BREAKOUT SESSION

Qualitative Perspective of the Industry Workforce Situation

20 December 2004

Qualitative Perspective of Industry Workforce Breakout Session
Workshop on National Security Workforce Challenges and Solutions

Slide 1

- **A summary of the findings from the NDIA Quick-Look Survey, and the AIA and Aviation Week Studies and a discussion to further these studies' goals**

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Breakout Session Members

Session Hosts: Tom Gannon, Malcolm Case

- **Vince Lauter, DoD Manpower Data Center**
- **Robert McGahern, US Navy ONR**
- **Carole Hedden, Aviation Week Strategic Media**
- **Alina Shaffer, Harris Corp**
- **Jeff Poindexter, Aerospace Corp.**

- **James Smith, US Air Force S&E Career Field Mgt**
- **Julia Warner, Congressional Ehlers' (MI) staff**
- **Ron Mutzelburg, Boeing Phantom Works**
- **David Napier, AIA Research**

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- **What are the implications of the findings from the NDIA Quick-Look Survey, and the AIA and Aviation Week Studies?**

- **Is the workforce crisis simply as a shortage environment or is it a shortage of engineers with updated skills, with proper clearances, who are ready at a given time to meet the immediate needs of industry in a competitive labor market.**

- **Are there actually persistent levels of unemployment of some engineering workers?**

- **Is this a manifestation of a need for younger/cheaper engineers while older workers, without updated skills, are leaving the active workforce for other careers.**

- **Are many engineers working in non-engineering jobs, or jobs in which engineering skills are secondary as a result of career growth? Is so, how can this trend be reversed (if necessary)?**

What are implications of the study?

   . Backfill – retirement/attrition

   . Front end hiring by OEMs masks issues vs. lower tier and govt.

. Attrition knowledge – where in career cycle occurs

DoD civilian jobs – age at retirement outside science and eng at 55.56. Scientists and engineers work to age 60 with 34 to 35 years of service. Function of general economy.

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- **DoD doesn't project retirements. Average age is 46. Comparable to industry.**
- **Low retirement level impact on front end of pipeline – don't have $ for both ends**
- **Transition re retirements – how handle smoothly**

  - technical – customer relations
- **What is average age for commercial retirement (Boeing is 62)**
- **Low attrition makes hard to bring in new talent**
- **Is vol attrition higher among those with clearances? Belief is yes.**

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- **9-12 months down time results in early term attrition re clearances**
- **Labor dept study 25-34yo – was 27% of workforce, now 12% from '92 to '03**
- **Govt agencies have no goal in terms of campus recruiting; may occur at local levels**

   - opportunity with retirement projections

   - can we adequately project future needs
- **Forecast – success in predicting future needs for size and skill mix**

   - govt has Civil Service and Fed Employee Retirement Systems (about 60% is FERS)

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- **Forecast re personnel needs – who could predict some of major events (9/11), new program launches, funding instability (SLAM, Crusader, Comanche) – not just #s but skills**

- **In identifying gaps, sometimes becomes too vanilla to be actionable or too specific – stop light useful but…**

- **Does academia offer govt as career option or project correct information/data on careers**

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- **Persistent unemployment among engineers – there are persistent needs in skill disciplines but also some unemployment – don't match**

- **Network, telecom etc have surplus but not easily transferable to DoD, Security or A&D industry (from other tech industries) (5% in silicon valley vs 5.4% nationwide)**

. **Life (or lack of)of engineering student given the outsourcing situation**

. **Not a central goal – space, new platforms, etc. to rally around**

- **The mix on skills/shortages is affected by funding and program uncertainties, a multi-faceted national vision without necessary long-term support, the inability to anticipate next threat and lack of accepted integrated plan for change.**

"Making predictions is tough…particularly about the future."

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Key Challenges and Barriers

- **Funding/project uncertainties make projections difficult re specific skills and gaps as well as clearance status**
- **Govt difficulty in establishing on-campus recruiting target; wait for vacancies to develop (retirements)**
- **Handling retiree knowledge/experience/relations transition**
- **Know what core science/engineering required to maintain national "edge" despite global economy and coalition needs; we don't know**
- **Research for research sake – is it possible to maintain, ROI for govt and companies**
- **Status of academia – concern due to lack of knowing status on their skill gaps, retirements, etc.)**
- **Multi-faceted vision – terrorism, Moon2Mars, transport advances, security/defense volatility**

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Recommended Actions

RECOMMENDED ACTION	Who	RECOMMENDED RESULT
Integrated plan of developing future workforce for national defense/security owned by single authority for continuous planning/ action – macro level	**DDRE**	**. Share best practices** **. Outreach** **. Focused vision/imperative** **. Research/data analysis** **. Establish new blood policy across DoD to sustain entry level recruiting (requires budget line)**
Clear technical/security/defense imperative that results in continuous forecast of future Science Tech Eng Math and enabler/ enterprise job skills (top 10 or 25, not hundreds) needed for national defense/ security	**Pres. Council on Science & Tech – Pres. Science Advisor (OSTP)**	**. Focused mission/ rallying point that has longevity** **. Applied research budget to sustain**
Common lexicon for top-level skills <u>and</u> highly detailed inventory re jobs (e.g. system engineer) **Must include production workforce**	**AIA**	**Maximize professional development, Identify replacement requirements across govt, industry and academia (ride the troughs)** **Funding to maintain database**

Action	Who	Result