Accelerating the Development of Key Technical Leaders (RT-140)

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Stevens Institute of Technology

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With appreciation for the contributions of Steve Jones and Dr. Chris D’Ascenzo of DAU, Pamela Knight of MDA and Dr. Pam Burke of Stevens
Agenda

- The Technical Leadership Challenge
- Previous Leadership Development Tasks
- RT-140 Results to Date
- Conclusions and Future Plans
“Our workforce must deal with complexity. The problems we solve are not simple—we are entrusted to develop and field some of the most complicated and technically advanced systems in military history. It is an illusion to believe that defense acquisition success is simply a matter of applying the right, easily learned ‘check-list’ approach to doing our jobs. There are no silver bullets that apply to all situations.

“It is not enough to know acquisition best practices; acquisition professionals must understand the ‘why’ behind the best practices—that is, the underlying principles at play. Many of our products consist of thousands of parts and millions of lines of code. They must satisfy hundreds of requirements, and take several years to bring into production. Managing and understanding complexity is central to our work.”

Testimony of Mr. Kendall, USD(AT&L), before the SASC
April 30, 2014
“Right now 21,000 members of our workforce are eligible for retirement, and 25,000 more soon will be. **Those approaching retirement represent 50% of our workforce.** Behind them – the bathtub – the mid-career workforce with low year groups – represent only 22% of our workforce – they were largely hired during the significant downsizing efforts in the 1990’s. We must learn from the 1990s and be strategic now, even in a period of downsizing. **Investing in our future leaders is essential for acquisition success.**

*Testimony of Mr. Kendall, USD(AT&L), before the SASC*  
*April 30, 2014*
Technical Leadership Task Evolution

RT-4
(FY09-FY13)
Technical Leadership Development Program

RT-104/121
(FY13-FY15)
Army SE Career Development Model

RT-129
(FY14-FY15)
Advanced Technical Leadership

RT-140
(FY15-FY16)
Advanced Technical Leadership - 2015

9/12/13
A Career Development Model can be defined that can systematically prepare Army Civilian Systems Engineers to assume Key Leadership and Critical Acquisition Positions.
Army Career Development System

**Inputs**
9000+ ENG ACF Engineers

**Career Management**
- Education
- Experience
- Tenure
- Currency

**Cross-functional Competencies**

**Mentorship**

**Outputs**
- Pool of qualified candidates for 22 Engineering KLPs
- More effective leaders in ~1000 ENG Critical Acquisition Positions
Conclusions and Recommendations

• The Army already has all the components required for an effective Career Development System; what is required is to integrate them and actively manage them as a coherent whole.

• Technical leadership training should start much earlier in an acquisition professional’s career and should assume increasing emphasis throughout and following functional certification.

• It is recommended that the Army shift its career development focus from capabilities (“what I have learned”) to evidence-based value propositions (“what I can do” and “how I have demonstrated I can”).
The technical leadership capabilities of high potential, senior DoD systems engineers and technologists can be accelerated through an educational program in technical leadership.
Leadership Development Architecture
Three Concentric Lenses
Program Architecture
Three Concentric Lenses

The Car
Program Architecture
Three Concentric Lenses

The Car

The Wheel
Program Architecture
Three Concentric Lenses

The Car
The Wheel
The Park
Program Architecture
Three Concentric Lenses

The Car

The Wheel

The Park

The Systems Lens
Program Architecture
Three Concentric Lenses

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The Wheel

The Park

The Systems Lens

The Business Lens
Program Architecture
Three Concentric Lenses

The Car
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The Systems Lens
The Business Lens
The Enterprise Lens
Program Architecture
Three Concentric Lenses

SYS 350A The Systems Lens
• Focuses on the technical product, system or system of systems
• Emphasizes the technical challenges faced by a Systems Engineering Lead

SYS 350B The Business Lens
• Focuses on the complete development project
• Emphasizes the challenges faced by the Integrated Product Team (IPT) Lead

SYS 350C The Enterprise Lens
• Focuses on the entire defense acquisition enterprise
• Emphasizes the challenges faced by a Chief Engineer
Program Architecture
Three Concentric Lenses + Threads

Leadership Threads

Personal Leadership

Leading Teams

Leading Change

Systems Lens

Business Lens

Enterprise Lens

“Because leadership is not a separate topic; it is the way leaders do their jobs.”
# The Technical Leadership Program Triptych

<table>
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<th></th>
<th>Systems Lens</th>
<th>Business Lens</th>
<th>Enterprise Lens</th>
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<tr>
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<td>System Development</td>
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<td>Colonel Chamberlain</td>
<td>General Grant</td>
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- **Colonel Chamberlain**
- **General Grant**
- **President Lincoln**

**Context**
- Static; Fixed
- Dynamic; Changing
- Emergent; Adaptive

**Embedded Thread**
- Personal Leadership
- Leading Teams
- Leading Change

**Extended Simulation**
- Lifecycle Project
- Disruptive Events
- Cultural
RT-4 Accomplishments

• Nine 5-day pilots conducted over four years for acquisition professionals chosen for their demonstrated leadership capability and potential to assume greater responsibility in the future.

• More than 100 lectures, case studies, exercises and group project modules developed and tested.

• More than 5200 student-contact-hours delivered.

• Valuable feedback obtained from participants in the Army, Navy, Air Force, Marine Corps, Missile Defense Agency and Defense Acquisition University.

• At the conclusion of the pilots all three courses were judged ready for transition to the government.
The Systems Lens can be successfully transitioned to government instructors.
• A successful SERC-led pilot was conducted at DAU Capital in January 2015 with target DAU instructors participating.

• The DAU instructors then conducted a government-led pilot at DAU South in May 2015 that was judged “a resounding success.”

• At the debrief in June, one of the DAU instructors remarked, “I would teach this course ten times a year if they would let me.”

• The course has been integrated into the standard DAU curriculum.
The Business and Enterprise Lenses can be successfully transitioned to government instructors.
## FY15 MDA KLDP Pilot Overview

### 4 CLASSROOM WORKSHOPS + BLENDED / ACTION LEARNING

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### Start: Jul 2015

**LAYING THE FOUNDATION**
- Think Outside the Functional Silo
- Think Critically
- Identify Proven Practices
- Communications

**BUILDING THE BUSINESS**
- Think from Industry Perspective
- Construct the Business Strategy
- Build a Business Plan

**MANAGING THE PROJECT**
- Think from Other Functional Perspectives in the Context of the Project
- Build Project Plans
- Evaluate Plans from an Enterprise Perspective

**CAPSTONE EXERCISE**
- Think From Your Boss and Your Boss’s Boss Perspective
- Evaluate Strategy and Plans

### Complete: Jun 2016
# FY15 MDA KLDP Pilot Overview

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## LAYING THE FOUNDATION
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## BUILDING THE BUSINESS
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4 CLASSROOM WORKSHOPS + BLENDED / ACTION LEARNING
# SYS 350B/KLDP Segment 3 Pilot
## November 16-21, 2015

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Technical Leadership Development
Conclusions and Future Plans

• All three technical leadership courses developed as part of the program have been strongly endorsed by the acquisition community.

• While fully validating the research hypotheses will obviously require more time and additional evidence, the results of the research to date have been very encouraging.

• On the basis of numerous successful pilots, all three courses have been judged suitable for transition for government delivery.

• The Systems Lens was successfully transitioned to DAU during Spring 2015 under SERC Research Task-129.

• Transition of the Business and Enterprise Lenses is currently underway as part of the DAU/MDA KLDP Pilot under SERC Research Task-140.