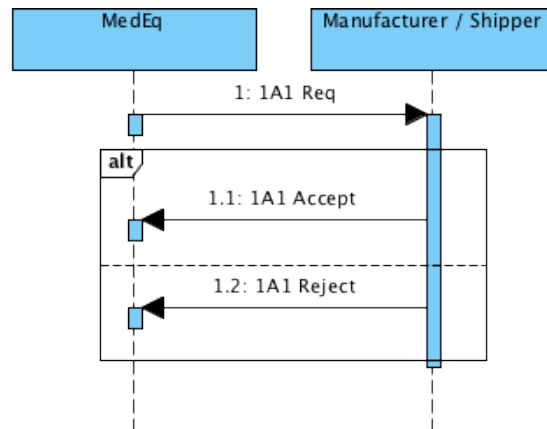# Deliverable 2 PIP Message Exchange
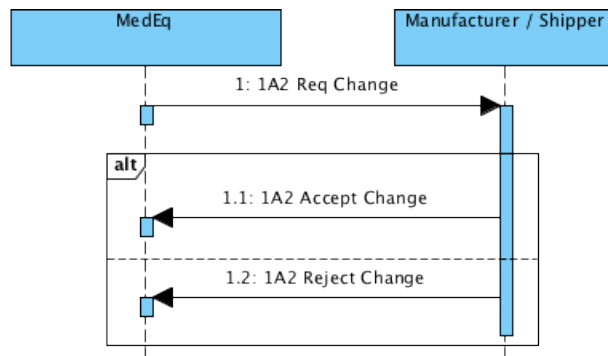
Xusheng Xiao
000954996
xxiao2@ncsu.edu

1. Account Setup and Maintain

- PIP 1A1: Request Account Setup
  - o MedEq outsources manufacturing to two contract manufacturers: FlexMan and SoleMan and employs two shippers: FedUp and UpFed. Thus, MedEq needs to share information, such as locations and contacts, with these four companies.
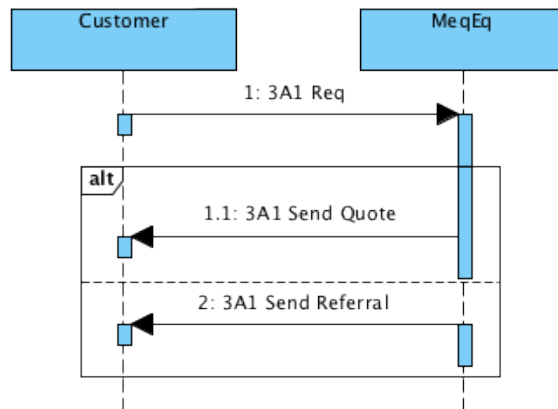 - o

- PIP 1A2: Maintain Account
  - o If MedEq or one of its business partners (FlexMan, SoleMan, FedUp, and UpFed) needs to change their information, they can use this PIP for sending change requests.
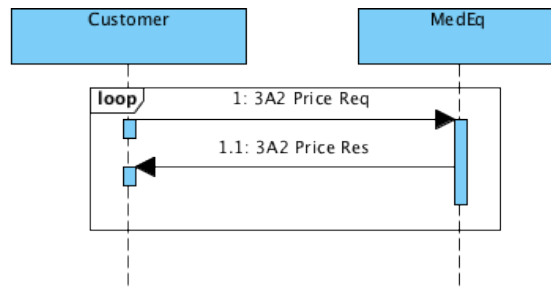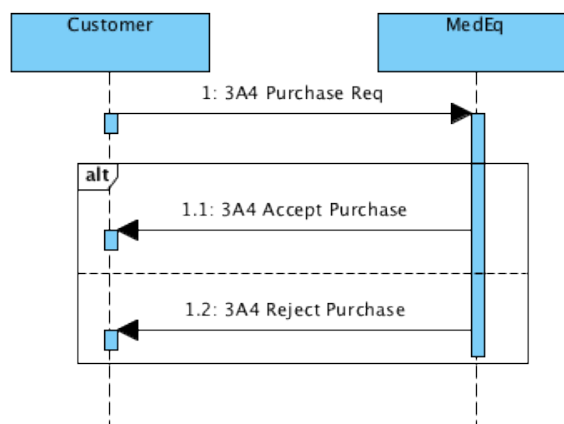 - o

2. Order Management

- PIP 3A1: Request Quote
  - o This PIP allows Customer to send their requirements to MedEq.
  - o

```
        Customer                    MeqEq

          │ 1: 3A1 Req                │
          │──────────────────────────▶│
          │                           │
   ┌alt───────────────────────────────────┐
   │      │  1.1: 3A1 Send Quote       │   │
   │      │◀──────────────────────────│   │
   │┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄│
   │      │  2: 3A1 Send Referral      │   │
   │      │◀──────────────────────────│   │
   └───────────────────────────────────────┘
```
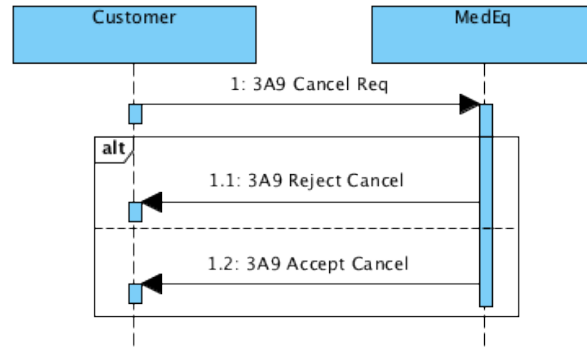
- PIP 3A2: Request Price and Availability
  - o This PIP allows Customer to request the price and availability of the submitted requirements.
  - o

```
        Customer                    MedEq

   ┌loop──────────────────────────────────┐
   │      │  1: 3A2 Price Req          │   │
   │      │──────────────────────────▶│   │
   │      │  1.1: 3A2 Price Res        │   │
   │      │◀──────────────────────────│   │
   └───────────────────────────────────────┘
```
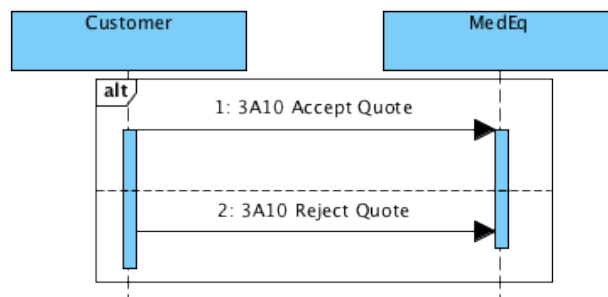
- PIP 3A4: Request Purchase Order
  - o If MedEq and Customer agree on the price and requirements, the Customer can request a purchase order
  - o

```
        Customer                    MedEq

          │ 1: 3A4 Purchase Req        │
          │──────────────────────────▶│
          │                           │
   ┌alt───────────────────────────────────┐
   │      │  1.1: 3A4 Accept Purchase  │   │
   │      │◀──────────────────────────│   │
   │┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄│
   │      │  1.2: 3A4 Reject Purchase  │   │
   │      │◀──────────────────────────│   │
   └───────────────────────────────────────┘
```

- PIP 3A9: Request Purchase Order Cancellation
  - o If Customer does not agree on the price, he can cancel it.
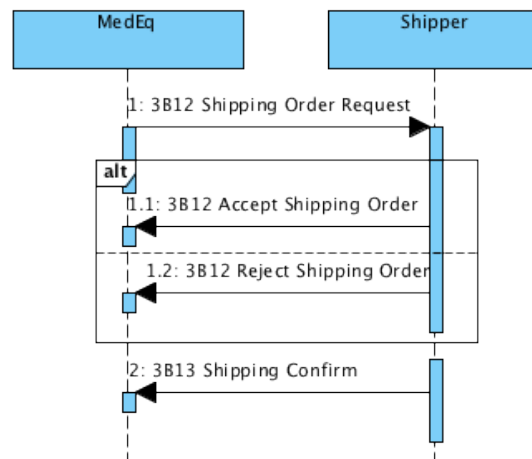
- PIP 3A10: Notify of Quote Acknowledgement
    - Customer can notify MedEq that he accepts or rejects the order based on the price
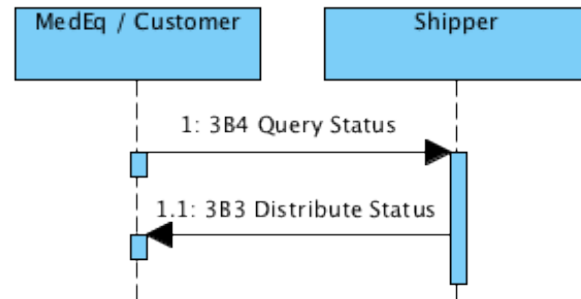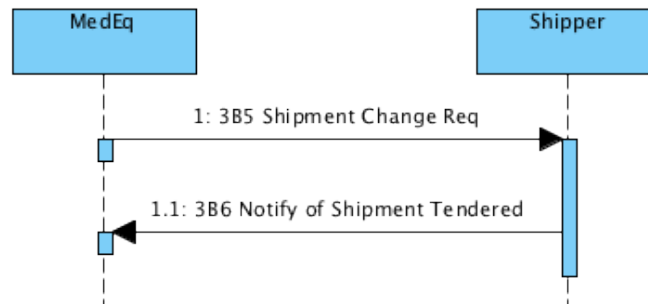

3. Shipment Management

- PIP 3B12: Request Shipping Order
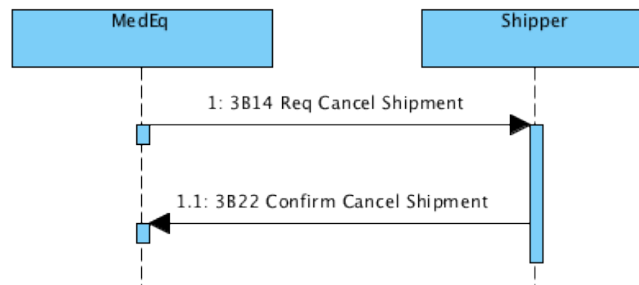- PIP 3B13: Notify of Shipping Order Confirmation

- PIP 3B3: Distribute Shipment Status
- PIP 3B4: Query Shipment Status

- PIP 3B5: Request Shipment Change
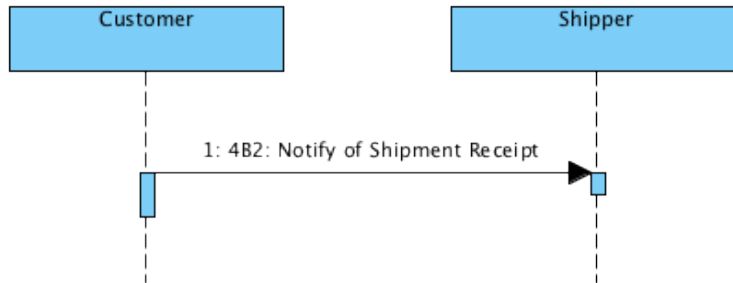- PIP 3B6: Notify of Shipments Tendered

- PIP 3B14: Request Shipping Order Cancellation
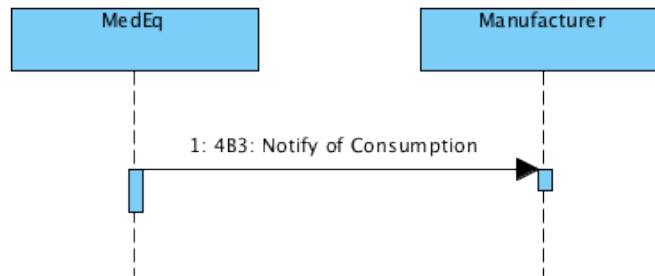- PIP 3B22: Notify of Shipping Order Cancellation Confirmation
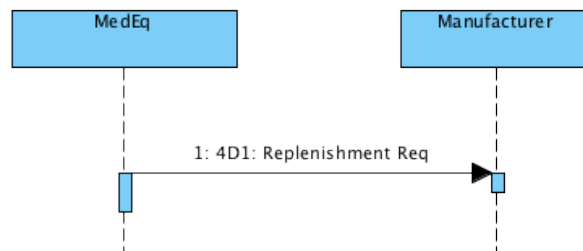

4. Stock Management

- PIP 4B2: Notify of Shipment Receipt
    - o This enables a consignee, such as customer and MedEq, to report the status of a received shipment to another interested party, such as MedEq, FedUp, or UpFed.

- PIP 4B3: Notify of Consumption
  - o This enables MedEq to communicate the material information with contract manufacturers
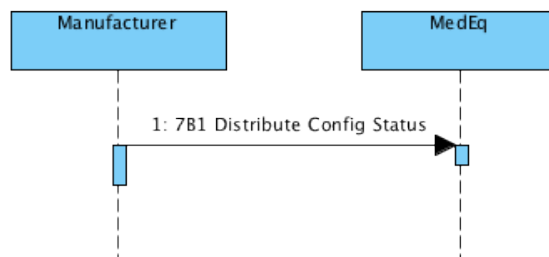

- PIP 4D1: Notify of Material Release
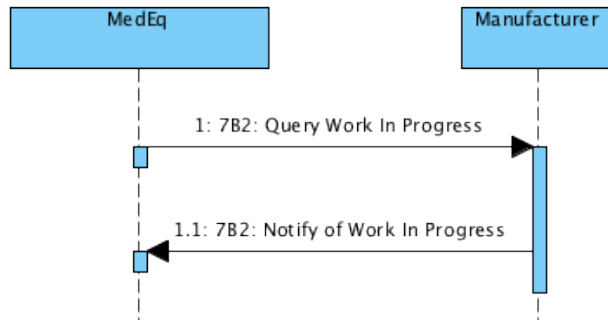 - o This enables MedEq to trigger a stock replenishment

5. Manufacturing
- PIP 7B1: Distribute Work in Process
  - o This enables the contract manufacturers (FlexMan, SoleMan) to notify MedEq the configuration status of the manufacturing of equipment

- PIP 7B2: Query Work in Process
  - This enables MedEq to query the status of the manufacturing equipment from the contract manufacturers (FlexMan, SoleMan)

MedEq   Manufacturer

1: 7B2: Query Work In Progress

1.1: 7B2: Notify of Work In Progress

6. Return and Finance

- PIP 3C1: Return Product
  - This PIP enables customer to submit a request to return the equipment if it does not meet the requirements

Customer   MedEq

1: 3C1: Return Req

1.1: 3C1: Return Res