



IIIF, Linked Data, and Vocabularies



International
Image
Interoperability
Framework

PNC 2016, ITWG 2016

<http://iiif.io/> #iiif



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Images are Fundamental Information Carriers





Yet, we hear ...



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@getty.edu



**I am locked into
my image
delivery software**



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I need a newer, faster image server
(and I can't spend much time or money on it)

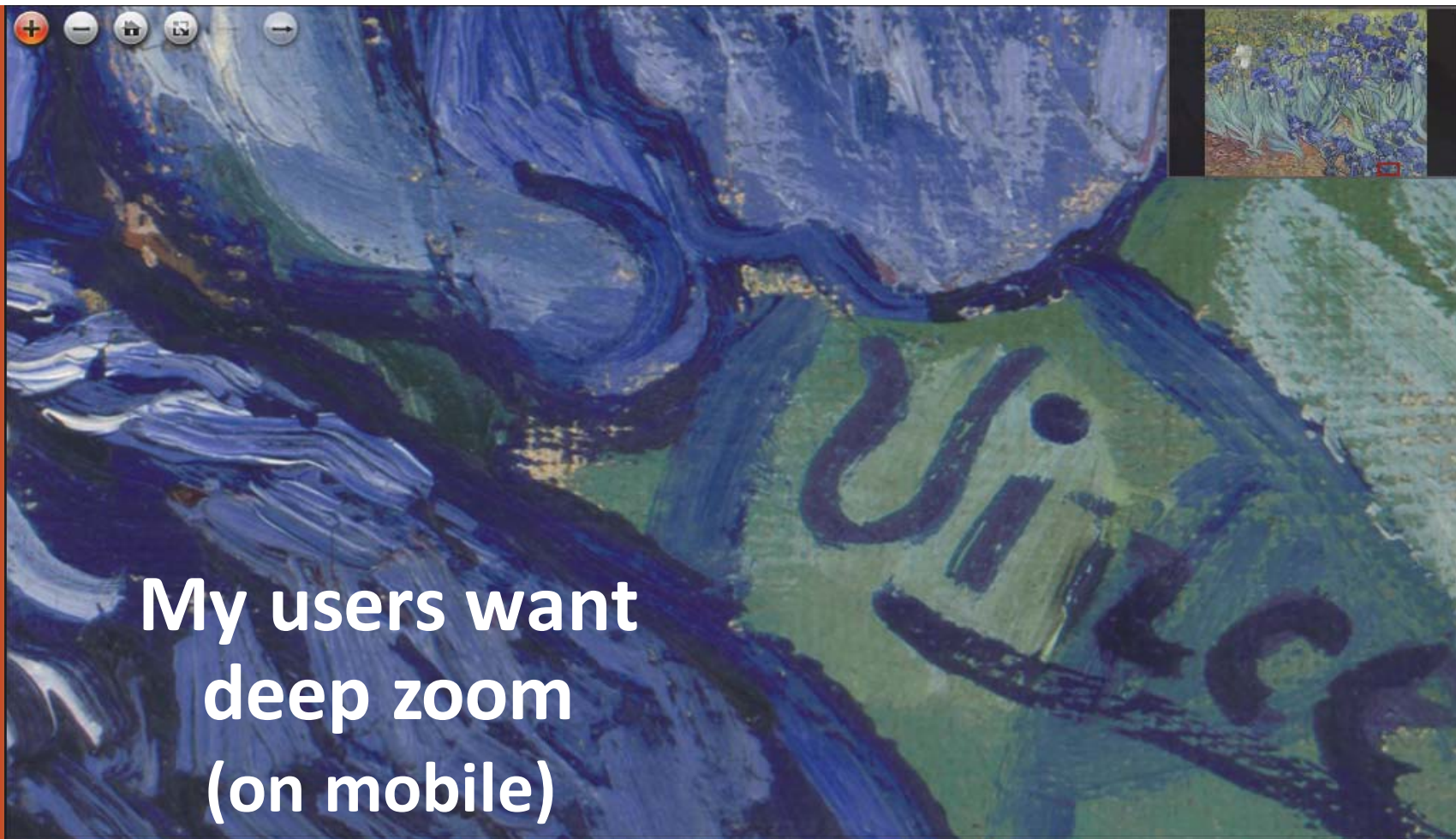


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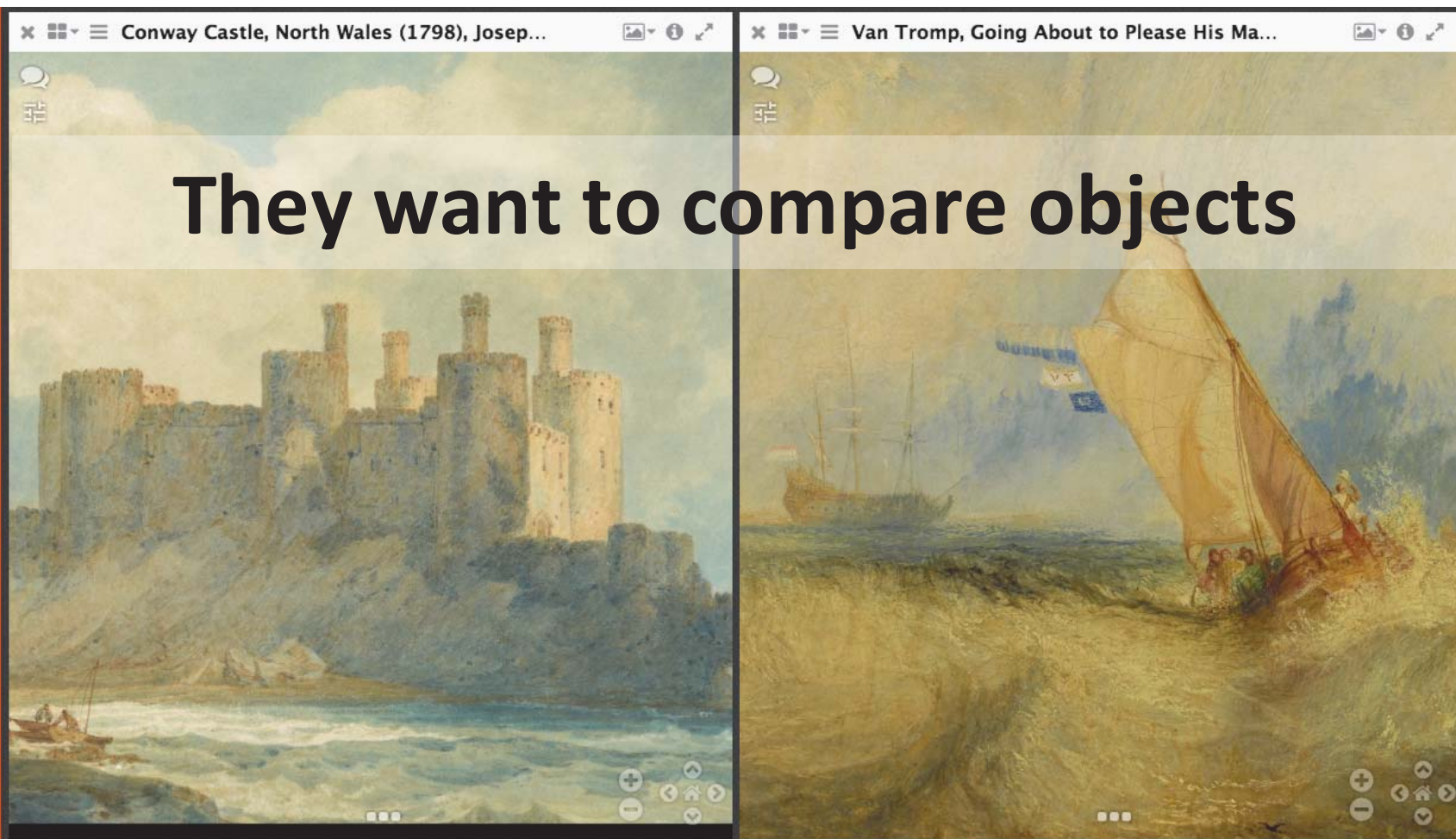


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They want to compare objects



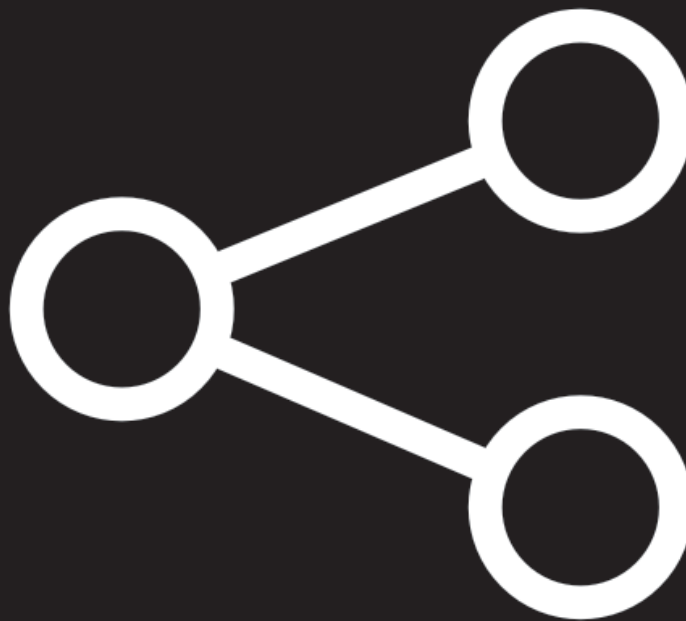
They want to compare objects

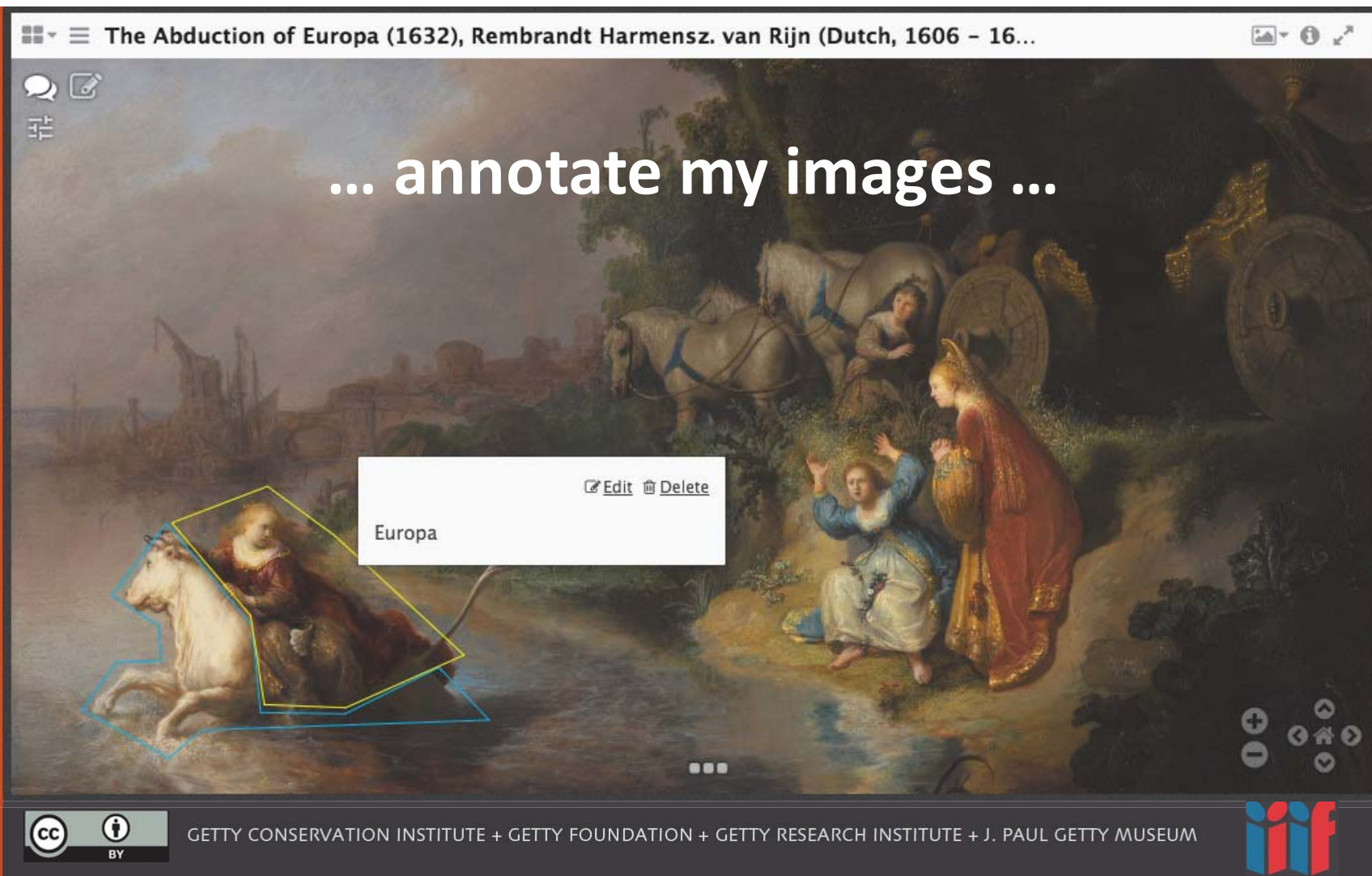
across collections





They want to cite my images ...





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Our Network

Get involved

Share your data

Use our data

OUR SITES

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+31 (0) 70 3140179

valentine.charles@europeana.eu



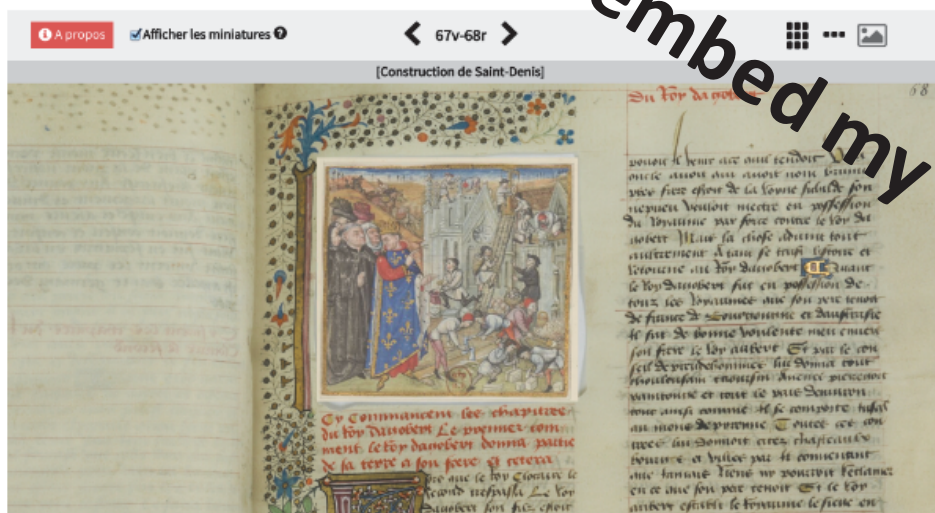
CONTACT:

Antoine Isaac

+31 (0) 70 3140179

antoine.isaac@europeana.eu

The International Image Interoperability Framework (IIIF) has huge potential to help us achieve this goal. If you're not familiar with it, IIIF is a standard for serving and consuming high quality images online, with the ability to instruct a server about the desired resolution, or image manipulations such as rotation and zooming. It also makes it more straightforward to publish complex aggregations of images, for instance bringing together a medieval manuscript text and an illumination that was stripped away from it.



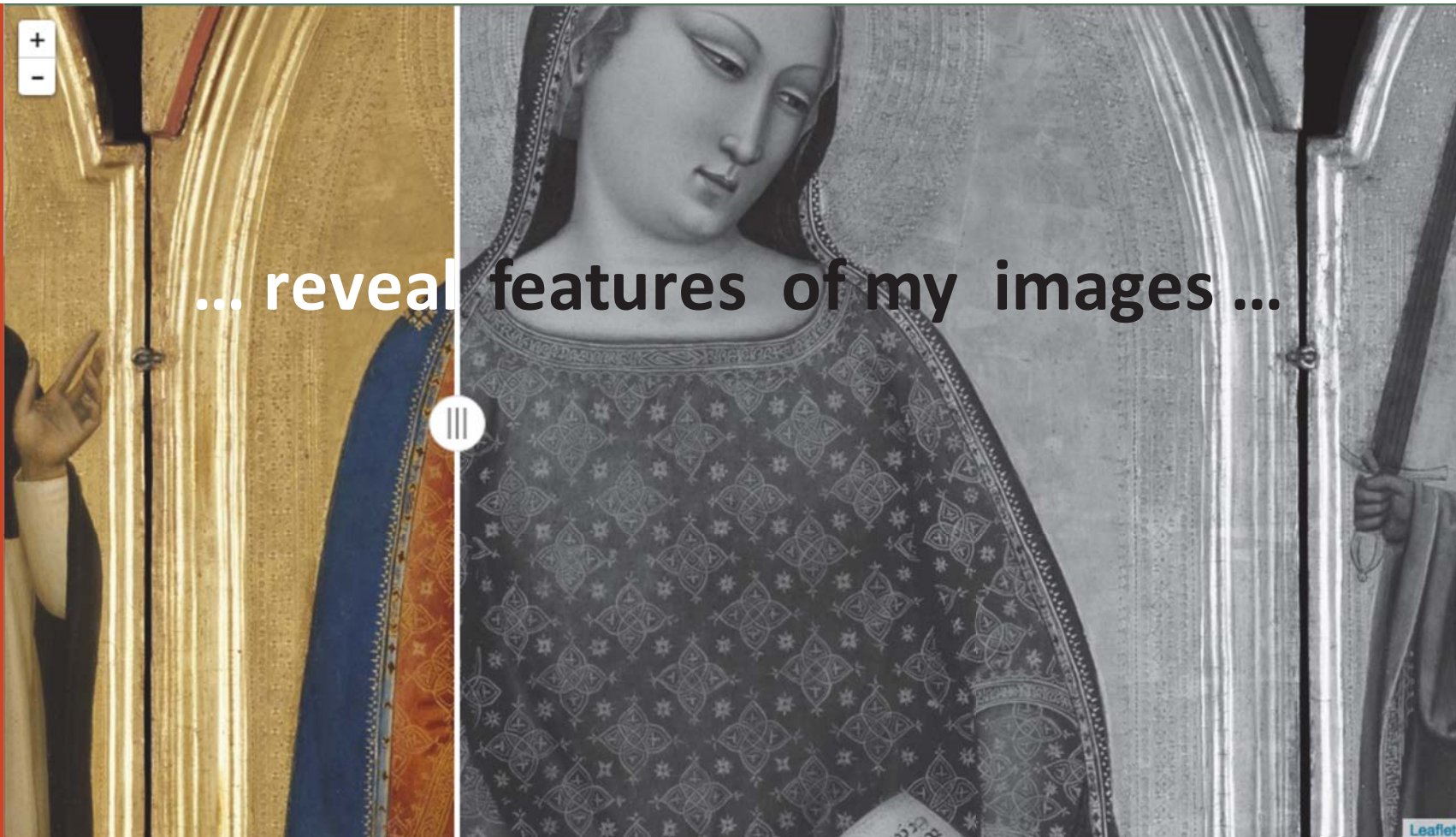
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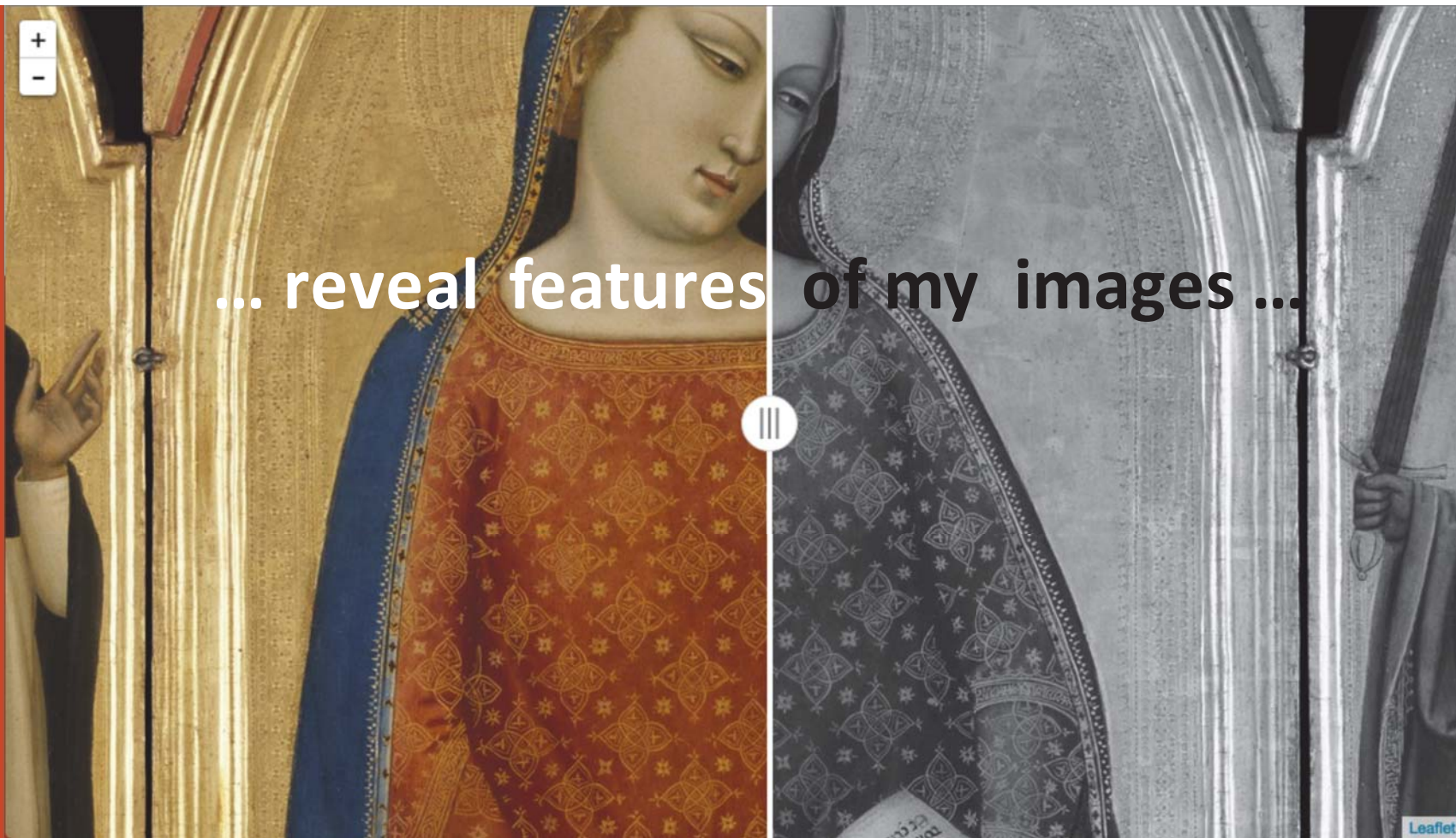
Leaflet

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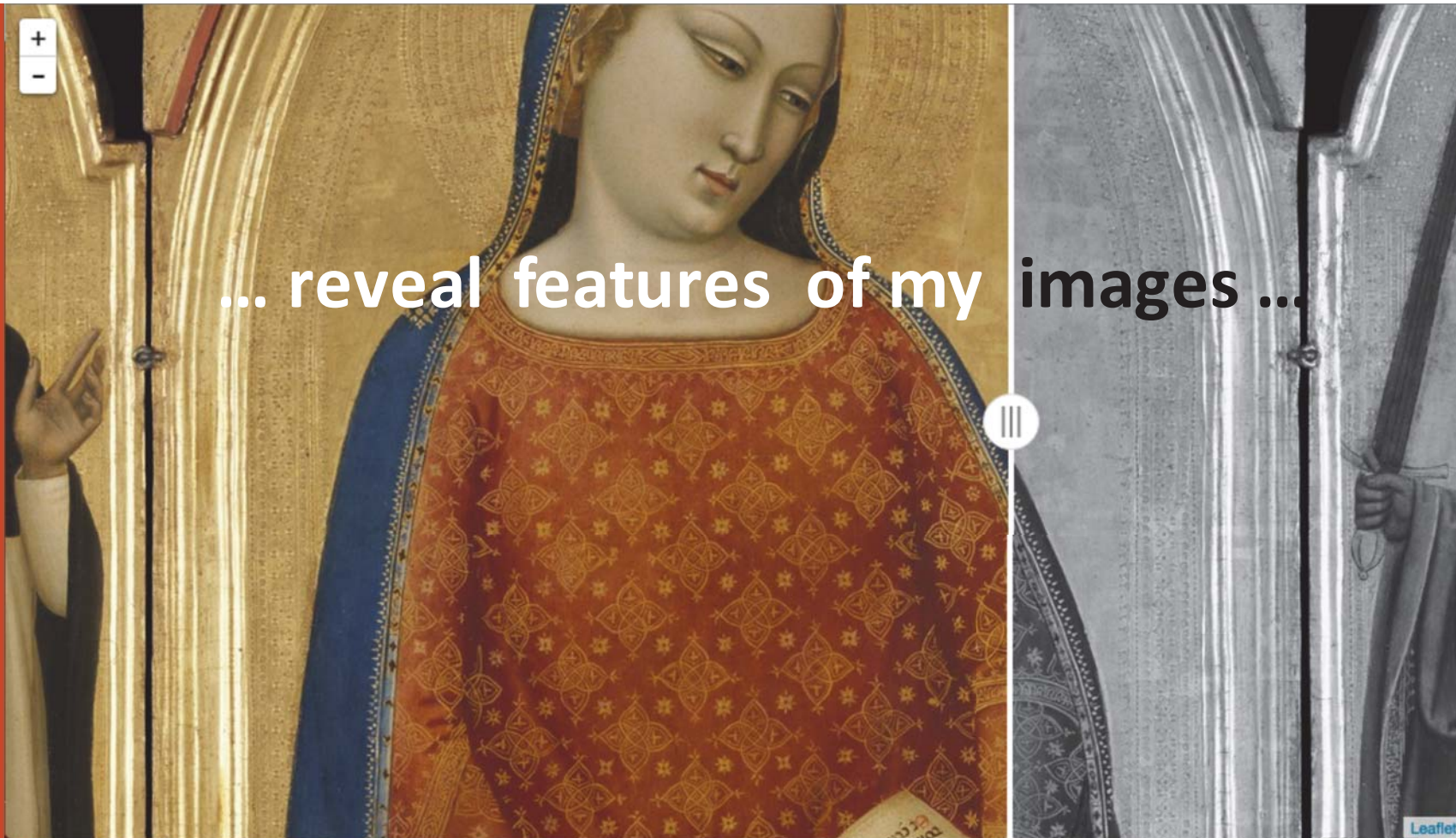
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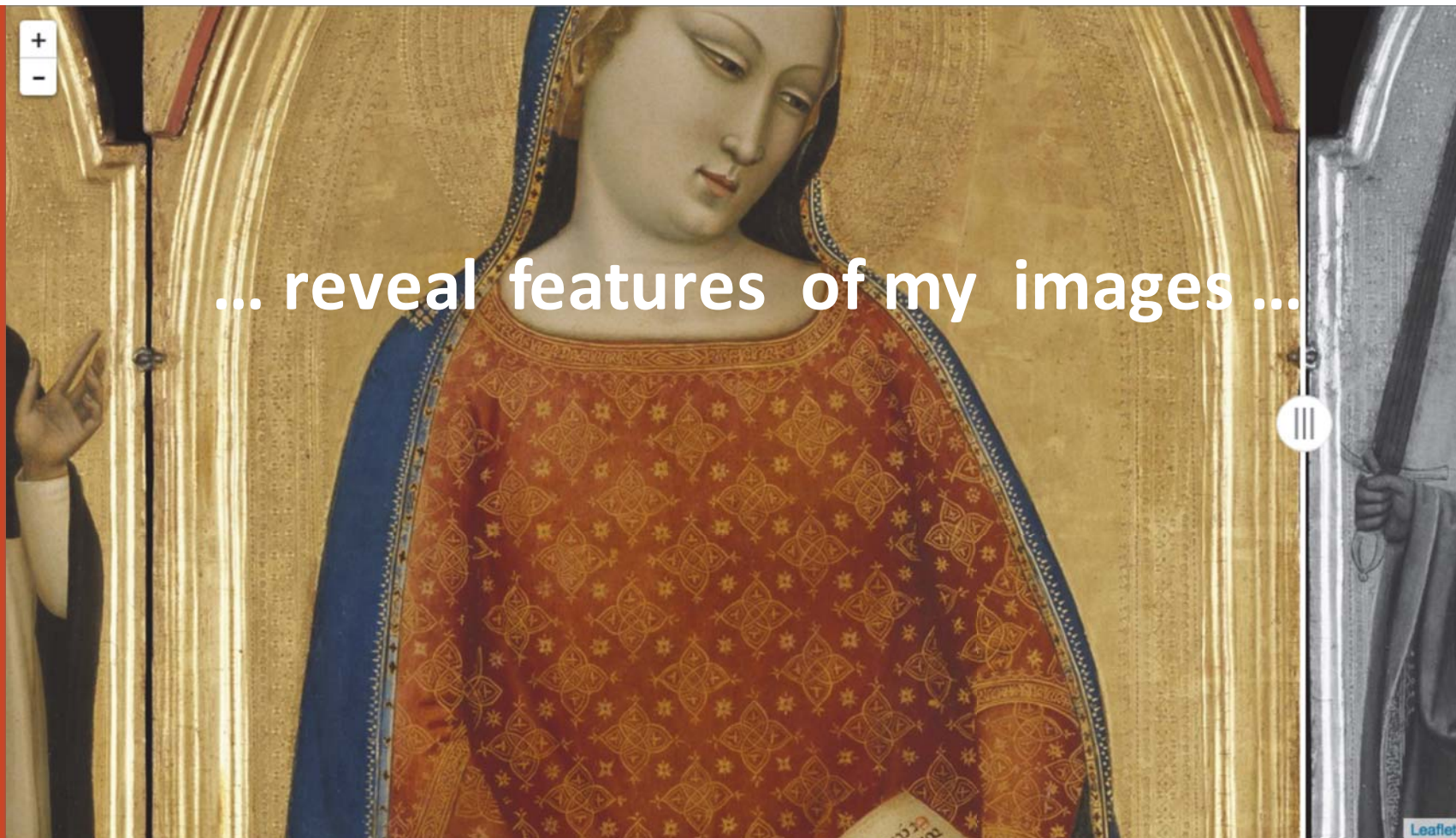
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... and I don't want to lose control



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Oh, and ...





I don't want to invent any of it



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A Community
that develops APIs,
implements them in Software,
and exposes interoperable Content

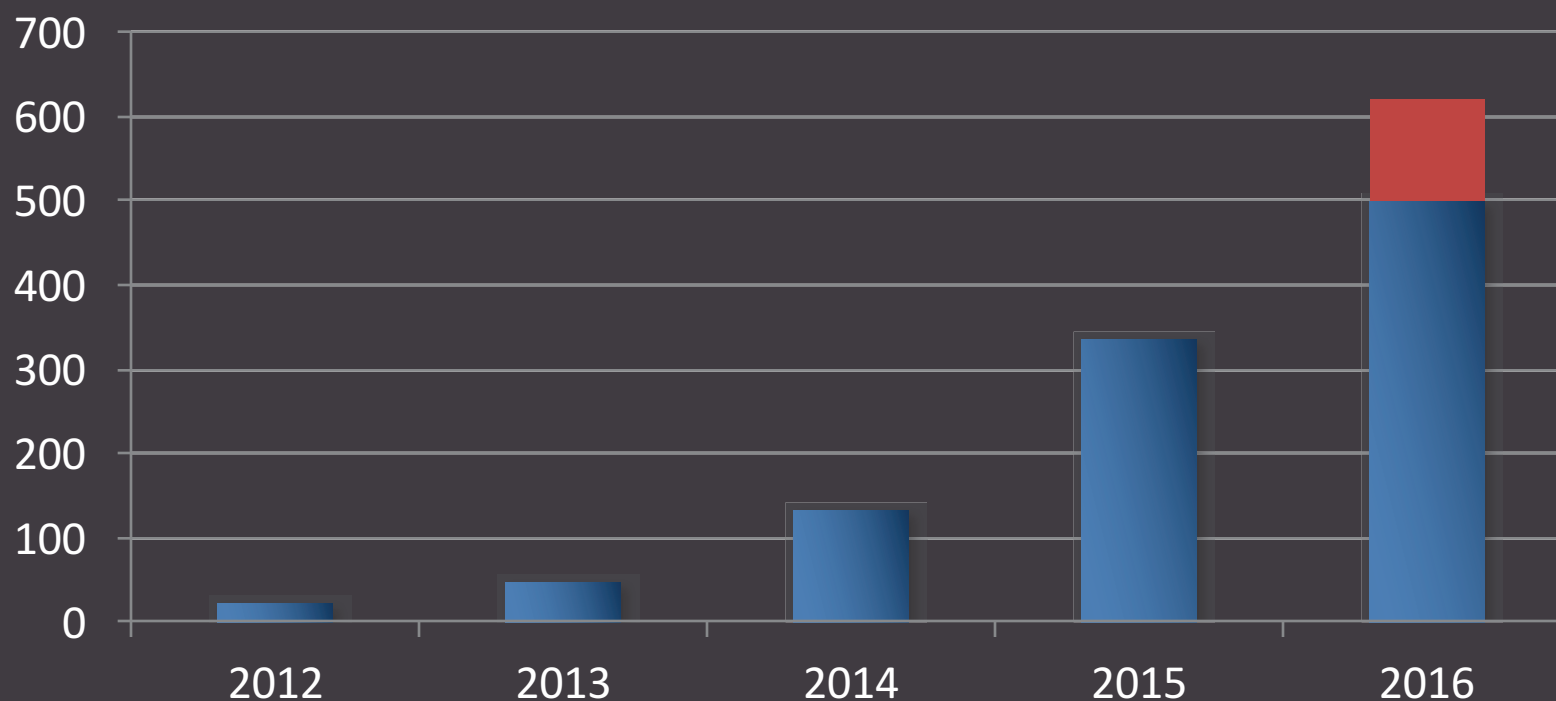


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IIIF Community



<https://groups.google.com/forum/#!forum/iiif-discuss>



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Some of the IIIF Community

National Libraries

- Austria
- British Library
- France
- Denmark
- Egypt
- Israel
- Japan
- New Zealand
- Norway
- Poland
- Qatar
- Scotland
- Serbia
- Vatican
- Wales

Research Institutions

- C2RMF (France)
- Cornell University
- Johns Hopkins Univ.
- Harvard University
- Oxford University
- Princeton University
- Stanford University
- Kyoto University
- University College Dublin
- Wellcome Library
- Yale University

Technology Firms

- CogApp * Digirati
- Luna * Klokian

Museums

- British Museum
- **J Paul Getty Trust**
- Natl Gallery of Art (US)
- YCBA
- Indianapolis Art Museum
- Chicago Art Institute
- Frick

Aggregators

- Artstor
- DPLA
- Europeana
- Internet Archive

Projects

- Biblissima * e-codices
- TPEN * TextGrid





IIIF Community: Consortium

- Artstor
- Bayerische Staatsbibliothek
- La Bibliothèque nationale de France
- British Library
- Brown University
- Cambridge University
- Cornell University
- **The J. Paul Getty Trust**
- Göttingen State and University Library
- Harvard University
- Indiana University
- Johns Hopkins University
- Leiden University
- MIT Libraries
- Nasjonalbiblioteket (National Library of Norway)
- National Library of Israel
- National Library of Poland
- National Library of Scotland
- New York University Libraries
- North Carolina State University
- Ohio State University
- Oxford University (Bodleian Library)
- Princeton University Library
- Stanford University
- University of Edinburgh
- University of Hong Kong
- University of Michigan
- University of Notre Dame
- University of Oklahoma
- University of Pennsylvania
- University of Toronto
- Vatican Library
- Wellcome Trust
- Yale University / Yale Center for British Art



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Four APIs: Agreements on Interaction

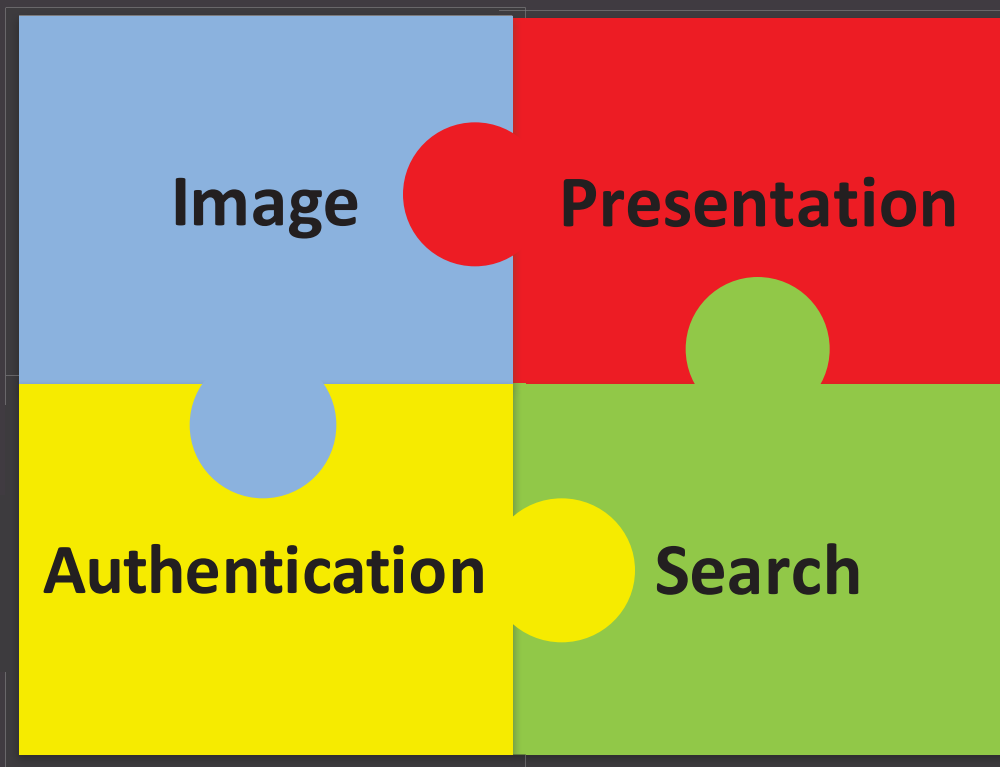


Image API



```

/ img-1234 / 125,15,120,140 / pct:75 / ! 345 / gray.jpg
(identifier) (region) (size) (mirror) (rotation) (quality.
format)
    
```

<http://iiif.io/api/image/2.1/>

But: Need More than One Image per Object

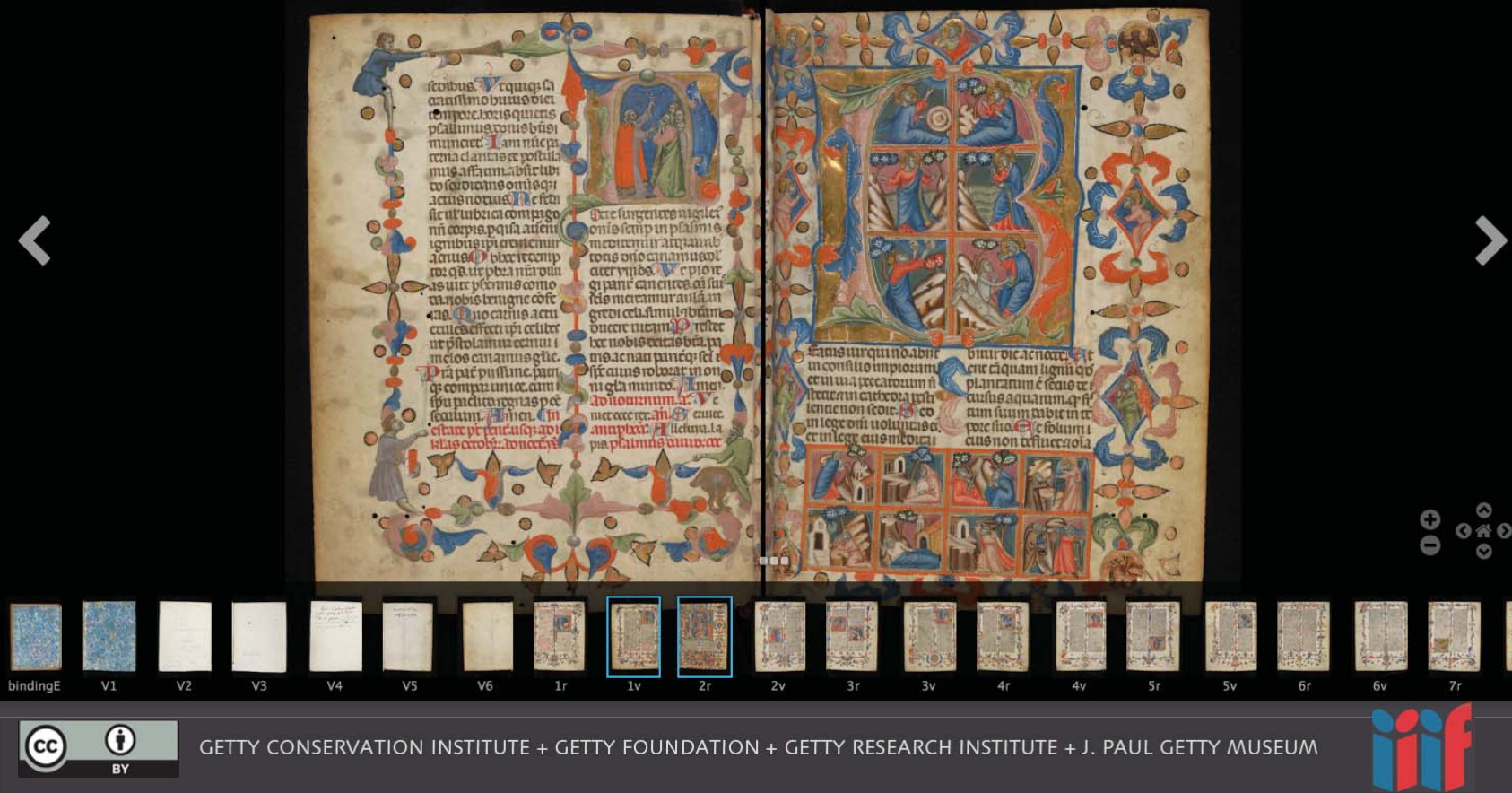




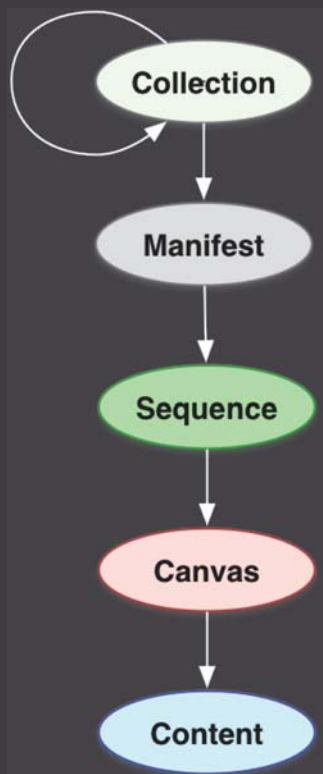
How Do I Know...

- ... which images to use?
- ... in which order?
- ... what they depict?
- ... how they can be reused?
- ... who should be attributed?
- ... which other resources to display?
- ... which other objects are related?

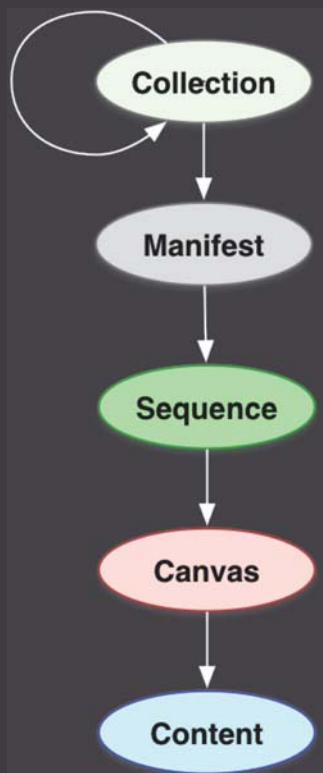
Actually, How to Provide Rewarding UX?



Presentation API



Provide only the information necessary for an application to present the object to the user



Presentation API

Structure

Properties

- Descriptive
- Rights
- Technical
- Linking

<http://iiif.io/api/presentation/2.1/>



Presentation API: Canvas





Presentation API: Canvas



**Think:
Powerpoint Slide**



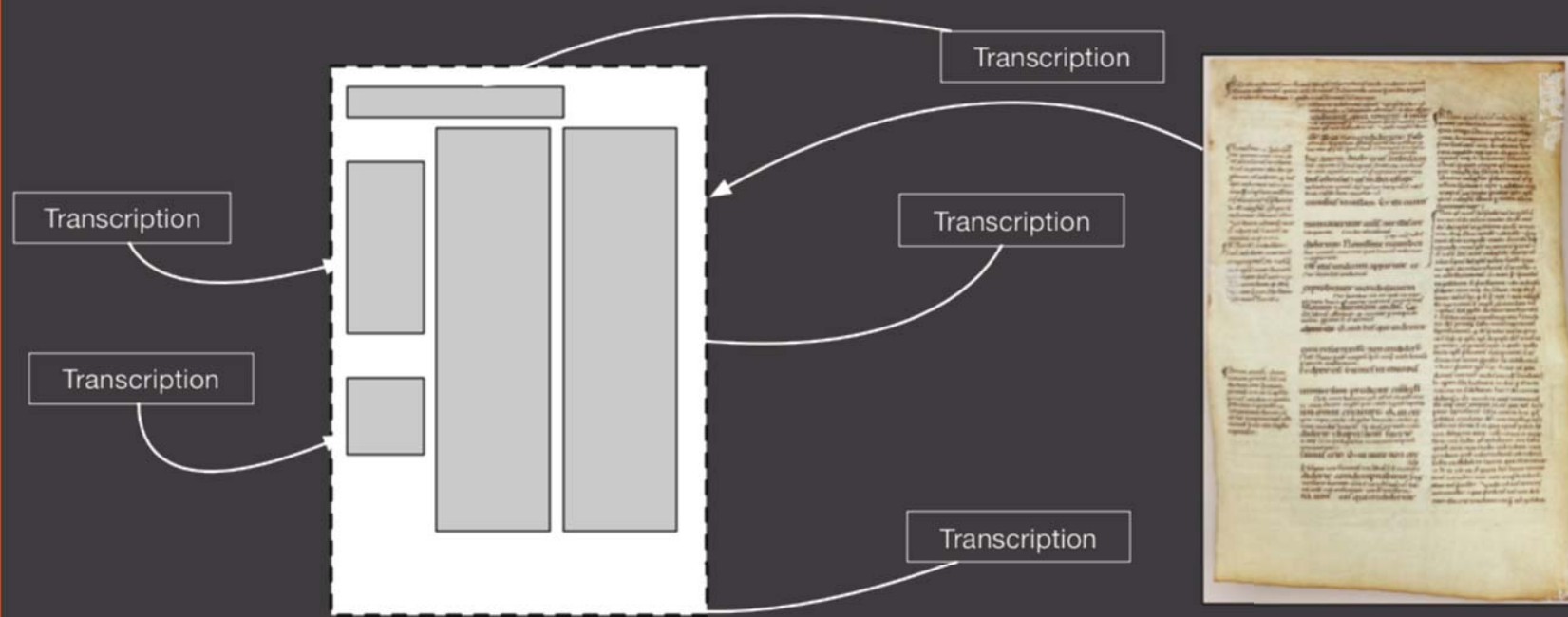


Presentation API: Content





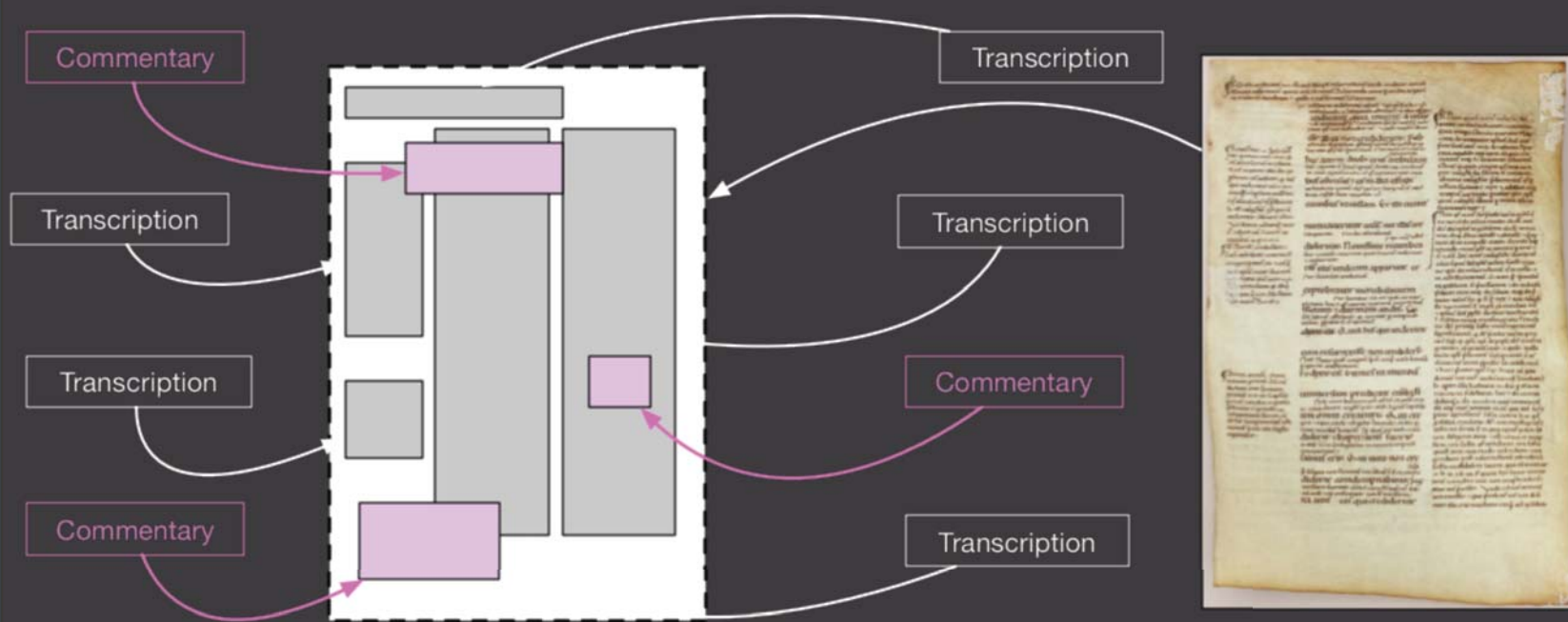
Presentation API: Content



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Presentation API: Annotations



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The Abduction of Europa (1632), Rembrandt Harmensz. van Rijn (Dutch, 1606 – 1669)

presentation



image



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The Abduction of Europa (1632), Rembrandt Harmensz. van Rijn (Dutch, 1606 – 1669)



A master of visual effects, Rembrandt took pleasure in describing the varied textures of sumptuous costumes and glittering gold highlights on the carriage and dresses.

Artist / Maker:

Rembrandt Harmensz. van Rijn (Dutch, 1606 – 1669)

Culture & Date:

Dutch, 1632

Medium:

Oil on single oak panel

Dimensions:

64.6 × 78.7 cm (25 7/16 × 31 in.)

Object Number:

95.PB.7

Rights:

Attribution:

Provided by The J. Paul Getty Museum

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CONTENTS

Index

Thumbnails

Stock book

Inventory

Index

Loose sheets

Sheet 2

<< >>

Livre no. 2

+

-

↺

SOE.	645 f	a M. Van Dam
Cadre compris		a Rotterdam (La Haye)
700		
NILLO	640 f	a M. L. Marquis d'Harcourt
Cadre compris	500 f.	(rendu à La Haye)
Aim	64 f	Vente publique Rotterdam
Cadre compris		La Haye
SRM	700 f	a M. L. Marquis d'Harcourt
		Portael
		Bruxelles

ATTRIBUTION

re compris

x

The Getty Research Institute, Los Angeles.

<

>

MORE INFORMATION

CONTRIBUTOR

CREATED

1856-1875

EXTENT

Volume 2 of 15 ; 1943 entries in 201 pages plus tables

LANGUAGE

ABSTRACT

Includes 8 Bouguereau, 26 Compté Calix, 9 Chapelin, 5 Couture, 4 Decamps, 1 Delacroix, 1 Diaz, 12 de Dreux, 8 Rosa Bonheur, 1... [MORE](#)

TYPE

SUBJECT

IDENTIFIER

RIGHTS

DESCRIPTION

A French gallery with offices in Paris, New York, London, Berlin, Brussels, and the Hague, Goupil & Cie. was founded in 1827. It was a... [MORE](#)

ATTRIBUTION

The Getty Research Institute, Los Angeles.

CC

BY

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Internationalization via Getty Vocab

Label: Artist

藝術家

Konstnär

kunstenaars

Value: Rembrandt van Rijn

رامبرانت

רמברנדט הרמנסזון ואן-ריין



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Discovery via Getty Vocab

Internationalized Search

Relationships between resources derived from

- shared concepts
- shared agents and places
- semantic relationships between resources





Linked Data as an API: JSON-LD

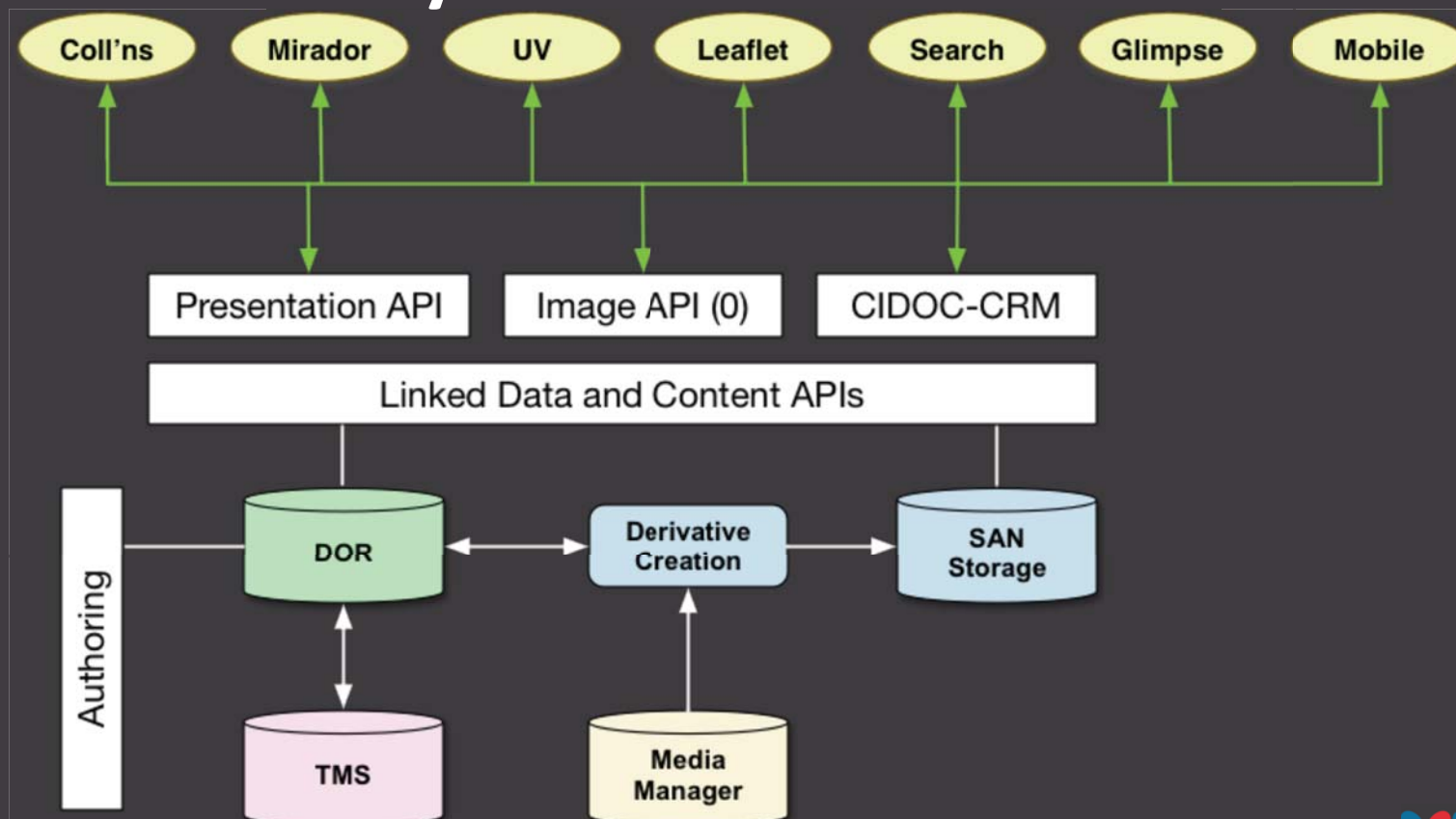
JSON is the most comfortable representation for software developers.

```
{
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  "id": "http://data.getty.edu/iiif/882/manifest",
  "type": "Manifest",
  "label": "The Abduction of Europa",
  "description": "In the Metamorphoses, the ancient Roman...",
  "metadata": [{"label": "Artist", "value": "Rembrandt..."}],
  ...
}
```





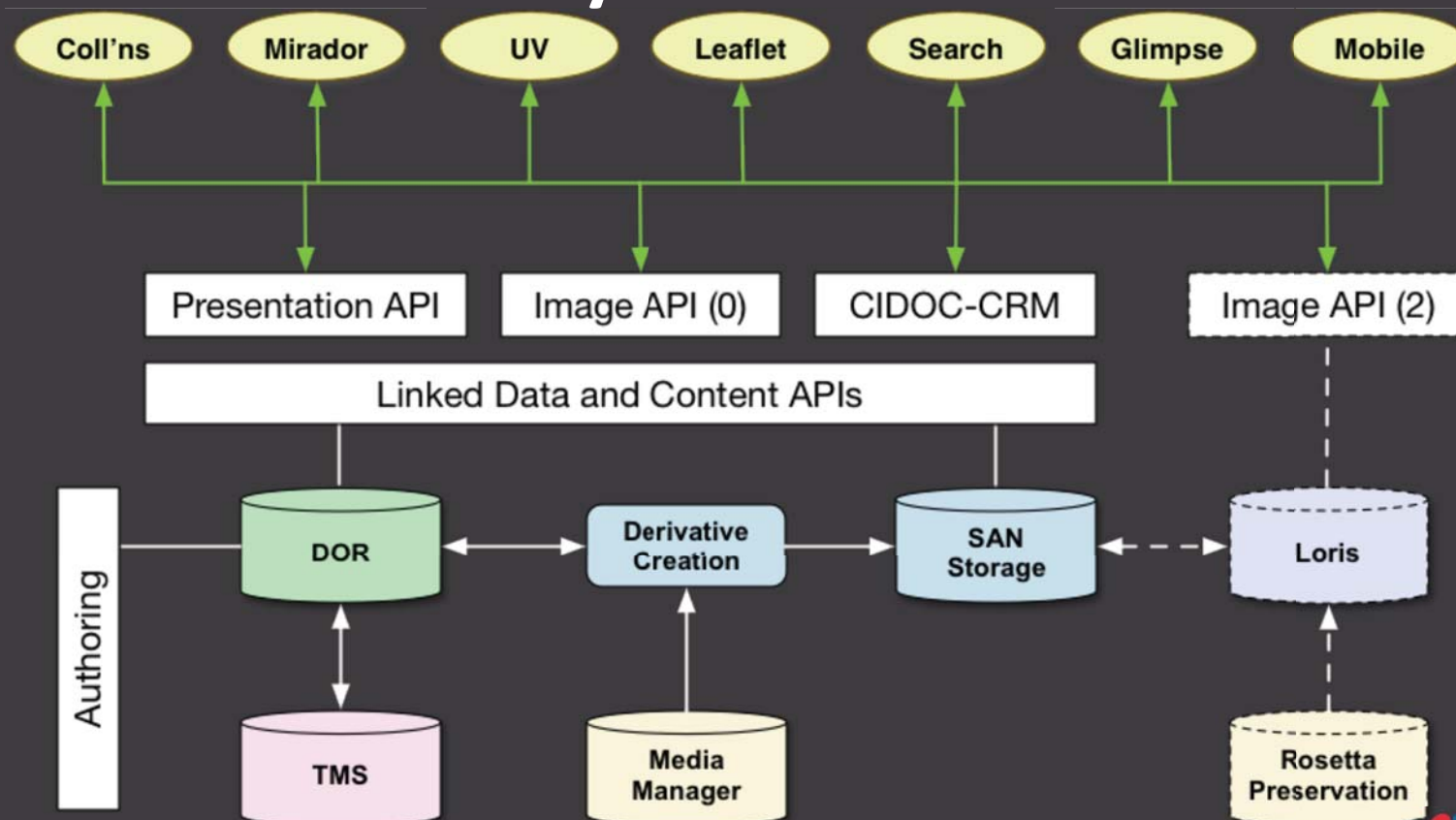
Getty Museum via LOD+IIIF



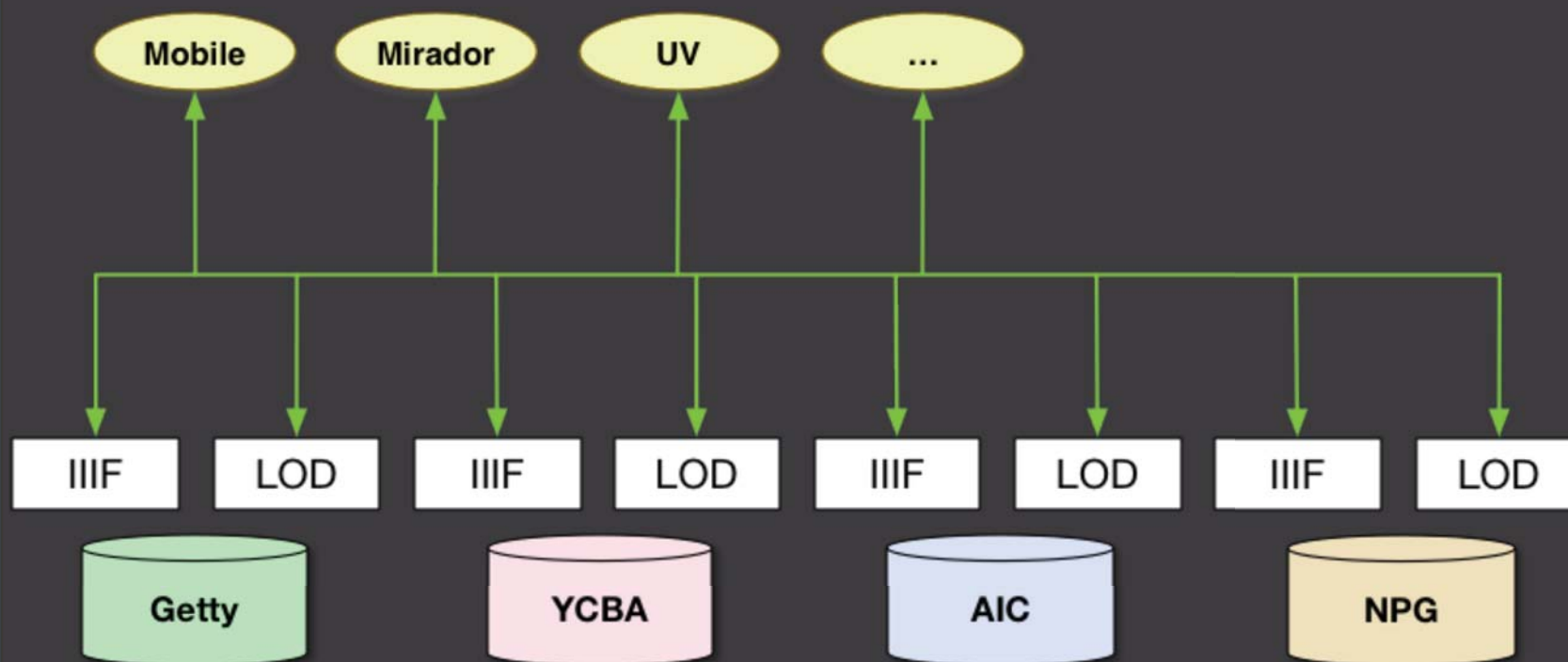
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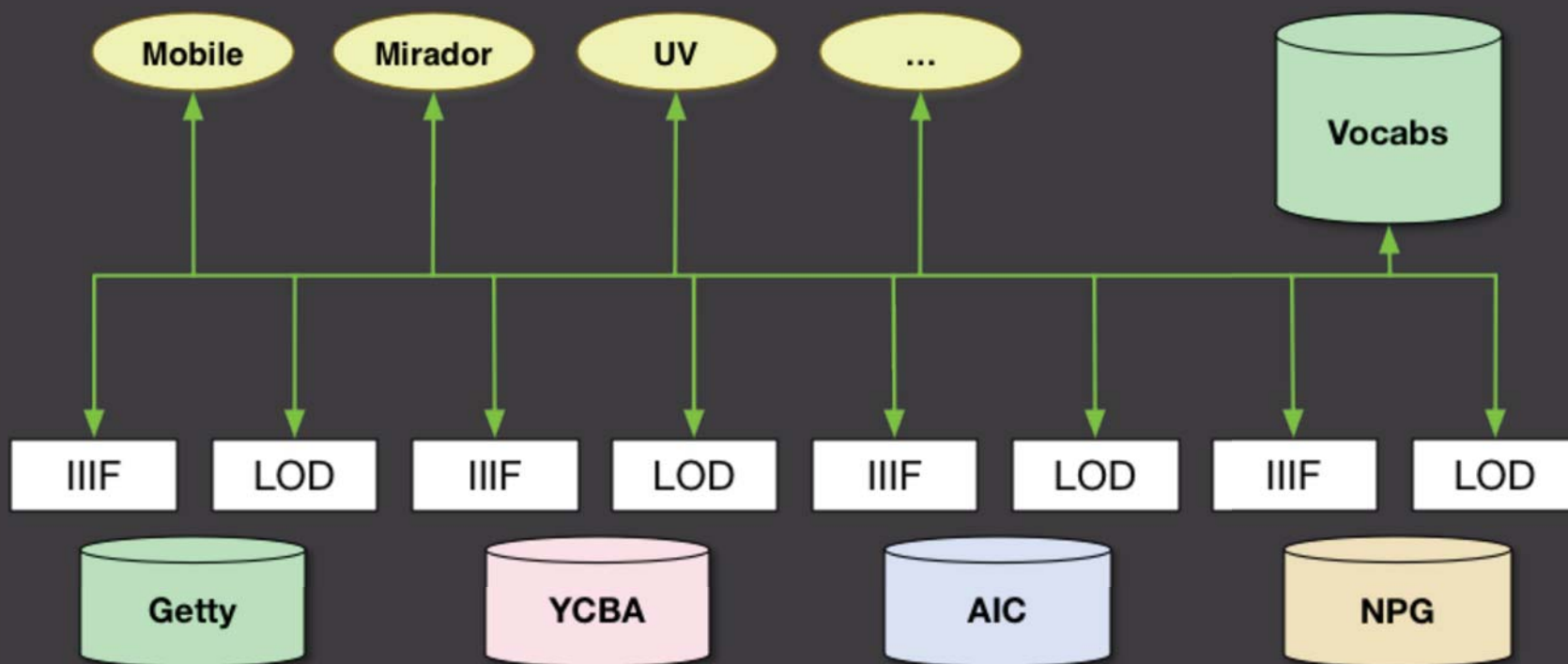
Getty via LOD+IIIF



Museum Community: LOD+IIIF



Museum Linked Data Ecosystem





Thank You!

Rob Sanderson / rsanderson@getty.edu

<http://iiif.io/>

<http://iiif.io/api/image/2.1/>

<http://iiif.io/api/presentation/2.1/>

<http://projectmirador.org/>

<http://universalviewer.io/examples/>



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