Why Have Projects Failed this Decade?

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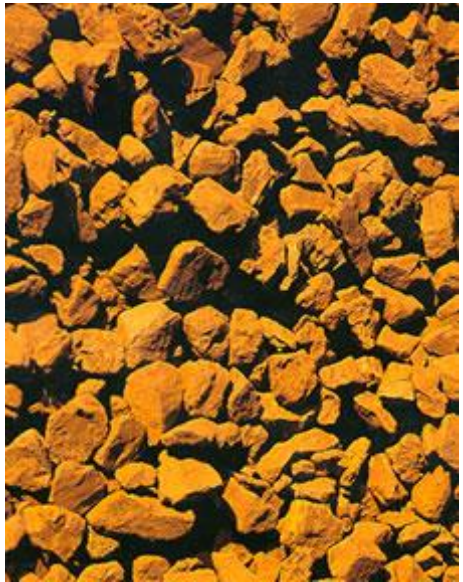

What is a “Failed” Project?

In the context of this discussion I would categorise “failure” as:

- A project that didn’t meet its performance expectations
- A project that was delivered late
- A project that was over budget

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- **The Lost Projects Decade in Alberta - *A Cautionary Tale***
  - **IEEE IAS ESTMP Workshop**
  - ***Michael McFadden March 29, 2010***

- **Between 1998 and 2008, Alberta produced many massive blowout projects**
- **Alberta was one of several overheated project markets in this period and all had similar problems**
- **My concern: owners in Alberta may misread the root causes of the problems in Alberta**
- **And will, therefore, repeat them even if the market never returns to its recent peak**
- **So what really happened?**
- **Why is it likely to happen again?**

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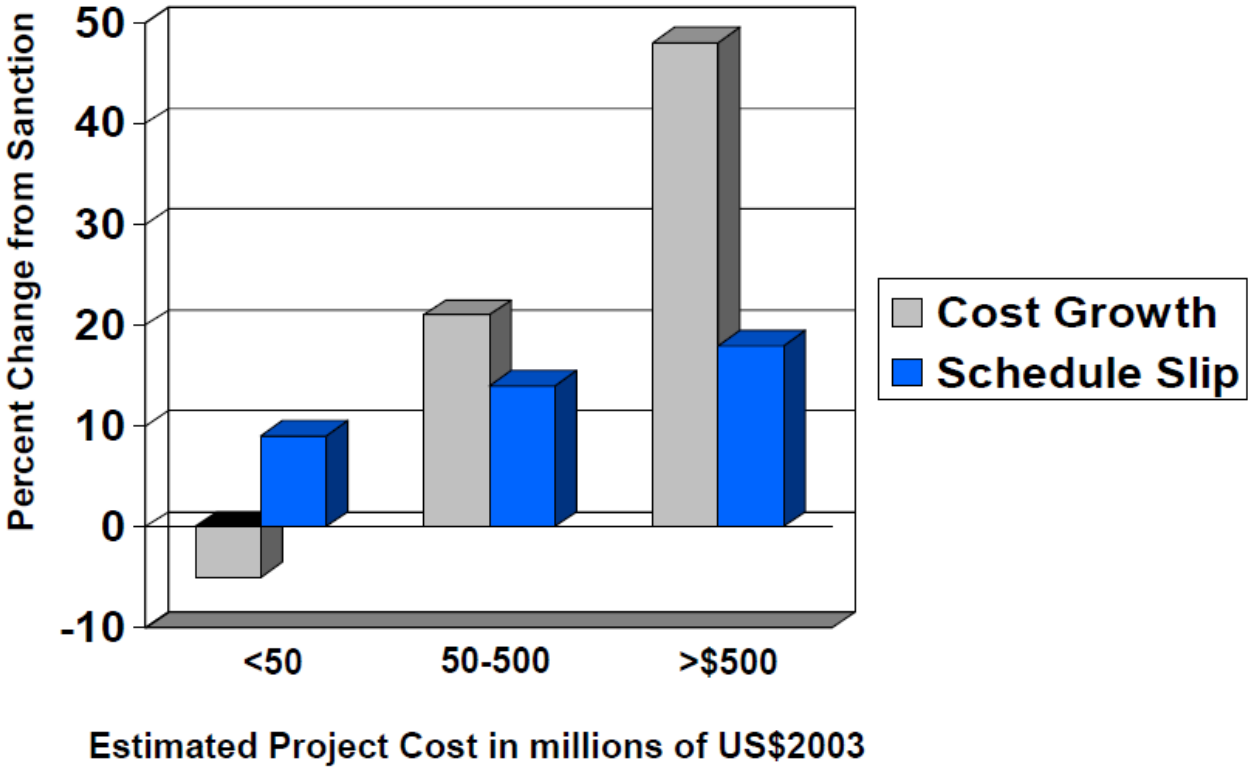
The Large Projects Took the Biggest Hit



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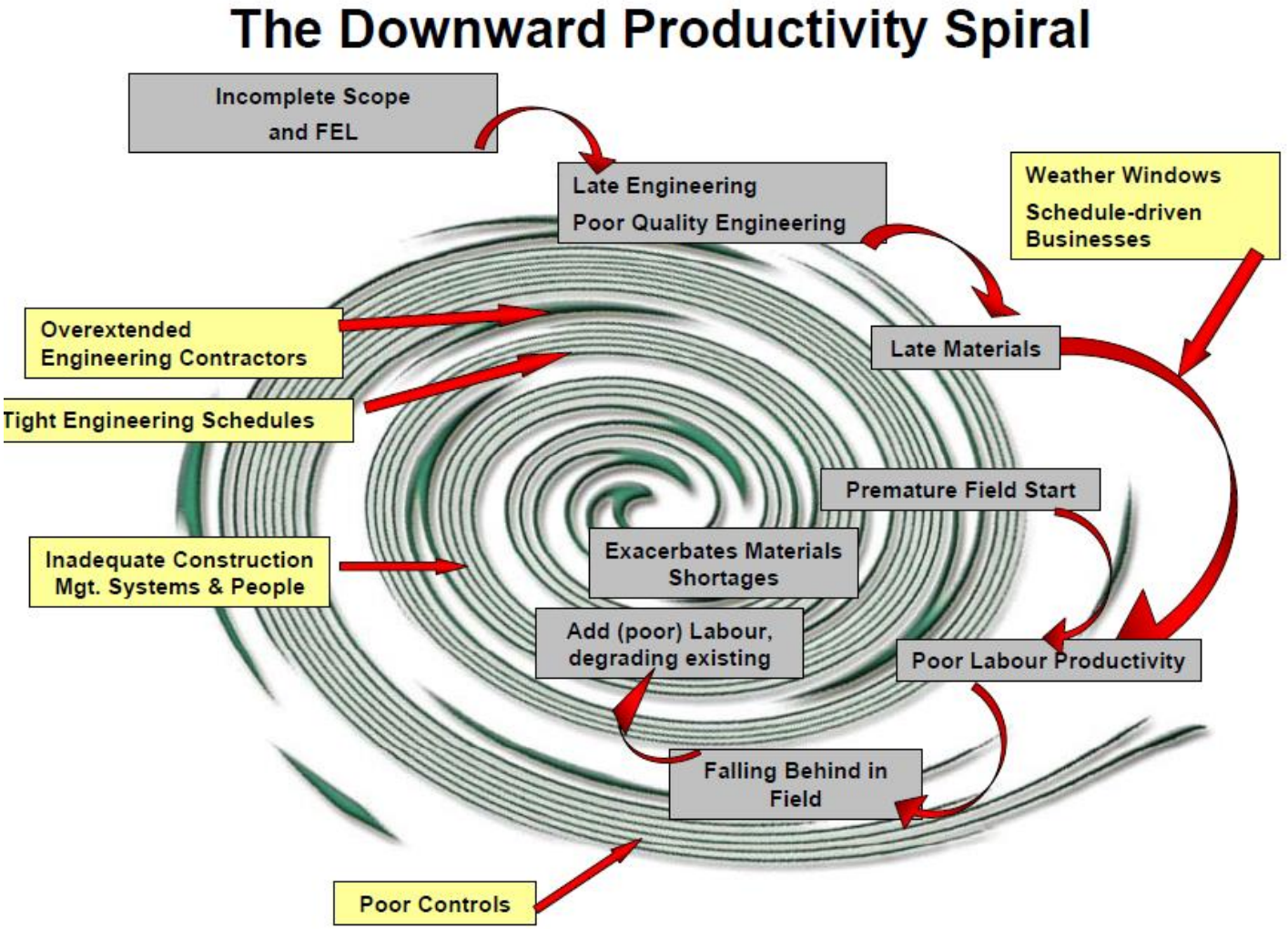

Multiple Reasons

Multiple reasons why projects “fail”:

- Poor definition as commencement
- Excessively tight targets (“stretch”)
- Poor scope control
- “Late” engineering
- Poor engineering
- Low construction productivity
- Late delivery of equipment
- Demand escalation
- Poor site coordination

Ultimately the reasons can be boiled down to two major failings

1. “Substandard” engineering
2. Poor project management

Issue 1 – Engineering Performance

How does engineering impact a projects budget and schedule? It determines all of the following:

- Whether the plant works or not (plant performance)
- The quantities required to be installed (steel, concrete etc)
- The extent of rework on site
- The overall schedule – late completion of engineering leads to late construction
- The delivery time of equipment

Engineering “costs” about 5% of the total capital cost

but

It determines somewhere between 50% and 70% of the total project cost.

Engineering - So What has Gone Wrong

The industry has in general under estimate the impact of engineering and has therefore made a number of decisions that have proved “expensive”:

“It’s only engineering so anyone can do it”

“Award it to the lowest engineering price”

“Lump sum the engineering”

“Shorten up the schedule by squeezing engineering”

“What were the original quantities?”

Outcome

A design that has excessive quantities, riddled with errors, issued late and in a sequence that doesn’t match construction.

Issue 2 - Project Management Performance

According to PMBOK, the ten fundamentals of PM are:

1. Integration Management
2. Scope Management
3. Time Management
4. Cost Management
5. Quality
6. Human Resources management
7. Communications
8. Risk Management
9. Procurement
10. Stakeholder Management

How long does it take to train someone to be competent in all these areas?

Project Management – The Biggest Failings

It is contended that the biggest failings in project management have been:

- Failure to properly define and then manage the scope of work
- Unrealistic budgets and schedules at commencement
- Understanding and management of major risks

The lack of project management expertise in owners and service provider teams has been the root cause of all of these problems

Summary

My advise to all owners commencing a new project:

1. Employ the best project manager you can to run the show. Don’t accept “second rate”

2. Be very careful in selecting the service provider doing the engineering and management for you

3. Demand a commitment to the original basis for approving the project (scope, schedule, budget, quantities etc).

Thank You

Questions?

Key Issue for consideration

Root Causes

- Labour productivity is not the root cause
  - It is the *proximate* cause of failure
  - It is a symptom of much deeper problems
  - Poor construction management contributed to the problem but also did not cause it
  - Poor controls also exacerbated but did not cause the problem
- The period was an *engineering* debacle
- Engineering problems are the principal cause of poor craft productivity