



AVIATION WEEK EXECUTIVE ROUNDTABLE:

Industry Leaders Define Issues to Face in 2009

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The AVIATION WEEK Executive Roundtable Summit held November 13 focused on key strategies for the aerospace and defense industry as it enters a period of significant change: the global financial collapse, change in U.S. government leadership, and new needs in America and among its partners around the world.

This fifth annual convocation was hosted by Chris Chadwick, President of Boeing Military Aircraft. However, due to requests from the U.S. Air Force, Chadwick turned the meeting over to two colleagues – Jean Chamberlin, VP of Boeing Global Airlift, and Tom Burbage, EVP/GM F-35 Global Integration.

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In opening comments, Burbage and Chamberlin focused on the strengths of the industry as it faces tremendous economic pressures and uncertainties. Burbage outlined the global nature of our business - -that the A&D industry does not merely occupy a leadership role for the American economy but that it is an enterprise incorporating business and government leadership around the world. Chamberlin focused on the technological challenges we face, while attempting to deal with the very real economic and cultural issues of this period.

The Executive Roundtable, sponsored by Siemens PLM Software, was attended by leaders from Boeing, Lockheed Martin, General Atomics Aeronautical Systems, Plasma Ruggedized Systems, EADS N.A., Pratt & Whitney, CRA International, Northrop Grumman, L-3 Communications, Honeywell, Goodrich, Rockwell Collins, IBM, Forerunner Foundation, and Deloitte, LLC. Also joining the group was The Honorable Kenneth Krieg, former Undersecretary of Defense for Acquisition, Technology & Logistics.

Among the resounding issues brought up during the roundtable was that the industry currently faces peak demand for both the commercial and defense sectors. At the same time, significant financial collapse, changes in government leadership and increased pressure on reducing Defense spending will combine to create sharp disruption across the industry. Roundtable attendees expressed concern that the convergence of these changes will put additional pressure on talent requirements, the ability to sustain growth levels, and to minimize operational impact to organizations. An underlying issue expressed was that these industry leaders want to avoid any similarities with industry sectors currently facing high rates of layoffs and bankruptcies.

Following are key areas of roundtable discussion and findings.

Sustain/Grow A&D Industry Capacity

As the aerospace and defense industry moves from a peak in both commercial and defense sectors, industry leaders will need to address how to sustain current industry capability, productivity and growth while also looking for adjacent technologies and business sectors to realize incremental growth. These range from opportunities linked to U.S. infrastructure improvements to global economic opportunities.

1. Major Concerns in Dealing with Economic Situation: assure technology/capability penetration into not only the Defense arena, but also transportation, energy, homeland security, state and local agencies and globally.
2. Protect margins by attacking fixed cost and infrastructure costs.
 - a. This may mean a new wave of consolidation through lower tiers of the supply chain, among divisions across a corporate base.
 - b. It was also noted that protecting the industry's gains in productivity and operating margin may come under public scrutiny as "largesse" compared to other industry sectors, thereby diminishing the A&D industry brand.

- c. As an entity, the A&D sector needs to address its energy consumption – in operations as well as in products and services; this is an opportunity for creativity and a must to drive down fixed costs.
3. Major concerns: credit flow unavailable to members of the supply chain; industry needs to assess how to assure credit/investment is extended to keep development and production on track.
4. Another category of concern is the personnel infrastructure of the industry
 - a. How to attract and retain young people while driving down fixed costs. A&D already has a “missed” generation – the gap in our age demographics that resulted from downsizing in the past, leaving us with an aging workforce over age 50 and a young workforce under age 35. If we repeat this error, it will be even more difficult next time to bring this back into balance. It is imperative that this be viewed as the loss of a national asset as A&D drives export balance and significant GDP contribution.
 - b. Similarly, there was significant concern expressed about U.S. going into “fortress mode” of protectionism that would create long-term loss of jobs and economic advantage on a global basis.
 - c. An additional issue tied to the people structure of the industry is the cost of pension funds and assuring this does not cycle out of control and impair the A&D industry as it has other market sectors.
 - d. Healthcare and education/development for employees is also a significant concern, particularly at lower levels of the supply chain. Research and planning needs to occur surrounding this topic to assure small firms are brought into some type of “umbrella” health care plan.
5. On the positive side of the table is the industry’s tenacity about innovation; history has proven that great products and processes have been developed in A&D during tough times – spin off companies with lower overhead costs.
6. Industry must expand its sustainment business portfolio, including global reach – shift from design for output to design for outcome.
7. Better partnerships across industry and with customers – how do we relate to one another in an appropriate way to create industry stability during significant pressure period?

Total Value Chain Performance

As the A&D industry has shifted its value chain model, bringing more complex tasks to non-OEM supply chain members, as well as increasing global reach to form international partnerships, joint ventures and alliances, integration of the total value chain is a critical success factor. Key areas of need:

1. Develop capacity for concurrent engineering, not just as an information technology tool but as a business methodology; this does include appropriate IT tools as well that can accommodate design progress/rate of change. One offset of these tools is that because change appears near real time or real time, it appears to be easy – “I can change, therefore I do.”
2. Goal alignment – needs to occur across multiple companies and with customers throughout lifecycle of a program, product, system all the way to the people we transport or the warfighter we support. The group cited engine manufacturers in terms of sharing risk; another case to study and observe is the Airbus approach to working with two or three suppliers as a group to identify specifications (known as plateau phase) with actual selection of suppliers later in the process. There is some paradox in sharing intellectual property with suppliers who then seek to supplant the contracting company – this stifles integration.
3. Participants believe that one issue regarding supply chain integration is that it has in the past been addressed as a contractual or administrative issue; it is a systems engineering flow process – requiring use of fundamental communications processes, command and control dash boards, carefully crafted “trade space” that allows for adaptability and improvement, predictive metrics, and visibility *up and down* supply chain to ensure understanding of impact of schedule delays or budget cuts.
4. Key attributes to improve value chain integration – eliminate year-to-year procurement, improve configuration control/scope, and convert data to knowledge through tools that sense demand, incorporate progress, forecast supply and drive a program accurately.

International Collaboration/Interoperability

The recent financial crisis has illustrated vividly the global nature of our economy and our industry. At the same time, program and business executives across the industry – space, communications, air transport and security/defense – are relying on investment and partnerships among international companies and governments. The success of our industry is a matter of sound business practices, but it also has geopolitical tethers and enablers.

Categories of capability that need to be incorporated on global teams include:

1. Team leaders who can shift to accommodate changing situation and relationships.
2. Situational awareness – shared goals, operating principles, risk assessment and mitigation (to include intellectual property risk assessment).

3. Understanding and shared ownership of earned value at all payroll levels and all tiers of supply chain.
4. Understand that more customer partners implies more variation and team leaders need to know when to stop variant-building to accommodate additional sales/customers.
5. International collaboration should include co-location/exchanges to develop personal relationships that bridge other required fundamentals, e.g. shared program language, guiding principles, operating norms.
6. Understand that competency for program leaders on international programs includes dealing with lawyers, banking, monetary policies and how primes and subcontractors behave in various countries.

MARK YOUR CALENDARS – The Executive Roundtable Summit – a gathering of A&D leaders who will engage in an in-depth discussion of these topics and based on the input of the Executive Roundtable Summit Advisory Board -- is scheduled for July 27-29, 2009 at Bishop's Lodge in Santa Fe, NM.

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