

Meltdown Management in the E&C Industry and the Engineering Company Conundrum

**Be Aware: No Decision...IS a Decision!
Doing NOTHING has consequences too!**

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Exchange Agenda and Open Discussion on Topic

Please...don't slay the messengers!!! – Thanks! - Paul & Ken

Growing Stronger in **Tough Economic Times**

- This presentation and facilitated open discussion will explore how E&Cs can take advantage of current market conditions - Where's the beef?!
- This may actually be a great time to use market conditions to advantage. As the competition retreats, this might be the best time to invest in talent and R&D, increase your marketing presence, perk up your processes, and start negotiating with suppliers to greater advantage.
- Contrary to popular myth, E&Cs CAN grow stronger during a recession. Get creative and seek new markets, monitor debt, rein in cash collection, look for strategic opportunities to acquire competitors or suppliers, and pour money into R&D, invest in talent, flatten the org and prune deadwood.

Recession Winners of the Past: **Bold Moves**

- *Companies willing to make bold moves on the operating, financial, and technology fronts are more likely to survive—even thrive—in a downturn.*
- Some are using the opportunity to re-position themselves.

Excellent topics for our following discussion!

- How does this ALL IMPACT the E&C Industry?
- WHERE are the OPPORTUNITIES NOW?
- Energy/O&G: conventional/unconventional; Power; Infrastructure?
- WHO were the E&C Recession Winners of the Past?
- Who will the NEW ONES be?
- What does the “REMAKE” of the E&C industry look like in long run?

Dry Powder and the New Project Environment

Dry Powder

- Significant dry powder (hundreds of \$billions in cash available)
- Corporate finance is under attack due to loss of credit lines, bank failures, loss of lender relationships, free-fall impact on publicly traded companies
- Driving capital project funding into the realism of "hard money" at-risk contracting, true Net Present Value (NPV), and restoration of basic E&C requirement: "earn the risk premium."

Existing contracts will experience Clients who require:

- significant cuts in cost and expense,
- re-negotiation of contracts,
- shutdown of projects with little/no warning due to cash management decisions, market conditions, other activities...some will go bankrupt, impacting freedom of decisions and possible existence –
- none of the above are good news for E&Cs

Liquidity and Cash Management in a **Financial Crisis**

To survive, **you must know and apply Crisis Management** and be proficient in

- Turnaround, Cash and Time Management with *a true sense of urgency*), and **"hard money"** contracting (At-Risk reputation & capabilities – Project Managers, Project Controls & Engineers must all be capable of delivering).
- Project Payment Milestone Schedules: physical/documented cash flow
- Cost of Cash & Cash Flow - staying unleveraged / cash rich

and **understand what is happening in the financial arena...**

- Credit markets have shifted (many banks have left the market).
- Debt providers now are appearing from institutional / private equity
- More hostile third world and NOC involvement forcing structured finance
- More shift to third-party structured finance requiring “hard money EPC.”
- Increasing demand for E&Cs to have “skin” in the game and do “at-risk.”
- Cost reimbursable/T&M – more of managing budget as hard money!
- INTERNAL requirement: hard money work packages in WBS and roll up.

Resulting Activities in E&C last few years

Mercenary – Creation of the Mercenary Behavior on both sides: Owners/Contractors

Some forgot: Engineering serves construction, construction serves operations, operations makes the money. Operational Input must drive engineering!

Professionalism – old guard vs new (*Millenniums*)

Minimal or non-existent training investments by companies in their resources

Loyalty? Where is it? - “What’s in it for me?” syndrome, outcomes, value proposition

Less of the old E&C way: the “rainy day reserve” for resource retention in downturns

Mushroom Communications = rumors. substantial productivity loss, cost overruns

Refusal – due recent “E&C sellers market,” many E&Cs refused to take on “at-risk”

Change Management – those who cannot adapt will lose. Change Order skills too!

Moving from schedule-driven to cost-driven until rebound.

DANGER! Switching to schedule-driven without fully integrated risk-based master schedule.” = fantasy & train wreck.

NPV investment loss (time value of money) by switching to cost-driven.

Now and the Next Few Years

Impact on E&C and the Lifeboat for Survival

- Reimbursable engineering will now be required to be in hard money terms much more than ever before or at a minimum to be managed as such.
- Those that can and do At-Risk projects either as Lump Sum Turn Key (LSTK) or modified Design-Build will be the survivors, with the caveat they have the management skills to button up and manage risks, capture the risk premium with ability and willingness to provide financing support. Some are getting lenders to accept conversion after detailed engineering and subcontractor awards are made, i.e. delayed conversion to hard money.
- "Skin in the game" may become a project requirement, not an option, for E&C players in many opportunities due to lenders. Overhead Reduction is mandatory! **Flat organizations able to manage "at-risks" will win!**

Skilled E&C Resources: **The Engineer**

In today's economic climate, it's hard to believe there are jobs that employers are having a hard time filling. But they do exist, according to the staffing firm Manpower's annual talent shortage survey. From the 2,019 employers who responded to the survey in January, Manpower created this *list of the 10 hardest jobs to fill in the U.S.* The **TOP one is Engineer!** Engineers can move in industries!

1. Engineer

- the “ENGINEER of OLD” was master of many disciplines & an architect

There are several reasons it's hard for employers to find qualified engineers, says Jonas Prizing, Manpower's president for the Americas.

- Employers don't want to hire two or three engineers with a variety of specialties, *they want one engineer who is trained in several areas (reverting back to the old)*.
- There are *far too few new college graduates in engineering* to replace retiring engineers. Many new graduates are “Millennium's” without a value proposition!
- The Obama administration's pledge to rebuild America's infrastructure is *increasing the need for talented engineers*. Easier said than done!
- **The Engineering Company Conundrum – Ken Arnold**

What is the Conundrum?

- “Engineering” Companies Do Not Value Engineering
- Management Focus is on:
 - Client relationships
 - Marketing strategy
 - Commercial contracts
 - A select group of Project Managers or franchise players
- Engineering is:
 - Man-hours
 - “Hands”

Signs That the Conundrum Exists

- Leadership does not spend time on:
 - Evaluating engineering work processes and technology to increase efficiency and quality
 - Assuring the correct technology is being employed
 - Assuring engineers are adequately trained
- Engineers are treated as expendable
- Emphasis on process control to assure quality
- No recognition that “hands” are real human beings to be treated with dignity

What Can Be Done About It

- Leadership must talk about:
 - The way engineering is being done
 - Quality of the engineering staff
 - Concerns and needs of engineering management
 - Recruiting, motivating and retaining the bulk of the engineers who do the day to day work
- Leadership must build a relationship to management and empower direct supervisors
- HR must treat engineers as people and not as objects of policy

Thank You for Your Attention!

Now...let's talk about it!

Exchange Agenda - 1/3 is presentation, 2/3 is discussion/Q&A

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Call us direct if you need help in these troubled times.