

Development of a Topics Course for Construction Risk Management

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By: Harrison Wygal

Courses Currently Offering Lessons in Construction Risk Management as Part of the Curriculum:

- CM 334 – Construction Law
- CM 413 – Jobsite Construction Management
- CM 443 – Management of the Construction Firm

Methodology

Identify Common Construction Risks



Determine Effective Risk Management Strategies



Determine Industry Professionals Views on the Importance of Risk Management Knowledge

The Cal Poly Construction Management program has a reputation for producing some of the most prepared graduates heading into new careers. However, many industry professionals have concluded that there is a need for an increased focus within the curriculum on construction risk management beyond just safety and job hazard analysis. In order to develop a suitable course, I performed a literary review to determine which risks are most prevalent within the industry and how firms in the construction industry manage business risk. It was revealed through interviews with industry professionals that having the ability to identify and manage construction related risk is critical for a successful career. Analyzing the information collected through this research project, it is clear that a Construction Risk Management topics course would benefit Cal Poly Construction Management students in their future careers in the construction industry.

“Providing the framework for risk analysis and risk assessment will greater support the Cal Poly CM curriculum. There is a fine balance on managing risk on a project that can easily impact safety, budget, and schedule without proper assessment and planning. It takes a collaborative/ open environment to foster an environment where risks can be assessed promptly and minimizing exposure to multiple parties.”

-Brandon Para, DPR Construction Project Manager

Risk Management Strategies to be Taught

Avoid

- Avoid certain scopes of work that the company foresees experiencing risk

Accept

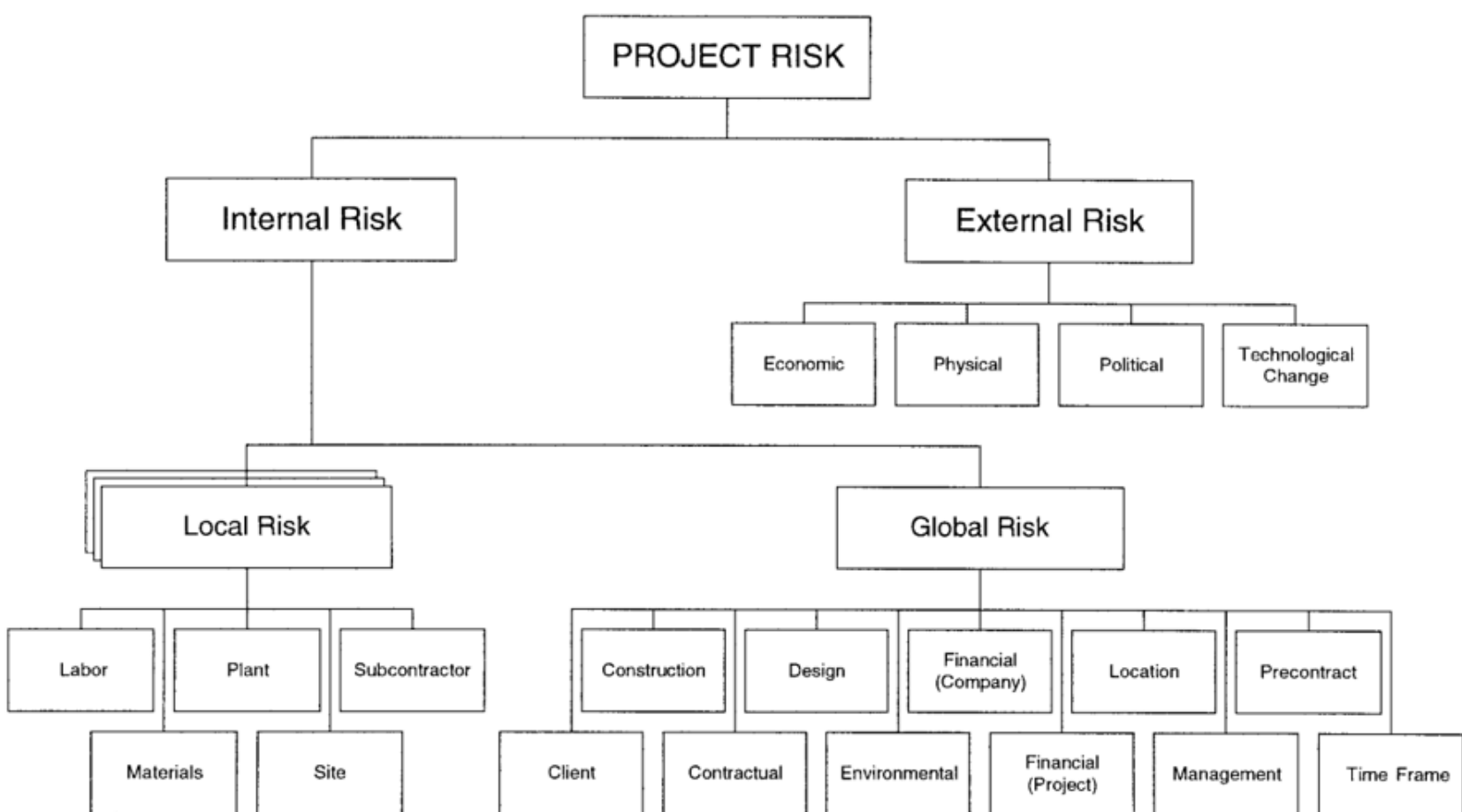
- Accepting partial or full responsibility for an identified risk

Transfer

- Selecting appropriate insurance
- Transferring risk to another party during contract negotiations

Mitigate

- Reduce the probability of a risk occurring
- Reduce the impact of the risk should it occur



	Contractors	Project management practices	All firms
Environmental (e.g. weather)	2.33	1.69	2.05
Political, Social & Economic (e.g. inflation)	2.52	2.20	2.37
Contractual arrangement (e.g. responsibilities)	3.40	3.54	3.44
Financial	3.50	3.55	3.50
Construction (productivity, injury, safety)	2.93	2.50	2.71
Market/industry (availability of workload)	2.90	3.00	2.95
Company (corporate)	2.50	2.58	2.56
Development in IT	1.89	1.71	1.81
Project (design information)	2.69	3.08	2.88

Organization risk premium index (RPI) is defined as $RPI = \sum_{i=0}^{i=4} E_i P_i$, where E_i = ith extent of premium; and P_i = percentage of respondents.

