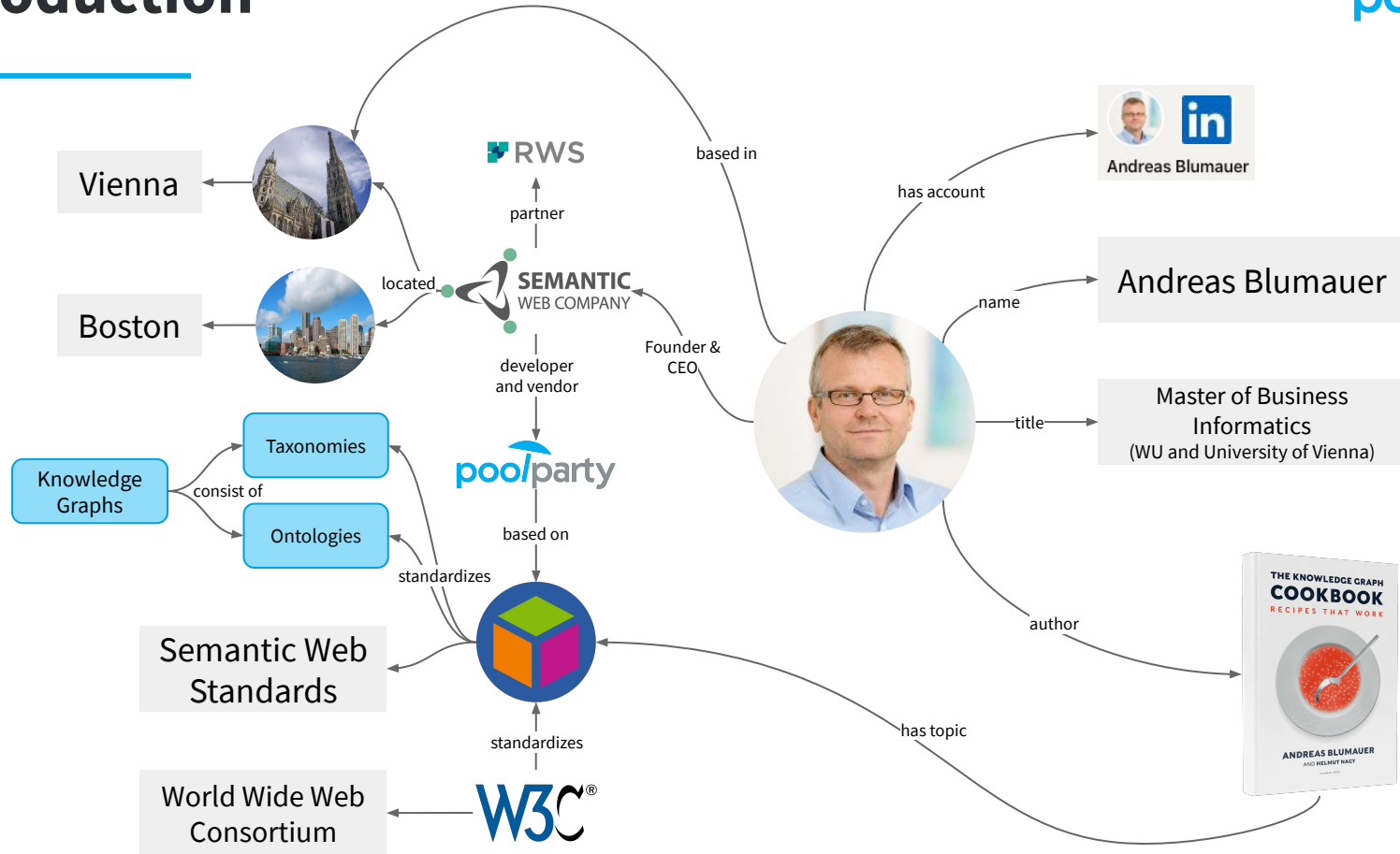


Benefit from **Enterprise 360** Based on Knowledge Graphs



Introduction



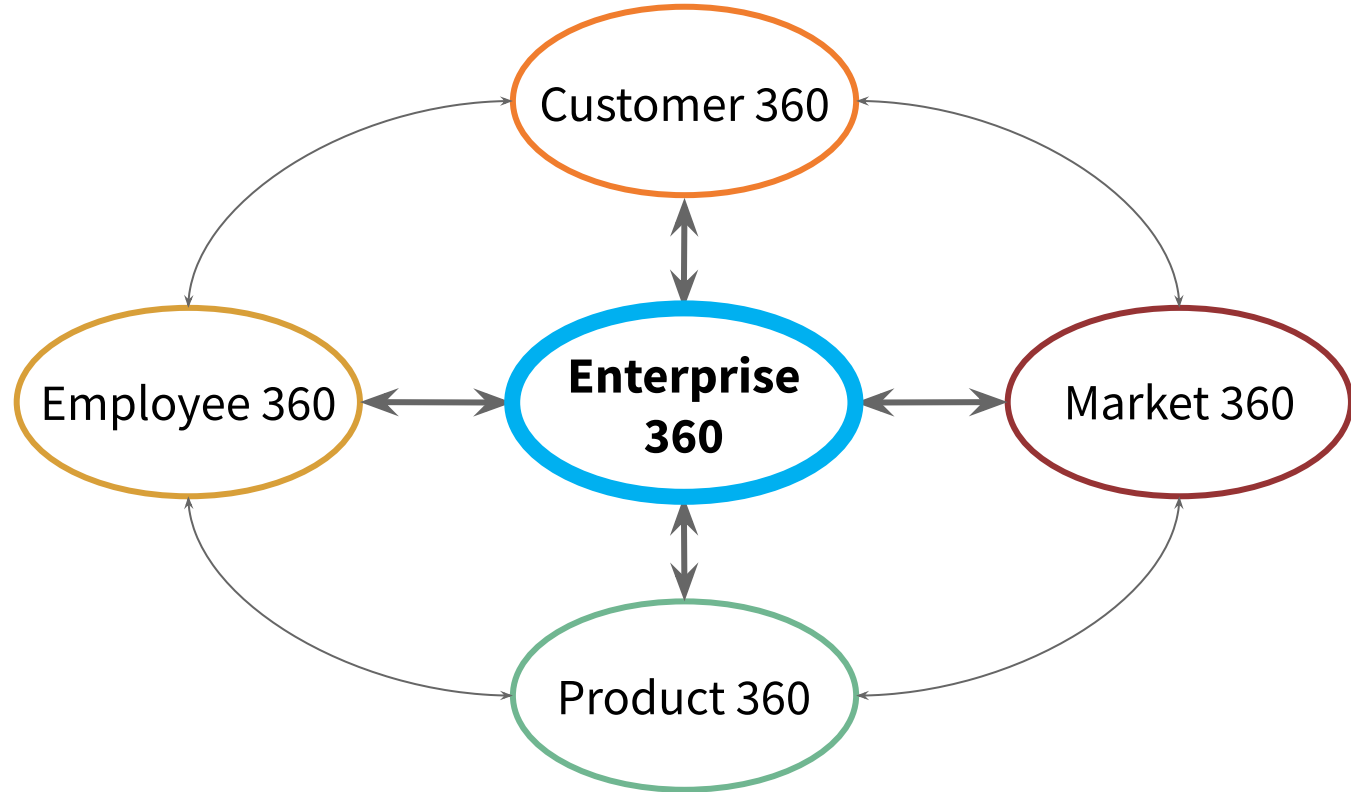
360-degree views

The imperative of a 360-degree view is to be able to create a comprehensive and accurate picture of all business objects and their relationships in the context of core business processes.



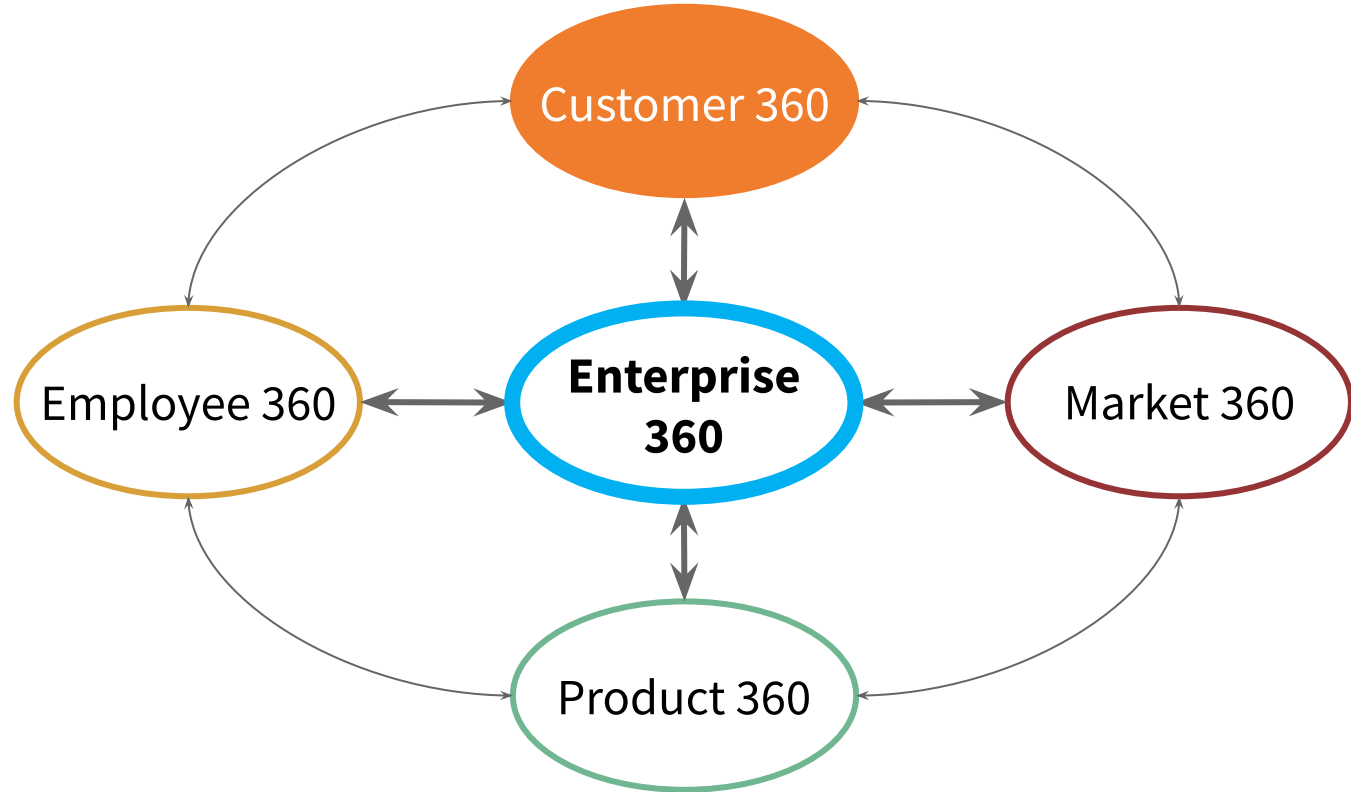
Enterprise 360—the core of digital transformation

The key to successful digital transformation of any company is to be able to **dynamically generate comprehensive 360-degree views** of core processes and business objects.



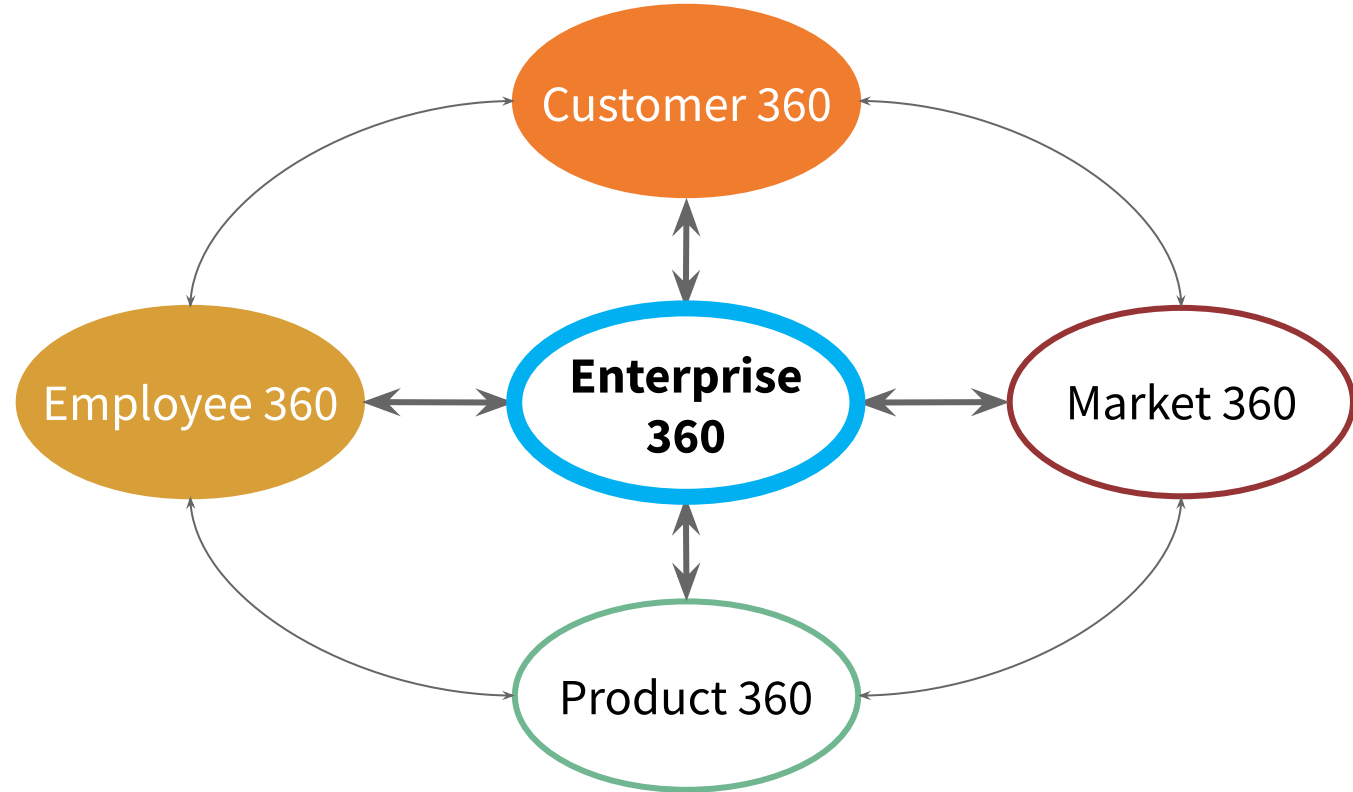
Customer 360—understand individual needs!

Understand each customer as they progress along their customer journey, including their individual needs.



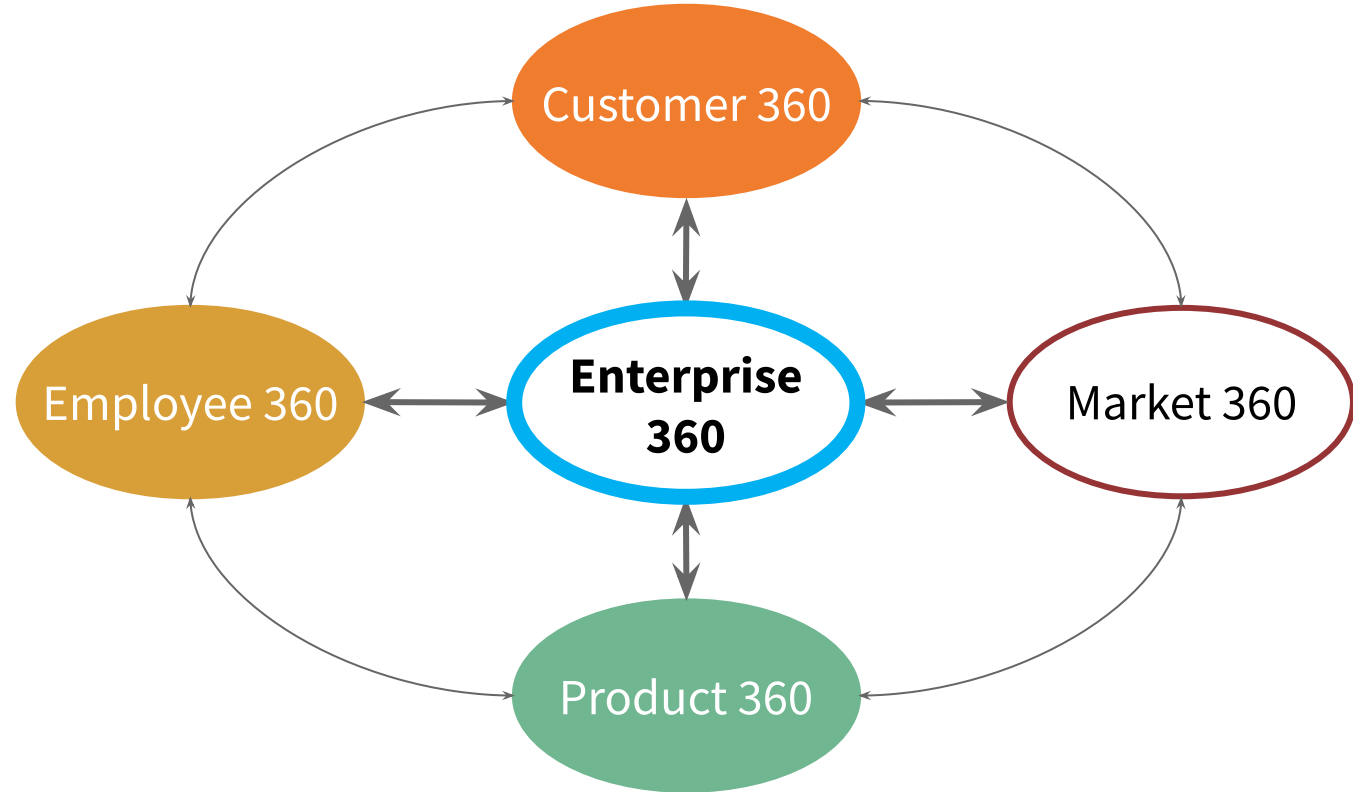
Employee 360—optimal learning and career paths

Embedded in a comprehensive corporate knowledge strategy, each employee can be provided with the best possible knowledge and learning assets for further development along defined career and development paths.



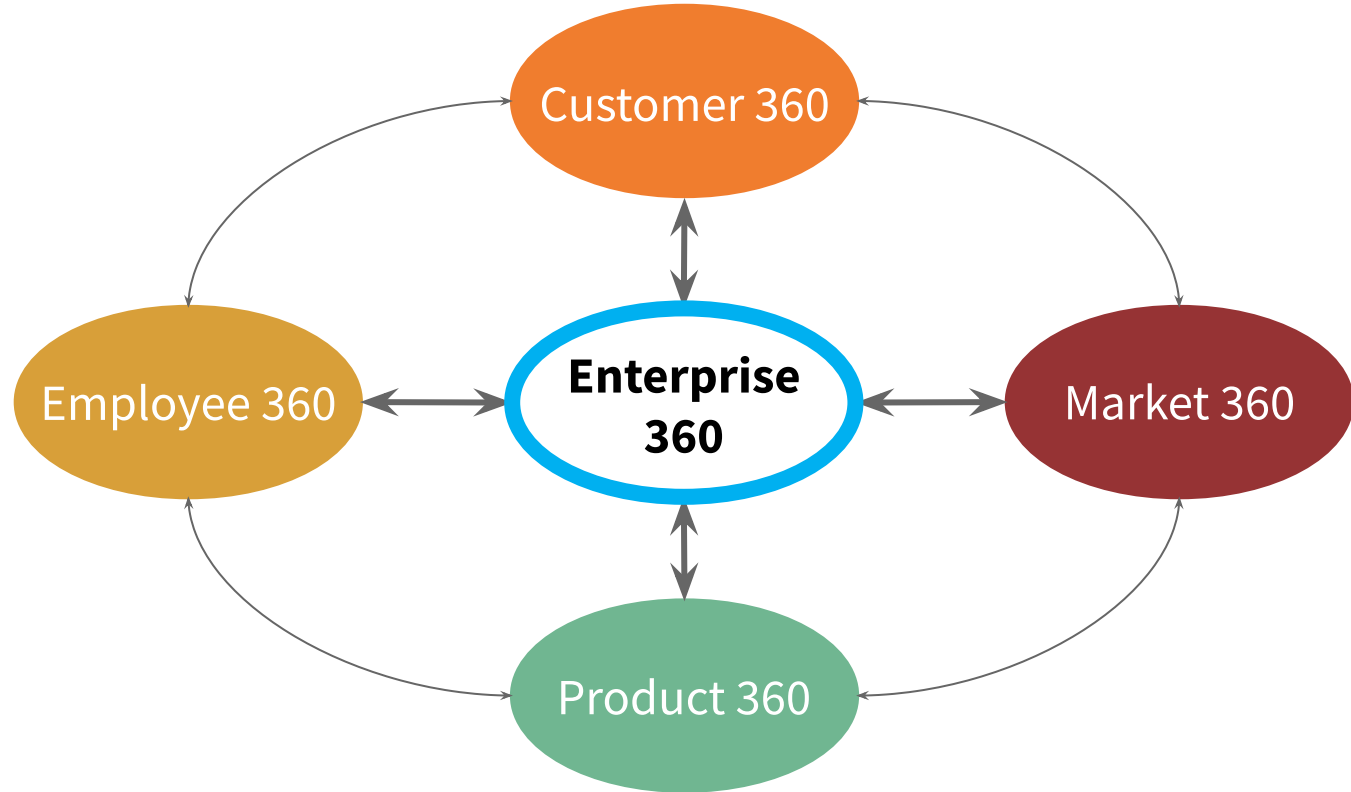
Product 360—value creation and benefit orientation

Linked product information can be viewed holistically, in the context of the strategic, operational or analytical perspective, in order to be able to steer product innovations in a targeted manner.



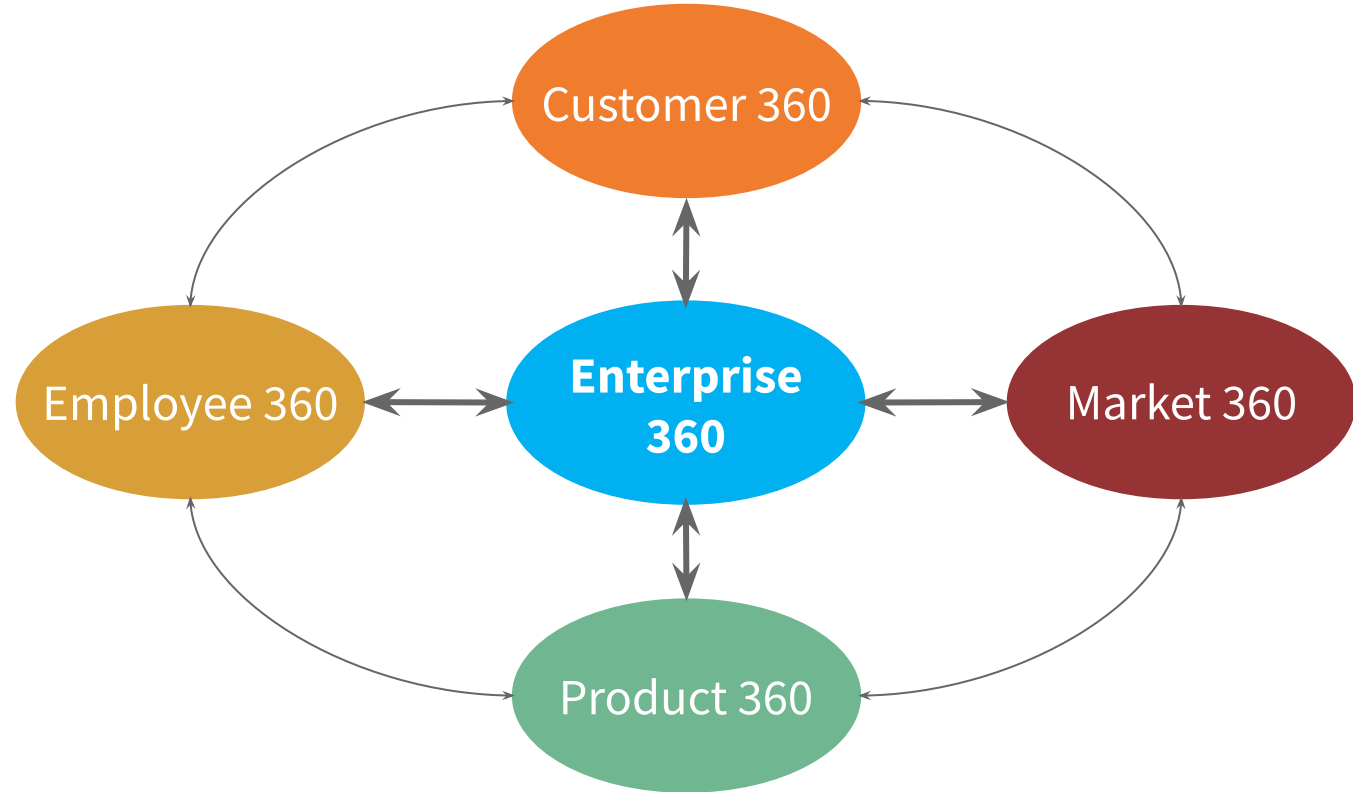
Market 360—position yourself at the sweet spot!

Better understand relevant markets and segments in terms of upcoming trends, current developments, your own positioning and the positioning of competitors (competitive intelligence).



Enterprise 360—link the four key areas!

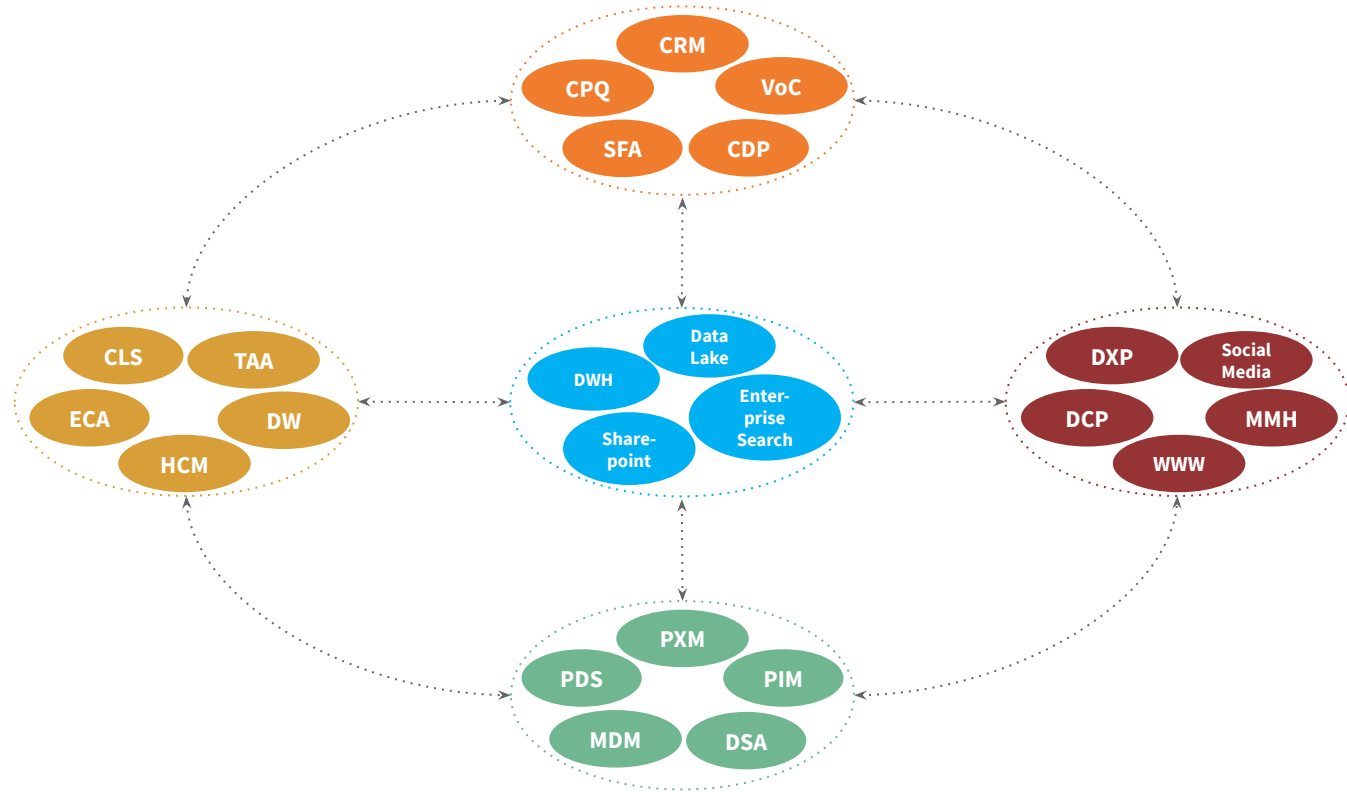
Organizations that work on at least three of these four key areas will gradually evolve into an Enterprise 360.



The Reality: loosely coupled data silos

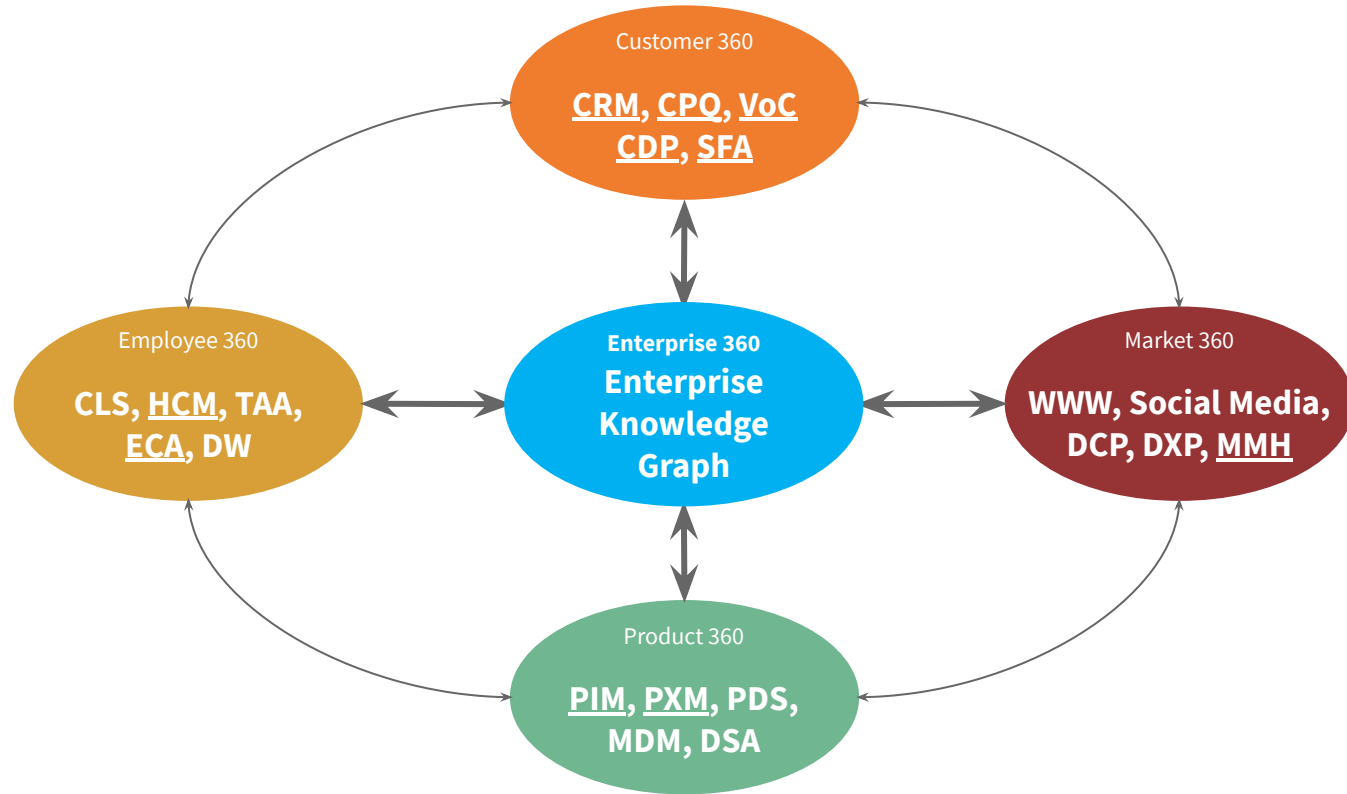
Companies operate an EIM* landscape with a multitude of siloed databases that contain valuable facts about business objects but are by no means interconnected.

* Enterprise Information Management



Enterprise Knowledge Graph—connect the silos!

To create a suitable data basis for Enterprise 360, data from various Enterprise Information Management (EIM) systems and external sources must be included.



Make 360-degree views dependent on context

Be able to look at business objects with personalized views. Enterprise 360 also means being able to offer those 360-degree views for different roles that are most useful in the respective context.



New perspectives and knowledge discovery

Graphs help generate new knowledge and insights.

Knowledge graphs are ideally suited to generate novel views of existing knowledge in an agile and dynamic way, and to discover hidden knowledge.



**By 2023, graph technologies
will facilitate rapid contextualization
for decision making
in 30% of organizations worldwide.**

Gartner, Inc. (2020)

(Mark Beyer in “Graph Steps Onto the Main Stage of Data and Analytics:
A Gartner Trend Insight Report”, December 2020)

SCENARIOS & USE CASES

Learning from data-driven and content-driven use cases
based on our customer success stories.

Development steps towards Enterprise 360°

Crawl

- Taxonomies
- Ontologies
- Content types and structure



Walk

- Automatic Tagging
- Named Entity Recognition
- Semantic Footprinting



Run

- Recommender Systems
- Semantic Search
- Question-answering



Fly

- Enterprise 360
- Knowledge Hub
- Digital Twins



Scenario 1 (Customer 360)

- ▶ **Benefit:** Customers who are understood holistically along their individual needs (in the context of their life stage or work situation) benefit from accurate recommendations that do not simply suggest "more of the same" but can also provide excellent assistance with complex configuration problems.
- ▶ **Challenge:** Customer segmentation and classification systems are often too simplified, and do not really achieve the level of granularity necessary to offer personalized assistance.



Retail Industry:

Our customer is one of the world's largest furniture companies

CHALLENGE

- Inconsistencies and duplication of effort between regional units
- Product recommendations are too broad, include products irrelevant in a context
- Much domain knowledge is unstructured and implicit and difficult to access

SOLUTION

- Dynamically generated topic pages showing products and related information in their context
- Creation of a product knowledge graph
- Use of multilingual controlled vocabularies

BENEFIT

- ✓ Better customer experience on the website
- ✓ More appropriate informational material and better targeted selling opportunities
- ✓ Stronger customer loyalty, building extended knowledge around the product and developing usage contexts

Scenario 2 (Employee 360)

- ▶ **Benefit:** Employee 360 allows the targeted development of skills and the precise recruiting or staffing of projects with employees who can work together efficiently as a team along complex challenges.
- ▶ **Challenge:** Information about employees, specifically about their competencies and skills is weakly structured or isolated from other data that would allow targeted development of career paths.



Management consultancy:
Our customer is **one of the most prestigious employers in the industry.**

CHALLENGE

- The main challenge that our client faces is to find the right people for the right projects.
- The current approach is comparatively slow, unpredictable, and only takes into account experience from past projects in an unsystematic way.

SOLUTION

- Use of PoolParty Taxonomy Management to curate skills taxonomies systematically
- Use of PoolParty Extractor in conjunction with skills taxonomies
- Highly accurate recommender system
- Improved person search system

BENEFIT

- ✓ Increased competitiveness through better reuse of existing knowledge assets
- ✓ Improved analysis capabilities to identify existing gaps in the knowledge base
- ✓ Identification of missing skills in the company: Support for strategic HR planning

Scenario 3 (Product 360)

- ▶ **Benefit:** Product 360 increases the speed of introduction of new products or new releases or also of new services.
- ▶ **Challenge:** Models and specifications of existing products ('digital twins'), or knowledge for the targeted development of new product versions (e.g., information from support processes or technical documentation) are barely networked with each other, neither organizationally nor at the data level.



Pharmaceutical Industry:

Our customer is one of the
top 20 companies in the
pharmaceutical industry.

CHALLENGE

- Required information to successfully complete a drug approval is diverse and scattered across numerous sources.
- The right contacts to successfully carry out a drug approval are often not easy to find, even within the corporation.

SOLUTION

- Graph-based text mining and recommender system embedded in target systems via PowerTagging
- Use of the PoolParty to efficiently maintain comprehensive knowledge graphs for the pharmaceutical industry.

BENEFIT

- ✓ Risks of becoming entangled in inconsistencies during a drug approval process are minimized.
- ✓ The time to successfully complete a drug approval is significantly reduced.

Scenario 4 (Market 360)

- ▶ **Benefit:** A holistic view of market trends, changes in the legal framework, new research findings, competitors' innovations or patents forms the basis for optimizing the company's own product development and market positioning.
- ▶ **Challenge:** In many cases, relevant information on market developments can only be obtained from external sources, which rarely meet individual requirements and are often only available in unstructured formats.



Healthcare:

Our customer is the **main national public health information service** in Australia

CHALLENGE

- Two-thirds of all patients search the internet before a health consultation.
- The data from over 200 specialized information providers is disconnected.
- Users didn't have a good experience obtaining only fragmented information.

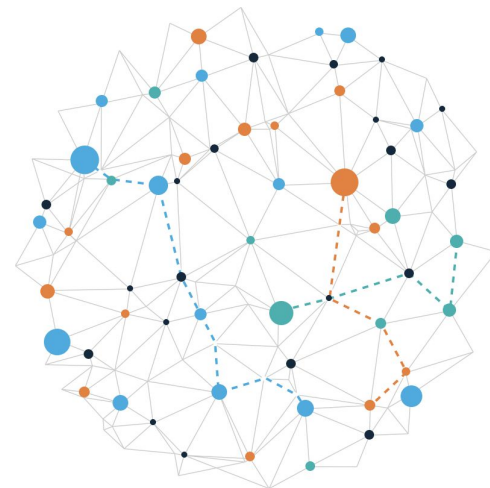
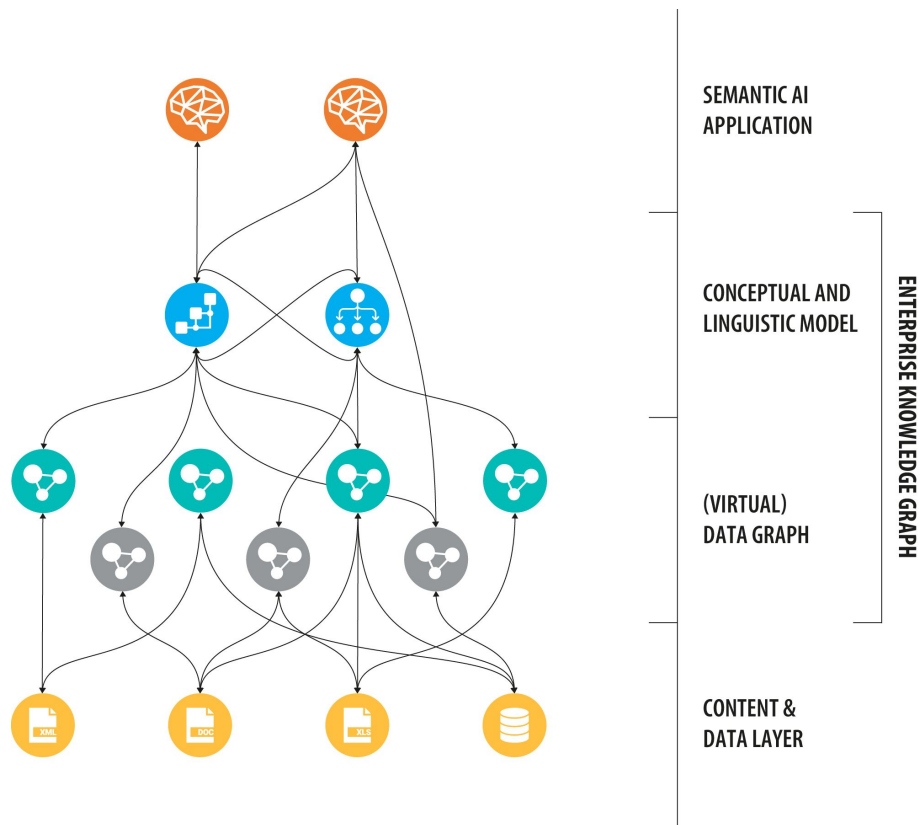
SOLUTION

- Enterprise Knowledge Graph that is used to connect sources of information and present through their own interfaces.
- Content re-use across channels.
- MeSH as a seed taxonomy being extended to reflect specific aspects.

BENEFIT

- ✓ System makes quality-assured and linked medical information accessible to Australians in a user-friendly way.
- ✓ Content architects benefit from a graph-based approach making data management, and development of new services more agile.

Anatomy of an Enterprise Knowledge Graph (EKG)

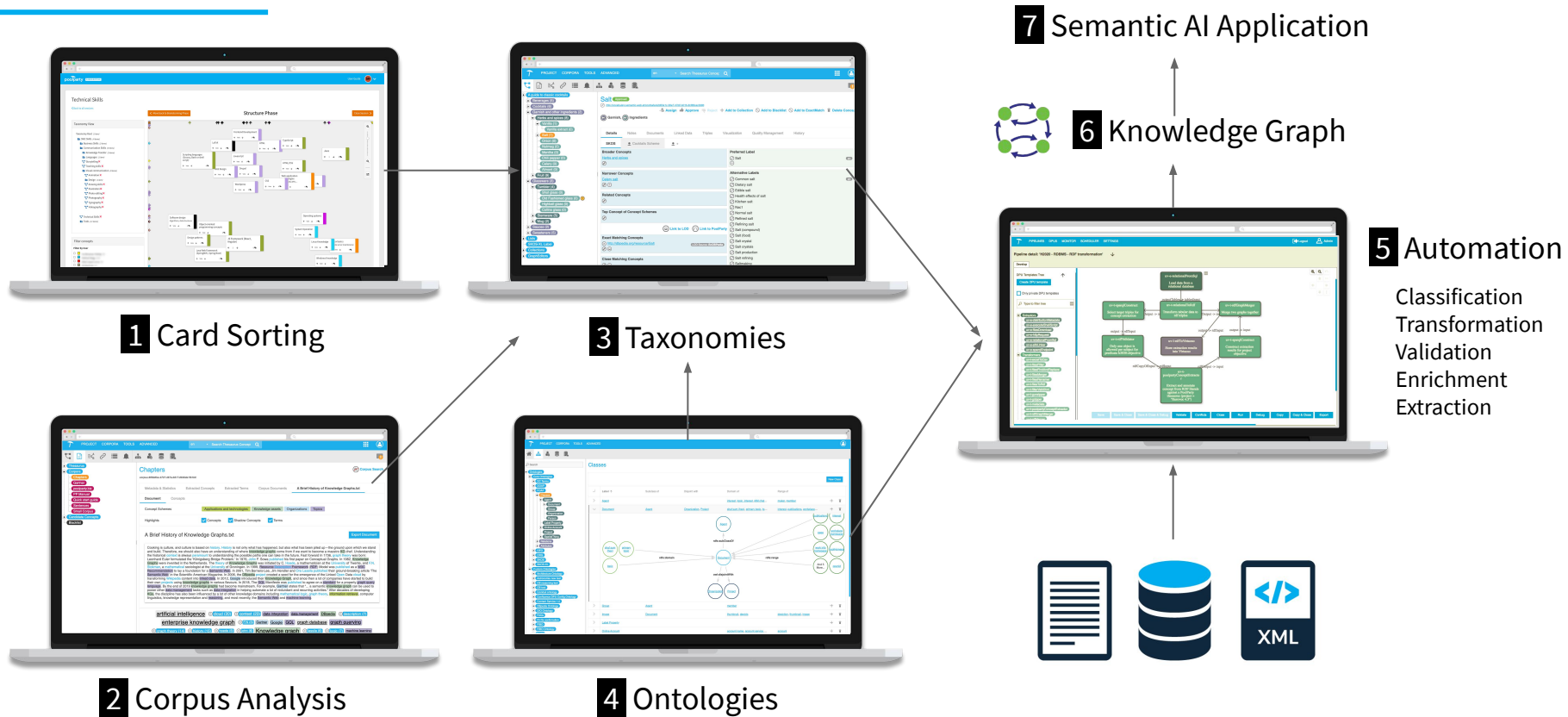


An Enterprise Knowledge Graph (EKG) contains business objects and topics that are closely linked, classified, semantically enriched, and connected to existing data and documents.

PoolParty Platform—components and features



Technologies to create 360-degree views



Conclusion

- ▶ Recognize the challenges you face due to data silos in your organization
- ▶ Recognize the added value of data that is linked
- ▶ Link structured and unstructured data
- ▶ Align your data management with your knowledge management
- ▶ Start using graph technologies
- ▶ Start organizing your data with help from taxonomies and ontologies
- ▶ Start building an enterprise knowledge graph (start here: [The Knowledge Graph Assessment](#))

