

2012 A&D MARKET SURVEY

CSC

11th ANNIVERSARY
Aviation Week and CSC
A&D Market Survey

The Flight to Safety

Looming sequestration and associated reductions in Department of Defense and government expenditures combined with strong but uncertain government demand amid growing commercial markets is weighing heavily on the industry and its supply base.

The 2012 Aerospace and Defense Industry Survey sponsored jointly by *Aviation Week and Space Technology* and CSC received strong industry backing with good representation across industry segments through a broad range of company sizes. Fully one third of the respondents identified themselves as Director Level or above.

Where until recently federal and government markets were seen as the source of growth and prosperity, companies are instead focusing on the commercialization of existing products — first domestically, then internationally. Goals of reaching for new areas of growth as full service providers, performance based logisticians or System of Systems Integrators have given way to building better relationships with existing customers in existing markets with existing products and services. Furthermore, business leaders appear to believe that commercial growth opportunities are fairly evenly split between international and domestic markets. This appears to be a shift in thinking as perceived commercial growth over the last couple of years has been heavily focused on international markets.

As suppliers, respondents perceived the greatest challenge within the global supply chain as meeting lead time and schedule performance. Risks associated with pushing additional product and service responsibility down the supply chain to partners and the cumulative impact on overall quality also weigh heavily on the industry.

In our technology-driven industry, Engineering is cited as the area of highest bottom line business potential. When asked about changes in what area of business would have the greatest positive impact on the bottom line, Engineering, Operations and Supplier/Supply Chain collaboration came up in that order. Similarly, Engineering is seen as a source of competitive advantage enabling business systems and processes.

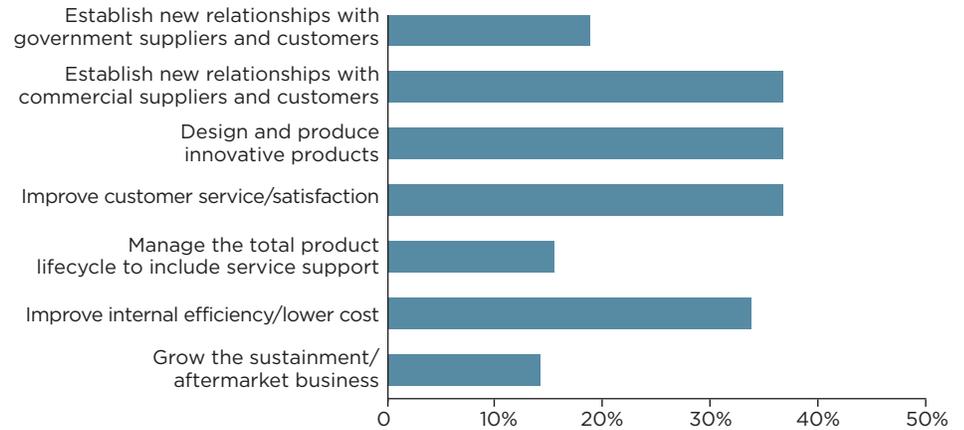
Aftermarket support and performance based logistics (PBL) are still seen as a source of continued revenue and margin, but growth has and is being constrained. Those firms providing PBL continue to increase their offerings and business, especially in the commercial market, where PBL is now as prevalent as it is in government business. Those not offering PBL have no immediate plans to get into the business, citing a lack of demand, a lack of knowledge in the area and the perception that PBL is not particularly profitable business.

These uncertain times are spawning a flight to safety where companies are focusing on increased productivity within core competencies and growth in more familiar domestic markets by way of existing product extensions.

Strategy and Growth

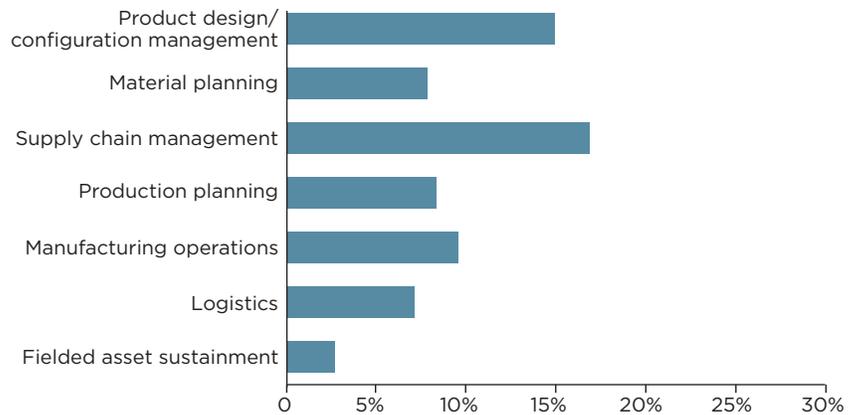
Strategically, the pendulum and growth emphasis has swung away from government procurement and towards providing goods and services for the commercial market with an emphasis on the design and production of innovative products and increased productivity.

Question 8. Percentage of responses indicating that the objective is either the highest (1) or second highest (2) strategic objective over the next 1 to 2 years.

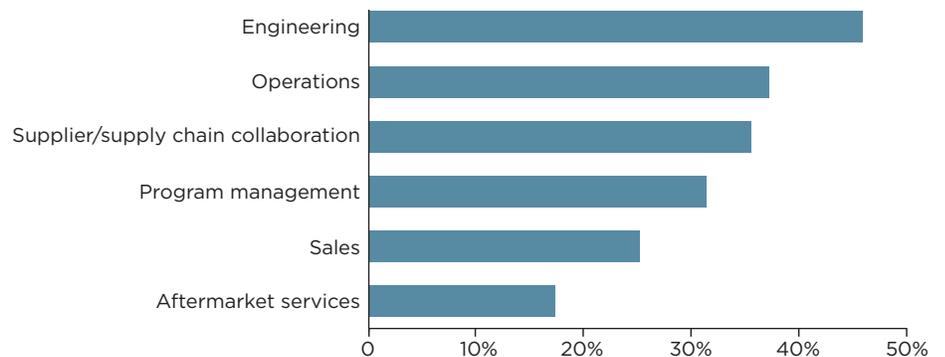


Of interest is the low level of emphasis on lifecycle service management and aftermarket sustainment, where respondents ranked field asset sustainment lowest in a list of functional areas offering the greatest commercial and financial value to the company and where changes to aftermarket services were ranked as having the lowest positive impact to bottom line results.

Question 25. Respondents selecting the following area as highest (1) or second highest (2) area of innovation providing greatest commercial or financial value to the company.

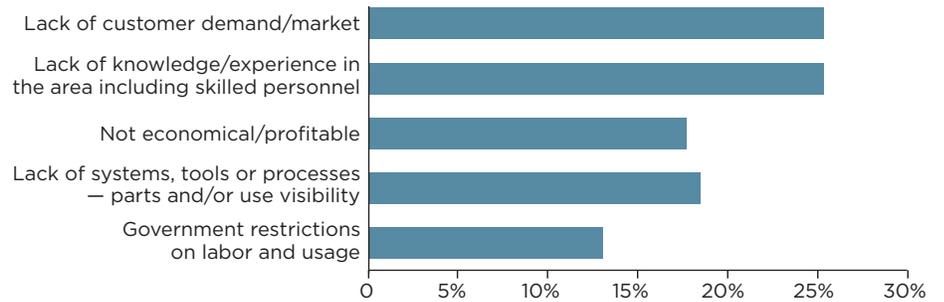


Question 6. Percentage of responses indicating that the functional area has the highest (1) or second highest (2) potential for positively impacting bottom line results.



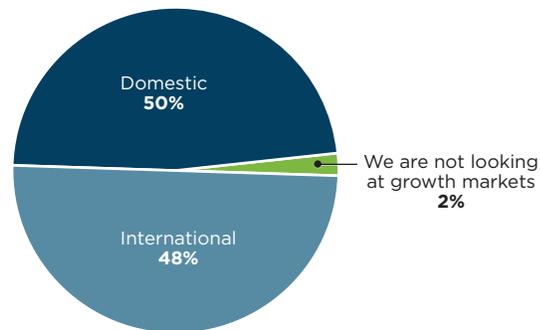
The reasons cited for the low interest in aftermarket services are a lack of customer demand (a market) and a lack of knowledge in the area including a lack of skilled personnel.

Question 45. **Greatest constraints to increasing performance based logistics based on the combined answers for each area representing greatest constraint (1) and next greatest constraint (2) for respondents with PBL contracts.**

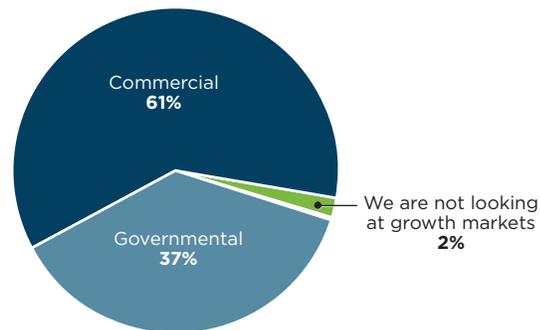


Furthermore, business leaders appear to believe that commercial growth opportunities are fairly evenly split between international and domestic markets. This is a major shift in thinking as perceived commercial growth over the last couple of years has been heavily focused on international markets.

Question 18. **Percentage of respondents focusing on Domestic or International markets for growth.**

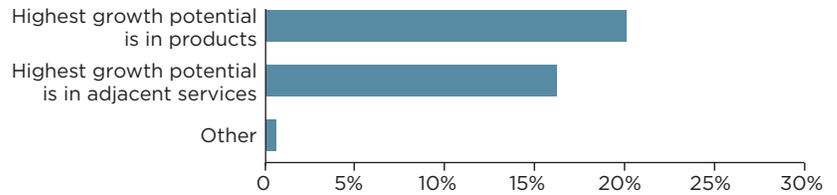


Percentage of respondents focusing on commercial vs. governmental/public markets for growth.

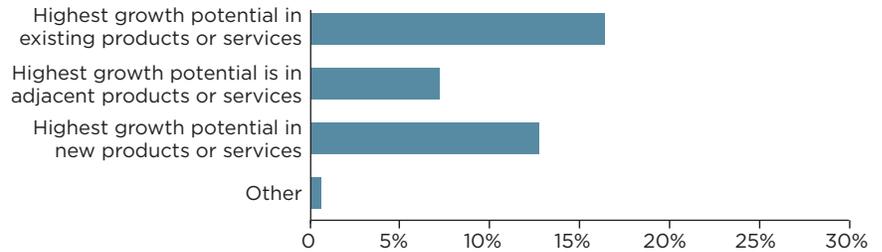


In looking for commercial growth opportunities, companies appear to be focusing on new and existing products as well as existing services, seeing limited potential in adjacent products and services or in developing new services. Similarly, growth through mergers and acquisitions is not seen as a macro force impacting our industry. The macro forces of reductions/reallocations of defense spending and globalization of markets has drastically changed industry priorities – deemphasizing workforce shortages, access to affordable capital and the push for the role of system of systems integrator.

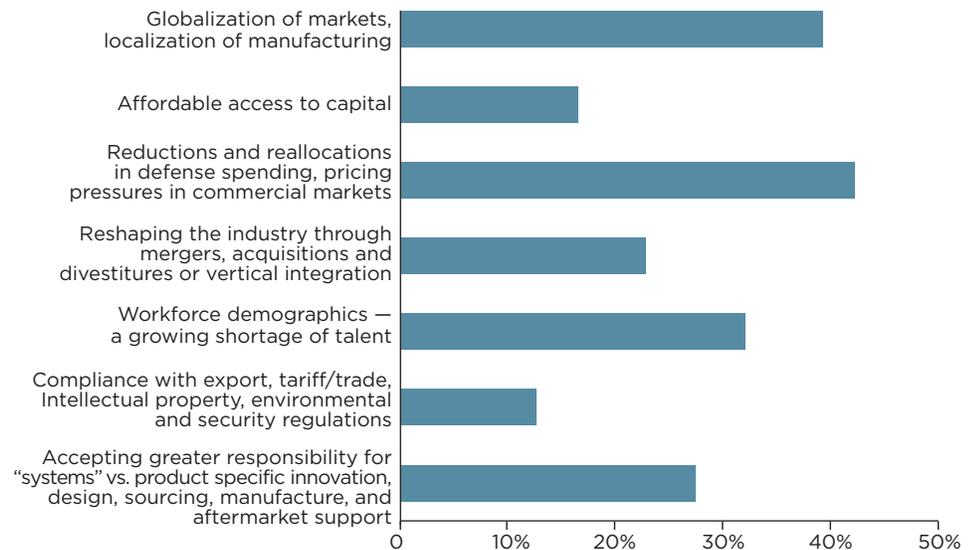
Question 19. Percentage of responses selecting products or services as the highest (1) or second highest (2) focus area for growth.



Percentage of responses selecting existing, adjacent or new products or services as the highest (1) or second highest (2) focus area for growth.



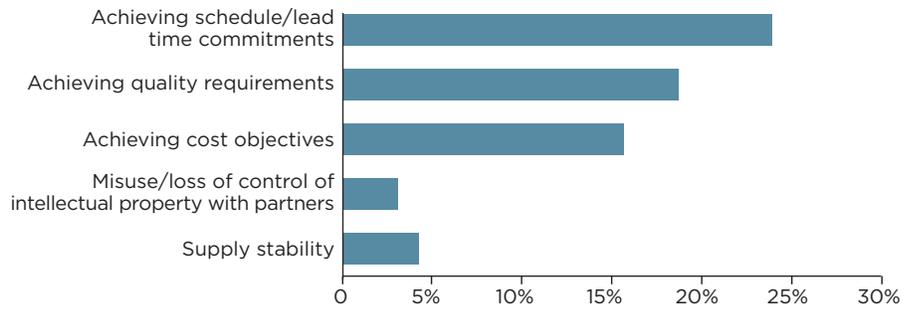
Question 7. Percentage of responses indicating that the area has the highest (1) or second highest (2) impact to the organization over the next 2 to 3 years.



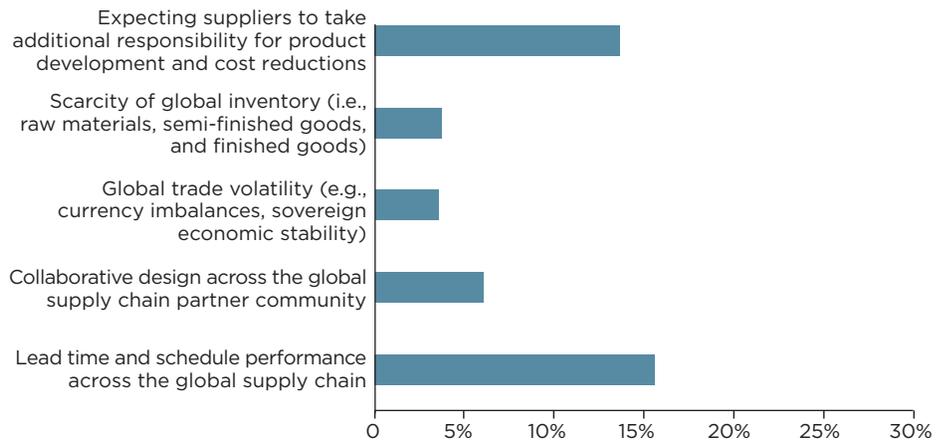
Supply Chain and Collaboration

The industry is feeling the cumulative impact of growing demand in the commercial sector atop continued strong but increasingly uncertain demand in the DoD and government sectors. As suppliers, respondents had the greatest concerns with achieving schedule and lead time requirements while maintaining high levels of quality. While suppliers perceived the greatest challenge within the supply chain as meeting lead time and schedule performance across the global supply chain they also expressed concerns with the expectation that suppliers will continue to bear an increased responsibility for product development and cost reduction. Risks associated with pushing additional product and service responsibility to partners and the cumulative impacts on overall quality also weigh heavily on the industry.

Question 23. Percentage of respondents choosing the area as the greatest concern (1) or second greatest concern (2) as a supplier.

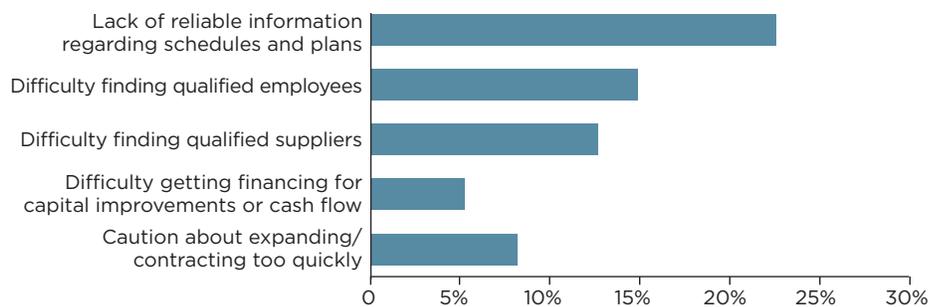


Question 35. Respondents identifying the following areas as their greatest (1) or second greatest (2) challenge to the global supply chain.

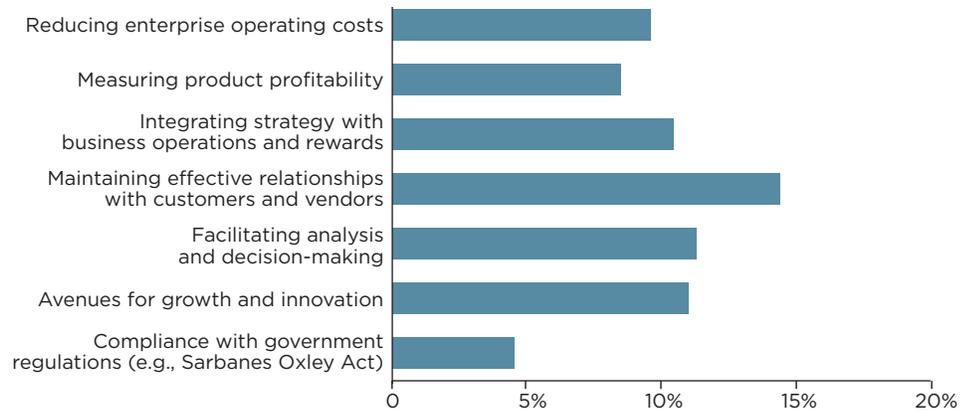


The lack of reliable information regarding schedules and plans is cited as one of the primary drivers for the concerns around meeting lead times and schedules. In addition, suppliers are feeling constrained by the lack of information available for creating and maintaining effective relationships with customers.

Question 24. Percentage of respondents identifying the following areas as highest (1) or second highest (2) drivers for their primary concerns as suppliers.

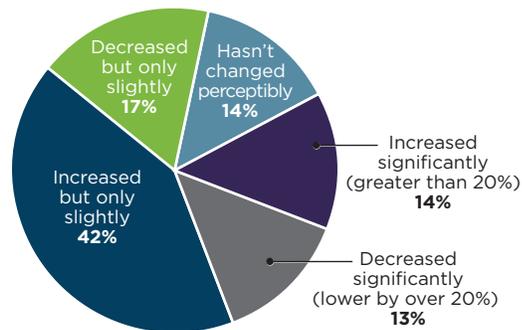


Question 41. Percentage of respondents choosing the following areas as most constrained by a lack of business information as identified by choosing the area as highest constraint (1) or second highest constraint (2).

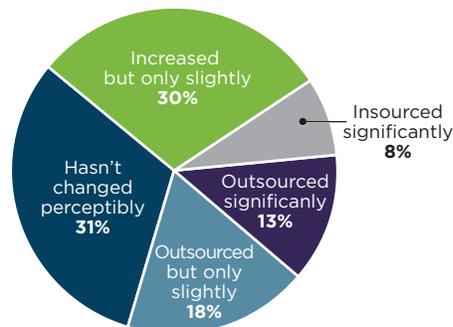


Difficulty finding qualified employees surfaced as a primary driver of Industry concern. By a margin of almost two to one, respondents identified that they are seeing shortages in the domestic workforce, especially in the areas of Aerospace and Mechanical Engineering and the skilled trades. The consensus appears to be that the shortages will probably continue for another 5 to 7 years. As a result, many companies are actively working to generate interest in math and the sciences with local high school programs. Despite the challenges of meeting schedules and lead times and the difficulties finding qualified employees, we see no significant increases or decreases in the number of firms outsourcing work or bringing in additional supply chain partners. To the contrary, we're actually seeing a larger number of respondent companies bringing work back in house as opposed to outsourcing.

Question 30. Has the number of supply chain “partners” your company collaborates with increased or decreased over the last year?



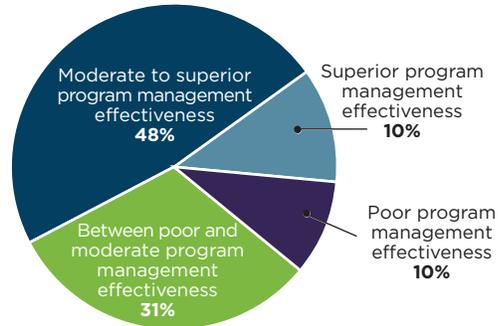
Question 31. Has your company insourced (taken work once outside the company back inside the company) or outsourced more work over the last year?



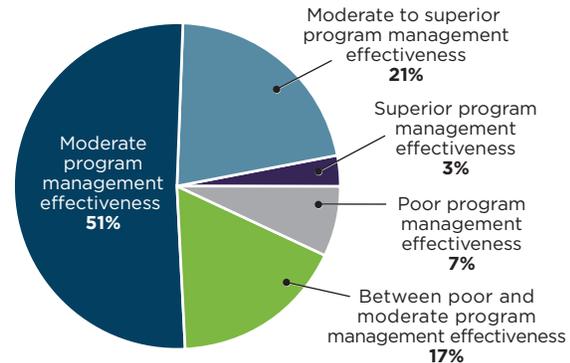
Programs, Productivity and Innovation

The message is clear: while people believe the level and competency of industry wide program management is improving, training, increased use of experienced resources and better management participation would accelerate overall program management effectiveness. Almost 60% of respondents believe their companies do a moderate or superior job of program management while 75% of the participants thought their suppliers and partners did a moderate or better job of program management. With that in mind, very few respondents thought they overspent on program management, and the overwhelming majority thought they either spent about the right amount or didn't spend enough on developing and maintaining program management capabilities. Similarly, a full 63% of the respondents believe they are getting value for their program management investment.

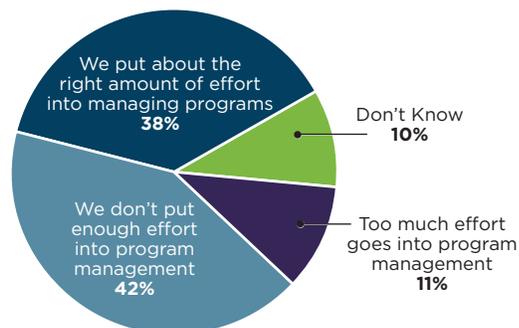
Question 12. **Rate your company's overall program management effectiveness.**



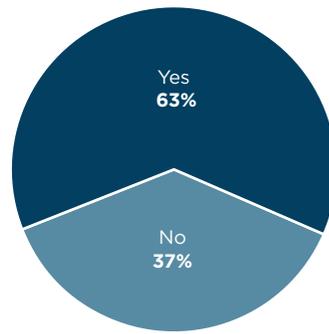
Question 16. **Rate the program management effectiveness of your partners (e.g., customers, suppliers, peers).**



Question 20. **Does your group/company spend too much, too little or just the right amount of effort on program management?**

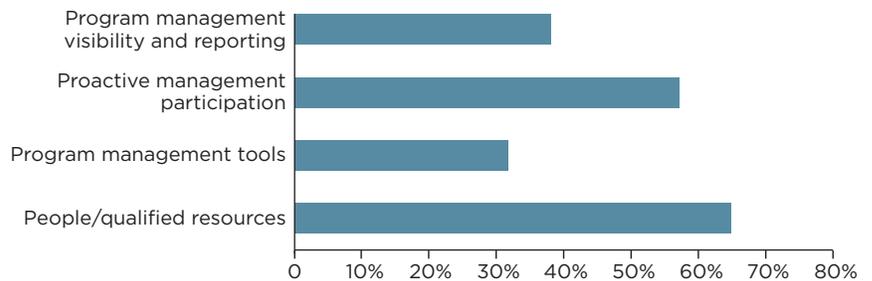


Question 14. Do your program management expenditures deliver the value you expect?



Despite increased confidence in program management capabilities, there is still room for improvement. If spending isn't the impediment to improving program management, what do respondents see as the primary impediments to better program management? Program management tools, reporting and visibility came out as the least impactful areas for improvement, whereas qualified resources and proactive management participation were identified as having the greatest impact on improved program management.

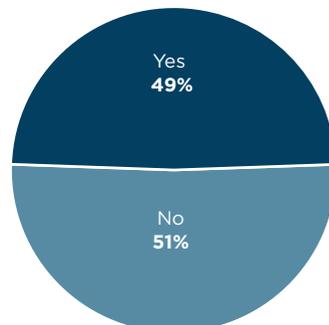
Question 15. Percentage of responses indicating that the area has the highest (1) or second highest (2) potential for improvement in the company's program management approach.



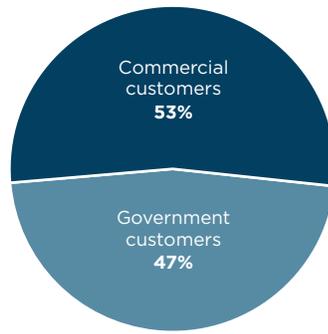
Maintenance, Repair, Overhaul and Sustainment

Aftermarket support and PBL are still seen as a source of continued revenue and margin, but growth has and is being constrained. Those firms providing PBL continue to increase their offerings and business, especially in the commercial market where PBL is now as prevalent as it is in government business. Those not offering PBL have no immediate plans to get into the business, citing a lack of demand, a lack of knowledge in the area and the perception that PBL is not particularly profitable business.

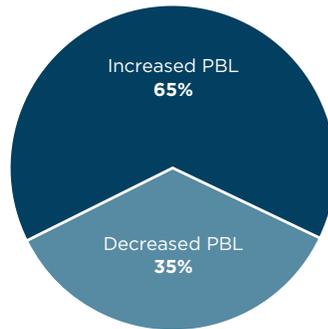
Question 43. Do you currently hold performance based logistics contracts?



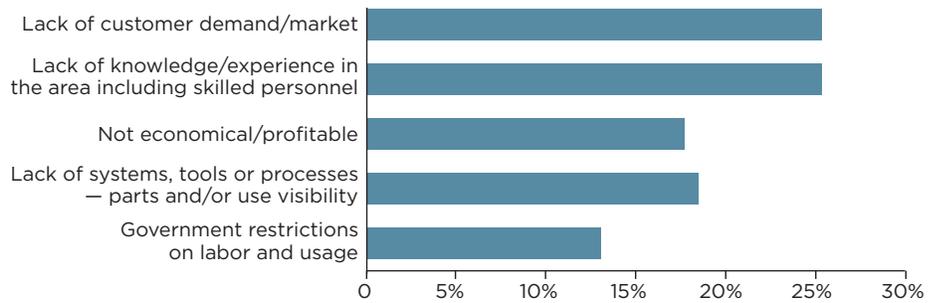
For those company's with PBL or equivalent contracts are they with government or commercial customers?



Question 44. For respondents with PBL contracts, has your PBL business increased or decreased over the past year?

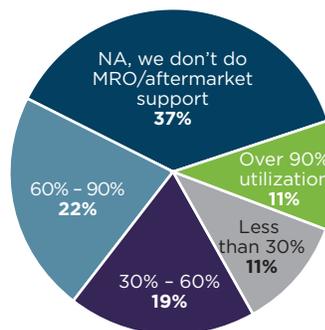


Question 45. Greatest constraints to increasing performance based logistics based on the combined answers for each area representing greatest constraint (1) and next greatest constraint (2) for respondents with PBL contracts.

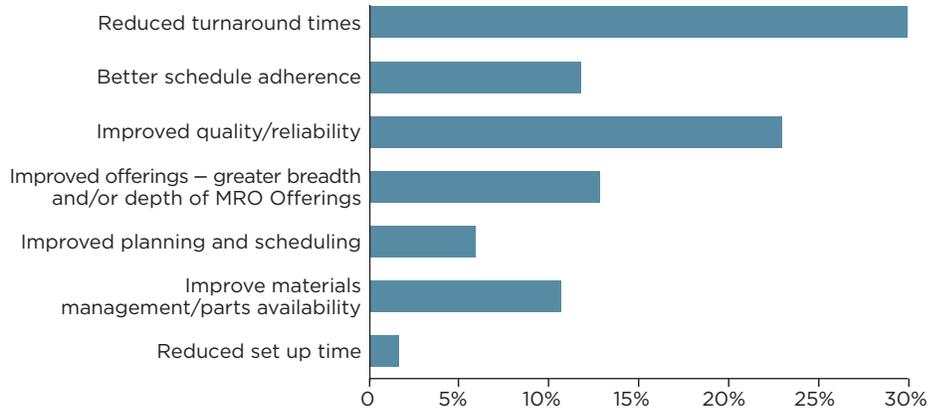


For those companies providing PBL, utilization is evenly distributed around a mean of 60% with about 18% of the companies reporting utilization in excess of 90% and a similar percentage reporting utilization lower than 20%. For these companies, the focus is on reducing turn time and improving quality and reliability.

Question 47. What is the current capacity utilization for your MRO operations?



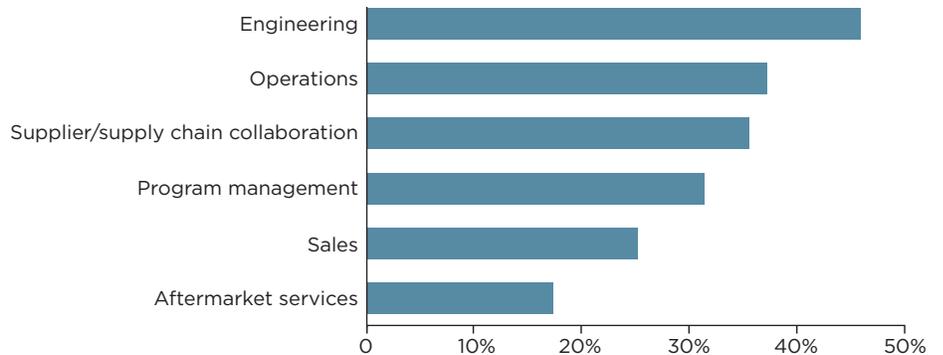
Question 49. **Top three improvement areas aftermarket support providers are focusing on as measured by the percent of top (1) and next highest (2) responses by area.**



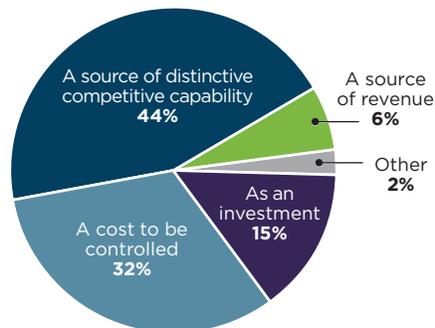
Engineering

In our technology driven industry, Engineering is cited as the area of highest potential. When asked about changes in what area of business would have the greatest positive impact on the bottom line, Engineering, Operations and Supplier/Supply Chain collaboration came up in that order. Similarly, Engineering is seen as a source of competitive advantage enabling business systems and processes as opposed to Information Technology, which is more often seen as a cost to be controlled, or Supply Chain Management, which is viewed as neither an enabler nor a deterrent to growth and diversification.

Question 6. **Percentage of responses indicating that the functional area has the highest (1) or second highest (2) potential for positively impacting bottom line results.**

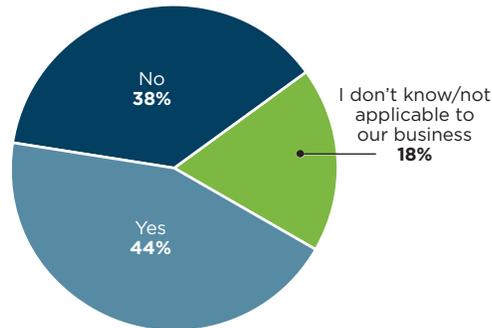


Question 57. **Your corporate management's view of engineering is: (select one)**

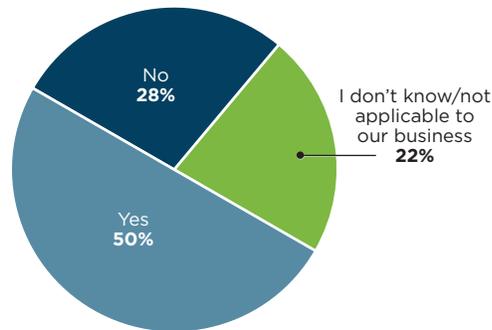


Similarly, most of the respondents do not see product delivery issues as engineering based. As a result, most companies see Engineering spend year over year increasing over 5% this year in an environment where engineering and engineering based tools and processes are reasonably current. And most companies use a single product data management system that is integrated with shop floor control and ERP. Most respondents model parts digitally, have electronic bills of material and have done a major engineering system or process upgrade in the last 4 years.

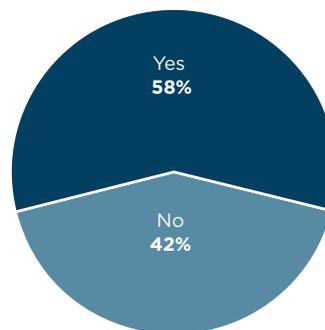
Question 51. **Does your group/company use a single enterprise wide product data management or engineering tool?**



Question 52. **Is your engineering system integrated with your shop floor control system?**

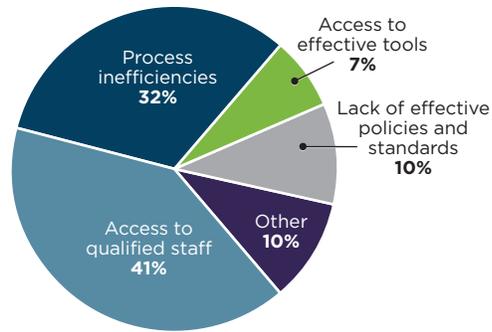


Question 53. **Is your engineering system integrated with your ERP system?**

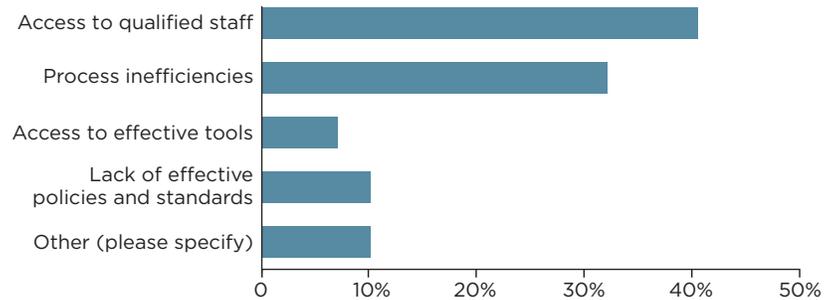


Engineering is constrained by both process inefficiencies and the continued issue of recruiting, hiring and retaining or otherwise accessing qualified staff. Perhaps its industry based restrictions or the nature of the work that keeps us from shifting production offshore or relying on offshore engineering staff augmentation. Despite that, Design Engineering as a function would be considered for outsourcing before manufacturing or procurement/sourcing.

Question 61. **Would you say your engineering related issues at your company are primarily due to:**



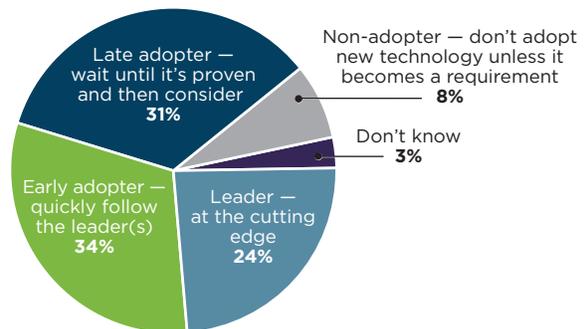
Question 40. **Percentage of respondents identifying the following areas as the source of engineering related issues**



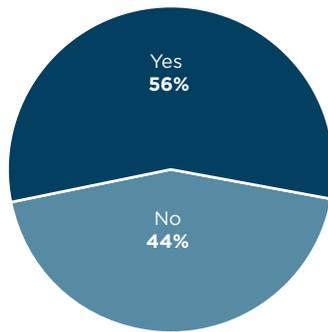
Information Technology

More than half of the respondents believe that they are either leaders or early adopters of new/emerging business processes and Information Technology (IT), and that their IT investments yield the expected value to the business. For those who did not see the expected results from their IT investments, most felt it was because they did not adapt their business processes to the new technologies.

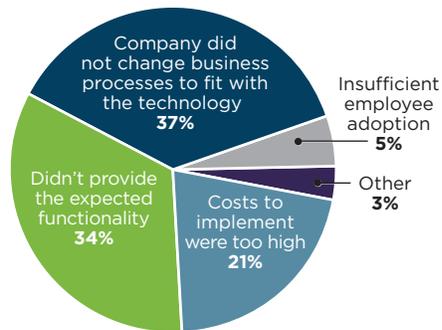
Question 9. **Is your company's attitude toward the adoption of new or emerging business practices and information technology that of a: (select one)**



Question 10. Do your information technology expenditures deliver the value you expect?



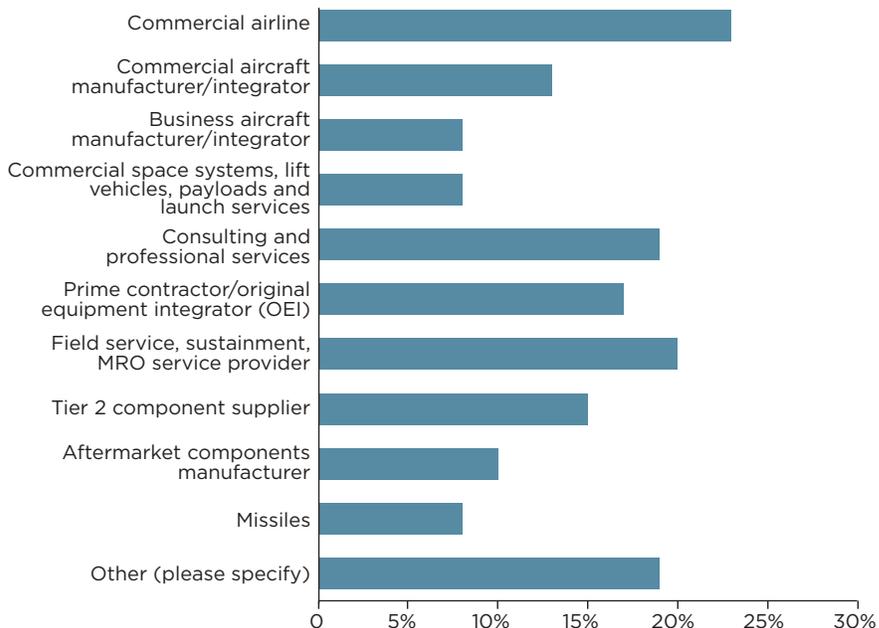
Question 11. If no, what was the most significant reason? (select one)



Demographics

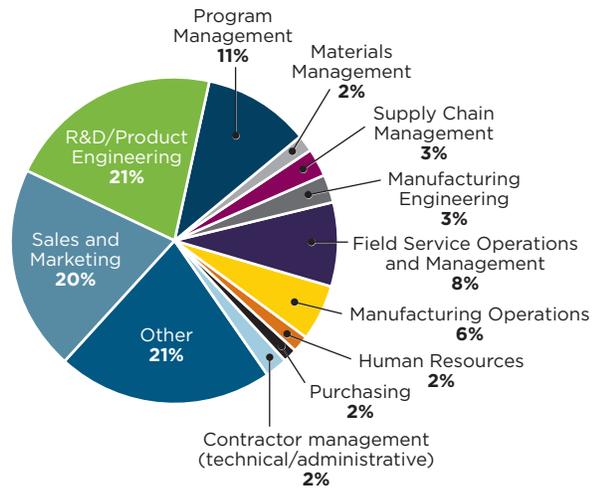
The 2012 Aerospace and Defense Industry Survey received strong industry backing with good representation across industry segments within all sizes of companies. Respondents were fairly evenly split between large companies (annual sales >\$5B) and smaller companies (annual sales <\$100M) with a strong showing of industry executives. Fully one third of the respondents identified themselves as Director Level or above.

Question 1. Identify your organization's aerospace and defense business segment(s). (select all that apply)

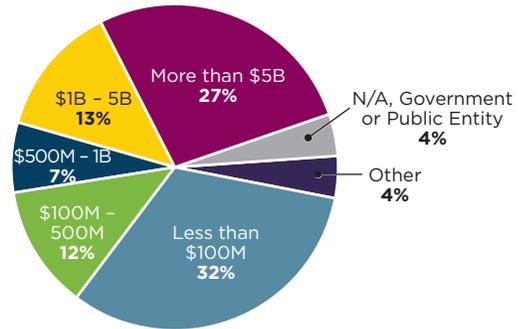


1. Total percentages greater than 100% as respondents may select more than one category
2. Other is comprised of multiple business areas with DoD/Gov't, IT and Retired representing almost one-third of the "other".

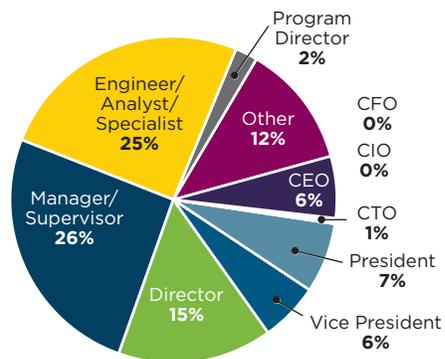
Question 2. Select your primary functional area. (select one)



Question 3. What are the annual revenues in U.S. dollars for your parent organization?



Question 4. What is your organizational level and role?





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CSC makes a special point of understanding its clients and provides experts with real-world experience to work with them. CSC is vendor-independent, delivering solutions that best meet each client's unique requirements.

For more than 50 years, clients in industries and governments worldwide have trusted CSC with their business process and information systems outsourcing, systems integration and consulting needs.

The company trades on the New York Stock Exchange under the symbol "CSC."

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