Radish34 Procurement Sequence Diagram (Functional View)
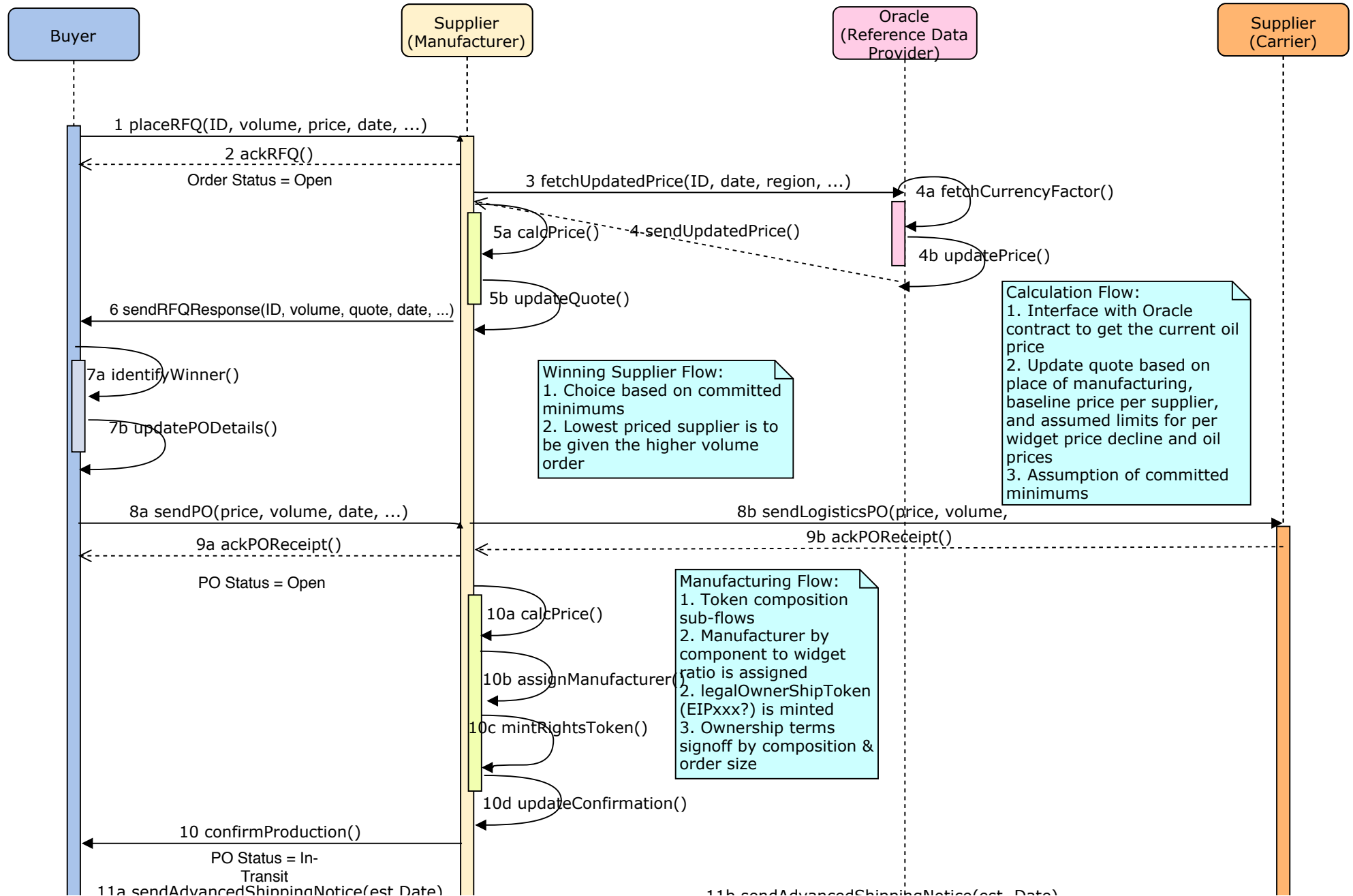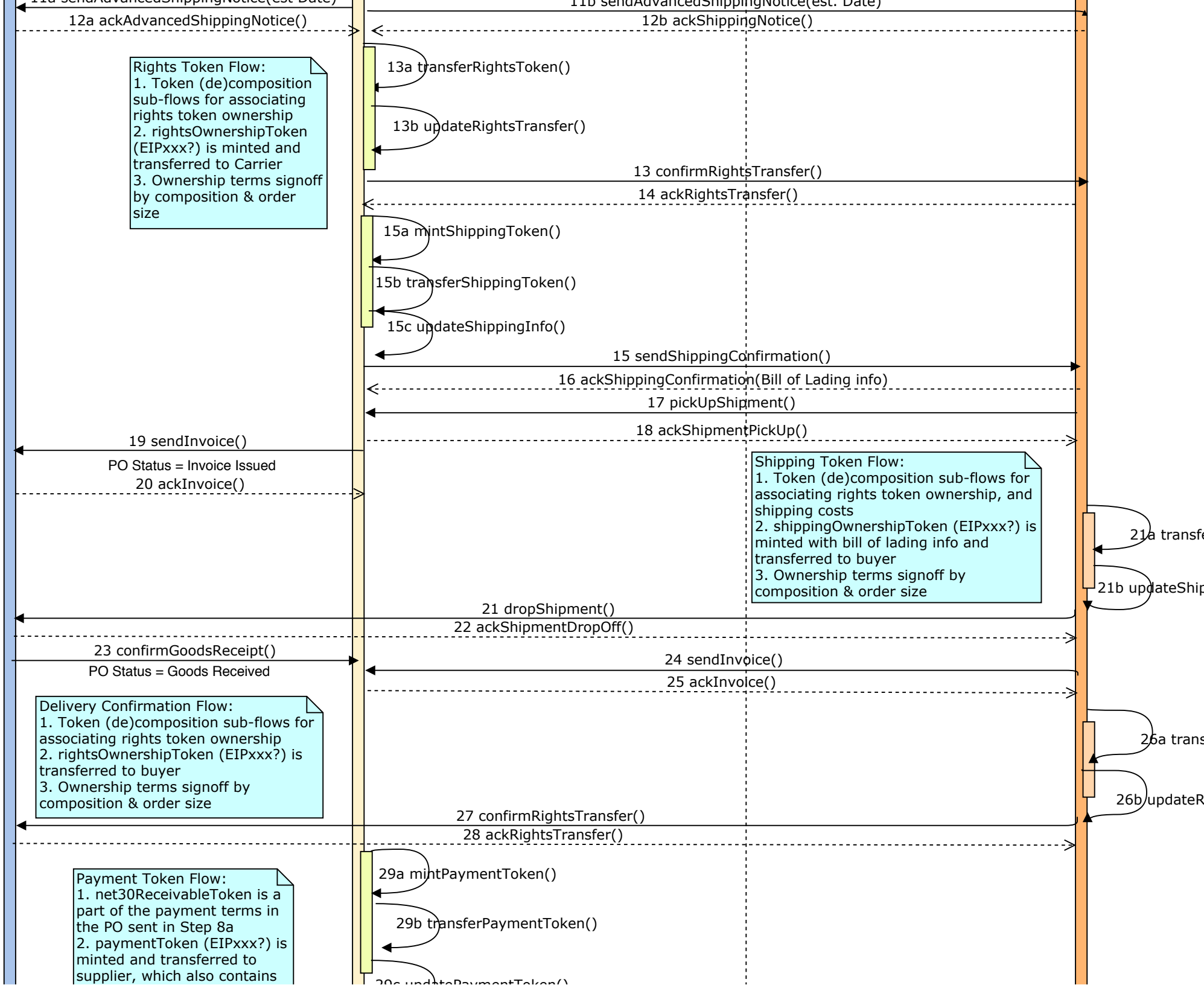
Note: Onboarding/set up flow is a separate timing digram, and will be interfaced at the beginning and over the duration of the procurement life cycle. This includes any authentication of identities both for public as well as private attributes/functionalities

Buyer | **Supplier (Manufacturer)** | **Oracle (Reference Data Provider)** | **Supplier (Carrier)**

1 placeRFQ(ID, volume, price, date, ...)

2 ackRFQ()

Order Status = Open

3 fetchUpdatedPrice(ID, date, region, ...)

4a fetchCurrencyFactor()

5a calcPrice()   4 sendUpdatedPrice()

4b updatePrice()

5b updateQuote()

6 sendRFQResponse(ID, volume, quote, date, ...)

7a identifyWinner()

Calculation Flow:
1. Interface with Oracle contract to get the current oil price
2. Update quote based on place of manufacturing, baseline price per supplier, and assumed limits for per widget price decline and oil prices
3. Assumption of committed minimums

7b updatePODetails()

Winning Supplier Flow:
1. Choice based on committed minimums
2. Lowest priced supplier is to be given the higher volume order

8a sendPO(price, volume, date, ...)

8b sendLogisticsPO(price, volume,

9a ackPOReceipt()

9b ackPOReceipt()

PO Status = Open

10a calcPrice()

Manufacturing Flow:
1. Token composition sub-flows
2. Manufacturer by component to widget ratio is assigned
2. legalOwnerShipToken (EIPxxx?) is minted
3. Ownership terms signoff by composition & order size

10b assignManufacturer()

10c mintRightsToken()

10d updateConfirmation()

10 confirmProduction()

PO Status = In-Transit

11a sendAdvancedShippingNotice(est Date)

11b sendAdvancedShippingNotice(est Date)

11a sendAdvancedShippingNotice(est Date)   11b sendAdvancedShippingNotice(est. Date)

12a ackAdvancedShippingNotice()   12b ackShippingNotice()

Rights Token Flow:
1. Token (de)composition sub-flows for associating rights token ownership
2. rightsOwnershipToken (EIPxxx?) is minted and transferred to Carrier
3. Ownership terms signoff by composition & order size

13a transferRightsToken()

13b updateRightsTransfer()

13 confirmRightsTransfer()

14 ackRightsTransfer()

15a mintShippingToken()

15b transferShippingToken()

15c updateShippingInfo()

15 sendShippingConfirmation()

16 ackShippingConfirmation(Bill of Lading info)

17 pickUpShipment()

18 ackShipmentPickUp()

19 sendInvoice()

PO Status = Invoice Issued

20 ackInvoice()

Shipping Token Flow:
1. Token (de)composition sub-flows for associating rights token ownership, and shipping costs
2. shippingOwnershipToken (EIPxxx?) is minted with bill of lading info and transferred to buyer
3. Ownership terms signoff by composition & order size

21a transfe

21b updateShip

21 dropShipment()

22 ackShipmentDropOff()

23 confirmGoodsReceipt()   24 sendInvoice()

PO Status = Goods Received   25 ackInvoice()

Delivery Confirmation Flow:
1. Token (de)composition sub-flows for associating rights token ownership
2. rightsOwnershipToken (EIPxxx?) is transferred to buyer
3. Ownership terms signoff by composition & order size

26a trans

26b updateR

27 confirmRightsTransfer()

28 ackRightsTransfer()

29a mintPaymentToken()

Payment Token Flow:
1. net30ReceivableToken is a part of the payment terms in the PO sent in Step 8a
2. paymentToken (EIPxxx?) is minted and transferred to supplier, which also contains

29b transferPaymentToken()

29c updatePaymentToken()

erShippingToken()

ppingTransfer()

sferRightsToken()

ightsTransferInfo()

the payment terms
3. Ownership terms signoff by composition & order size

29c updatePaymentToken()

30 payCarrier()

31 ackPayment()

32 fetchUpdatedPrice(ID, date, region, ...)

33a fetchCurrencyFactor()

34a mintPaymentToken()

33 sendUpdatedPrice()

33b updatePrice()

34b transferPaymentToken()

34d updatePaymentToken()

34 paySupplier()

PO Status = Closed
35 ackPayment()

36a transferRightsToken()

37 confirmOwnershipTransfer()

36b transferRightsToken()

38 ackOwnershopTransfer()

36a runDisputeCheck()

Dispute Management Flow:
1. net30ReceivableToken is minted and transferred to supplier(?)
2. paymentToken (EIPxxx?) is transferred to buyer, based on oil price of the date of delivery
3. Ownership terms signoff by composition & order size (after re-association)
Note: Simpler flow to address price variations across PO and Invoicing is sufficient for the base scope

36b amendInvoice()

36c updateInvoice()

37 sendUpdatedInvoice()

PO Status = Re-opened

38 ackInvoice()

39a resolveDispute()

39b transferPaymentToken()

39c updatePaymentInfo()

39 sendRevisedPayment()

40 ackRevisedPayment()