

Investigating the DNA of the Systems Engineering Workforce – The Helix Project

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Abstract. The Helix Project, sponsored by the DoD and the National Defense Industrial Association Systems Engineering Division (NDIA-SED), has recently begun a multi-year examination to answer three questions: • Who are the systems engineers? • How effective are they and why? • What are employers doing to improve their effectiveness? Many systems engineers in the defense workforce are nearing retirement. Budget and schedules are being dramatically compressed. Mission requirements demand ever more sophisticated and complex systems. The tools, processes, and technologies that systems engineers must master keep changing ever more rapidly. Organizations respond in many different ways to these winds buffeting their systems engineers. Yet, there is scant agreement or understanding what the most important levers are that affect the effectiveness of systems engineers, how to measure that effectiveness, and the impact various workforce improvement efforts are having. Beginning in the second half of 2013, Helix will publish quarterly reports addressing the three questions above, including such demographic data as age, education, experiences, roles, and activities. Each new report will fold into the analysis new insights gained from the previous quarter's data collection. The reports will identify forces (such as experiences, education, and competencies) that most affect workforce effectiveness and what organizations are doing to address those forces. Based on the data, Helix will be able to benchmark different segments of the community and even individual organizations.