# Documentation

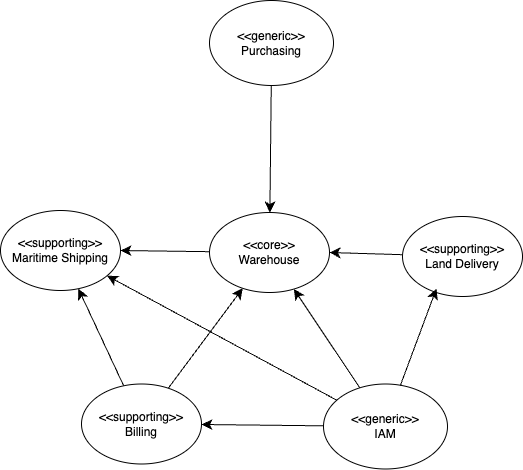
##### Name: Krystal Distribution Group

##### Author: Mykhailo Kruts

##### Description: Krystal Distribution Group (KdG) specializes in the efficient and seamless distribution of essential raw materials, including gypsum, iron ore, cement, petcoke, and slag. They want to renew their logistics system, as it is outdated and hard to change. They need a new system that can be adapted easily and makes data available for other systems.

## Subdomains:

* Warehouse :core
* Land Delivery :supporting
* Maritime Shipping :supporting
* Billing :supporting
* Purchasing :generic
* IAM :generic

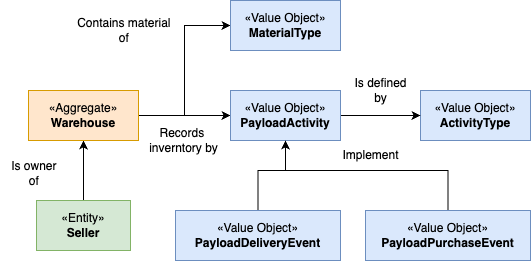


## Bounded Contexts:

1. Warehouse
2. Landside
3. Waterside
4. Invoicing

## Warehouse context:

#### Domain model:



#### Purpose:

* Manage warehouse information, including storage capacity and raw material stock levels.
* Maintain records of mineral types and quantities stored.

#### Entities:

* Seller

#### Value Objects:

* PayloadActivity
  + PayloadDeliveryEvent
  + PayloadPurchaseEvent
* ActivityType
* MaterialType
* MaterialAmount

#### Aggregates:

* Warehouse
  + Seller
  + MaterialType
  + PayloadActitvity

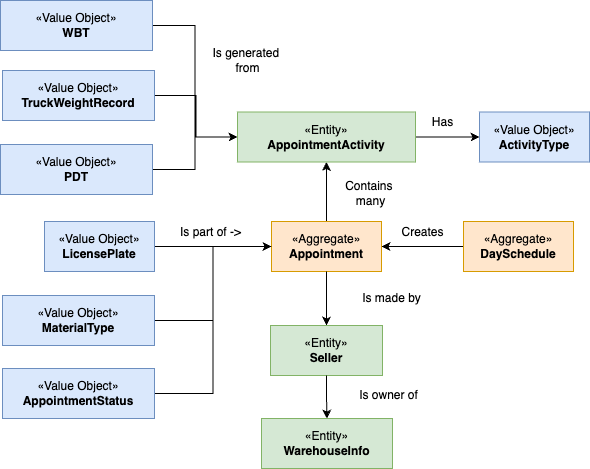
#### Commands:

#### Events:

* PDTReceivedEvent
  + Event when warehouse has received a payload delivery for specific warehouse with a certain amount
* UpdateWarehouseCapacityEvent
  + Event is sent when calculating warehouse capacity

## Landside context:

#### Domain model:



#### Purpose:

* Schedule truck arrivals to ensure efficient processing and avoid congestion.
* Maintain a log of scheduled and actual arrival times.
* Maintain a log of departures.
* Record the weight of trucks arriving and leaving the warehouse.
* Calculate the net weight of minerals delivered.

#### Entities:

* Seller
* WarehouseInfo
* AppointmentActivity

#### Value Objects:

* ActivityType
* AppointmentStatus
* LicensePlate
* MaterialType
* PDT
* WBT
* TruckWeightRecord

#### Aggregates:

* Appointment
  + LicensePlate
  + MaterialType
  + AppointmentStatus
  + AppointmentActivity
* DaySchedule
  + Appointment

#### Commands:

* CreateAppointmentCommand
  + Schedules a truck for delivery within a specific time window.
* PassBridgeCommand
  + A trigger when a truck passes weighing bridge
* TruckArrivalCommand
  + Truck arrives to facility

#### Events:

* WarehouseUpdatedEvent
  + Event to prohibit sellers from making appointments when the desired warehouse has reached its capacity.
* PayloadDeliveredEvent
  + Event to send calculated net weight of delivered payload

## Waterside context:

## Invoicing context:

## Context mapping plan: