The Perfect Storm

Navigating Through the Turbulence of Risk and Change

41st Annual ECC Conference

September 9 - 12, 2009
Hyatt Lost Pines Resort
Bastrop, Texas
Courageous Leadership During Turbulent Times

Donald C. Runaldue

Project Executive
ExxonMobil

Moderator

41st Annual ECC Conference, September 9-12, 2009, Bastrop, Texas

The Perfect Storm
Navigating Through the Turbulence of Risk and Change
Presentation Flow

- Introductions
- The Challenges
- Our Jobs at ExxonMobil / Fluor / Emerson
- Courageous Leadership
  - Examples
  - Case Studies
  - Discussions
COURAGEOUS LEADERSHIP

- Industry has faced enormous challenges from the worst economic times since the great depression
- Some are just starting to say the tide may be turning
- What have leaders done to position for the longer term and the recovery?
“My Forecast was wrong in February, and the continued weakness in the Global economies continues.”

– David Farr, Chairman / CEO Emerson Electric Products Group Speech

May 20, 2009
My Job at ExxonMobil

- Project Executive
- Provide leadership on capital projects
- Face the challenges in projects
- But similar challenges today
  - Need to work together for all to be successful
  - Need qualified motivated teams
  - Must have an everlasting dogmatic focus on safety
Courageous Leadership During Turbulent Times

Jim Scotti
Senior Vice President & Chief Procurement Officer, Fluor Corporation

Panelist

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The Perfect Storm
Navigating Through the Turbulence of Risk and Change
Topics

- Center-Led / Global Organization
- Supplier Partnerships
- Low-Cost Country Sourcing
- Understanding the Market
- Investing in the Future
My Job at Fluor
Managing a Center-Led / Global Organization

- Material Management
- Contract Management
- Corporate Procurement
- Travel
- Fluor Supply Chain Solutions
- Logistics

2,000 Resources Globally
$13.6 Billion Annual Spend
My Job at Fluor
Managing a Center-Led / Global Organization

Over 2,000 Procurement Professionals Worldwide
Managing Supplier Partnerships

- Keep the larger purpose in mind
- Work collaboratively for project success
- Listen and consider options that may differ from their own preferences or experience
- Ask for only appropriate concessions from partners
- Adequately assign risk to partners who can mitigate
- Trust, but verify
Managing Supplier Partnerships

- Suppliers and subcontractors are critical to successful project execution
  - 60-70% of typical project’s TIC based on materials, equipment, and subcontracted services
- Supplier integration promotes greater efficiencies by allowing each stakeholder to leverage their strengths
- Working with suppliers, instead of treating them as adversaries or risk holders, leads to relationships that work in both good and difficult times
Managing Supplier Partnerships

The PEpC Process

The ability to influence the cost of a project is greatest at the beginning of a project – bringing strategic suppliers in early is essential to success.

Construction Industry Institute indicates:
- 4 – 8% cost savings
- 10 – 15% time savings
Managing Supplier Partnerships

- Tiger Woods & Steve Williams
  - A perfect partnership, in good and bad times
  - Woods’ caddy since 1999
    - Also caddied for Raymond Floyd and Greg Norman
  - Woods and Williams are friends, in addition to their professional relationship
  - Trust, but verify!
Managing Supplier Partnerships

How Owners Contribute to Success

- Appropriate allocation of risk between owners, contractors, and suppliers
  - Appropriate allocation of risk is key to developing and maintaining trust across all execution partners
  - Each partner should only be expected to accept risks for those aspects they can mitigate
- Allowing relationships and trust to develop between all parties
- Understanding that a single project is only one element of a much larger business relationship
  - Contractors and suppliers recognize that successful project execution and client satisfaction are key factors to securing future engagements
Managing Low Cost Country Sourcing

- **LCCS provides 15-40% total cost savings versus non-LCCS region competitive bidding**
  - Lower labor costs
  - Lower raw materials costs
- **Fluor rates and monitors LCCS suppliers**
  - Price differentials against US baseline
  - Delivery times, schedule risk, quality
- **Strategic supplier agreements developed with suppliers in low cost and emerging markets**
  - Proven track records on projects with Fluor, other contractors, and owners
- **LCCS opportunities exist in several locations**
  - China
  - India
  - Vietnam
Managing Market Intelligence

- Material Market Intelligence Services (MMIS)
- Monthly Material Market Bulletins for our projects, estimating groups, and clients that contain market specific information and trend analyses for select material and equipment categories
  - Supply
  - Demand
  - Pricing

U.S. Raw Material Price Escalation
January 2004 – August 2009

Price index
January 2004 = 100

- Brass
- Copper
- Stainless Steel
- Shredded Scrap
- Aluminum
- Nickel
Projects Commencing in 2009 Q1 Have Potential to Capture the Anticipated “Low Cost Window”

<table>
<thead>
<tr>
<th>FEED = 5%</th>
<th>Bridging Activities</th>
<th>Detailed Design = 10%</th>
<th>Procure = 55%</th>
<th>Construction = 30%</th>
<th>Operate Plant</th>
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<tbody>
<tr>
<td></td>
<td>Owner Approval</td>
<td>Estimate</td>
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| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| % GDP World | -2.7 | -3.1 | -3.0 | -1.4 | 0.7 | 1.5 | 2.2 | 2.7 | 3.1 | 3.5 | 3.7 | 4.0 | 4.4 | 4.2 | 4.1 |
| Oil Price $/Barrel | 43 | 44 | 45 | 48 | 53 | 55 | 54 | 56 | 57 | 60 | 63 | 67 | 69 | 73 | 76 |
| Cost Change Due To Market | | | | | | | | | | | | | | | |
| % Engineering* | 0 | 0 | 0 | -5 | -5 | -5 | -5 | -5 | 0 | 0 | +5 | +5 | +5 | +5 | +5 | +5 |
| % Procurement | -5 | -5 | -5 | -5 | -15 | -15 | -10 | -10 | -5 | 0 | 0 | +5 | +5 | +10 | +10 | +10 |
| % Construction* | 0 | -5 | -5 | -5 | -10 | -10 | -10 | -10 | -5 | 0 | 0 | +5 | +5 | +10 | +10 | +10 |

* Cost reductions achieved through increased efficiencies from more experienced personnel, fewer hours and less turnover. Source of Oil Price and % GDP Growth Forecast: Global Insight Apr 17, 2009 – “the most consistently accurate economic forecasting firm in the world”.

Legend

- Good
- Med.
- Bad

Low Cost Window

Project Cash Outflow

Projects Commencing in 2009 Q1 Have Potential to Capture the Anticipated “Low Cost Window”.
Investing in the Future

Fluor Endowment to Clemson University

Fluor Endowed Chair of Supply Chain & Logistics

- $2 million investment
- Announced September 11, 2007
- First class began August 20, 2008
  - 40+ students from Fluor and other companies in the industry
Investing in the Future
Fluor Endowment to Clemson University

Fluor Endowed Chair of Supply Chain & Logistics

- Fully online; no campus visits required
- Graduates obtain a Masters Degree in Engineering with a Concentration in Supply Chain from a fully accredited US University
- Continued support and input from owners, contractors, and suppliers is required
Courageous Leadership During Turbulent Times

Melissa Herkt
President & COO
PlantWeb Solutions Group
Emerson Process Management

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$24.8 Billion in sales

Headquarters in St. Louis, Mo. NYSE: EMR
Diversified global manufacturer and technology provider
Approximately 141,000 employees worldwide

- Manufacturing and/or sales presence in more than 150 countries
- 255 manufacturing locations, 165 outside the U.S.
- No. 94 on 2009 FORTUNE 500 list of America’s largest corporations
- Founded in 1890
Summary: Who We Are

- **EMERSON** a successful and stable partner
- **Emerson Process Management** a world leader in automation
- **PlantWeb Solutions Group (PSG)** combining control and safety systems, operations management, and services into integrated digital plant solutions

**PSG Divisions**
- Process Systems and Solutions
- Power & Water Solutions
- Asset Optimization
EMERSON
Process Management

PlantWeb Solutions

• Process Automation
• Safety Systems
• Operations Management
• Remote Automation
• Wireless Solutions
• Industry Solutions

• Asset Management Software
• Services and Technologies
• Mechanical Equipment
• Electrical Systems
• Process Equipment
• Instruments & Valves

PSG Operations Group
• Material Supply Chain
• Labor Supply Chain
• Global Project Management Office
• Product Support
• Quality
• Educational Services
• IT

Capabilities
Integrated Material and Labor Supply Chain

Business System Tools / Applications for Sales, Projects & Supply Chain

Sales
- Proposal is 15-30 days
- 3-6 months prior to RFQ

EET Architect
- Proposal is
- Product duration is 3 to 16+ months

Project Management
- Services / Labor Hrs
- PSS BOM (proposed)
- Buyout BOM (proposed)

Clarity
- Released BOM
- Released Buyouts

Project Materials Management System
- Oracle JDE-E
- JDE-A...

Finance / Supply Chain
- MRO Sales
- Fulfillment scope is usually 1-3 months

Oracle Box

Projects Forecasting
Projects Execution Backlog
Supply Chain Execution

S&OP

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Able to reach 98% of customers in 24 hrs

Distributes worldwide via intra-hub network

Main Distribution Center is close to suppliers
The ability to influence the cost of a project is greatest at the beginning of a project – driving early strategic supplier integration is essential to success.
Evolution of Project Delivery Methodologies

Traditional → PEpC → MAC

- Traditional – Packaged tendering process
- PEpC – Procure, Engineer, procure, Construct
- MAC – Main Automation Contractor
  (a.k.a. MICC – Main Instrument & Controls Contractor)
Strategic Partner Selection Criteria

- Technology leaders, not followers
- Broad scope of supply with > 80% of required discipline
- Significant experience, capabilities & references
- Project delivery excellence
- Strong global and local presence
- Comprehensive lifecycle support
Industry research shows quantifiable improvements through Partnerships / Alliances during project delivery and in operations.

An Alliance Approach to Capital Programs

Proven in practice ... case study presented at 2008 CII Annual Conference"
MAC / MICC Benefits & Results

- Complete responsibility for all automation
- Eliminates redundant and overlapping communication chains
- Single organization with globally consistent project management
- Mitigates traditional I&C problems
- Reduces the risk of scope expansions, schedule extensions, and cost overruns
- Proven through real world experience
Typical MAC / MICC Savings Example

30% Savings Illustration

Traditional Approach

MAC / MICC Approach

- Training
- Commissioning & Start-up
- Installation Supervision
- Field Instrumentation
- Safety System
- Process Control System
- Detailed Engineering
- FEED Engineering
Courage to Invest & Make the Right Choices …

- While underlying economics and resulting orders remain very weak, Emerson continues to reposition global assets to achieve best cost structure.
- Emerson’s long-term strategies align with global megatrends:
  - Developing world - infrastructure, urbanization
  - Resource scarcity - energy capacity, renewable
  - Environment - energy efficiency, emissions
  - Connectivity - datacenter and information networks
Global trade has fallen sharply as the world’s economy has sunk into what Federal Reserve Chairman Ben Bernanke on Tuesday called “the deepest recession since World War II.” In fact, so far in this downturn the total volume of global trade has fallen at an even faster pace than it did during the Great Depression.

Source: Netherlands Bureau for Economic Policy and Analysis

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Emerson is Committed to Identifying and Meeting New Customer Needs

$728 million… Emerson’s investment in Engineering & Development during 2008

8,500… number of Engineering & Development personnel worldwide

38%… increase in new products as percent of Emerson sales between 1995 and 2008

655… new patents earned in 2008 by Emerson employees globally
Record New Product Sales of Nearly $9B in 2008

New Product And Technology Investments Continue To Pay Off

New Product Sales for Emerson

2008 $8.8B
2013F $12-14B

NP as % of Sales
1976 3%
1981 9%
1986 14%
1991 21%
1996 30%
2001 35%
2008 36%
2013 40%

2008 2013F
$Billions
Building Technology and Engineering Capacity in Best Cost Regions

Number of engineers

Best Cost
High Cost

2003: 5,000
- 30% Best Cost
- 70% High Cost

2004: 5,500
- 36% Best Cost
- 64% High Cost

2005: 6,000
- 41% Best Cost
- 59% High Cost

2006: 7,200
- 43% Best Cost
- 57% High Cost

2007: 7,700
- 47% Best Cost
- 53% High Cost

2008: 8,500
- 49% Best Cost
- 51% High Cost

Strong Investment for Emerging Market Sales Penetration
Conclusion
Courageous Leadership: Questions to Ponder

- Has your company’s behavior with contractors / suppliers changed since the crisis began?
- Do you value relationships, trust, and reliability more now?
- How are you investing for the recovery and the future?
- Are you exhibiting courageous leadership in your job and in your company? What does that look like?
- Do you really understand the market?
- Are your additional demands paired with more reward opportunity for your contractors / suppliers?
- Do you think the crisis has lowered the cost for everything?
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Questions & Answers