RESEARCH AND REPORT

CTRM VENDOR PERCEPTIONS

2018

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INTRODUCTION

The 2018 Commodity Technology Advisory's vendor perception study was conducted to establish end-user and market influencer perceptions of the CTRM vendors to determine market leadership perceptions as well as buying criteria, demand levels, and brand awareness of the different vendors. The research comprised of a comprehensive set of questions that end users and others (including industry consultants but excluding vendor personnel) were invited to answer as an internet survey. The survey was open for responses between May 21st and September 30th, 2018 and collected some 195 responses.

The survey was promoted in several ways to attract *bone fide* respondents. ComTech Advisory used email notification, Linkedin posts, blog articles, banner advertising and verbal requests to encourage responses. CTRM vendors and service providers also promoted the survey of their own accord. Unfortunately, the EU's new GDPR legislation had a significant impact on our ability to use email to request responses and also forced us to add a privacy notice to the survey essentially meaning that to respond, respondents had to opt in to take the survey. Some 10% opted out with a further unknown number who did not take the survey due to the privacy notice. Consequently, the number of responses is slightly down on 2016 (230 responses) and a number of responses were left blank by respondents after reading the privacy notice.

ComTech were extremely rigorous in validating the responses and in the end, utilized only 95 (49%) of them in the results presented below. We found that quite a few responses were blank after the EU privacy notice and assume that the notice caused the potential respondent to discontinue with the survey. We also rejected a number of obviously vendor submitted responses utilizing alternate email addresses. Reasons for rejecting responses included;

1. The respondent worked for a vendor. Despite instructions to discourage vendor employee responses, ComTech eliminated several such responses. These included responses that were obviously by vendor staff using a vendor email address and also those that were apparently vendor responses using a private email or alternate address,
2. Incomplete responses were eliminated where the respondent had answered less than 50% of the questions,
3. Duplicate responses were eliminated,
4. Finally, suspicious responses were eliminated. These included those with fictitious email addresses, names or company names, or those lacking such validation data.

The results presented and discussed in this report were obtained using the 95 responses that we deemed to be valid. This pool of valid respondents reflected 60% end users and 40% influencers.

Vendor perceptions are interesting both in terms of

how well a vendor is known in the market and as to how it is viewed by those that are aware of it and its products. However, vendor perceptions invariably lag current reality in that the opinions expressed in the data effectively represents views of past performance. This means that it is equally important to look at trends in vendor perception through time. We have done this by utilizing similar historical data collected and analyzed by ComTech and CommodityPoint over the last decade or so. This trend data is presented and discussed within this report.

Finally, the last 12-months or so has been quite active in terms of major M&A activity in the space. Notably, ION acquired Aspect and Openlink, and Allegro acquired FEA. In analyzing the results, we have sometimes looked at the data in two ways - first, in terms of the names used by the respondents; and second, by rolling up the combined entities into a consolidated number. This allows us to thoroughly examine brand awareness and make past comparisons.

As perceptions invariably lag current conditions, this report, representing vendor perceptions prior to mid-year 2018, should be but only one of many data points used by anyone looking for an ETRM or CTRM software solution as things can and do change very rapidly in this software category.

RESEARCH DEMOGRAPHICS

We received a total of 195 responses to our survey; however, we eliminated many of those responses as they were provided by vendor personnel, were incomplete, or were otherwise suspicious. After this reduction, we were left with a total of 95 valid responses from end users and influencers (Figure 1). By comparison, the 2014 study utilized some 146 valid responses and 2016 study had 154. The reduced numbers in 2018 can be mostly explained as the impact of EU privacy laws on email and surveying and despite a reduced number of valid responses, the results appear largely consistent with past studies.

The respondent's locations reflected a reasonable distribution of experienced CTRM software users and implementers, with the majority of the responses coming from Europe (53%), followed by North America (38%), and Asia-Pacific (5%) (Figure 1). We also received three responses from the Middle East and one from south America. The distribution of responses is again slightly biased towards Europe and this has been a continued feature of ComTech surveys recently where European respondents have outnumbered North American respondents. However, by comparison to the 2016 survey, there were slightly less European responses (56%). Despite the lower number of respondents, the overall distribution of responses is similar to the 2016 survey.

Figure 1 - Geographic Distribution

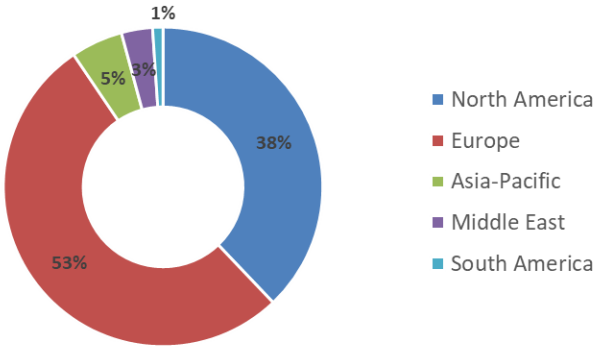
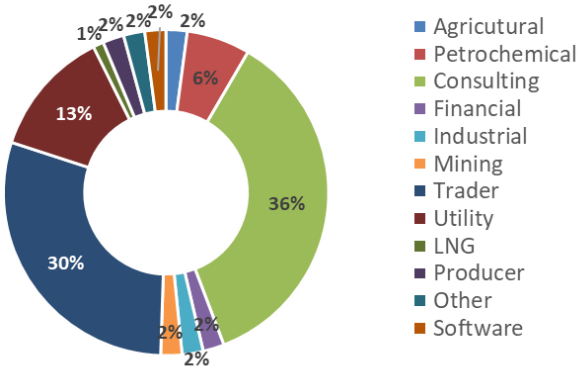


Figure 2 - Types of Respondent

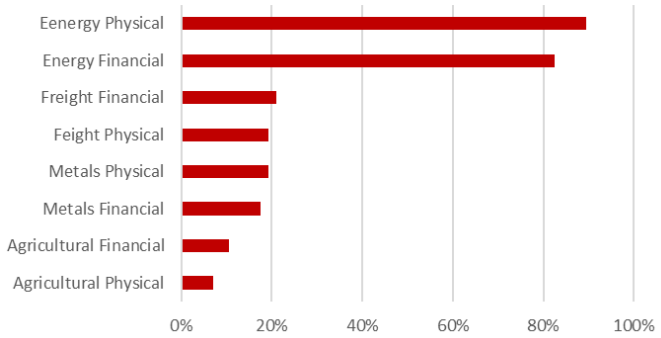


The 2018 survey comprised of 60% end user and 40% influencer-type respondents (primarily consultants). The largest industry groups participating in our research were the Merchant/Trader/Broker group (30%), Consultant/Integrator (36%) and Utility-Generator (13%|) segments. The remaining company segments comprised less than 10% each (Figure 2). By comparison with the 2016 survey, we obtained more Consultant/System Integrator and fewer Generator/Utility respondents. Other than that, the actual segment representation was broadly similar.

It should be noted, that many of the respondents indicated that their company did span multiple industry classes and the many of the companies identified as traders and refiners could also be representative of the oil and gas exploration/production markets. That being said, based upon ComTech research, it does appear that the oil and gas companies are under-represented in our data.

Note: Responses from Consultants/Systems Integrators were not considered in questions relating to software systems in current use, commodities traded, or satisfaction with current software solution in use.

Figure 3 - Commodities Traded



In terms of commodities traded by our respondents, physical energy, followed by financial energy, is the most widely traded of all commodity groups. This would be expected as a result of the larger energy industry segments response however, Ags & Softs, Metals and Freight rates are all traded by around 5-20% of the respondents and all commodities are reasonably represented. Interestingly, when comparing the primary commodities traded by our respondent group, they once again correlate very well with estimated share of the commodity classes noted in Commodity Technology Advisory's most recent CTRM Market Sizing Report.

The largest installed base reflected in this year's survey belonged to Brady PLC, with ION Openlink a close second. Other vendors and products included in the installed base among user respondents included ION Triple Point, SAP, FIS, Allegro, Amphora, Enuit, Veson, KYOS, Powel, ComFin, Contigo, Unicorn Systems and Pioneer. Brady's installed base was largely European, but it did have some North American and Asian users as well. It also represented multiple Brady products across energy and broader commodities. ION Openlink's installed base in the sample was split largely between Europe and North America. A number of regional vendors also show up in the installed

base and reflect only a single geographic region.

The installed base information is useful as it alerts us to possible sample bias and, by removing each vendor's installed base, we can gain a slightly different perspective of brand awareness.

By comparison to 2016, there were more Brady and SAP users represented in the survey and many fewer Allegro users. There were no custom-built system users represented in the sample. There was also a larger number of smaller vendors represented, particularly in Europe, in the sample.

When asked how satisfied they were with their current solution(s), almost 90% of the respondents (same as in 2016 and 2014) indicated some level of satisfaction, with 10% saying they were very satisfied, 49% satisfied and 32% somewhat satisfied representing a swing away from very satisfied to somewhat satisfied over the 2016 survey. Only 7% indicated they were dissatisfied with their current product(s). By comparison to the 2016 survey, the notable difference is that there are few 'very satisfied' users and more 'somewhat satisfied' users.

Figure 4 - Installed base

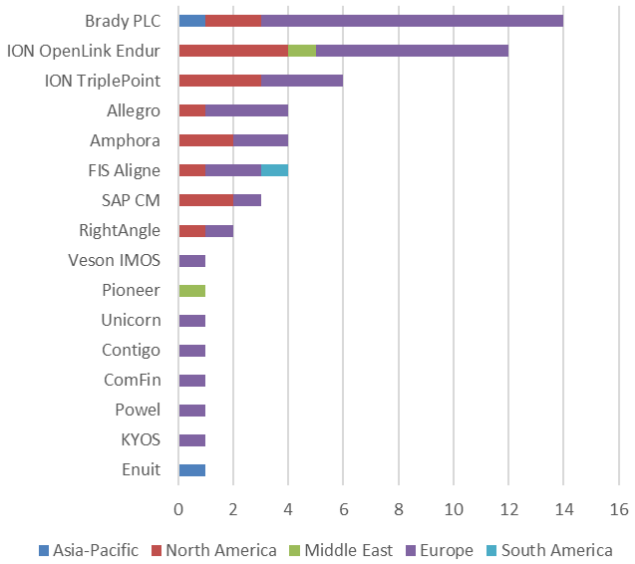
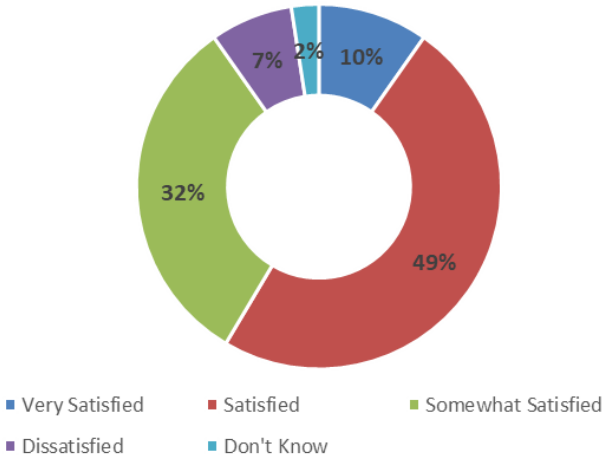


Figure 5 - Satisfaction Rates



Those that were dissatisfied with their current solution cited a number of reasons why, but largely complained of poor support, low quality software with bugs, slow development and vendor promises not being honored. Other issues included the vendor being focused on a different geographic region and not prioritizing needed market requirements for another region, upgrade issues, integration issues, and unstable serves from data providers.

However, when we asked which vendors the respondents were using or had experience using in the past, ION OpenLink and Allegro were most frequently mentioned, with Brady dropping to third place along with FIS and ION TriplePoint. Other fairly widely used vendors/products included SolArc (acquired by Openlink and subsequently by ION) and Amphora. The respondents reported using a wide variety of products from various vendors; however, very few had used custom developed solutions.

When asked which they considered to be best solution they had used, only Allegro, ION TriplePoint and SAP scored over 50% among the respondents.

Among the end users who responded and answered the question, a small majority have a mix of homegrown/custom and commercially available CTRM solutions installed (45%). A further 43% utilize only commercially available solutions, about 6% use homegrown/custom built solutions only and nearly 6% do not have a solution installed at all (Figure 7). By comparison with 2016, those utilizing a commercial solution only has marginally increased and those using a mixture of home grown/custom and commer-

Figure 6 - Experience with Vendors

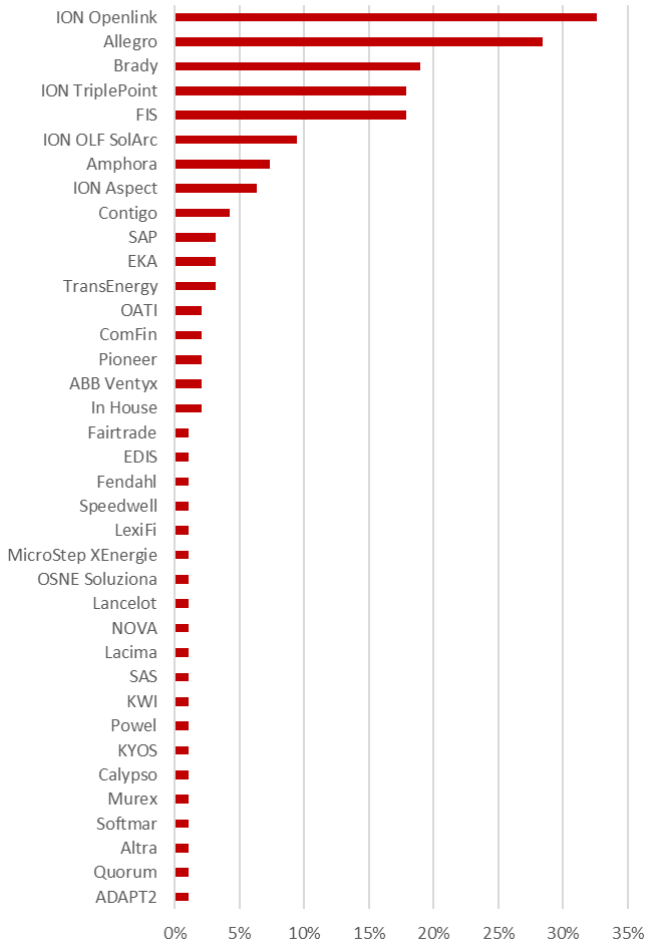
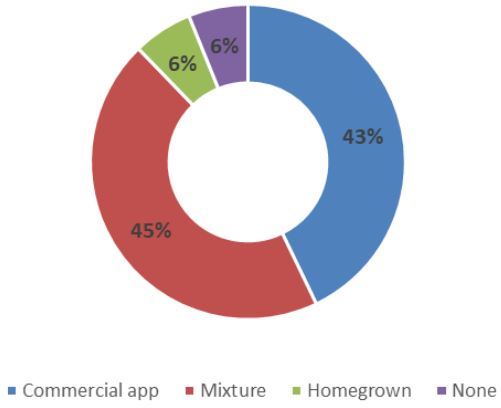


Figure 7 - Types of Applications



cial has marginally decreased.

We also asked about deployment mode (Figure 8) and surprisingly given recent trends for new systems to be deployed in the cloud, the survey found that the vast majority of the respondents continue to use traditional, on premises type deployments (80%). Given the install base shown in Figure 4, the respondent group does clearly skew toward more traditional, non-cloud enabled solutions. Only 5% were single tenanted, hosted in the cloud and 7% multi-tenanted. A single user reported leasing the system, but deploying traditionally, on premises and around 5% could not answer the question.

An area where there does appear to be something of a difference over the 2016 survey, is in the number of solutions deployed by users. In 2016, more than half the respondents utilized more than one CTRM, but in the 2018 sample this had declined to 48% of the sample. The majority (43%) used only one installed solution up from 29% in 2016, 23% used between one and three solutions (down from 27% in 2016), 18% between three and five solutions and just 7% used five or more. The data does suggest a move towards the use of fewer installed solutions per user company overall during the last two-years, as the sample of types and nature of the businesses represented is broadly similar to the 2016 data set. That said, there may be a data sample bias that we are unaware of.

Figure 8 - Type of Installation

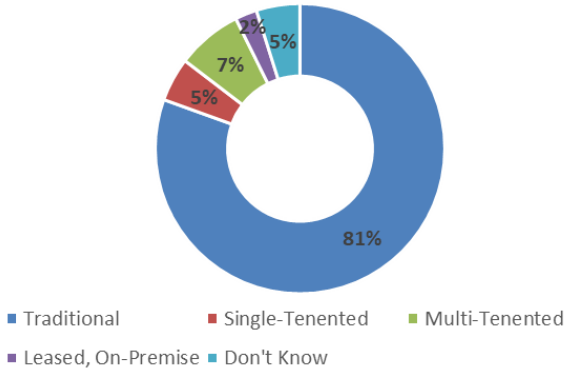
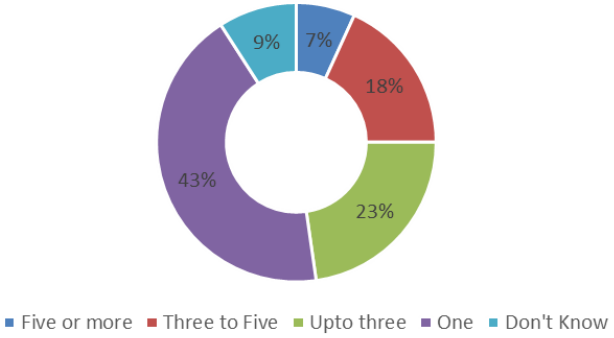


Figure 9 - Number of Applications



MARKET AWARENESS

We asked our respondents to identify and name all the vendors of CTRM software that they were aware of. ION Openlink and Allegro were identified most often, with around 60% of the respondents naming the two companies. FIS and ION TriplePoint were also commonly cited, each being named by more than 40% of the respondents. Brady was also widely known with more than 35% of the respondents naming them. EKA and ION Aspect were named by more than 25%. Below that, recognition fell off dramatically (Figure 10 which omits vendors with less than 2 mentions).

Figure 10 does not show the vendors named by only one respondent and in all, our respondents noted 52 different vendors, though it could be argued that several of those vendors would not be accurately described as CTRM suppliers.

Given the acquisitions that have taken place recently, we also looked at consolidated brand awareness for the top vendors in the space. Here, ION, in one form or another (as ION, Openlink, Aspect, or TriplePoint) was mentioned unprompted by over 80% of the respondents, followed by Allegro with around 75% of the respondents mentioning that vendor. (Figure 11). Brady was mentioned by just over 40%, FIS by around 34% and Eka by 30%. While, some of the respondents mentioned an ION acquired brand or product as opposed to ION explicitly, this does show the potential of a consolidated brand in terms of ongoing market awareness.

Figure 11 - Combined Brand Recognition

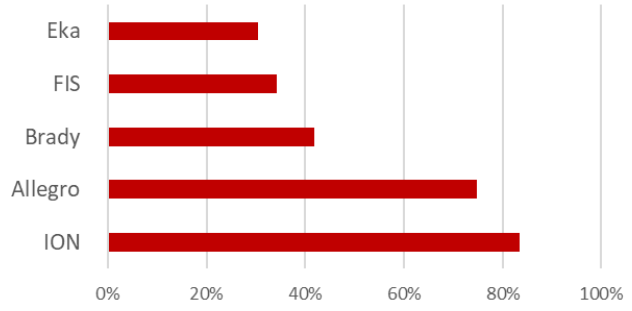
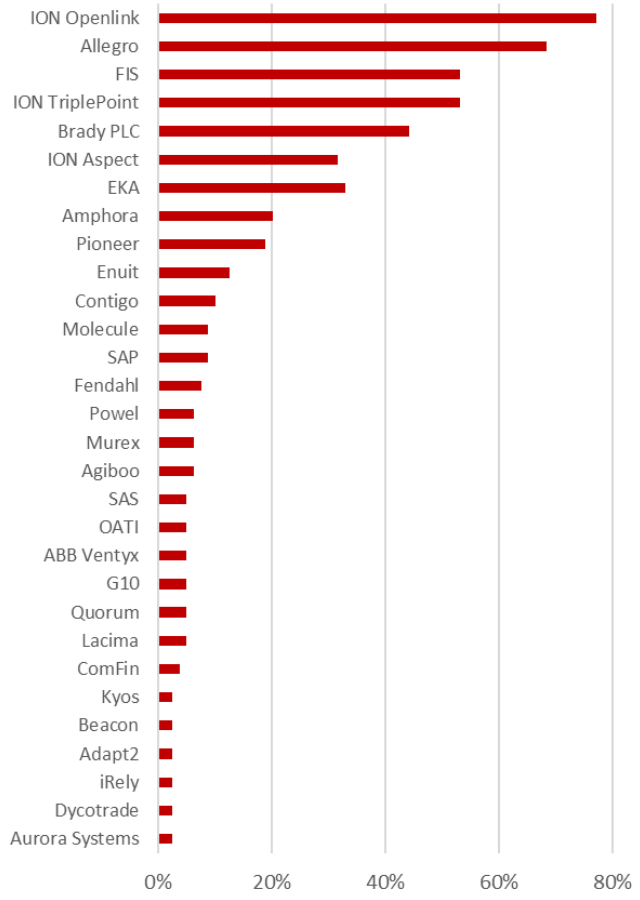


Figure 10 - First to Mind

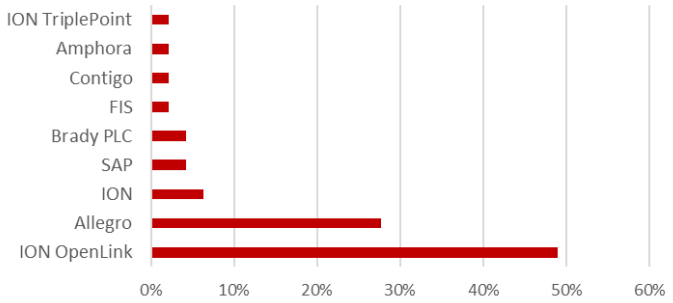


MARKET LEADERSHIP CATEGORIES

Overall CTRM/ETRM Market Leader

When it comes to perceived overall market leadership, more than 30% of the respondents don't know if there is a market leader or who it would be. However, of those with an opinion, the majority of those with an opinion again perceived ION OpenLink to be the overall market leader (49%) in CTRM software with Allegro in second place with 28%. Several other vendors were mentioned as perceived overall leaders including ION generally, SAP, Brady PLC, FIS, Contigo, Amphora and ION TriplePoint, but only by a handful of respondents each (Figure 12). By comparison to 2016, ION Openlink has extended its lead over Allegro however, there is more uncertainty as to who the leader is. This is perhaps unsurprising given the M&A activity in the space and the advent of the cloud and cloud-enabled CTRM.

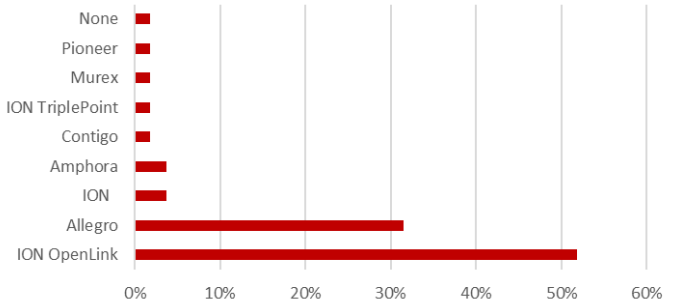
Figure 12 - Overall Market Leadership



Energy

In the broad category of overall energies, of those that expressed an opinion (68%), slightly more than half identified ION OpenLink as the perceived market leader. Allegro also showed highly with 31%. A number of other vendors were also identified as perceived market leaders in energy including ION generally, Amphora, Contigo, ION Triple Point, Brady, Murex and Pioneer (Figure 13). In this category, ION OpenLink and Allegro have both gained in leadership perceptions over the 2016 survey.

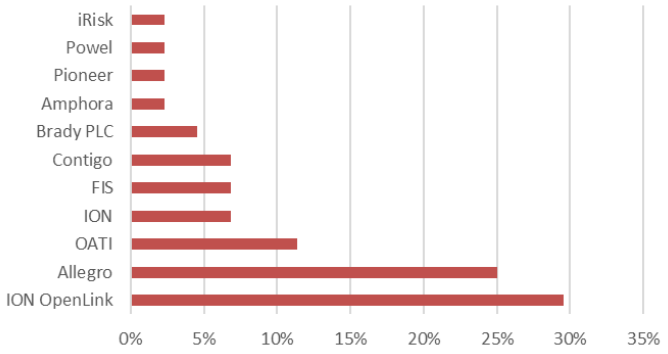
Figure 13 - Energy Leadership



Electric Power

More than a third of the respondents didn't know who the market leader is for electric power and there was less confidence among the respondents, but among those with an opinion, ION OpenLink was thought to be the leader by around 29% of the respondents and Allegro by about 25% (almost identical to 2016 survey results). Other vendors mentioned included OATI, FIS, Contigo, Brady, Amphora, Pioneer, Powel and iRisk. (Figure 14).

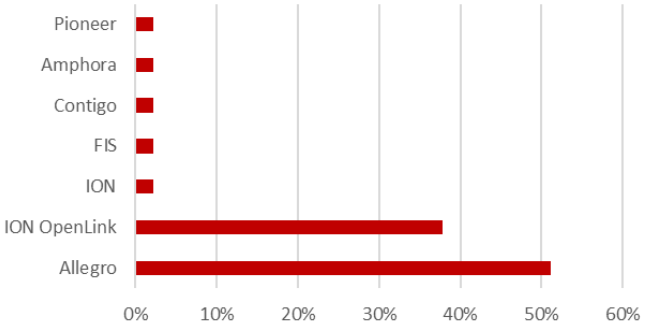
Figure 14 - Power Leadership



Natural Gas

More than 37% of the respondents did not know if there is a market leader for natural gas. Of those that do perceive there to be a market leader, about 52% named Allegro and a further 37% identified ION OpenLink. In this category, there is more certainty over the 2016 results with Allegro and ION OpenLink extending their perception of leadership. Other vendors who were named by a small number of respondents include ION, FIS, Contigo, Amphora and Pioneer (Figure 15).

Figure 15 - Natural Gas Leadership



Crude Oil and Refined Products

Although around a 30% of respondents couldn't identify a leader, those that expressed an opinion named ION OpenLink as the leader (46%). This is a significant change over the 2016 survey in which the "Don't Knows" were the vast majority and no vendor had a significant lead in terms of leadership perceptions. Allegro and ION TriplePoint were both mentioned by more than 10% of the respondents. ION, Amphora, ION Aspect and InaTech also received mentions.

Figure 16 - Crude Oil Leadership

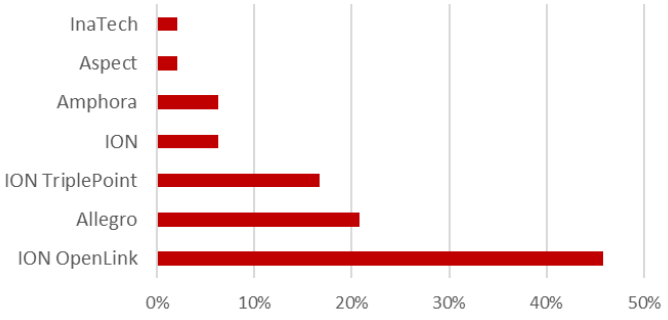


Figure 17 - Ags Leadership

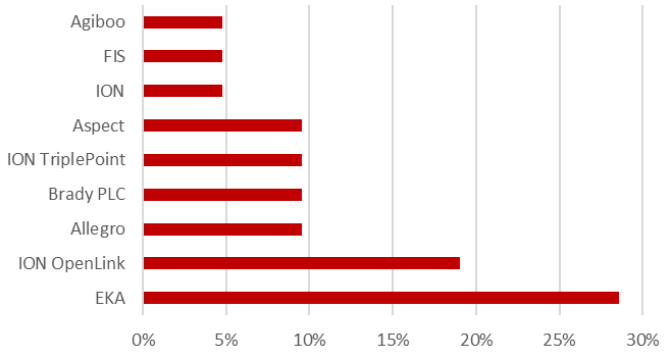
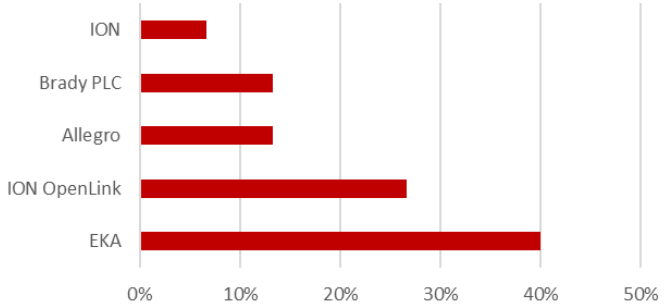


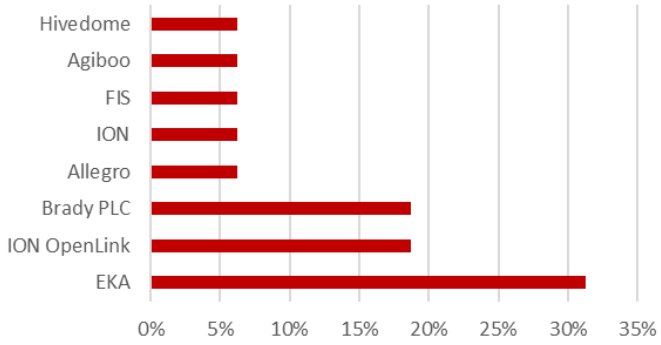
Figure 18 - Oilseeds Leadership



Ags & Softs

This year, we broadened the Ags & Softs category into Ags, Oilseeds and Softs; however, given the lower number of respondents that trade Ags & Softs, the majority (66%, 76% and 75% respectively) didn't know who the market leader might be in any of these categories. The data does suggest that Eka was most widely thought of as the leader in each of the three (Figures 17, 18 and 19). Other vendors mentioned across the categories included ION Openlink, Brady PLC, Allegro, ION, ION TriplePoint, Agiboo, Hivedome and FIS.

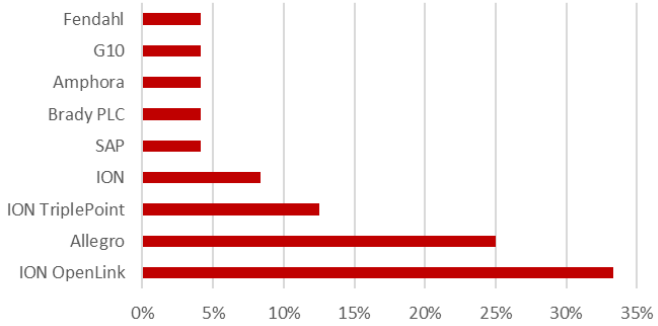
Figure 19 - Softs Leadership



Bulk Commodities

Similarly, for bulk commodities (liquid or granular) the majority of respondents (62%) didn't know who the market leader was. Of those that had an opinion, ION OpenLink, Allegro, ION TriplePoint, ION, SAP, Brady PLC, Amphora, G10 and Fendahl were all mentioned by a small number of respondents.

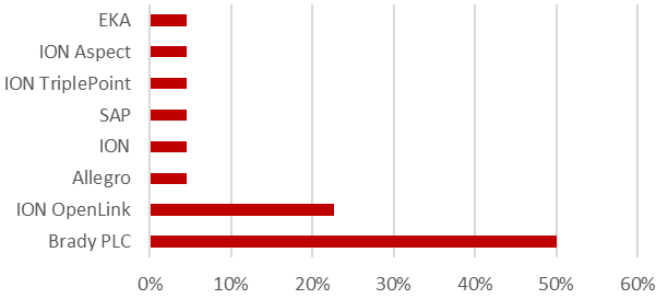
Figure 20 - Bulk Commodities Leadership



Precious Metals

In the category of precious metals, more than half of the respondents couldn't name a market leader (65%); however, of those expressing an opinion, Brady PLC was identified as the market leader by around 50% of the respondents. Other vendors mentioned included ION OpenLink, ION TriplePoint, Allegro, ION (generally), SAP, ION Aspect and Eka.

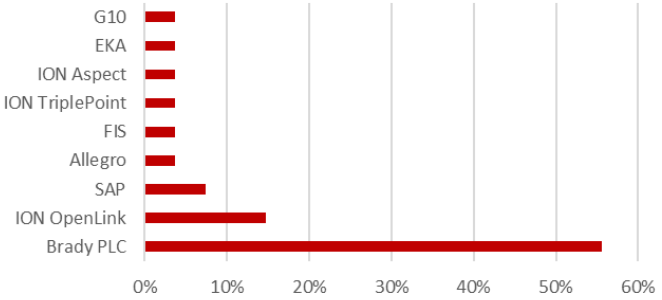
Figure 21 - Precious Metals Leadership



Base Metals

Again, in base metals, a majority (60%) did not know who the market leader might be. However, of those expressing an opinion, Brady PLC was noted as the market leader by 56% of the respondents, well ahead of runner-up ION OpenLink with about 15%. Other vendors named in base metals leadership include SAP, Allegro, FIS, ION TriplePoint, ION Aspect, Eka and G10. By comparison to 2016, Brady has significantly extended its perceived leadership in both metals categories; however, this may also be a feature of an increased number of Brady customers responding versus ION Openlink and Allegro customers. Despite this potential skewing in this survey, Brady has been consistently thought of as the leader in metals across all our past vendor perception surveys.

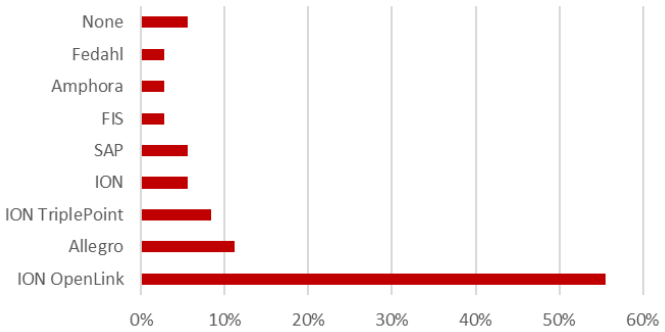
Figure 22 - Base Metals Leadership



Single Platform for All Commodities

In the category of a single platform servicing all commodities, many respondents did not know who the market leader was (43%). Of those that could name a market leader, ION OpenLink was most noted in the category by 56% of the respondents, well ahead of the next most mentioned vendor, Allegro, with about 12%. Others mentioned were ION TriplePoint, ION, SAP, FIS, Amphora and Fendahl. Compared to 2016, ION Openlink has extended its leadership in this category.

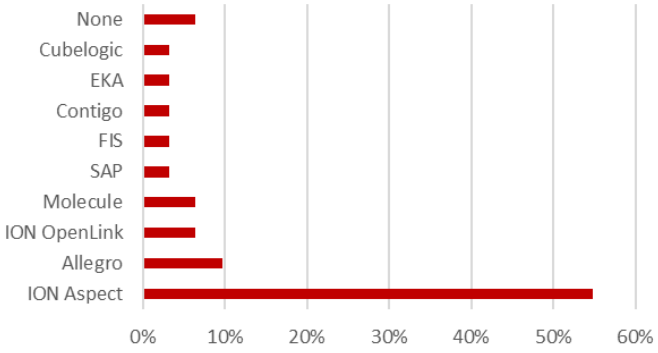
Figure 23 - Cross-Commodities Leadership



Cloud

Despite the growing attention to, and adoption of, cloud based CTRM solutions, most of respondents in our survey didn't know who the market leader was for CTRM in the cloud (52%). Of the respondents that did name a cloud leader, ION Aspect identified as the market leader by about 55% of the respondents, well outpacing the runner-up in the category – Allegro with less than 10%. Other vendors named included ION Openlink, Molecule, SAP, FIS, Contigo, Eka and Cubelogic. By comparison to 2016, ION Aspect has increased its perceived market leadership by more than double.

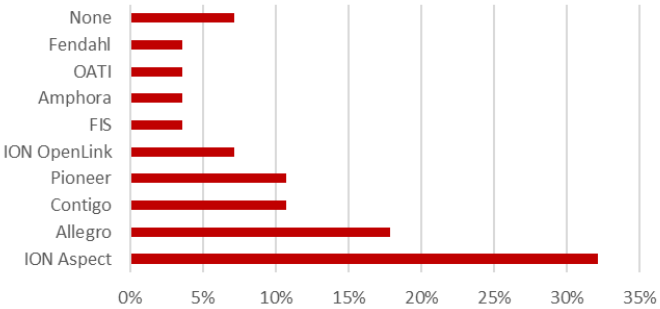
Figure 24 - Cloud Leadership



Implementation

The respondents largely didn't seem to have established views about market leadership for implementation services (51%), and the results indicate a relative tight grouping of perceived leadership among the named vendors. ION Aspect noted by about 34% of those that did name a leader, followed by Allegro with slightly less than 20%. Other vendors named included Contigo, Pioneer, ION Openlink, FIS, Amphora, OATI and Fendahl. It is notable that when compared to 2016, ION Aspect has more than doubled the number of respondents that named it as market leader in this category.

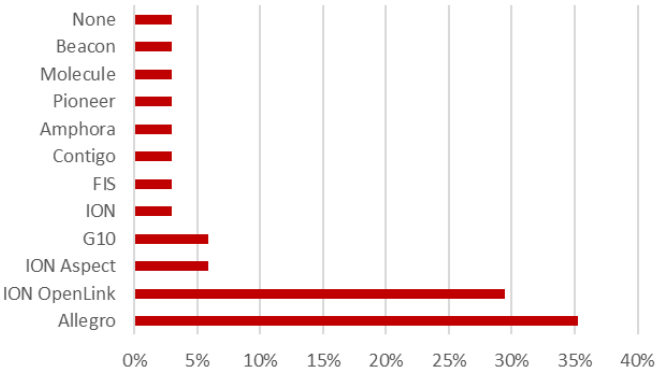
Figure 25 - Implementation Leadership



Technical Architecture

In terms of perceived leadership in the category of CTRM technical architecture, about half of the respondents (47%) said that they did not know who the leader was. Of those respondents that named a vendor, Allegro was identified as the leader by about 35% of the respondents, followed closely by ION Openlink, being named leader by about 29%. Others receiving notes in the category include ION Aspect, G10, ION, FIS, Contigo, Amphora, Pioneer, Molecule and Beacon. These results are broadly similar to the 2016 survey.

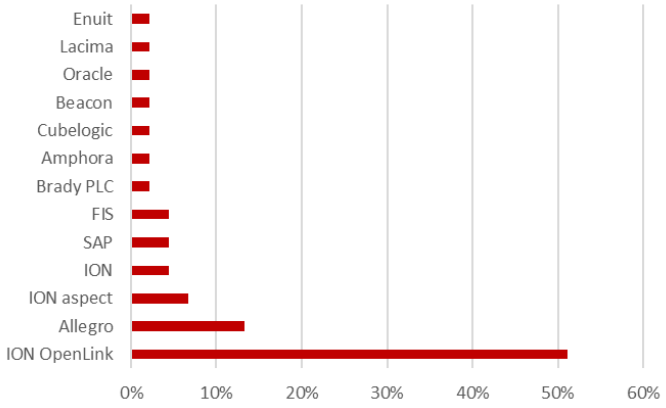
Figure 26 - Architectural Leadership



Risk Management

When asked who the leader was for risk management, about a third of the respondents couldn't identify one. Of those that did, 51% believed ION OpenLink was the leader in the category, well ahead of runner-up Allegro with about 13%. Other vendors mentioned as leaders included ION Aspect, ION, SAP, FIS, Brady PLC, Amphora, Cubelogic, Beacon, Lacima, Oracle and Enuit. Compared to the results from the 2016 vendor perceptions survey, ION Openlink has extended its perceived leadership position substantially over the last couple of years. However, given Allegro's recent acquisition of risk analytics vendor FEA, it will be interesting to see the impact of that deal in this category in future surveys.

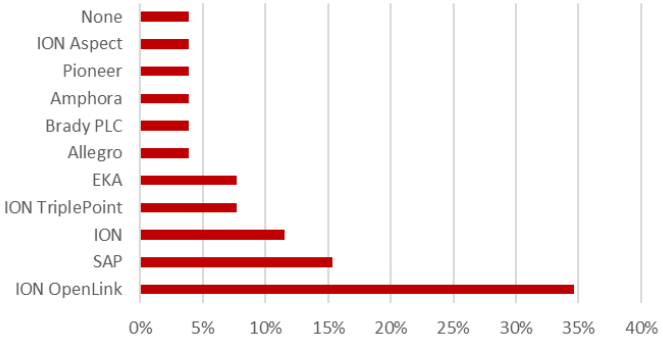
Figure 27 - Risk Management Leadership



Commodity Management

The respondents were largely undecided about leadership in commodity management, with 53% saying they did not know a leader in the category. Of those that named a leader, ION Openlink was most often mentioned (34%), followed by SAP with 15% of the respondents naming that firm as the leader. Others noted include ION, ION TriplePoint, Eka, Allegro, Brady PLC, Amphora, Pioneer and ION Aspect.

Figure 28 - Commodity Management Leadership



MARKET LEADERSHIP SUMMARY

The table below is a summary of the results of perceived market leadership (changes from the 2016 CTRM Vendor Perception Study are shown in italics).

Category	Leader	Runner Up	Third
Overall	ION OpenLink	Allegro	*ION*
Energy	ION OpenLink	Allegro	*ION/Amphora*
Electric Power	ION OpenLink	Allegro	*OATI*
Natural Gas	Allegro	ION OpenLink	-
Crude Oil	ION OpenLink	Allegro	*ION Triplepoint*
Ags	*Eka*	*ION Openlink*	-
Oilseeds	*Eka*	*ION OpenLink*	-
Soft Commodities	*Eka*	*Brady PLC/ION Openlink*	-
Bulk Commodities	*ION Openlink*	*Allegro*	*ION Triplepoint*
Base Metals	Brady	ION OpenLink	ION Triplepoint
Precious Metals	Brady	ION OpenLink	*SAP*
All Commodities – Single Platform	ION OpenLink	Allegro	*ION Triplepoint*
Cloud Delivery	ION Aspect	*Allegro*	*ION Openlink/Molecule*
Implementation	ION Aspect	Allegro	*Contigo/Pioneer*
Technical Architecture	Allegro	ION OpenLink	*ION Aspect/G10*
Risk Management	ION OpenLink	Allegro	*ION Aspect*
Commodity Management	*ION Openlink*	*SAP*	*ION*

PROCUREMENT DATA

About 48% of the respondents that answered the question suggested that they would procure a new CTRM over the next 24 months. (Figure 29).

We also asked the respondents to rank a set of buying criteria using a scale from "critical" to "unimportant". Figure 30 shows the results. "Physical & Financial Commodity Support" was the most highly ranked criteria, followed by "Market Price/Risk Support", "Multi-Currency Support" and "Good Support from the Vendor". "Comprehensive Analytics", "Being Supplied by a Top Vendor" or "Regulatory Support" were the least critical feature/functions desired by buyers.

Figure 29 - Procurement Plans

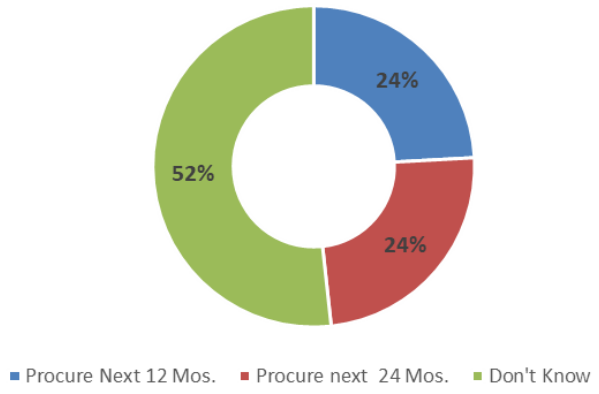
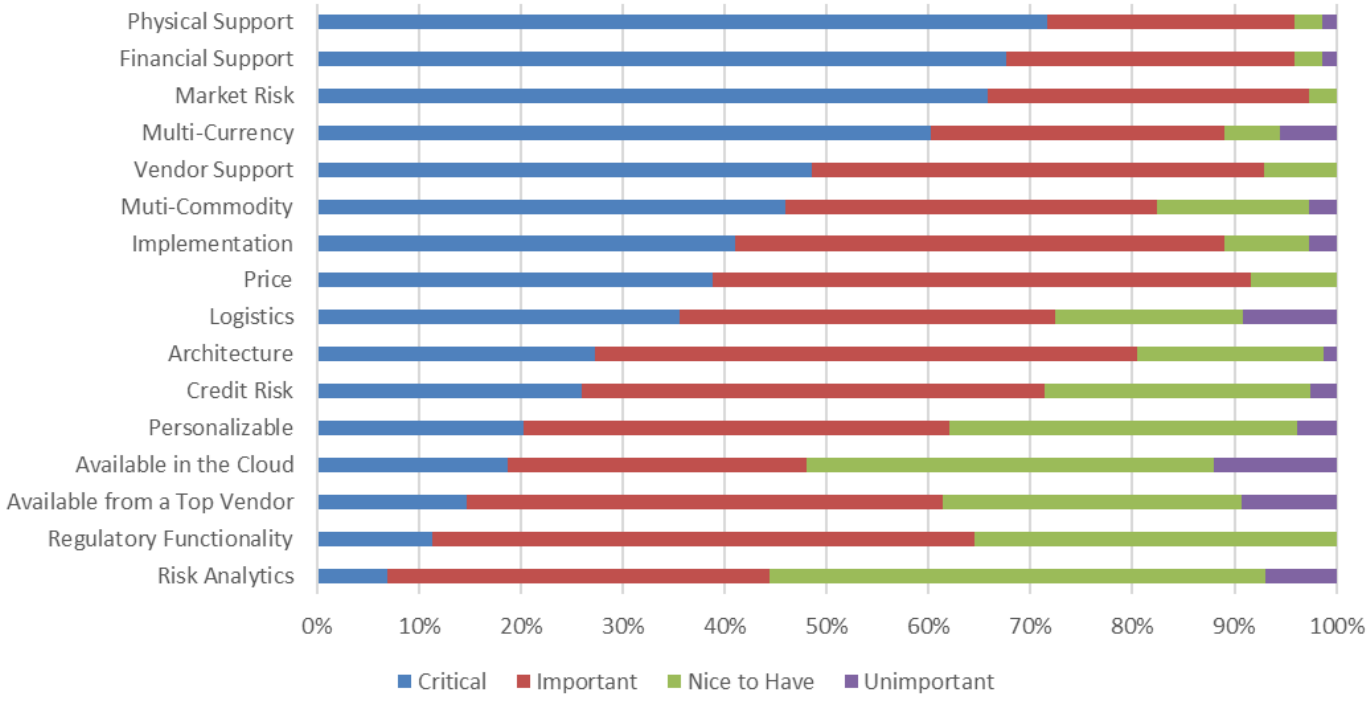
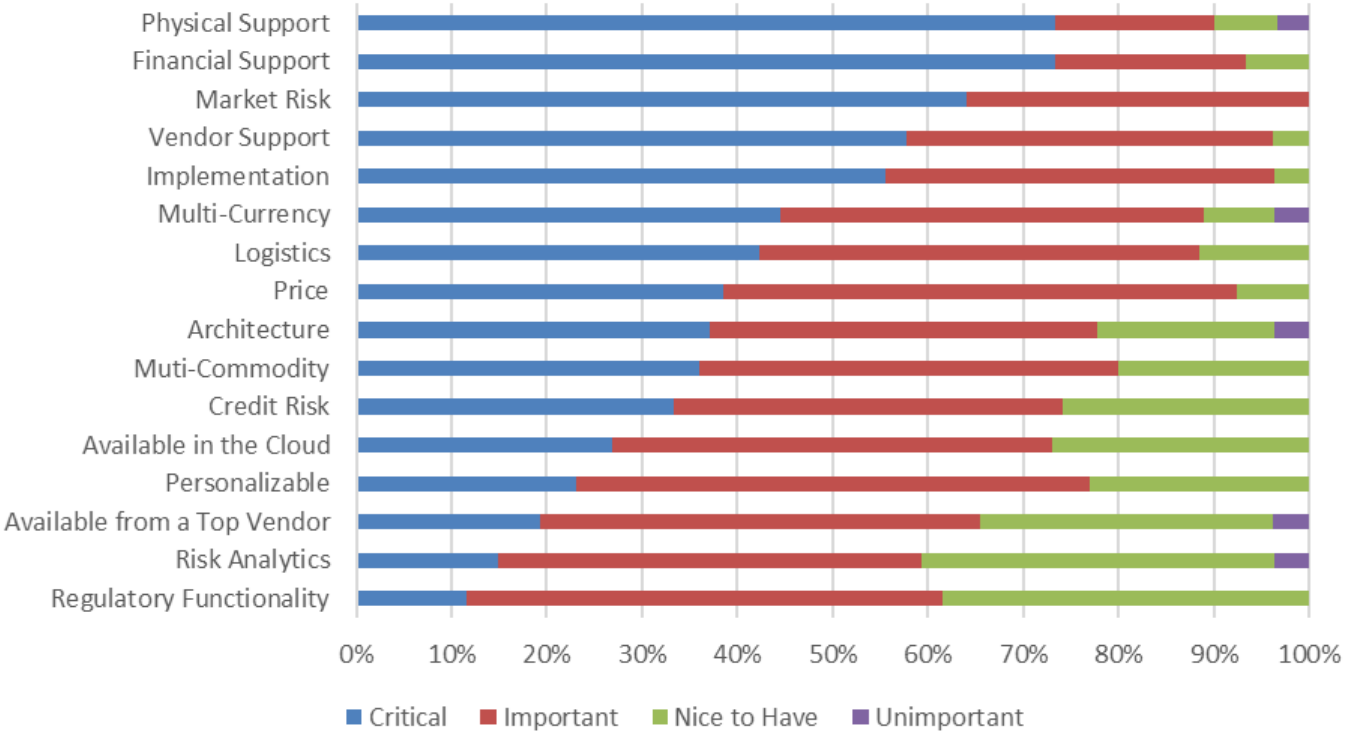


Figure 30 - Buying Criteria



When it comes to buying criteria, the consultants and SI's share broadly the same opinions as the respondents in general. There some differences however, including that influencers rank "Quality Vendor Support" more highly than end users and "Multi-currency Capabilities" less highly. Influencers also appear to rank "Available in the Cloud" more highly than end user and "Multi-commodity Support" much lower than end users. (Figure 31).

Figure 31 - Influencer Buying Criteria

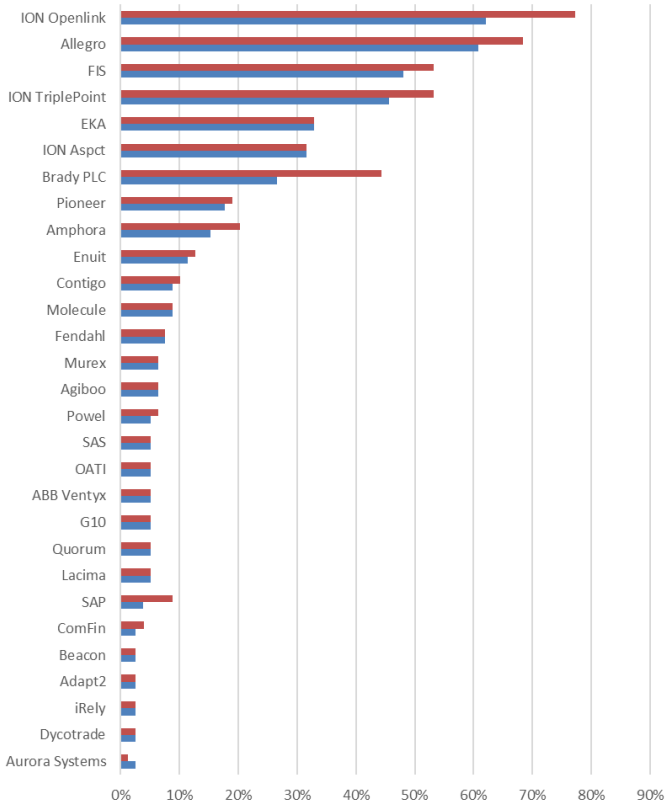


IMPACT OF INSTALLED BASE ON RESULTS

When looking at brand recognition and first-to-mind, it could be assumed that the respondents know, and are most familiar with, their own solution providers. In order to eliminate any potential bias that this familiarity represents, the indicated vendor installed bases can be removed to provide an adjusted view of brand recognition.

When the installed base is removed from the unprompted brand recognition results, the overall effect is not hugely significant in terms of which vendors are well-known. A number of minor changes are observed, but the better-known vendors remain as ION OpenLink, Allegro, FIS, Eka, Brady PLC, ION Aspect, and ION Triple Point. ION OpenLink remains marginally the most widely-known vendor but in reality, is essentially tied with Allegro. FIS is more or less tied with ION Triplepoint, while Eka, ION Aspect and Brady are also tied in a group (Figure 32).

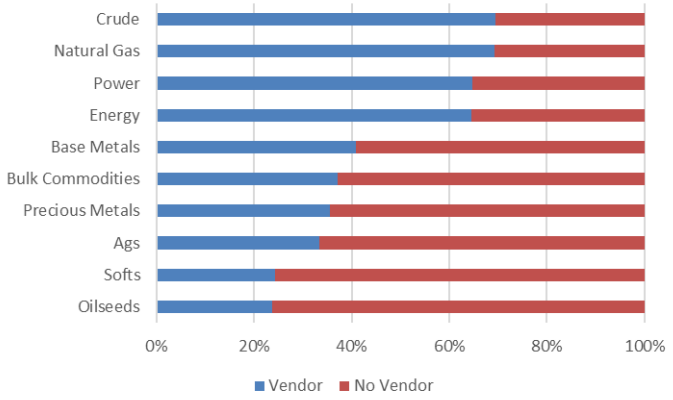
Figure 32 - Brand Recognition Without Installed Base



MARKET MATURITY

Once again, the CTRM software space looks increasingly mature with 43% of respondents utilizing a commercial application and 45% using a mixture of commercial and homegrown applications. Just 6% of the sample were using in-house/custom developed solutions. Similarly, the survey data suggests that many can name several vendors in the space. On the other hand, 52 vendors were named and despite the brand dominance of a handful of vendors. As market analysts, ComTech tracks over 100 vendors and

Figure 33 - Market Maturity



products across the space, speaking to the continuing complexity and often regional or business complexity of the space.

The maturation of the CTRM software market is further indicated by looking at the ratios of those who named a vendor solution as market leader versus those respondents that didn't know or didn't think that there was an overall market leader. Figure 33 shows the split of respondents that did have an opinion and named a vendor versus those that could not or thought there was no leader. One way to look at this data is that the more mature the segment, the more likely it is that respondents have an opinion... and it's clear that the Energy segment, Electric Power Natural Gas and Crude Oil, are the most mature segments indicated by this study. There remains a lot less clarity around Ags & Softs and Metals; however, this can be misleading to some degree as the number of respondents qualified by virtue of their market knowledge or experience in those commodities is much more limited in the sample.

FOCUS ON CONSULTANTS AND INTEGRATORS

Consultants and Integrators can be influential in selecting CTRM software and so their views are of particular interest. Figure 34 shows their responses for unprompted brand recognition and it actually looks very similar to the overall unprompted brand recognition results. ION OpenLink and Allegro are the most widely known followed by FIS, ION Triplepoint, Eka and Brady. Other vendors are not so well known but ION Aspect, Amphora and Pioneer were quite widely mentioned.

The result is also quite similar to 2016 and is also broadly similar to the overall survey results outlined above.

The influencers also share similar views on overall market leaders with the only difference being in electric power and natural gas where the results are inverted (Table 2).

Figure 34 - Inluencers' First to Mind

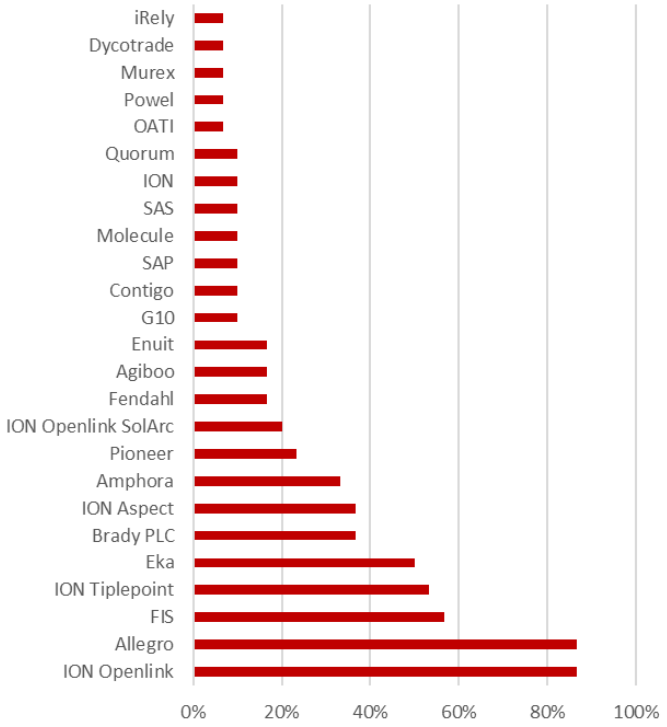


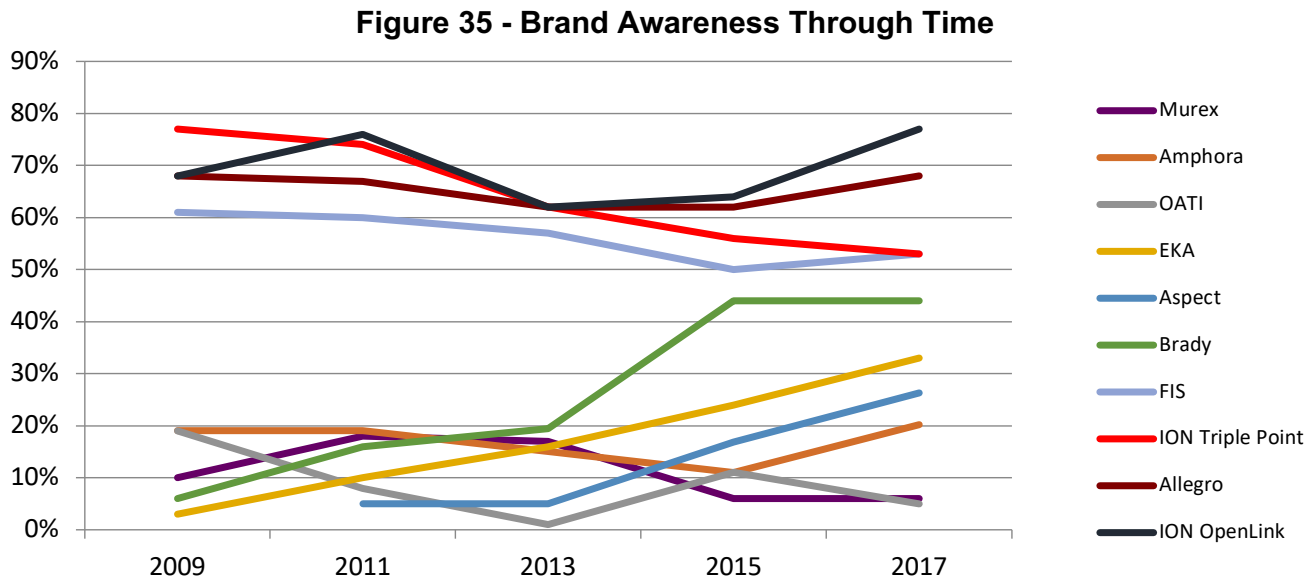
Table 2: Comparison of Perceived Market Leader views

Category	Leader – all respondents	Leader – Consultants/SI Only
Overall	OpenLink	OpenLink
Energy	OpenLink	OpenLink
Electric Power	OpenLink	Allegro
Natural Gas	Allegro	OpenLink
Crude	OpenLink	OpenLink
Ags	Eka	Eka
Oilseeds	Eka	Eka
Softs	Eka	Eka
Precious Metals	Brady	Brady
Base Metals	Brady	Brady
Cloud	Aspect	Aspect

TRENDS

By taking data from previous Vendor Perception studies, we can examine trends over the last few years. Figure 35 shows brand recognition for several of the major vendors for which we have historical data. At first sight, it seems as if the overall brand perception of the top vendors has declined, but this is more likely due to an increasing sample size over the years that has become significantly more geographically diverse.

In looking further at the data, It is interesting to note certain trends. First, ION OpenLink has managed to maintain its' overall perceived market leadership for some time now, but it has been locked in something of an ongoing battle with Allegro over the recent past...although the indications of this survey is that perhaps they have pulled away a bit from Allegro and is increasing its brand strength. ION TriplePoint's brand strength has declined steadily and continues to decline post the ION acquisition. The FIS brand has also steadily declined in the recent past, likely due to its lack of products outside of energy (as our sample has included a greater proportion of non-energy commodity players); however, this survey suggests that the decline has now ended, and FIS is showing some resilience as a brand in the space.



At the same time, the brand strength of EKA has steadily increased. Brady, a business that spent 18-months refocusing during the period, has maintained its brand strength but has not gained. And lastly, Amphora has improved their brand awareness after several years of decline, likely the result their acquisition by a new investment group mid-year 2018.

SUMMARY

The ComTech vendor perception survey is a backward facing view of relative brand strength and perceptions across the industry. Although the number of responses was slightly down over 2016, the demographics were broadly similar and 60% of the valid respondents were end users. While the same larger vendors (namely ION OpenLink, Allegro, FIS, Brady PLC, and Eka) largely dominate brand awareness, we do see more smaller, cloud-based vendors getting increasingly mentioned – a trend we expect to see continue in future years. In particular, ION Aspect has gained in brand awareness and leadership perceptions over past surveys and, given their above market rates of sales success in recent years, we do expect that brand to continue to develop strength.

The key buying criteria tested in this survey remain broadly consistent with previous surveys, though the greater cost consciousness of buyers, and a progressive shift to the cloud appear to have started to have an impact on those criteria in this survey.

With recent acquisitions, particularly those by ION, just a few vendors now have much of the name recognition in the sector. However, the current environment and technology trends in particular do suggest that the overall CTRM landscape is set to change. While more acquisitions are expected, the shift to the cloud and a trend away from large monolithic solutions towards ecosystems comprised of multiple specialized solutions is likely to disrupt the landscape of vendors in the future. ComTech does expect some market share to be picked-up by smaller vendors of specialized products over the next few years, but how much of an impact this has on the larger vendors remains to be seen. As can be readily seen in this survey, the combined brand 'clout' of ION Openlink, ION TriplePoint and ION Aspect is pervasive. The future strategy of ION and its ability to solidify these acquisitions will dictate to some extent whether this remains the *status quo*.

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- Implement effective risk control processes and minimise operational risk
- Streamline operations through fully integrated accounting processes

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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.

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