Human Systems International

Project Management, Systems Thinking and Complexity

PMI

Terry Cooke-Davies, PhD, Founder Human Systems International,
Senior Consultant Project Management Institute
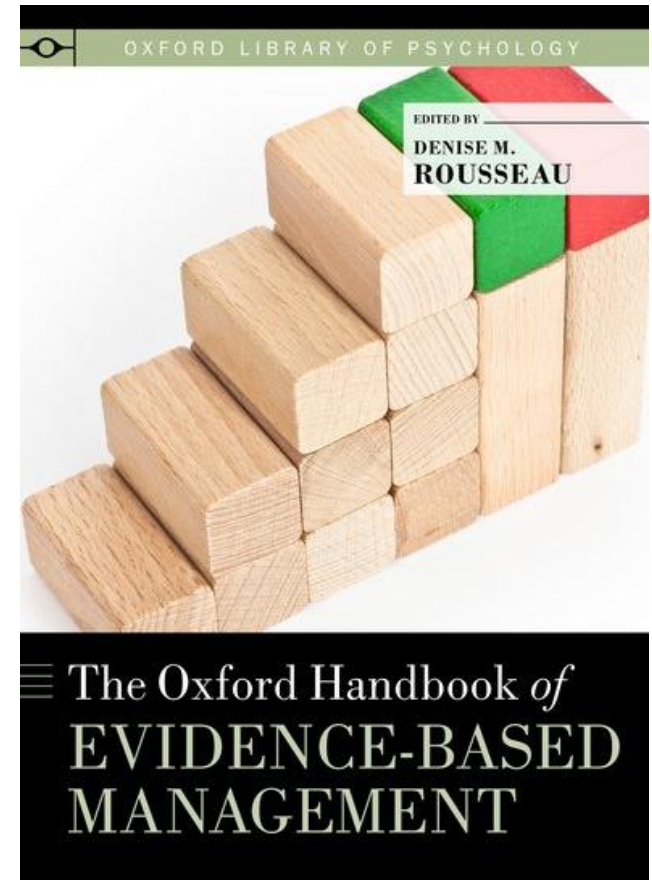13 November 2013

Projects, Projects, Projects

Projects to improve the performance of current activities….

Projects to develop new business, new products, new markets…

Projects to introduce new technology, new processes, new ways of working…

Projects to build new infrastructure, new physical assets…

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EDITED BY
DENISE M. ROUSSEAU

The Oxford Handbook *of*
EVIDENCE-BASED
MANAGEMENT

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Two Worlds – Two Mindsets

The World of Business Operations

Basis to mainstream management

- Start from known and predictable baseline
- Risks are exceptions to normality
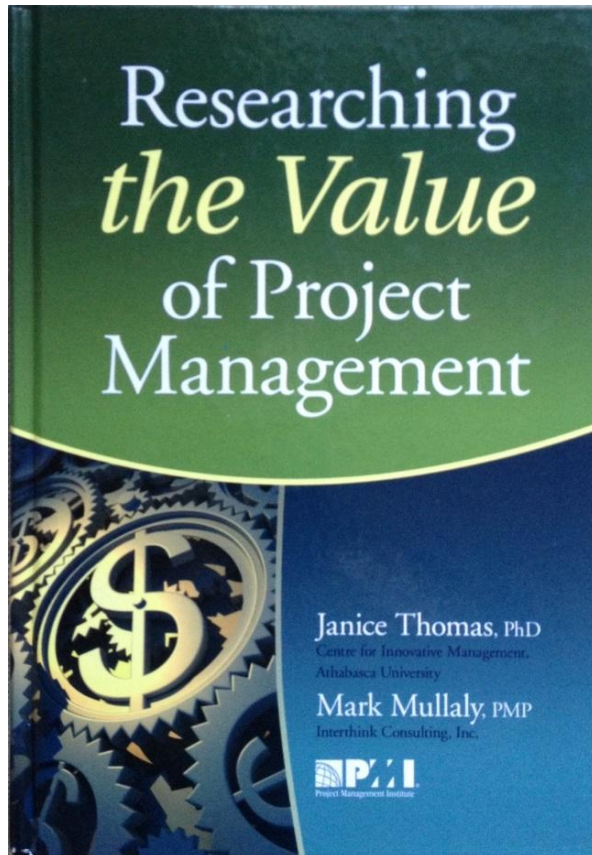- Planning has firm basis in the known present

Two Worlds – Two Mindsets

The World of Projects


Planning and creating something from imagination

- With a temporary organization
- Of human beings with numerous biases and flaws
- With irrational attitudes to risk
- So planning the work and managing risk are inextricably intertwined

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Different Organizations – Different Vocabularies

Researching *the Value* of Project Management

Janice Thomas, PhD
Centre for Innovative Management,
Athabasca University

Mark Mullaly, PMP
Interthink Consulting, Inc.

- Major Research Effort involving 65 Organizations, 447 Interviews, 418 Project Histories
- Organizations mean very different things when they talk about "project management"
  – Accreditation
  – Processes and routines
  – Training
  – Job function
  – Organizational department
- We need to be careful that we understand what each of us is talking about when we use the term

Systems Thinking is Highly Relevant
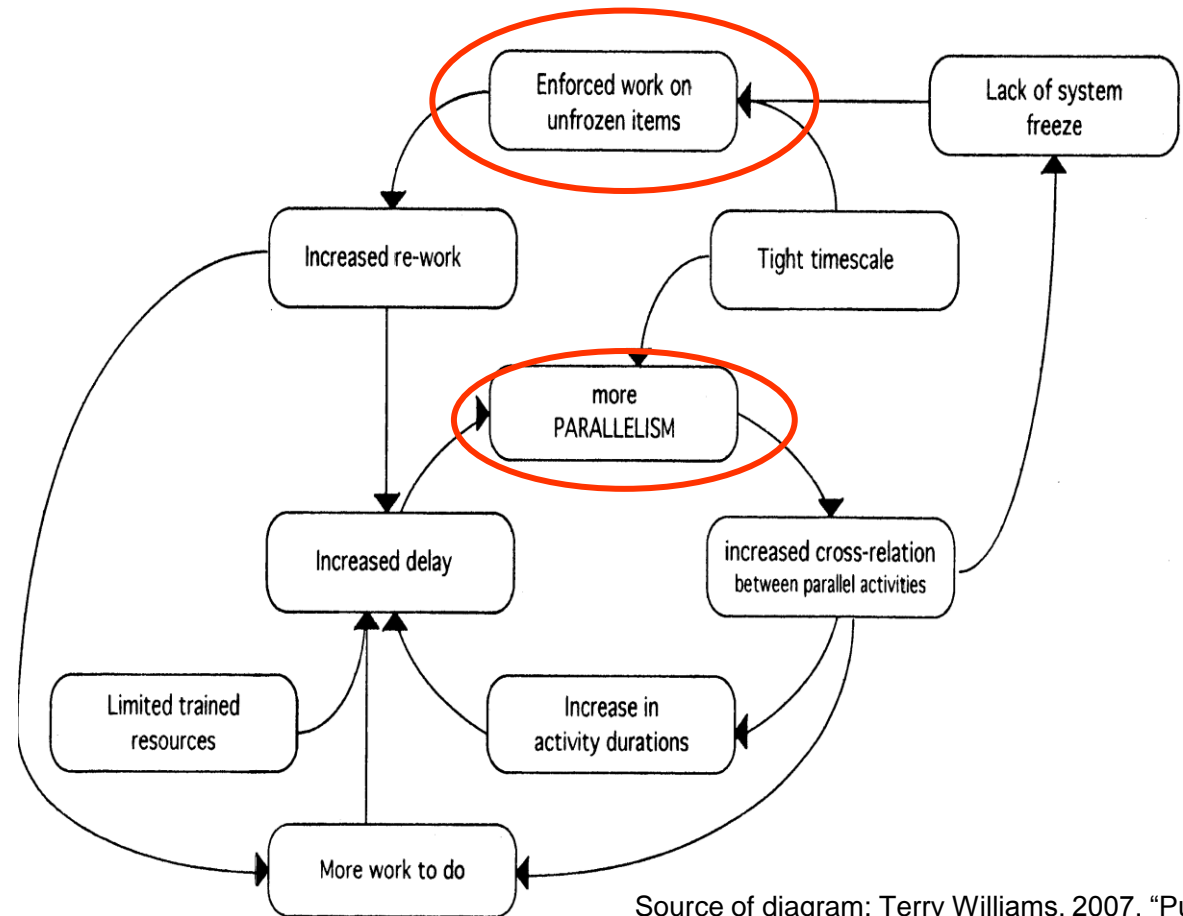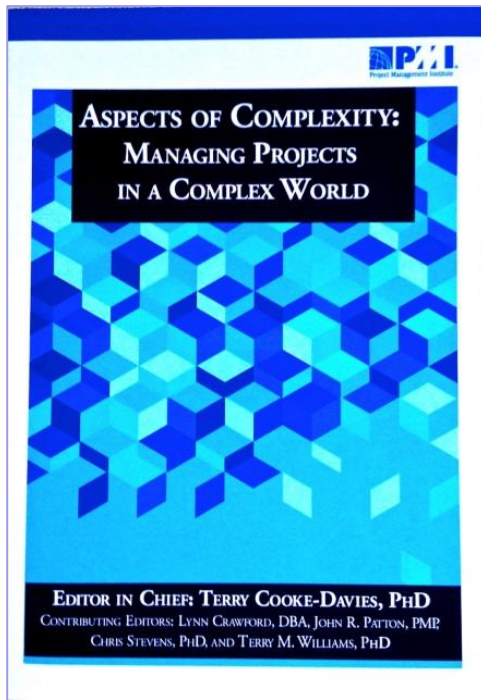
Source of diagram: Terry Williams, 2007, "Putting the Brakes on Runaway Projects", Southampton University, Concertante Consulting

For Example, in Engineering Projects…

Challenge

1. Firefighting—Reactive Program Execution

2. Unstable, Unclear and Incomplete Requirements

3. Insufficient Alignment and Coordination of the Extended Enterprise

4. Locally Optimized Processes that are not Integrated Across the Entire Enterprise

5. Unclear Roles, Responsibilities and Accountability

The Guide to
LEAN ENABLERS
for **MANAGING**
ENGINEERING
PROGRAMS

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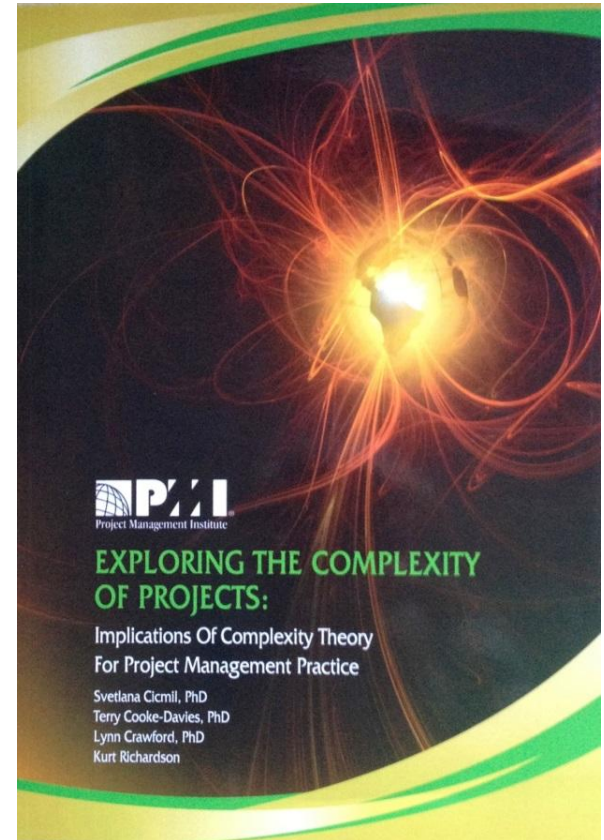International
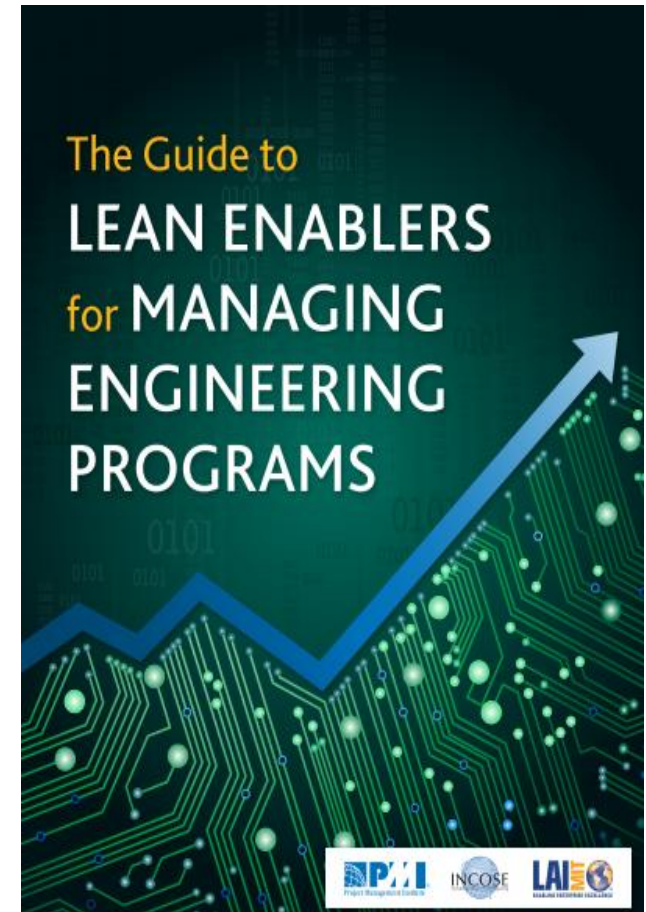
For Example, in Engineering Projects

Challenge

6. Mismanagement of Program Culture, Team Competency and Knowledge
7. Insufficient Program Planning
8. Improper Metrics, Metric Systems and KPIs
9. Lack of Proactive Risk Management
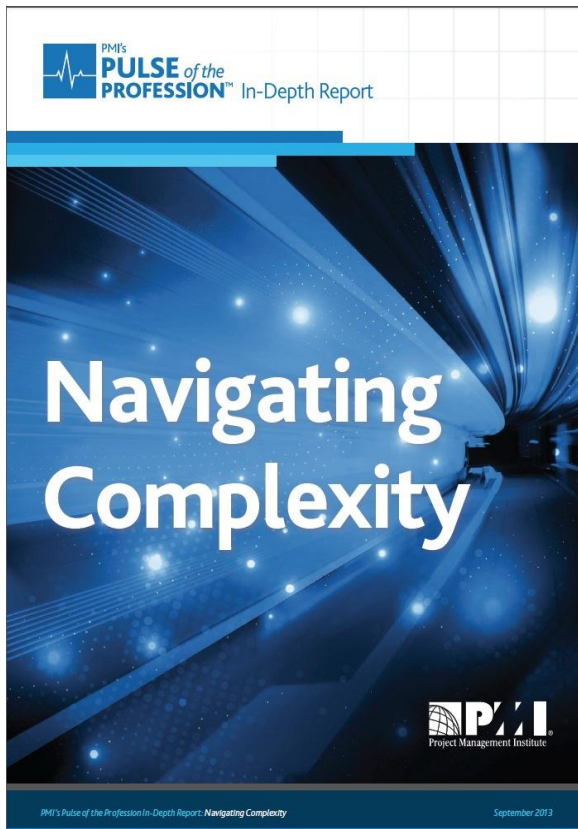10. Poor Program Acquisition and Contracting Practices

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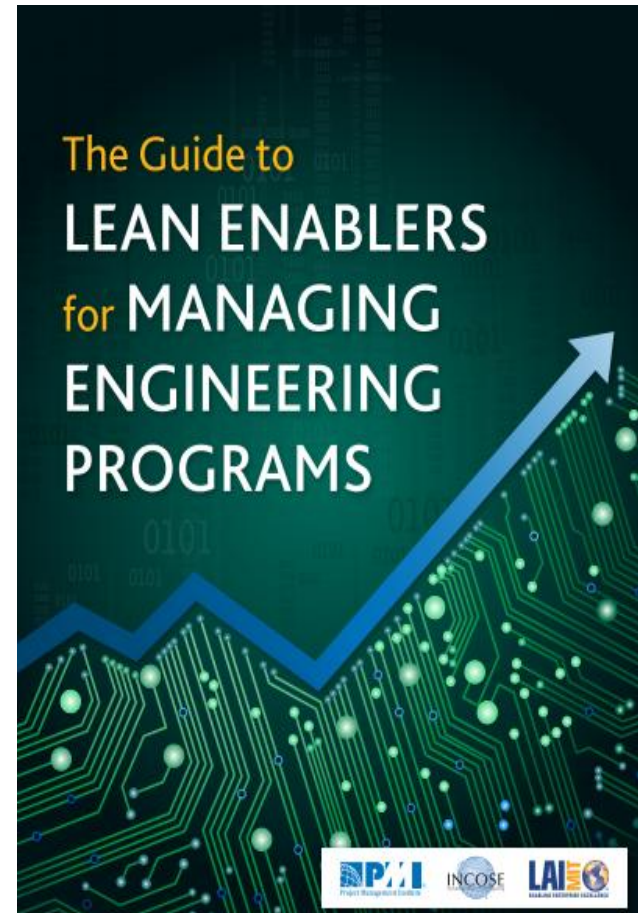
…but Not Simply "Hard" Systems

- Complexity Theory is relevant to the management of projects because of:
    - Non-linearity
    - Emergence
    - Radical uncertainty
- Projects involve patterned conversation and power relating between people – tools help to form the conversations and relationships.
- The effective Project Manager is a participant in processes of relating, s/he cannot stand outside organizational processes and control them remotely.

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EXPLORING THE COMPLEXITY OF PROJECTS:

Implications Of Complexity Theory For Project Management Practice

Svetlana Cicmil, PhD
Terry Cooke-Davies, PhD
Lynn Crawford, PhD
Kurt Richardson

Recent Survey Highlights Prime Need for Leadership

- Explores the steps organizations are taking to improve the success of their more complex projects and programs.

- Emphasizes that as complexity increases, so does the need for:

  – Commonly embraced organizational processes,

  – Strong talent base of people capable of leading, and

  – Excellent communications

- Paradoxically, increasing complexity calls for BOTH greater shared discipline AND greater flexibility of leadership

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Thank you for listening