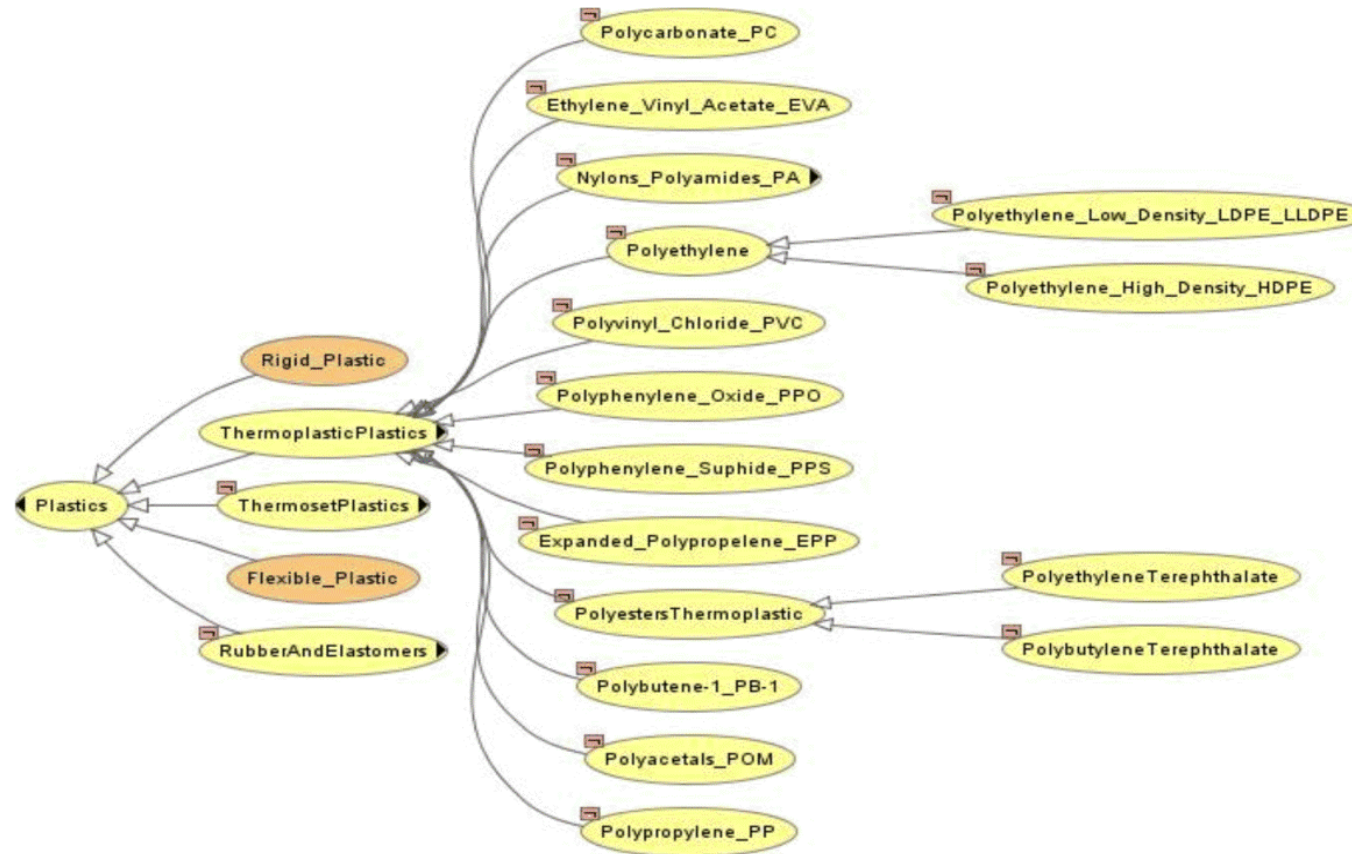


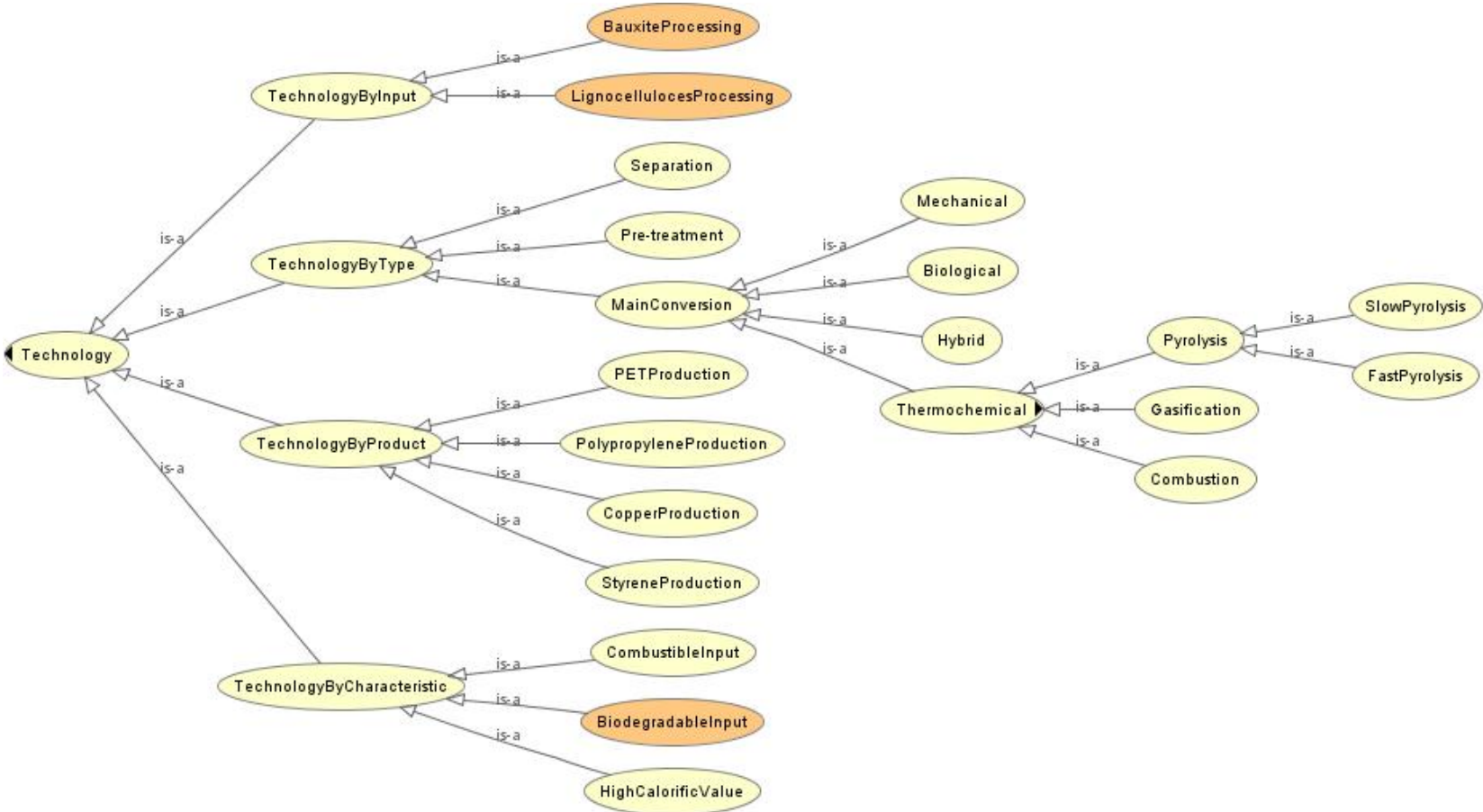
European Materials Modelling Ontology Kick-off Meeting

Nikolaos Trokanas
R&D Consultant

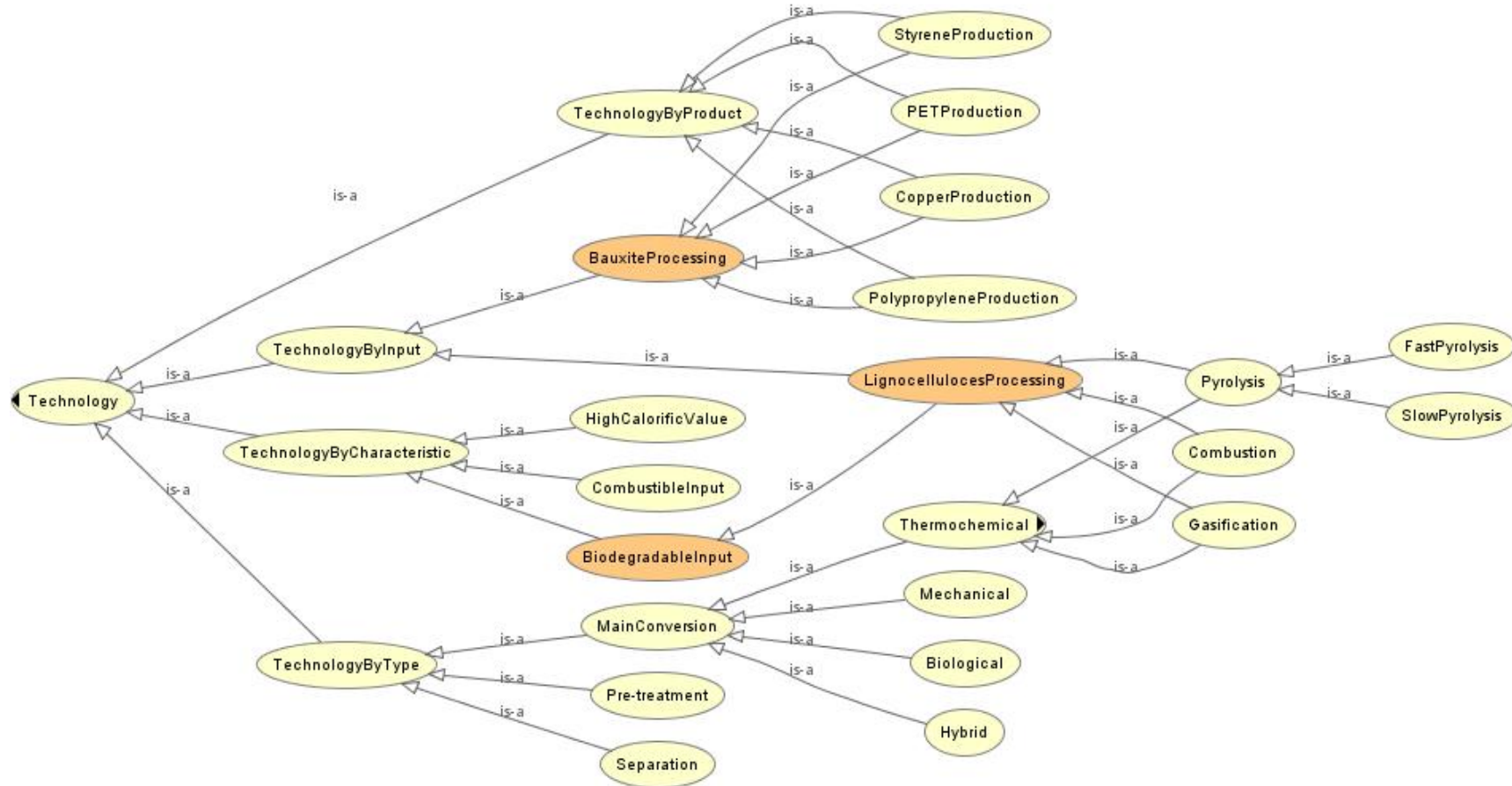
Industrial Symbiosis (Plastic) Materials Ontology



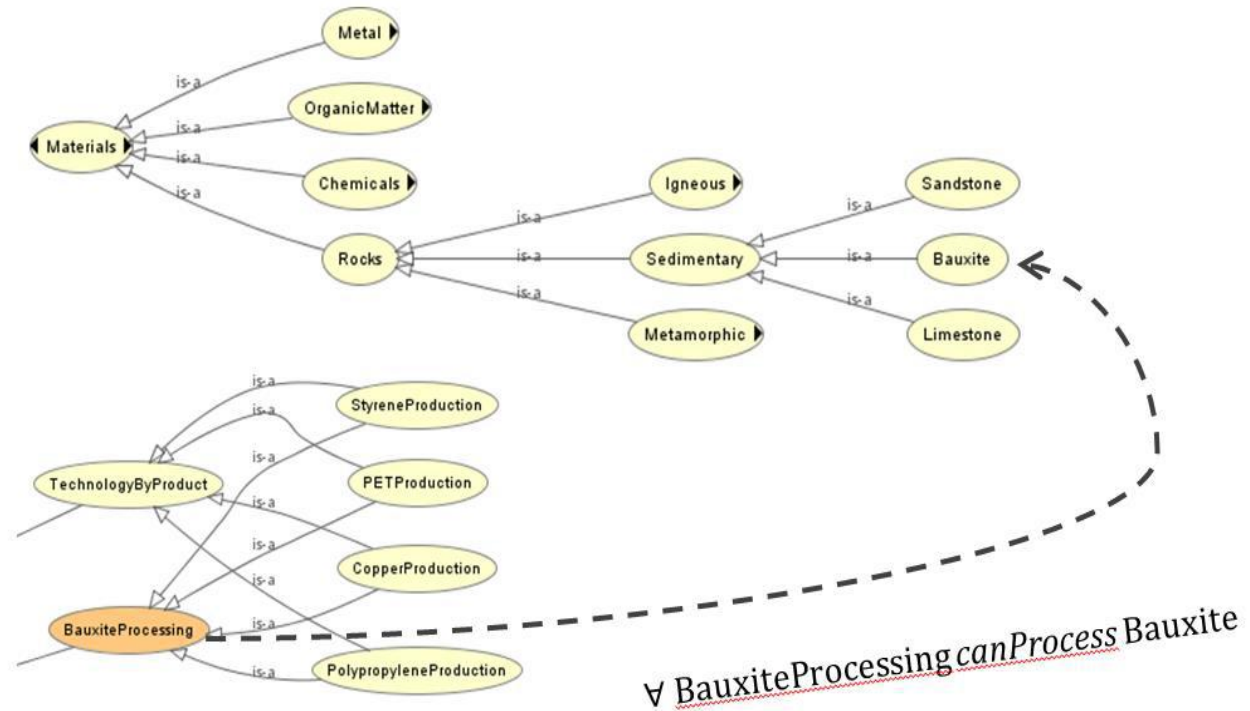
Industrial Symbiosis Processing Technologies



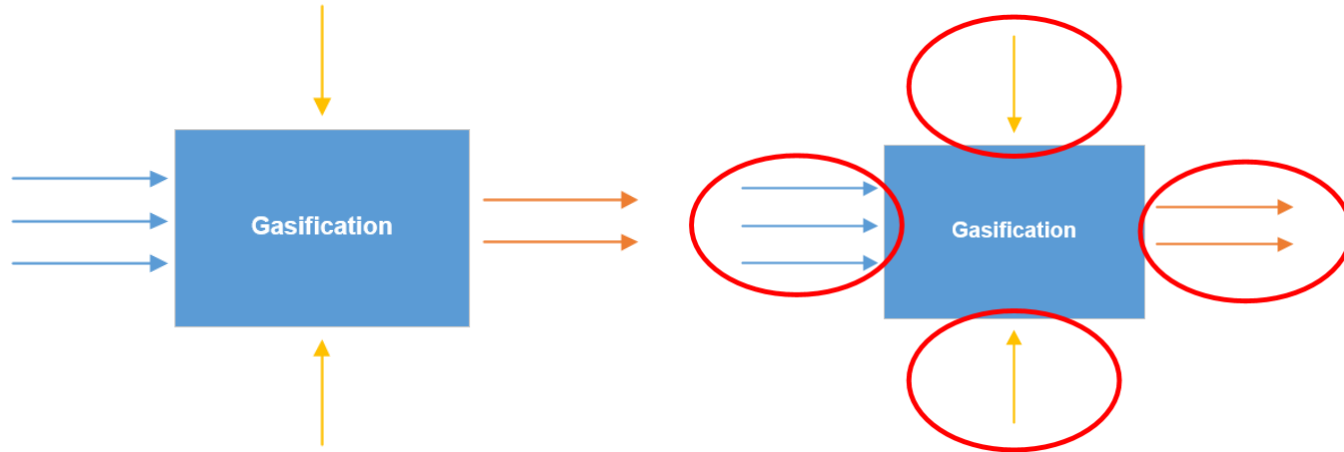
Industrial Symbiosis Ontology Processing Technologies (inferred)



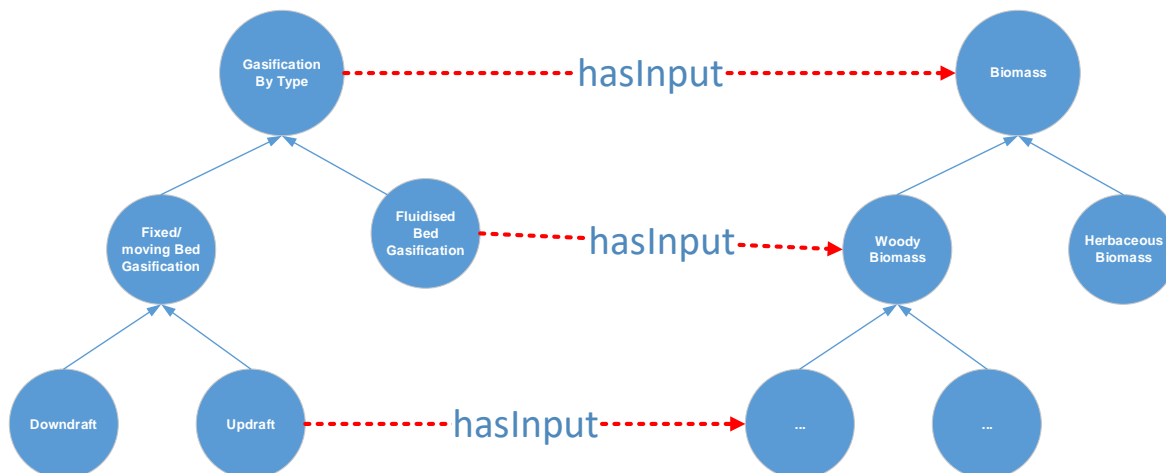
Linking Materials and Technologies



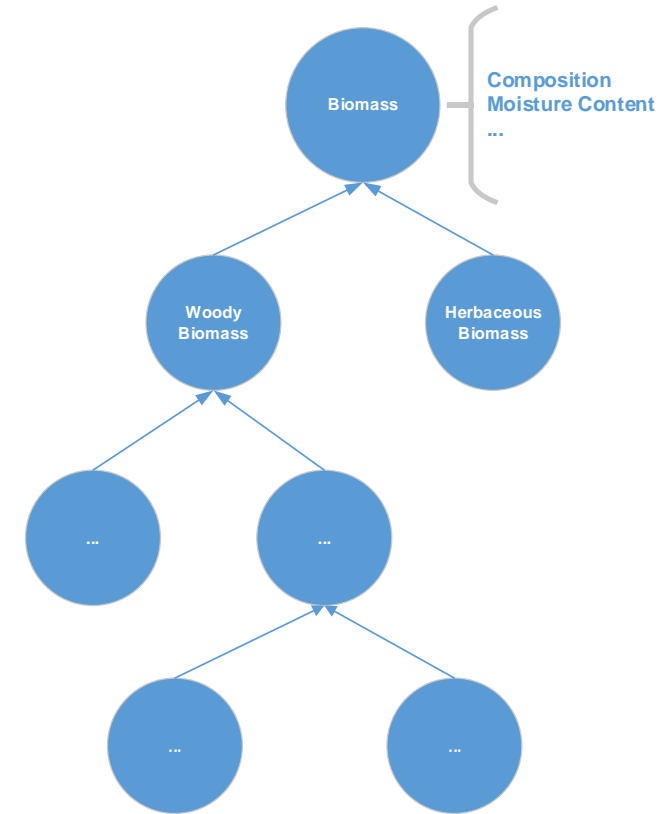
Biomass Ontology



Identify requirements

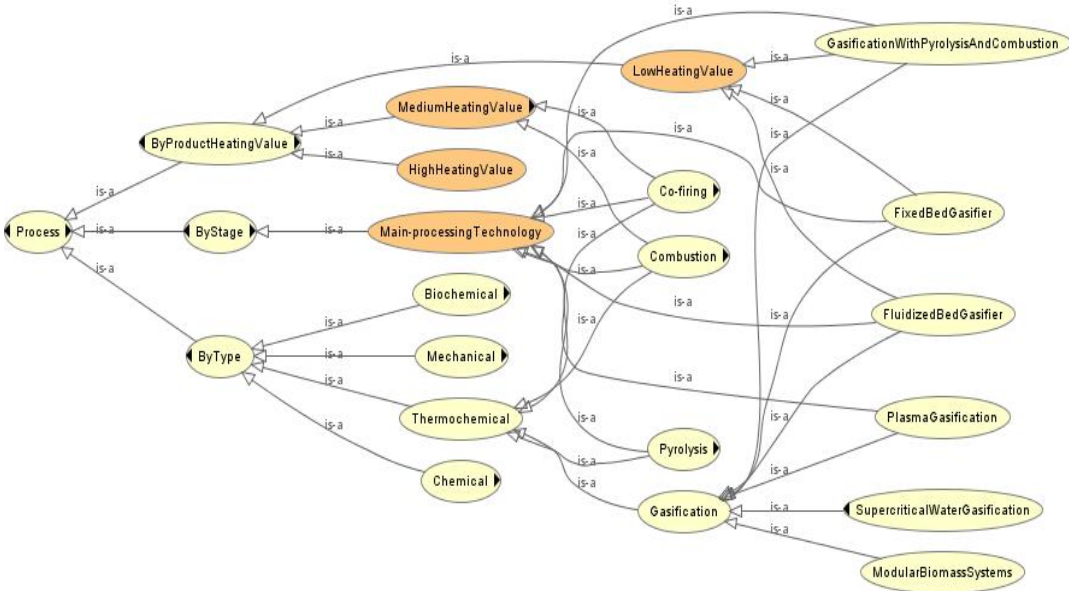


Define cross-relations



Classify materials and processing technologies

Biomass Ontology - Results



Superclasses +

- **Gasification**
- hasConversionRate **only** int[>= 60 , <= 80]
- hasEndUse **only** GaseousFuel
- hasInput **only** LignocellulosicBiomass or SewageSludge
- hasMoistureContent **only** int[<= 20]
- hasOutput **only** Biogas
- hasPhase **value** "Main-processing"
- hasProductHeatingValue **only** int[>= 4 , <= 5]
- hasSideProduct **only** FlyAsh
- hasTemperature **only** int[>= 780 , <= 1400]

Inherited anonymous classes

- hasPlatform **some** Syngas
- hasTemperature **some** int
- hasProductHeatingValue **some** int
- hasEndUse **only** EndUse
- hasOutput **only** Material

Description: Paper

Equivalent To +

SubClass Of +

- hasCellulose **only** xsd:float[>= 19.7f , <= 22.5f]
- hasHemicellulose **only** xsd:float[>= 3.8f , <= 4.4f]
- hasLignin **only** xsd:float[>= 13.3f , <= 14.5f]

Wood

- **Hardwood**
 - Aspen
 - Poplar
 - RoseWood
 - RoundTimber
 - RoundTimberProduct
- **Softwood**
 - Eucalyptus
 - LoblollyPine
 - SitkaSpruce

SubClass Of +

- hasHemicellulose **some** Hemicellulose that (hasXylan **value** 19.09f and hasArabinan **value** 4.24f and hasMannan **value** 2.12f and hasGalactan **value** 1.59f)
- **Hardwood**
- hasCelluloseContent **value** 53.02f
- hasHemicelluloseContent **value** 27.04f
- hasLigninContent **value** 19.09f

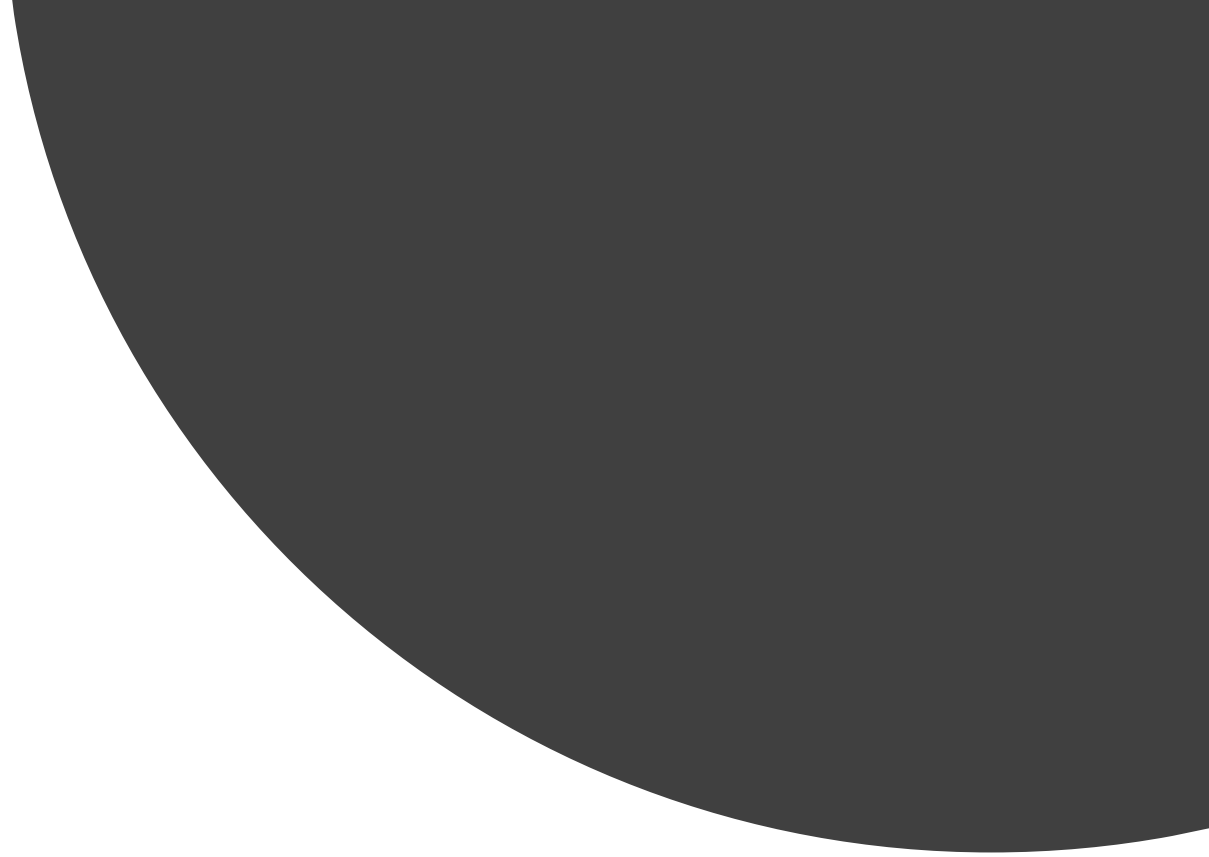
Other Relevant Experience

Commercial Projects

- Electrical Products Ontology
- Skills and Occupations Ontology
- Finance and Banking Ontology
- Company Profile Ontology

Research Projects

- Digital Supply Chain Ontology
- Manufacturing Ontology
- Pharmaceutical Products Ontology
- Clinical Trials Ontology



Thank you

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