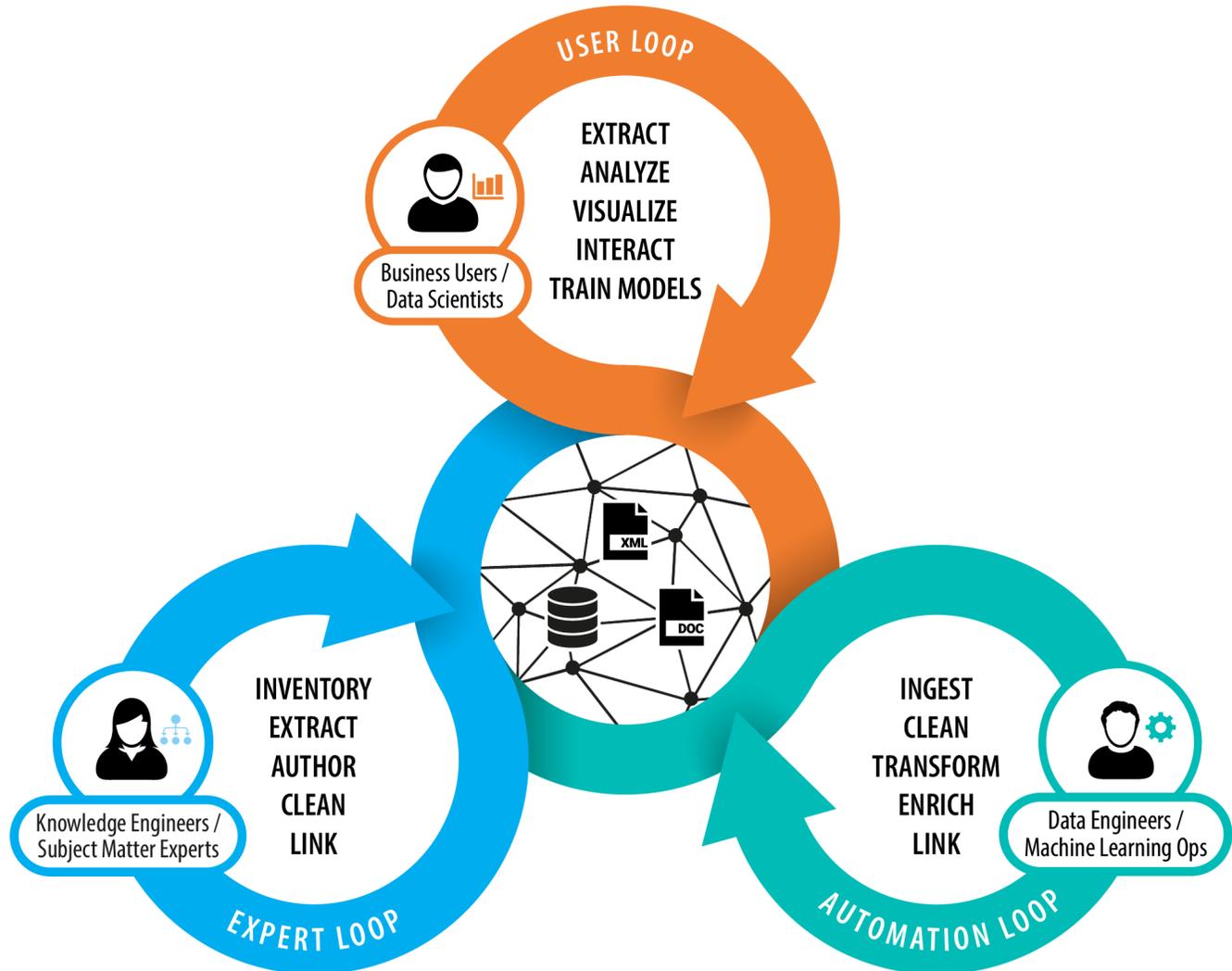


An Enterprise Knowledge Graph Life Cycle - A Summary

Enterprise Knowledge Graphs are developed efficiently with PoolParty and can be successfully used as an integral part of your enterprise information and AI architecture. Along the entire data lifecycle, various tools and semantic services of the PoolParty Semantic Suite support different user groups, from Knowledge Engineers to Data Engineers, Data Scientists, Business Analysts, end users, or your chatbot.

The major topics covered are: semantic search, taxonomies, ontologies, knowledge graph management, text mining, NLP, data integration and linked data.

The enterprise knowledge graph life cycle provides an overview of the actors and agents involved during the most important operational steps for the (ongoing) development of the graph. This ranges from data inventory, extraction and curation, modeling (authoring), various transformation steps, to linking and enrichment (for example, inferred data), and analysis or feedback of the newly acquired data into existing database systems. In reality, there are three cycles that are intertwined: the expert loop (Human-in-the-Loop, HITL), the automation loop, and the user loop.



A solid foundation for the creation of high quality data graphs can only be established if sufficient time is invested in the creation and maintenance of curated taxonomies and ontologies, but even these steps can be partially automated. Within the loops, agile and iterative working methods are predominant, whereby individual process steps can interact with each other.

In summary, the knowledge graph life cycle points out the following aspect:

1. The development of knowledge graphs is an endeavour involving *several stakeholders*.
2. Developing knowledge graphs means to proceed *iteratively and agilely*, not linearly.
3. Humans *and* machines should be equally involved in building an enterprise knowledge graph.
4. The knowledge graph is constantly being developed further in *three loops that are linked together*.
5. The aim is always to *balance the three most important perspectives* on the knowledge graph: representing domain knowledge, linking company data, and enriching it with user contexts.

The major loops identified here, are the Expert Loop, the Automation Loop and the User Loop.

The majority of technology platforms used in the development and implementation of enterprise knowledge graphs are specialized in one of the three loops. As a result, only special applications based on graphs can be implemented. Only the right mix and a balanced interaction of the three loops can support a long-term knowledge graph vision and strategy of a company. With the expert loop in the game, which interfaces with the automation loop, every AI system based on knowledge graphs automatically becomes an explainable AI.

For in-depth information and more background on how to create a well-formed knowledge graph efficiently for your enterprise based on the Knowledge Graph Life Cycle, refer to [the Knowledge Graph Cookbook](#).

In its core, PoolParty uses state-of-the-art semantic web technologies, which are built on top of open W3C standards. Professional metadata management is the key for efficient information management in any data-driven organization. PoolParty combines methodologies from the Semantic Web with machine learning, text mining algorithms, and approaches for collaborative knowledge engineering.

As a result, organizations benefit from a better data quality, integrated views on data, better reuse of existing knowledge, and end users who love to work with smarter applications with great user experience.