# APPLICATION OF MODDALS FOR GLOBAL ONTOLOGY GENERATION IN INDUSTRY 4.0

APPLICATION OF MODDALS TO DEVELOP I4GO

MODDALS methodology was applied to design the structure of I4GO ontology.

1. Ontologies of legacy applications developed in the I4.0 context were taken as input.
2. MODDALS steps were applied to analyse and classify ontology knowledge.

The output is the **knowledge from existing ontologies classified into different abstraction layers**.
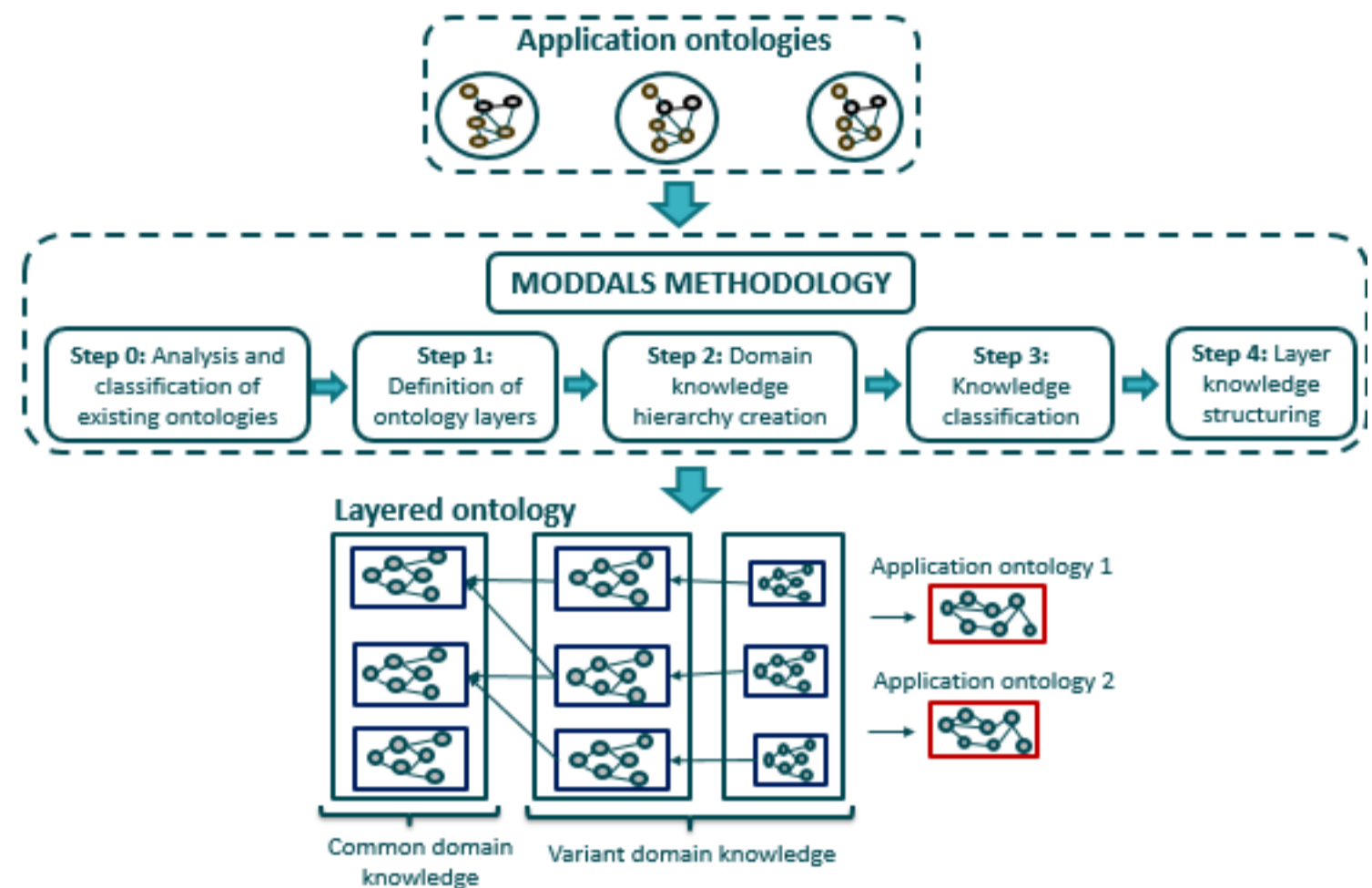
I4GO ONTOLOGY KNOWLEDGE AND STRUCTURE

The I40GO ontology represents the following data domains:

- **System domain:** data about physical or abstract systems, mainly devices.
- **Manufacturing domain:** data about the actors involved in manufacturing processes in Industry 4.0.

The knowledge is classified into **modules** and **layers**. I40GO also includes **mappings** between legacy ontologies to enable interoperability between legacy applications.
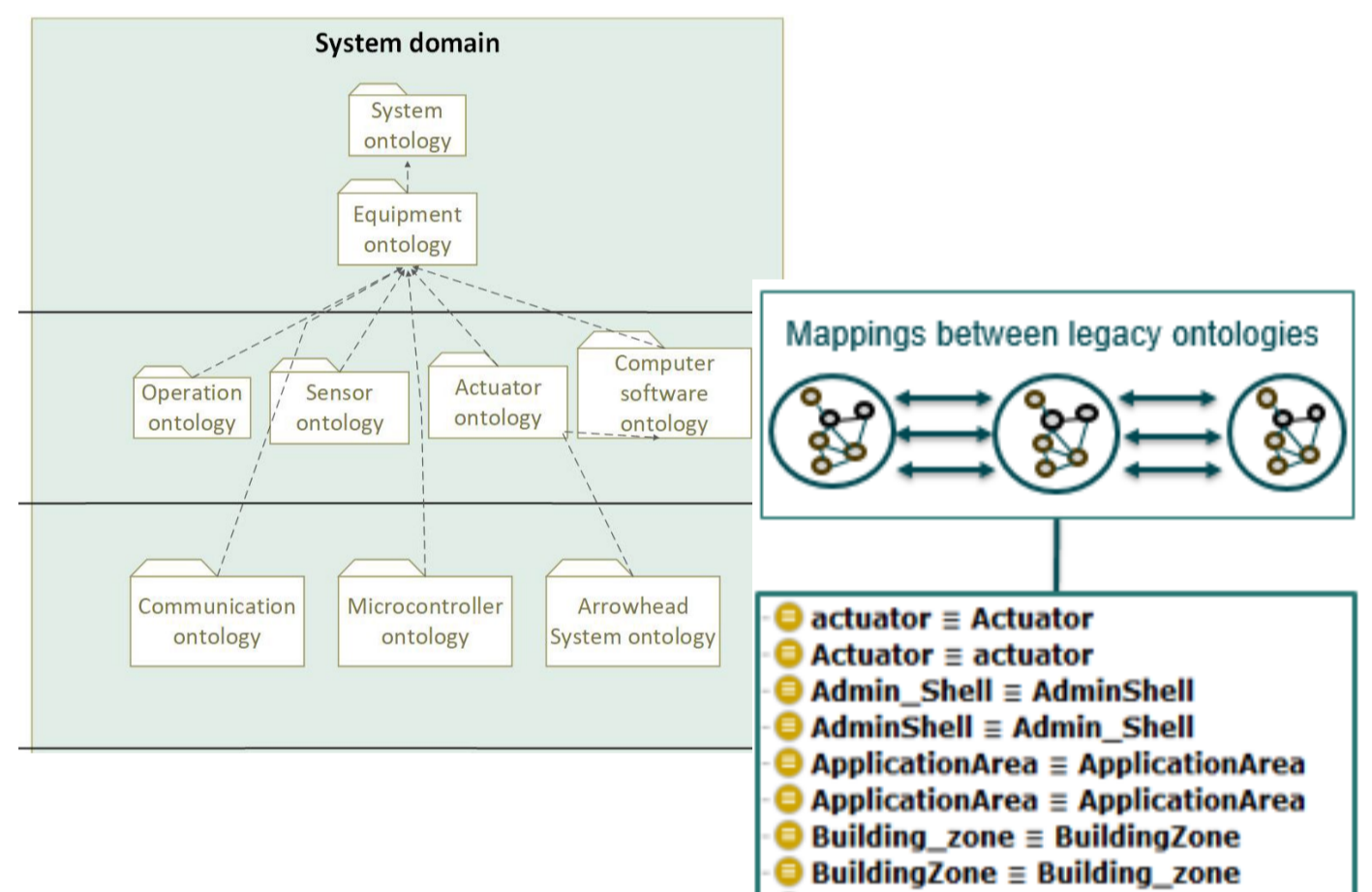
**IG40 ontology access:**

MOODALS documentation:

I4GO USAGE IN THE INDUSTRY 4.0

The modules of I4GO ontology can be **reused** and **customized** to develop ontologies for **different applications** in the I4.0 context:

- Manufacturing automation
- Manufacturing monitoring
- Distributed manufacturing
- Production scheduling
- …

It will enable the development of **interoperable I4.0** applications that share **common vocabularies**. In addition, the applications will be interoperable with legacy applications that rely on already developed ontologies.
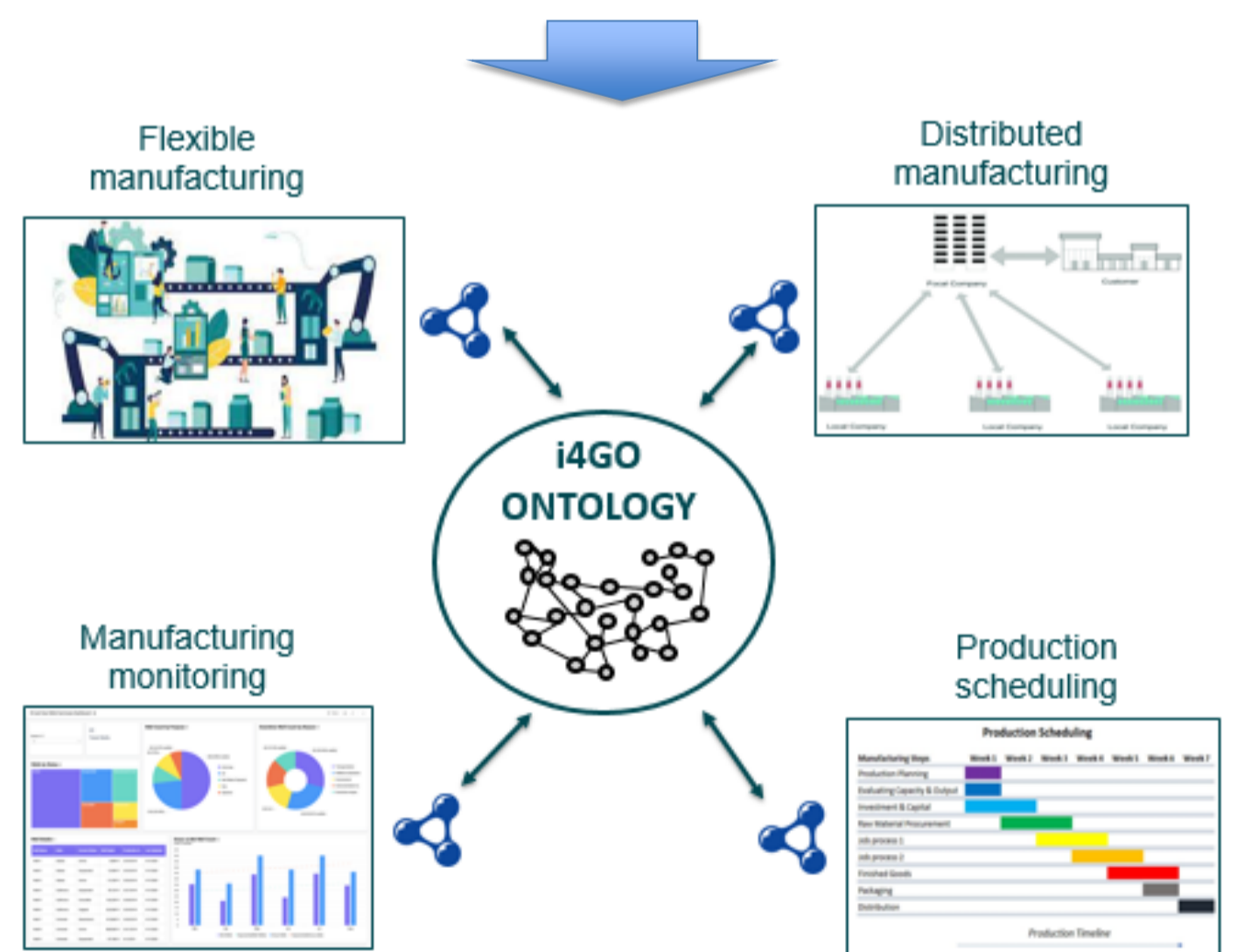
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