Linked.Art: Our Linked Open Usable Data Model

https://linked.art/

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Overview

- Databases
- Linked Open Data
- Linked Open <u>Usable</u> Data
- Linked.Art
- Worked Example









Databases Protect Data











Linked Art

We Need to Provide Access to the Data



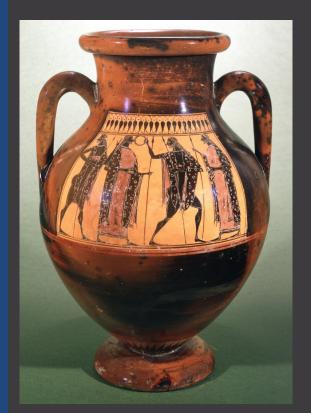








Data is Relevant Around the World





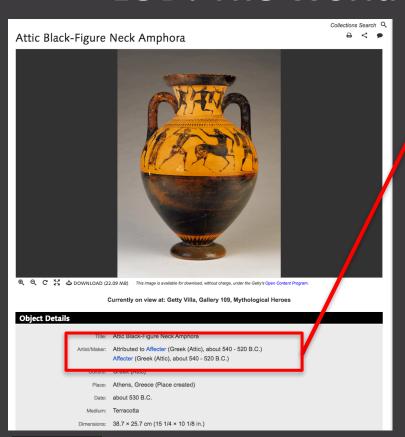








LOD: The World Wide Web of Data











Features of the Web

- Globally accessible
- Globally unique identifiers (URLs) for pages
- Get the page when you go to its URL
- Link from one page to another
- Common, standardized formats for pages
- Easy to contribute
- Easy to use









Features of LOD

- Globally accessible
- Globally unique identifiers (URIs) for things
- Get description of thing when you go to its URI
- Link from one thing to another
- Common, standardized formats for descriptions
- Easy to contribute
- ... err ... Easy to use???









Why has the Getty Committed to LOD?

- Data Management:
 - More accurate descriptions
 - Easier to integrate across systems
- Data Publication:
 - We have valuable information to share!
 - Enable others to build on it
- Data Consumption:
 - Others have valuable information too!









Data: Easy to Use ... by Humans

Title: Attic Black-Figure Neck Amphora

Artist/Maker: Attributed to Affecter (Greek (Attic), about 540 - 520 B.C.)

Affecter (Greek (Attic), about 540 - 520 B.C.)

Culture: Greek (Attic)

Place: Athens, Greece (Place created)

Date: about 530 B.C.

Medium: Terracotta

Object Number: 86.AE.75

Dimensions: $38.7 \times 25.7 \text{ cm} (15 1/4 \times 10 1/8 \text{ in.})$

Inscription: On the sloping surface of the underside of the foot: Large M (Greek graffito).

Alternate Titles: Storage Jar (Display Title)

Object Type: Amphora









Linked Art

LOD: Easy to Use ... by Machines

```
<http://vocab.getty.edu/aat/300015045> <http://www.w3.org/1999/02/22-rdf-syntax-</pre>
ns#type> <http://www.cidoc-crm.org/cidoc-crm/E57 Material> .
<http://vocab.getty.edu/aat/300015045> <http://www.w3.org/2000/01/rdf-</pre>
schema#label> "Terracotta" .<http://vocab.getty.edu/aat/300148696>
<a href="http://www.w3.org/1999/02/22-rdf-syntax-ns#type">http://www.w3.org/1999/02/22-rdf-syntax-ns#type</a> <a href="http://www.w3.org/1999/02/22-rdf-syntax-ns#type">http://www.cidoc-
crm.org/cidoc-crm/E55 Type> .<http://vocab.getty.edu/aat/300148696>
<a href="http://www.w3.org/20\overline{0}0/\overline{0}1/rdf-schema#label> "Amphora" .
<https://data.getty.edu/museum/11733> <http://www.cidoc-crm.org/cidoc-</pre>
crm/P108i was produced by> <a href="https://data.getty.edu/museum/11733/create">https://data.getty.edu/museum/11733/create</a>.
<https://data.getty.edu/museum/11733> <http://www.cidoc-crm.org/cidoc-</pre>
crm/P2 has type> <http://vocab.getty.edu/aat/300148696> .
<https://data.getty.edu/museum/11733> <http://www.cidoc-crm.org/cidoc-</pre>
crm/P45 consists of> <http://vocab.getty.edu/aat/300015045> .
<https:7/data.getty.edu/museum/11733> <http://www.w3.org/1999/02/22-rdf-syntax-</pre>
ns#type> <http://www.cidoc-crm.org/cidoc-crm/E22 Man-Made Object> .
<a href="https://data.getty.edu/museum/11733">https://data.getty.edu/museum/11733</a> <a href="https://www.w3.org/\overline{2}000/01/rdf">https://www.w3.org/\overline{2}000/01/rdf</a>
schema#label> "Attic Black-Figure Neck Amphora" .
<https://data.getty.edu/museum/11733/create> <http://www.w3.org/1999/02/22-rdf-</pre>
syntax-ns#type> <http://www.cidoc-crm.org/cidoc-crm/E12 Production> .<
https://data.getty.edu/museum/11733/create> <http://www.w3.org/2000/01/rdf-
schema#label> "Creation event" .
```









LOUD: Easy to Use ... by Humans

```
"@context": "https://linked.art/ns/v1/linked-art.json",
"id": "https://data.getty.edu/museum/11733",
"type": "ManMadeObject",
"label": "Attic Black-Figure Neck Amphora",
"classified as":
  [{"id": "aat:300148696", "type": "Type", "label": "Amphora"}]
"made of":
  [{"id": "aat:300015045", "type": "Material", "label": "Terracotta"}]
"produced by":
  {"id": ".../create", "type": "Production", "label": "Creation event"}
 // . . .
```

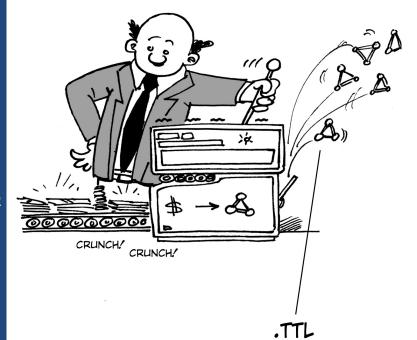








LOUD: Easy to Use ... by ... Humans?



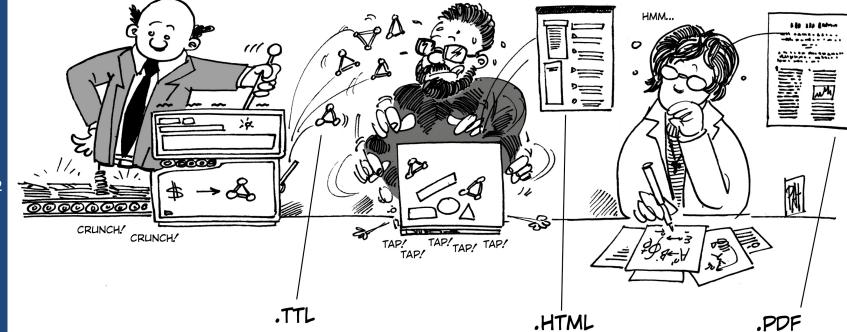




@getty.edu



LOUD: Easy to Use ... by Developers!







The API is the Developers' User Interface

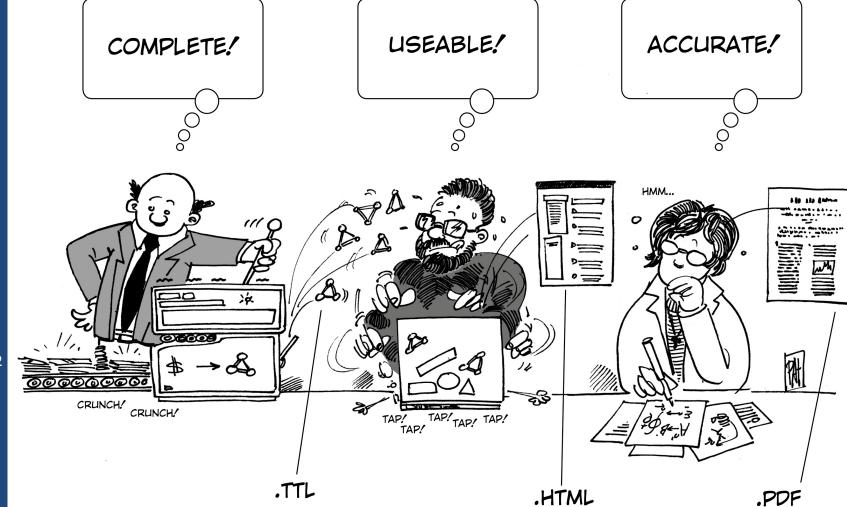
When it comes to APIs, developers are your users. The same principles of user-centred-design apply to the development and publication of APIs (simplicity, obviousness, fit-for-purpose etc)







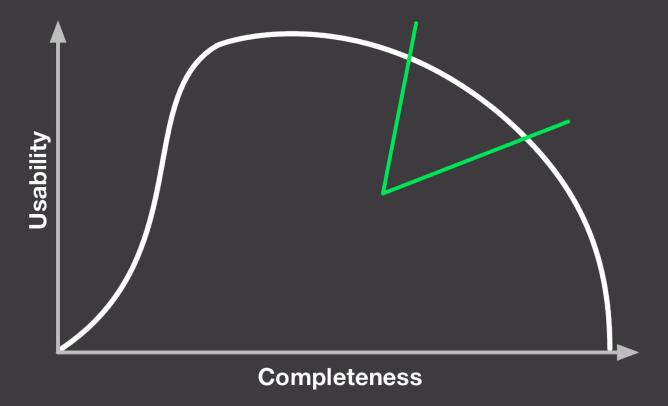




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Usable vs Complete: Target Zone











Linked Art Model

A Linked Open Usable Data model, collaboratively designed to work across cultural heritage organizations, that is easy to publish and enables a variety of consuming applications.

Design Principles:

- Focused on Usability, not 100% precision / completeness
- Consistently solves actual challenges from real data
- Development is iterative, as new use cases are found
- Solve 90% of use cases, with 10% of the effort









Linked Art Collaboration

Starting to work with organizations to formalize the model

- Getty
- Rijksmuseum
- Louvre
- Metropolitan Museum of Art
- Smithsonian
- MoMA
- V&A
- NGA
- Philadelphia Art Museum
- Indianapolis Art Museum

- Harvard University
- Princeton University
- Yale Centre for British Art
- Oxford University
- Academica Sinica
- ETH Zurich
- FORTH
- Zeri Foundation (U. Bologna)
- Canadian Heritage Info. Network
- American Numismatics Society









What Do We Care About: Art!

Object









... and People

Object



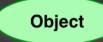








Art and People ... throughout History















Okay, Fine ... and Places

Object

Place

TimeSpan



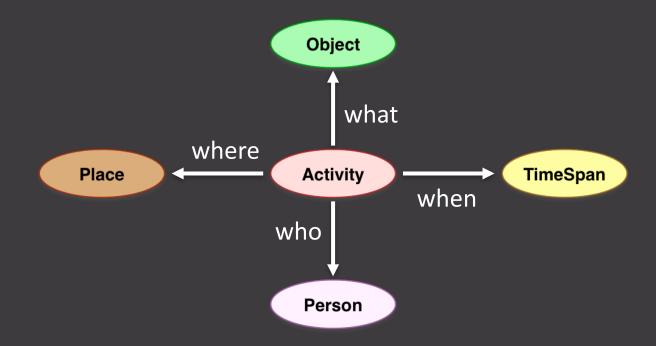








What Do We Care About: Activities!











Linked Art

Data Model: Classes



Object Physical Things

TimeSpan Time

Person People & Groups

Places Places



Non-Physical Things



Names & Ids



Controlled Vocabulary



Values



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Date: about 530 B.C.

Medium: Terracotta

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Alternate Titles: Storage Jar (Display Title)

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Core Identity Features

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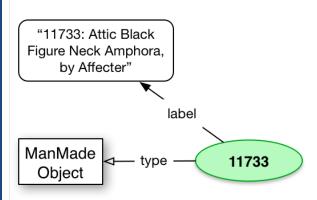
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Data: Object Type

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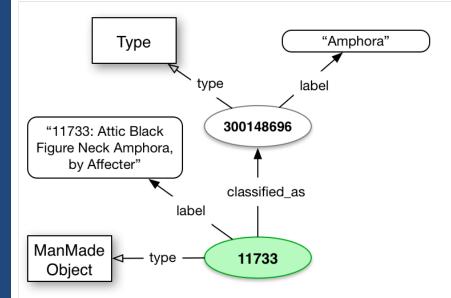
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Data: Accession Number

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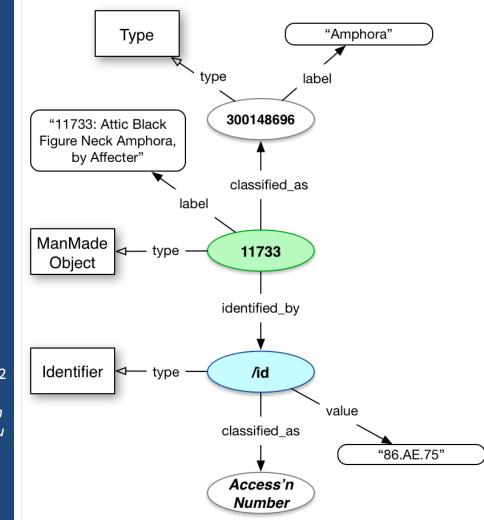
Object Type: Amphora

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Data: Primary Title

Title: Attic Black-Figure Neck Amphora

Artist/Maker: Attributed to Affecter (Greek (Attic), about 540 - 520 B.C.)

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Culture: Greek (Attic)

Place: Athens, Greece (Place created)

Date: about 530 B.C.

Medium: Terracotta

Object Number: 86.AE.75

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Inscription: On the sloping surface of the underside of the foot: Large M (Greek graffito).

Alternate Titles: Storage Jar (Display Title)

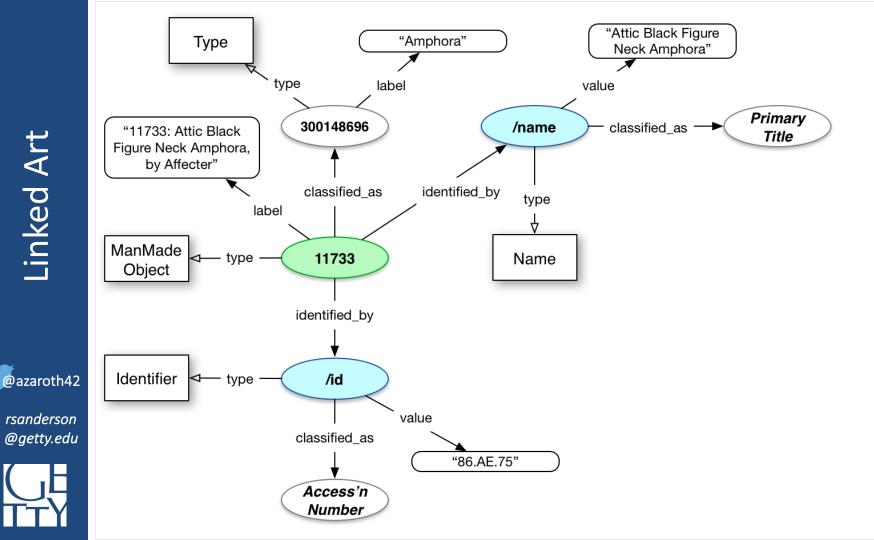
Object Type: Amphora

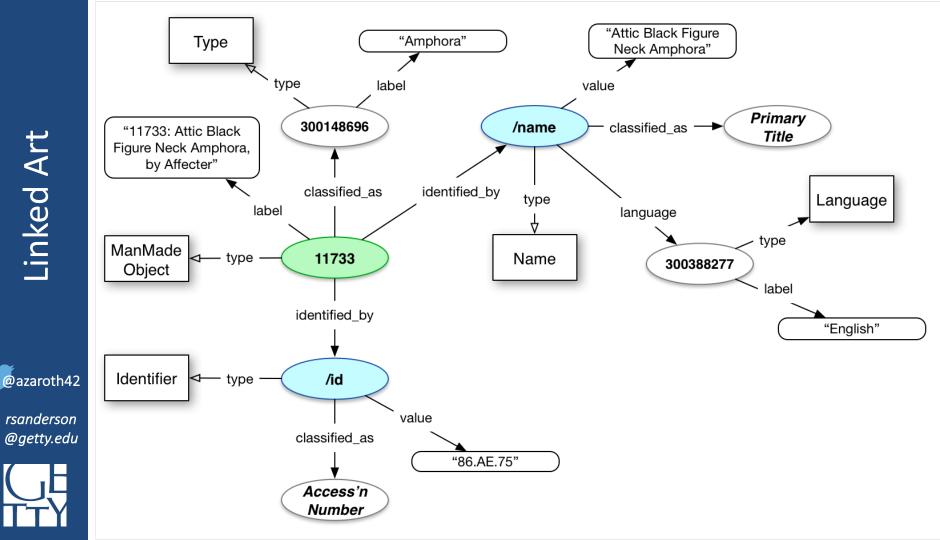












Data: Alternate Title

Title: Attic Black-Figure Neck Amphora

Artist/Maker: Attributed to Affecter (Greek (Attic), about 540 - 520 B.C.)

Affecter (Greek (Attic), about 540 - 520 B.C.)

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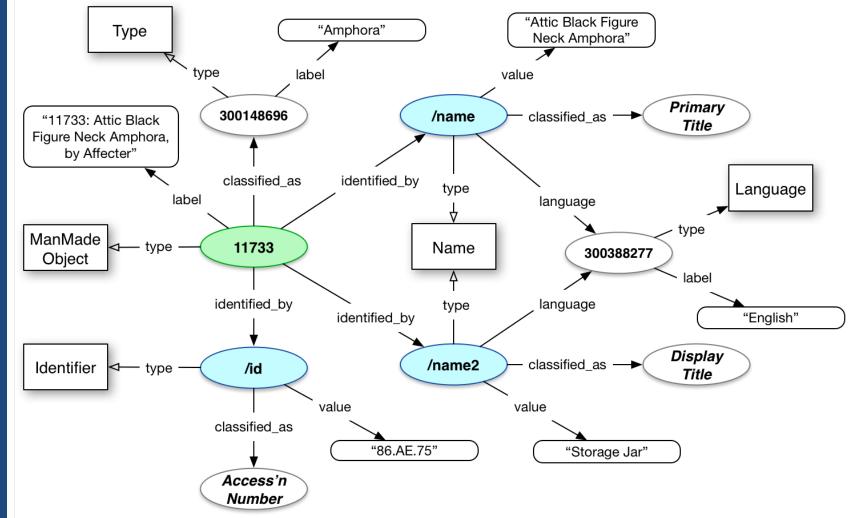
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Physical Features

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Data: Medium / Material

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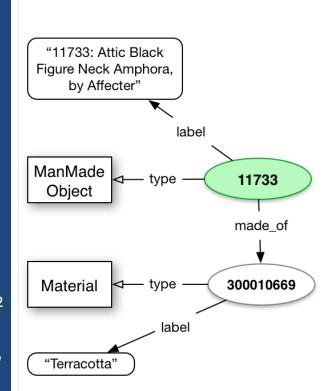












Data: Size / Dimensions

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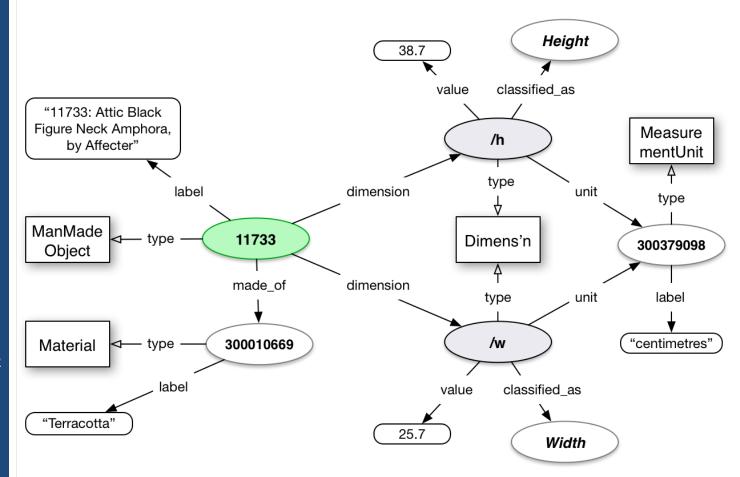
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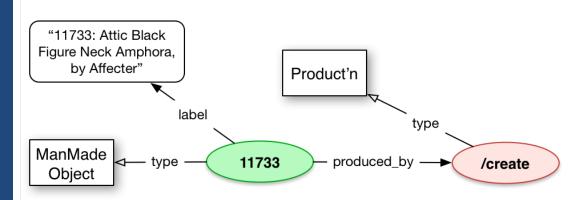
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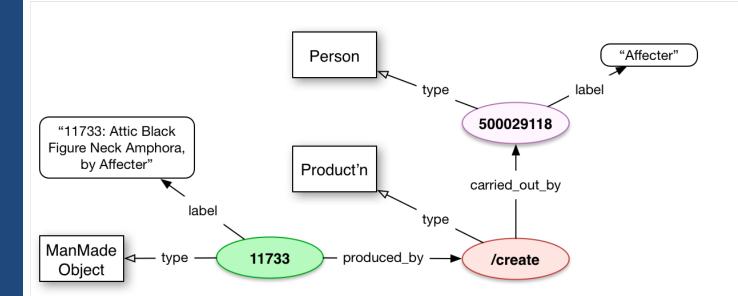
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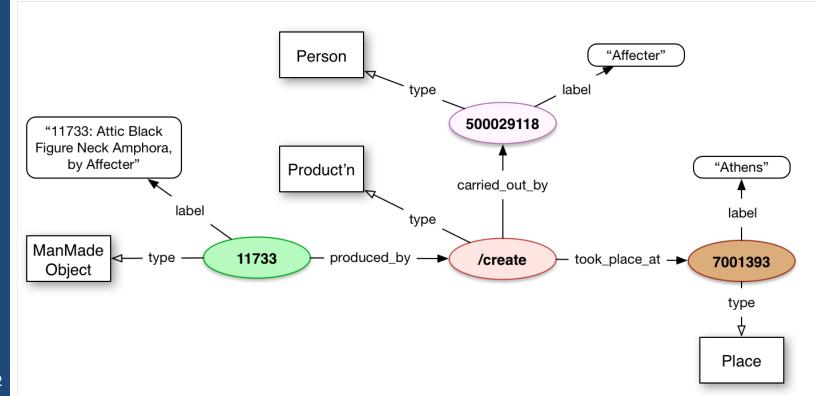
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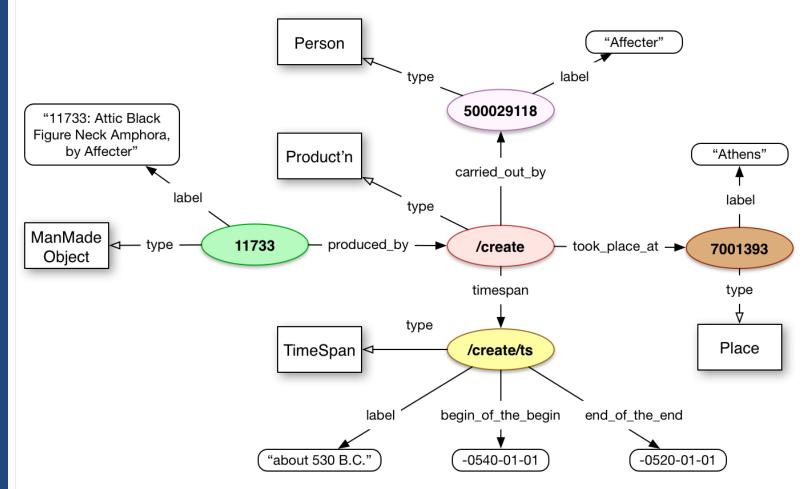
Object Type: Amphora











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But ... What About ...

- Attribution? Culture? Inscription?
- People and Organizations?
- Places?
- Provenance?
- Bibliographies?
- Exhibitions?
- ... ?

Next Time!









Thank You!

https://linked.art/

Rob Sanderson rsanderson@getty.edu @azaroth42







