

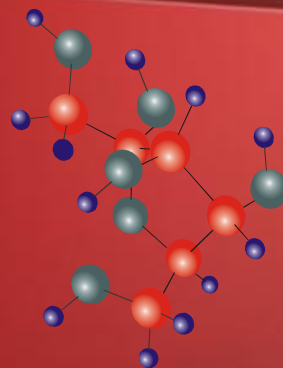
# ONTOLOGY BUILDING METHODOLOGY

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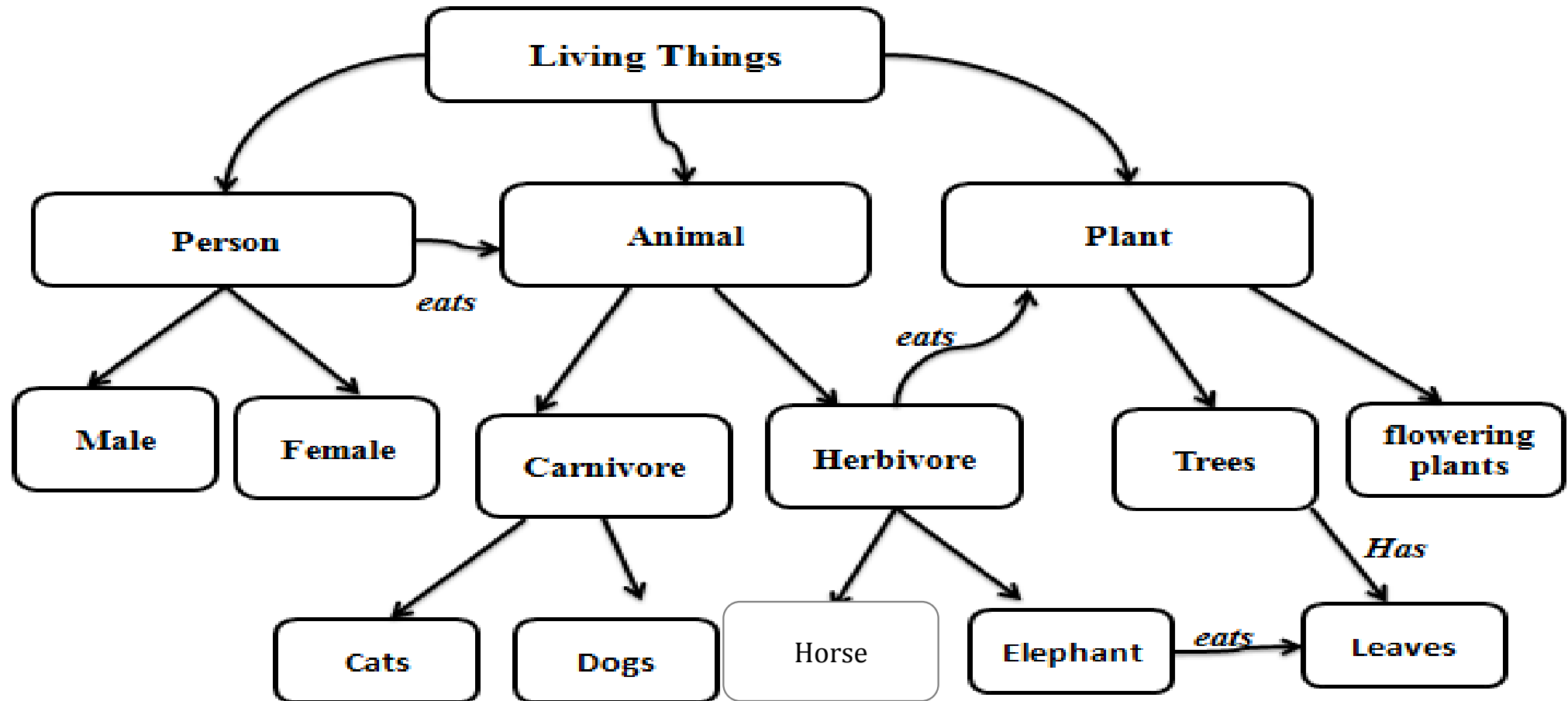
# PLAN

- **Ontology Definition**
- **Ontology Motivation**
- **Ontology Classification**
- **Ontology Building Challenges**
- **Enterprise Ontology REA**
- **Proposed Methodology for Ontology Building**
- **Comparison between REA and proposed methodology**
- **Conclusion**

# ONTOLOGY DEFINITION

**“Formal explicit of specification of shared conceptualization. Where “formal” means that the ontology should be understandable by the machines and “shared” implies that it is validated by a group or a community”-Tom Gruber**

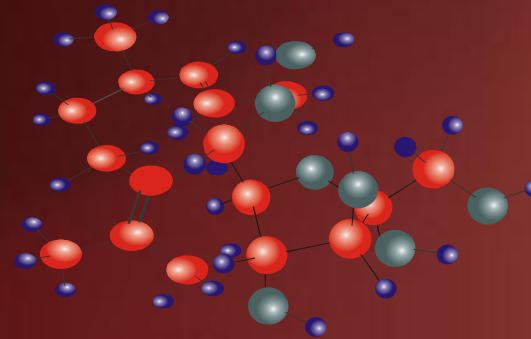
# ONTOLOGY



# MOTIVATION

## Semantic Web

**Content mining by  
adding additional  
information to the  
webpage**



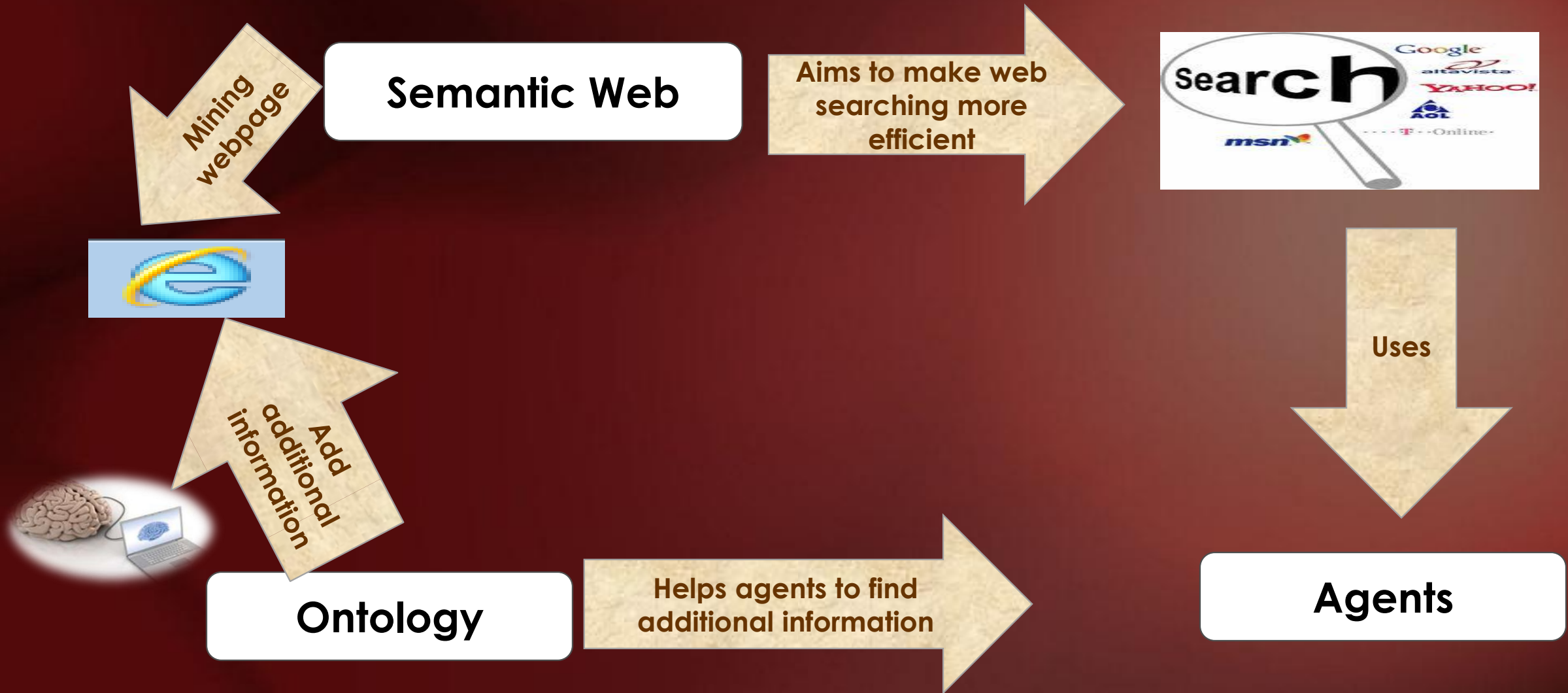
## KBS

**Explicit knowledge  
presentation for a  
domain**

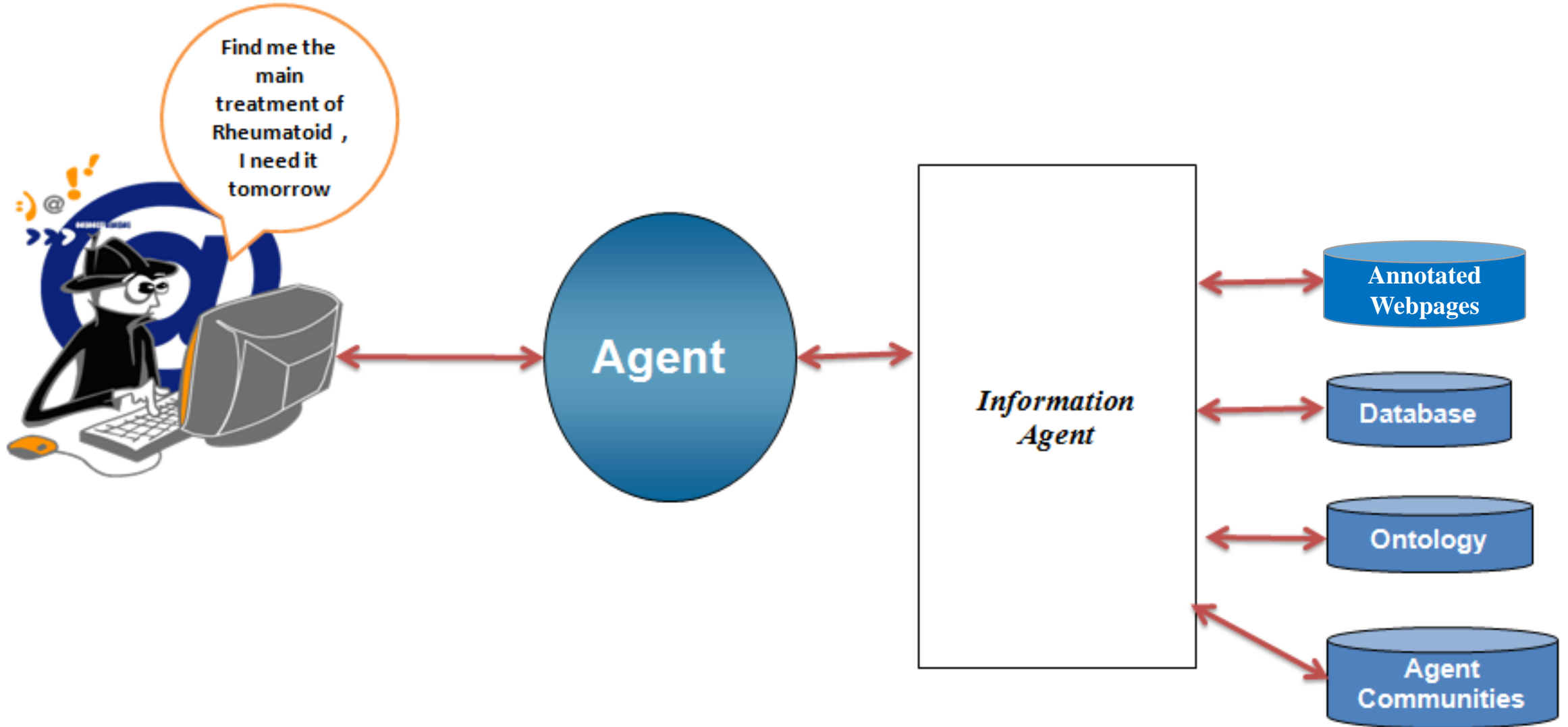
## Agents

**SW program  
perform specific  
tasks for the user  
& pocesses  
intelligence to  
autonomously  
perform its tasks**

# MOTIVATION

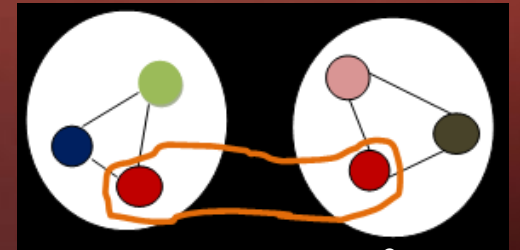
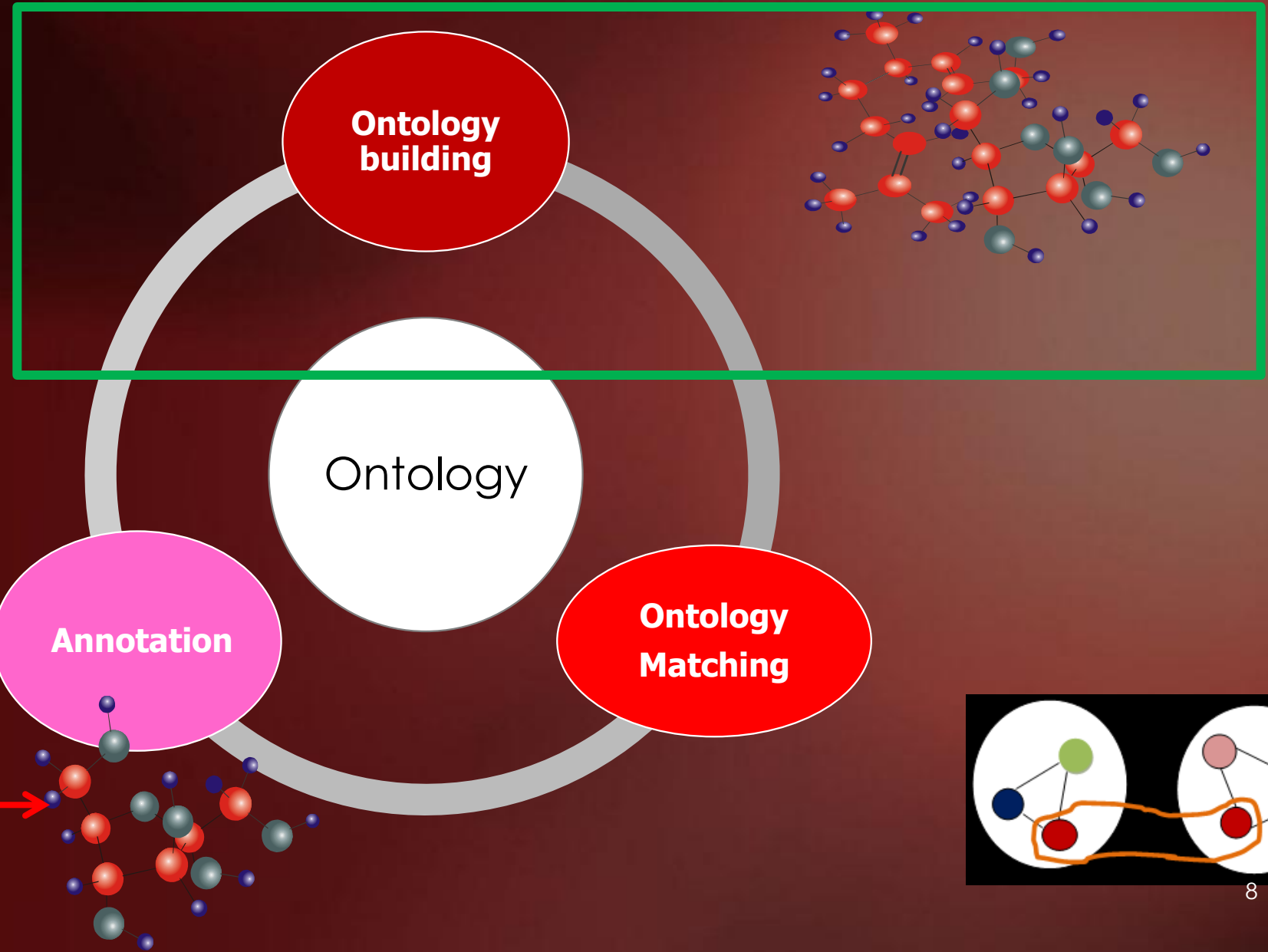


# MOTIVATION





# ONTOLOGY CLASSIFICATION





# ONTOLOGY BUILDING CHALLENGES



Discovering background knowledge

Annotation Tool

Matching Tool

Agent

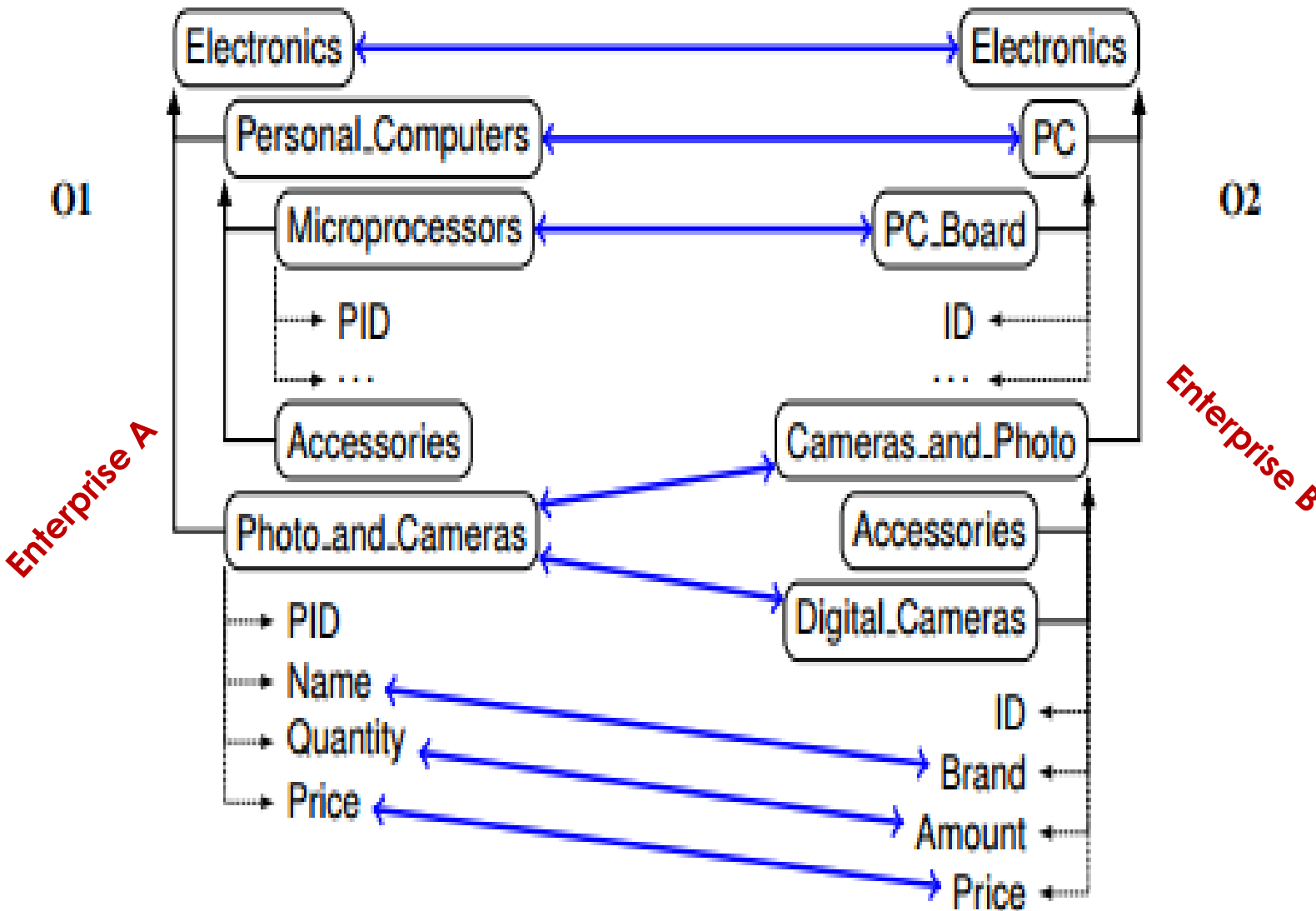
Knowledge base  
system

Using ontology across applications

# **ENTERPRISE ONTOLOGY**

**RESOURCE EVENT AGENT  
(REA)**

# MOTIVATION TO BUILD THE ENTERPRISE ONTOLOGY



- Improve communication, sharing and transactions between an enterprise and an external agent.

# MOTIVATION TO BUILD THE ENTERPRISE ONTOLOGY



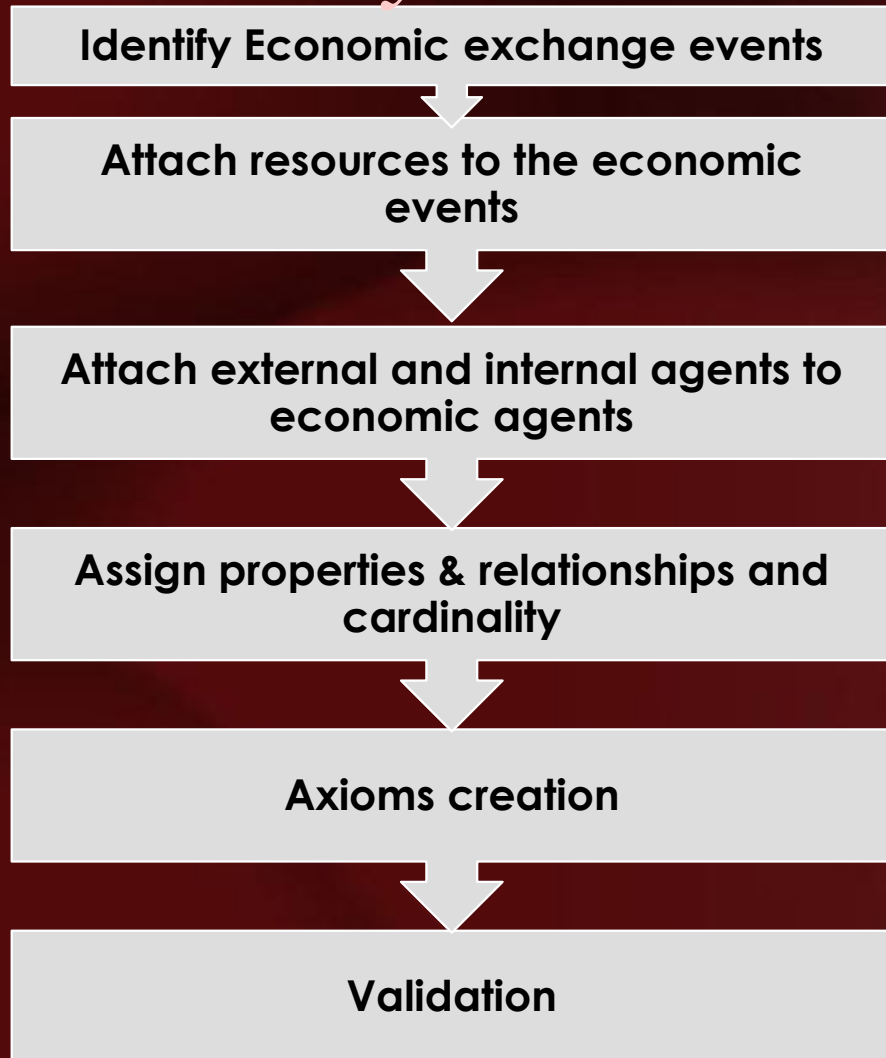
- Improve communication, sharing and knowledge update inside the organization.



- Achieve Interoperability and communication between separate computer systems inside and outside the organization.

# WILLIAM M. CARTHY METHODOLOGY

## *REA ontology William M.Carthy*



*REA is an enterprise ontology which is based on the Business Model.*

*It consists of three core concepts :*

### *1. Resources*

- *Goods*
- *Services*

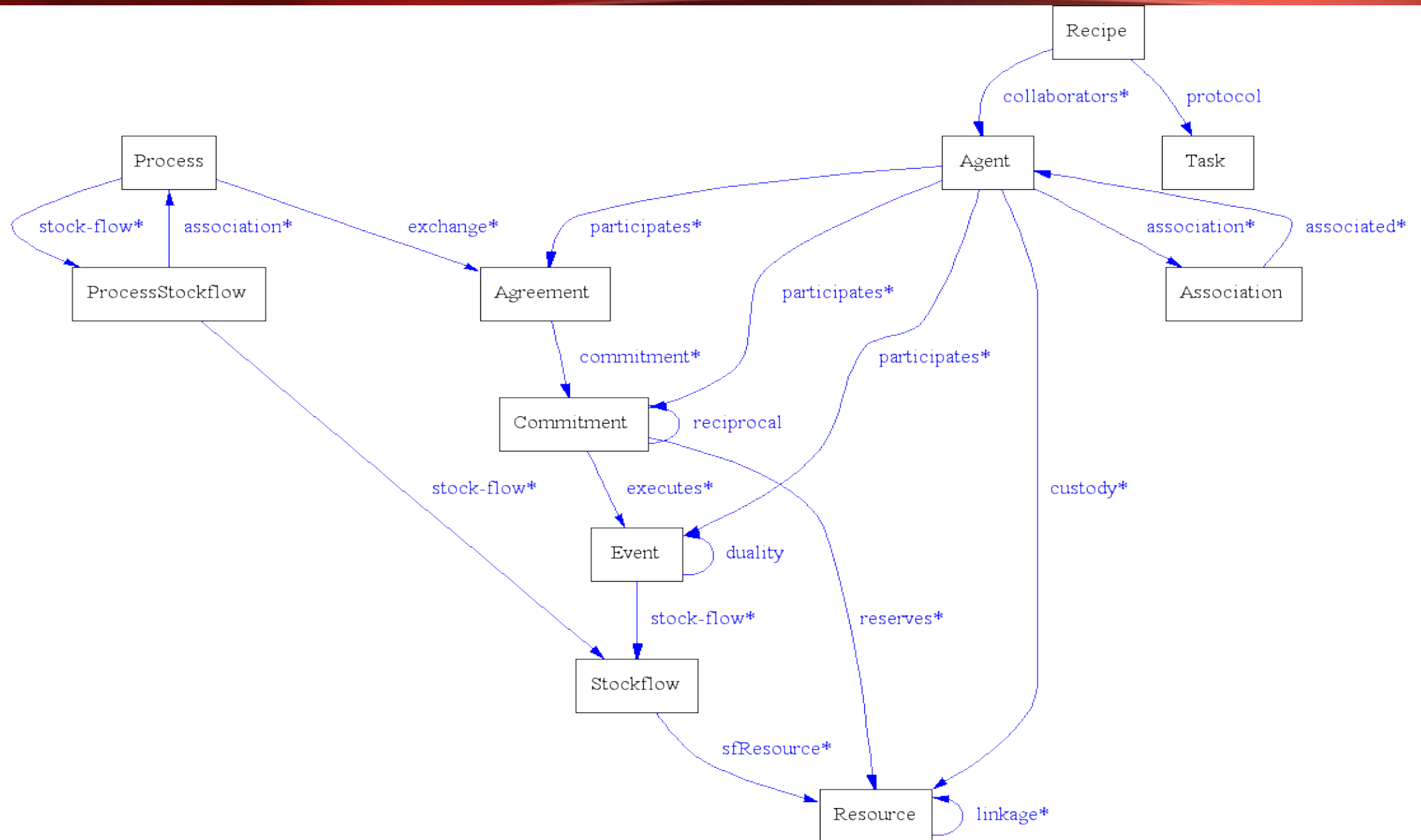
### *2. Events*

- *Production*
- *Exchange*
- *Consumption*

### *3. Agents*

- *Persons*
- *Agencies*

# REA ONTOLOGY

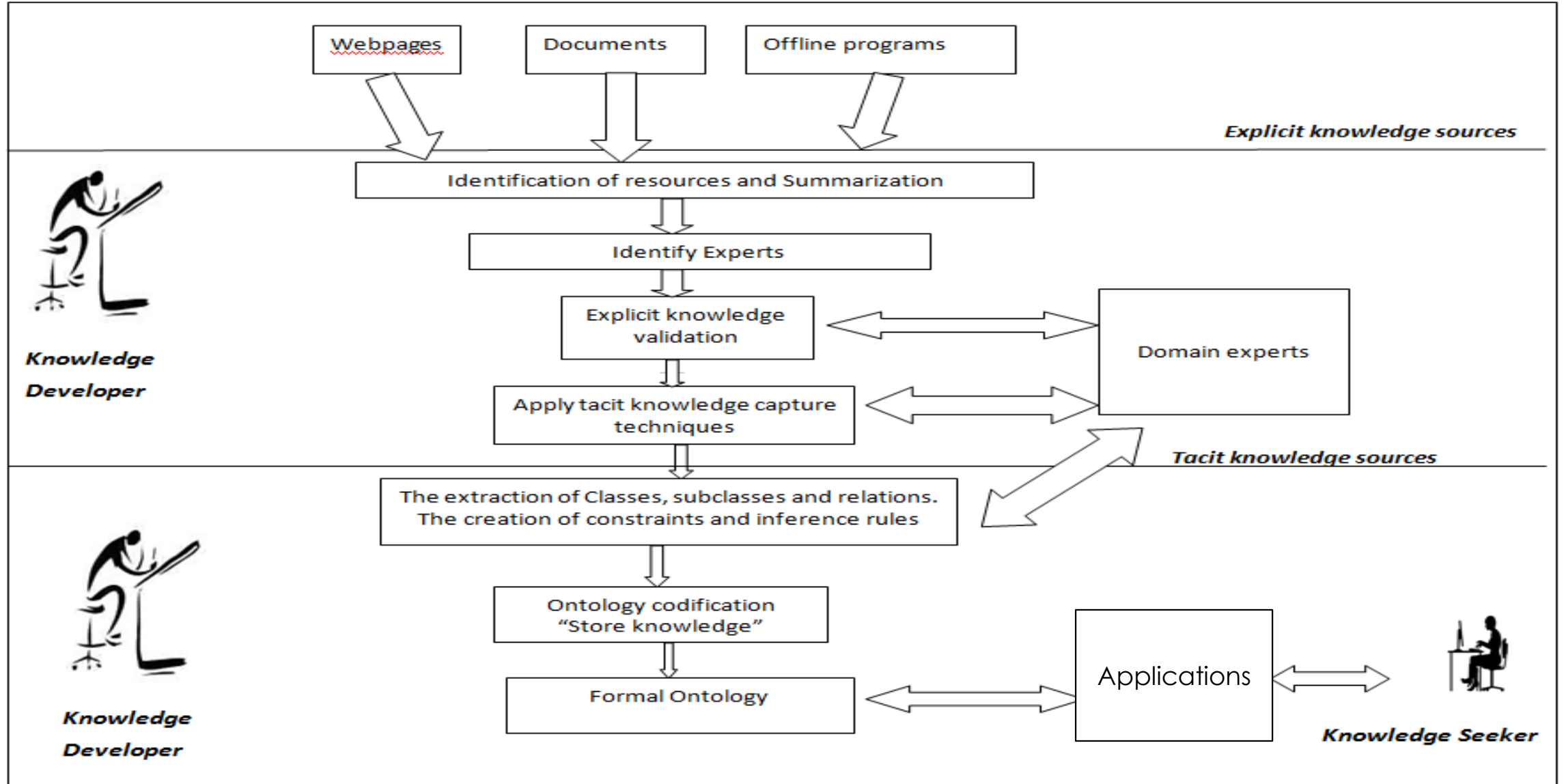


# NEW PROPOSED METHODOLOGY FOR ONTOLOGY BUILDING





# NEW PROPOSED METHODOLOGY FOR ONTOLOGY BUILDING



# COMPARISON BETWEEN METHODOLOGIES

	<b>REA methodology</b>	<b>Proposed methodology</b>
<b>Experts consolidation</b>	The creator is the expert	Implies the intervention of more than one expert
<b>Usability</b>	Is related only to the enterprise ontology	Can be applied with any domain ontology
<b>Inference rules</b>	√	√

# CONCLUSION

- The intervention of explicit and tacit knowledge increases the reliability of ontology which should be validated by a group.
- The proposed methodology is general and can be applied in any domain ontology, whereas the William M. Carthy methodology is very specific for the enterprise ontology.

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