FLOW Common Use Cases
Data Product Team

The examples below are several of the ways current participants can use FLOW data. There may be valuable use cases outside of this document that are worth considering for your organization.

Throughput Reporting and Visualization

Participants use FLOW information to quantify and monitor current regional logistics capacity, utilization, and throughput across different logistics modes. This provides transparency into the current conditions of logistics networks, identifying sources of congestion, while tracking changes in throughput and variance over time.

Demand Forecasting

Aggregated PO information represents manufacturing orders that will transition to logistics demand. Participants use demand forecasts to inform resourcing and procurement decisions.

Throughput Forecasting

Participants use FLOW data to predict how incoming demand will impact regional logistics throughput. Historic demand, capacity, and throughput data can be used to help quantify how throughput and variance are affected by capacity and demand. When combined with future aggregated PO information, this can be used to forecast transit/cycle times across different modes within a region. Further related use cases that incorporate Throughput Forecasting include:

1. Estimating transit/cycle times.
2. Improving routing decisions.
3. Improving expectation management, scheduling, and resourcing.
4. Improving inventory stocking levels for goods.
5. Improving production/service levels.
6. Improving dynamic pricing cycles.

Service Optimization

Supply participants use FLOW data to optimize how logistics capacity matches to demand while maintaining low variance (i.e., maximizing on-time arrival). Further related use cases include:

1. **Setting Contract and Spot-Market Freight Resourcing Levels –** Forecasts incorporating FLOW's demand and throughput data can be used to inform Push-Pull hybrid mixture models. These models can help to balance demand responsiveness with assignment flexibility.
2. **Setting Service-Mix Expectations –** Participants use mixture models (i.e., probabilistic models that can identify sub-groups within data) to inform service expectation times as well as well as the size of service level pools (e.g., how many units of fast, standard, value service, etc. should be sold across a route). This provides a granular and easy to adjust method to better fit demand to capacity.
3. **Linking Dynamic Pricing with Service Commitments –** Demand and throughput forecasts enabled by FLOW can be used to dynamically adjust pricing to keep service-mix buckets filled while maximizing revenue yield. This will help to drive demand through routes that are most likely to result in on-time arrivals while maximizing production levels.