

# **Distribution and Logistics**

The means by which goods are carried from one or more location to other locations is distribution. The organising that is required to achieve this is called logistics. In the context of business, distribution and logistics are employed throughout the world from small local arrangements through to intricate global networks.

Material moving workers are categorized into two groups—operators and laborers. Operators use machinery to move construction materials, earth, petroleum products, and other heavy materials. Generally, they move materials over short distances—around a construction site, factory, or warehouse. Some move materials onto or off of trucks and ships. Operators control equipment by moving levers or foot pedals, operating switches, or turning dials. They may also set up and inspect equipment, make adjustments, and perform minor repairs when needed. Laborers and hand material movers manually handle freight, stock, or other materials; clean vehicles, machinery, and other equipment; feed materials into or remove materials from machines or equipment; and pack or package products and materials.

Material moving occupations are classified by the type of equipment they operate or goods they handle. Each piece of equipment requires different skills to move different types of loads. (For information on operating engineers; paving, surfacing, and tamping equipment operators; and piledriver operators, see the statement on construction equipment operators elsewhere.)

Industrial truck and tractor operators drive and control industrial trucks or tractors equipped to move materials around a warehouse, storage yard, factory, or construction site. A typical industrial truck, often called a forklift or lift truck, has a hydraulic lifting mechanism and forks. Industrial truck and tractor operators also may operate tractors that pull trailers loaded with materials, goods, or equipment within factories and warehouses, or around outdoor storage areas.

Excavating and loading machine and dragline operators operate or tend machinery equipped with scoops, shovels, or buckets, to dig and load sand, gravel, earth, or similar materials into trucks or onto conveyors. Construction and mining industries employ the majority of excavation and loading machine and dragline operators. Dredge operators excavate and maintain navigable

channels in waterways by operating dredges to remove sand, gravel, or other materials from lakes, rivers, or streams. Underground mining loading machine operators operate underground loading machine to load coal, ore, or rock into shuttle or mine car or onto conveyors. Loading equipment may include power shovels, hoisting engines equipped with cable-drawn scraper or scoop, or machines equipped with gathering arms and conveyor.

Crane and tower operators operate mechanical boom and cable or tower and cable equipment to lift and move materials, machinery, or other heavy objects. They extend or retract a horizontally mounted boom to lower or raise a hook attached to the load line. Most operators coordinate their maneuvers in response to hand signals and radioed instructions. Operators position the loads from the onboard console or from a remote console at the site. While crane and tower operators are noticeable at office building and other construction sites, the biggest group works in primary metal, metal fabrication, and transportation equipment manufacturing industries that use heavy, bulky materials. Hoist and winch operators control movement of cables, cages, and platforms to move workers and materials for manufacturing, logging, and other industrial operations. They work in such positions as derrick operators and hydraulic boom operators. Many hoist and winch operators are found in manufacturing or construction industries.

Pump operators and their helpers tend, control, or operate power-driven pumps and manifold systems that transfer gases, oil, or other materials to vessels or equipment. They maintain the equipment to regulate the flow of materials according to a schedule set up by petroleum engineers and production supervisors. Gas compressor and gas pumping station operators operate steam, gas, electric motor, or internal combustion engine-driven compressors. They transmit, compress, or recover gases, such as butane, nitrogen, hydrogen, and natural gas. Wellhead pumpers operate power pumps and auxiliary equipment to produce flow of oil or gas from wells in oilfields.

Tank, car, truck, and ship loaders operate ship loading and unloading equipment, conveyors, hoists, and other specialized material handling equipment such as railroad tank car unloading equipment. They may gauge or sample shipping tanks and test them for leaks. Conveyor operators and tenders control or tend conveyor systems that move materials to or from stockpiles,

processing stations, departments, or vehicles. Shuttle car operators operate diesel or electric-powered shuttle car in underground mine to transport materials from working face to mine cars or conveyor.

Laborers and hand freight, stock, and material movers manually move materials or perform other unskilled general labor. These workers move freight, stock, and other materials to and from storage and production areas, loading docks, delivery vehicles, ships, and containers. Their specific duties vary by industry and work setting. Specialized workers within this group include baggage and cargo handlers, who work in transportation industries, and truck loaders and unloaders. In factories, they may move raw materials or finished goods between loading docks, storage areas, and work areas as well as sort materials and supplies and prepare them according to their work orders.

Hand packers and packagers manually pack, package, or wrap a variety of materials. They may inspect items for defects, label cartons, stamp information on products, keep records of items packed, and stack packages on loading docks. This group also includes order fillers, who pack materials for shipment, as well as grocery store courtesy clerks. In grocery stores, they may bag groceries, carry packages to customers' cars, and return shopping carts to designated areas.

Machine feeders and offbearers feed materials into or remove materials from automatic equipment or machines tended by other workers. Cleaners of vehicles and equipment clean machinery, vehicles, storage tanks, pipelines, and similar equipment using water and other cleaning agents, vacuums, hoses, brushes, cloths, and other cleaning equipment. Refuse and recyclable material collectors gather trash, garbage, and recyclables from homes and businesses along a regularly scheduled route, and deposit the refuse in their truck for transport to a dump, landfill, or recycling center. They lift and empty garbage cans or recycling bins by hand, or operate a hydraulic lift truck that picks up and empties dumpsters.

## **Petroleum Distribution [Mission Statement]:**

The Petroleum Optimization Center [POC] provides a resource planning & scheduling function, incorporating the use of an advanced Proportional

Inventory Replenishment system – Aspen Retail. The name reflects the purpose of optimizing petroleum transportation operations.

The Planning & Scheduling component takes into account fuel operations throughout North America. The Petroleum Optimization Center maintains direct control over the assignment of orders to petroleum freight companies to ensure that the maximum utilization of resources is sustainable. Consequently, the POC recognizes the significant benefits & efficiencies it can provide to its customer base.

### **[Our Vision]:**

Our motivation is to provide value added services to customers. The Petroleum Optimization Center enhances the following tasks:

- More effective Inventory Management,
- Seamless order taking for all customers,
- Planning and scheduling from one location, consequently maintaining continuity in the areas of:
  - Payload optimization
  - Equipment utility
  - Assignment of resources
- Improved Customer Service through
  - Centralized monitoring & measurement [KPI's]
  - Developing and cascading of 'best practices'

The best is that we can provide one-stop shopping customers integrate high-tech inventory management. Meanwhile focused on the continuity of the process.

### **[Goals]:**

By institutionalizing processes, this allows improved inventory management and global operational efficiency through better utility, lower Cost Per Volume Delivered [CPVD], load leveling and closer scrutiny of customer service [run-outs/retains] The purpose of the POC is to optimize the use of available resources. The primary objectives are to:

- Provide a value added service to all customers
- Make decisions on the best match of loads to resources, considering elements such as customer service, costs [CPVD], payload, equipment utility, reduction in split deliveries, tank inventory leveling and driver retention
- Drive inefficiencies out of the cost component

### **[Petroleum Optimization Center Operations]:**

The function of the Petroleum Optimization Center is focused on Inventory Management, planning [payload optimization], scheduling, the distribution of Optimization Plans [Terminal Tender Reports] and customer & driver communication regarding product issues, i.e. deliveries, inventories.

System interfaces between the customer, carrier and POC [Aspen Retail] may vary depending upon local customer and Bulk Plus Logistics' technology. Therefore, it will be the responsibility of the POC to develop procedures for the respective interface and ensure all personnel receive the appropriate documentation & training for current and future enhancements.

### **[POC Operating Protocol]:**

There are 4 pre-requisites to managing an efficient Petroleum Optimization Center and to ensure the Optimization Plan can be executed to the customers' satisfaction; **1.** the data quality in Aspen Retail must be accurate and current, **2.** the available resources at the must be current, **3.** the minimum Economic Order Size [EOS] must be achieved, and **4.** the delivery window & lead time must be adhered to at all times.

Daily operations reviews are conducted to deal with:

- Available resources [amendments to the pre-set Transport Schedule, i.e. equipment, drivers]
- Data quality issues/changes requiring immediate correction of Aspen Retail [product changes, name changes]
- Scheduling issues
- Customer Service Non-conformances

### **[Measurement]:**

The Petroleum Optimization Center has a critical need to analyze the ability to meet its objectives in a repeatable manner. A Balanced Scorecard identifies the Key Performance Indicators determined to be the most effective in measuring the activities of the POC and the customer in meeting those objectives.

### **[Optimization]:**

Bulk Plus Logistics has the resources, the expertise and the technology to identify and quantify potential transportation efficiency initiatives in areas such as:

- Route Optimization

- Payload Optimization
- Petroleum Distribution Optimization

Furthermore, we can add your volumes to our existing base of freight to increase the opportunity for load matching.

Bulk Plus also operates a Petroleum Distribution Optimization Centre in Oakville, ON using state of the art Aspen Retail software.

### **[Route]:**

Route Optimization improves system freight operations to reduce costs, decrease empty miles, improve driver satisfaction and increase asset utilization.

Our optimization experts will work with you to analyze your traffic patterns, identify and quantify savings opportunities, manage the process via our Load Optimization Centers and monitor for results.

### **[Supply Chain Assessment]:**

You need to continually assess and improve all elements of your supply chain to remain competitive. We help you do that by providing an unbiased, professionally competent, and analytically innovative outside perspective. The tools we use include:

- Process mapping of the supply chain
- Activity based modeling of current and alternative supply and inventory strategy
- The use of an applied diagnostic framework to identify key priority areas for improving efficiency
- We look at and consider how and where you may source inbound materials through to final customer delivery of your products

Based on:

Unknown author; Occupational Outlook Handbook 2004-2005 Edition; U.S. Bureau of Labor Statistics; Washington DC USA; 2004; Available <http://www.bls.gov/oco/home.htm>.