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Nuclear Weapons Workforce Development February 25, 2008

**Dr. Jim Tritten
Chief, Defense Threat Reduction University
Defense Threat Reduction Agency
(DTRA/CSU)**

james.tritten@abq.dtra.mil

505-846-8734



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What is the Problem?

- Existing knowledgeable / skilled nuclear weapons workforce will depart very soon
 - In many cases they have left workforce already but are still available to pass on knowledge
- New workforce needs to be recruited
 - Military talent pool no longer available in same numbers
 - Nuclear weapons workforce talent pool may come from different backgrounds
 - Other nuclear areas
 - States
- New workforce needs to be developed
 - Basic level of knowledge may be different than in past
 - Opportunities to learn and gain experience will be different
- New workforce needs to be retained
 - Generation N / Millennium Generation is motivated by different things than workers in the past

Cannot just be left to chance



Who has the Problem?

- Department of Defense (DoD)
 - Defense Threat Reduction Agency (DTRA)
 - US Air Force
 - US Navy
 - To lesser degree
 - US Army
 - US Marine Corps
 - DoD support contractors



- Department of Energy (DOE)/National Nuclear Security Administration (NNSA)
 - Government
 - National Laboratories



- States and localities with related workforce



- Each of us has been trying to solve problem individually
 - Issues facing each organization may be different
 - Might a comprehensive approach be better?



How do we Build Tomorrow's Workforce?

- Must capture knowledge before it is gone
 - Time is of the essence
- Need a vision, a plan, and aggressive recruitment program
 - Identify new sources of talent, create applicant pool, & use human resources flexibilities to reach them
- Need career development opportunities
 - Career track with experiential opportunities that go beyond individual organizations
 - Education & training with continuous learning
- Similarity to career development programs of Services




Methods Proposed to Address Problem

- Knowledge Management
- Education Partnerships
- Outreach
- Workforce Training
- Experience Tours
 - Growing Expertise Enterprise Model
- Competency / Skill certification
- Support for Programs



Methods: Knowledge Management

- Defense Threat Reduction Information Analysis Center (DTRIAC) as repository of knowledge 
- Aggressive program to capture before it is too late
- Protect but expand availability to those who need to know
 - Those leaving DoD need broadening
 - Those not coming from DoD need technical details
- Can technology provide assistance and make up for human capital problems?
 - Technology Innovation Consortium (TIC)
 - Communities of practice and communities of interest



Methods: Education Partnerships

- Afford academe, labs, industry and other government organizations opportunity to participate in nuclear weapons training & education programs
 - Adjunct instructors
 - Thesis advisors
- Afford students opportunities to intern or work on projects with nuclear weapons workforce
 - Post-docs
- Share knowledge with full range of potential partners affords opportunity to gain different perspective
- University of Virginia (UVA) / FBI Academy model
- Universities put Defense Threat Reduction University (DTRU) staff on faculty?
- Improved education
- The basis for subsequent skill training





Methods: Outreach

- Outreach programs provide exposure to potential recruits
- Afford academe, labs, industry and government organizations opportunity for existing workforce to serve as outreach instructors
- Affords participants opportunity to gain different perspective



Methods: Workforce Training

- Capabilities-based approach
 - Shift from requirements-based to capabilities-based based upon employer generated competencies and skills
- Individual training
 - Shift to learner-centric model of instruction on-demand
 - Not just distance learning
 - Role of instructor changes
 - Shift to “just-in-time” training with reachback
 - Cannot afford the bill for everyone to be trained in everything
 - How to reach senior personnel who do not come to courses?
 - Tailored mentoring
- Collective training
 - Involve entire nuclear weapons community
 - Joint National Training Capability (JNTC) linkages to real world
 - Get Combating Weapons of Mass Destruction (CbtWMD) training embedded within larger exercise programs

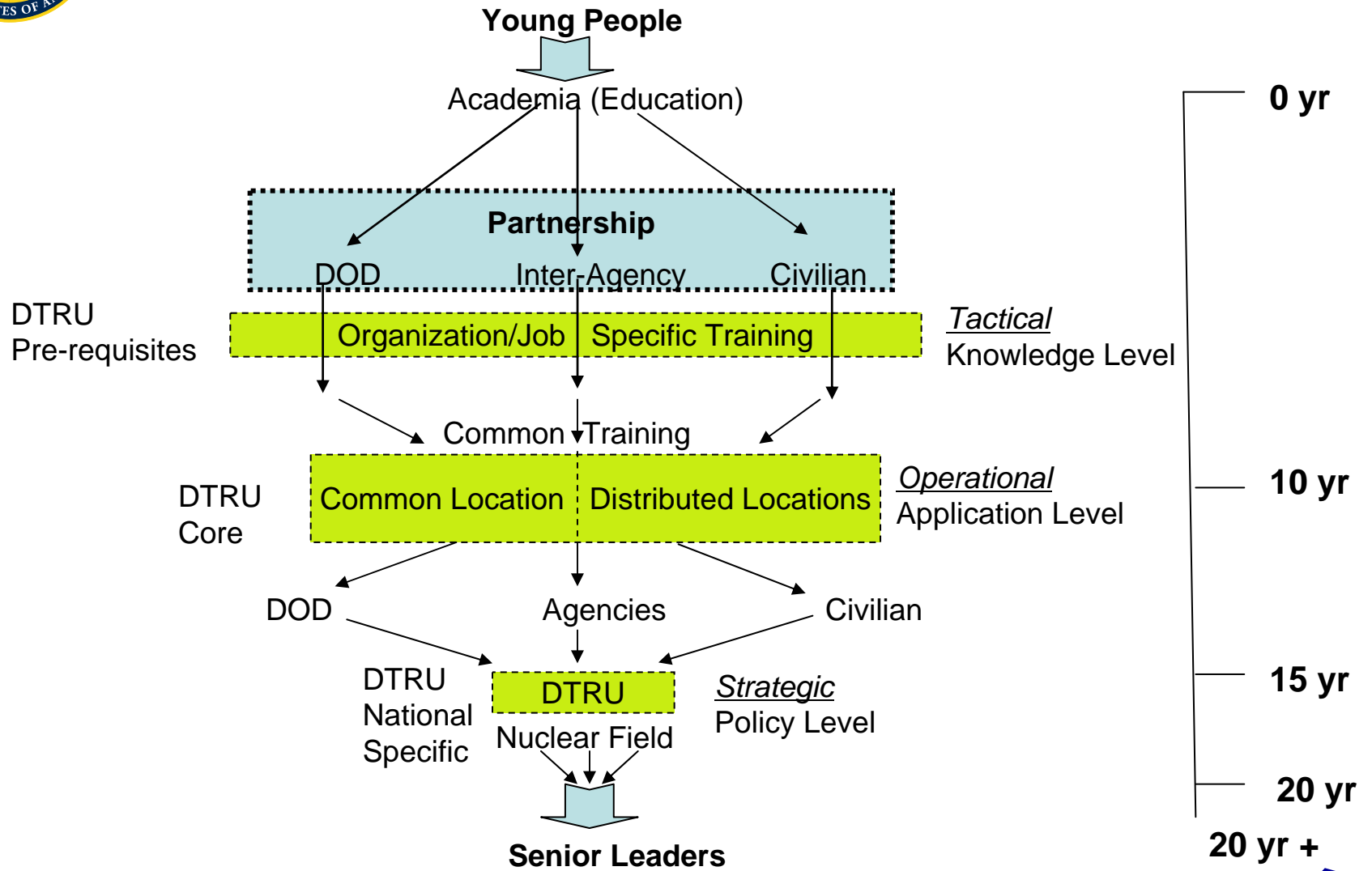


Methods: Experience Tours

- Manage workforce like military manages personnel
 - Experience tours in various areas required for upward mobility
- Agencies to cooperate and ensure viability of the entire workforce rather than just their small piece



Methods: Growing Expertise Enterprise Model





Methods: Competency / Skill Certification

- Certification of nuclear weapons specialists
 - Nuclear weapons workforce for multinational, federal, state, and local entities
 - Start with DoD/DOE instructors for training
 - Grow into certification all nuclear weapons specialists
- Borrow from other nuclear certification programs or those used by Department of Homeland Security (DHS)





Methods: Support for Programs

- Global Initiative (GI) to Combat Nuclear Terrorism
 - Portal and exploring role in training & education
- Nuclear weapons programs
 - Need to contribute to education and training



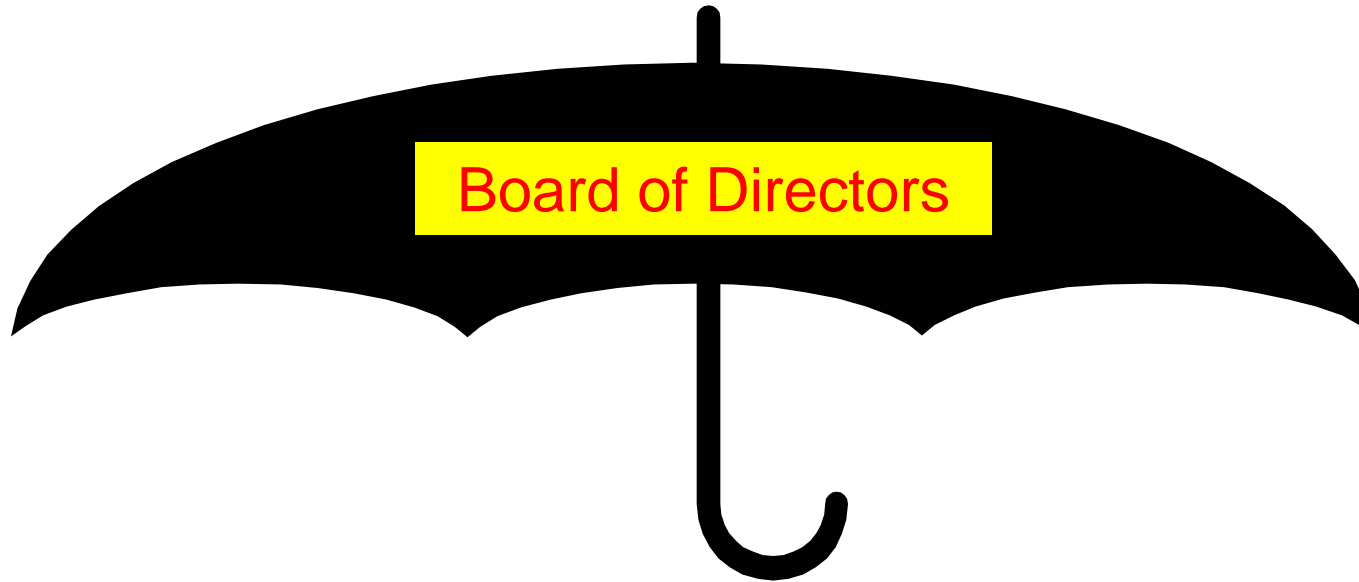
DTRU as a Model

- Defense Threat Reduction University (DTRU)
 - DTRA is DoD Executive Agent for general nuclear weapons training
 - Internal DTRA organization with a vision
 - Expertise in both subject matter and how to teach that subject matter
 - Links both individual & collective training
 - Support to education but will not become an education institution
- Alliance of primary training stakeholders
 - DTRU is just a single member
 - Get past sub-optimizing and advocating Chemical, Biological, Radiological, Nuclear, or High-yield Explosives (CBRNE)
 - CbtWMD education & training for the nation and its allies





Nuclear Weapons Workforce Development Alliance Proposal



Board of Directors

Illustrative



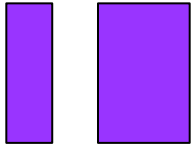


Nuclear Weapons Workforce Development Proposal

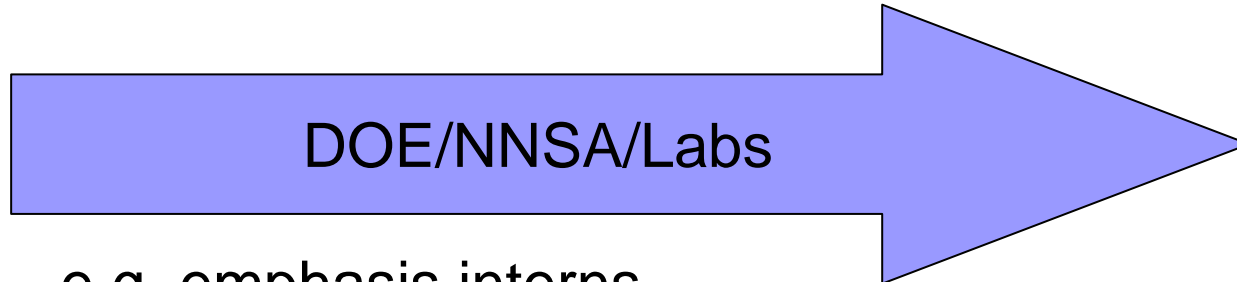
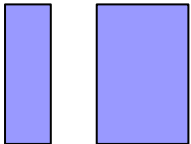
- Alliance of primary nuclear weapons workforce stakeholders
 - Equality of members
 - Get past sub-optimizing and advocating DOE, NNSA, DoD, etc.
 - Nuclear weapons workforce program for the nation
- or
- Loose confederation
 - Equality of members
 - Share knowledge and approach
 - Nuclear weapons workforce discussion for membership



Parallel Path Approach with no Commingling of Finances



e.g. emphasis training



e.g. emphasis interns



e.g. emphasis education



For More Information



Dr. James J. Tritten

Chief, Defense Threat Reduction University
Defense Threat Reduction Agency (DTRA/CSU)
1680 Texas St., SE
Kirtland AFB, NM 87117-5669

james.tritten@abq.dtra.mil
tritten@skytel.com

(505) 846-8734
(505) 228-6316 (cell)
(888) 449-9657 (pager)