



Semantics Utilised for Process Management
within and between Enterprises



Organization Structure Description for the Needs of Semantic Business Process Management

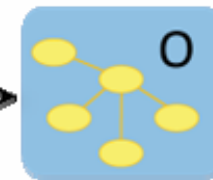
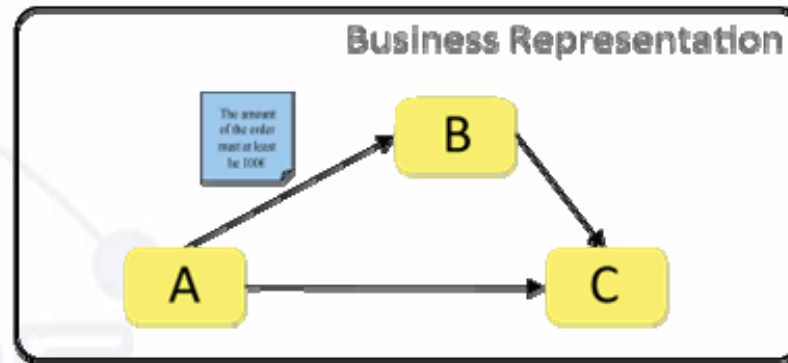
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Filipowska, Monika Kaczmarek,
Carlos Pedrinaci, Monika
Starzecka, and Adam Walczak



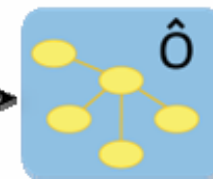
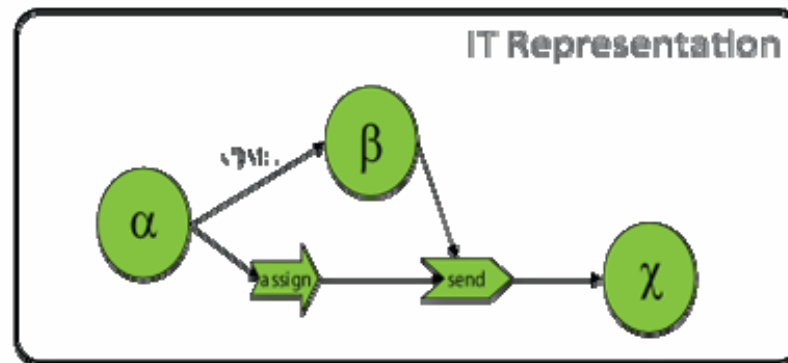
Introduction to SBPM



Here is my business process!



M



Wow! This is perfect – nothing left to do for me!



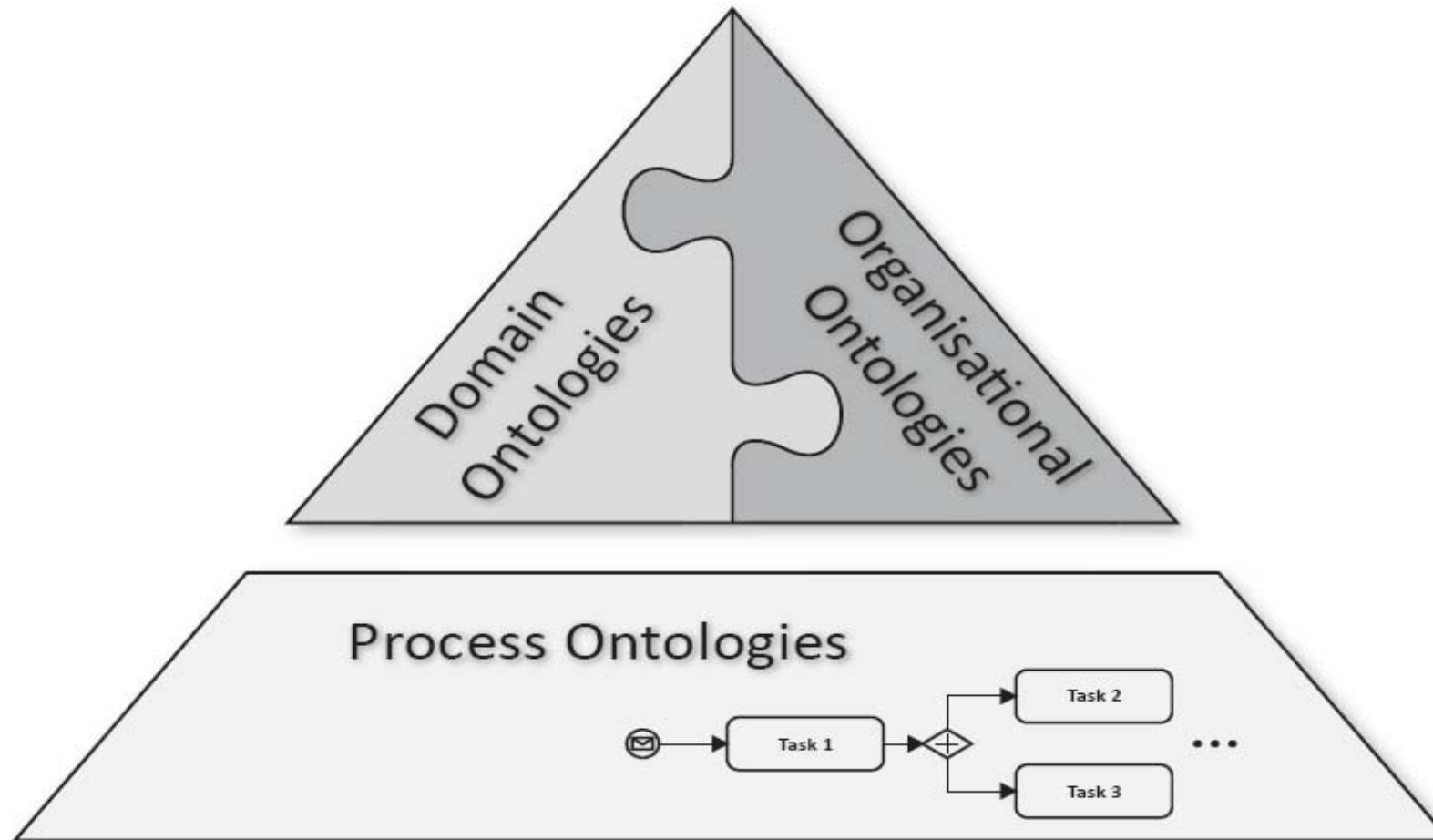
Business Process as Organisational Activity

- Business process - a set of related, ordered activities that contribute to the production of good(s) or the delivery of some service
 - ▶ emphasises how the work is done within an organization and by its organization members

- Organization context
 - ▶ used resources,
 - ▶ strategies,
 - ▶ enterprise structure
 - ▶ roles
 - ▶ functions



Business Process as Organisational Activity



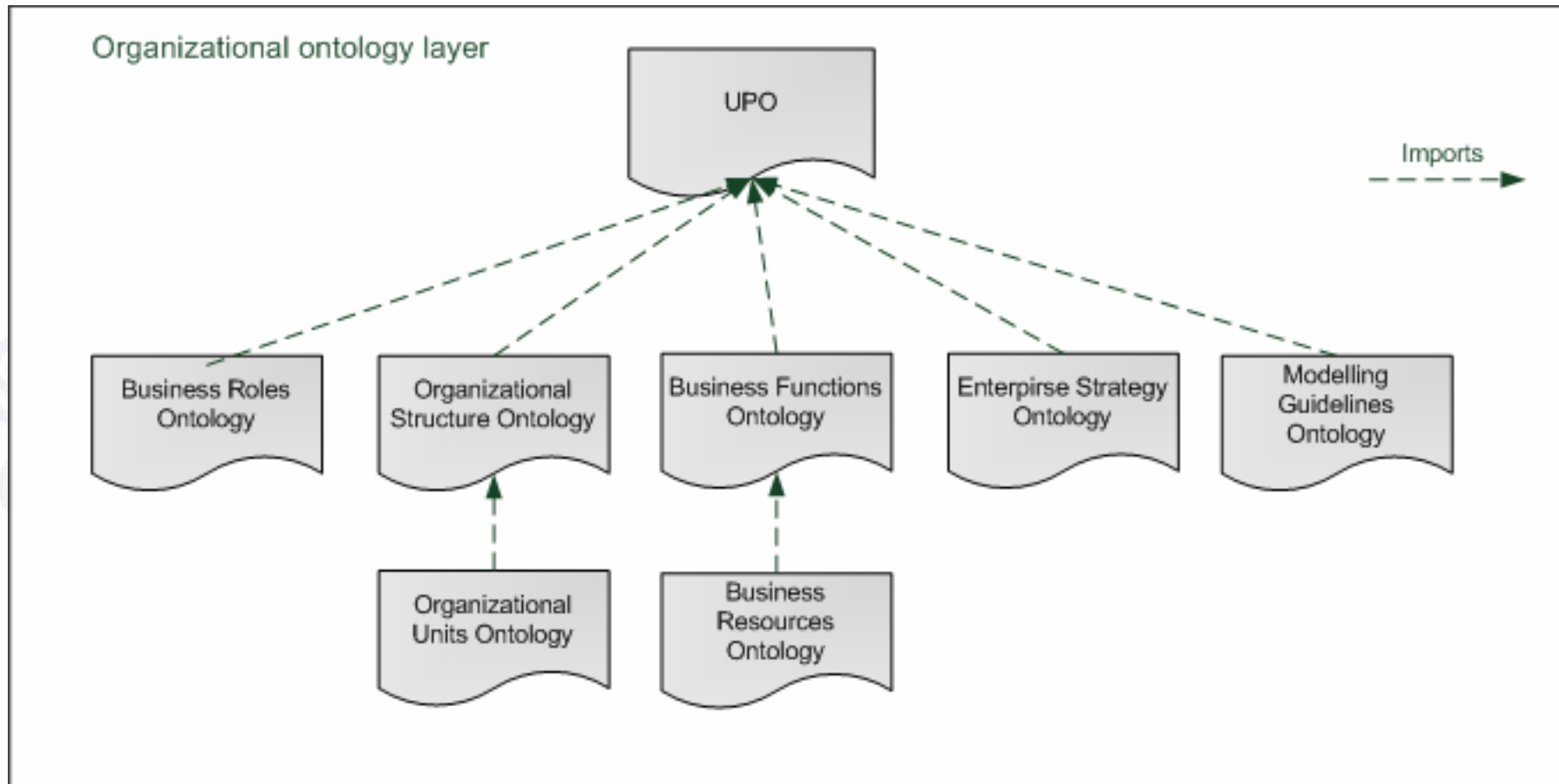


Organisational Ontologies

- **Business Functions**
 - ▶ vocabulary for describing the hierarchy of different functions like, Marketing, Finance, Human Resources
- **Business Roles**
 - ▶ representing roles in the organisation like, Designer, Process Modeller, Manager
- **Organizational Structure and Organisational Units Ontologies**
 - ▶ presenting detailed view on the organisational structure
- **Process Resources**
 - ▶ describing resources (physical or not) that are required for carrying out processes
- **Enterprise Strategy**
 - ▶ strategy, targeted markets, beneficiaries of the company and external aspects that influence the processes carried out in a company
- **Modelling Guidelines**
 - ▶ used to describe policies and rules that should be taken into account during process modelling

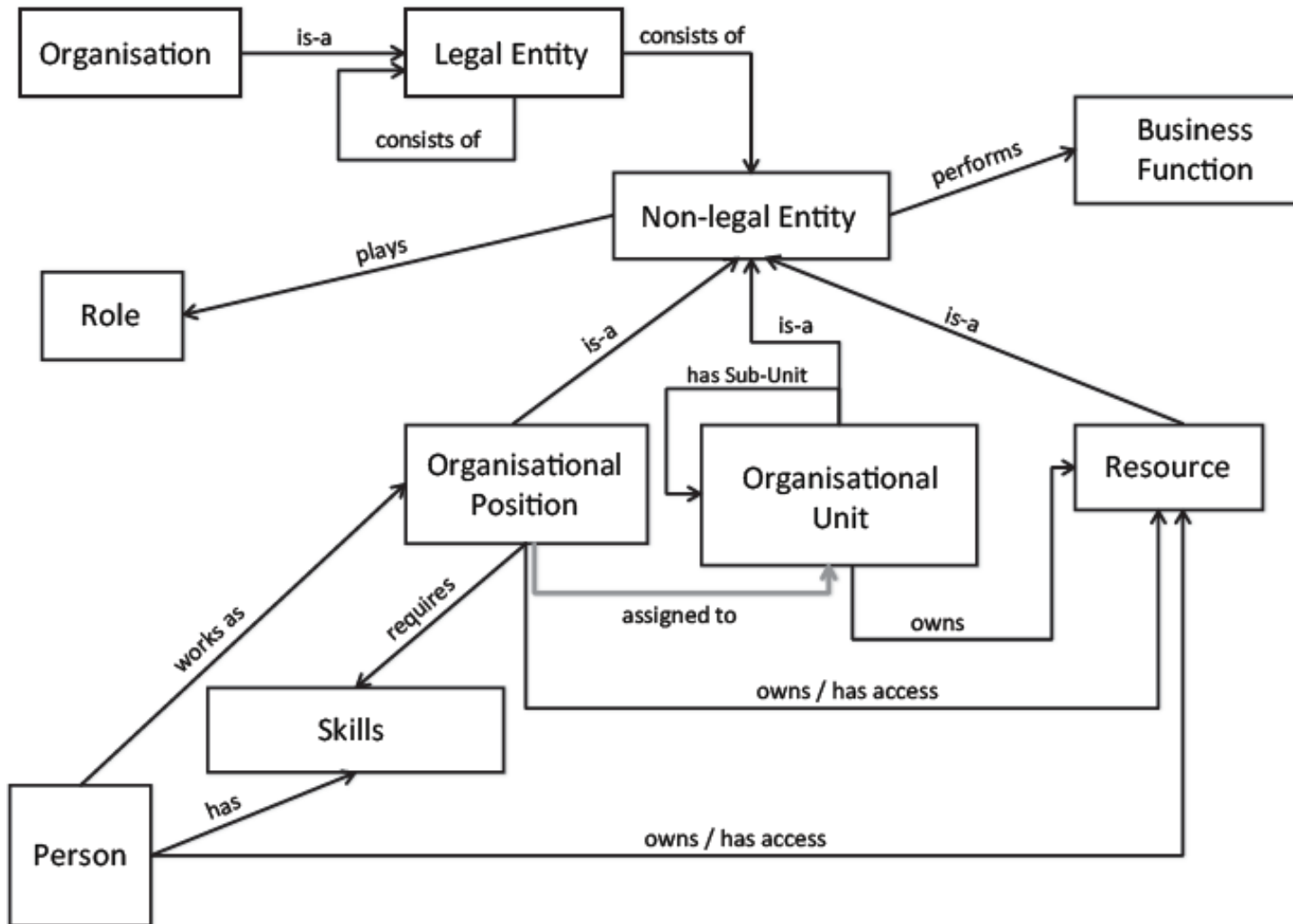


Organisational Ontologies (2)



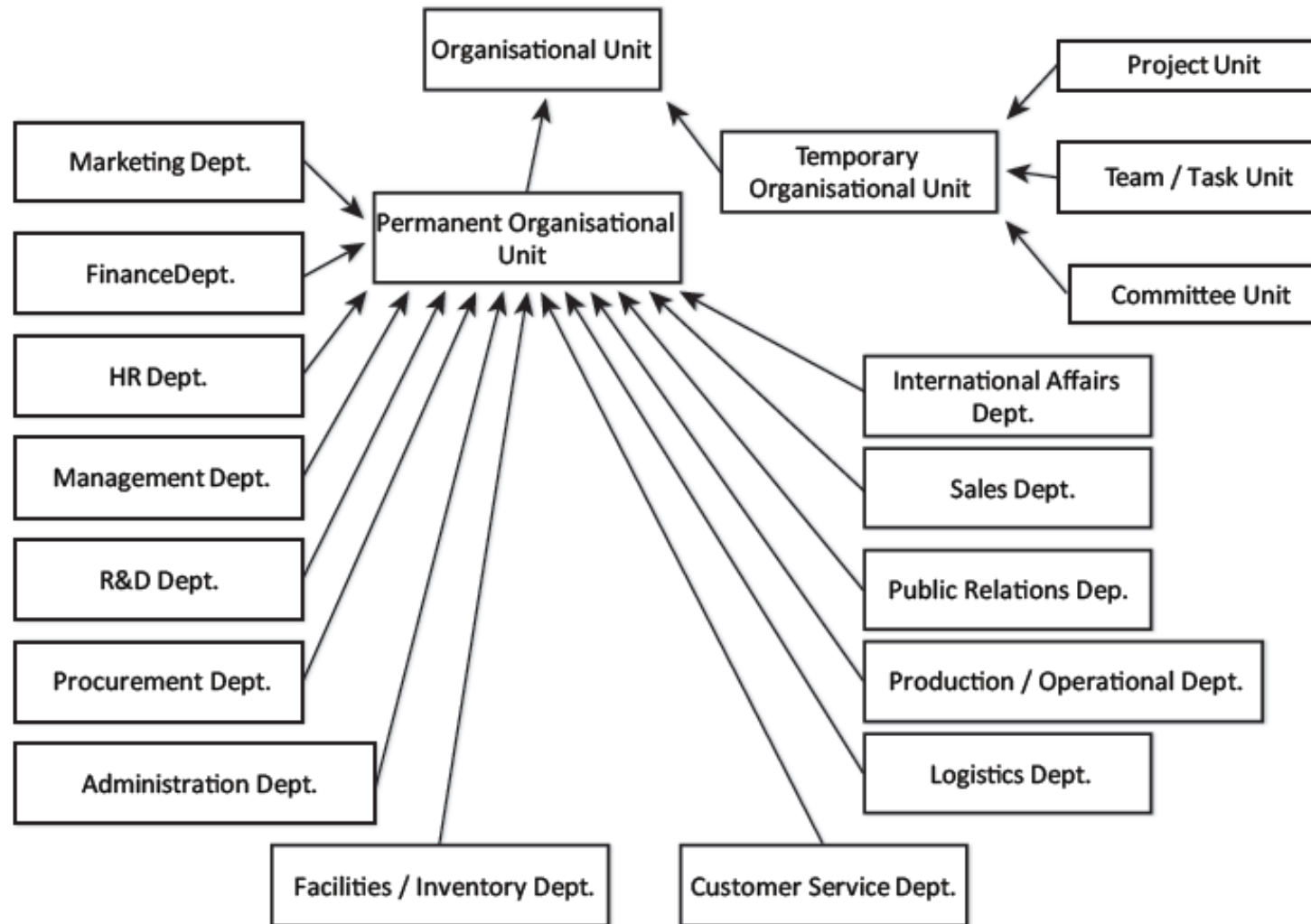


Organisational Structure Ontology



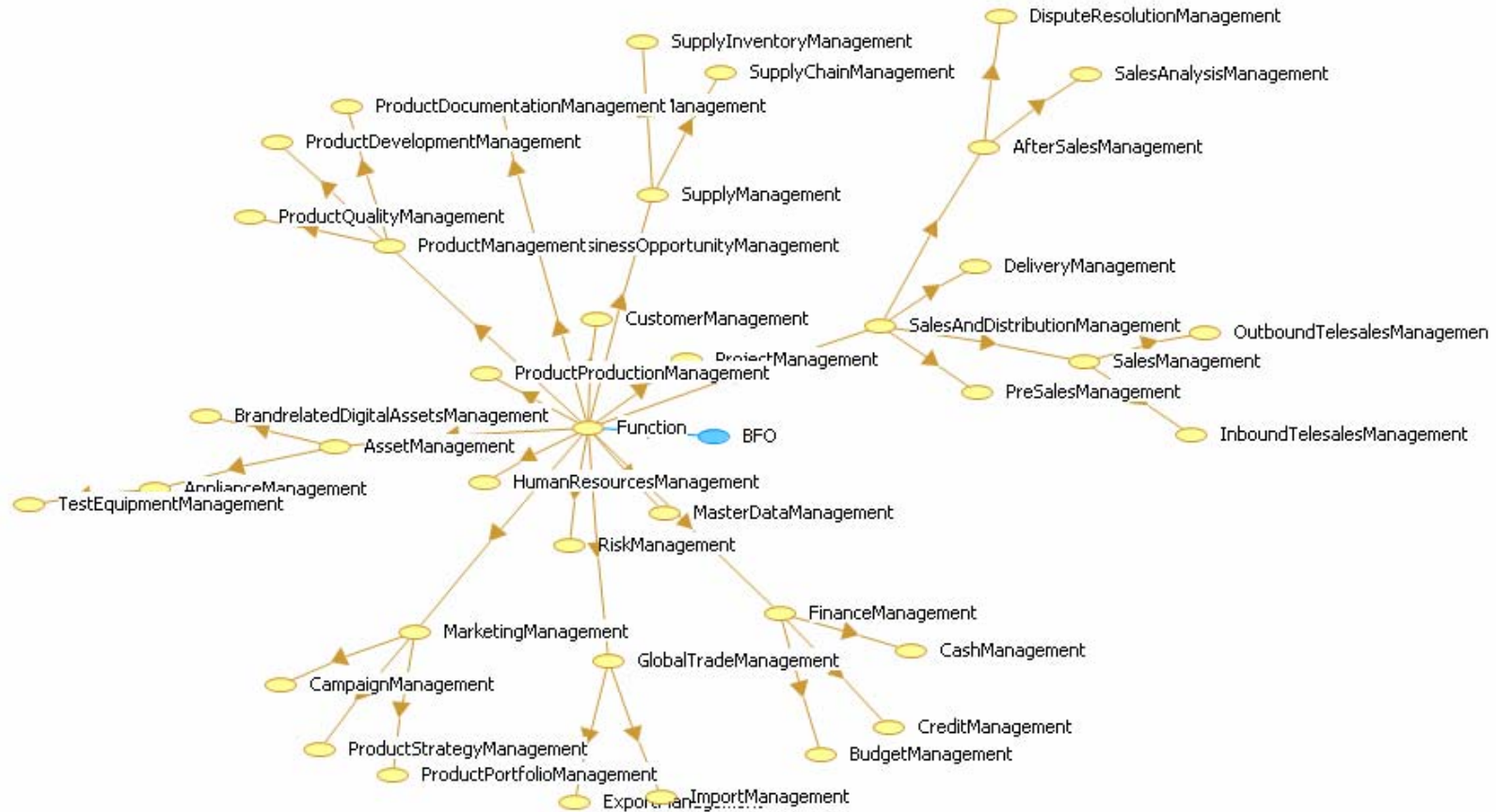


Organisational Units Ontology



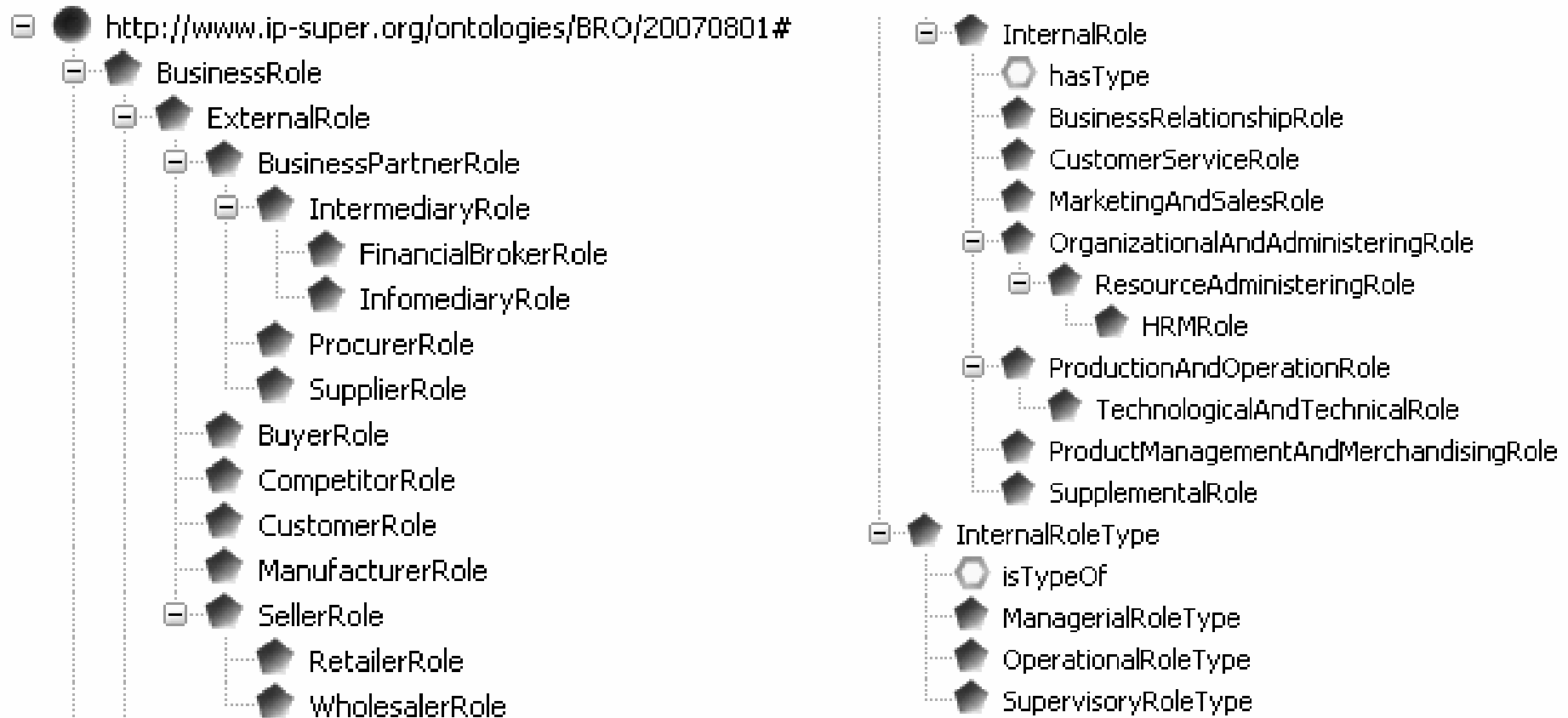


Business Functions Ontology





Business Roles Ontology





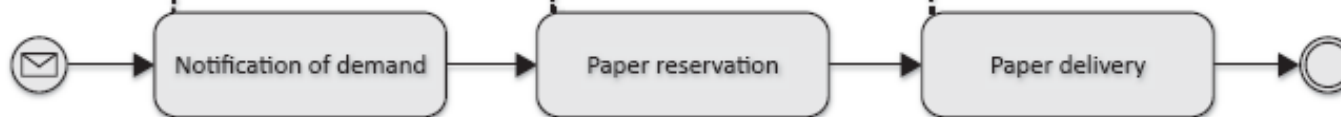
Example

```
instance SupplyDistributingRole memberOf bro#SupplementalRole
instance DeliveryMan memberOf oso#OrganizationalPosition
  playsRole hasValue {SupplyDistributingRole}
  assignedTo hasValue {ouo#LogisticsDepartment}
instance MrC memberOf oso#Person
  worksAs hasValue {DeliveryMan}
```

```
instance NotificationOfDemand memberOf sbpmn#ManualTask
...
hasPerformer hasValue MrsA
...
```

```
instance PaperReservation memberOf sbpmn#ManualTask
...
hasPerformer hasValue MrB
...
```

```
instance PaperDelivery memberOf sbpmn#ManualTask
...
hasPerformer hasValue MrC
...
```





Conclusions and Future Work

- Categorization of process models and fragments
- Clear and informed assignment of roles, tasks, and responsibilities
- Supported by automated processing and reasoning
- New possibilities for querying the process space before or after process execution
 - ▶ who is responsible for what? Who is doing what? what are the roles/functions associated with specific tasks?
 - ▶ which organizational units are responsible for carrying out given functions?
 - ▶ which organizational units are participating in a given process?
 - ▶ which processes will be affected by changes in the organisation?
- Future work will be devoted to
 - ▶ Aligning the ontologies with the foundational ontology in SUPER (UPO)
 - ▶ Integrating the ontologies with the Business Process Analysis layer in SUPER (COBRA, EVO)



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Thanks!