

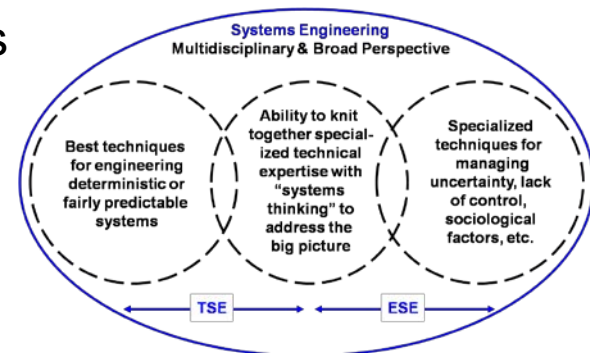
Systems Engineering *Workforce Evolution*

*2013 NDIA Systems Engineering Conference
Industry Panel: Best Practices for Systems
Engineering Workforce Development*

October 2013

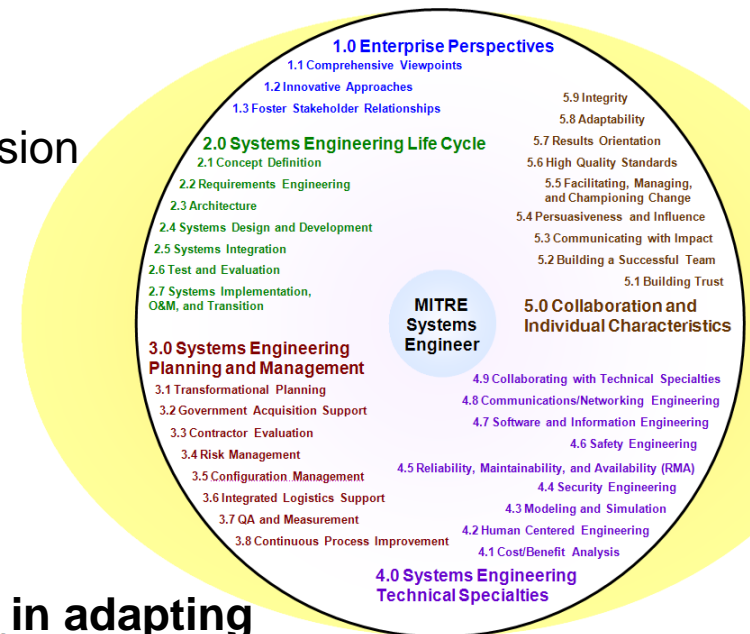
Systems Engineering for a Complex Future

- **New complexity a consequence of networking many systems to achieve a collaborative advantage**
 - Systems each individually adapting to rapid technology/mission changes
 - People are part of the enterprise
 - Environment for any one system becomes unpredictable
- **Systems engineering in the face of complexity**
 - Engineer the enterprise and the systems that enable it
 - Engineer adaptability of individual systems
 - Engineer adaptability of the network of constantly changing systems
- **Requires a spectrum of systems engineering techniques**
 - Disciplined methods of traditional forms
 - Big-picture systems thinking
 - Enterprise methods for harnessing and managing uncertainty
 - All required to achieve success



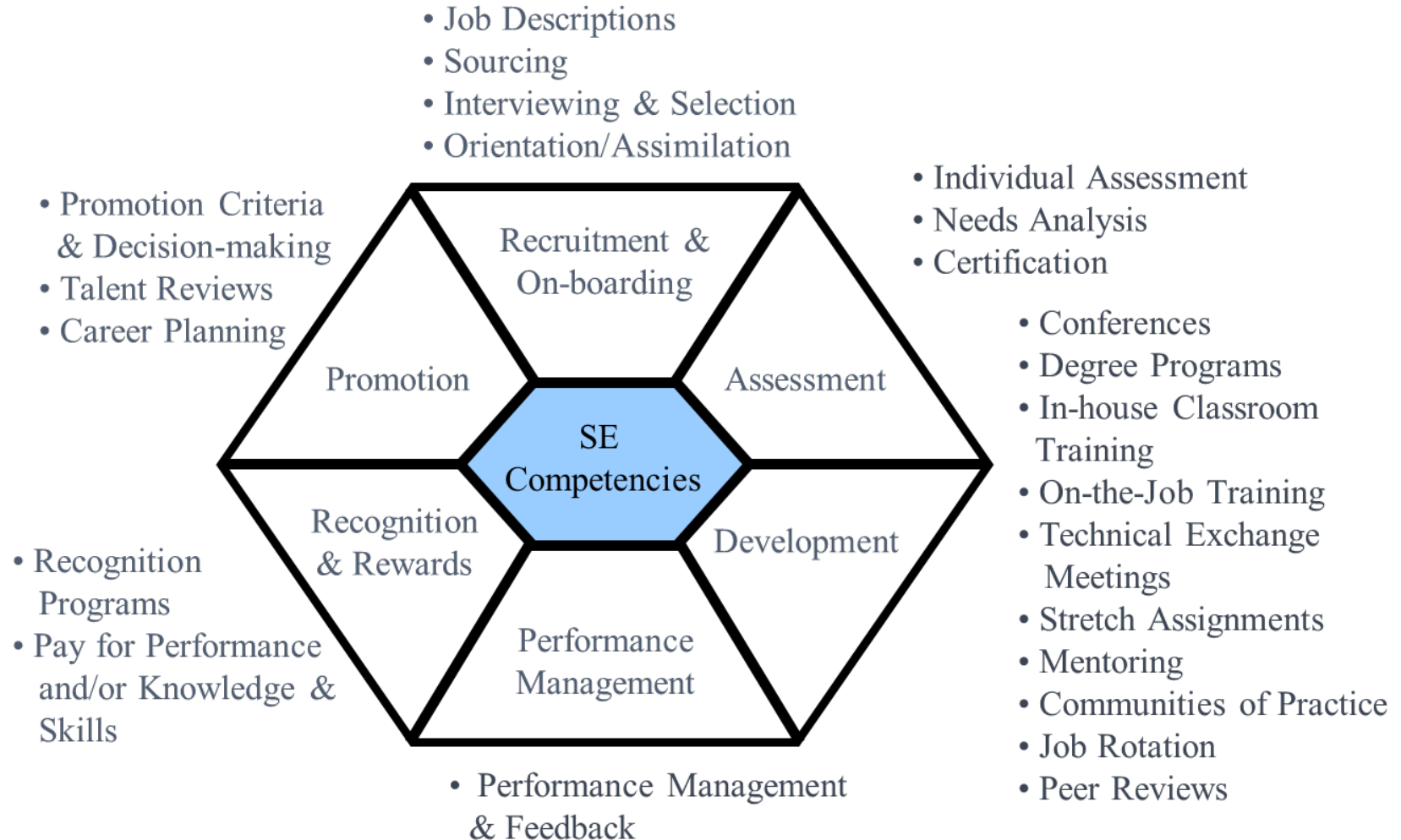
Define and Codify Attributes of Successful Systems Engineering

- Defines the problem or opportunity from a comprehensive, integrated perspective
- Applies systems thinking to create strategies, anticipate problems, and provide short- and long-term solutions
- Proposes a comprehensive, integrated solution or approach that:
 - Contributes to achieving the strategic mission objectives in a changing environment
 - Can be feasibly implemented within the political, organizational, operational, economic and technical context
 - Addresses interoperability and integration challenges across organizations
- Adapts to change and uncertainty in the program environment, and assists others in adapting
- Cultivates partnerships
- Brings their own and others' expertise to provide sound, objective evidence and advice to achieve a successful outcome



Leads to a SE Competency Model that can drive actions

Align Processes and Programs with SE Accession & Development



Skill Currency & Evolution

- **Hire individuals with strong academic foundation**
 - Education aligned with organizational needs
- **Staying technically current – continuing education**
 - Graduate-level university education in SE
 - 3-level in-house career competency training
 - Focused technical courses
- **Staying technically current – not just education**
 - Assignment rotation
 - Embedding in different locations
 - Mentoring
 - Opportunities to interact with operational users
 - Enable, facilitate career development opportunities across organizational lines
 - Ensure that organizational transfers don't break career mentoring

Make Available Other Knowledge Resources

Contact Information

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