Organizational Leadership and Management Dynamics for Technical Execution in Acquisition Programs

Frank Sisti/Capt. DeWitt Latimer

October 25, 2007

vision



Views expressed in this presentation do not reflect official policy or position of the U.S. Air Force, Department of Defense, or the US Government

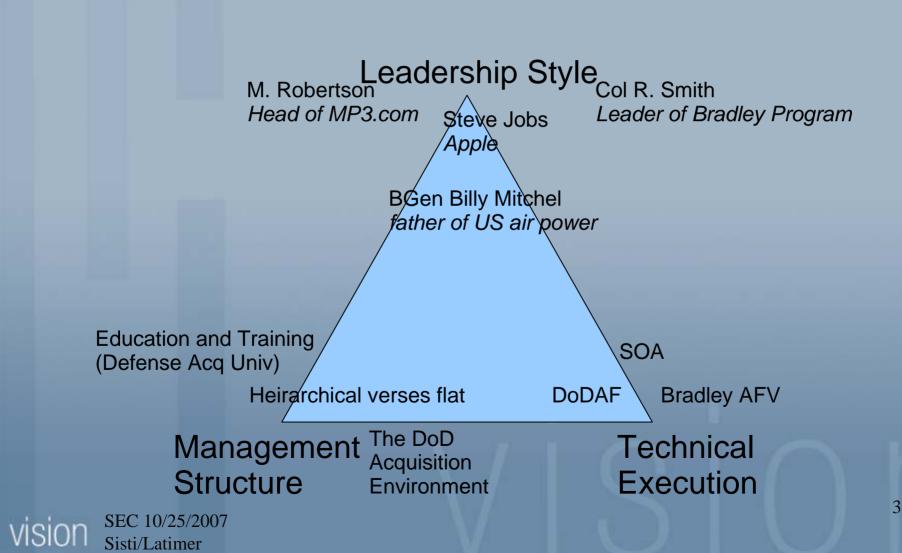


Overview

- Definitions
 - Leadership/Management/Technical (dis)Harmony
 - Precedented/Unprecedented systems
- Examples
- Methods
 - Leadership evaluation
 - Mapping leadership styles to precedented and unprecedented systems
 - Mitigating style mismatches for individuals
 - Examples of mappings and mitigation



Definition: Leadership/Management/ Technical (Dis)Harmony



Definition: Leadership Styles

- Transactional occurs when
 - "Leader rewards or disciplines the follower depending on the adequacy of the follower's performance
 - Contingent reinforcement, either the positive of contingent-reward or more negative of active or passive forms of management by exception"

Transformational is seen when

SEC 10/25/2007 Sisti/Latimer

- "They motivate others to do more than they originally intended and often more than they thought possible
- Stimulate interest among colleagues and followers to view their work from new perspectives
- Generate awareness of the mission or vision of the team or organization
- Develop colleagues and followers to higher level of ability and potential
- Motivate colleagues and followers to look beyond their own interests toward those that will benefit the group"

- Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology, 88*(2), 207-218. (Reprinted with the permission of Mind Garden, Inc.)

Definition: Stresses the Move to Disharmony

- Budget mandates
- New technology maturations
- Independent reviews
- Performance of peer leaders/managers
- New requirements and requirement combinations that make a system unprecedented

Definition: Precedented and Unprecedented Systems

Precedented System

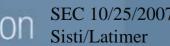
- Technically similar to one that has been built before
- Schedule and budget constraints (and hence productivity) are similar to previous efforts
- Unprecedented System
 - Technically dissimilar to previous systems
 - Even if technically similar, faster schedules or lower budgets than previous efforts may require sufficient innovation in the delivery/productivity to make the development of the system unprecedented

- Sisti, F. J. & Latimer, D. T. (2007). Linking leadership and technical execution in unprecedented systems-of-systems acquisitions. *Journal of Integrated Design and Process Science,* (In Press).



Example: *Precedented* System with Transactional Leadership

- Demonstrates traction and harmony from leaders and management since they know what to direct the technical folks to do and have reasonable expectations of success of assigned tasks; conversely, technical folks know what management/leadership wants (the precedented system using precedented methods)
- Example Armor kits for the HMMVs in Iraq and Afghanistan



Example: Unprecedented System with Transactional Leadership

MP3.COM

- Michael Robertson, CEO
- MP3 Technology/Internet Based
- Artist and Customer friendly
- 2000, Universal Music Group \$250 (T)
- Forced Sales

 Demonstrates stresses that couldn't be handled *transactionally* that eventually led to loss of the company



Example: Unprecedented System with Transformational Leadership

- PMA-271 E-6B TACAMO Program combination ABNCP and Longwire VLF antenna onto single Boeing 707-320
 - Two systems never before combined
 - Combined services (Navy and USAF programs) to consolidate C&C of strategic assets across two services
 - Various challenges Technical & Management
- PM demonstrated the 41's of Transformational Leadership:
 - Idealize Influence,
 - Inspirational Motivation,
 - Intellectual Stimulation, and
 - Individualized Consideration

On SEC 10/25/2007 Sisti/Latimer



Once you understand the system impact, how can you modify your leadership to improve chances of success?

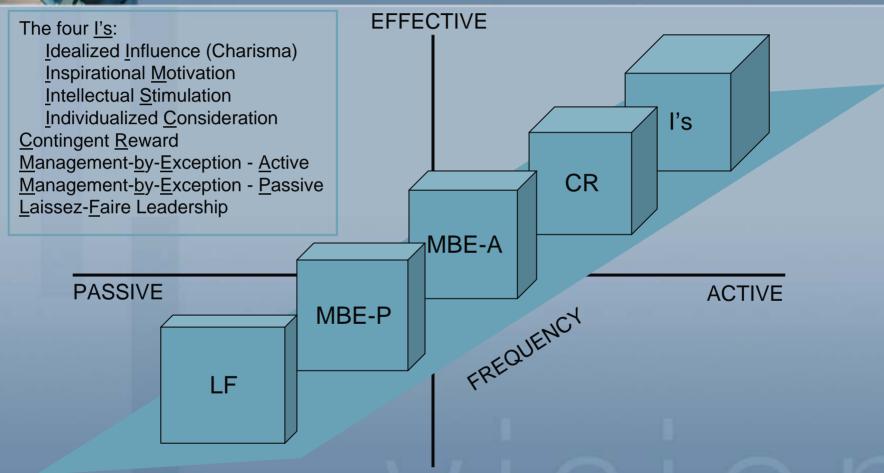


Methods: Leadership Evaluation Mechanisms

- Multi-Factor Leadership Questionnaire^o (MLQ^o)
 - Heritage: research in 1978 by Burns extended in 1985 Bass
 - What is measured: 7 component model of leadership
 - How it is measured: 45 questions, 360-degree preferred, reported out across the 7 leadership behaviors
- Full Range of Leadership[®] (FRL[®])
 - Heritage: 1999 Bass/Avolio extended MLQ[®] to give leaders direction to improve their preferences
 - What is measured: 7 leadership behaviors
 - How is measure used: Augmented MLQ[®] report provides input to increase specific leadership capabilities

-Avolio, B. J. & Bass, B. M. (2006). *Multifactor leadership questionnaire* (3rd.). Menlo Park, CA: Mind Garden, Inc. (Reprinted with the permission of Mind Garden, Inc.)

The Model of the Full Range of Leadership[®]



INEFFECTIVE

-Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership: Second edition* (Rev. ed.). Mahwah, NJ: Lawrence Erlbaum Associates. (Reprinted with the permission of Mind Garden, Inc.) SEC 10/25/2007 Sisti/Latimer

Comparing the Two Points-of-View

- Transactional
 - Maintains subordinate levels & grows individual experience
 - Focuses on "wait for direction" work ethic
 - Encourages linear actions focusing on extending planned schedules
 - Fosters point-to-point solutions
 - Limits perception of value to overall mission success and effectiveness
 - Provides individual with narrow experience profile
 - Does not encourage trust
 - Does not require much training to maintain competency
- Precedented
 - Technically similar to one that has been built before
 - Schedule and budget constraints (and hence productivity) are similar to previous efforts

- Transformational
 - Builds subordinate capabilities & potential through experiences
 - Builds understanding, morale, & trust
 - Encourages multi-linear capability focusing on maintaining or reducing schedules
 - Fundamentally net-centric
 aware
 - Enables perception of value to overall mission success and effectiveness
 - Provides capacity for transfer of knowledge
 - Requires trust
 - Requires appropriate training
- Unprecedented
 - Technically dissimilar to previous systems
 - Even if technically similar, faster schedules or lower budgets than previous efforts may require sufficient innovation in the delivery/productivity to make the development of the system unprecedented 13

Strength Comparisons

System Challenges

> SEC 10/25/2007 Sisti/Latimer

Method: Individual Development Plans for Leaders/Managers

Setting goals

- Approach should be based on system type and FLR[®] results, style, current environment, personal preferences, and career planning
- With 360 feedback, you know if you are being successful with your leadership efforts
- What you desire in the future environment becomes the goal

-Avolio, B. J. & Bass, B. M. (2006). *Multifactor leadership questionnaire* (3rd.). Menlo Park, CA: Mind Garden, Inc. (Reprinted with the permission of Mind Garden, Inc.)



Points-to-Ponder

 This presentation addresses a current examination of the interplay between leadership and effectiveness/success

Conclusion is that failure to adapt
 leadership to the circumstances of
 your project or organization can lead
 to unexecutable programs



Additional Sources - 1

- Avolio, B. J. & Bass, B. M. (2006). *Multifactor leadership questionnaire* (3rd.). Menlo Park, CA: Mind Garden, Inc.
- Avolio, B. J., Waldman, D. A., & Yammarino, F. J. (1991). Leading in the 1990s: The four I's of transformational leadership. *Journal of European Industrial Training*, *15*(4), 9-16.
- Bass, B.M. (1999). Two decades of research and development in transformational leadership. *European Journal of Work and Organizational Psychology*, 8, 9-32.
- Bass, B. M. (1998). *Transformational leadership: Industrial, military, and educational impact*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Bass, B.M. (1990). Bass & Stogdill's handbook of leadership: Theory, research & managerial applications. (3rd Ed.). New York: The Free Press.
- Bass, B. M. (1985). Leadership and performance beyond expectation. New York: Free Press.
- Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology*, *88*(2), 207-218.

Additional Sources - 2

- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership:* Second edition (Rev. ed.). Mahwah, NJ: Lawrence Erlbaum Associates.
- Burns, J. M. (2003). *Transforming leadership*. New York: Grove Press.
- Burns, J. M. (1978). *Leadership.* New York: Harper & Row.
- Mintzberg, H., Lampel, J., Quinn, J. B., & Ghoshal, S. (2003). *The* strategy process – concepts, contexts, cases. Upper Saddle River, NJ: Prentice Hall.
- Eid, J., Johnsen, B. H., Brun, W., & Laberg, J. C. (2004). Situation awareness and transformational leadership in senior military leaders: An exploratory study. *Military Psychology*, *16*(3), 203-209.
- Pinney, C. W. (1999, Winter). The USAF PEO/DAC/MAD structure: Successful pattern for future weapon system acquisition? Acquisition Review Quarterly 21- 46.
- Sisti, F. J. & Latimer, D. T. (2007). Linking leadership and technical execution in unprecedented systems-of-systems acquisitions. *Journal of Integrated Design and Process Science*, (In Press).

"All trademarks, service marks, and trade names are the property of their respective owners" 17

Sisti/Latimer

Author Contact Information

 Frank Sisti, Chief, Software Engineer

> MILSATCOM P.O. Box 92957 The Aerospace Corporation, M8-018 Los Angeles, CA 900002-2957

Francis.J.Sisti@aero.org www.aero.org (O) 1-310-336-1502 (C) 1-602-538-6554 (Fax) 1-310-726-1332 DeWitt Latimer, Captain, U.S. Air Force

Software Engineering, PhD Student (AFIT/CIGD) USC 941 W. 37th Place SAL 300 Los Angeles, CA 90089-0781

dlatimer@USC.edu http://robotics.usc.edu (C) 1-310-722-8157

Sion SEC 10/25/2007 Sisti/Latimer