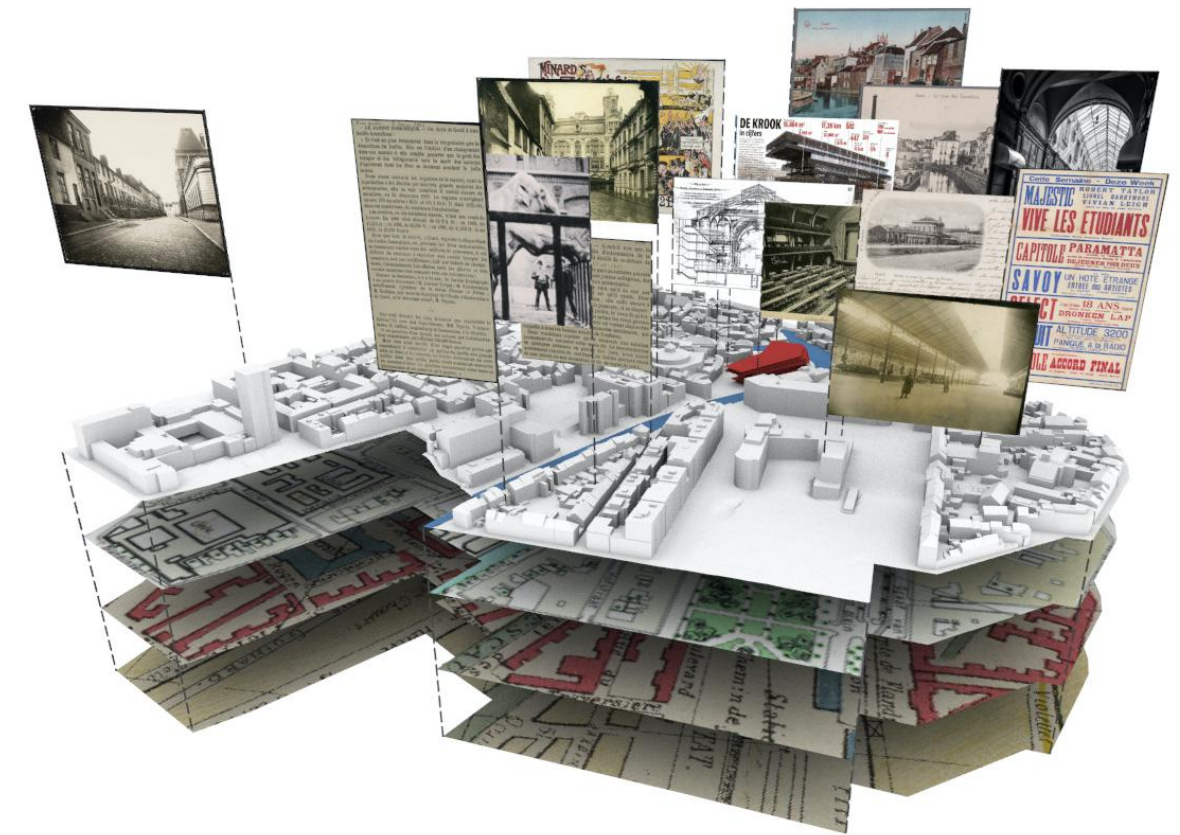# Ghent Mapped
IIIF as an enabler

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Ghent Centre for Digital Humanities (Ghent University, Belgium)

About Ghent Mapped

- Cultural Heritage Project
- Funded by the Flemish Community (2020-2023)
- 8 partners
  - Ghent City Museum
  - Industrial Museum
  - Institute of Social History
  - Museum of Daily Life
  - …

About Ghent Mapped

- Use "Places" to organize, present and explore
  history and cultural heritage collections
  - streets, parks, waterways, buildings,
  - each place has its human history
  - each place is linked to cultural herita
- Use historical maps to explore a city,
  its history & its collections
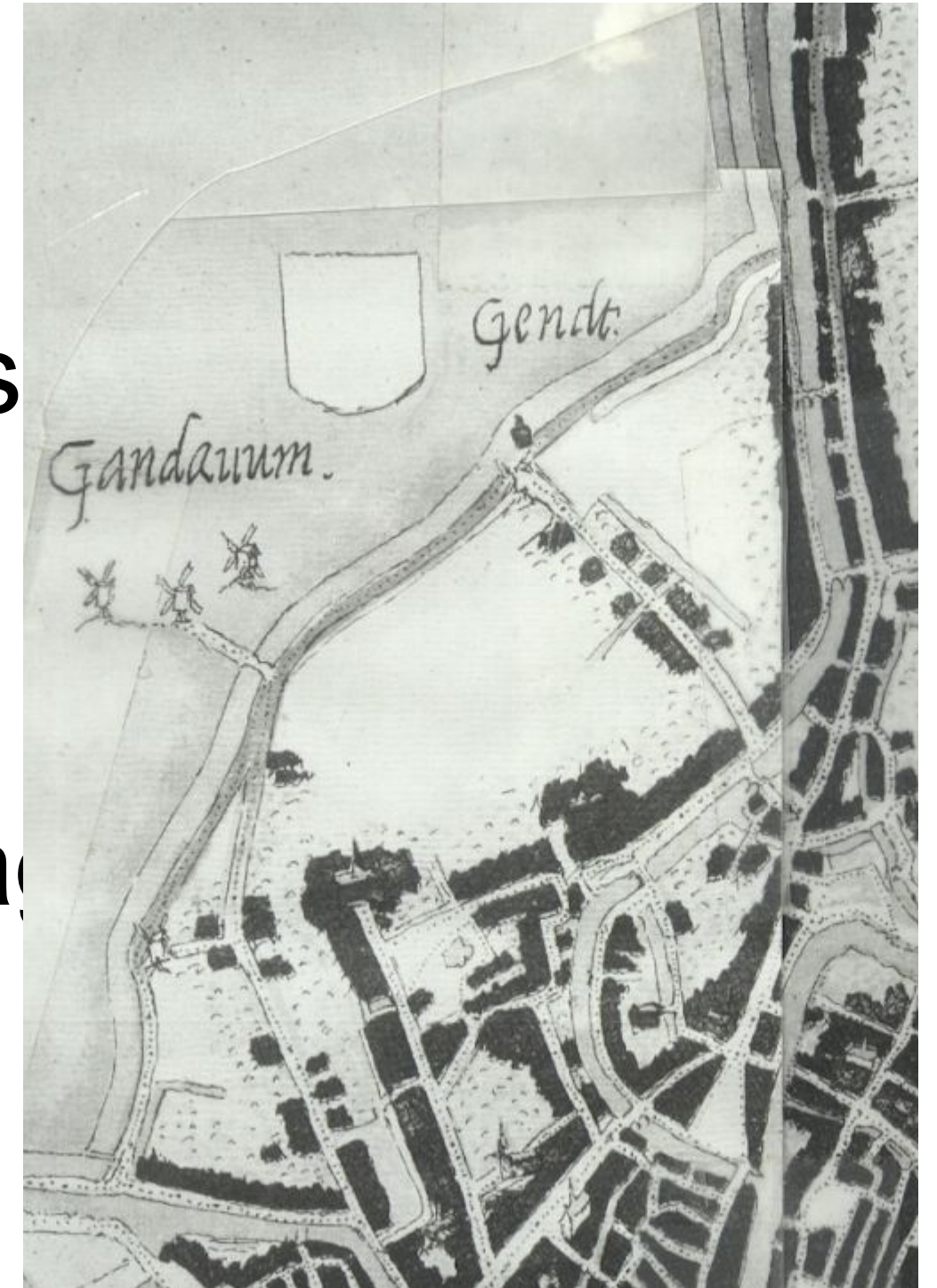
How can institutions share cultural heritage?

GLAMs (Galleries, Libraries, Archives, Museums)
- improve accessibility through digitization
- provide metadata to help discover collection
- adopt open standards

… Flemish GLAMs have varying levels of IIIF adoption

How can we promote IIIF to these GLAMs?

- IIIF offers possibilities for GLAM, researchers and users
  - Standardized access to digital objects —Annotation
  - Cite and share digital objects —Participative enrichment
  - Display and storytelling —Collaborative learning
- Yes, but how?
  - Help GLAMs in their transition to IIIF
  - Build a proof of concept

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State of the Art

Ghent Mapped - Showcase
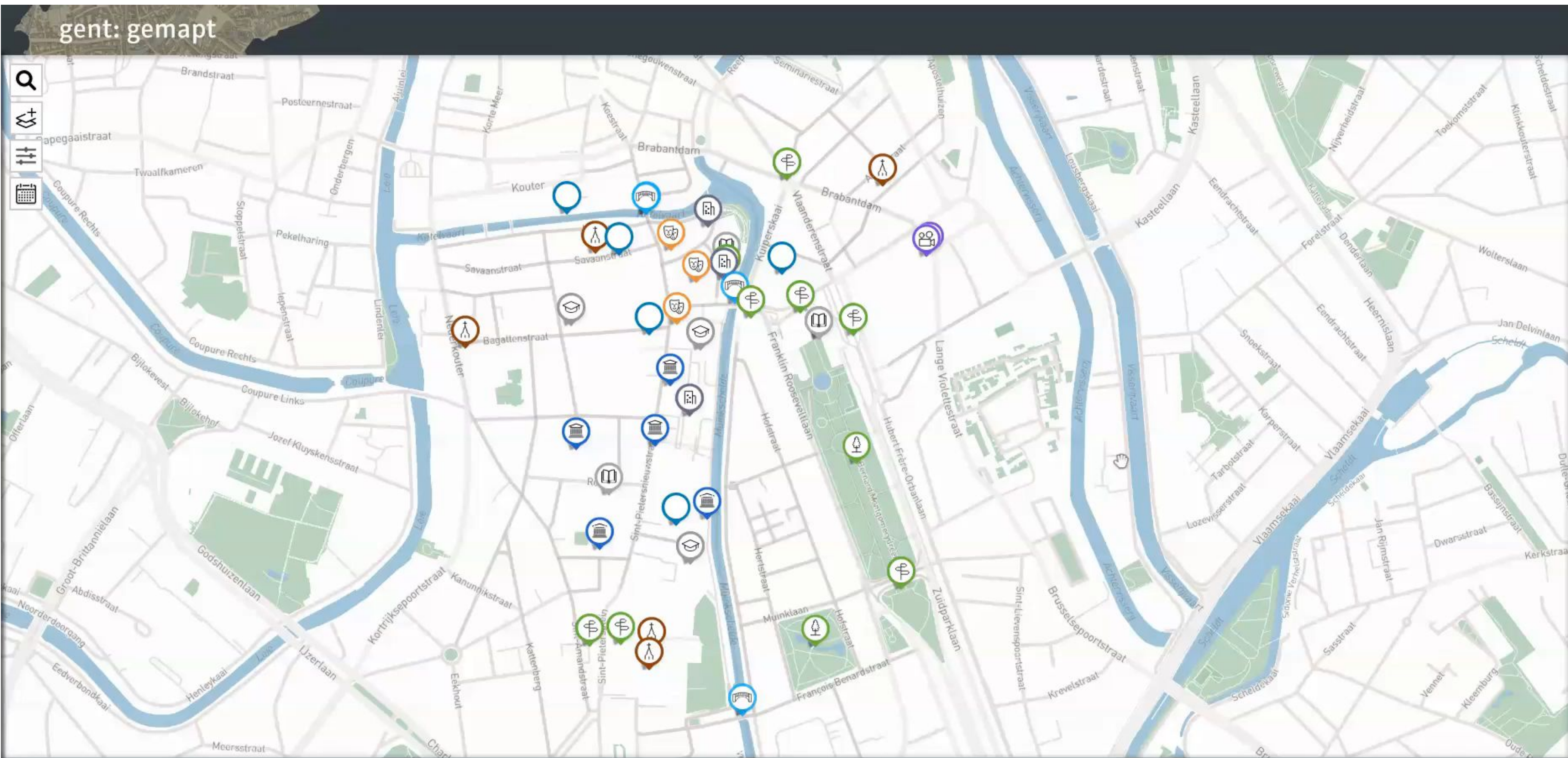
GLAMs transition to IIIF

- Only 2 of 8 partners support IIIF
- Big step to get started
- Ghent University Library as IIIF partne
  - Image/Metadata conversion
  - Hosting on "SharedCanvas"
- Early 2022: "Collection of Ghent"
  - IIIF infrastructure for city GLAMs
  - Central metadata repository based OSLO standard

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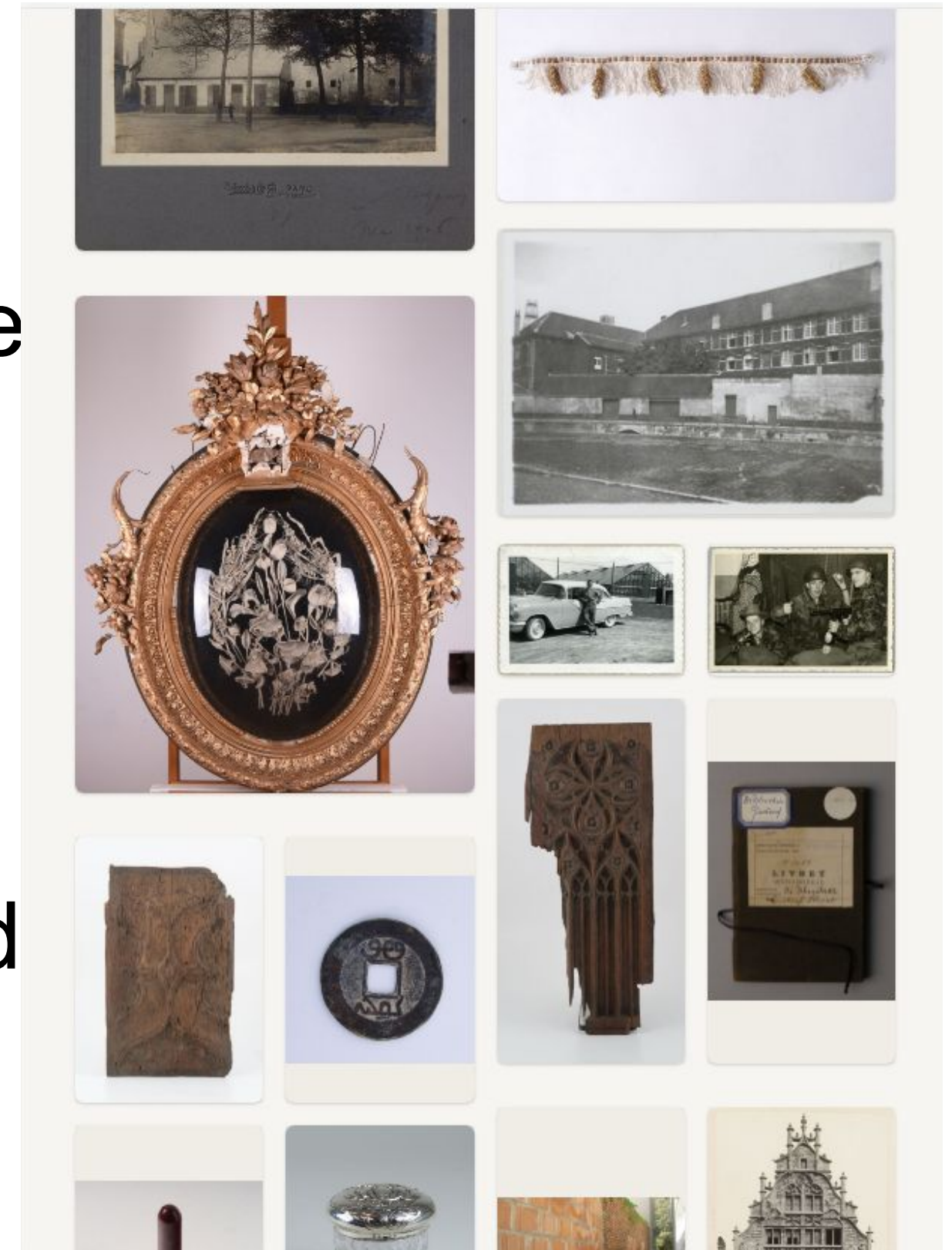
Geographical dictionary

- a list of 'places'

    - name, feature type, dating geographical extent

    - relational context

    - URI (Uniform Resource Identifier)

- publish as Linked Open Data

- gazetteers as an organizing tool

Images | Image selection

- (currently) manual selection of digital objects, based on:
  - 'Place'
  - Availability of material
  - Visual quality
  - Diversity (type, content)
- (currently) 5000+ images for a selected set of places

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- Currently 6 historical maps
  - Georectification of high resolution scans with QGIS
  - Time consuming
  - Future: IIIF maps with Allmaps
- Many more maps available, but …
  - source material not good enough
  - poor georectification results
  - should you show geometries on historical maps?

Platform | Omeka S as unifying framework

VueJS / Leaflet / Bootstrap web application

Omeka S

Map API | Place API | IIIF Presentation API

Maps | Places | Resources | Collections

Kaart opties ✕

Basiskaarten

- ☐ Gent Gemapt basiskaart
- ☐ Google satelliet

Kaartlagen

- ☑ Compyn, Soenen & Piscador, 1912
- ☐ Ferraris kaart - Kabinetskaart der Oostenrijkse Nederlanden en het Prinsbisdom Luik, 1771 - 1778
- ☐ Horenbault, 1619
- ☐ Popp, Atlas cadastrale parcellaire de la Belgique, 1842 - 1879
- ☐ Topografische kaart Vandermaelen (1846-1854), Vlaanderen
- ☐ Luchtfoto Vlaanderen, zomer 1979-1990 - kleur
- ☐ Luchtfoto Gent 1954-1961
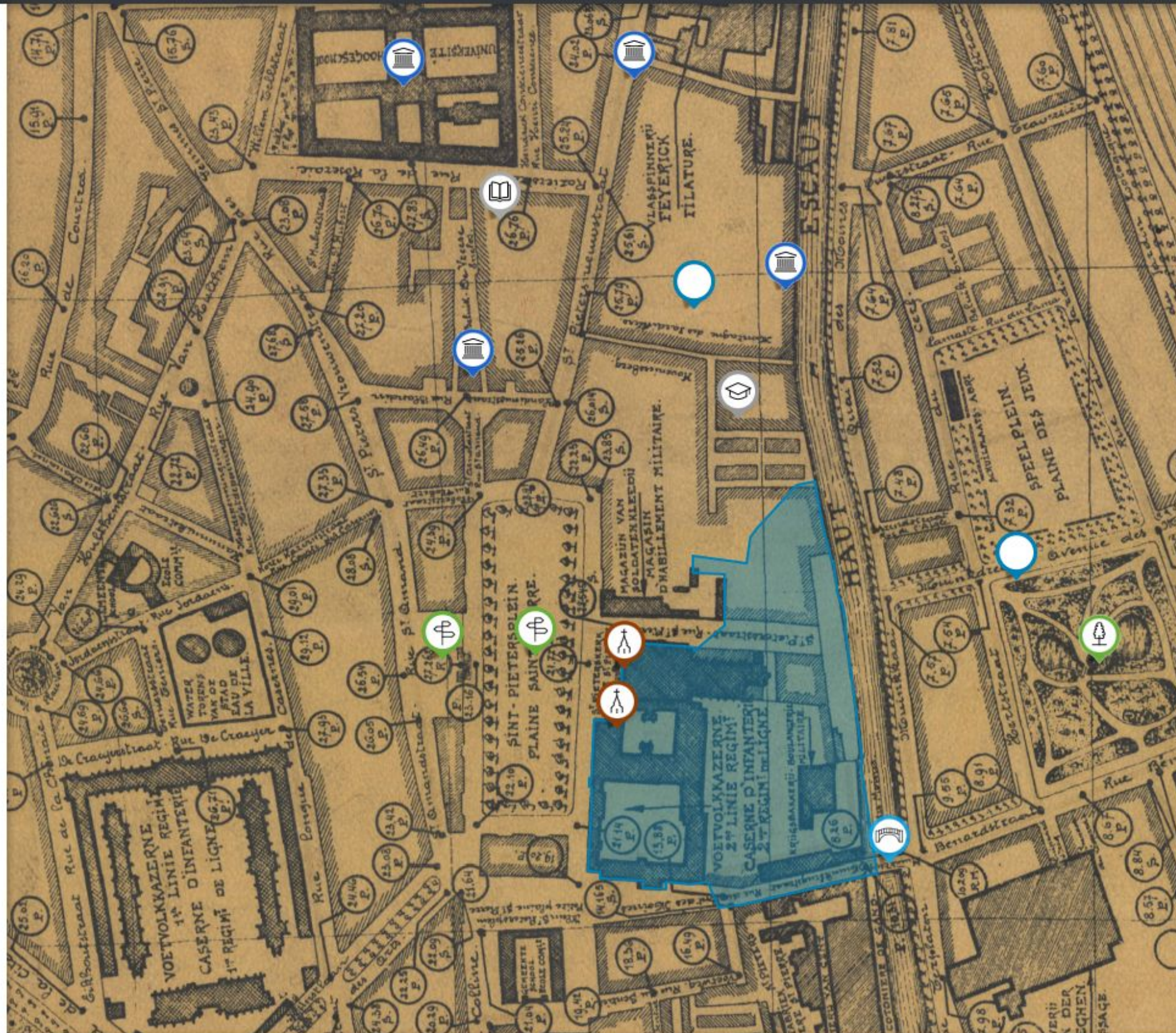
Sint-Pietersabdij ✕

600 - heden · abdijen · abdijkerken · bakkerijen · boomgaarden · brouwerijen · infirmerieën · kaaimuren · kloostertuinen · omheiningsmuren · oorlogsmonumenten · parochiekerken · rosmolens · stallen · wijngaarden

De Sint-Pietersabdij ligt naast de Sint-Pieterskerk aan het Sint-Pietersplein op de Blandijberg. De abdijtuin met ruïnes van de oude abdij, haar boom- en wijngaard strekt zich uit langs de Muinkschelde. De voormalige benedictijnenabdij heeft een lange voorgeschiedenis en was van bijzonder grote betekenis voor Gent en omgeving. Ze vormde naast de Sint-Baafsabij aan portus Ganda een tweede, en lang rivaliserende, stadspool van de stad.

Machtig religieus en economisch centrum

toon meer

Collectie

Sustainability

- Current manual image selection unsustainable

- Current manual mapping to places unsustainable

- Minimum information needed

  – Dates required for sorting & filtering

  – Identifiers & metadata needed for mapping

- What is possible with IIIF?

IIIF properties & metadata

- `navDate`
  - datetime, for navigation purposes (timeline/calendar)
  - rarely found in manifests
- `navPlace`
  - geographic coordinates (GeoJSON, no GeoNames)
  - no wide adoption yet
- `metadata`
  - key / value pairs, intended for presentation only
  - no semantics!

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Flanders
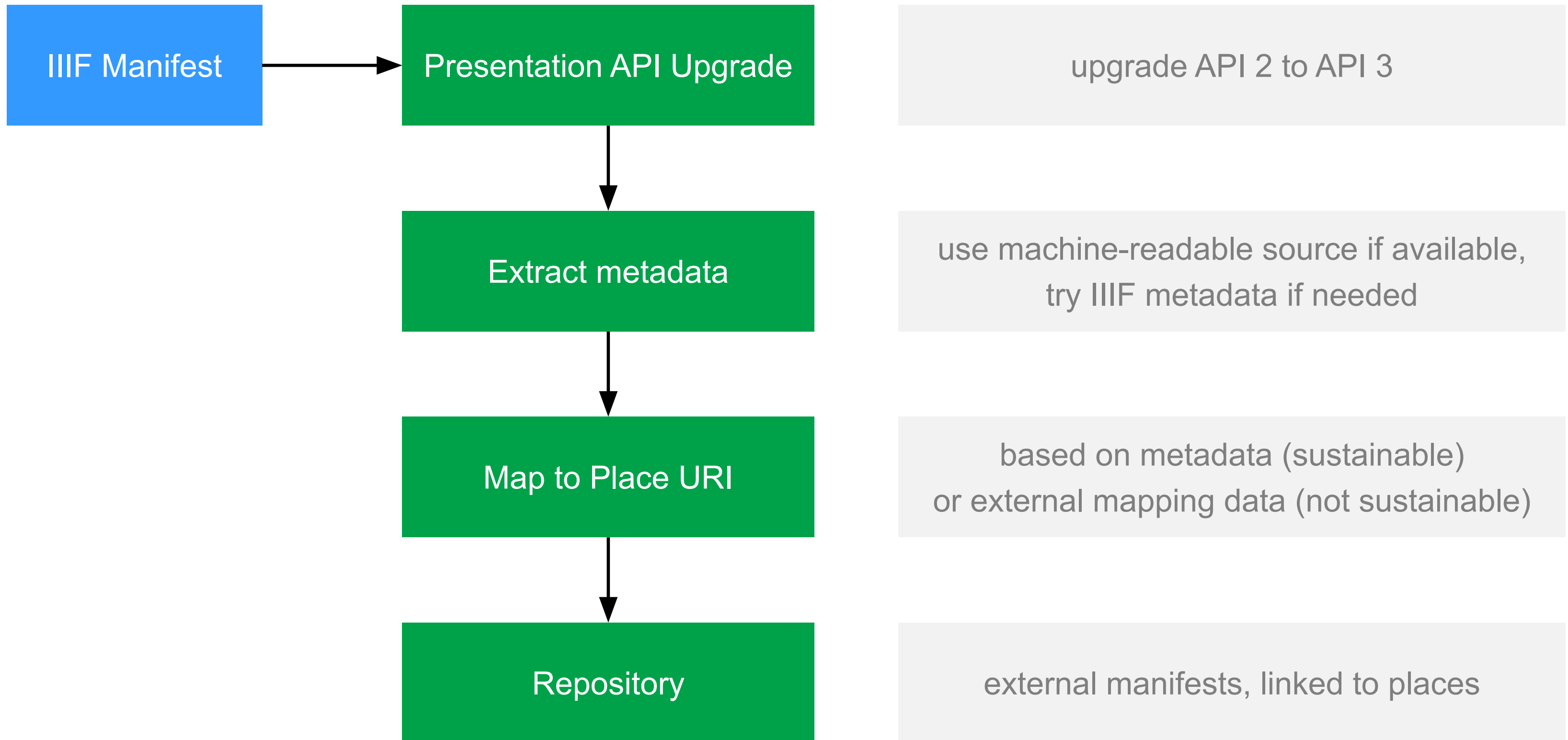State of the Art

External data sources

`seeAlso`

- points to machine-readable resources
  (JSON, XML, RDF, etc.)

Sounds good, no?
- a lot of extra code to support different data formats and structures
  (in our case: MARCXML, custom JSON, GraphQL endpoint)
- external data sources are not always semantic datasets
- for each partner, a custom mapping config is needed

Ingest pipeline

IIIF Manifest → Presentation API Upgrade

Presentation API Upgrade — upgrade API 2 to API 3

Extract metadata — use machine-readable source if available, try IIIF metadata if needed

Map to Place URI — based on metadata (sustainable) or external mapping data (not sustainable)

Repository — external manifests, linked to places

Enriching IIIF collections through Madoc

Madoc platform

- developed by Digirati

- crowdsourcing and machine-assisted IIIF enrichment

- custom data models

  — transcriptions, annotations, entities, metadata
    enrichment

- external data sources

 — "Ghent Mapped" gazetteer as lookup service

Enriching IIIF collections through Madoc

- IIIF goes in ☐ IIIF comes out
  - view updated metadata
  - view captured entities as annotations
  - easy to present enriched collections
- Madoc API
  - get structured data
  - allow partners to receive enriched data
    (future challenge)
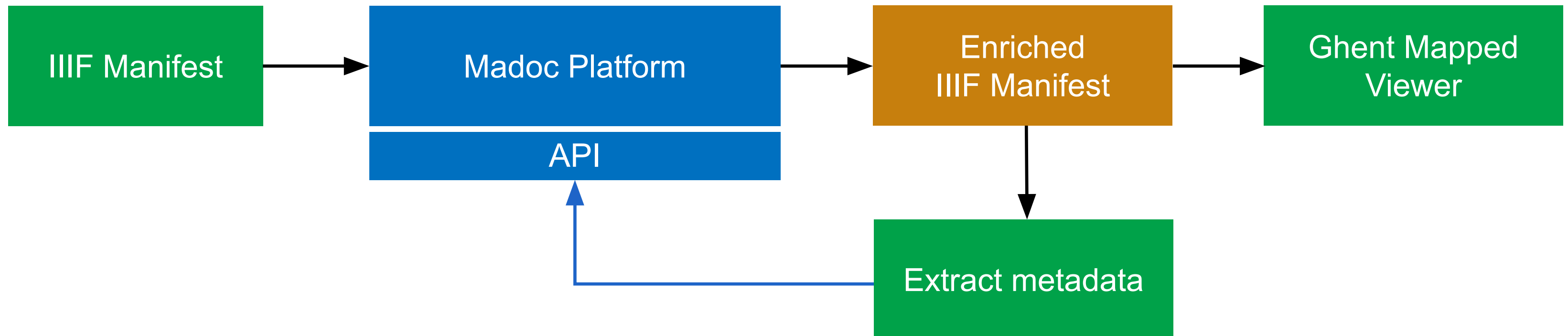
Madoc use cases for Ghent Mapped

- Transcriptions of old postcards
- Improve metadata and descriptions of collections of porcelain-cards
- Geolocate historical workers houses
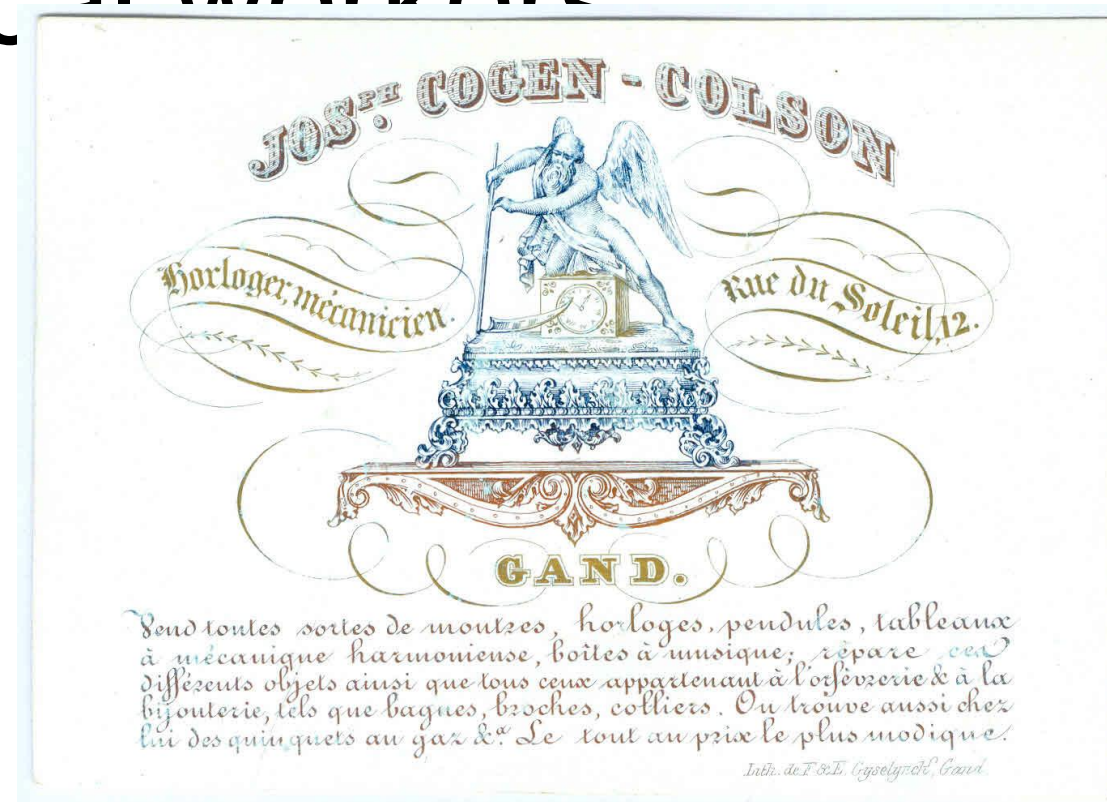
Improve sustainability

Use Madoc to improve manifest ingestion

- collect missing dates
- map resources to places using our gazetteer

Future work

- Improve pipeline for enriched manifests for each partner
- Migrate maps to IIIF maps
- Publish gazetteer as Linked Open Data for heritage
  - No IIIF extension for gazetteer URIs?

Thank you!

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- Gazetteer - vincent.ducatteeuw@ugent.be
- Madoc - lise.foket@ugent.be
- Software - frederic.lamsens@ugent.be