

E/CTRM Software – To Build or Buy?

That is The Question



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Commodity Software Solutions

**Commodity
Technology
Advisory**

CTRM Market Research, Analysis and Insights

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About Brady PLC

About Commodity Technology Advisory LLC

INTRODUCTION

With around 90 or more software vendors offering a variety of commercially available solutions in the area of ETRM and CTRM software and a history of commercial solution development going back 20 plus years, the idea of building a custom solution might seem something of a throw back. However, the truth is that the commodity trading business and its requirements can change so quickly that for large or complex, cross-commodity businesses, internal development of a custom solution can hold some attraction. There simply isn't yet a commercial solution in the marketplace that can do everything for every commodity in every geographic location and do it well.

As a result of this, and having detected what seemed to be a bit of a trend back towards building custom solutions in the top tier of the market, Commodity Technology Advisory (ComTech) set out to survey the market in an attempt to see what the drivers around build and buy were. The survey was designed as a short surveymonkey.com survey (appendix A) and it was available for

users to complete for an extended period between August and November 2015. Various methods were used to solicit responses including emails, banner advertising, blog articles and so on. Although more than 100 replies were received, only 59 were considered to be valid and usable responses and only those responses were used in the developing the results presented below.

DEMOGRAPHICS

A majority of the respondents were located in Europe (64%) with the remainder split evenly between the North America and Asia-Pacific regions.

In terms of the type of company representatives responding to the survey, the distribution was quite extensive with many types of entity/company included. However, merchants, traders, utilities, generators and cooperatives made up about 2/3rds of the respondents. The remainder of the respondents originated in many different industry segments ranging from food and beverage companies through to mining concerns.

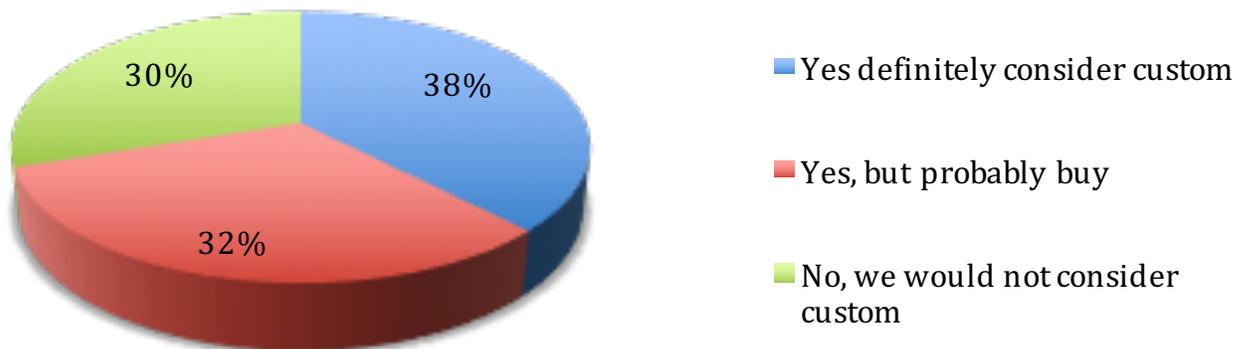
What isn't perhaps as obvious from the demographic data

(and may have significant bearing on the results) is that many of the respondents represent the top market tier. Based on our subjective classification of the responding companies, about 35% of the sample represents the top tier of the industry; names like - Glencore, Cargill, Noble, ADM and others; with the mid-tier accounting for 59% of the responses. Given this representation, we believe the sample is therefore quite heavily skewed towards top tier and top middle tier, a group of companies who historically have often pursued a "build internally" approach.

WHY BUILD; WHY BUY?

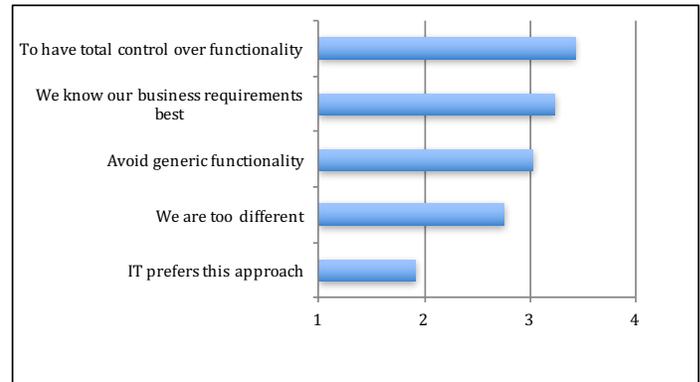
Our research wanted to examine the reasons any company would choose either path – build or buy. We asked our respondents if they would consider building an E/CTRM solution as opposed to licensing an available solution from a vendor and some 38 % said that they would. A further 32% said that while they would give custom development consideration, they felt they would likely still end up buying a commercial solution. In all, a total of 70% of the group did indicate at least a willingness to consider an internal/custom development effort; leaving the remaining 30% who said that they would not consider building internally (Figure 1). When viewed by markets, the data does indicate that the willingness to consider an internal/custom build is more common in the top tier than the middle or bottom tiers of our respondent companies. Though not a majority of our respondents, the large percentage of those willing to consider an internal/custom effort does represent data sizeable portion of the market.

Figure 1: Build or Buy?



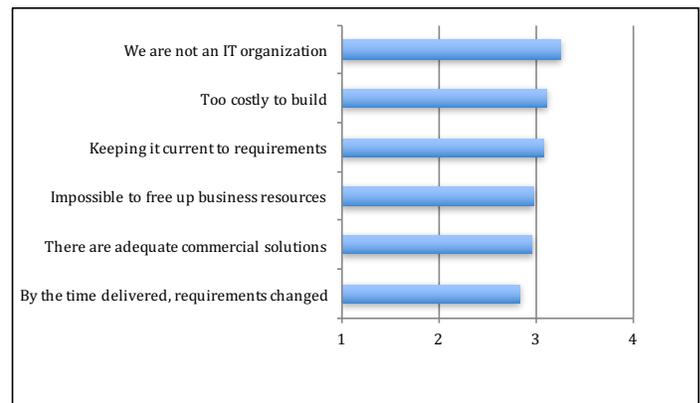
When asked to rank various reasons why a company would want to consider building internally (on a scale between 1 and 4, with 4 being very important and 1 being not at all important), the respondents ranked¹ “having total control over functionality” as the most important reason. Close behind in importance was their belief that they would know their own business and requirements best. Another strongly ranked reason to build internally was to avoid having to use generic capabilities that, in the end, may only make implementation more complex. The least important factor was deemed to be that there might be a predisposition by their IT department to build its own software solution (Figure 2).

Figure 2: Ranked reasons for Building Internally



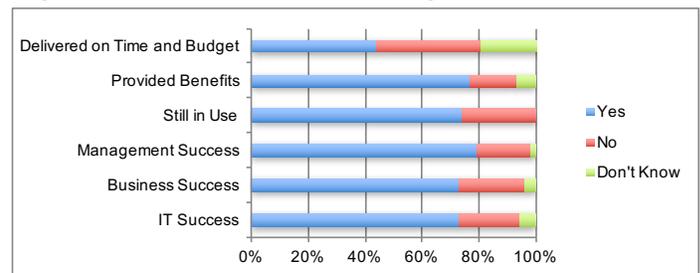
On the other side of the coin, the highest ranked reason to not build a solution internally was the belief that the company is not an IT shop and/or doesn't desire the costs and complexities associated with a large IT department. That being said, the sheer cost of an internal build and the problems involved in keeping that custom software current with evolving business requirements were both ranked almost as high. In fact, by comparison to the reasons to build internally, all of the reasons not to build internally were ranked quite strongly (Figure 3).

Figure 3: Reasons Not To Build Internally



So are these opinions based on facts or experience on the part of the respondents? Well, it seems that experience of building internally is quite common among the respondents, with 81% indicating they had some experience in developing custom solutions. In terms of those experiences (Figure 4), the vast majority of the respondents felt that the internal build projects that they had been involved with had been largely successful in terms of meeting business, IT and management expectations; with many of those internally developed solutions still in use and providing business benefits. That being said, less than half of those respondents indicated that the projects were completed on time and within budget, indicating that with these types of projects there is significant budget/execution risk.

Figure 4: Experience of Homegrown Solutions



project sizes, our respondents indicated that most commonly, the initial estimates for such an effort averaged between \$500 and \$1,000k, with the actual costs often ending up being significantly higher.

In fact, in reviewing the individual responses, we did see a dichotomy in the data that again represents the difference

1) Note: Respondents ranked as follows – very important (4), important (3), unimportant (2) and not at all important (1)

between the top tier and the rest of the respondents. The top-tier businesses actual costs to build were often in excess of \$5 million, while the smaller businesses represented costs to build were between \$100-500k. This scale of costs could suggest that these smaller businesses build to supplement commercial solutions; while some of the top tier simply build and maintain their own solutions.

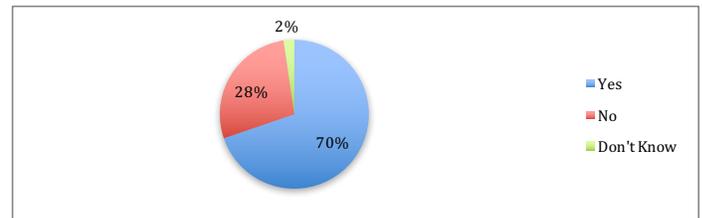
Table 1 shows that, where respondents provided both initial budget estimate and actual cost data guidance, the actual costs were always at least one increment larger than the estimate.

Despite these issues, 70% of the respondents still thought that the internal build exercise had been worthwhile.

Table 1: Individual Responses – Initial Estimate versus Actual Costs

Actual Cost	Initial Budget					
	<\$100k	\$100-\$500k	\$500-1m	\$1 – 3m	\$3 – 5m	\$5m+
<\$100k						
\$100-\$500k	2					
\$500-1m		1				
\$1 – 3m			6			
\$3 – 5m						
\$5m+				1		1

Figure 5: Was The Build Worthwhile?



SUMMARY OF RESULTS

The results of the survey do suggest that, despite many negative anecdotes and high profile past failures, there remains some attraction/inclination to build E/CTRM software internally; and that this is strongest among top tier companies that invariably have a global, complex, multi-commodity business to manage. Again, though, it may be important to again note that the survey respondents were largely located in Europe, a market that would be considered more fractionated than North America, particularly so in the energy markets. This market fractionation may make it more difficult for these largescale companies to identify and procure a single commercially supported system that would meet all their needs.

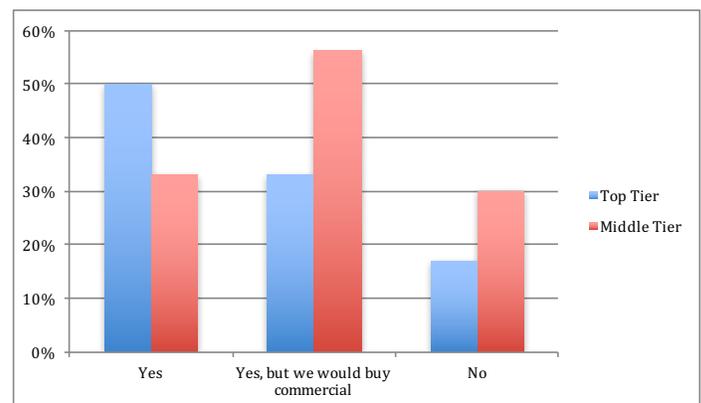
The respondents who would consider building an internal CTRM solution do seem to be seeking something that 'fits them like a glove' in terms of overall requirements, believing themselves to be different, either in process or scope, to the 'generic' offering available commercially in the market. Our respondents believe their past experiences in building custom solutions have generally been positive too in terms of meeting various stakeholders' expectations, and they believe they have delivered benefits despite having commonly exceeded budgets and delivery schedules.

On the other hand, those that would more commonly procure a commercial solution tend to be mid-tier and are companies that perhaps have a more focused business in terms of commodities and/or geographies. Given such a profile, it is easier for them to find something in the market that meets their specific requirements and doesn't require a significant investment in building an IT organization to development and maintain software.

This is a classic dichotomy and on the surface it does appear to reinforce the pyramid model of software adaption in which the top tier looks to develop its own solutions due to the complexity of their business and the feeling that they are different, or have unique strategic business processes that afford them a competitive advantage. Meanwhile, the middle tier lacks the internal resources to build, has an eye of costs and is essentially a package software market. The bottom tier is really all about cost as these are very small or localized businesses that without an affordable commercial system (either cloud based or locally installed) would otherwise utilize Excel.

In fact, by categorizing the respondents by industry tier (according to our view), the dichotomy becomes instantly apparent (Figure 6). However, it is surprising to see the strong level of support (as indicated by the data) for building internally even in the middle tier. Plainly, the pyramid adoption model holds broadly true, but more than a third of the middle tier respondents would build internally and a further 56% would consider it as an option even if they eventually chose a commercial solution.

Figure 6: Buy versus Build by Industry Tier



The results of the survey seem to back up a trend that ComTech has observed recently in the market, and particularly in Europe, in which large, top-tier merchants and commodity firms are looking to build, as opposed to buy, CTRM software. While not endemic, it is based upon the data in this research and our interactions with industry participants, clearly an identifiable trend. There appear to be a number of reasons and rationales for building including:

- / Perceived lack of a comprehensive, multi-commodity, CTRM/Commodity Management solution that can perform “out of the box”; exacerbated by the sheer complexity of the global scale companies whose business can include virtually all commodities (listed and unlisted), logistics, inventory, complex pricing and accounting requirements,
- / The idea that “our business is different” – meaning they have unique processes or mix of assets that offers them a strategic or competitive advantage in the market and that couldn’t be modeled effectively in a commercial solution,
- / A certain lack of trust in the performance or stability of many of the vendors of commercial software – potentially including a track record of high-profile and known implementation failures, concerns over debt financing effecting vendor strategies, or concerns related to the high levels of M&A activity among the vendors and the potential impacts for support in products that may follow.

Every company must of course decide as to whether these reasons are legitimate or not...that being said, why would anyone want to set out to build an entire CTRM solution from scratch when significant amounts of mature functionality is extant among the different large scale and point/niche solutions commercial solutions currently available?

Given advances in technology, including the move to HTML and the Cloud, a reasonable approach for companies that do have these concerns is a hybrid approach in which the company

knits together a comprehensive solution from segment-leading vendor solutions, bespoke functional modules, and an overlay of enterprise risk, analysis, and reporting? This is certainly not a new concept and has previously been known as a “best of breed” approach (though not necessarily with the bespoke functionality). While past problems have occurred with such an approach (primarily associated with integration issues), we are seeing technology improvements from virtually all vendors that enable better support for enterprise-scale integration. Additionally, with the increasing breadth of capabilities provided by currently available commercial solutions, the number of vendor supported systems that would need to be implemented should be significantly fewer than just 5 or 10 years ago.

Given the maturation of the vendors in CTRM markets, ComTech believes that this hybrid approach will be more widely adopted in the upper-tier and top of the mid-tier markets as companies seek out specialized capabilities, while reducing implementation times and lowering overall project costs through the leveraging of vendor supplied IP.

In today’s environment of low commodity prices, increased regulation and oversight, and lower profits, the luxury of building a homegrown, large scale CTRM solution from scratch probably no longer exists. However, the need to construct a solution certainly does exist for many of the top tier commodity traders. This is why, in the end, ComTech feels that a hybrid approach will be the chosen path for these global scale companies.

APPENDIX A - SURVEY QUESTIONS

- 1.** Would your firm consider building an ETRM or CTRM solution rather than licensing a commercially available solution from a vendor?
 - a.** Yes, we would definitely consider a custom solution
 - b.** Yes, we would consider custom, but we would probably still buy
 - c.** No, we would not consider that option
 - d.** Don't Know
- 2.** Please rank the following reasons why an internal or third party custom built solution might be a preferred alternative to one of the 80+ commercially available solutions?
 - a.** To avoid having to build in generic design features that in the end only makes implementation more complex
 - b.** Our IT department prefers this approach
 - c.** We have no choice as we are different and no commercial solution exists that meets our requirements
 - d.** We know our business best
- 3.** Please rank the following reasons why an internal or third party custom solution build might not be the way to go
 - a.** We are not an IT organization and we do not want a huge IT department
 - b.** We couldn't free up the business resources to provide input into such a project
 - c.** By the time the solution was finished, the market would be different
 - d.** Keeping such a solution current with requirements would be costly
 - e.** There are perfectly adequate solutions available commercially
- 4.** Have you experienced developing a custom solution?
 - a.** Yes
 - b.** No
 - c.** Don't Know
- 5.** If so, can you tell us if
 - a.** Was the solution considered a success by IT
 - b.** Was the solution considered a success by the business
 - c.** Was the solution considered a success by Management
 - d.** Are you still using it?
 - e.** Did the solution provide measurable benefits?
 - f.** Was the solution delivered on time and budget?
- 6.** And could you also indicate the magnitude of the budget and actual cost for the project as well as annual maintenance costs for the custom solution?
 - a.** Less than \$100k
 - b.** \$100 – 500k
 - c.** \$500k – 1m
 - d.** \$1 – 3m
 - e.** \$3 – 5m
 - f.** \$5m+
- 7.** Overall and in hindsight, do you think it was worthwhile building a custom solution?
 - a.** Yes
 - b.** No
 - c.** Don't Know
- 8.** Is your current solution
 - a.** Commercially-supplied and licensed from a vendor
 - b.** Internally developed
 - c.** Developed as a custom solution by a third party
 - d.** A mixture of commercially available and custom solutions
- 9.** Please provide some demographics as follows
 - a.** Name
 - b.** Company
 - c.** Country
 - d.** Email
- 10.** And what type of company is that please?

ABOUT BRADY PLC

To prosper in today's increasingly complex commodities marketplace, physical trading companies and financial institutions rely on specialist technology and sophisticated analysis to maintain a competitive edge in the global markets. The latest generation of Brady's market leading software provides integrated trading, risk, settlement and logistics solutions. With comprehensive audit, compliance and regulatory functions, businesses can now combine cost saving with sophisticated management techniques. The straight-through processing capability of a single platform enables an enterprise to quickly achieve a lower cost per trade and provides a proven foundation for effective risk management and a streamlined, efficient business process.

With 30 years of experience of developing leading technology, Brady is now used by over 400 companies globally; our clients include some of the largest commodity, energy and recycling companies, including traders, financial institutions, producers, mining and brokerage corporations in the world. By working closely with our clients in the softs, agricultural, metals, minerals, oil, electricity, natural gas, emissions, coal, recycling and freight markets we continue to lead the way in trade capture and risk management, increasing productivity and operational and regulatory efficiencies in an ever changing landscape.

The global commodities markets are becoming more volatile and complicated and growing regulatory, legal and corporate governance requirements are adding even more pressure. To keep pace businesses need to unlock the real value of their information and market intelligence. That means breaking up data silos and deploying the tools necessary to capture, access and share data accurately, efficiently and in real-time, throughout a trade lifecycle. Brady's transaction and risk management applications are designed to help producers, consumers, financial institutions and trading companies manage all of their commodity transactions in a single integrated solution – including pre-deal analysis, trade capture, foreign exchange, credit risk, cash management, logistics and other physical operations, reporting, settlements and more.

Brady is a proven market leader and provides solutions for all sizes of operation. Whether the requirement is for hundreds of users across the entire process – from point of production to end-user – or for just a few users who are targeting one aspect of the supply chain, we have a solution. Brady's products can be fully integrated with 3rd party systems and applications, whether internal or external.

The goals are the same for everyone – to be competitive, profitable, and timely, effectively manage risk, streamline operations and meet regulatory requirements.

The benefits seen by our customers across trading companies, merchants, producers, banks, brokers, hedge funds, fabricators and corporates, include:

- / Ability to anticipate market moves
- / Analysis of all types of costs
- / Compliance with FAS133 and IAS39
- / Detailed cash flow projections
- / End of day valuations
- / Full audit trail and regulatory compliance
- / Integration with 3rd party applications
- / Integrity, accuracy and reconciliation
- / Interface to accounting systems through a general ledger interface
- / Interface to ERP systems/clients
- / Latest market data
- / Management of market rates, allowing creation of option premium indications
- / Margining positions
- / Operational control
- / Planning long-term strategies
- / Real-time information
- / Risk measurement
- / Seamless straight through processing
- / Storage and shifting of forward price curves
- / Supply Chain Management
- / Support for a broad range of commodities
- / Third party application interfaces
- / Weighting scenarios
- / "What If" reporting, scenarios and stress testing

For further information visit: www.bradyplc.com



BRADY

Commodity Software Solutions

ABOUT

Commodity Technology Advisory LLC

Commodity Technology Advisory is the leading analyst organization covering the ETRM and CTRM markets. We provide the invaluable insights into the issues and trends affecting the users and providers of the technologies that are crucial for success in the constantly evolving global commodities markets.

Patrick Reames and Gary Vasey head our team, whose combined 60-plus years in the energy and commodities markets, provides depth of understanding of the market and its issues that is unmatched and unrivaled by any analyst group.

For more information, please visit:

www.comtechadvisory.com

ComTech Advisory also hosts the CTRMCenter, your online portal with news and views about commodity markets and technology as well as a comprehensive online directory of software and services providers.

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