Logistic System Object Oriented Design

Use cases: 1) Place order – Customer creates order including item details, pickup, drop location and time.

2) Pickup shipment – The next order in order queue is picked up and delivery partner is assigned. The delivery partner picks up the shipment and delivers it to local storage facility.

3) Receive shipment – The storage facility admin receives the shipment and updates order tracking status.

4)Dispatch shipment – The admin assigns driver, transport vehicle and next destination for the shipment.

5) Track order – Whenever order reaches a particular destination, the order status is notified to the client.

Actors: Customer, Delivery agent, Facility admin

Assumptions: 1) Customer is already registered to the application.

2) Payment channel is a third party service not included here.

Design considerations – 1) Use chain of responsibility for each storage facility handling. The facility receives order, dispatches order and delegates task to next facility.

2) Use builder to create order of items.

3) Use Observer to notify customer about order status.

4) Decouple order placement and order processing through an order queue.