

# Outbrief on the Results of a Joint INCOSE PMI Survey

Survey title: Improving Integration of  
Program Management and Systems  
Engineering

# Survey sponsors

- INCOSE and PMI jointly sponsored.
- Jan 2011 decided to work jointly and began survey in Oct 2012
- 680 respondents from PMI and INCOSE rolls
- Surveyed individual employees in various positions and industries.
- Authors debriefed at both INCOSE and PMI international sessions.
- Following slides summarize their report results.

# Publisher: MIT Consortium for Engineering Program Excellence Abstract

For many years, a cultural barrier has existed between practitioners of systems engineering and of program management. Some systems engineers and program managers have developed the mindset that their work activities are separate from each other rather than part of an organic whole.

Consequently, work often costs more, takes longer, and provides a suboptimal solution for the customer or end user. The leaders of INCOSE and PMI believe this cultural barrier and mindset can and must be overcome. By working together, the organizations hope to foster a team approach that will benefit their members and their organizations, and ultimately the stakeholders who depend on them.

The survey findings reported in this whitepaper highlight 4 key elements to reduce unproductive tension between program managers and system engineers and support the integration of these roles:

- **1. Use standards from both domains;**
- **2. Formally define the integration of the roles;**
- **3. Conducted integrated program assessments; and**
- **4. Share responsibilities in select key areas.**

# Is there Unproductive Tension between Program Management and Systems Engineering

- About 30% of respondents indicate some or significant unproductive tension. About 20% indicate no unproductive tension.
- Smaller organizations (below \$500 million annual revenue) and large organizations (above \$5 billion) are particularly at risk of suffering from unproductive tension.
- Higher levels of integration support effectiveness of collaboration between SE and Program Management.
- Better **integrating program management and systems engineering** significantly lowers unproductive tension. Fully integrated organizations show almost no or only minimal unproductive tension.

**Key Lever to Reducing Unproductive Tension:  
Integrate Program Management and Systems Engineering**

# Lack of Integrated Planning is Key Source of Unproductive Tension (57%)

- Also contributing to tension between the roles are not having clearly defined authority (44%) and conflicting practices between the two roles (41%). Q23. You identified that there is unproductive tension that affects team or program performance. Please describe the applicable source of the tension.

- n=177

Possible response	%
Lack of integrated planning	57
Authority not clearly defined	44%
Conflicting practices for PM & SE	41%
Job position not clearly defined	32%
Unclear expectations from executive sponsor	32%
Authority not clearly understood	28%
Job position not clearly understood	23%
Other	8%
Do not know	2%

## Review of the Report

- We'll go through the report content and data and pause as needed for discussion
- Pg 35 for responder demographics

# Greater Integration Between PM and SE Reduces Unproductive Tension

- They found these statistically significant relationships:
  - Lower levels of unproductive tension are more likely at higher levels of integration between PM and SE; Higher levels of unproductive tension are more likely at decreased levels of integration.
  - Experiencing no/minimal unproductive tension is more likely when the level of effectiveness of integration between PM and SE is higher.
  - Organizations that conduct assessment(s) are more likely to have less/no unproductive tension between PM and SE.





PM



SE





