Leveraging AI techniques in SDMX visualization

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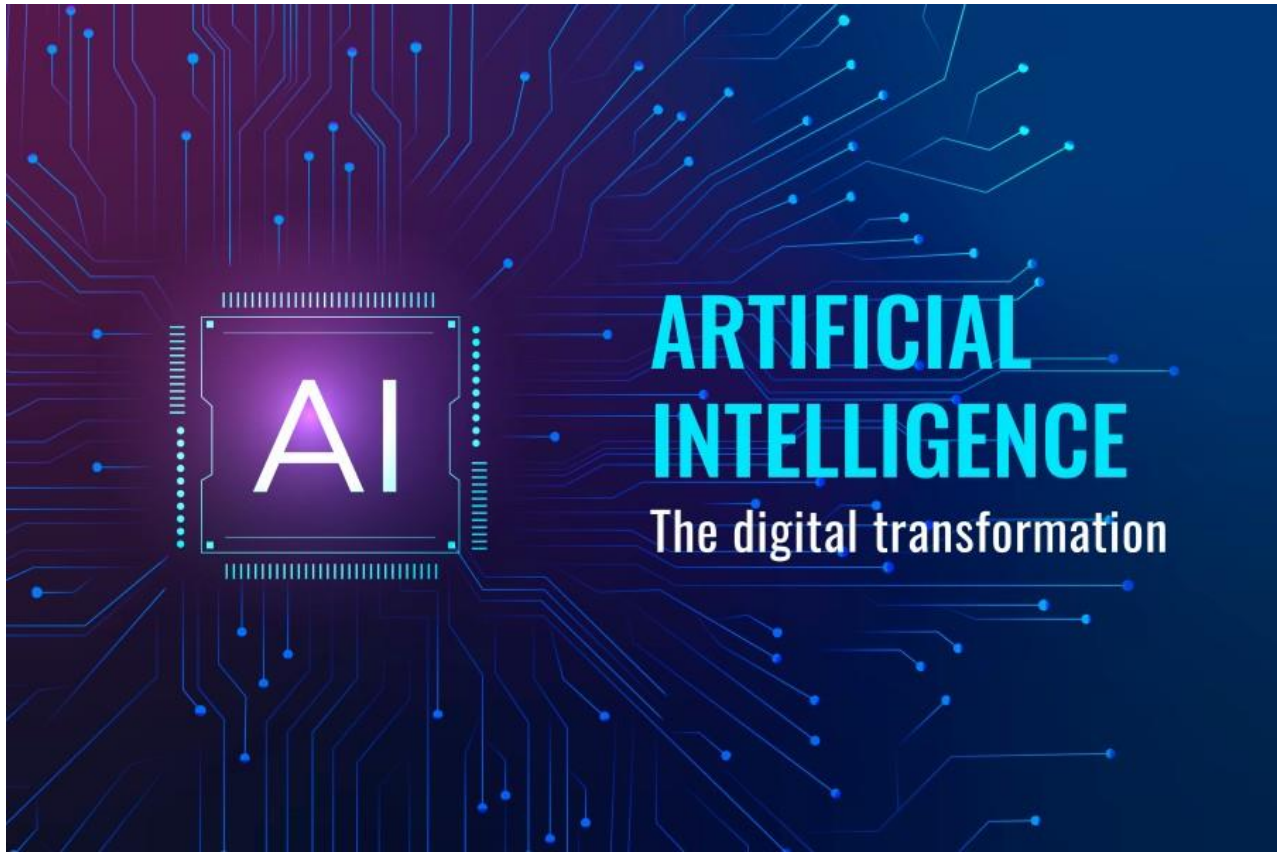
AI – Artificial intelligence



- **(AI)** refers to the development of computer systems and algorithms that can perform tasks that typically require **human intelligence**

- Techniques & approaches aimed at enabling machines to:

Understand, **R**eason, **L**earn, and **M**ake **D**ecisions

SDMX - Statistical Data and Metadata Exchange

- International initiative
- Standard for exchanging and sharing statistical data and metadata between organizations
- Standardizing and modernizing (“industrializing”) the mechanisms and processes

Initiative made up of 7 international organizations

The world bank, European central bank, United Nations, Organization for Economic Corporation and Development, Euro Stat, International Monetary Fund and Bank for international settlements

EUROPEAN CENTRAL BANK

BANK FOR INTERNATIONAL SETTLEMENTS

The benefits of SDMX

Improve **data quality**

Improve **data accuracy**

Reduce duplication and **increase efficiency**

Facilitate **international comparisons**

Reduce the **cost**

Importance of SDMX

By standardizing data **SDMX** can help **to** ensure that:

- Data is **accurate**
- Date is **consistent**
- Data is **comparable**

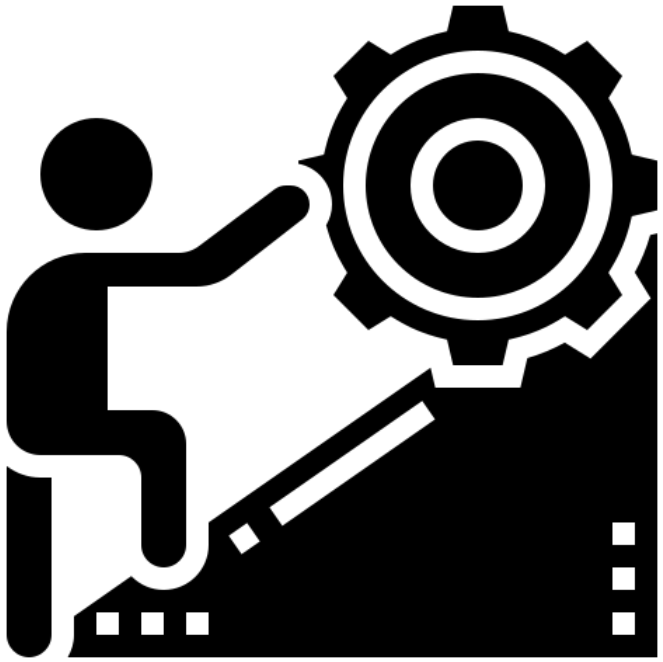
Reliable data is **crucial** for **making informed decisions**

SDMX can help organizations to **avoid duplicating efforts** and **free up resources** for **more important tasks**

Challenges of SDMX

Accessibility

Complexity



Collecting and processing data

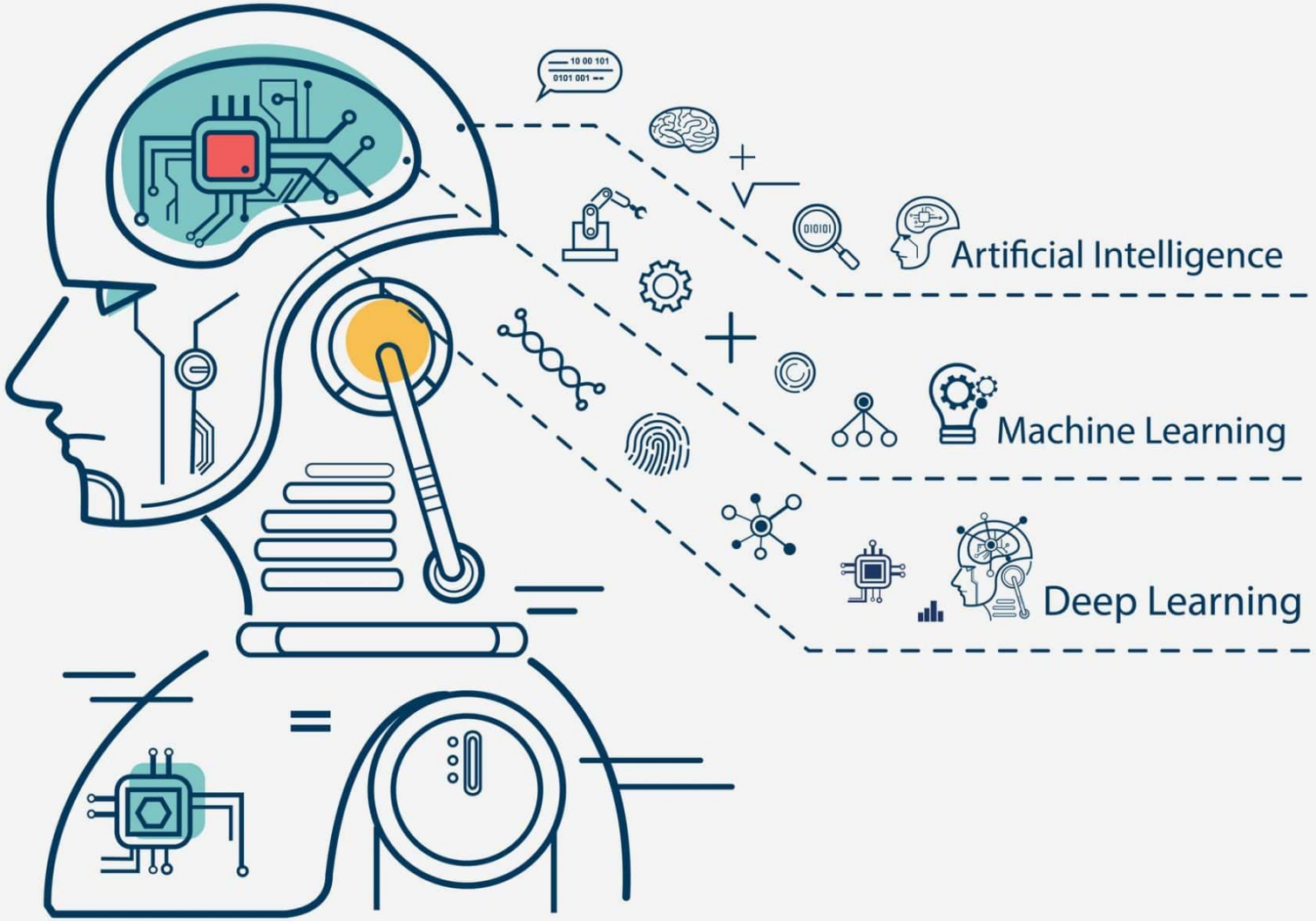
Ensuring accuracy & completeness of data

SDMX & AI

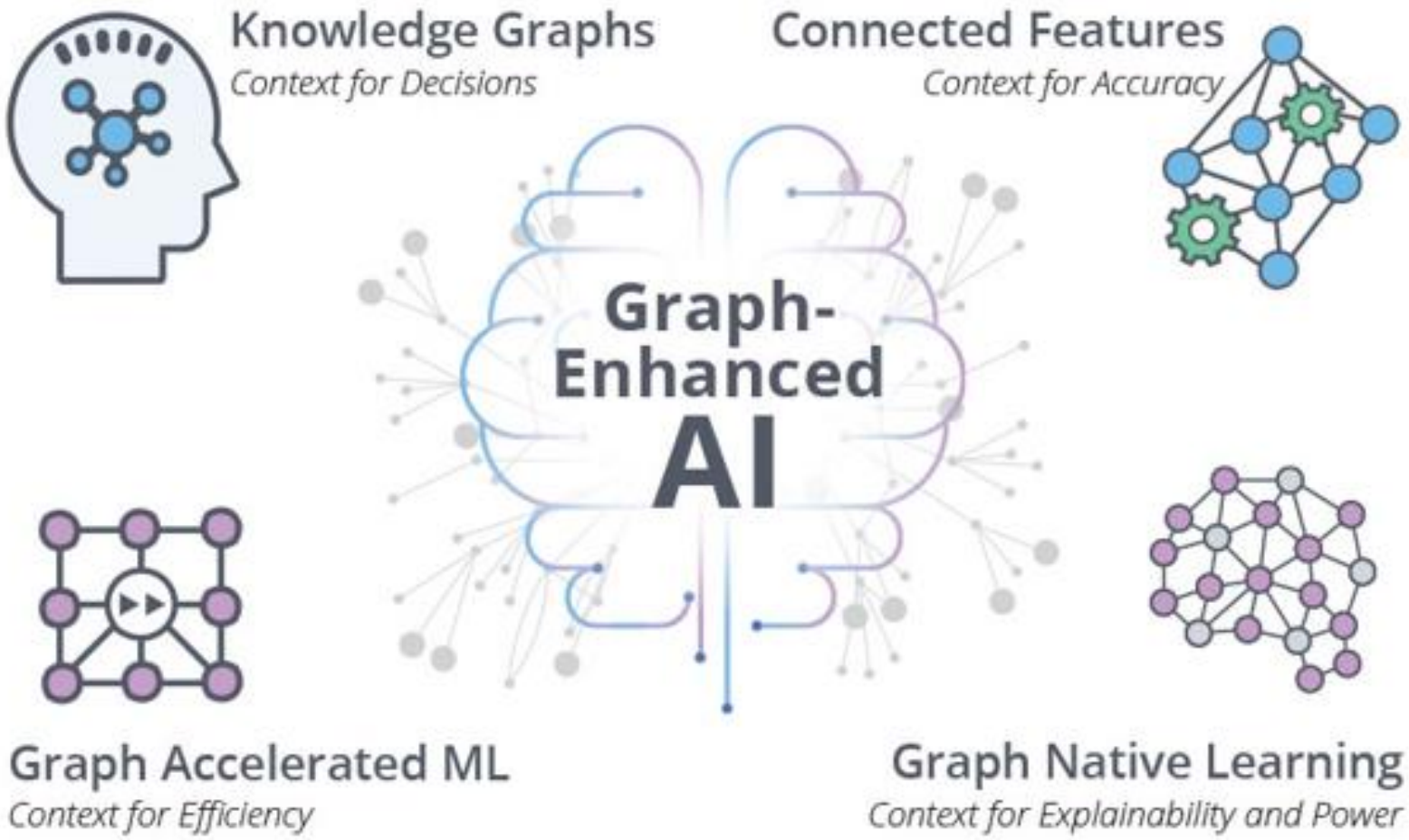
Using **AI** in **SDMX can help** in:

- Transform the way of **data collection, processing, and analysis**
- Improve the **accuracy** and **efficiency** of data processing
- **Data cleaning** and **visualization**
- **Free up resources** for other important tasks
- Improve **forecasting accuracy**
- Making data **more engaging and understandable**

Advanced Techniques used in SDMX



AI graph enhancement for SDMX



Knowledge Graph Benefits

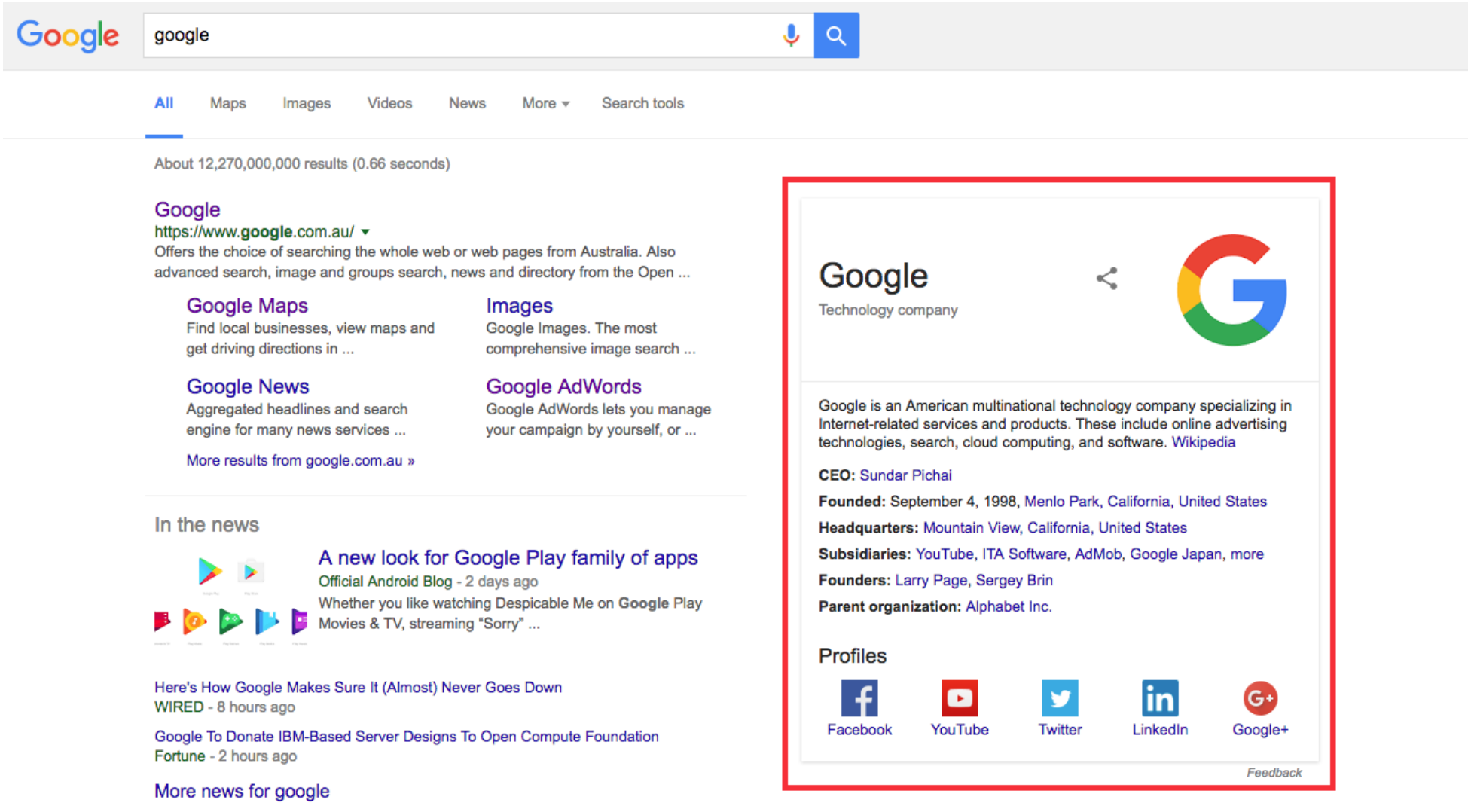
Improved **data discovery** and **understanding**

Enhanced **data analysis** and **visualization**

Increased **data interoperability**

Improved **data quality**

Examples of Successful Knowledge Graph Applications



Examples of Successful Knowledge Graph Applications

English | Not logged in | Talk | Contributions | Create account | Log in

WIKIDATA

Item | Discussion | Read | View history | Search Wikidata

University of Bahrain (Q1707779)

public university in the Kingdom of Bahrain

Bahrain University | UoB | Ǧāmaʿat al-Baḥrayn

edit

In more languages

Configure

Language	Label	Description	Also known as
English	University of Bahrain	public university in the Kingdom of Bahrain	Bahrain University UoB Ǧāmaʿat al-Baḥrayn
Arabic	جامعة البحرين	No description defined	جامعه البحرين
Malayalam	No label defined	No description defined	

All entered languages

Main page
Community portal
Project chat
Create a new Item
Recent changes
Random Item
Query Service
Nearby
Help
Donate

Lexicographical data
Create a new Lexeme
Recent changes
Random Lexeme

Tools
What links here
Related changes
Special pages

Statements

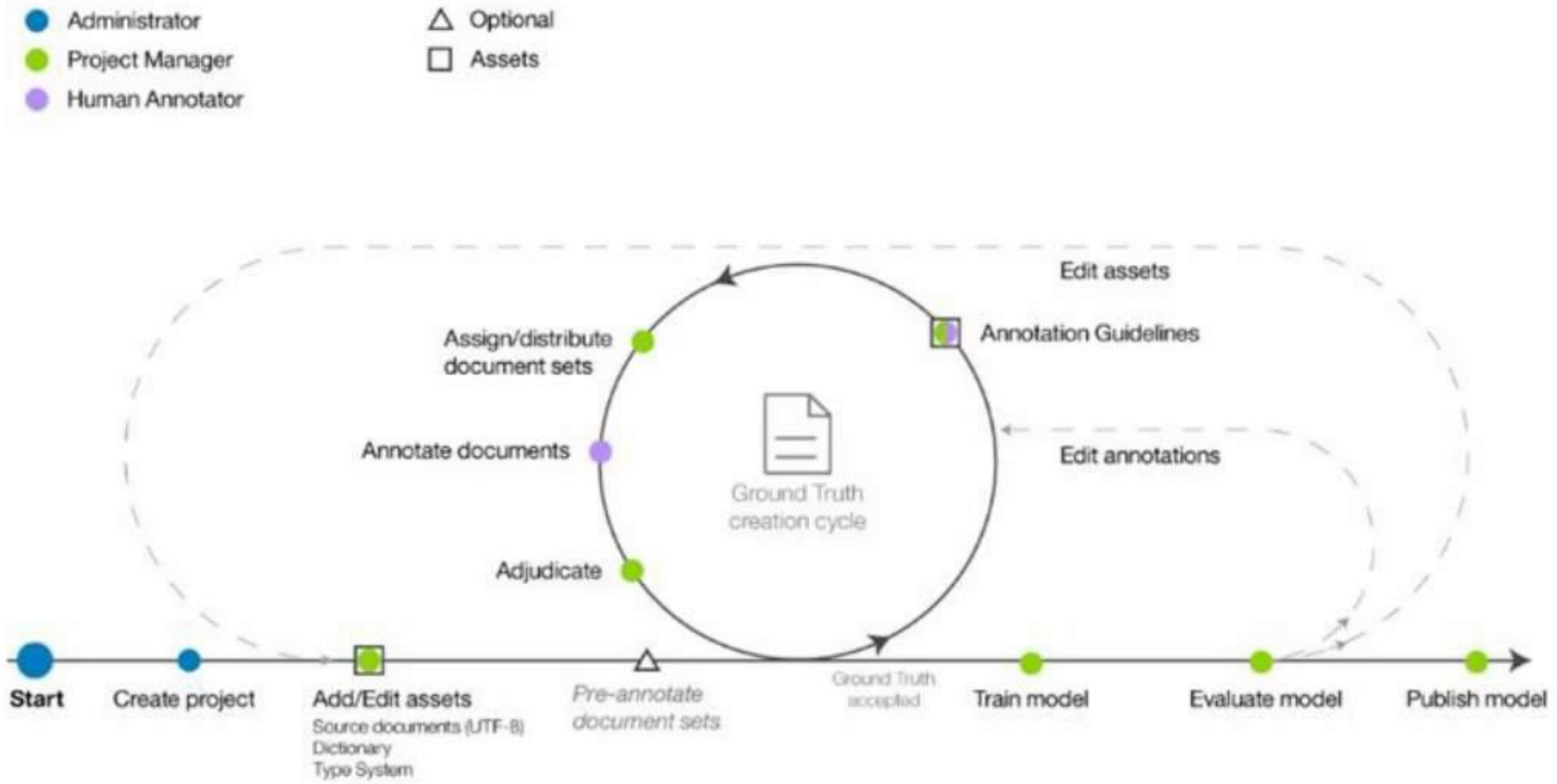
instance of	public university	edit

Examples of Successful Knowledge Graph Applications

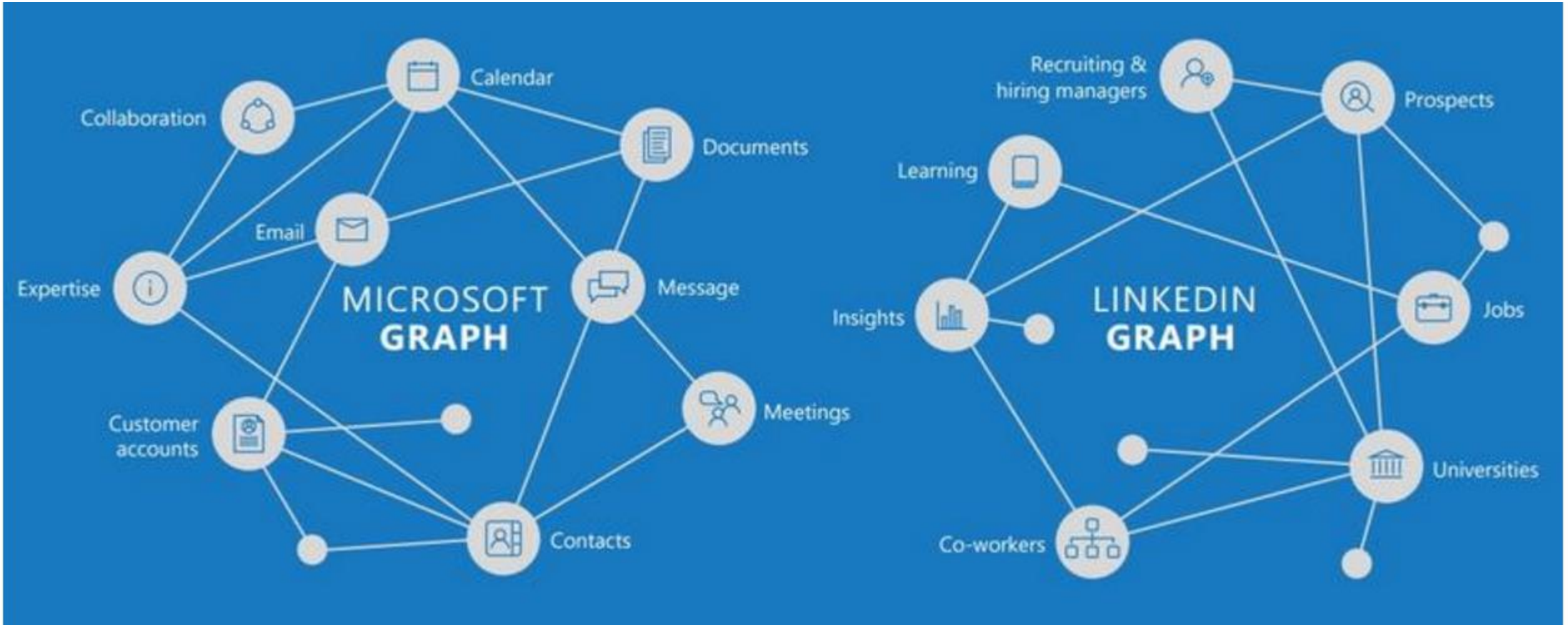
IBM Watson

IBM

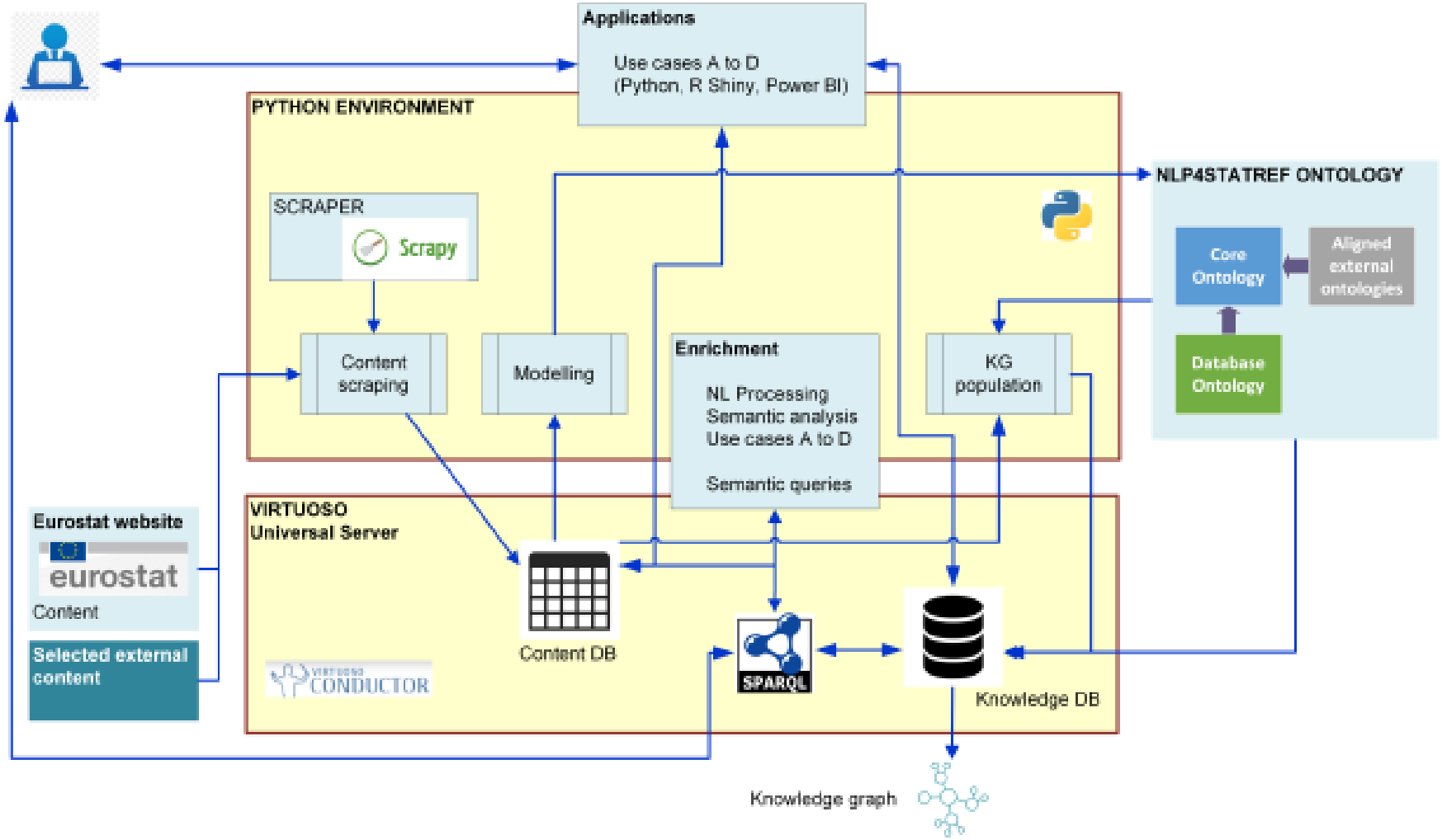
Creating an Annotator – An Iterative & Multi-stage Process



Examples of Successful Knowledge Graph Applications



Building AI Eurostat Knowledge Graph



Thank you

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