

ArchiGraph.MDM

platform for building model-driven
enterprise architectures

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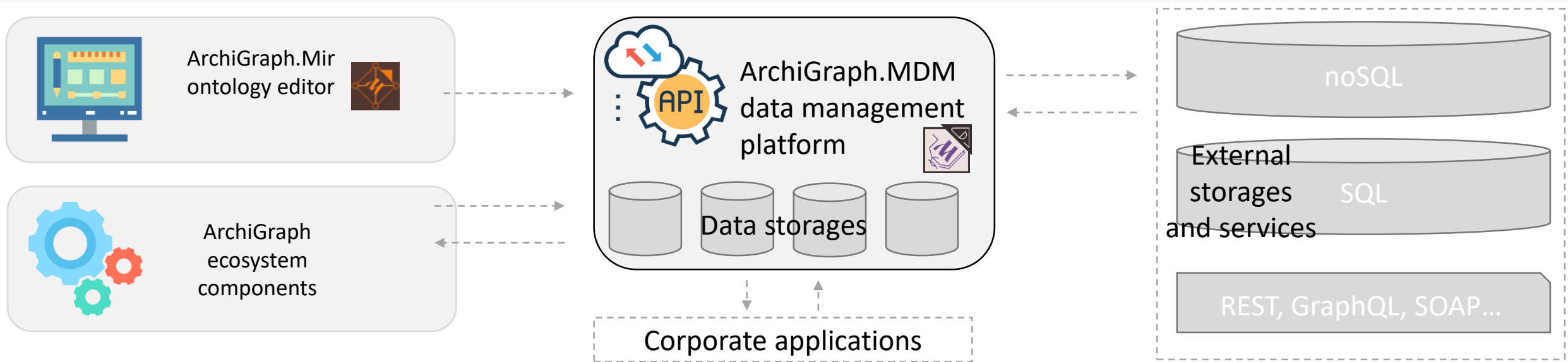
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The logo for trinidata features the word "trinidata" in a white, lowercase, sans-serif font. The letter "i" is replaced by a stylized network diagram consisting of three nodes (yellow, orange, and red) connected by lines, with a dashed purple circle around them.The logo for onto pro, featuring the word "onto" in blue and "pro" in black on a yellow background.

АрхиГраф.MDM



АрхиГраф.CY3



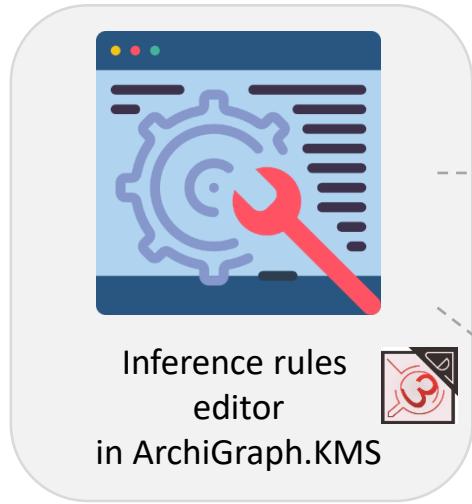
ArchiGraph.MDM is designed as a core of the enterprise information infrastructure.

ArchiGraph.MDM:

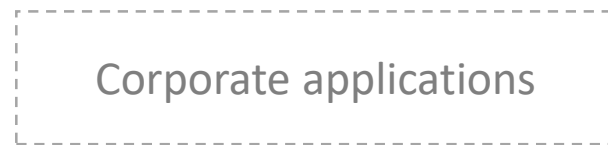
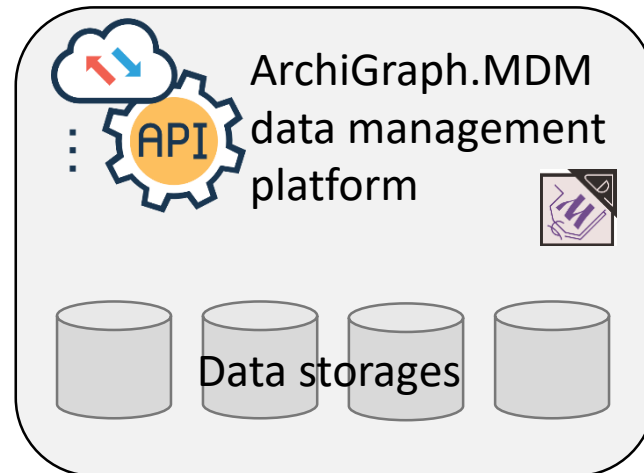
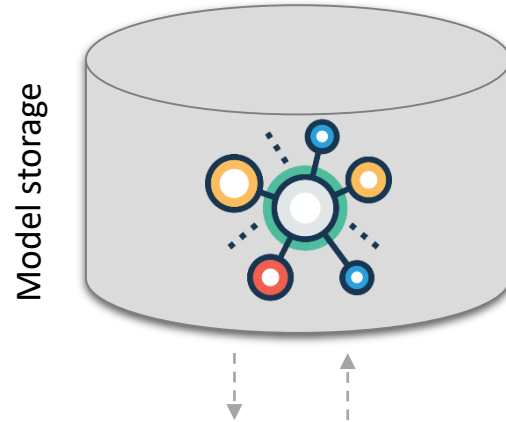
- stores the structure of all the enterprise data as an ontology;
- stores and manages master data;
- allows access to the transactional data in the external repositories as well as in its own;
- works as a Data Governance tool.

ArchiGraph.MDM enables building of the single logical storage for the data and the algorithms of its processing, not depending on the set of the physical storages. The storages and data structure can be changed over time, and ArchiGraph.MDM provides their continuous use.

Analyst's instruments



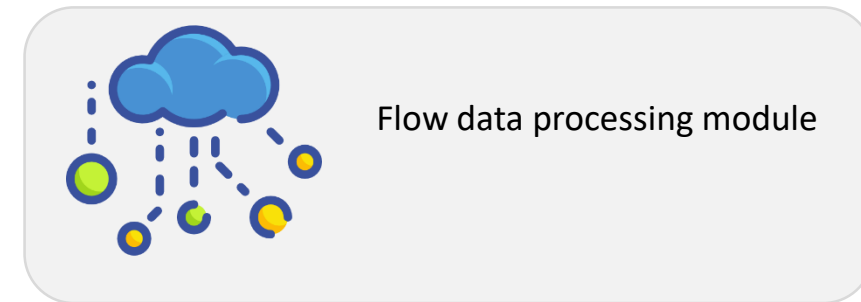
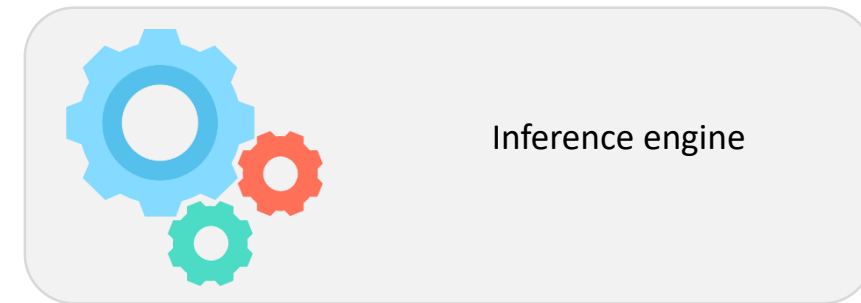
Data storages



ArchiGraph ecosystem consists of:

- ArchiGraph.Mir ontology editor
- Inference rules editor in ArchiGraph.KMS application
- ArchiGraph.MDM data management platform
- Inference engine
- Flow data processing module

Data processing tools

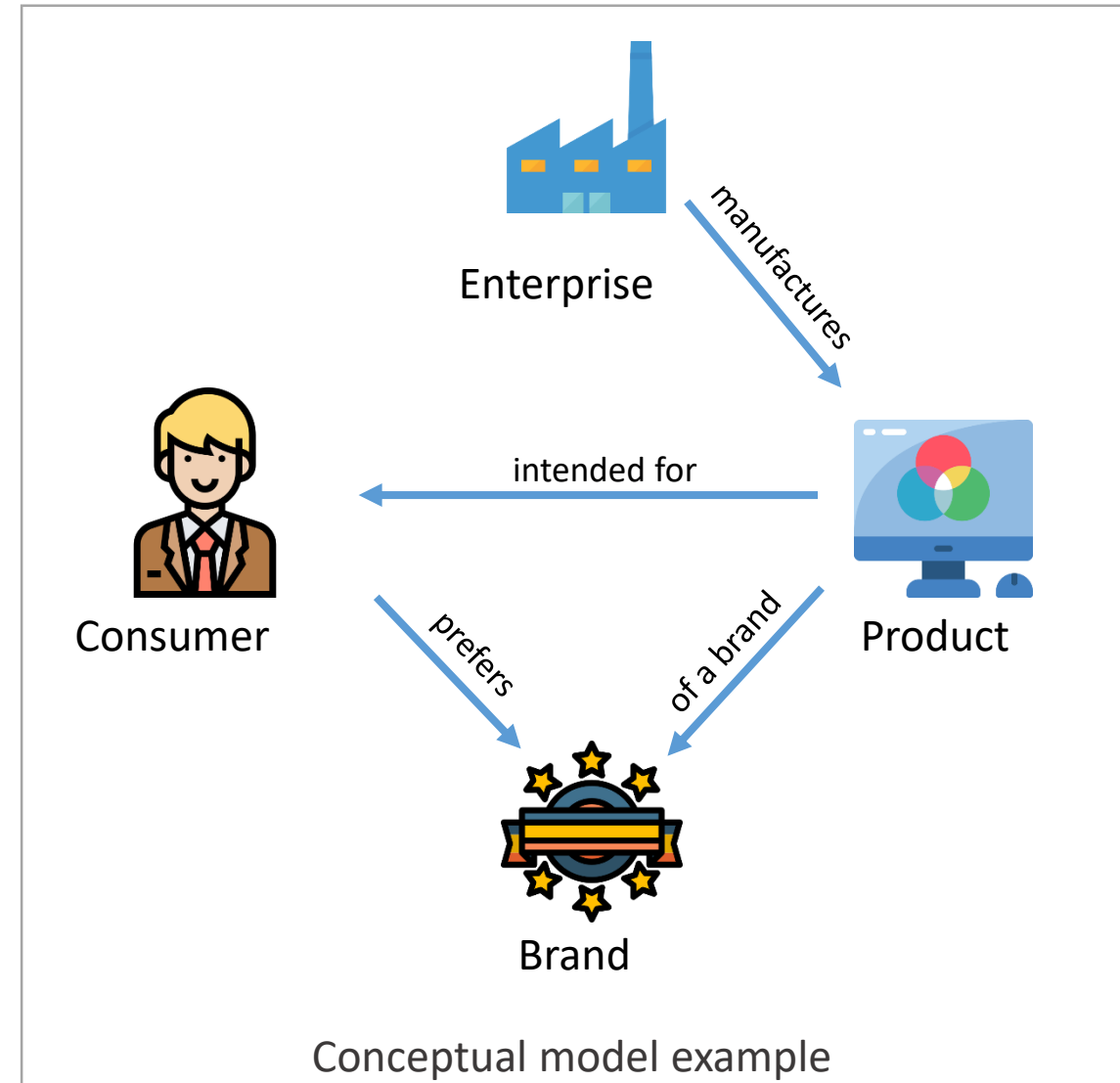


Ontologies allow to:

- determine the set of the **concepts** describing the subject area;
- represent all the available information using them;
- compose the **inference rules**;
- apply these rules to process the incoming data;
- **prove** any conclusion made from the data.

The ontology consists of two levels:

- **Concept level (“terminology box”)**, defining the concepts for denoting the objects and their relations,
- **Facts level (“assertions box”)**, containing facts expressed using the concepts.



The mission of our platform is to combine the power of ontologies and the most advanced data processing tools.

The ontologies are the best (industrially available) way of describing the conceptual structure of any subject matter area, and to project it on the data structures in the various storages. They are allowing the management of the data structure and the logic of its processing without stopping the system or affecting its code.



The modern data storages are allowing fast processing of the data of various types.

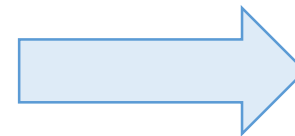
- RDBMS are well suited for transactional data and time series storage and processing;
- noSQL databases are optimal for managing documents of the complex structure;
- Big Data tools are intended for handling huge amounts of the once-generated data;
- Full-text search tools are allowing indexing of the large arrays of the documents.



In fact, almost every enterprise needs to process the data of all these types. And all these data are describing the environment in which the enterprise acts.

To use these data effectively, enterprise needs to ensure its:

- **coherence,**
- **fast processing,**
- **flexible structure management,**
- **traceability and quality checking.**



ArchiGraph .MDM

The next level of the corporate automated systems development are the model-driven applications unified under the single ontology-driven data management platform.

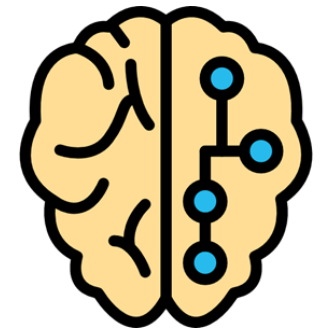
The goal is to continuously manage the data processing logic along with its structure.

This may be achieved with:

- The inference rules expressed in the terms of the enterprise ontology;
- The rules of building the interfaces and reports, data transformation etc, developed according to the special meta-ontologies;
- The neural networks and ML-enabled components, able to produce the optimal algorithms during the system's operation.

Among the **tasks** best suitable for these tools are:

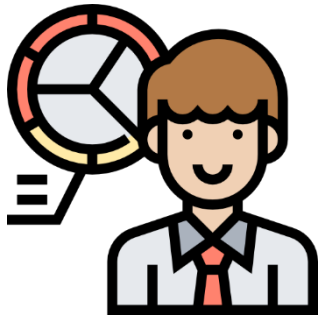
- Implementation of the Situation centers and other real-time data aggregation systems;
- Building the reports generation and KPI tracking systems;
- Creating the logical data warehouses;
- Creating the single platform for the enterprise applications implementation.





For a systems architect

- Transfer the data processing logic from code to the ontology and inference rules
- Lower the costs and terms of software adaptation
- Manage the software algorithms without stopping the system and changing code
- Add/remove application components without stopping it



For an analyst

- Create a domain ontology
- Distribute data between storages, taking the best from each of them
- Manage data import processes
- Manage data processing rules



For a developer

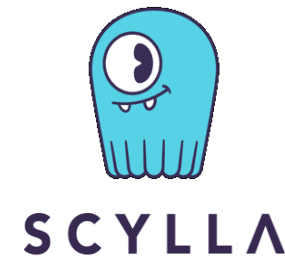
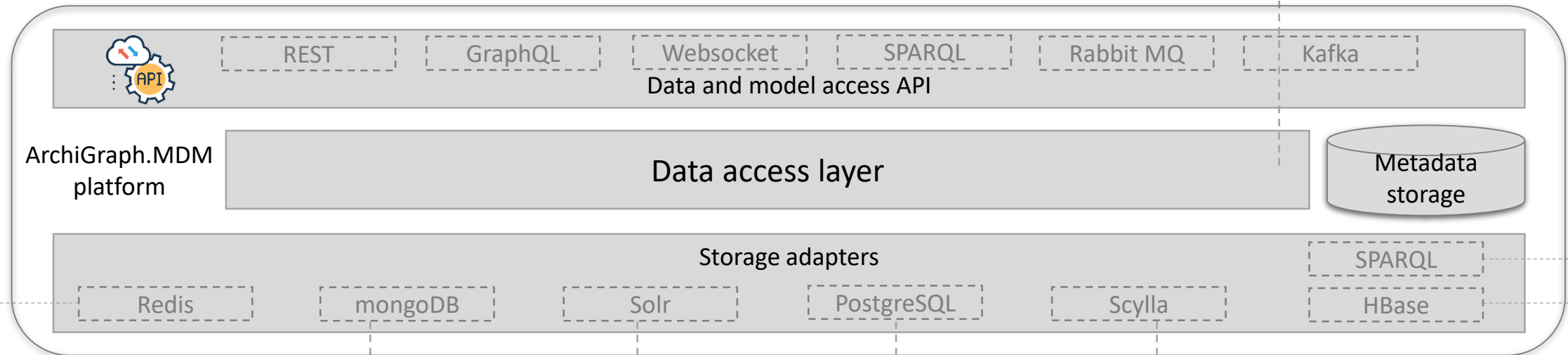
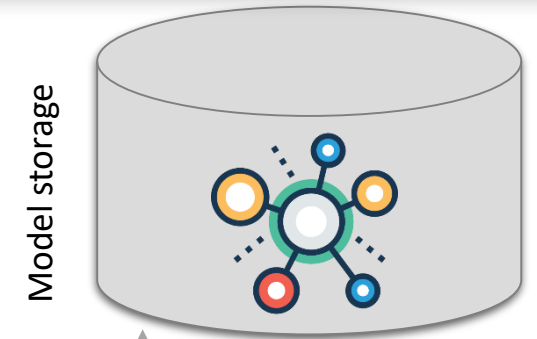
- Work with data regardless of its disposition
- Work with permanently changing data structure
- Optimize data access speed with the “native” technics of various platforms

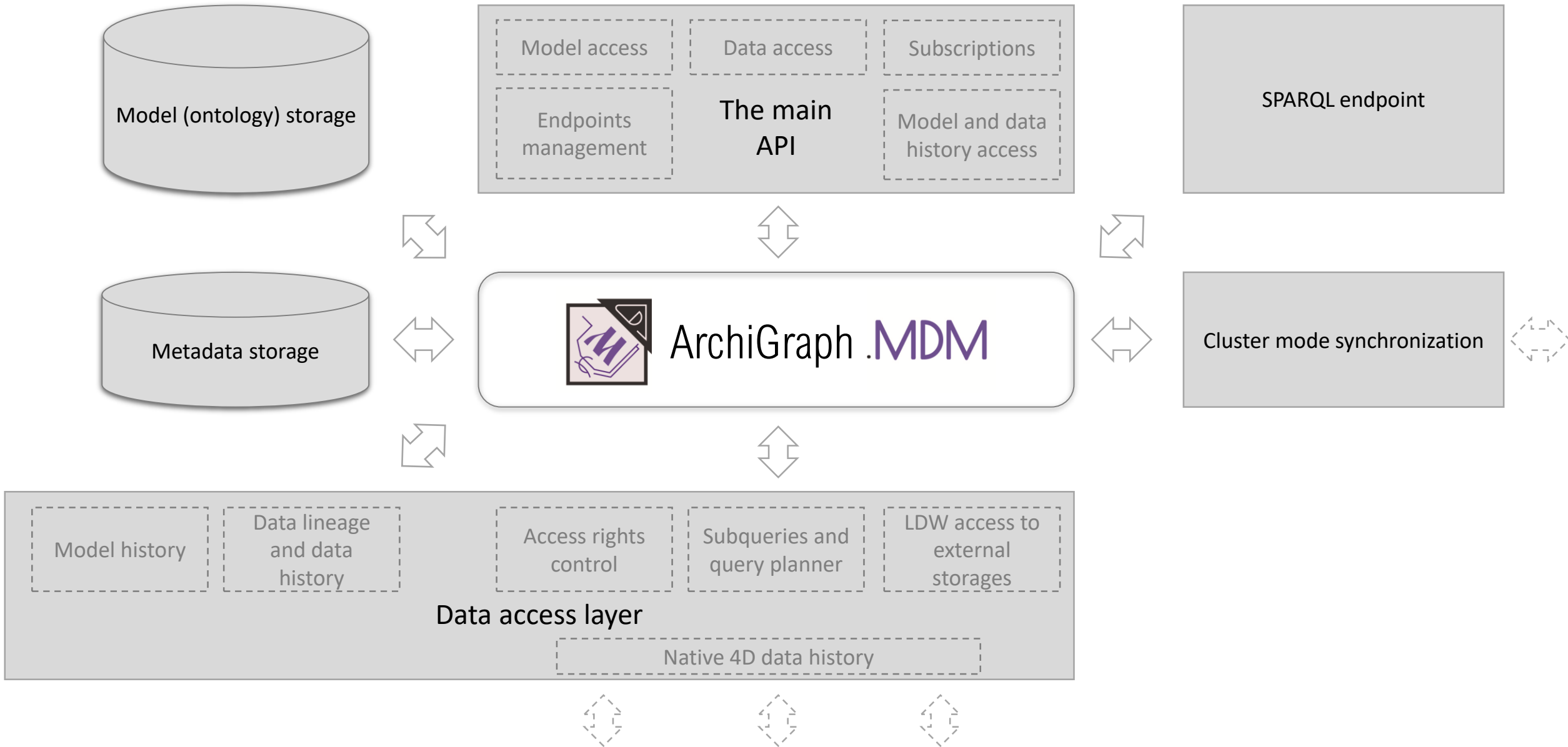
Query types:

- search objects by any conditions
- change objects
- group operations
- geospatial data search
- full-text search

Main functions:

- distribute data among storages
- manage data access rules
- subscribe on data updates
- changes approval workflow
- access logging
- tracking the history of the model and all data







The **ArchiGraph.MDM** management console allows:

- Manage endpoints (the logical segments of the data);
- Distribute data between storages and manage storages structure;
- Create roles and allow them access to the model elements;
- Confirm or reject data change requests.



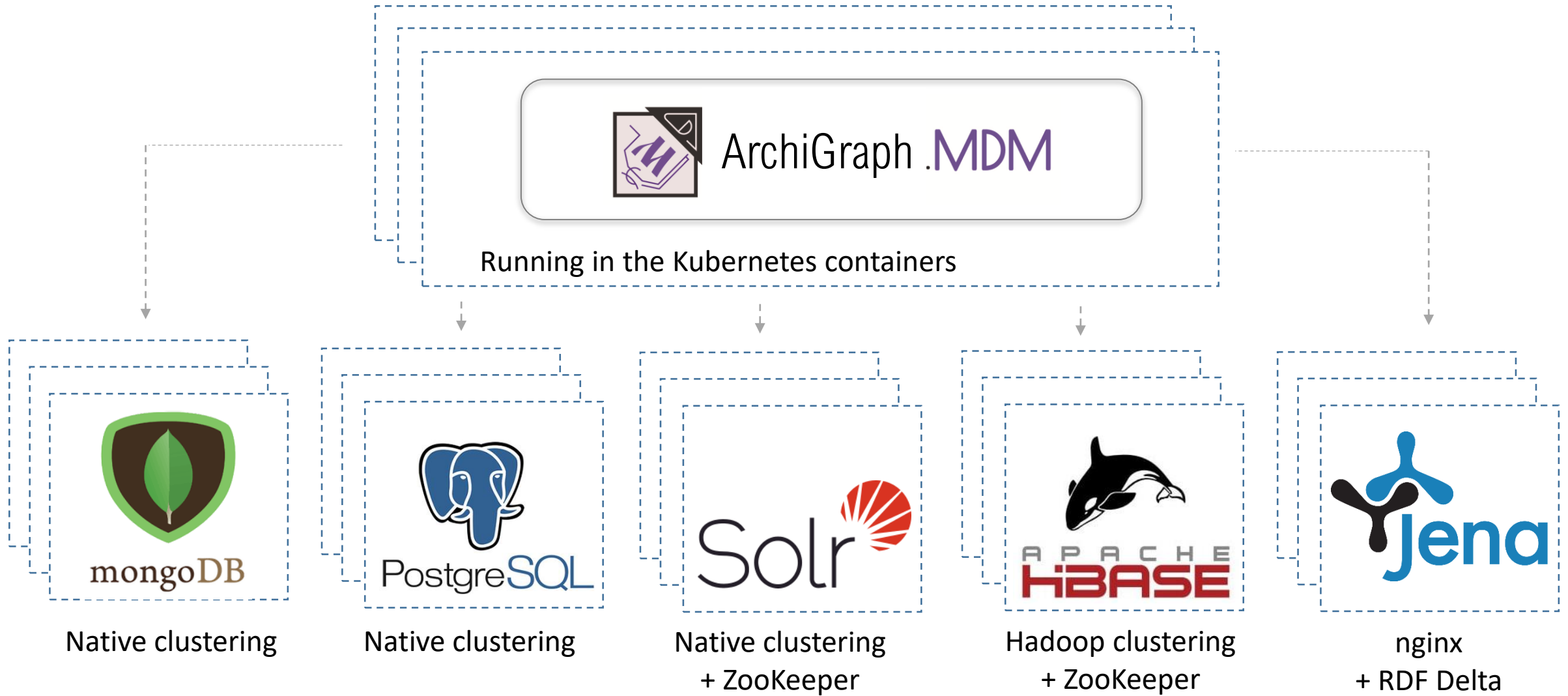
ArchiGraph.KMS allows:

- Create and apply the duplicates search rules;
- Review and merge duplicates.

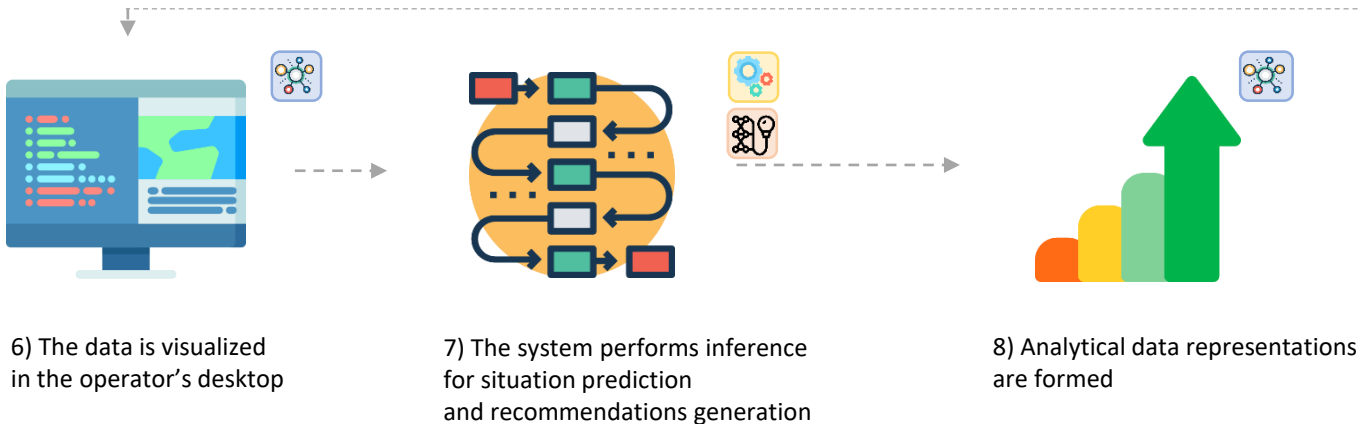
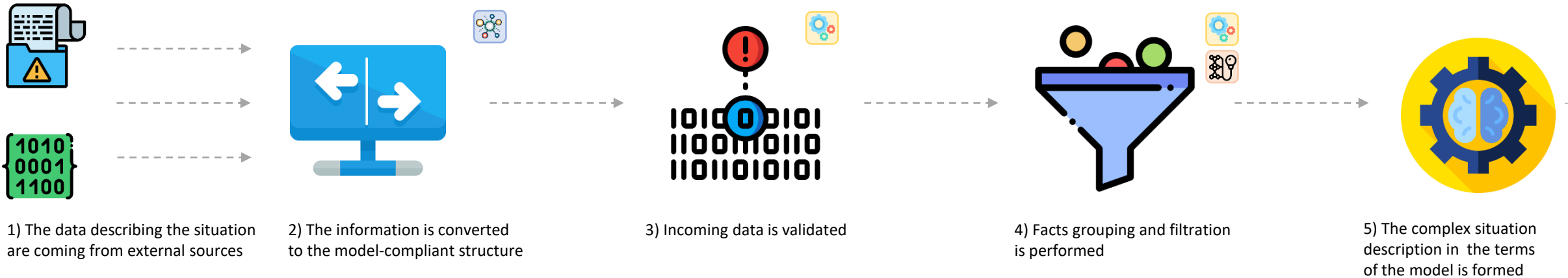





ArchiGraph.Mir ontology editor allows:

- Create, edit and delete classes, properties and individuals. Navigate them using trees or lists, find with the quick search, assign property values for the arbitrary sets of the objects (including assignment of the several values for the single attribute), attach files and annotate with the comments any piece of data.
- Work with the data collaboratively, with respect to the data access rules.
- Create data changes requests, if defined by the access policies.
- Export and import the fragments of the model through Excel files.
- Explore the history of the model and data changes.

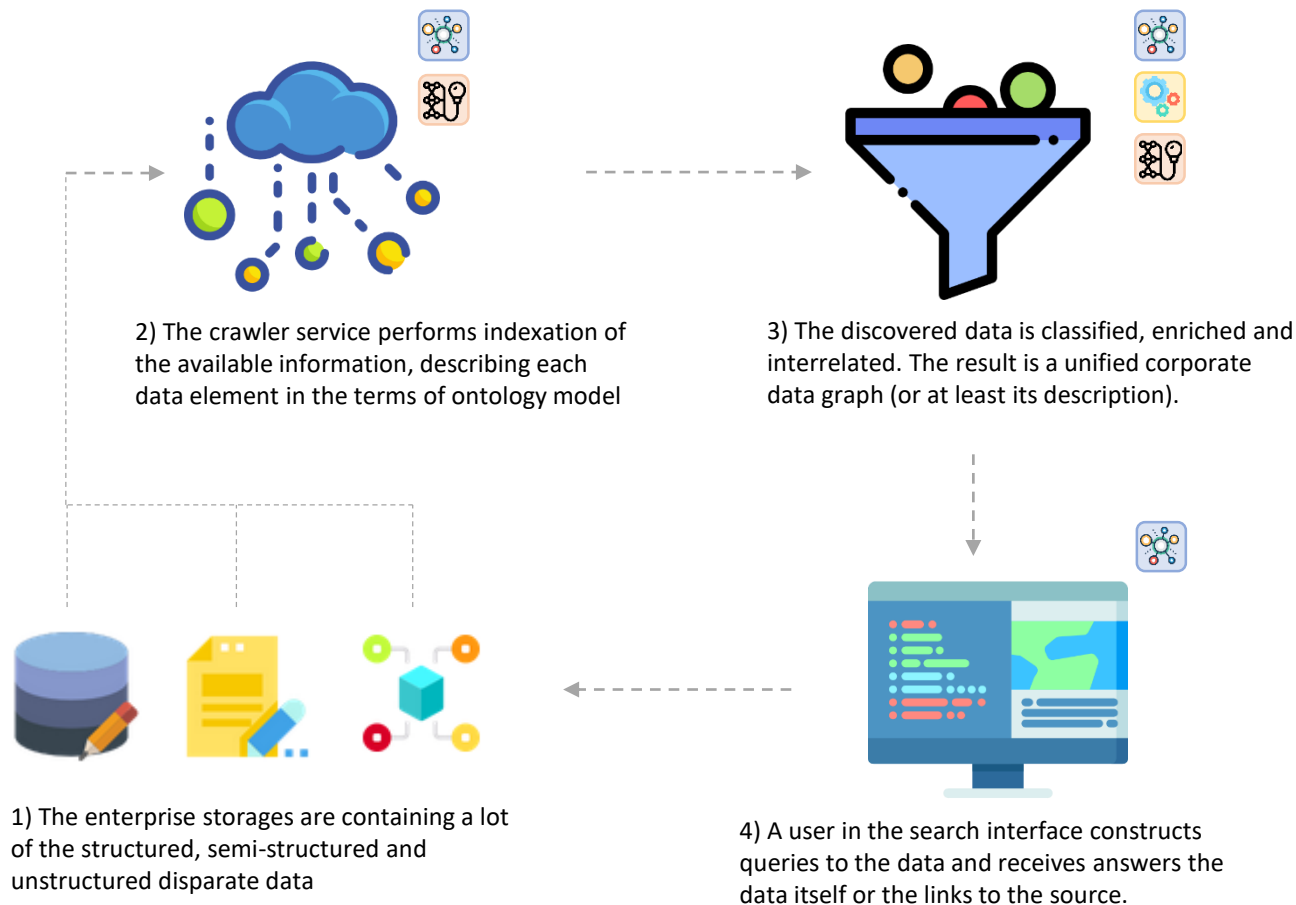


One of the preferred ArchiGraph use scenario is an enterprise situation center.

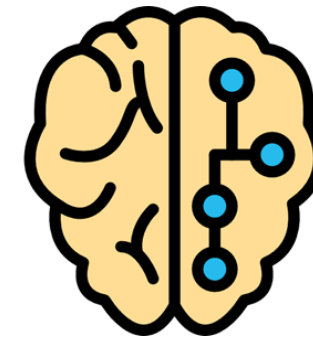





The  sign shows that the logic of the algorithm is stored in the ontology.
The  shows that the inference rules are used for data processing.
The  sign shows that the logical inference may be combined with the machine learning and the neural networks.

Another scenario is creation of the single access point to the disparate enterprise information



In this scenario ArchiGraph works as a data steward, finding relations between data blocks and performing queries according to these relations.



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Thank you for attention!

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