ANNOUNCING the AVAILABILITY[1] of
SYSTEMS ENGINEERING LEADING INDICATORS GUIDE
Version 2.0[2]

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The Systems Engineering Leading Indicators Guide editorial team is pleased to announce the availability of Version 2.0. This version of the guide supersedes Version 1.0 released in July 2007, as the result of a project initiated by the MIT Lean Advancement Initiative (LAI), in cooperation with the International Council on Systems Engineering (INCOSE), Practical Software and Systems Measurement (PSM), and MIT Systems Engineering Advancement Research Initiative (SEAri). Additional collaborating organizations involved in Version 2.0 include Naval Air Systems Command (NAVAIR), US Department of Defense Systems Engineering Research Center (SERC), and National Defense Industrial Association (NDIA) Systems Engineering Division (SED). Many leading measurement and systems engineering experts from government, industry, and academia volunteered their time to work on this initiative. The Systems Engineering Leading Indicators Guide is issued by INCOSE as document number INCOSE-TP-2005-001-03, and is available on its website. It is also available on the PSM website and the MIT LAI and MIT SEAri websites.

The Version 2.0 guide adds five new leading indicators to the previous thirteen indicators, for a total of eighteen indicators. The guide addresses feedback from users of the previous version of the guide, as well as lessons learned from implementation and industry workshops. The document format has been improved for usability, and several new appendices provide application information and techniques for determining correlations of indicators. Tailoring of the guide for effective use is encouraged.

A leading indicator is a measure for evaluating the effectiveness of a how a specific activity is applied on a project to provide information about impacts that are likely to affect system performance objectives. A leading indicator may be an individual measure, or collection of measures and associated analysis predictive of future systems engineering performance before the system is fully realized. Systems engineering performance itself could be an indicator of future project execution and system performance. Leading indicators aid leadership in delivering value to customers and end users, while assisting in taking interventions and actions to avoid rework and wasted effort. Conventional measures provide status and historical information, while leading indicators use an approach that draws on trend information to allow for predictive analysis (forward looking). By analyzing the trends, predictions can be forecast on the outcomes of certain activities. Trends are analyzed for insight into both the entity being measured and potential impacts to other entities. This provides leaders with the data they need to make informed decisions and where necessary, take preventative or corrective action during the program in a proactive manner.

Developed and Published by Members of

Note: Several other organizations supported the collaborative development of this release; they are listed in the guide.

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[1] Download guide on lead organization websites: http://lean.mit.edu; http://www.incose.org, http://www.psmsc.com, http://seari.mit.edu

[2] Supersedes Version 1.0, June 2007