

# Terminal Solution for Buckeye Partners



## Challenge

Buckeye Partners owns and operates one of the United States' largest petroleum products terminal and pipeline networks providing refiners, wholesalers, marketers, airlines, railroads and other commercial end-users with transportation and storage of refined petroleum products. In addition to pipeline transportation services, Buckeye provides terminalling, storage and refined product distribution services. The Partnership owns more than 100 refined petroleum products terminals with an aggregate storage capacity of over 64 million barrels / 10.1 million cubic meters, and owns and operates a major natural gas storage facility in California.

With a history dating back well over 100 years, Buckeye undertook a major strategic initiative beginning in 2007 that started a period of rapid growth. As market forces conspired to result in a global increase in the demand for additional storage capacity, Buckeye embarked on its expansion strategy. As the Partnership planned for its growth, it realized that it needed an Information System that would support its growing number of pipelines and terminals, and the new business models it was encountering, while simultaneously keeping cost and resource levels low. Like many pipeline and terminal operators, Buckeye relied on a custom developed commercial system that bridged the gap between its terminal automation systems and its accounting systems to

provide support for the commercial functions that Buckeye needed. Buckeye began an exhaustive, multi-year search that included evaluating custom developed solutions and packaged software solutions that could provide it with the following functions:

- Planning and Scheduling
- Ticketing
- Inventory Management
- Contract Management
- Billing

### Solution

After an exhaustive selection process that evaluated many of the leading systems on the market, Buckeye selected the Synthesis® system. In part, Buckeye selected Synthesis for its ability to support Buckeye’s existing needs as well as its ability to support Buckeye’s growth strategy.

Synthesis is a complete order to cash system that helps with the commercial aspects of operating a terminal and integrates seamlessly with terminal automation systems and back office systems to significantly enhance these. Figure 1 on the next page shows where Synthesis resides in the enterprise systems landscape.

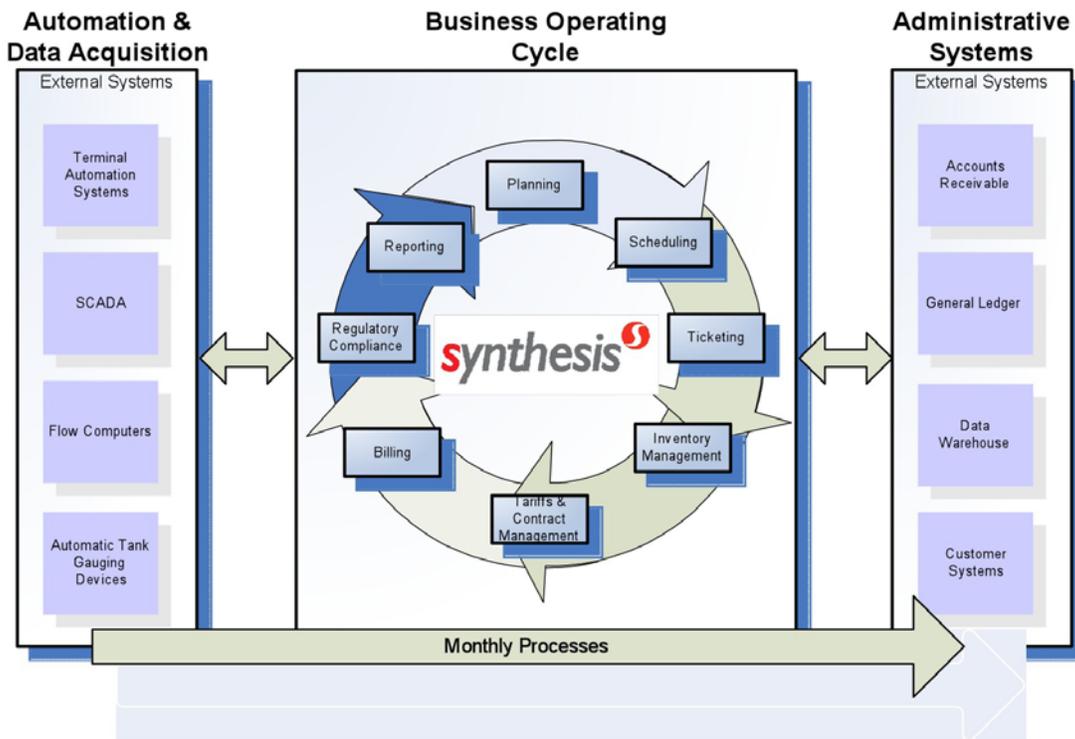


Figure 1. Synthesis Terminal Solution Footprint

Synthesis customers have experienced a reduction in their monthly closing from 6 days to 2 days while other customers have increased throughput rates by 25%. Due to better planning capability and when orders are integrated through to invoices, all processes in a terminal’s workflow are streamlined and simplified. Not only does Buckeye have more capability than before; they also have more time to focus on doing what they do better.

## Synthesis User Figures

- More than 225 terminals
- More than 35M m<sup>3</sup> products monitored
- More than 5,000-strong user base

Synthesis is unique in the terminal industry in that it was specifically developed to help terminal operators manage their commercial processes. The processes that Synthesis supports are outlined on the next page.

*“We see a lot of advantages to streamline our business process and anticipate managing our order-to-cash cycle more efficiently with Synthesis.”*

*Chief Information Officer  
Buckeye Partners*

## Key Capabilities

Some of the core functions of the Synthesis Marine solution include:

Module	Feature/Function	Description
Contract Management	Manage Contracts	Ability to set up Mercantile, Buy/Sell, Storage, Transportation, and Association Contracts
	Contract Terms	Includes the ability to manage contract terms, including the contract party, transport, drop locations, load/delivery windows, Import duties, commissions, payment terms, and other terms
	Contract Segments	Includes the ability to identify multiple segments/movements per contract
	Document Management	Document storage and filing associated with the contract
	Contract Approval	Contract approval workflow
	Contract Charges	A detailed and flexible charge structure to support storage and transportation contracts; includes all details associated with charges for storing or transporting volumes
Orders & Planning	Inventory Requests	Ability to create and manage any inventory request resulting in the movement of inventory, such as nominations, reconsignments, and product transfers
	Customer Portal	Customer portals through which customers can access critical data and submit requests
Scheduling	Truck and Rail Scheduling	Provides the ability to schedule rail cars and trucks, including unit trains
	Vessel & Barge Scheduling	Provides the ability to schedule barges and vessels, including spot and time chartered
	Dock Scheduling	Jetty/dock scheduling in a graphical and tabular manner
	Demand Forecasting	Manages demand and uses a combination of historical averages or user defined volumes to populate demand forecasts that are used in inventory projections
	Inventory Forecasting	Inventory forecasts by terminal, pipeline, tank or groups of locations; integrated with the Synthesis scheduling features and inventory so that forecasts are updated each day with actual inventory levels

Module	Feature/Function	Description
Inventory Management	Book Inventory Summary	A configurable summary of all book inventory positions, consisting of opening book inventory, receipts, deliveries, loadings, transfers, adjustments, over/shorts, and closing (total) volumes
	Close Accounting Process	Workflow to support an orderly and chronologically correct closing process
	Physical Inventory Summary	Summary of physical inventories on hand
	Inventory Gain/Loss Summary	Outlines the differences between volumes received and gained over a particular time period and highlights
	Terminal Tank Inventories	Administer the physical tank volumes
	Tickets (Measurements)	Tank and meter tickets that are standards compliant capable of calculating net volumes
Terminal and Pipeline Activity	Search Movement Tickets	Search, filter and view any movement ticket within the system
	Enter a Movement Ticket	Provides the ability to manually enter a ticket, if electronic tickets are not available
	Meter Provings	Administer meter provings
	Enter Product Rebrand/Regrade	When inventory is rebranded or regarded, this feature lets the user change the grade on the inventory
	Search Component Analysis	Search and view component analysis for LPG or NGL
	Add Component Analysis	Manually add a new component analysis for LPG or NGL
	Summary of Operations	Provides the ability to book inventory to a particular stockholder, if tickets do not already contain this information
Rack Activity	Loading Summary	Provides an overview into all truck activity and truck tickets and rail, or Bills of Lading (BOLs)
	Search BOL	Provides a portal through which individual BOLs may be searched, filtered, and exported
	Add Manual Delivery BOL	Provides ability to add a BOL manually. Most BOLs will be generated by an external Terminal Automation System, but this functionality allows for manual entry of a BOL
	Add Receipt Bill of Lading	Ability to add a BOL that is a receipt into the terminal or refinery
	Edit BOL	Provides ability to edit a BOL
	Print and Export BOLs	Streamlines the printing functionality and provides tools to allow users to export large numbers of BOLs with ease
Billing & Invoicing	Tariff Maintenance	Ability to create and maintain tariffs, including terminal specific requirements such as joint tariffs, tiered tariffs, incentive tariffs and such
	Transportation and Storage Charges	Create charges for transportation, storage and other services that logistics providers encounter. This includes charges for additives, handling of product, activities such as transfers, heating and blending, and approximately 150 other logistics specific charges
	Price Based Charges	Charges based on price of crude or product, such as price per barrel
	Quality Based Charges	Charges for superior or inferior qualities (such as sulphur content or gravity/density)

Table 1. Synthesis Terminal Functions

## Results

By selecting Synthesis as its order to cash solution for both, its terminal and pipeline network, Buckeye has a fully integrated management information system that helps keep its costs low, increase its throughput and keep its customers happy.

A significant validation of this concept came when Buckeye recently completed an acquisition of 33 terminals and the Buckeye team was able to implement all of these terminals, with very little assistance from Emerson (formerly Energy Solutions International), on the Synthesis system within a 30 day period. What's more, they did not require any additional staff or other resources to manage these terminals in the system. Buckeye thus realized its goal of having a system that accommodates their growth while keeping costs low.

## Benefits Realized

### Do More with Less

By providing extensibility, configurability and flexibility Buckeye is able to do more with its existing resources. Since selecting Synthesis, Buckeye has increased its numbers of terminals by nearly 100% and has also increased its number of pipelines significantly – all without any additional resources required to manage these assets from an IT or administrative perspective. Other customers have reduced the amount of time and resources spent on administrative tasks by over 30%.

### Do It Better

With tools to enhance the monthly closing process, Synthesis customers have experienced a reduction in their monthly closing from 6 days to 2 days while other customers have increased throughput rates by 25%. Due to better planning capability and when orders are integrated through to invoices, all processes in a terminal's workflow are streamlined and simplified. Not only does Buckeye have more capability than before; they also have more time to focus on doing what they do better.

### Make Customers Happier

Using the Synthesis portal, Synthesis customers will be able to submit orders, view inventory, tickets, BOLs, invoices, reports and scheduled movements online. Your customers are sure to improve their experience with you.

Buckeye Partners continues its rapid growth. Today, Buckeye is one of the fastest growing terminal operators in North America and Synthesis continues to support their efforts.



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