Research: Enabling Systems Thinking to Accelerate the Development of Senior Systems Engineers.

Student: Heidi Davidz, MIT ESD Ph.D. 2005
Advisor: Professor Deborah Nightingale

Motivation
- Increasing interest in systems thinking
- Data needed on systems thinking development

Methodology
- 1. Literature review
- 2. Pilot interviews
- 3. Field studies on development
- 4. Interviews with proven experts
- 5. Identify enablers, barriers, & precursors

Exploratory
Inductive

Field Studies
- Work in multiple aerospace companies
- Interview expert panelists on how each company develops systems thinking
- Administer survey, personality test, and interview to compare characteristics and development histories of:
  1. Senior systems engineers
  2. Junior systems engineers
  3. Senior technical specialists

Anticipated Results
- Quantitative comparisons of the three subject groups
- Information of how companies currently develop and assess systems thinking
- Analysis of enablers, barriers, and precursors to the development of systems thinking in engineers