

Industrial Configuration Management

Powered by
metaphactory & RDFox



metaphacts

 Oxford Semantic Technologies



User Needs

How can I find **compatible components** to assemble a specific configuration solution within a given **budget**?

For example...

*Which power switches are compatible with my **existing direct current motor**?*

*I'm looking for a brushless motor with a **specific speed and torque**. How can I quickly find one that fits my current environment?*



Available Data

Information about hundreds or thousands of industrial components, including details on their provisions, requirements and cost.

For example...

*Details about different types of **motors, gears, switches, power supplies and controllers***

*Cost information, as well as provisions and requirements, such as **speed and torque***



Challenges

Integration of large volumes of data with heterogeneous formats

End users manually compare thousands of possible combinations to find suitable solutions

Data updates require manual steps resulting in **no access to real-time data**

Lack of reusability of analyses as parameters change

Intuitive & Interactive
Data-driven & Insightful
Intelligent

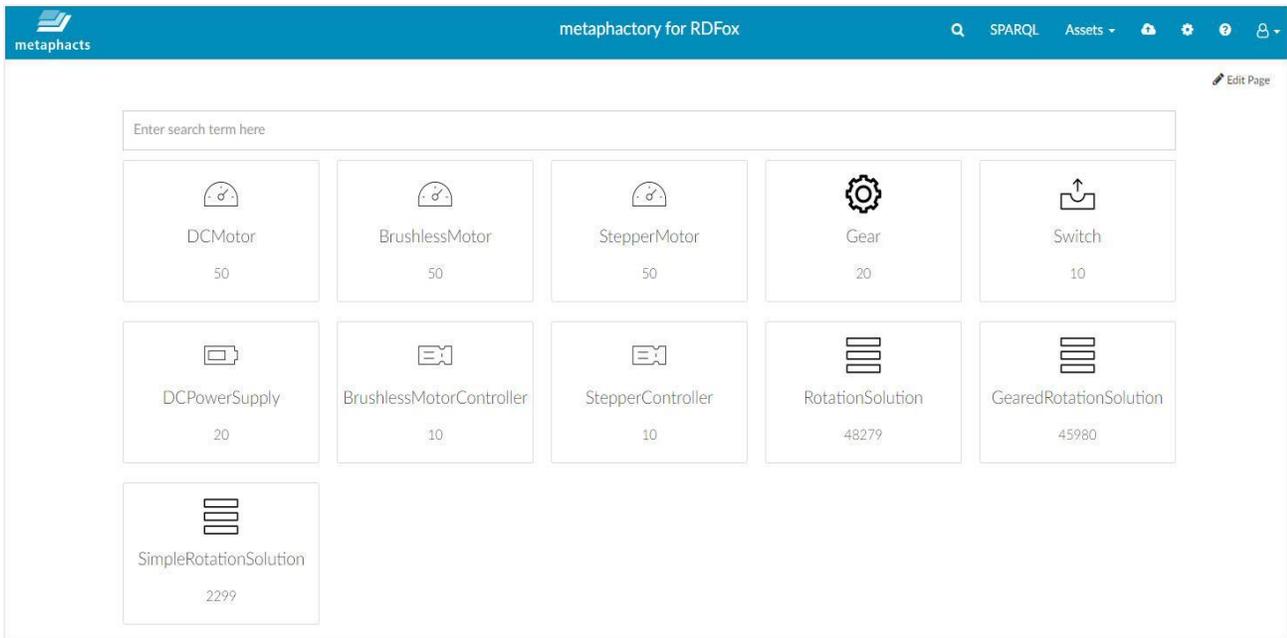
Knowledge Graph-driven Application for Industrial Configuration Management

Flexible & Adaptable
Unique Reasoning & Performance
Domain-specific



Ontology modelling interface to **model your domain** based on your specific information needs

Model-driven template pages and extensive library of Web components to **build an intuitive user experience** on top of your knowledge graph



In-memory RDF triple store to **build your enterprise knowledge graph**

Advanced reasoning capabilities to encode logic, add and remove data, and materialize facts

Expand your capabilities by harnessing the power and precision of semantic reasoning

Encode logic with rules

Search, filter & drill down

Explore & discover relations

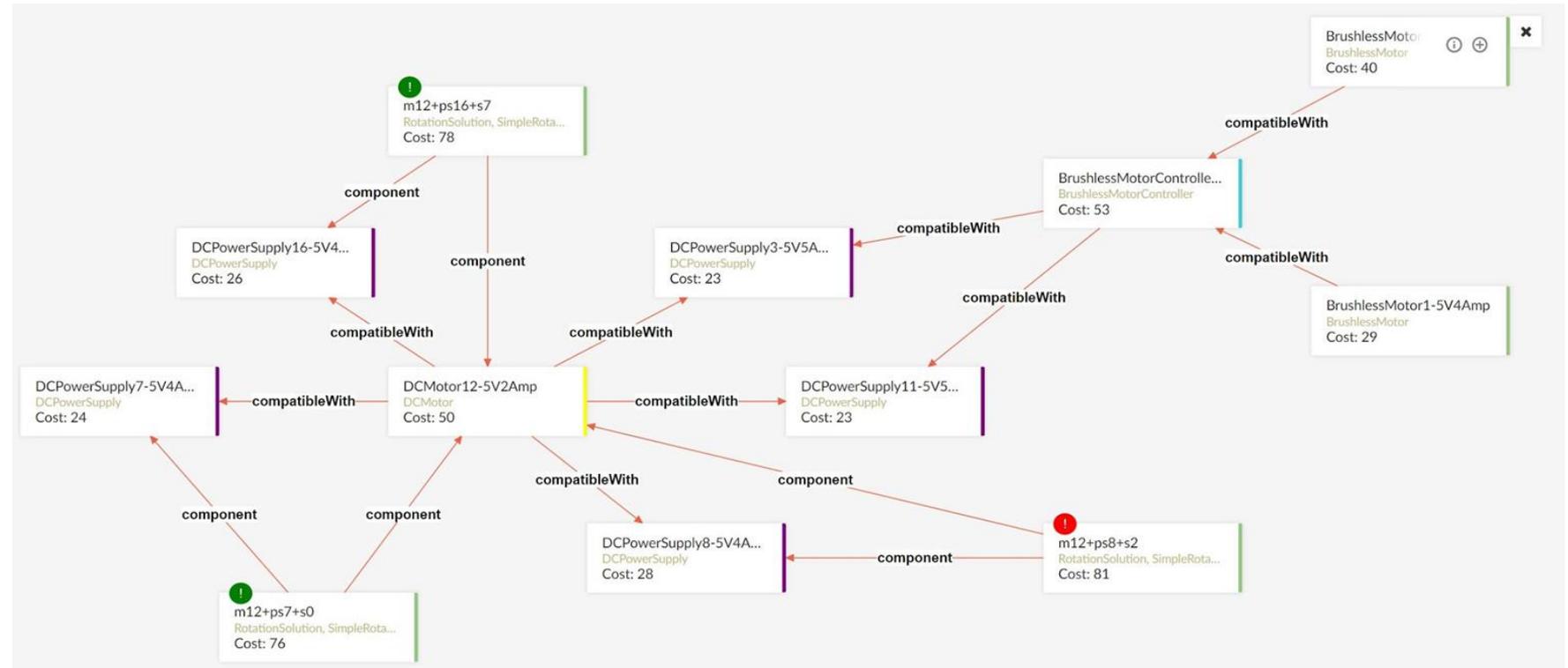
Build insightful dashboards

Add & edit data

Harness advanced semantic reasoning technology

A machine-understandable, rich network of data about components, their provisions and specifications

- ⇒ Determine compatibility with **speed and precision**, using rules
- ⇒ **Rules encode the logic** of compatibility into the system
- ⇒ Rules are developed to **suit the use case and user needs**
- ⇒ **Standardized data model** and domain-specific **ontologies & vocabularies** help organize and structure data
- ⇒ **Metadata adds context** and makes the semantics of data explicit
- ⇒ **Unique and persistent IDs** make all meta-levels searchable, accessible, shareable & traceable
- ⇒ **Flexible models** support **reusability** across use cases



Replace time-consuming and error-prone manual processes, with fast and intelligent recommendations for your customers



Find
configuration
solutions



Reuse existing
components



Stay
within budget



Ensure
compliance
with standards

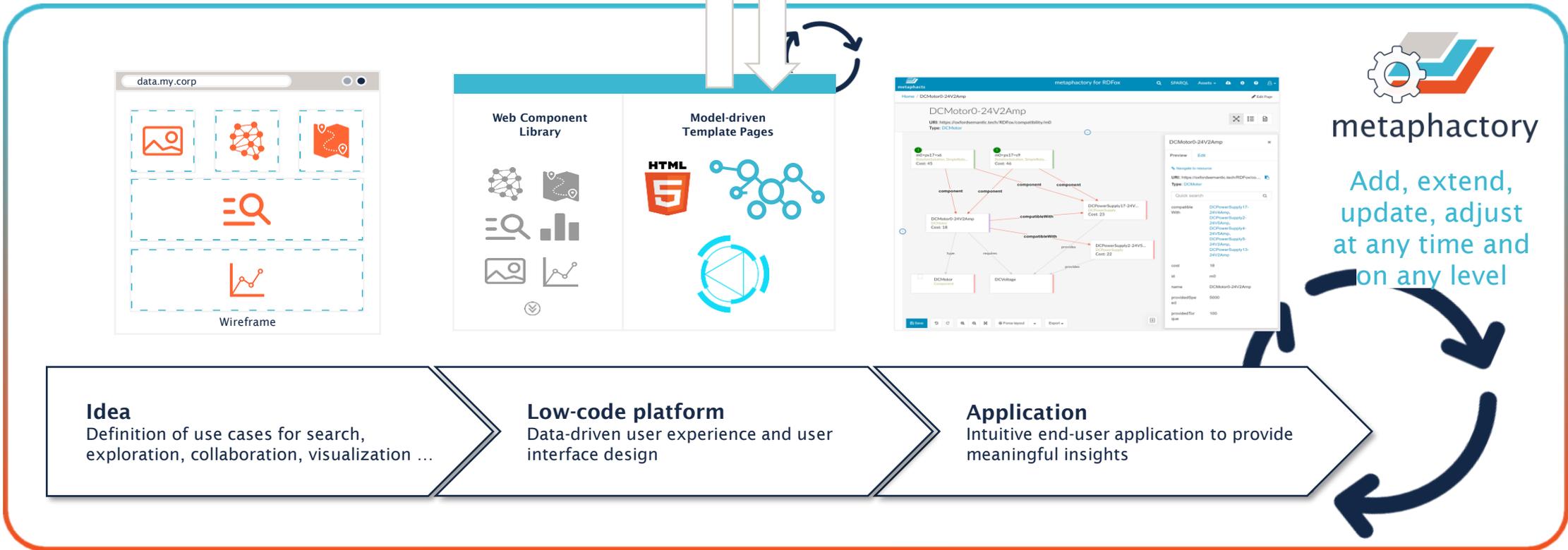


Find the data you
need without
support from IT

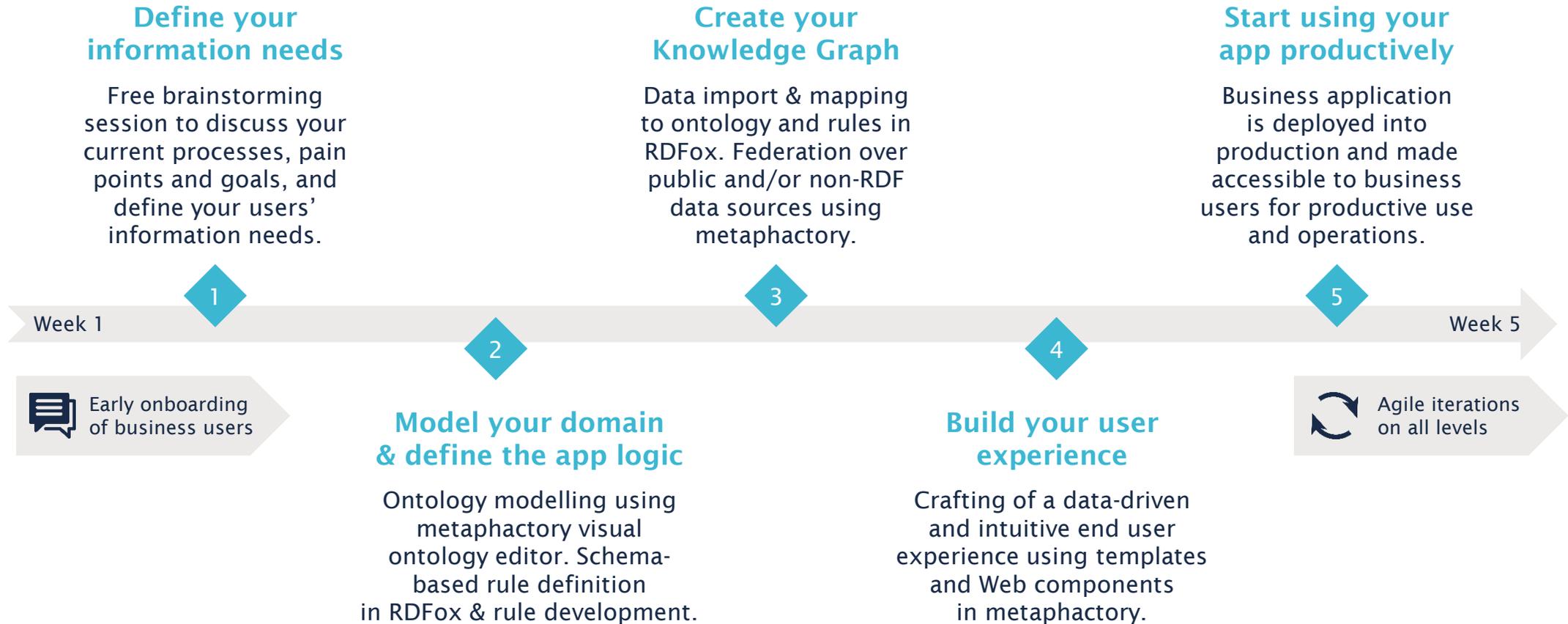
From idea to production in a matter of weeks

Joint solution with
unparalleled capabilities

Development of Rules
Model the domain
Materialise facts with rules
Encode logic by creating rules, e.g. compatibility calculations



Our Approach



Get Started with Your Knowledge Graph Application Today!

Contact us at:

info@metaphacts.com
metaphacts.com/get-started



metaphactory is a low-code, FAIR Data platform that supports knowledge graph management, rapid application development and end-user oriented interaction. Customers in the Engineering & Manufacturing sector leverage metaphactory to build flexible and intuitive applications for configuration management, spare parts management, smart manufacturing planning and execution, and more.



RDFox is a main-memory, highly scalable, centralised RDF store which leverages the properties of modern computer architecture and C++ to deliver high performance parallel datalog reasoning and SPARQL query answering. Its speed provides a richer user experience which is well suited to responsive applications. It is available on Mac, Windows, and Linux.