Enrichment of accesible LD and visualization for Humanities:

MPOC model and prototype

Alicia Lara Clares alara@lsi.uned.es

Ana García Serrano agarcia@lsi.uned.es

Covadonga Rodrigo San Juan covadonga@lsi.uned.es

11th International Conference on Metadata and Semantics Research

November 28th – December 1st 2017, Tallinn, Estonia

UNED

Museum, digital curation, linked data, narratives, semantic graph.

Museology and social integration: the diffusion of the artistic and cultural heritage of the Spanish Prado Museum to groups with special accessibility

(S2015/HUM3494)

The **MUSACCES Consortium** was born with the purpose of bringing the artistic and cultural heritage of the Spanish Prado Museum to blind, deaf and those who, because they are incarcerated in penitentiary institutions, can not go directly to the Collection.
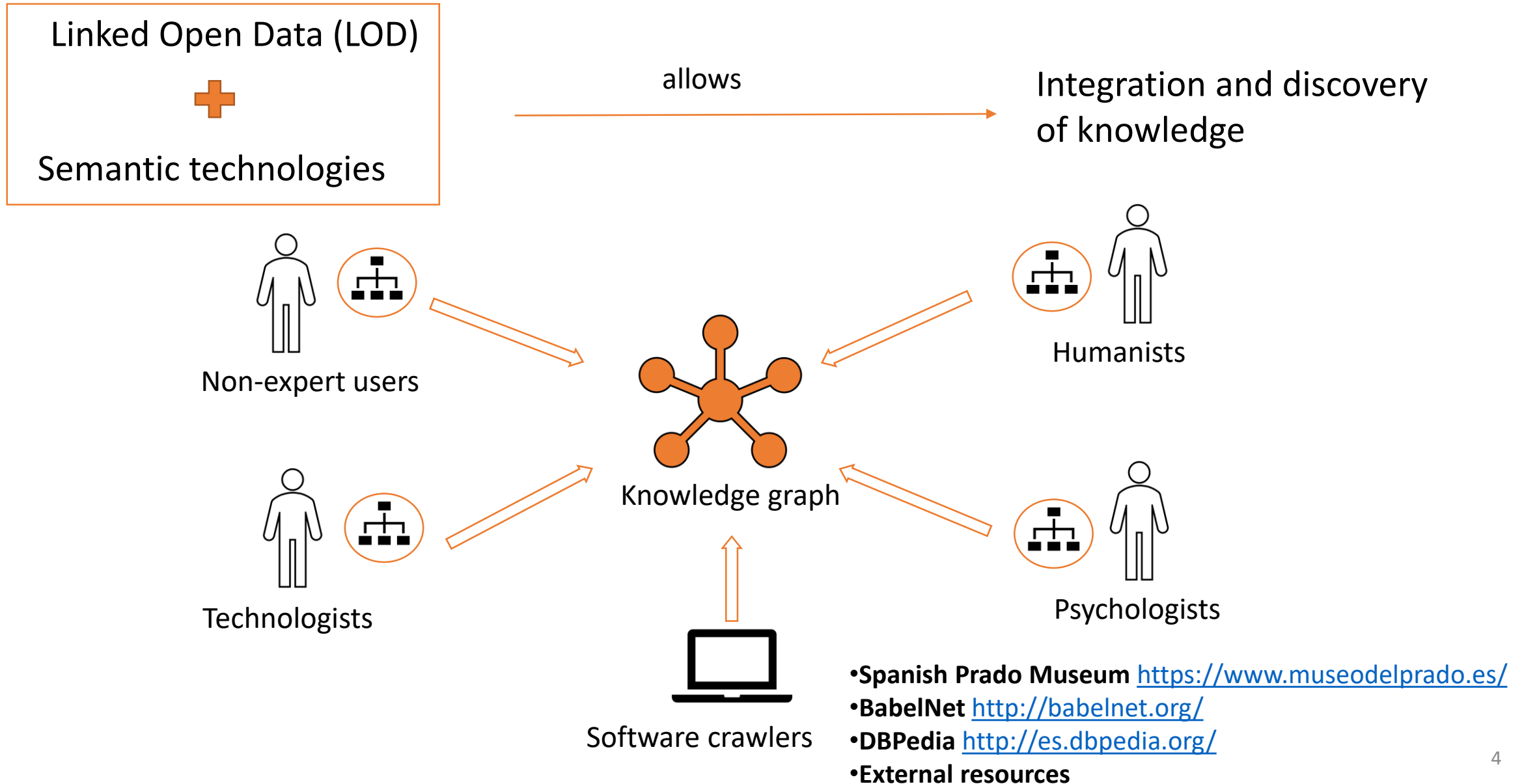
http://www.musacces.es

Comunidad de Madrid

UNIÓN EUROPEA
Fondo Social Europeo

https://www.facebook.com/musacces

https://twitter.com/musacces

https://www.youtube.com/channel/UCQaEUzVMiS9z
w5PJIw2nFfw

Contextualization

Main aim ———————→ Work with semantic technologies in two ways:

1. Management of available data from different resources
2. The use of a semantic graph that can assist the experts (humanists, psycologists, …)

Create a **narrative model** ——— to interact with ———→ **Semantic objects**

Contextualization

Linked Open Data (LOD)

➕

Semantic technologies

allows

Integration and discovery of knowledge

Non-expert users

Technologists

Knowledge graph

Humanists

Psychologists

Software crawlers

- **Spanish Prado Museum** https://www.museodelprado.es/
- **BabelNet** http://babelnet.org/
- **DBPedia** http://es.dbpedia.org/
- **External resources**

Existing tools for creating and editing narratives: **StorySpace**

- Structure of narration with hyperlinks: Does not use standards, metadata or narrative elements
- Created for museum workers who manually create narratives
- Available for IOS: It is not multiplatform
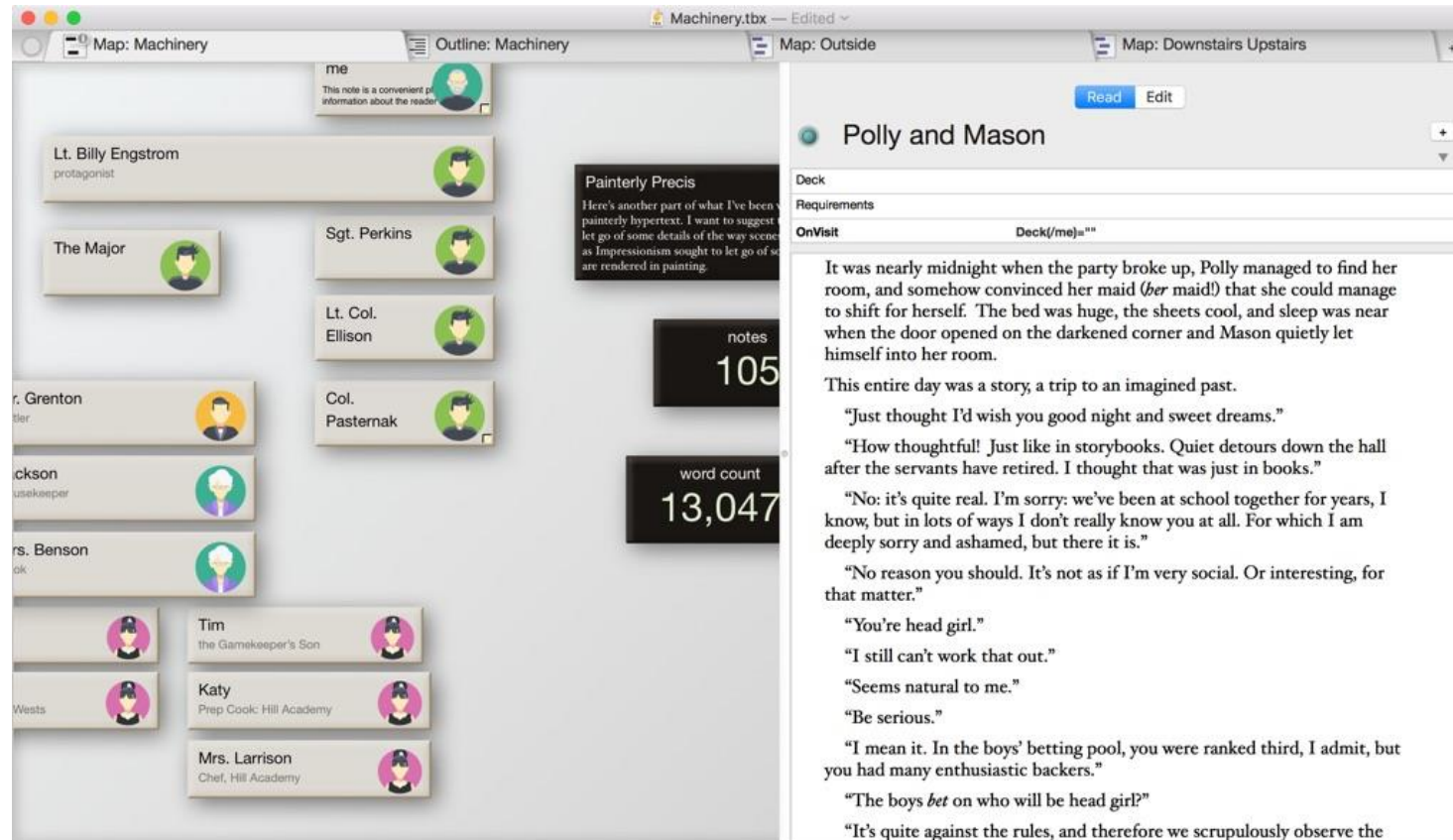
Existing tools for creating and editing narratives : **StoryScope**

- Web-based information system
- Includes model, methodology and collections of artworks
- The narration is manually written on the artwork
- The narrative elements are separated from the narrative, but associated with the work.
- There are no relationships between the narrative elements.

A proposal for Narrative Modeling

Narratology
("Grammaire Du Décaméron",
Todorov, 1969)

is a branch of

Structuralism and Semiotics

study of

Narratives → **Structure of narratives**

Es una de las obras de mayor tamaño de Velázquez y en la que puso un mayor empeño para crear una composición a la vez compleja y creíble, que transmitiera la sensación de vida y realidad, y al mismo tiempo encerrara una densa red de significados. El pintor alcanzó su objetivo y el cuadro se

The way of how the structure has an effect in our **perception** of narratives

Narrative model

The creation of a new narrative model allows users to take advantage of existing information and significantly improves the reach of current narrative creation tools.
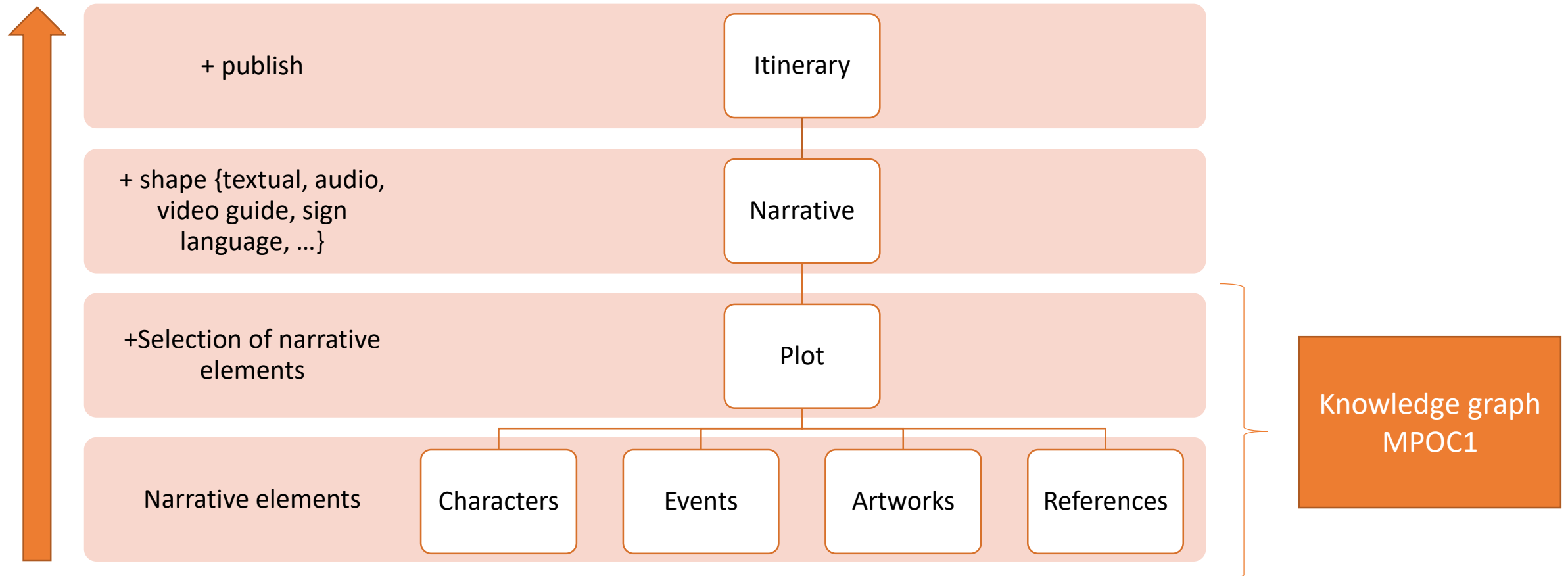
```
<div class="autor">
<h1>Vel&#225;zquez, Diego Rodr&#237;guez de Silva y</h1>
<h2>Sevilla, 1599 - Madrid, 1660</h2>
<img src=https://content3.cdnprado.net/imagenes/Documentos/imgsem/43/4343/434337e9-
77e4-4597-a962-ef47304d930d/70dcbd0d-aae0-48
 alt="Miniatura autor" />
<p>Adoptó el apellido de su madre, según u
&quot;Diego Vel&#225;zquez&quot; o &quot;Diego
Estudi&#243; y practic&#243; el arte de la pintura e
veinticuatro a&#241;os, cuando se traslad&#243; c
al rey desde entonce ...</p>
<a href="https://www.museodelprado.es/coleccion/
y/434337e9-77e4-4597-a962-ef47304d930d" class=
```

```
<div class="obra"> <article>
<h1 about="http://museodelprado.es/items/E22_Ma
ab8b-edee94ea877f_22cb0262-ddd4-4a0c-bb59-10
property="ecidoc:p102_E35_p3_has_title">La
```

```
<strong class="subtitulo">1656. Óleo sobre lienzo
```

Las meninas

1656. Óleo sobre lienzo, 318 x 276 cm.

Es una de las obras de mayor tamaño de Velázquez y en la que

Information in the Spanish Prado Museum: CIDOC-CRM

"The **CIDOC Conceptual Reference Model (CRM)** provides definitions and a formal structure for describing the implicit and explicit concepts and relationships used in cultural heritage documentation."

http://www.cidoc-crm.org/

Standard documentation is available:

http://www.cidoc-crm.org/html/5.0.4/cidoc-crm.html

CIDOC-CRM in Spanish Prado Museum
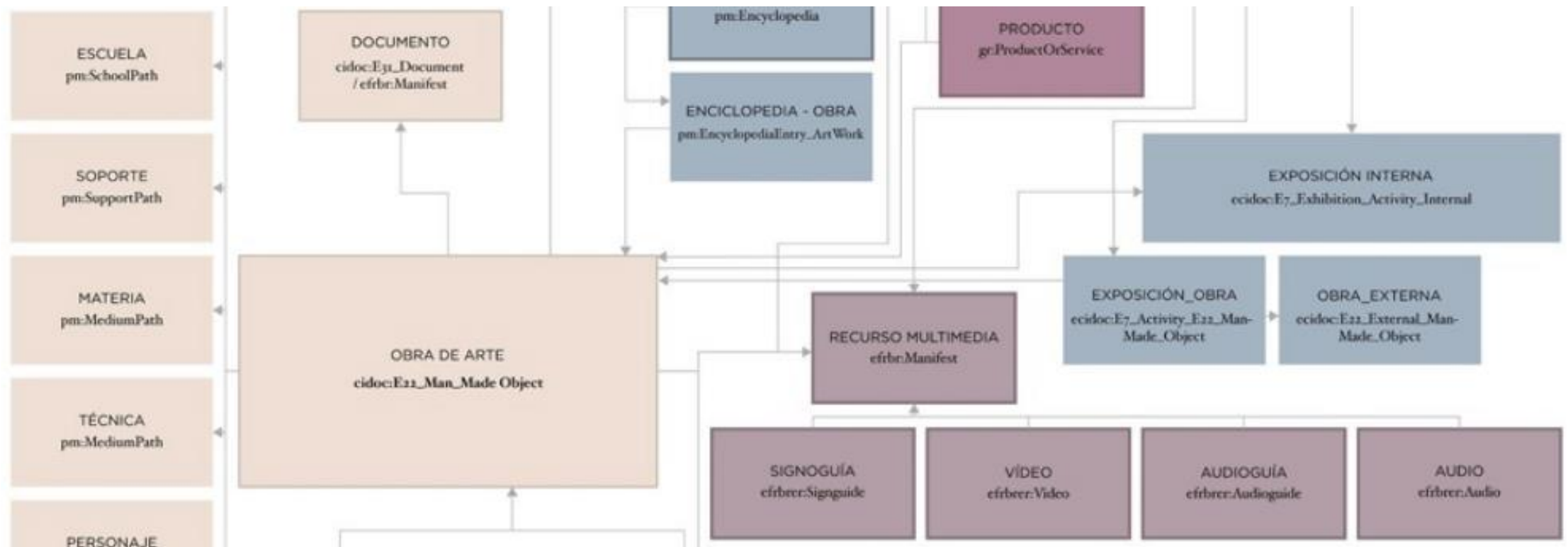
MPOC1: Web information system for the management of museum narratives.

http://catedra.lsi.uned.es/metadata/

Musacces

Museología e integración social: la difusión del patrimonio artístico y cultural del Museo del Prado a colectivos con especial accesibilidad (invidentes, sordos y reclusos)

Web oficial Musacces

| Ver URLs añadidas | Añadir URLs | Buscar obra | Documentación |

The system currently allows:
- Visualize and edit data of works and characters
- Create new metadata

Using metadata stardards and ontologies for museums:
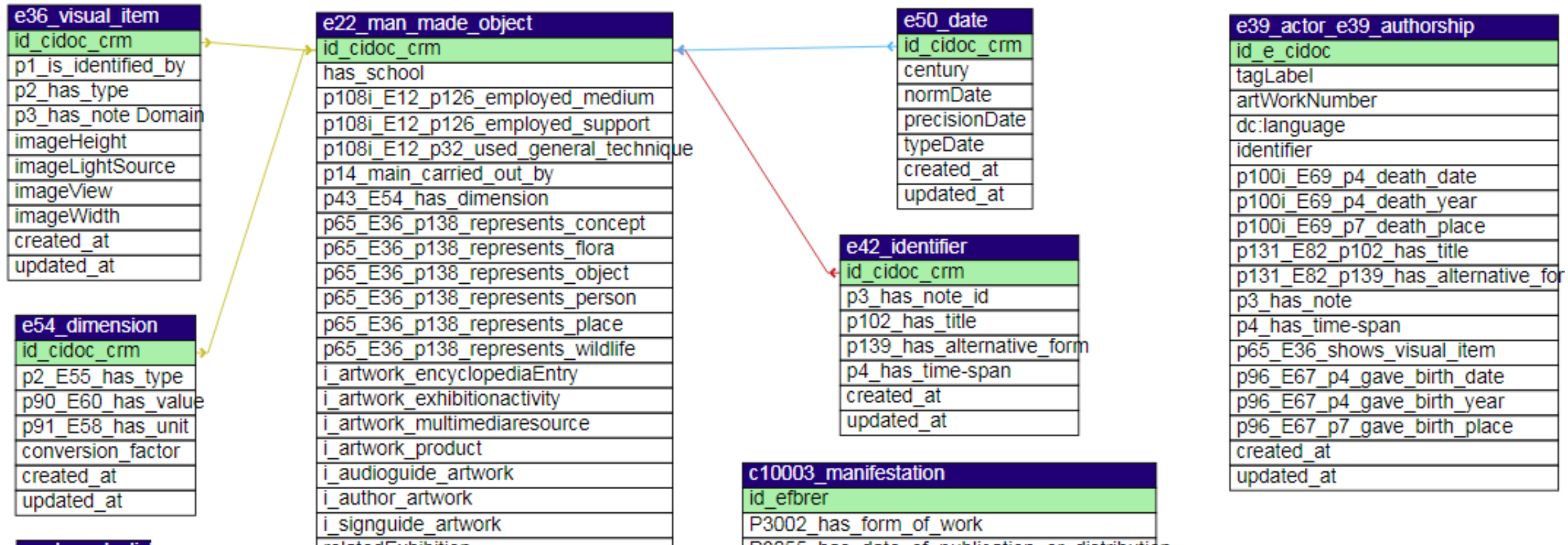
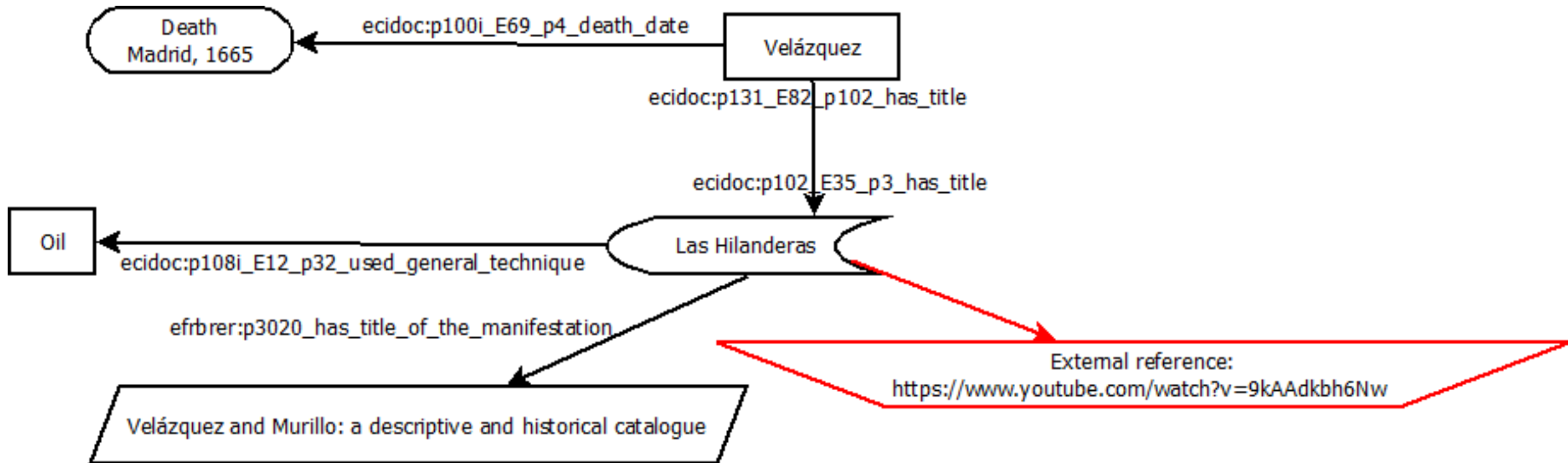**CIDOC-CRM**

FRBR

rNnews

SIOC   PPROC

Information storage in MPOC1

Future work

- Enrich the knowledge graphs from existing data (LOD) with information manually added by experts

Future work

- Add gamification elements (that allow to model different types of games)

- Add interactive elements that increments the value to the narrative (modeling of visual, olfactory objects, etc.)

- Integrate a Human-Computer Interaction (HCI) model to create a discourse-based system

Future work: Design and implementation of MPOC2

Añadir evento Añadir personaje Añadir obra Añadir acción externa Añadir referencia

El cuadro de Las Meninas desde el punto de vista de Nicolasito

File ▾   Edit ▾   Insert ▾   View ▾   Format ▾   Table ▾   Tools ▾

↶ ↷   + ▾   Formats ▾   **B** *I* ≡ ≡ ≡ ≡ ☰ ▾ ☰ ▾ ⇤ ⇥   🔗 🖼

Hola, soy [personaje id='4'] Nicolasito Pertusato [/personaje] y voy a contaros la historia del cuadro de [obra id='6'] Las Meninas [/obra] tal y como la cuentan en el libro [referencia id='2'] "El Misterio Velázquez" de Eliacer Cansino [/referencia].

p

Guardar cambios

Editing narratives and adding narrative elements

Thanks for your attention!

Any questions?