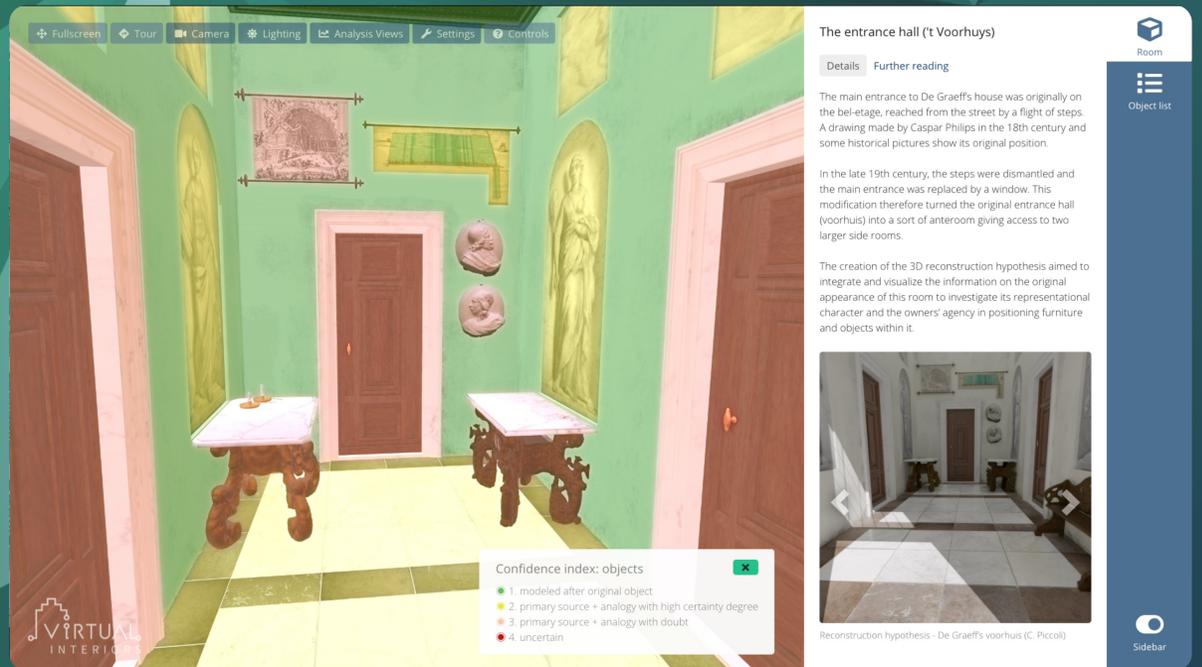
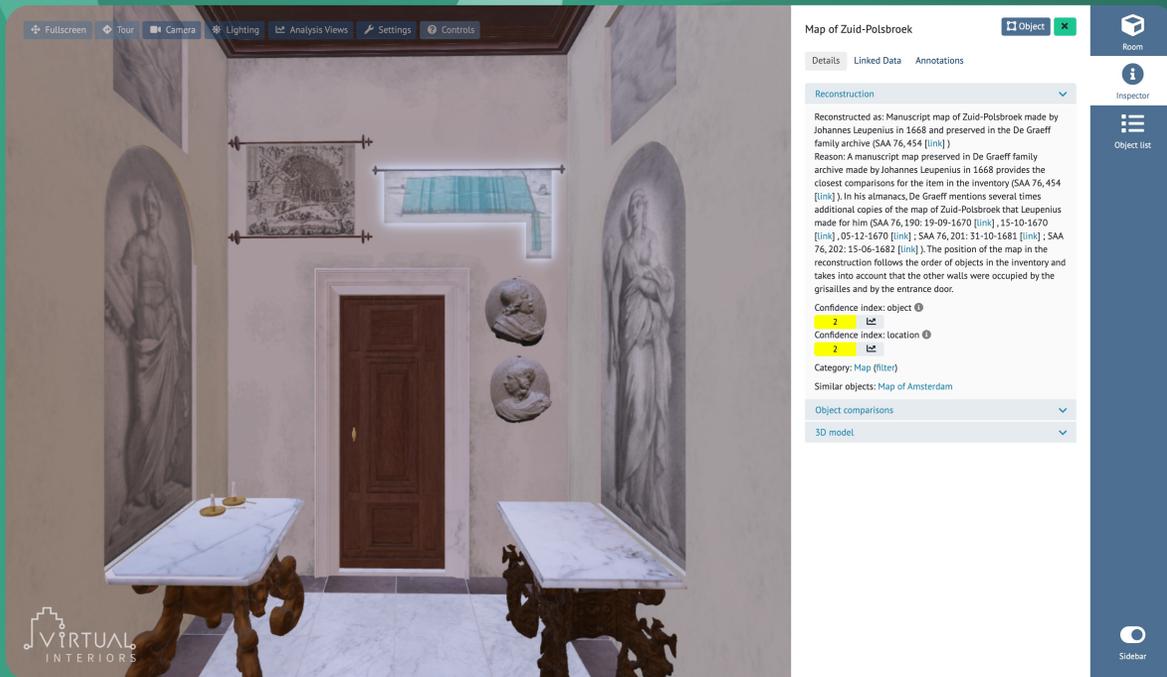
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<http://osiris.itabc.cnr.it/aton/>

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Virtual Interiors



Hurdeman, H. & Piccoli, C. (2021). 3D Reconstructions as Research Hubs: Geospatial Interfaces for Real-Time Data Exploration of Seventeenth-Century Amsterdam Domestic Interiors: . *Open Archaeology*, 7(1), 314-336. <https://doi.org/10.1515/opar-2020-0142>

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<https://www.virtualinteriorsproject.nl/>

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Gathering requirements for the Editions



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Gathering Requirements: A User-Centered Design Approach

Target End-Users

- 3D Content Creators (museums, researchers, non-profit, private sector)
- Humanities and Social Science Researcher
- Public (from school children to adults)

Methods

- Environment scan
- Surveys
- Focus Groups with different target end-users
- Multi-stage evaluations of a working prototype



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Survey – Purpose and Methodology

Objectives

- Gather requirements from diverse community of researchers who make and deploy 3D models from the heritage sector

Format

- 47 questions
 - Respondent demographic
 - Ideal features (future)
 - Project-specific (past)



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What Scholars Want: Survey Results



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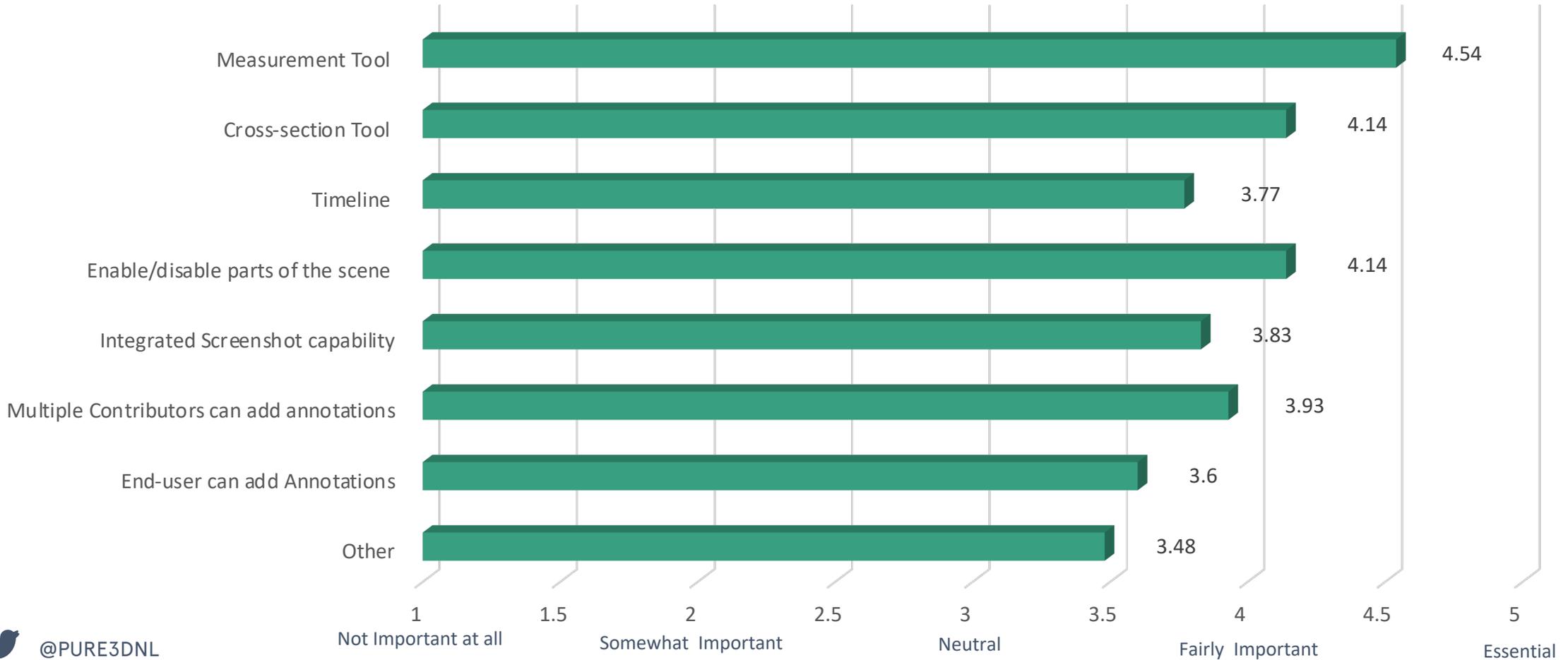
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Interface Features

Mean values for Question 6: The 3D web viewer should support the following features...



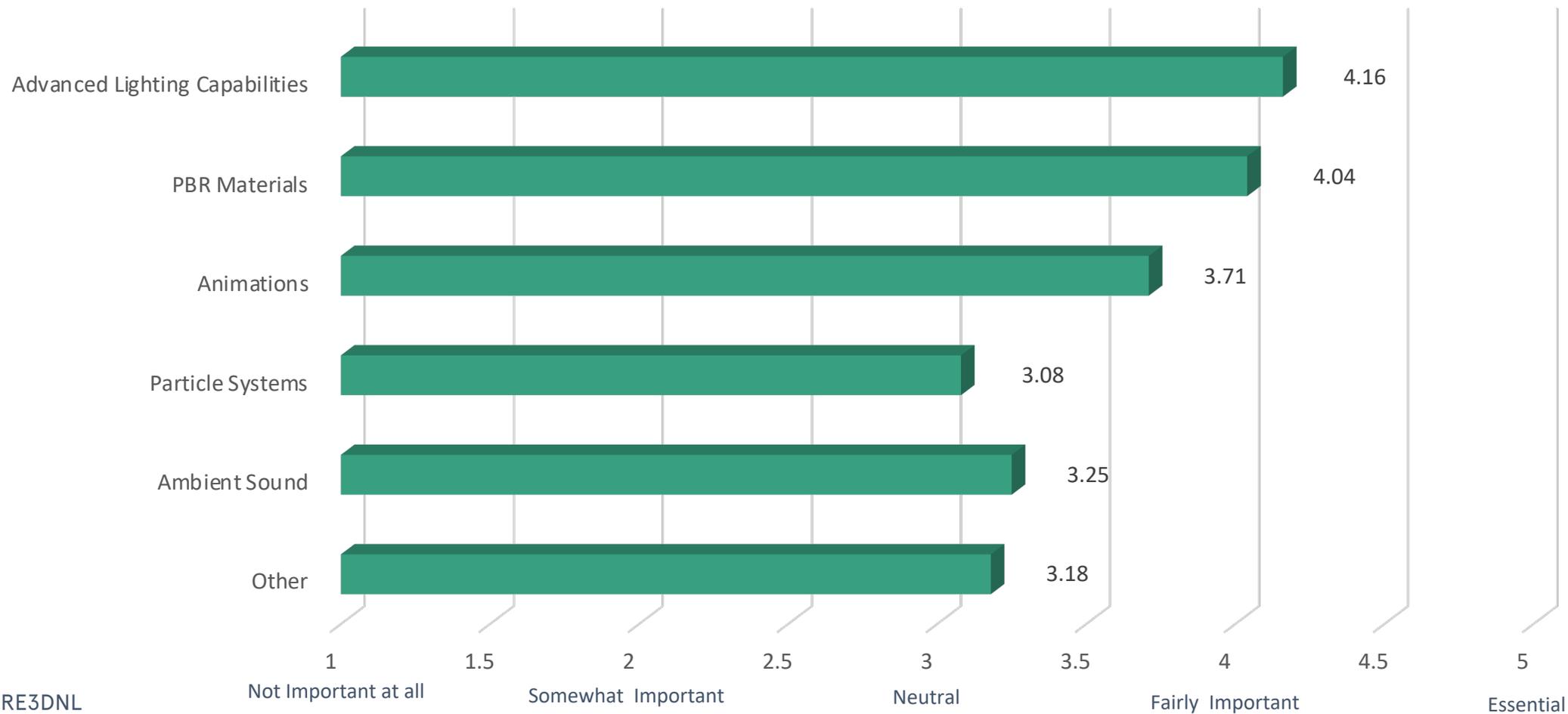
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Multi-Sensory Features

Mean values for Question 7: The 3D web viewer should be able to handle...



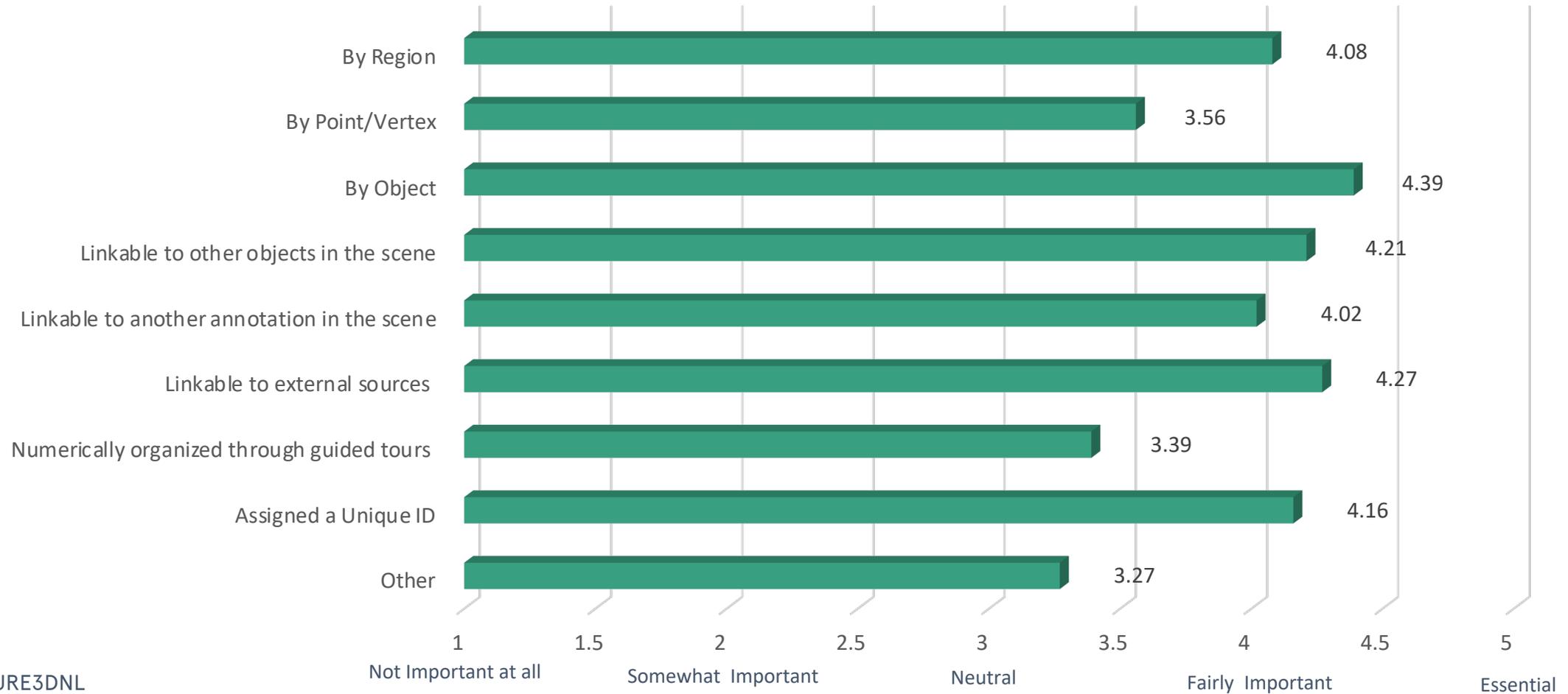
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Annotation Features

Mean values for Question 8: Annotations within the 3D web viewer should be...



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Why an addition (as opposed to an interface)

3D Interface

- Convention view-only modes
- Little to no contextualizing information
- Limited metadata
- Focus of the model is on technical characteristics of the model, not the real object it is representing

3D Edition

- Interactive, discoverable
- Linked with internal and external contextualizing narratives and information
- Robust metadata and paradata standards
- The model itself can be configured by the end-user to produce new knowledge



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