

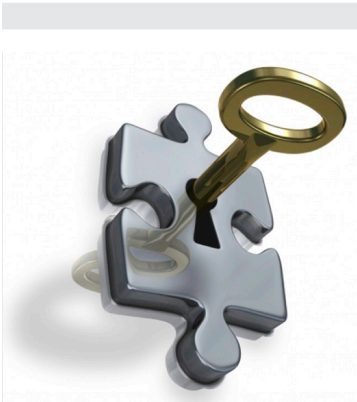


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Unlocking Trader Productivity for Crude Oil & Refined Products

An Allegro White Paper
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Most energy companies today still rely on spreadsheets or patchwork systems to run their trading & risk management business. This means that most trading organizations could be doing more to maximize the productivity and profitability of their trading team. This paper describes systems, processes, and metrics to help increase trader productivity in crude oil and refined products. Advanced trading and risk management software is available today and provides a significant competitive advantage to trading organizations.



A trader's time is precious and can have an immense impact on a company's profitability. Petroleum traders are required to match supply and demand across a wide variety of products at different locations and across different time horizons – crude oil, fuels and refined products. They are responsible for buying and selling both the transportation and the product itself, and need to get the best price possible. Traders need to make sure they're balanced in maintaining the right amount of inventory to meet physical requirements of their firm.

Anything that can be done to automate the calculation of this work for a trader, means that the trader can spend more time finding the best price in the market and putting together superior trades. It almost goes without saying that the most successful traders focus on markets and information, rather than on clerical tasks. Almost.

The reality is that many energy trading organizations could be doing more to maximize the productivity and profitability of their trading team. From the trader's perspective, it means that they could be achieving superior performance – and being appropriately compensated for it.

The Burden of Spreadsheets and Disparate Systems

Allegro recently completed a market research study regarding the preparedness of the energy sector. Over 250 survey responses were received from risk managers, traders, finance, logistics, and marketers in energy companies. Three quarters of them were in trading, risk, and finance departments.

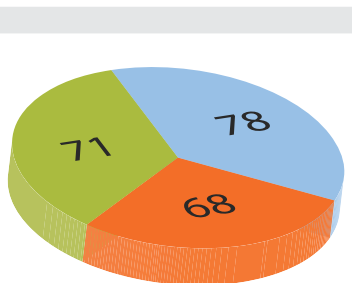
The fascinating result of the study is that the majority of energy companies today still rely on spreadsheets or in-house developed systems to run their trading and risk management business. That's 2 out of 3! Only 1-in-3 make use of today's highly evolved commercial software for energy trading and risk management (ETRM).

For organizations still relying on legacy systems, the impacts to productivity are serious. When traders input trades into spreadsheets or legacy systems, data entry can often be cumbersome. Such systems often don't provide much in the way of error checking. Templates for common trades may be unavailable. Templates for complex trades may be non-existent, or such trades may require inefficient "outside the system" workarounds to be accurately captured.

Error correction is also a concern. If a mistake is made during trade entry, all of the processes that follow are impacted. Then errors propagate so that valuation, scheduling, and accounting all experience the errors as well. This causes the need for error correction, exception reporting, rework, and re-checking.

Another problem is that with multiple systems that don't "talk" to each other, traders are often required to enter the same trade into multiple systems. This inevitably yields differences in different systems, and creates the need for the different trades to be reconciled – another process that takes time away from identifying trading opportunities and analyzing the market.

The overall problem with these approaches is that organizations lose valuable trader productivity because they are spending time trying to get trades into inadequate systems. Simplifying processes and reducing errors with the right systems is positive for a trading shop – both in terms of efficiency and profits.



- Spreadsheets
- An in-house developed system
- A commercial system

Achieving Increased Trader Productivity

Today's commercial energy trading and risk management systems can make a real difference in the way that traders do their day-to-day work. Traders are concerned about knowing the current price, if they are long or short, seeing all of the trades that have been done today and in the past, if there are new inventory measurements or new transportation details. In other words, petroleum traders need perfectly up to date information. In leading ETRM systems like Allegro, accurate, timely positions are provided with grid architecture so that traders can see all of this information in real-time.

Accurate, timely positions with grid architecture

The screenshot shows two tables from the Allegro system. The top table, 'Exposure', shows a summary of positions for March and April 2011. The bottom table, 'Position valuation', provides a detailed breakdown of P&L for various products and trades.

Group description	ExpQty March, 2011	ExpQty April, 2011	Trade	Beg time	Future month	Price date	Validation
DME Oman	1,525,000	(25,000)					
NYMEX WTI Cushing	(268,662)	(924,060)					
Platts Dubai	(0)	(25,000)					
Total	1,256,338	(974,060)					

Product, Trade	Quantity	P & L Jan 03, 2011	P & L Jan 04, 2011	P & L Jan 04, 2011 Variance	Beg time	Trade
C5+	0	0	0	0	3/1/2011	
Dubai	(875,000)	44,925,000	44,410,664	(514,336)	3/1/2011	801645
Eik Hills 18G	620,000	208,209	127,789	(80,421)	3/1/2011	801591
Eugene Island	200	125	(121)	(246)	3/1/2011	801676
ICE Brent	(50,000)	0	0	0	3/1/2011	
Oman	(1,925,000)	60,000	(2,052,098)	(2,112,098)		
SJLB	77,500	(7,750)	(7,750)		3/1/2011	
SJVH	0	0	0	0	3/1/2011	
WTI	232,117	3,718,889	3,529,857	(189,032)	3/1/2011	
WTS	229,731	(22,749,678)	(22,387,698)	361,981	3/1/2011	
Total	(1,690,452)	26,154,795	23,620,643	(2,534,152)		

Traders also need to see exposure and P&L - both volumetrically and by values. This information must be broken out by type of crude or refined product, location, and time period. Product-level detail is very important – jet fuel is very different from gasoline – and effective ETRM systems offer rich drill-down capabilities for analysis at any level of aggregation.

The screenshot shows the 'Trade Execution' form in Allegro. It contains various fields for trade details, including trade type, product, trade date, trade status, company, trader, book, program, counterparty, contract, and price/index information.

Quick, easy trade input for simple trades such as bulk trades at storage locations

Next, let's turn to trade entry, another potential source of inefficiency for traders. Many trades are "easy" trades, and today's best ETRM systems offer ways to handle these trades very efficiently so that routine trades can be input quickly. For example, the US and Europe have very extensive pipeline networks and bulk trades on a pipeline are common, such as bulk trades at a storage location. For these simple transactions, leading systems like Allegro prompt traders to provide very little information, which enables rapid trade creation. This is possible through the use of trade templates and other features that streamline trade entry for simple trades.

For more complex trades, Allegro helps improve trader productivity with the use of flexible, intuitive input. For example, in crude oil purchasing both the oil & gas producer and the crude oil first purchaser enter into a trade to purchase crude oil "at the wellhead." Typically, this type of trade will have certain definitions on what "wellhead" means. In this example, there may actually be 20 different producing properties, each with a different start and stop date. These may each have a different price differential and price index. A very compli-

cated set of information must be specified to trade crude at the wellhead. This is only one of many real-world examples of complex trades in the petroleum business.

The bottom line is that traders need a format that allows a complex trade to be entered without redundant entry and with the least effort possible. Allegro’s ETRM system is designed to address the complexities of petroleum trading – for the straightforward handling of even complex trades.

Getting There: Key Performance Indicators

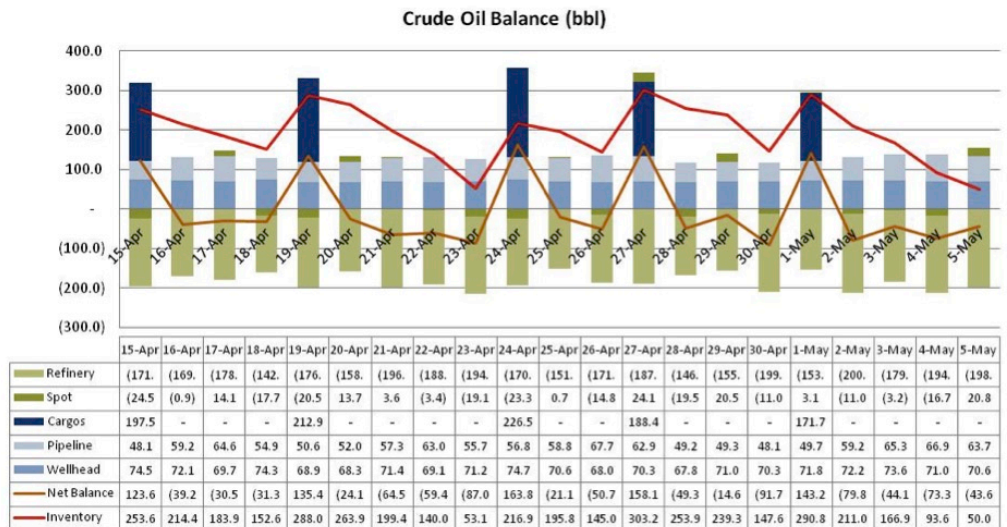
Effective energy trading and risk management solutions can help trading organizations understand their performance and drive improvements. The visibility into key performance indicators (KPIs) – made possible by ETRM systems – can help firms track efficiency gains and increased profitability for individual traders and for the team as a whole:

Daily volume by trader.

Managers want to see who is trading what volume, on what day. This enables organizations to measure efficiency gains and determine if they are getting what they need from each individual trader.

Daily crude oil balance by trade book.

When trading crude oil, visibility into inventory levels is very important for a trader- you don’t want too much inventory and you don’t want too little inventory. This KPI shows the positives (increases to inventory) and the negatives (refinery consumption) for the net balance change by day and net inventory levels being carried. This enables managers to determine if trading activity is netting the right inventory levels for crude oil at the refinery.



Daily refinery production balance by trade book.

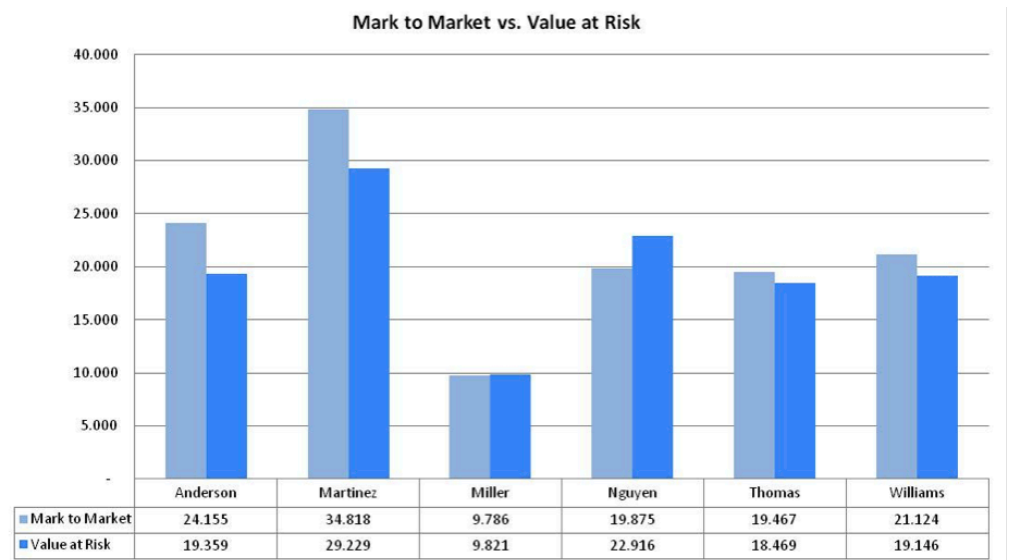
Producing refined products involves position production coming out of the refinery, and then reductions to that. This key performance indicator shows where inventory stands at any given point – when production has increased, or when inventory has decreased through rack sales or sales to pipelines or barges. With this information, managers have the ability to ensure inventory levels stay within the right parameters. This information can also help to explain how trading activity has caused inventory to drop or climb.

Net value of trader positions.

This metric shows what position each trader is carrying, and their net quantity position and net value. It offers a rapid way to determine who is running a positive or negative book. Managers can then determine if traders are where they should be in their overall position.

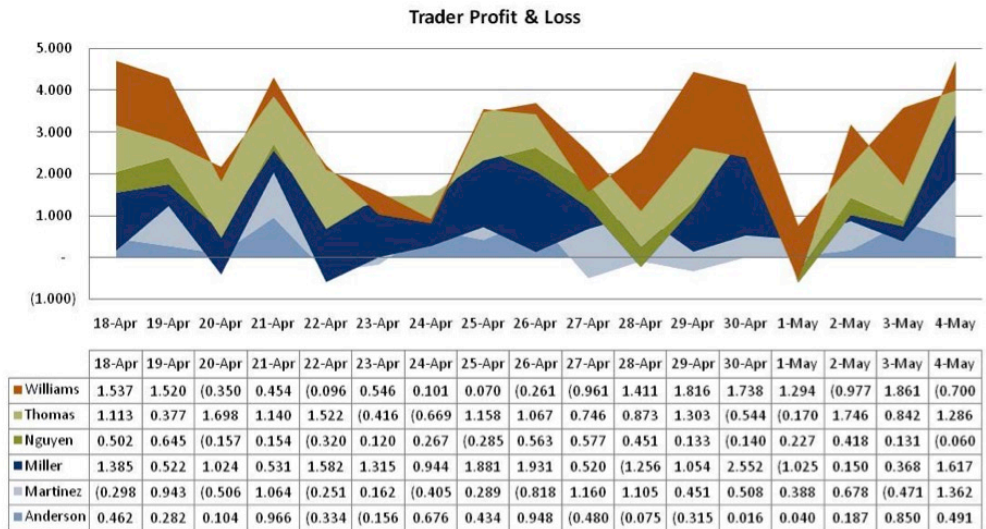
Mark to market comparison with value at risk.

There are two important measurements to evaluate when it comes to decision making: Mark-to-Market (MtM) is what your product’s position is worth, while Value at Risk (VaR) is the amount you can possibly lose in a day’s turnover at this position. Traders want to determine whether or not the value they can make on the oil exceeds the risk they’d take to make it. When mark-to-market is lower than the VaR, you are risking more money to take that position than you can make in that position. This is very useful in examining traders’ productivity and overall performance.



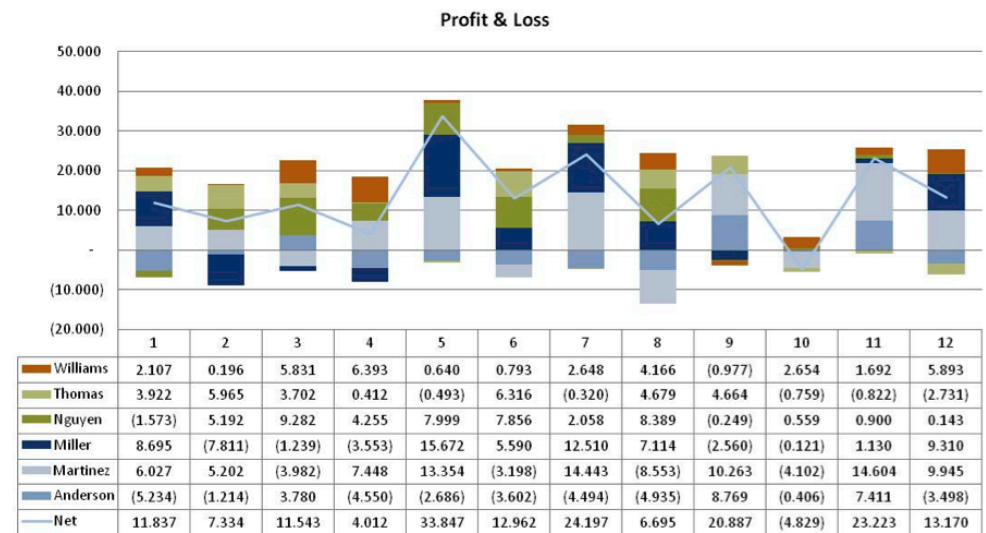
Daily profit and loss by trader.

With movements in the commodity markets, each trader's overall book is either going to make money or lose money on a daily basis. Managers need to see how productive their traders are and who is making money. The organization needs to understand what the good traders are doing to get a better MtM and P&L, and what the poorer traders are doing that can be improved.



Profit and loss for each trader by delivery month.

Managers need to understand and manage profit and loss for forward delivery months, a year or more into the future. Effective ETRM systems enable a view 12 or more months into the future, so that you can see profit and loss by the month of delivery or any other timeframe. In commodity trading there are two important dates – the date of the trade and the delivery date. Successful trading organizations need to understand and report on both of these.



Total Business Benefits

Effective ETRM solutions provide traders with better real time information for better market decisions, while cutting administrative tasks to a minimum. This enables the entire trading organization to spend more time on the markets – identifying and capturing the most profitable trading opportunities.

An important overall metric is:

- The average market value that each trader is carrying in the book, times
- The number of traders, times
- The percentage increase in trade profits.

The product of these three terms is the value of implementing a trader productivity solution.

If you have an average market value of \$2 million per trader and a staff of 10 traders, then even a conservative 1% increase in trade profitability results in an annual gain of \$200,000 per year. In practice, the value of better market decisions can be much higher. The intangible benefit of identifying additional opportunities for better trading can be substantial.

World class systems can also have a positive impact on recruiting and retention of top traders. If traders have a very efficient system to work with – you'll get better traders and they'll make more money.

Advanced trading and risk management software is available today and provides a significant competitive advantage to trading organizations. We invite you to contact Allegro to learn more.



About Allegro

Allegro is a global leader in energy trading & risk management solutions for power and gas utilities, refiners, producers, traders, and commodity consumers. With more than 27 years of deep industry expertise, Allegro's enterprise platform drives profitability and efficiency across front, middle, and back offices, while managing the complex logistics associated with physical commodities. Allegro provides customers with agile solutions to manage risk across gas, power, coal, crude, petroleum, emissions, and other commodity markets, allowing decision makers to hedge and execute with confidence. Headquartered in Dallas, Texas, Allegro has offices in Calgary, Houston, London, Singapore and Zurich, along with a global network of partners.

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