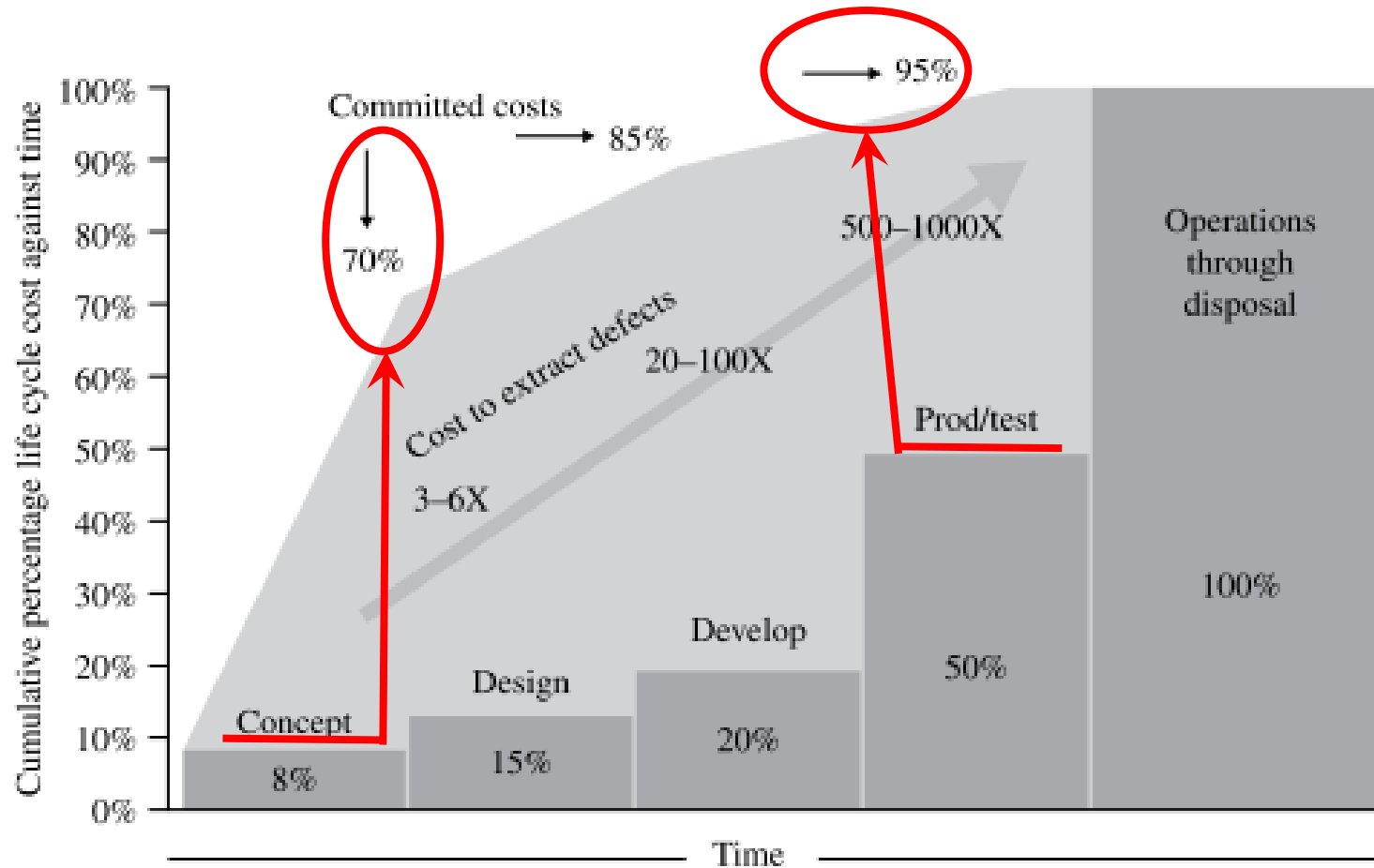


The value of Systems Engineering and INCOSE

Source: INCOSE SE Handbook and
www.incose.org



Front-loading matters !



(Lack of) Concious early decisions has consequences on the outcome

FIGURE 2.4 Committed life cycle cost against time. Reprinted with permission from DAU. All other rights reserved.

”Projects that properly apply systems engineering best practices perform better than projects that do not”

(Source: National Defense Industrial Association and IEEE : CMU/SEI-2012-SR-009)

- A performed study of defense industry in U.S. shows a strong relationship between applying SE best practices and project performance in terms of budget, schedule and technical requirements
- The relationship increases with increasing Project Challenge (i.e. complexity)

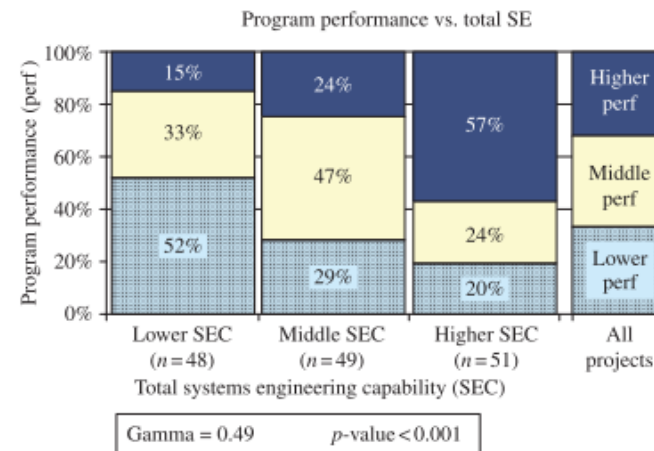
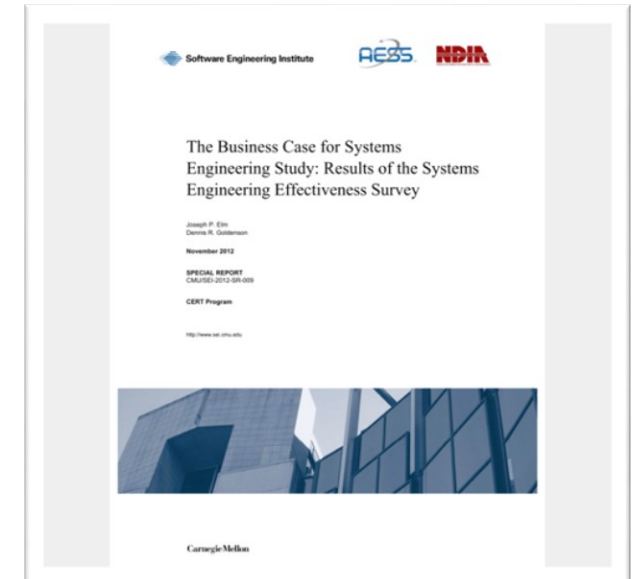


FIGURE 2.6 Project performance versus SE capability. From Elm and Goldenson (2012). Reprinted with permission from Joseph Elm. All other rights reserved.

SE – a bargain 14%

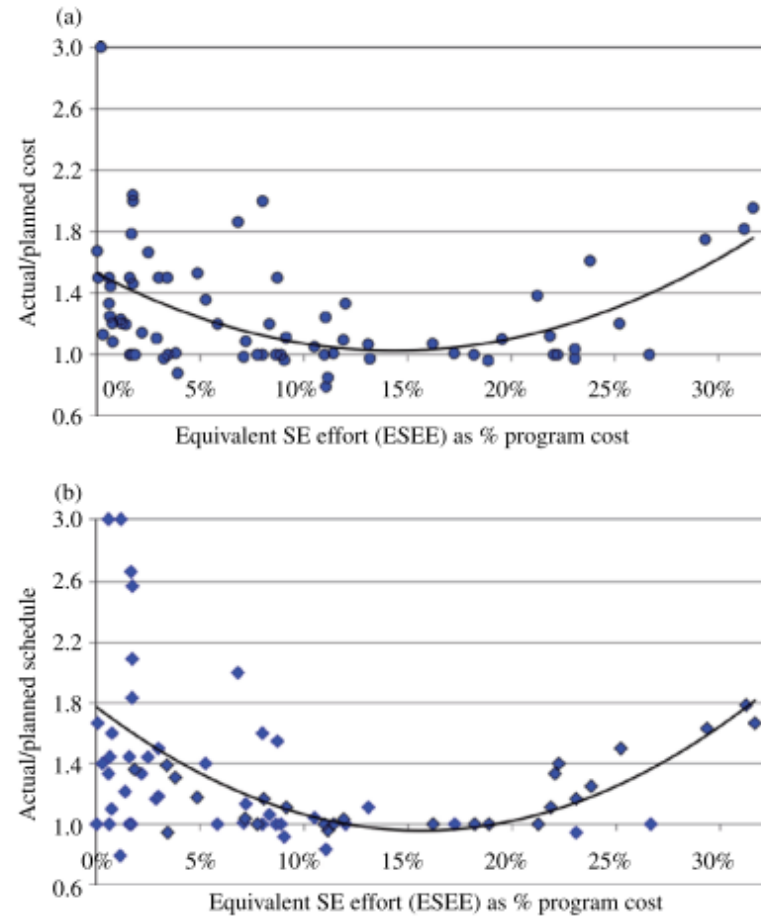


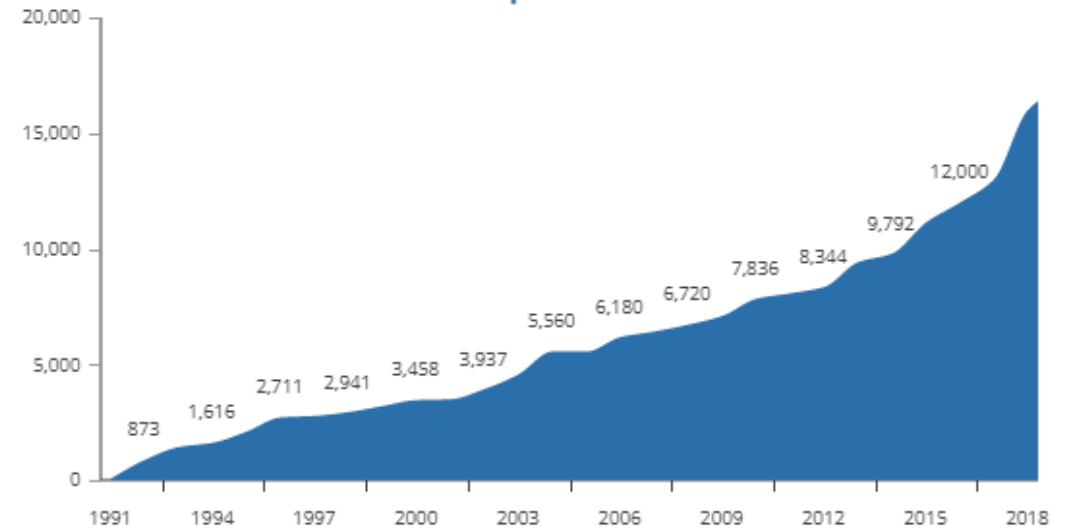
FIGURE 2.7 Cost (a) and schedule (b) overruns correlated with SE effort. From Honour (2013). Reprinted with permission from Eric Honour. All other rights reserved.

INCOSE – Events and membership

Upcoming events

Nov 2020	INCOSE LA Chapter Virtual Tutorial: Building Really Big Systems with SAFe by Harry Koehnemann Nov 10, 2020 - Nov 11, 2020
Nov 2020	INCOSE Sweden annual seminar 2020 Nov 10, 2020 - Nov 11, 2020
Nov 2020	Midwest Gateway Chapter Speaker Event - Scaled Agile Framework (SAFe) with MBSE for System Engineers Nov 10, 2020 - Nov 10, 2020
Nov 2020	Systems Exchange Café: Oak Café Nov 11, 2020 - Nov 11, 2020
Nov 2020	Wasatch Chapter Meeting -- The Integrated Digital Environment of the AFMC Digital Campaign by Thomas Lockhart Nov 13, 2020 - Nov 13, 2020
Nov 2020	Cascade Chapter Lunch and Learn - Systems Thinking Nov 13, 2020 - Nov 13, 2020 Online,
Nov 2020	ASEC 2020 Virtual Event Nov 17, 2020 - Nov 18, 2020

INCOSE Membership Evolution since 1991



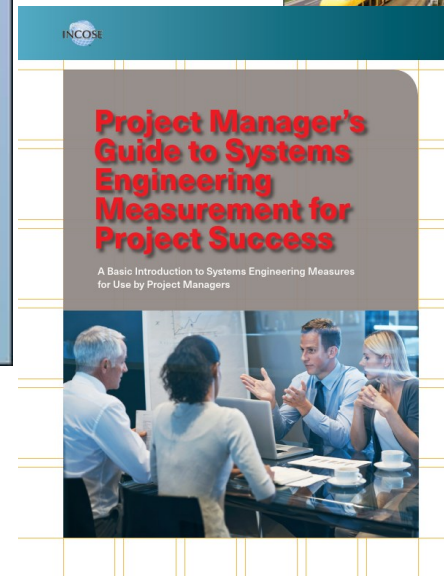
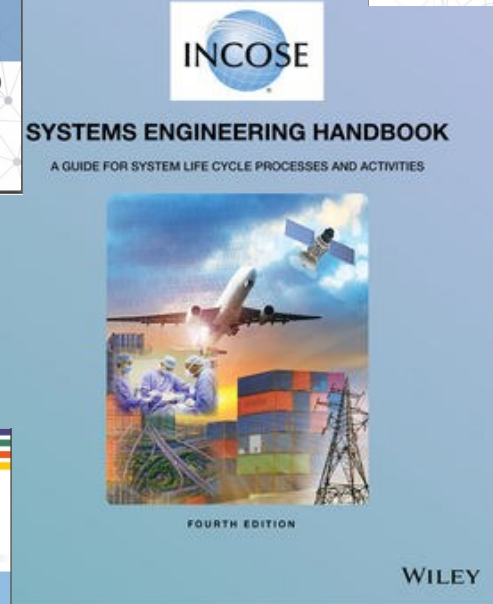
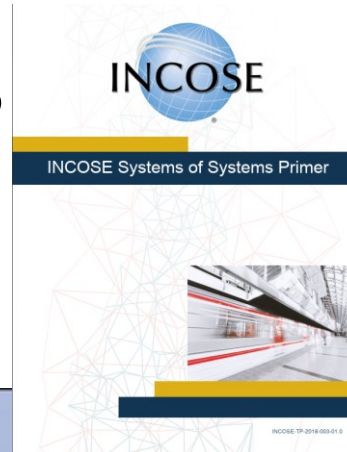
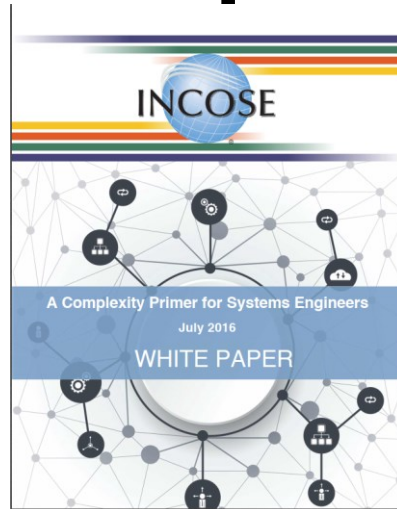
INCOSE – Standards and Working Groups

- Support development of standards
- 52 Working groups



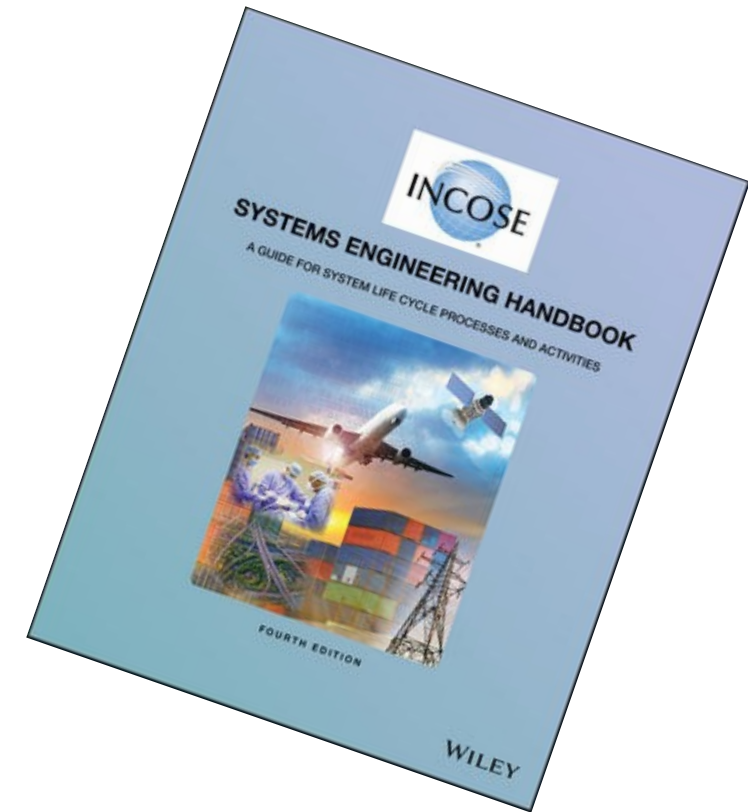
Agile Systems and Systems Engineering ✉ Rick Dove / Ron Lyells / Larri Rosser / Keith Willett 🔄 Transformational	Anti-Terrorism International ✉ Bill Mackey 🔄 Application Domains	Architecture ✉ R. Martin / ✉ A. Kumar / ✉ J.L. Garnier 🔄 Process Enablers	Artificial Intelligence Systems ✉ Thomas Shortell / ✉ Tom McDermott 🔄 Transformational	Automotive ✉ Alain Dauron / ✉ Gary Rushton 🔄 Application Domains
Competency ✉ Cliff Whitcomb / ✉ Lori Zipes 🔄 Analytic Enablers	Complex Systems ✉ Michael Watson / ✉ A.Raz / ✉ M. Do 🔄 Analytic Enablers	Configuration Management ✉ Paul Nelson / ✉ Dale Brown / ✉ Adriana DSouza 🔄 Process Enablers	Critical Infrastructure Protection and Recovery ✉ D. Eisenberg / ✉ J. Juhasz / ✉ A. Adebonojoa 🔄 Application Domains	Decision Analysis ✉ Frank Salvatore / ✉ G. Parnell 🔄 Analytic Enablers
Defense Systems ✉ Karl Geist 🔄 Application Domains	Digital Engineering Information Exchange ✉ John Coleman / ✉ Frank Salvatore / ✉ Chris Schreiber 🔄 Transformational	Enterprise Systems ✉ K. Nortrup / ✉ T. McDermott 🔄 Process Enablers	Global Earth Observation System of Systems (GEOSS) ✉ Ken Crowder 🔄 Application Domains	Healthcare ✉ Bob Malins / ✉ Chris Unger 🔄 Application Domains
Human Systems Integration ✉ Guy Boy 🔄 Analytic Enablers	Infrastructure ✉ A. Kouassi / ✉ L. Uden / ✉ M. van de Ven 🔄 Application Domains	Integration, Verification & Validation ✉ Jim Armstrong / ✉ Russell Kubycheck 🔄 Process Enablers	Knowledge Management & Ontologies ✉ Robert Nilsson / ✉ Jean Duprez 🔄 Transformational	Lean Systems Engineering ✉ Arthur Hyde 🔄 Transformational

INCOSE – Example Products



INCOSE Certification

- Planning paper exams
 - Gothenburg 16/12
 - Stockholm Jan 2021



Thank You !

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