

7<sup>th</sup> Annual INCOSE Great Lakes Regional Conference

## *Leadership Through Systems Engineering*

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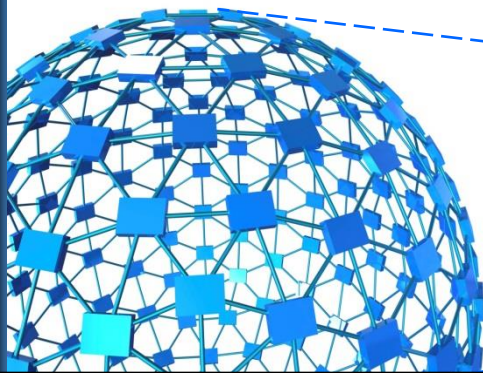
### **Christopher Hoffman, *A View on Systems Engineering & Complexity***

Abstract: Systems engineering is a key enabler for effective product development and managing complexity of many forms, however the definitions of systems engineering and complexity is a barrier to change. Without an understanding of the problem space of complexity in an enterprise, introducing systems engineering processes, methods, and tools will not be effective. Additionally, one of the failure modes of a systems engineer and systems thinking is the awareness of multiple problems to be solved. This potential scope creep further complicates the problem space and increases the need to focus limited resources on the most important improvement areas for the enterprise.

This presentation reviews an approach used at a diesel engine manufacturer to define systems engineering and complexity and the improvement projects launched from that approach. Several frameworks will be shared to communicate the problems and solution concepts, centered on an improvement thread of new product development deliverables with insufficient data flow through the applied tools. This process is applicable to others looking to clarify the need for systems engineering in their enterprise, and encourages further focus to apply systems engineering processes, methods, and tools to the supporting systems which are used to deliver product and services to consumers.

Author:

Abstract



**GLRC 2013: *Leadership  
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