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Model-Facilitated Collaboration by Regulators, Technical Societies, Customers, and Suppliers

**Accelerating Innovation Effectiveness**



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[www.incose.org/symp2018](http://www.incose.org/symp2018)



**16000**  
MEMBERS



**70**  
CHAPTERS



**35**  
COUNTRIES



**100**  
CORPORATE ADVISORY  
BOARD MEMBERS

## VISION:

- A better world through a systems approach.

## MISSION

- To address complex societal and technical challenges by enabling, promoting, and advancing Systems Engineering and systems approaches.

## INCOSE Strategic Objective (1/7):

- Accelerate the transformation of systems engineering to a model-based discipline.

## INCOSE Collaborations:

- INCOSE has several collaboration agreements with other institutions such as ISO, OMG, ASME, MORS, NAFEMS, PMI, ISSS, ISFR, IIE, and others

**Accelerating  
Innovation  
Effectiveness:**

Model-Facilitated  
Collaboration by  
Regulators, Technical  
Societies, Customers,  
and Suppliers



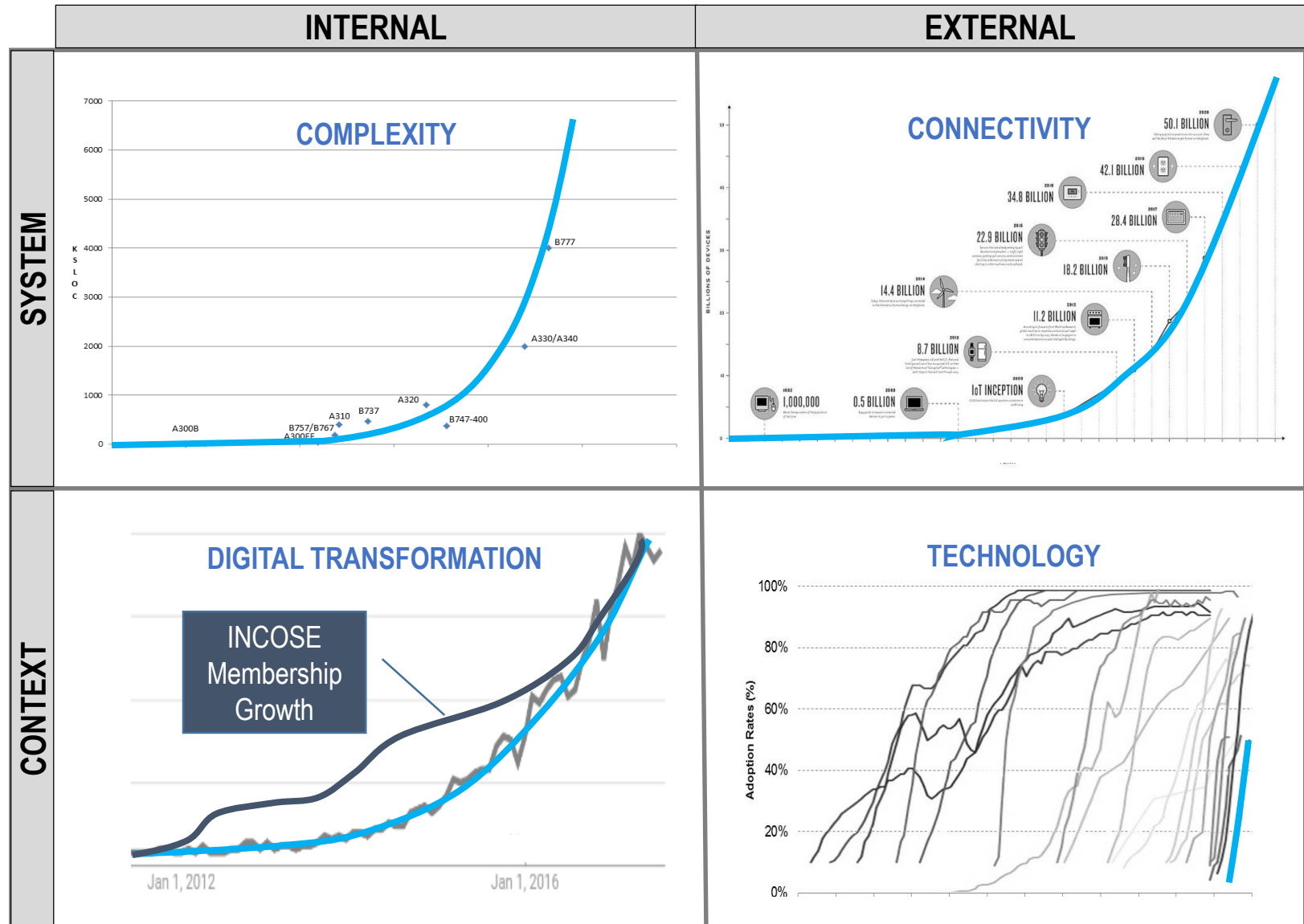
# Why We Must Accelerate Innovation Effectiveness

*“Today more and more design problems are reaching insoluble levels of complexity.”*

*“At the same time that problems increase in quantity, complexity and difficulty, they also change faster than before.”*

*“Trial-and-error design is an admirable method. But it is just real world trial and error which we are trying to replace by a symbolic method. Because trial and error is too expensive and too slow.”*

*NSF is calling for methods to conceptualize and design for the deep interdependencies inherent in Cyber-Physical Systems.*





# Transforming Systems Engineering

## The Future of Systems Engineering

- Advance to address the market demands of innovation, productivity, and time to market
- Harness the power of modeling, simulation and knowledge representation
- Domain-specific standard vocabularies, to meet increasingly diverse stakeholder community.
- The methods and tools will also keep pace with system complexity
- Drive out unnecessary complexity through well-founded architecting and deeper system understanding.

## Systems Engineering Body of Knowledge

- Systems engineering knowledge and practices will be grounded in...mathematics and science.
- Knowledge and practices will be defined and codified in domain-specific guidance and standards.

## Virtual Engineering – Part of the Digital Revolution.

- Model-based approaches will extend beyond product modeling to enterprise-level modeling and analysis.



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