



Flying Digital Editions: A Tool for Enhancing Digital Text Exploration through Wikidata

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March 11, 2024

Project Goal

Flying Digital Editions (FDE) is a domain-agnostic tool that aims to turn any document into a *lightweight digital edition*. By reusing existing tools and leveraging large *Knowledge Bases*, FDE can annotate the text in the document with available and authoritative information.

Research Questions

- ✦ What are the main features of a Digital Edition?
- ✦ Which of the main features of a Digital Edition can be turned into automatic processes?
- ✦ How and at what cost is it feasible to do so?



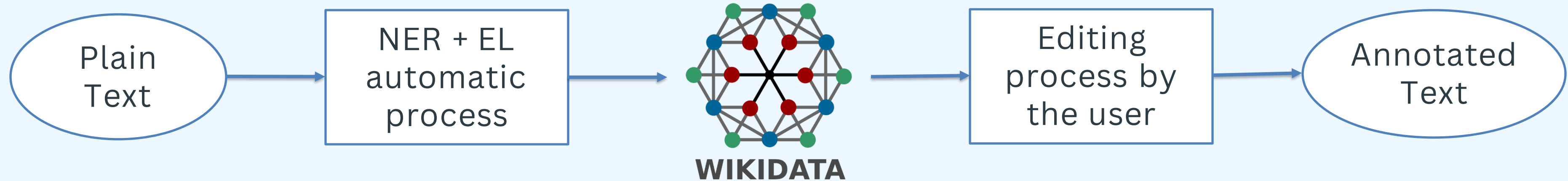
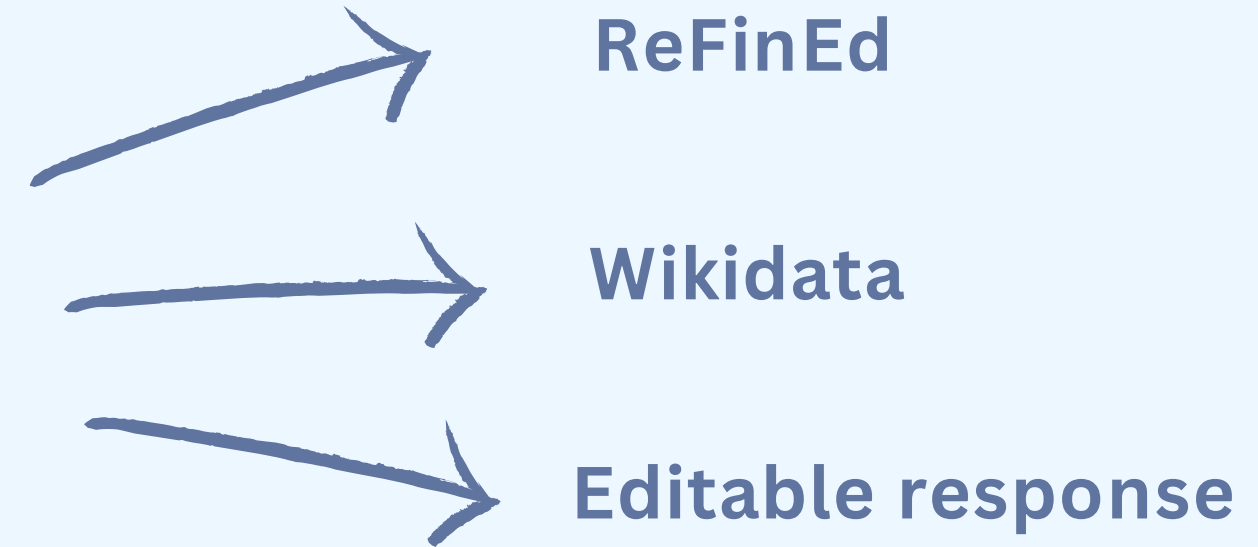
The features of a Digital Edition



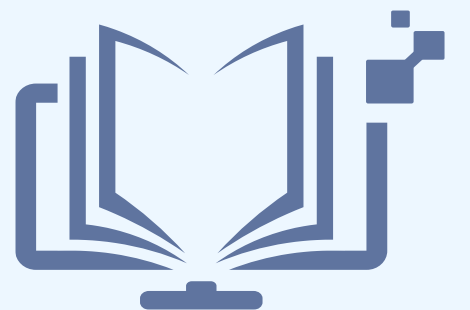
Which of these features can benefit from automation?

Text Annotation

- ✦ Named entity recognition and linking systems
- ✦ Knowledge Base for retrieving information
- ✦ Control over the annotation

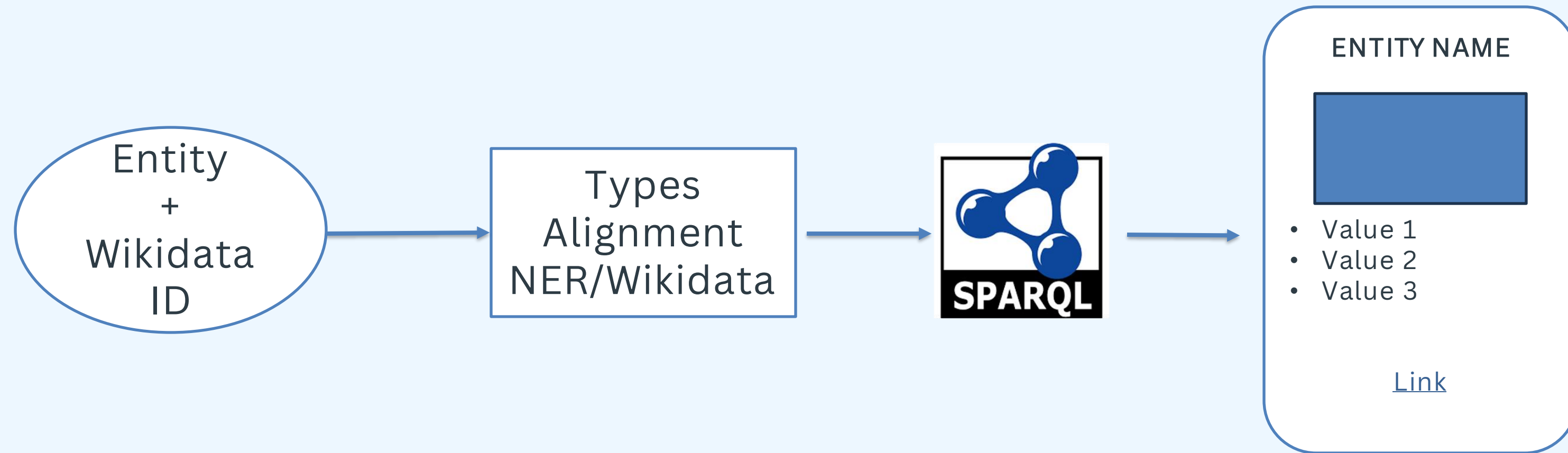
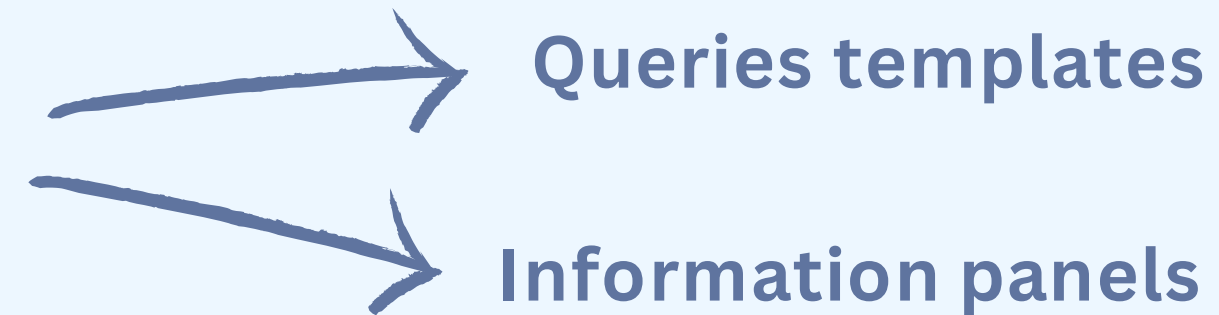


Semi-automatic process

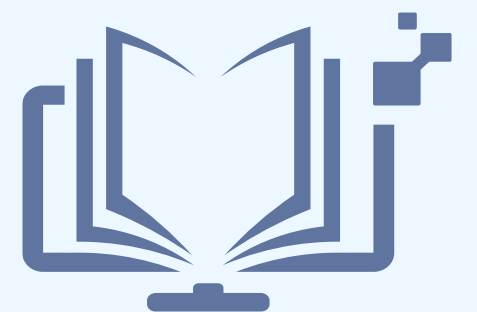


Data enrichment & Visualisation

- ✦ Execution of SPARQL queries
- ✦ Visualisation of the data
- ✦ Standardisation of the items information

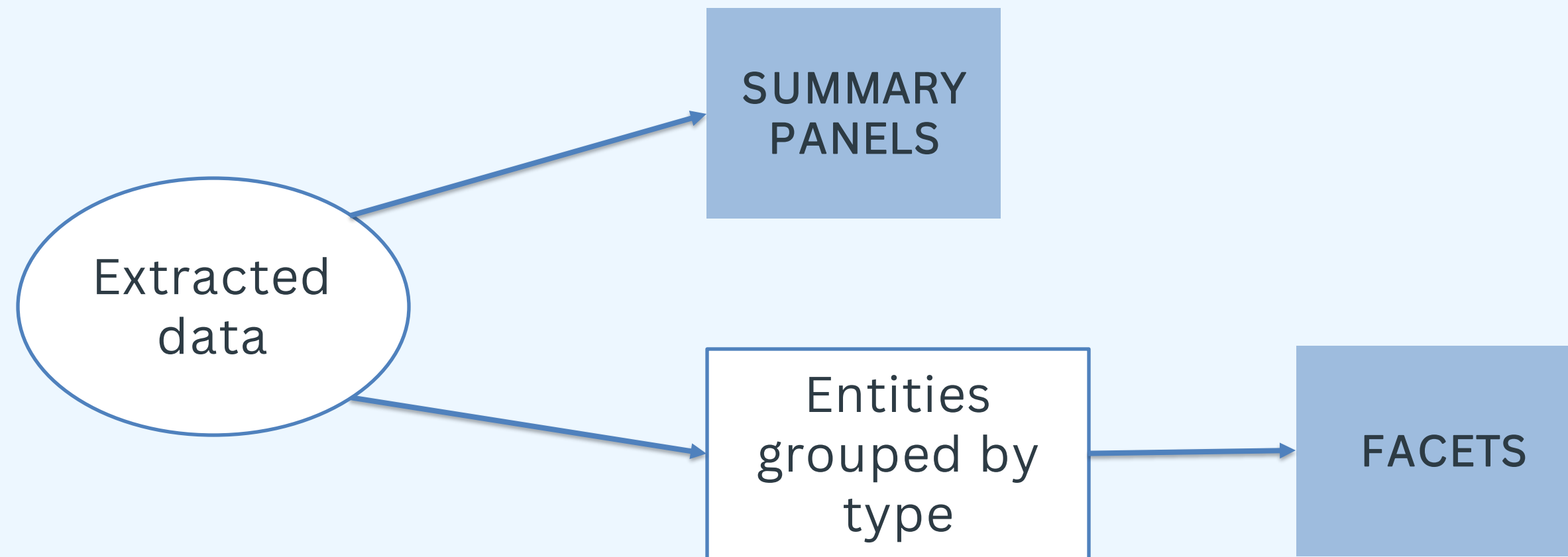


Semi-automatic process



Search and analysis tools

- ✦ A way to organise the retrieved entities
- ✦ A way to search the annotated entities



Automatic process



Interoperability and shareability

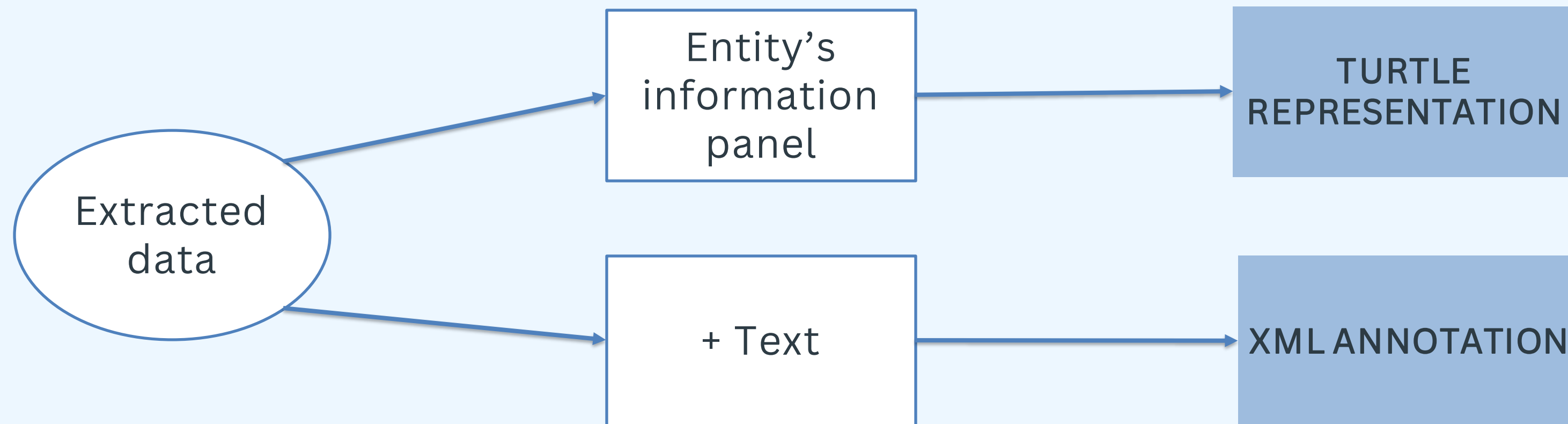
✦ Sharing data and information



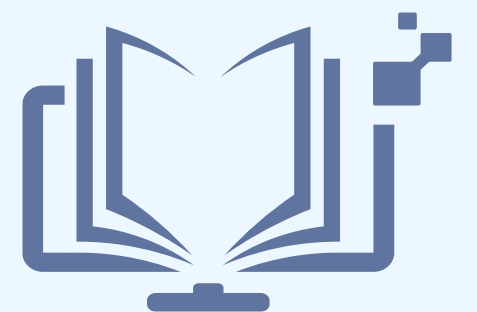
Turtle representation



Export of the text in TEI-XML



Automatic process



Development

Server - Python APIs

- ✦ Two endpoints
- ✦ Annotation process
- ✦ SPARQL queries templates

Client - Angular Framework


- ✦ Loading-mode page
- ✦ Edit-mode page
- ✦ View-mode page
- ✦ Information panel



Development Loading-Mode

✦ Few familiar elements


✦ Multi-input

 Flying Digital Editions Go to Loading Page

Insert your text here

Once Upon a Time...

Or choose your file


Choose 

No file uploaded

Analyse Text


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Development Edit-Mode

- ✦ Guidelines
- ✦ Summary panel
- ✦ Text-centered
- ✦ Editing card

 Flying Digital Editions Go to Loading Page

To **add** a new entity select the word and then click on the "Add new entity" button. Provide a [Wikidata](#) ID and choose the Class. Then click on "Update".
To **modify** the ID and the Class of an entity, click on the corresponding pencil icon in the list and update the entity.
To **save** and visualise the result, click on the "Save" button.

Add new entity

Add Metadata

Philolaus

Aristarchus of Samos

Pythagoreans

Anaximander

Numa Pompilius

Vesta

Democritus

Eudoxus

Calippus

Aristotle

It was the ancient opinion of not a few, in the earliest ages of philosophy, that the fixed stars stood immoveable in the highest parts of the world; that under the fixed stars the planets were carried about the Sun; that the Earth, as one of the planets, described an annual course about the sun, while by a diurnal motion it was in the mean time revolved about its own axis; and that the sun, as the common fire which served to warm the whole, was fixed in the centre of the universe. This was the philosophy taught of old by [Philolaus](#), [Aristarchus of Samos](#), Plato in his riper years, and the whole sect of the [Pythagoreans](#); and this was the judgment of [Anaximander](#), more ancient than any of them; and of that wise king of the Romans, [Numa Pompilius](#), who, as a symbol of the figure of the world with the sun in the centre, erected a temple in honour of [Vesta](#), of a round form, and ordained perpetual fire to be kept in the middle of it. The Egyptians were early observers of the heavens; and from them, probably, this philosophy was spread abroad among other nations; for from them it was, and the nations about them, that the Greeks, a people of themselves more addicted to the study of philology than of nature, derived their first, as well as soundest, notions of philosophy; and in the [Vestal](#) ceremonies we may yet trace the ancient spirit of the Egyptians; for it was their way to deliver their mysteries, that is, their philosophy of things

Save

Entity: Numa Pompilius

ID:

Q200031

[Check in Wikidata](#)

Class:

PERSON

Candidates ID:

Q200031

Update


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Development View-Mode

- ✦ Searching facet
- ✦ Visual highlighting
- ✦ Information panel
- ✦ Export available

 Flying Digital Editions Go to Loading Page

Person | Other

- Philolaus
- Aristarchus of Samos
- Anaximander
- Numa Pompilius
- Vesta
- Democritus
- Eudoxus
- Calippus
- Aristotle

Back to Edit-mode

Principia

Isaac Newton

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Numa Pompilius





Image	
Description	Legendary second king of rome, succeeding romulus
Birth Date	13 Apr 752 CE
Birth Place	Cures
Death Date	1 Jan 670 CE
Death Place	-
Gender	Male
Occupation	Ancient roman politician, ancient roman priest

Export Text in XML

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Results - General summary

Pros

- ✦ Leveraging Wikidata
- ✦ Editable annotation response
- ✦ SPARQL templates to fit types
- ✦ Coherence for the visualised data
- ✦ Turtle format available for download
- ✦ Text's XML format available for download
- ✦ An easy interface for non-expert users
- ✦ Flexibility of the code

Cons

- ✦ Entity detection and entity linking issues
- ✦ Generic categorisation of the entities
- ✦ Items not mapped in Wikidata
- ✦ Weight of the models



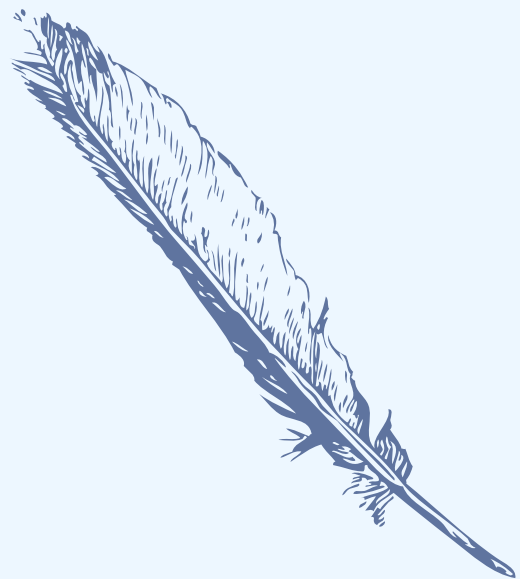
Conclusions

Which of the main features of a Digital Edition can be turned into automatic processes?

How and at what cost is it feasible to do so?

It's not an impossible task, but...

- ✦ Soft standardisation in Wikidata entities' information
- ✦ Generic annotation
- ✦ Human effort is still needed



Future Works

- ✦ Features that are common in SDE, but have not been implemented.
- ✦ Features that are implementable using available models.
- ✦ Other features, such as authentication system and dynamically generated SPARQL queries.





Thank
You