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Foundational Learning



Workflow Learning



Performance Learning

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Introduction

- Defense Acquisition System Performance
 - Superior weapon systems
 - Cost, Schedule, Performance challenges
- Acquisition Improvement & Workforce Incentives
- Academic Research
 - Incentives and Individual and Organization Performance
- Proposed Approach
 - Incentives tied to Cost, Schedule, Performance Achievement
- Discussion of Proposed Approach
- Conclusions



Acquisition System Performance

- Defense Acquisition Reform 1969-2009 An Elusive Goal, Ronald Fox 2011 – 12 programs from 1950s
 - Development costs significantly higher
 - Production costs tend to exceed original estimates by a significant margin
 - Schedule delays averaged 36% beyond projected time for completion
- Performance of the Defense Acquisition System 2014, Annual Report released by USD – ATL
 - 1992-2014 sixteen programs had 200% development cost growth
 - 18 programs had 100% cost growth in early production cost
 - Operational Effectiveness between 80-90% for all programs
 - Operational Suitability 123 programs below 65%, 65 programs at 80%



Workforce Recommendations

- Business Executives for National Security (BENS) Taskforce on Defense Acquisition Law and Oversight 2009
 - Streamline hiring and rewarding of key acquisition personnel including providing appropriate compensation and other forms of incentives
 - Inability to couple rewards to performance
 - Acquisition is a business function and demands skills and talents that are far more common to the business world than to government and military operations
- Defense Acquisition Reform: Where do we go from here? A compendium of views from leading experts, 2014 – US Senate Permanent Subcommittee on Investigations
 - Half of the experts feel that cultural change is required while two-thirds believe improving incentives for the acquisition workforce is necessary for reform



Workforce Recommendations

- Report to Congress on DOD 2014 Study of Program Manager Training and Experience
 - Secretary of Defense and Service Secretaries should implement clearer, more tangible recognition, incentives, and enhanced promotion opportunities for outstanding program management
 - Cost performance on major acquisition programs should be considered as a major weighting factor for this recognition
 - Continued absence of relevant rewards belies government statements of dedication to achieving significant cost reduction
 - Cost savings achieved in implementing this recommendation can far outweigh any implementation costs to the taxpayer



Workforce Recommendations

- Defense Acquisition Reform, 1969-2009 An Elusive Goal, Ronald Fox
 - A Personnel Board should provide other incentives such as additional pay and incentive compensation
 - An additional \$30,000 per year for selected officers and civilians could minimize incentives to retire and join the defense industry
 - Sweden's government acquisition agency provides an added salary increase for crucial acquisition positions
 - A Swedish colonel and PM can receive a significantly higher salary than other colonels or even the director general of the agency

- Steven Condly, Richard Clark & Harold Stolovitch in *The Effects of Incentives on Workplace Performance: A Meta-analytic Review of Research Studies*
 - Meta-analytic review of 45 studies on the effects of incentives on workplace performance
 - Team based incentives provided greater gains 48% improvement in performance compared to individual performance gains of 19%
 - Monetary incentives resulted in 27% gain when compared to 13% for non-monetary incentives
 - Programs with only top performers receiving incentives versus programs where everyone had an opportunity to receive an incentive showed no statistical difference but both showed a 22% improvement in performance

- Mark Huselid in *The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performances*
 - Based on a national survey of 1000 firms comprehensively evaluated the links between High Performance Work Practices and firm performance
 - Established that high performance work practices have economic and statistically significant impact on intermediate employee outcomes and short term and long term measures of corporate financial performance

- Alfie Kohn in Harvard Business Review and Daniel Pink in “Drive-The Surprising Truth About What Motivates Us” argue against incentives
- Gerald Ledford and Barry Gerhart in “Negative Effects of Extrinsic Rewards and Intrinsic Motivation: More Smoke Than Fire” argue rewards increase performance because they increase total motivation
 - Social context in which the reward is implemented will enhance rather than undermine intrinsic motivation making the incentive effect much more powerful than if it relies on extrinsic motivation alone



Proposed Approach

- Establish Program Credits (PC) for each program based on Affordability Caps, PC available for distribution to acquisition workforce
- Programs appraised for cost, schedule, performance, affordability, should cost, or other relevant criteria at program milestones or annually depending on the phase the program is in
- Program credits have an associated dollar value and vest in employee's account from 4 to 10 years at a variable rate
 - 40-45% vested by the end of Production and Deployment
 - 55-60% vested over the O&S phase
 - No vesting until the start of the Operations and Maintenance phase
 - Rapid acquisition programs may reach vesting in less than 5 years
- Length of association with program determines contribution and PC benefit
- Negative credits assessed when program does not meet objectives positive credits can be reduced for poor performance during later phases
- Employee receives vested benefits upon retirement or separation from government service



Proposed Approach- Critical Factors

- Career accumulation of PC can be substantial
 - Motivate workforce to contribute to success of all programs
 - Application to the entire workforce can result in significant positive changes
- PC must be significant for the workforce to demonstrate “ownership”
- Allocation of credits must be impartial, fair, and commensurate with an individual’s contribution
 - Allocations can vary across employees based on their responsibilities
 - GAO or similar office to administer program
- All employees associated with a program must be eligible for PC
- Funds allocated by Congress with legislative changes to make funds available for distribution



Notional Example

- Program in Technology Maturation & Risk Reduction Phase
- Affordability Target (LCC) \$5000M
- Program Credits \$50M (1% of Affordability Target)

Program Credit Estimation Scheme

Phase	TMRR	EMD	P&D	O&M
Length of Phase	2 years	3 years	4 years	11 years
Program Credits (%)	10%	15%	20%	55%
Program Credits	\$5M	\$7.5M	\$10M	\$27.5M
Eligible Workforce	150	250	350	400
Average Program Credits/Employee	\$33,000	\$30,000	\$28000	\$67,000
Annualized Program Credits/Employee	\$16,000	\$10,000	\$7100	\$6100



Notional Example

Scenario 1 – An employee stays with the program and the program meets all the objectives during all the phases

Program Credit Allocation

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
Program Credits Allocated	\$ 16,000	\$ 16,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 7,100	\$ 13,200	\$ 13,200	\$ 13,200	\$ 6,100	\$ 6,100	\$ 6,100
Cumulative Program Credits Allocated	\$ 16,000	\$ 32,000	\$ 42,000	\$ 52,000	\$ 62,000	\$ 69,100	\$ 82,300	\$ 95,500	\$ 108,700	\$ 114,800	\$ 120,900	\$ 127,000

Program Credit Vested and Available Upon Retirement or Leaving Government

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
Annual Vested	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16,000	\$ 16,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 7,100
Reductions due to not meeting Sustainment Objectives							\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Available If Employee Retires/Leaves Govt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16,000	\$ 32,000	\$ 42,000	\$ 52,000	\$ 62,000	\$ 69,100



Notional Example

- Scenario 1: An employee stays with a program and the program meets all the objectives during all the phases
- Scenario 2: An employee stays with the program and the program meets its objectives during the TMRR and EMD phase but does not meet objectives during the O&M phase
- Vested Credits are available for the employee starting year 7 or the assumed start of the O&M phase
- Starting year 7 the credits from year 1 are vested after adjusting for reductions due to not meeting objectives and available for the employee if he separates
- The table show the credits available to the individual under the two scenarios

Available If Employee Retires/Leaves Government Service

Scenario 1

Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
\$16,000	\$32,000	\$42,000	\$52,000	\$62,000	\$69,100

Scenario 2

Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
\$9,900	\$19,800	\$23,700	\$33,700	\$43,700	\$50,800

- This is a notional model and the differences and distribution can be optimized



Required Conditions for the Approach

- Measurement metrics must be established and synchronized with the Acquisition Program Baseline which is the PM and team commitment
- Since O&M costs are difficult to measure at a program level, mission completion or other measures used to assess system effectiveness and suitability can be used to measure performance during the O&M phase
- Metrics must be reviewed and must account for threat changes, scope changes, unit cost changes due to quantity changes, and Nunn-McCurdy breaches
- An independent body akin to GAO in conjunction with OMB must be established to assess performance against objectives to determine and assign Program Credits
- A definition of the acquisition workforce and a fair assessment of the workforce that would be eligible for Program Credits must be made
- An impartial process to allocate program credits to an individual based on the individual's contribution and team achievement must be developed
- Legislative action to establish funding for program credits and authority to execute a program credit scheme will be required
- An enhanced personnel information system to track program credits from allocation to vesting and reductions will need to be implemented



Benefits and Consequences

- Reduced compensation differential between working for industry and DoD
- Attract best and brightest from both within and outside government
- Increased number of military officers in an acquisition career
 - Require regulation and policy changes
- Compensation differences might lead to morale issues between acquisition and non-acquisition workforce
 - Food and Drugs Administration has a higher compensation scale for highly qualified scientists
- Innovation in reducing long term sustainment costs
- Faster integration of newer technologies into weapon systems
- Faster time to market with international partners
- Greater integration of functions - Contracting into the PMO with better negotiations and best value
- The implementation of an incentive system that recognizes the value of the workforce can be a significant motivating factor.



Benefits and Consequences

- Need for additional monitoring of program data to validate accuracy in allocation of credits
- Setting program objectives to maximize program credits
- Development of a complex information system to administer and audit the scheme
 - However will result in comprehensive program data resulting in opportunities to address systemic issues in program execution



Conclusions and Additional Research

- Evidence that a well-constructed incentive scheme with human resource management practice can improve individual and organization performance
- DOD Acquisition offers additional advantages of being a high purpose work environment with opportunities to innovate that can enhance intrinsic motivation
- A notional approach for incentives that are tied to the achievement of cost, performance, schedule goals including long term sustainment
- Additional research in the following areas:
 - Validate factors that would enhance intrinsic and extrinsic motivation
 - Measurement of individual contributions in a team setting which is the organizational model for DOD programs
 - Necessary conditions to implement a model along with the legislative changes