Abstract ID: 10850

Title: System Engineering Effectiveness

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Abstract --------- The Armaments Research Development and Engineering Center (ARDEC) has developed and maintains an organization level SE Process. The impact of poor SE processes leads to delivering the wrong product, inconsistencies in project deliverables, schedule slips, and cost increases. As such, ARDEC needs to determine the usage and effectiveness of the ARDEC SE process. As a result, ARDEC collects and analyzes a set of metrics to assess the implementation and effectiveness of our processes. The metrics are designed to assess how effective and helpful the processes are to projects in performing their goals. ARDEC is collecting data on a quarterly basis on projects to see the quality of requirements and task execution per schedule. The data collected is analyzed to see how effective the current ARDEC OSPs are and if the current OSPs are helpful or not on projects. The metrics are constantly being updated and improved to better capture the performance of the processes. Recommended actions based on the metrics helped improve quality of requirements, quality of execution of projects, performance of data management. ARDEC would like to share how we developed the metrics, collect and analyze data, and generate reports which can assist other organizations to develop metrics for their unique situations.