# Graph: https://www.abonyilab.com/wh-ontology#

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# A-Z of terms

This is a complete alphabetical A-Z index of all terms, by main logical type.

-Classes (27) -

hckg:Activity | hckg:AssemblyStation | hckg:Buffer | hckg:CrimpingStation | hckg:DAS |
hckg:EnergySupply | hckg:HAR\_Analysis | hckg:KPIStore | hckg:LogDataStore | hckg:Result |
hckg:Storage | smo:Capability | smo:Component | smo:Machine | smo:ManufacturingFacility |
smo:Operator | smo:Part | smo:Product | smo:Resource | smo:Tool | sosa1:FeatureOfInterest |
sosa1:ObservableProperty | sosa1:Observation | sosa1:Sensor | var:IndustrialRobot | var:MobileRobot |
var:Robot

# Object Properties (26)

smo:hasCapability | sosa1:hasFeatureOfInterest | sosa1:madeObservation | sosa1:observes | hckg:HARResult | hckg:activityHasPrecedence | hckg:activityHasResult | hckg:activityRecognition | hckg:activityRequiresCapability | hckg:activityRequiresManufacturingFacility | hckg:activityRequiresOperator | hckg:activityRequiresResource | hckg:alarmToDAS | hckg:componentRequiresActivity | hckg:dataToDAS | hckg:dataToKPIStore | hckg:dataToLog | hckg:equippedTo | hckg:hasComponent | hckg:hasPart | hckg:isA | hckg:operatorAllocation | hckg:performedBy | hckg:requiresSupply | hckg:resourceAllocation | hckg:sourceLogData

# Datatype Properties (58)

hckg:DASMessage | hckg:DASName | hckg:DASdeviceID | hckg:KPICategory |
hckg:KPIOperatorType | hckg:KPIType | hckg:KPIValue | hckg:KPI\_ID | hckg:activityID |
hckg:activityTypeID | hckg:activityTypeName | hckg:activityTypeRemark | hckg:activityTypeUnit |
hckg:additionalTime | hckg:alarmLimit | hckg:averageActivityTime | hckg:capabilityCost |
hckg:capabilityDescription | hckg:capabilityID | hckg:capabilityName | hckg:competenceLevel |
hckg:energySupplyCost | hckg:energySupplyID | hckg:energySupplyName | hckg:equipmentCondition |
hckg:equipmentCost | hckg:equipmentID | hckg:equipmentName | hckg:equipmentType |
hckg:facilityID | hckg:facilityType | hckg:locationID | hckg:logDataValue | hckg:logTime |
hckg:machineCondition | hckg:machineCost | hckg:machineID | hckg:machineType |
hckg:observationID | hckg:observationName | hckg:observationValue | hckg:operatorCost |
hckg:personnelID | hckg:qualification | hckg:relatedAssets | hckg:resultID | hckg:resultTypeID |
hckg:resultTypeName | hckg:robotCondition | hckg:robotCost | hckg:robotID | hckg:sourceID |
hckg:sensorCost | hckg:sensorID | hckg:sensorReadingValue | hckg:sensorType | hckg:sourceID |
hckg:warningLimit

-Annotation Properties (1)-

dc:isPartOf

# Classes

Class: hckg: Activity back to top

- owl:Thing
  - hckg:Activity

NOTE hckg: Activity is a leaf node.

# **Description**

#### **Inherits from:**

owl:Thing

# **Property Domain of:**

hckg:activityID | hckg:activityTypeID | hckg:activityTypeName | hckg:activityTypeRemark | hckg:activityTypeUnit | hckg:additionalTime | hckg:averageActivityTime | hckg:activityHasPrecedence | hckg:activityHasResult | hckg:activityRequiresCapability | hckg:activityRequiresManufacturingFacility | hckg:activityRequiresOperator | hckg:activityRequiresResource

# **Property Range of:**

hckg:componentRequiresActivity

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
hckg:Activity a owl:Class .
```

Class: hckg:AssemblyStation back to top

- smo:ManufacturingFacility
  - hckg:AssemblyStation

NOTE hckg: Assembly Station is a leaf node.

# **Description**

### **Inherits from (3):**

smo:ManufacturingFacility | sosa1:FeatureOfInterest | sosa1:ObservableProperty

# **Property Domain of:**

hckg:facilityID | hckg:facilityType | hckg:locationID

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
```

```
hckg:AssemblyStation a owl:Class ;
rdfs:subClassOf smo:ManufacturingFacility .
```

# Class: <u>hckg:Buffer</u> back to top

- smo:ManufacturingFacility
  - hckg:Buffer

NOTE hckg:Buffer is a leaf node.

# **Description**

# Inherits from (3):

smo:ManufacturingFacility | sosa1:FeatureOfInterest | sosa1:ObservableProperty

# **Property Domain of:**

hckg:facilityID | hckg:facilityType | hckg:locationID

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
hckg:Buffer a owl:Class ;
rdfs:subClassOf smo:ManufacturingFacility .
```

# Class: hckg:CrimpingStation back to top

- smo:ManufacturingFacility
  - hckg:CrimpingStation

NOTE hckg:CrimpingStation is a leaf node.

# **Description**

#### **Inherits from (3):**

smo:ManufacturingFacility | sosa1:FeatureOfInterest | sosa1:ObservableProperty

#### **Property Domain of:**

hckg:facilityID | hckg:facilityType | hckg:locationID

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
hckg:CrimpingStation a owl:Class ;
rdfs:subClassOf smo:ManufacturingFacility .
```

# Class: <u>hckg:DAS</u> back to top

- owl:Thing
  - hckg:DAS

NOTE hckg:DAS is a leaf node.

# **Description**

#### **Inherits from:**

owl:Thing

# **Property Domain of:**

hckg:DASMessage | hckg:DASName | hckg:DASdeviceID | hckg:equippedTo

# **Property Range of:**

hckg:alarmToDAS | hckg:dataToDAS

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
hckg:DAS a owl:Class .
```

Class: <u>hckg:EnergySupply</u> back to top

- owl:Thing
  - hckg:EnergySupply

NOTE hckg:EnergySupply is a leaf node.

# **Description**

# **Inherits from:**

owl:Thing

### **Property Domain of:**

hckg:energySupplyCost | hckg:energySupplyID | hckg:energySupplyName

### **Property Range of:**

hckg:requiresSupply

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
hckg:EnergySupply a owl:Class .
```

# Class: hckg:HAR Analysis back to top

- owl:Thing
  - hckg:HAR Analysis

NOTE hckg:HAR Analysis is a leaf node.

## **Description**

### **Inherits from:**

owl:Thing

# **Property Domain of:**

hckg:HARResult

### **Property Range of:**

hckg:activityRecognition

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
hckg:HAR_Analysis a owl:Class .
```

Class: <u>hckg:KPIStore</u> back to top

- owl:Thing
  - hckg:KPIStore

NOTE hckg:KPIStore is a leaf node.

# **Description**

#### **Inherits from:**

owl:Thing

# **Property Domain of:**

<u>hckg:KPICategory</u> | <u>hckg:KPIOperatorType</u> | <u>hckg:KPIType</u> | <u>hckg:KPIValue</u> | <u>hckg:KPI\_ID</u> | <u>hckg:relatedAssets</u> | <u>hckg:dataToDAS</u>

### **Property Range of:**

hckg:HARResult | hckg:dataToKPIStore | hckg:sourceLogData

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
hckg:KPIStore a owl:Class .
```

Class: <u>hckg:LogDataStore</u> <u>back to top</u>

- owl:Thing
  - hckg:LogDataStore

NOTE hckg:LogDataStore is a leaf node.

# **Description**

### **Inherits from:**

owl:Thing

# **Property Domain of:**

hckg:logDataValue | hckg:logTime | hckg:sourceID | hckg:sourceLogData

# **Property Range of:**

hckg:dataToLog

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
hckg:LogDataStore a owl:Class .
```

# Class: hckg:Result back to top

- sosa1:FeatureOfInterest
  - hckg:Result
- sosal:ObservableProperty
  - o hckg:Result

NOTE hckg:Result is a leaf node.

# **Description**

### Inherits from (2):

sosa1:FeatureOfInterest | sosa1:ObservableProperty

## **Property Domain of:**

hckg:resultID | hckg:resultTypeID | hckg:resultTypeName | hckg:performedBy

# **Property Range of:**

hckg:activityHasPrecedence | hckg:activityHasResult

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
hckg:Result a owl:Class ;
rdfs:subClassOf sosa1:FeatureOfInterest,
sosa1:ObservableProperty .
```

# Class: <u>hckg:Storage</u> back to top

- smo:ManufacturingFacility
  - hckg:Storage

NOTE hckg:Storage is a leaf node.

# **Description**

### **Inherits from (3):**

smo:ManufacturingFacility | sosa1:FeatureOfInterest | sosa1:ObservableProperty

### **Property Domain of:**

hckg:facilityID | hckg:facilityType | hckg:locationID

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
hckg:Storage a owl:Class ;
rdfs:subClassOf smo:ManufacturingFacility .
```

# Class: smo: Capability back to top

- owl:Thing
  - smo:Capability

NOTE smo: Capability is a leaf node.

# **Description**

### **Inherits from:**

owl:Thing

# **Property Domain of:**

hckg:capabilityCost | hckg:capabilityDescription | hckg:capabilityID | hckg:capabilityName

# **Property Range of:**

smo:hasCapability | hckg:activityRequiresCapability

Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
smo:Capability a owl:Class .
```

Class: smo:Component back to top

- owl:Thing
  - smo:Component

NOTE smo: Component is a leaf node.

# **Description**

#### **Inherits from:**

owl:Thing

### **Property Domain of:**

hckg:componentRequiresActivity

# **Property Range of:**

hckg:hasComponent

Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
smo:Component a owl:Class .
```

# Class: smo: Machine back to top

- smo:Resource
  - smo:Machine

NOTE smo: Machine is a leaf node.

# **Description**

### **Inherits from (3):**

smo:Resource | sosa1:FeatureOfInterest | sosa1:ObservableProperty

### **Property Domain of:**

<u>hckg:locationID</u> | <u>hckg:machineCondition</u> | <u>hckg:machineCost</u> | <u>hckg:machineID</u> | <u>hckg:machineType</u> | <u>hckg:requiresSupply</u>

#### Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
smo:Machine a owl:Class ;
rdfs:subClassOf smo:Resource .
```

# Class: smo:ManufacturingFacility back to top

- sosa1:FeatureOfInterest
  - smo:ManufacturingFacility
    - hckg:AssemblyStation
    - hckg:Buffer
    - hckg:CrimpingStation
    - hckg:Storage
- sosa1:ObservableProperty
  - smo:ManufacturingFacility
    - <u>hckg:AssemblyStation</u>
    - hckg:Buffer
    - <u>hckg:CrimpingStation</u>
    - hckg:Storage

# **Description**

#### **Inherits from (2):**

sosa1:FeatureOfInterest | sosa1:ObservableProperty

#### **Property Domain of:**

hckg:facilityID | hckg:facilityType | hckg:locationID

#### **Property Range of:**

hckg:activityRequiresManufacturingFacility | hckg:operatorAllocation | hckg:resourceAllocation

#### Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
smo:ManufacturingFacility a owl:Class ;
rdfs:subClassOf sosa1:FeatureOfInterest,
sosa1:ObservableProperty .
```

# Class: smo: Operator back to top

- sosa1:FeatureOfInterest
  - o smo:Operator
- sosal:ObservableProperty
  - smo:Operator

NOTE smo: Operator is a leaf node.

### **Description**

### Inherits from (2):

sosa1:FeatureOfInterest | sosa1:ObservableProperty

## **Property Domain of:**

<u>hckg:competenceLevel</u> | <u>hckg:locationID</u> | <u>hckg:operatorCost</u> | <u>hckg:personnelID</u> | <u>hckg:qualification</u> | <u>smo:hasCapability</u> | <u>hckg:operatorAllocation</u>

# **Property Range of:**

hckg:activityRequiresOperator | hckg:equippedTo | hckg:performedBy

Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
smo:Operator a owl:Class ;
rdfs:subClassOf sosa1:FeatureOfInterest,
sosa1:ObservableProperty .
```

Class: smo:Part back to top

- owl:Thing
  - o smo:Part

NOTE smo: Part is a leaf node.

### **Description**

#### **Inherits from:**

owl:Thing

### **Property Domain of:**

hckg:hasComponent

# **Property Range of:**

hckg:hasPart

Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
smo:Part a owl:Class .
```

# Class: smo:Product back to top

- owl:Thing
  - o smo:Product

NOTE smo:Product is a leaf node.

# **Description**

#### **Inherits from:**

owl:Thing

### **Property Domain of:**

hckg:hasPart

Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
smo:Product a owl:Class .
```

# Class: smo: Resource back to top

- sosa1:FeatureOfInterest
  - o smo:Resource
    - var:Robot
    - smo:Machine
    - smo:Tool
- sosa1:ObservableProperty
  - o smo:Resource
    - var:Robot
    - smo:Machine
    - smo:Tool

# **Description**

### Inherits from (2):

sosa1:FeatureOfInterest | sosa1:ObservableProperty

# **Property Domain of:**

hckg:resourceAllocation

### **Property Range of:**

<u>hckg:activityRequiresResource | hckg:performedBy</u>

#### Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
smo:Resource a owl:Class ;
rdfs:subClassOf sosa1:FeatureOfInterest,
sosa1:ObservableProperty .
```

# Class: smo: Tool back to top

- smo:Resource
  - o smo:Tool

NOTE smo: Tool is a leaf node.

### **Description**

### **Inherits from (3):**

smo:Resource | sosa1:FeatureOfInterest | sosa1:ObservableProperty

# **Property Domain of:**

hckg:equipmentCondition | hckg:equipmentCost | hckg:equipmentID | hckg:equipmentName

# <u>hckg:equipmentType</u> | <u>hckg:locationID</u> | <u>hckg:requiresSupply</u>

Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
smo:Tool a owl:Class ;
rdfs:subClassOf smo:Resource .
```

# Class: sosa1:FeatureOfInterest back to top

- owl:Thing
  - sosa1:FeatureOfInterest
    - smo:ManufacturingFacility
    - smo:Operator
    - smo:Resource
    - hckg:Result

# **Description**

### **Inherits from:**

owl:Thing

# **Property Range of:**

sosa1:hasFeatureOfInterest

Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
sosa1:FeatureOfInterest a owl:Class .
```

# Class: sosa1:ObservableProperty back to top

- owl:Thing
  - sosa1:ObservableProperty
    - smo:ManufacturingFacility
    - <u>smo:Operator</u>
    - smo:Resource
    - hckg:Result

# **Description**

#### **Inherits from:**

owl:Thing

# **Property Range of:**

sosal:observes

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
sosa1:ObservableProperty a owl:Class .
```

# Class: sosa1:Observation back to top

- owl:Thing
  - sosa1:Observation

NOTE sosal: Observation is a leaf node.

### **Description**

### **Inherits from:**

owl:Thing

# **Property Domain of:**

<u>hckg:alarmLimit</u> | <u>hckg:observationID</u> | <u>hckg:observationName</u> | <u>hckg:observationValue</u> | <u>hckg:warningLimit</u> | sosa1:hasFeatureOfInterest | hckg:activityRecognition | hckg:alarmToDAS | hckg:dataToKPIStore | hckg:dataToLog

### **Property Range of:**

sosa1:madeObservation

Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
sosa1:Observation a owl:Class .
```

Class: sosa1:Sensor back to top

- owl:Thing
  - sosa1:Sensor

NOTE sosal: Sensor is a leaf node.

# **Description**

### **Inherits from:**

owl:Thing

## **Property Domain of:**

hckg:sensorCost | hckg:sensorID | hckg:sensorReadingValue | hckg:sensorType | sosa1:madeObservation | sosa1:observes

Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
sosa1:Sensor a owl:Class .
```

# Class: <u>var:IndustrialRobot</u> <u>back to top</u>

- var:Robot
  - var:IndustrialRobot

NOTE var:IndustrialRobot is a leaf node.

### **Description**

### **Inherits from (4):**

var:Robot | smo:Resource | sosa1:FeatureOfInterest | sosa1:ObservableProperty

### **Property Domain of:**

de:isPartOf | hekg:locationID | hekg:robotCondition | hekg:robotCost | hekg:robotID | hekg:robotType | smo:hasCapability | hckg:requiresSupply

#### Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix var: <http://www.satisfactory-project.eu/satisfactory/var#> .
var:IndustrialRobot a owl:Class ;
rdfs:subClassOf var:Robot .
```

# Class: <u>var:MobileRobot</u> <u>back to top</u>

- var:Robot
  - var:MobileRobot

NOTE var: Mobile Robot is a leaf node.

# **Description**

### **Inherits from (4):**

var:Robot | smo:Resource | sosa1:FeatureOfInterest | sosa1:ObservableProperty

### **Property Domain of:**

de:isPartOf | hckg:locationID | hckg:robotCondition | hckg:robotCost | hckg:robotID | hckg:robotType | hckg:requiresSupply

### Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#>
@prefix var: <http://www.satisfactory-project.eu/satisfactory/var#> .
var:MobileRobot a owl:Class ;
rdfs:subClassOf var:Robot .
```

# Class: var:Robot back to top

- smo:Resource
  - o var:Robot
    - var:IndustrialRobot
    - var:MobileRobot

# **Description**

#### **Inherits from (3):**

smo:Resource | sosa1:FeatureOfInterest | sosa1:ObservableProperty

### **Property Range of:**

dc:isPartOf

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix var: <http://www.satisfactory-project.eu/satisfactory/var#> .
var:Robot a owl:Class ;
rdfs:subClassOf smo:Resource .
```

# **Object Properties**

Object Property: smo:hasCapability back to top

NOTE smo:hasCapability is a leaf node.

# **Description**

#### **Class Domain for:**

var:IndustrialRobot | smo:Operator

# **Class Range for:**

smo:Capability

### Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix var: <http://www.satisfactory-project.eu/satisfactory/var#> .
smo:hasCapability a owl:ObjectProperty ;
rdfs:domain var:IndustrialRobot,
smo:Operator ;
rdfs:range smo:Capability .
```

# Object Property: sosal:hasFeatureOfInterest back to top

NOTE sosal:hasFeatureOfInterest is a leaf node.

# **Description**

#### **Class Domain for:**

sosa1:Observation

#### **Class Range for:**

sosa1:FeatureOfInterest

#### Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
sosa1:hasFeatureOfInterest a owl:ObjectProperty ;
rdfs:domain sosa1:Observation;
rdfs:range sosa1:FeatureOfInterest .
```

Object Property: sosal:madeObservation back to top

NOTE sosal:madeObservation is a leaf node.

### **Description**

### **Class Domain for:**

sosa1:Sensor

# **Class Range for:**

sosa1:Observation

Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
sosa1:madeObservation a owl:ObjectProperty ;
rdfs:domain sosa1:Sensor ;
rdfs:range sosa1:Observation .
```

# Object Property: sosal:observes back to top

NOTE sosal: observes is a leaf node.

# **Description**

# **Class Domain for:**

sosa1:Sensor

### **Class Range for:**

sosa1:ObservableProperty

Implementation:

```
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
sosa1:observes a owl:ObjectProperty ;
rdfs:domain sosa1:Sensor ;
rdfs:range sosa1:ObservableProperty .
```

# Object Property: <u>hckg:HARResult</u> <u>back to top</u>

NOTE hckg:HARResult is a leaf node.

# **Description**

#### **Class Domain for:**

hckg:HAR Analysis

# **Class Range for:**

hckg:KPIStore

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
```

```
hckg:HARResult a owl:ObjectProperty;
rdfs:domain hckg:HAR_Analysis;
rdfs:range hckg:KPIStore .
```

# Object Property: <a href="https://hckg:activityHasPrecedence">hckg:activityHasPrecedence</a> back to top

NOTE hckg:activityHasPrecedence is a leaf node.

# **Description**

### **Class Domain for:**

hckg:Activity

### **Class Range for:**

hckg:Result

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
hckg:activityHasPrecedence a owl:ObjectProperty ;
rdfs:domain hckg:Activity ;
rdfs:range hckg:Result .
```

# Object Property: <u>hckg:activityHasResult</u> <u>back to top</u>

NOTE hckg:activityHasResult is a leaf node.

### **Description**

### **Class Domain for:**

hckg:Activity

### **Class Range for:**

hckg:Result

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
hckg:activityHasResult a owl:ObjectProperty ;
rdfs:domain hckg:Activity ;
rdfs:range hckg:Result .
```

# Object Property: <u>hckg:activityRecognition</u> <u>back to top</u>

NOTE hckg:activityRecognition is a leaf node.

# **Description**

### **Class Domain for:**

sosal:Observation

# **Class Range for:**

hckg:HAR\_Analysis

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
hckg:activityRecognition a owl:ObjectProperty ;
rdfs:domain sosa1:Observation ;
rdfs:range hckg:HAR_Analysis .
```

# Object Property: <u>hckg:activityRequiresCapability</u> <u>back to top</u>

NOTE hckg:activityRequiresCapability is a leaf node.

# **Description**

#### **Class Domain for:**

hckg:Activity

# **Class Range for:**

smo:Capability

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
hckg:activityRequiresCapability a owl:ObjectProperty ;
rdfs:domain hckg:Activity;
rdfs:range smo:Capability .
```

# Object Property: <u>hckg:activityRequiresManufacturingFacility</u> <u>back to top</u>

NOTE hckg:activityRequiresManufacturingFacility is a leaf node.

### **Description**

# **Class Domain for:**

hckg:Activity

# **Class Range for:**

smo:ManufacturingFacility

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
hckg:activityRequiresManufacturingFacility a owl:ObjectProperty ;
rdfs:domain hckg:Activity;
rdfs:range smo:ManufacturingFacility .
```

# Object Property: <a href="https://doi.org/10.1001/journal.com/">hckg:activityRequiresOperator</a> back to top

NOTE hckg:activityRequiresOperator is a leaf node.

### **Description**

### **Class Domain for:**

hckg:Activity

### **Class Range for:**

smo:Operator

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
hckg:activityRequiresOperator a owl:ObjectProperty ;
rdfs:domain hckg:Activity;
rdfs:range smo:Operator .
```

# Object Property: <a href="https://doi.org/10.1001/journal.com/">hckg:activityRequiresResource</a> back to top

NOTE hckg:activityRequiresResource is a leaf node.

### **Description**

#### **Class Domain for:**

hckg:Activity

# **Class Range for:**

smo:Resource

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
hckg:activityRequiresResource a owl:ObjectProperty ;
rdfs:domain hckg:Activity;
rdfs:range smo:Resource .
```

# Object Property: <a href="https://hckg:alarmToDAS">hckg:alarmToDAS</a> back to top

NOTE hckg:alarmToDAS is a leaf node.

### **Description**

#### **Class Domain for:**

sosa1:Observation

### **Class Range for:**

hckg:DAS

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
```

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```
hckg:alarmToDAS a owl:ObjectProperty;
rdfs:domain sosa1:Observation ;
rdfs:range hckg:DAS .
```

# Object Property: <u>hckg:componentRequiresActivity</u> <u>back to top</u>

NOTE hckg:componentRequiresActivity is a leaf node.

# **Description**

# **Class Domain for:**

smo:Component

# **Class Range for:**

hckg:Activity

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
hckg:componentRequiresActivity a owl:ObjectProperty;
rdfs:domain smo:Component;
rdfs:range hckg:Activity .
```

# Object Property: <a href="hckg:dataToDAS">hckg:dataToDAS</a> back to top

NOTE hckg:dataToDAS is a leaf node.

# **Description**

#### **Class Domain for:**

hckg:KPIStore

### **Class Range for:**

hckg:DAS

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
hckg:dataToDAS a owl:ObjectProperty ;
rdfs:domain hckg:KPIStore ;
rdfs:range hckg:DAS .
```

# Object Property: <a href="https://doi.org/10.1001/journal.com/">hckg:dataToKPIStore</a> back to top

NOTE hckg:dataToKPIStore is a leaf node.

# **Description**

### **Class Domain for:**

sosal:Observation

# **Class Range for:**

hckg:KPIStore

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
hckg:dataToKPIStore a owl:ObjectProperty ;
rdfs:domain sosa1:Observation;
rdfs:range hckg:KPIStore .
```

# Object Property: <u>hckg:dataToLog</u> <u>back to top</u>

NOTE hckg:dataToLog is a leaf node.

### **Description**

#### **Class Domain for:**

sosa1:Observation

### **Class Range for:**

hckg:LogDataStore

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
hckg:dataToLog a owl:ObjectProperty ;
rdfs:domain sosa1:Observation;
rdfs:range hckg:LogDataStore .
```

# Object Property: <u>hckg:equippedTo</u> <u>back to top</u>

NOTE hckg:equippedTo is a leaf node.

### **Description**

# **Class Domain for:**

hckg:DAS

### **Class Range for:**

smo:Operator

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
hckg:equippedTo a owl:ObjectProperty ;
rdfs:domain hckg:DAS ;
rdfs:range smo:Operator .
```

# Object Property: <u>hckg:hasComponent</u> <u>back to top</u>

NOTE hckg:hasComponent is a leaf node.

## **Description**

### **Class Domain for:**

smo:Part

### **Class Range for:**

smo:Component

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
hckg:hasComponent a owl:ObjectProperty ;
rdfs:domain smo:Part ;
rdfs:range smo:Component .
```

# Object Property: <u>hckg:hasPart</u> <u>back to top</u>

NOTE hckg:hasPart is a leaf node.

# **Description**

# **Class Domain for:**

smo:Product

### **Class Range for:**

smo:Part

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
hckg:hasPart a owl:ObjectProperty ;
rdfs:domain smo:Product;
rdfs:range smo:Part .
```

# Object Property: <a href="https://doi.org/10.160/backtotop">hckg:isA</a> back to top

NOTE hckg:isA is a leaf node.

# **Description**

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
hckg:isA a owl:ObjectProperty .
```

# Object Property: <u>hckg:operatorAllocation</u> <u>back to top</u>

NOTE hckg:operatorAllocation is a leaf node.

### **Description**

### **Class Domain for:**

smo:Operator

# **Class Range for:**

smo:ManufacturingFacility

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
hckg:operatorAllocation a owl:ObjectProperty ;
rdfs:domain smo:Operator ;
rdfs:range smo:ManufacturingFacility .
```

# Object Property: <u>hckg:performedBy</u> <u>back to top</u>

NOTE hckg:performedBy is a leaf node.

# **Description**

# **Class Domain for:**

hckg:Result

### **Class Range for:**

smo:Operator | smo:Resource

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
hckg:performedBy a owl:ObjectProperty ;
rdfs:domain hckg:Result ;
rdfs:range smo:Operator,
smo:Resource .
```

# Object Property: <a href="hckg:requiresSupply">hckg:requiresSupply</a> back to top

NOTE hckg:requiresSupply is a leaf node.

# **Description**

#### **Class Domain for:**

var:MobileRobot | smo:Tool | smo:Machine | var:IndustrialRobot

### **Class Range for:**

hckg:EnergySupply

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
 @prefix owl: <http://www.w3.org/2002/07/owl#> .
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```

```
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix var: <http://www.satisfactory-project.eu/satisfactory/var#> .
hckg:requiresSupply a owl:ObjectProperty ;
rdfs:domain var:IndustrialRobot,
var:MobileRobot,
smo:Machine,
smo:Tool ;
rdfs:range hckg:EnergySupply .
```

# Object Property: <u>hckg:resourceAllocation</u> <u>back to top</u>

NOTE hckg:resourceAllocation is a leaf node.

### **Description**

### **Class Domain for:**

smo:Resource

### **Class Range for:**

smo:ManufacturingFacility

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
hckg:resourceAllocation a owl:ObjectProperty ;
rdfs:domain smo:Resource;
rdfs:range smo:ManufacturingFacility .
```

# Object Property: <u>hckg:sourceLogData</u> <u>back to top</u>

NOTE hckg:sourceLogData is a leaf node.

### **Description**

# **Class Domain for:**

hckg:LogDataStore

### **Class Range for:**

hckg:KPIStore

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
hckg:sourceLogData a owl:ObjectProperty ;
rdfs:domain hckg:LogDataStore;
rdfs:range hckg:KPIStore .
```

# **Datatype Properties**

# Datatype Property: <u>hckg:DASMessage</u> <u>back to top</u>

NOTE hckg:DASMessage is a leaf node.

# **Description**

### **Class Domain for:**

hckg:DAS

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:DASMessage a owl:DatatypeProperty ;
rdfs:domain hckg:DAS;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1007/journal.com/html">https://doi.org/10.1007/journal.com/html</a>

NOTE hckg:DASName is a leaf node.

# **Description**

#### **Class Domain for:**

hckg:DAS

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:DASName a owl:DatatypeProperty ;
rdfs:domain hckg:DAS ;
rdfs:range xsd:string .
```

# Datatype Property: <u>hckg:DASdeviceID</u> <u>back to top</u>

NOTE hckg:DASdeviceID is a leaf node.

### **Description**

### **Class Domain for:**

hckg:DAS

# **Class Range for:**

xsd:string

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:DASdeviceID a owl:DatatypeProperty ;
rdfs:domain hckg:DAS;
rdfs:range xsd:string .
```

# Datatype Property: <u>hckg:KPICategory</u> <u>back to top</u>

NOTE hckg:KPICategory is a leaf node.

# **Description**

#### **Class Domain for:**

hckg:KPIStore

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:KPICategory a owl:DatatypeProperty ;
rdfs:domain hckg:KPIStore ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1007/journal.com/html">https://doi.org/10.1007/journal.com/html</a> <a href="ht

NOTE hckg:KPIOperatorType is a leaf node.

### **Description**

# **Class Domain for:**

hckg:KPIStore

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:KPIOperatorType a owl:DatatypeProperty ;
rdfs:domain hckg:KPIStore ;
rdfs:range xsd:string .
```

# Datatype Property: <u>hckg:KPIType</u> <u>back to top</u>

NOTE hckg:KPIType is a leaf node.

### **Description**

# **Class Domain for:**

hckg:KPIStore

## **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:KPIType a owl:DatatypeProperty ;
rdfs:domain hckg:KPIStore ;
rdfs:range xsd:string .
```

# Datatype Property: <u>hckg:KPIValue</u> <u>back to top</u>

NOTE hckg:KPIValue is a leaf node.

### **Description**

#### **Class Domain for:**

hckg:KPIStore

### **Class Range for:**

xsd:double

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:KPIValue a owl:DatatypeProperty ;
rdfs:domain hckg:KPIStore ;
rdfs:range xsd:double .
```

# Datatype Property: <a href="https://doi.org/10.100/line.2007.000">hckg: KPI ID back to top</a>

NOTE hckg:KPI ID is a leaf node.

# **Description**

### **Class Domain for:**

hckg:KPIStore

# **Class Range for:**

xsd:string

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:KPI_ID a owl:DatatypeProperty ;
rdfs:domain hckg:KPIStore ;
```

rdfs:range xsd:string .

# Datatype Property: <a href="https://doi.org/10.1001/journal.com/html">https://doi.org/10.1001/journal.com/html</a> back to top

NOTE hckg:activityID is a leaf node.

# **Description**

### **Class Domain for:**

hckg:Activity

# **Class Range for:**

xsd:string

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:activityID a owl:DatatypeProperty ;
rdfs:domain hckg:Activity;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1007/journal.com/html">https://doi.org/10.1007/journal.com/html</a>

NOTE hckg:activityTypeID is a leaf node.

# **Description**

#### **Class Domain for:**

hckg:Activity

### **Class Range for:**

xsd:string

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:activityTypeID a owl:DatatypeProperty ;
rdfs:domain hckg:Activity;
rdfs:range xsd:string .
```

# Datatype Property: <u>hckg:activityTypeName</u> <u>back to top</u>

NOTE hckg:activityTypeName is a leaf node.

# **Description**

### **Class Domain for:**

hckg:Activity

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:activityTypeName a owl:DatatypeProperty ;
rdfs:domain hckg:Activity ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1007/journal.com/html">https://doi.org/10.1007/journal.com/html</a> <a href="ht

NOTE hckg:activityTypeRemark is a leaf node.

# **Description**

#### **Class Domain for:**

hckg:Activity

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:activityTypeRemark a owl:DatatypeProperty ;
rdfs:domain hckg:Activity ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1007/journal.com/html">https://doi.org/10.1007/journal.com/html</a>

NOTE hckg:activityTypeUnit is a leaf node.

### **Description**

# **Class Domain for:**

hckg:Activity

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:activityTypeUnit a owl:DatatypeProperty ;
rdfs:domain hckg:Activity;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1001/journal.com/">hckg:additionalTime</a> <a href="back to top">back to top</a>

NOTE hckg:additionalTime is a leaf node.

### **Description**

### **Class Domain for:**

hckg:Activity

### **Class Range for:**

xsd:double

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:additionalTime a owl:DatatypeProperty ;
rdfs:domain hckg:Activity;
rdfs:range xsd:double .
```

# Datatype Property: <u>hckg:alarmLimit</u> <u>back to top</u>

NOTE hckg:alarmLimit is a leaf node.

# **Description**

#### **Class Domain for:**

sosa1:Observation

# **Class Range for:**

xsd:double

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:alarmLimit a owl:DatatypeProperty ;
rdfs:domain sosa1:Observation;
rdfs:range xsd:double .
```

# Datatype Property: <u>hckg:averageActivityTime\_back to top</u>

NOTE hckg:averageActivityTime is a leaf node.

### **Description**

### **Class Domain for:**

hckg:Activity

### **Class Range for:**

xsd:double

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
```

```
hckg:averageActivityTime a owl:DatatypeProperty ;
rdfs:domain hckg:Activity ;
rdfs:range xsd:double .
```

# Datatype Property: <a href="https://doi.org/li> <a href="https://doi.org/l

NOTE hckg:capabilityCost is a leaf node.

# **Description**

### **Class Domain for:**

smo:Capability

### **Class Range for:**

xsd:int

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:capabilityCost a owl:DatatypeProperty ;
rdfs:domain smo:Capability ;
rdfs:range xsd:int .
```

# Datatype Property: <a href="hckg:capabilityDescription">hckg:capabilityDescription</a> <a href="backtotop">back to top</a>

NOTE hckg:capabilityDescription is a leaf node.

### **Description**

### **Class Domain for:**

smo:Capability

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:capabilityDescription a owl:DatatypeProperty ;
rdfs:domain smo:Capability ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1001/journal.com/hckg:capabilityID">hckg:capabilityID</a> back to top

NOTE hckg:capabilityID is a leaf node.

### **Description**

# **Class Domain for:**

smo:Capability

## **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:capabilityID a owl:DatatypeProperty ;
rdfs:domain smo:Capability;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1001/journal.com/html">https://doi.org/10.1001/journal.com/html</a> <a href="ht

NOTE hckg:capabilityName is a leaf node.

# **Description**

#### **Class Domain for:**

smo:Capability

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:capabilityName a owl:DatatypeProperty ;
rdfs:domain smo:Capability;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1001/journal.com/html">https://doi.org/10.1001/journal.com/html</a> back to top

NOTE hckg:competenceLevel is a leaf node.

# **Description**

### **Class Domain for:**

smo:Operator

### **Class Range for:**

xsd:int

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
```

```
hckg:competenceLevel a owl:DatatypeProperty ;
rdfs:domain smo:Operator ;
rdfs:range xsd:int .
```

# Datatype Property: <u>hckg:energySupplyCost</u> <u>back to top</u>

NOTE hckg:energySupplyCost is a leaf node.

# **Description**

# **Class Domain for:**

hckg:EnergySupply

### **Class Range for:**

xsd:int

# Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:energySupplyCost a owl:DatatypeProperty ;
rdfs:domain hckg:EnergySupply;
rdfs:range xsd:int .
```

# Datatype Property: <a href="https://doi.org/10.1007/journal.com/html">https://doi.org/10.1007/journal.com/html</a> back to top

NOTE hckg:energySupplyID is a leaf node.

# **Description**

#### **Class Domain for:**

hckg:EnergySupply

### **Class Range for:**

xsd:string

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:energySupplyID a owl:DatatypeProperty ;
rdfs:domain hckg:EnergySupply ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="hckg:energySupplyName">hckg:energySupplyName</a> back to top

NOTE hckg:energySupplyName is a leaf node.

# **Description**

# **Class Domain for:**

hckg:EnergySupply

### **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:energySupplyName a owl:DatatypeProperty ;
rdfs:domain hckg:EnergySupply;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1001/journal.com/html">https://doi.org/10.1001/journal.com/html</a> <a href="ht

NOTE hckg:equipmentCondition is a leaf node.

### **Description**

#### **Class Domain for:**

smo:Tool

### **Class Range for:**

xsd:int

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:equipmentCondition a owl:DatatypeProperty ;
rdfs:domain smo:Tool ;
rdfs:range xsd:int .
```

# Datatype Property: <u>hckg:equipmentCost</u> <u>back to top</u>

NOTE hckg:equipmentCost is a leaf node.

# **Description**

#### **Class Domain for:**

smo:Tool

#### **Class Range for:**

xsd:int

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:equipmentCost a owl:DatatypeProperty ;
rdfs:domain smo:Tool ;
rdfs:range xsd:int .
```

# Datatype Property: <u>hckg:equipmentID</u> <u>back to top</u>

NOTE hckg:equipmentID is a leaf node.

# **Description**

#### **Class Domain for:**

smo:Tool

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:equipmentID a owl:DatatypeProperty ;
rdfs:domain smo:Tool ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1007/journal.org/">hckg:equipmentName</a> <a href="back to top">back to top</a>

NOTE hckg:equipmentName is a leaf node.

# **Description**

# **Class Domain for:**

smo:Tool

### **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:equipmentName a owl:DatatypeProperty ;
rdfs:domain smo:Tool ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1007/journal.com/">hckg:equipmentType</a> <a href="back to top">back to top</a>

NOTE hckg:equipmentType is a leaf node.

### **Description**

#### **Class Domain for:**

smo:Tool

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:equipmentType a owl:DatatypeProperty ;
rdfs:domain smo:Tool ;
rdfs:range xsd:string .
```

# Datatype Property: <u>hckg:facilityID</u> <u>back to top</u>

NOTE hckg:facilityID is a leaf node.

### **Description**

### **Class Domain for:**

smo:ManufacturingFacility | hckg:AssemblyStation | hckg:Buffer | hckg:Storage | hckg:CrimpingStation

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:facilityID a owl:DatatypeProperty ;
rdfs:domain smo:ManufacturingFacility,
hckg:AssemblyStation,
hckg:Buffer,
hckg:CrimpingStation,
hckg:Storage ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1007/journal.com/html">https://doi.org/10.1007/journal.com/html</a>, <a href="https://doi.org/10.1007/journal.com/html">https://doi.org/10.1007/journal.com/

NOTE hckg:facilityType is a leaf node.

### **Description**

### **Class Domain for:**

hckg:Storage | hckg:CrimpingStation | smo:ManufacturingFacility | hckg:AssemblyStation | hckg:Buffer

# **Class Range for:**

xsd:string

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:facilityType a owl:DatatypeProperty ;
rdfs:domain smo:ManufacturingFacility,
```

```
hckg:AssemblyStation,
hckg:Buffer,
hckg:CrimpingStation,
hckg:Storage ;
rdfs:range xsd:string .
```

# Datatype Property: <u>hckg:locationID</u> <u>back to top</u>

NOTE hckg:locationID is a leaf node.

# **Description**

### **Class Domain for:**

hckg:Buffer | smo:Tool | var:MobileRobot | smo:Operator | var:IndustrialRobot | hckg:CrimpingStation | smo:Machine | smo:ManufacturingFacility | hckg:AssemblyStation | hckg:Storage

### **Class Range for:**

xsd:string

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix var: <http://www.satisfactory-project.eu/satisfactory/var#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:locationID a owl:DatatypeProperty ;
rdfs:domain var:IndustrialRobot,
var:MobileRobot,
smo:Machine,
smo:ManufacturingFacility,
smo:Operator,
smo:Tool,
hckg:AssemblyStation,
hckg:Buffer,
hckg:CrimpingStation,
hckg:Storage ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.2016/journal.com/html">hckg:logDataValue</a> back to top

NOTE hckg:logDataValue is a leaf node.

### **Description**

# **Class Domain for:**

hckg:LogDataStore

### **Class Range for:**

xsd:double

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:logDataValue a owl:DatatypeProperty ;
rdfs:domain hckg:LogDataStore ;
```

rdfs:range xsd:double .

# Datatype Property: <a href="https://doi.org/10.1001/journal.com/html">https://doi.org/10.1001/journal.com/html</a>

NOTE hckg:logTime is a leaf node.

# **Description**

### **Class Domain for:**

hckg:LogDataStore

# **Class Range for:**

xsd:string

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:logTime a owl:DatatypeProperty ;
rdfs:domain hckg:LogDataStore;
rdfs:range xsd:string .
```

# Datatype Property: <a href="hckg:machineCondition">hckg:machineCondition</a> back to top

NOTE hckg:machineCondition is a leaf node.

# **Description**

#### **Class Domain for:**

smo:Machine

### **Class Range for:**

xsd:int

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:machineCondition a owl:DatatypeProperty ;
rdfs:domain smo:Machine ;
rdfs:range xsd:int .
```

# Datatype Property: <a href="https://hckg:machineCost">hckg:machineCost</a> back to top

NOTE hckg:machineCost is a leaf node.

# **Description**

### **Class Domain for:**

smo:Machine

### **Class Range for:**

xsd:int

```
Implementation:
```

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:machineCost a owl:DatatypeProperty ;
rdfs:domain smo:Machine ;
rdfs:range xsd:int .
```

# Datatype Property: <u>hckg:machineID</u> <u>back to top</u>

NOTE hckg:machineID is a leaf node.

# **Description**

# **Class Domain for:**

smo:Machine

### **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:machineID a owl:DatatypeProperty ;
rdfs:domain smo:Machine ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://news.nchineType">hckg:machineType</a> back to top

NOTE hckg:machineType is a leaf node.

### **Description**

### **Class Domain for:**

smo:Machine

# **Class Range for:**

xsd:string

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:machineType a owl:DatatypeProperty ;
rdfs:domain smo:Machine ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1001/journal.com/html">https://doi.org/10.1001/journal.com/html</a>

NOTE hckg:observationID is a leaf node.

# **Description**

#### **Class Domain for:**

sosa1:Observation

# **Class Range for:**

xsd:string

### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:observationID a owl:DatatypeProperty ;
rdfs:domain sosa1:Observation ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1001/journal-backto-top">hckg:observationName</a> back to top

NOTE hckg:observationName is a leaf node.

# **Description**

#### **Class Domain for:**

sosa1:Observation

### **Class Range for:**

xsd:string

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:observationName a owl:DatatypeProperty ;
rdfs:domain sosa1:Observation ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://docs.property-backto-top">hckg:observationValue</a> <a href="backto-top">back to top</a>

NOTE hckg:observationValue is a leaf node.

# **Description**

### **Class Domain for:**

sosa1:Observation

# **Class Range for:**

xsd:string | xsd:double

```
Implementation:
```

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:observationValue a owl:DatatypeProperty ;
rdfs:domain sosa1:Observation;
rdfs:range xsd:double,
xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1001/journal.com/html">https://doi.org/10.1001/journal.com/html</a>

NOTE hckg:operatorCost is a leaf node.

# **Description**

#### **Class Domain for:**

smo:Operator

### **Class Range for:**

xsd:int

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:operatorCost a owl:DatatypeProperty ;
rdfs:domain smo:Operator ;
rdfs:range xsd:int .
```

# Datatype Property: <a href="https://doi.org/10.1001/journal.com/">hckg:personnelID</a> <a href="back to top">back to top</a>

NOTE hckg:personnelID is a leaf node.

### **Description**

#### **Class Domain for:**

smo:Operator

#### **Class Range for:**

xsd:string

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:personnelID a owl:DatatypeProperty ;
rdfs:domain smo:Operator ;
```

rdfs:range xsd:string .

# Datatype Property: <a href="hckg:qualification">hckg:qualification</a> back to top

NOTE hckg:qualification is a leaf node.

# **Description**

### **Class Domain for:**

smo:Operator

# **Class Range for:**

xsd:string

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix smo: <http://www.semanticweb.org/manufacturingproductionline#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:qualification a owl:DatatypeProperty ;
rdfs:domain smo:Operator ;
rdfs:range xsd:string .
```

# Datatype Property: <u>hckg:relatedAssets</u> <u>back to top</u>

NOTE hckg:relatedAssets is a leaf node.

### **Description**

### **Class Domain for:**

hckg:KPIStore

# **Class Range for:**

xsd:string

### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:relatedAssets a owl:DatatypeProperty ;
rdfs:domain hckg:KPIStore ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="hckg:resultID">hckg:resultID</a> back to top

NOTE hckg:resultID is a leaf node.

# **Description**

### **Class Domain for:**

hckg:Result

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:resultID a owl:DatatypeProperty ;
rdfs:domain hckg:Result;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://hckg:resultTypeID">hckg:resultTypeID</a> back to top

NOTE hckg:resultTypeID is a leaf node.

# **Description**

#### **Class Domain for:**

hckg:Result

### **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:resultTypeID a owl:DatatypeProperty ;
rdfs:domain hckg:Result ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1007/journal.org/">hckg:resultTypeName</a> <a href="https://doi.org/">back to top</a>

NOTE hckg:resultTypeName is a leaf node.

### **Description**

# **Class Domain for:**

hckg:Result

### **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:resultTypeName a owl:DatatypeProperty ;
rdfs:domain hckg:Result ;
rdfs:range xsd:string .
```

# Datatype Property: <u>hckg:robotCondition</u> <u>back to top</u>

NOTE hckg:robotCondition is a leaf node.

## **Description**

#### **Class Domain for:**

var:IndustrialRobot | var:MobileRobot

### **Class Range for:**

xsd:int

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix var: <http://www.satisfactory-project.eu/satisfactory/var#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:robotCondition a owl:DatatypeProperty ;
rdfs:domain var:IndustrialRobot,
var:MobileRobot ;
rdfs:range xsd:int .
```

# Datatype Property: <a href="hckg:robotCost">hckg:robotCost</a> back to top

NOTE hckg:robotCost is a leaf node.

# **Description**

### **Class Domain for:**

var:IndustrialRobot | var:MobileRobot

### **Class Range for:**

xsd:int

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix var: <http://www.satisfactory-project.eu/satisfactory/var#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:robotCost a owl:DatatypeProperty ;
rdfs:domain var:IndustrialRobot,
var:MobileRobot ;
rdfs:range xsd:int .
```

# Datatype Property: <a href="hckg:robotID">hckg:robotID</a> back to top

NOTE hckg:robotID is a leaf node.

# **Description**

# **Class Domain for:**

var:MobileRobot | var:IndustrialRobot

### **Class Range for:**

xsd:string

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix var: <http://www.satisfactory-project.eu/satisfactory/var#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:robotID a owl:DatatypeProperty ;
rdfs:domain var:IndustrialRobot,
var:MobileRobot;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1007/journal.com/html">https://doi.org/10.1007/journal.com/html</a> back to top

NOTE hckg:robotType is a leaf node.

# **Description**

#### **Class Domain for:**

var:MobileRobot | var:IndustrialRobot

### **Class Range for:**

xsd:string

# Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix var: <http://www.satisfactory-project.eu/satisfactory/var#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:robotType a owl:DatatypeProperty ;
rdfs:domain var:IndustrialRobot,
var:MobileRobot ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="hckg:sensorCost">hckg:sensorCost</a> back to top

NOTE hckg:sensorCost is a leaf node.

### **Description**

#### **Class Domain for:**

sosa1:Sensor

# **Class Range for:**

xsd:integer

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:sensorCost a owl:DatatypeProperty ;
rdfs:domain sosa1:Sensor ;
rdfs:range xsd:integer .
```

# Datatype Property: <u>hckg:sensorID</u> <u>back to top</u>

NOTE hckg:sensorID is a leaf node.

# **Description**

#### **Class Domain for:**

sosa1:Sensor

### **Class Range for:**

xsd:string

#### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:sensorID a owl:DatatypeProperty ;
rdfs:domain sosa1:Sensor ;
rdfs:range xsd:string .
```

# Datatype Property: <u>hckg:sensorReadingValue</u> <u>back to top</u>

NOTE hckg:sensorReadingValue is a leaf node.

# **Description**

# **Class Domain for:**

sosa1:Sensor

#### **Class Range for:**

<u>xsd:double</u> | <u>xsd:string</u>

### Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:sensorReadingValue a owl:DatatypeProperty ;
rdfs:domain sosa1:Sensor ;
rdfs:range xsd:double,
xsd:string .
```

# Datatype Property: <u>hckg:sensorType</u> <u>back to top</u>

NOTE hckg:sensorType is a leaf node.

# **Description**

### **Class Domain for:**

sosa1:Sensor

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:sensorType a owl:DatatypeProperty ;
rdfs:domain sosa1:Sensor ;
rdfs:range xsd:string .
```

# Datatype Property: <u>hckg:sourceID</u> <u>back to top</u>

NOTE hckg:sourceID is a leaf node.

# **Description**

### **Class Domain for:**

hckg:LogDataStore

# **Class Range for:**

xsd:string

Implementation:

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:sourceID a owl:DatatypeProperty ;
rdfs:domain hckg:LogDataStore ;
rdfs:range xsd:string .
```

# Datatype Property: <a href="https://doi.org/10.1001/journal.com/html">https://doi.org/10.1001/journal.com/html</a>

NOTE hckg:warningLimit is a leaf node.

# **Description**

#### **Class Domain for:**

sosal:Observation

#### **Class Range for:**

xsd:double

```
@prefix hckg: <https://www.abonyilab.com/wh-ontology#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix sosa1: <http://www.w3.org/ns/sosa#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
hckg:warningLimit a owl:DatatypeProperty ;
rdfs:domain sosa1:Observation ;
rdfs:range xsd:double .
```

# **Annotation Properties**

Annotation Property: dc:isPartOf back to top

NOTE dc:isPartOf is a leaf node.

# **Description**

# **Class Domain for:**

var:IndustrialRobot | var:MobileRobot

# **Class Range for:**

var:Robot

### Implementation:

```
@prefix dc: <http://purl.org/dc/elements/1.1/> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix var: <http://www.satisfactory-project.eu/satisfactory/var#> .
dc:isPartOf a owl:AnnotationProperty ;
rdfs:domain var:IndustrialRobot,
var:MobileRobot;
rdfs:range var:Robot .
```

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