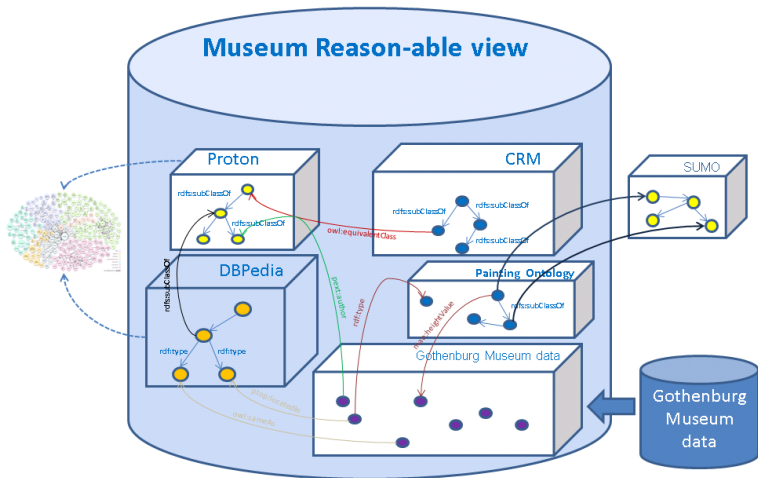# WP8 Case study: Cultural Heritage

MOLTO Enlarged EU (MOLTO-EEU) kickoff meeting
Gothenburg, 12 January 2012

- To build an ontology-based multilingual grammar for museum information starting from the CIDOC-CRM ontology for artefacts at Gothenburg City Museum

- To cover 15 languages for baseline functionality and 5 languages with a more complete coverage

- To build a prototype of a cross-language retrieval and representation system to be tested with objects in the museum, and automatically generate Wikipedia articles for museum artefacts in 5 languages

- An ontology model of paintings has been implemented

- Integration of the Gothenburg City Museum data into the Museum Reason-able View has been established

- The CIDOC-CRM and the Painting ontologies have been implemented in GF

- An application grammar library covering syntax and discourse patterns of written artwork descriptions for English and Swedish was developed

- The painting ontology is developed in Protégé
- Its main reference model is the OWL 2 implementation of the CIDOC-CRM 5.0.1.

- 197 classes
  24 stems from CRM, 15 equivalent to SOCH, 45 equivalent to SUMO concepts
- 107 properties
  17 are subproperties of the CRM properties

http://museum.ontotext.com/sparql

```
abstract Painting = {
. . .

cat Painting ;
cat Human ;
cat Both_SUMO_Man_Painter ;

fun Guernica : Painting ;
fun Painter_Human : Painter -> Human ;
fun PabloPicasso : Both_SUMO_Man_Painter ;
fun createdBy : Painting -> Human -> Formula ;
. . .
}
```

Straightforward from the ontology:

- Guernica is a painting
- Guernica is painted on canvas
- Guernica is painted by Pablo Picasso
- Guernica was created in 1937

[*TITLE CREATOR DATE SIZE COLOR LOCATION*]

Guernica was painted by Pablo Picasso in 1937. It is of size 349 by 776 cm and is painted in white, black and gray. The painting is displayed at Museo Reina Sofia, Madrid. (Eng)

Guernica blev målad av Pablo Picasso år 1937. Den är av storlek 349 och 776 cm och är målad i vit , svart och grå. Målningen återfinns på Museo Reina Sofia i Madrid. (Swe)

- Grammar generation based on SPRAQL query language

- Implement more patterns for discourse generation

- Translate lexical entites and write grammar for Frensh, Finnish, and German

- Extand the grammar and evaluate the results