E&C Governors Meeting
Preview for Rice Forum

What Have We Done and Where are We Going?
Meeting Agenda

- ECRI vision
- Formation of ECRI
- Focus areas during 2005
- Examples of work product
- Plans for 2006
- What is needed to proceed

OTHER SESSIONS INCLUDE
- Do We Have the Right Qualified Resources?
- Supplies and Commodities
- Anti-Corruption Principles
One of the first findings was that “Undermanaged” project risk alone is costing the E&C industry $3 - 4 Billion annually in profits.

2002 Global Realized versus Potential Profits

Key Observations

- $200 – $270 billion industry wide revenue would be needed to make up for lost profit
- Clients’ exposure is on a similar order of magnitude

Source: Datamonitor, Factset

Engineering News Record and industry expert estimates of project failure rates

Note: 1) Analysis based on 2002 data. Cost of project failure is the cumulative variance between estimated profits and realized profits. It includes margin shortfalls which could be addressed by improved risk management for an estimated share of 20% - 25% projects. EBITDA margin of 1.5% is used to describe the average project profitability.
Riskier business models and over-emphasis on new orders have contributed to declining profitability, which has driven shareholder value destruction.

Global E&C Industry Profit Margin

Key Observations

- 60% EBITDA decline in 12 years
- Structural issue, not explained by “business cycles”
- Europe has improved (in the past five years), but came from negative territory
- Regions appear to be converging, reflecting globalization

Source: 1) Factset. Includes the 38 publicly traded companies in North America, Europe and Asia
Notes: 2) Profit margin is found by company’s operating margin/net sales
3) Global trend is found from a composite of all companies weighted by market share
4) Prepared in cooperation with AT Kearney and the World Economic Forum
A consensus vision for the E&C “Risk Institute” has emerged from a large number of discussions with the E&C Governors.

Vision

“Institutionalize sound risk management in the Engineering & Construction Industry to improve performance and predictability of large capital projects, consequently enhancing the long term health of the E&C community and the value to its clients.”

CEO Interviews
Current ECRI Sponsors (more information at www.ecrionline.org)

- CH2M Hill
- Lahoud Engineering
- Heijmans
- Godrej
- Peremba Group
- Aveng
- CCC
- SNC-Lavalin

- Corporacion IMPSA
- Washington Group
- Fluor
- Skanska
- Hochtief
- Hindustan Construction
- Obayashi
- Murray & Roberts
- Karl Steiner
Operations Beginning July 2005

• **Risk Management Process**
  • Established Global Task Teams and began their work on the following immediate focus areas approved by Sponsors
    – Risk Management Guidelines
    – Risk Management Process Criteria
    – Contractual Guidelines
    – Commercial Guidelines for different types of payment structures
    – Project Finance/Development Criteria
    – Project Development Risk
    – Change Management Guidelines
  • Established web-based clearinghouse of risk management information [www.ecrionline.org](http://www.ecrionline.org)

• **Risk Financing**
  • Established Insurance and Bonding Best Practices
  • Began dialog with Insurance/Bonding industries

• **Risk Allocation**
  • Began planning Joint Risk Management dialog with clients
Organization – Global Task Teams

Risk Board
Managing Director

Risk Financing
CH2M Hill
Murray & Roberts
Skanska
WGI

Project Development
CH2M Hill
Fluor
Skanska
WGI

Terms & Conditions
Aveng
CH2M Hill
Fluor
Godrej
Murray & Roberts
Skanska
WGI

Best Practices
CH2M Hill
Fluor
Karl Steiner
Murray & Roberts
SNC-Lavalin
WGI

Change Management
Aveng
CH2M Hill
Fluor
IMPSA
Matt:

This is just to show the names. Trust you will generate a more attractive format.

William Zelle, 1/5/2006
# Institute Deliverables

## GENERAL

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Status</th>
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<tbody>
<tr>
<td>Index of Deliverables</td>
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<tr>
<td>Institute Future Vision</td>
<td>Completed</td>
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<tr>
<td>Individual Sponsor’s Risk Management Future Vision</td>
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<td>Project Risk Management Guideline</td>
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## CONTRACT TERMS & CONDITIONS

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<td>Contract Best Practices: Critical Issues</td>
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<tr>
<td>Terms &amp; Conditions Criteria: Project Execution/Commercial</td>
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<tr>
<td>Survey &amp; Analysis of Model Contracts</td>
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<td>Glossary of Defined Contract Terms</td>
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## RISK FINANCING

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<td>Risk Financing Best Practices Critical Issues - Bonding</td>
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<td>Survey of Trends in Insurance, Surety, Security Requirements</td>
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## Institute Deliverables

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<th>CHANGE MANAGEMENT</th>
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<td>Inventory of Risks Associated with Change</td>
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<td>Change Definition Table</td>
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<td>Inventory of Additional Risks for Development/Financed Projects</td>
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<td>Project Development Early Decision Screens</td>
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Risk Management in the E&C Industry

<table>
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<td>Risk Management Process</td>
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<td>Bidding including Risk Quantification</td>
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<td>Risk Management of Change</td>
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Feedback from the E&C Industry indicates that despite widespread existence of written risk management processes and procedures, actual risk management declines dramatically as a project progresses and is often not well integrated with project execution or applied to contract changes when it is most needed.
Plans for 2006 and Beyond

• Continue development of deliverables and begin:
  • Risk event contingency
  • Change impact
  • Joint ventures
• Broaden ECRI sponsorship by E&C industry
• Joint risk management discussions with owners*
• Identification & insight of industry-wide emerging risks*
• Forums with insurance and bonding firms
• Liaison with PMI, APM, CII, etc.
• Promote effective risk management training in the E&C industry

* - supported by World Economic Forum
Potential Future Institute Activities

• Risk Management Process for Portfolio/Enterprise Risks
• Risk Management Process for Ownership Projects (BOO), (O&M) etc.
• Investigate Methodology for Certifying E&C Companies’ Risk Management Processes
What have we done and where are we going?

- Established global institute to improve risk management performance in our industry
- Developed excellent and accessible risk management products
- Now ready to reach out to broader audience of contractors and clients