OPERATING SYSTEM 2.0

*Briefing for Industry Leaders*

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Project 13 (ICE UK)

• Not concerned with project scope
• Totally concerned with returns

• Entities:
  • Investor
  • Owner
  • Advisor
  • Integrator
  • Supplier

• Video
YouTube Video Link:

https://www.youtube.com/watch?v=wWNeEHB0Nso&feature=youtu.be
“Rethinking how capital programmes are delivered”

Operating System 2.0 from CII

86% of participants supportive or strongly supportive

45% unsure whether their organisations are well placed to take advantage

Commercial model was most critical aspect (56%)
The Changing Face of the Owner

• Tomorrow’s owner (asset developer / operator) may not look like today’s
  • Construction is not a core competency of most traditional owners
• Capital can come from many sources
• Is crowdsourcing an asset possible?
Flexible Approach to Capital Markets and Investment

- Financial markets prefer to spread risk by making many small loans
- Emerging, non-traditional investors (private equity, MLPs, pension funds)
- Can we do more commercial financing at more preferable rates?
- Can we better align market analyses and production projections for a new asset with its development and operation?
  - Build more facilities, each with less capacity and continually re-analyze those decisions in real-time?
Global Sourcing and Transfer Pricing

- Procure with real time knowledge of the ever-changing landscape of taxation & transaction costs in each jurisdiction globally
- Real-time analysis of where best to domicile revenues and expenses
- Sophisticated algorithms are needed to optimize the sourcing of goods and services from around the world
- Make tax laws work to our advantage
  - Owning assets creates tax advantages
Transition to a Leasing Economy

- $50M over 14 years instead of $500M today
- Avoids immense amounts of up front capital
- Many (hundreds, thousands) of small deals
  - Improved cash flow predictability
  - New credit facilities
Equity Participation in Asset Creation?

- Product & service provider participation in facility ownership
  - Products optimized for specific service durations
    - Higher quality products (not just about first cost)
    - New / different types of products
  - Purchasing decisions made based on best ROI or ROCE, not just initial price
• Lack of trust = protectionist schemes
  • Unfair allocation of risk is common
  • Can we engineer trust back into the system?
• Duplicative insurance (400% excess insurance is common)
• Entire cost centers may be unnecessary
Rewire the Contractual Framework

• Need to eliminate organizational layers
• Transactional costs too high today (40%) – *needs to be 1/10\textsuperscript{th} of this*
• Traditional Contracts = High Transactional Waste
• Can we eliminate RFP’s, PO’s?
• Can we have a common platform and implement only two contracts on a project?
  1. Investors (capital markets)
  2. All product and service providers on project
Supply Chain Rationalization

- Historical reasons for the industry’s current (massive) purchasing and distribution networks
- Modern economy enables factory-direct sourcing
- Need to rationalize supply chain against an objective function that looks at life cycle value contribution, not just initial cost
- Enabling technologies:
  - Logistics software, cognitive computing, Blockchain
Optimal, Real-Time Partner Selection

- Industry is fragmented and highly specialized
  - Many companies on any given project (1-to-$1M factor)
  - Suboptimal partner selection is frequent cause of failure
- Need to create the right “objective function” in selecting partners
- Selection based on maximizing ROI / ROCE
  - Availability, track record, product efficiency, location, initial price, reliability, etc.
  - New accounting methods to challenge life cycle asset classes (5, 7, 10 years)
- Leverage cognitive computing
Cloud-Enabled Thin Platform

• Pockets of innovation today, but most proprietary and sector-specific
  • Some PM solutions exist, but there is no *business platform* for the industry

• Use the project to improve business performance
  • Unleash data from being controlled by the “project team”
    • Dramatic ↑ in information flow and awareness
    • Vastly speed up the project
    • Better, faster decision-making
  • *PrairieDog Platform* is the Integrator

• Mine data to enhance business knowledge & profitability
Agile Planning and Design

• Today’s FEED process takes too long; often creates sub-optimal results
• Need to increase agility (simultaneous planning & design)
• Digital twin designs
• Design reuse
• Supplier-led designs
• Process simplification / intensification
Implement Modern Production Methods

• Building big is cool, but….
  …economies of scale and repetition win

• Multiple, smaller units
  • Eliminate need for shutdowns, turnarounds, outages

• Miniaturization (Modular Chemical Process Intensification (MCPI))

• Computer-aided, factory-based production

• Embrace new management science
  • PERT, CPM, etc. are from the 1950’s and ‘60’s
Workforce of the Future

• Regional workforce shortages are today’s reality
• Perception of “Difficult, Dirty, Dangerous”
• Need to create a new culture
  • Innovation, creativity, inventiveness
• Need to create workforce of the future
  • More “digital” skills
  • Attract, compensate, retain
• Manufacturing / fab shop environments
  • 1/6th workers at the job site
Call to Action!

• Work to maximize your value as a COAA member
• Become vocal leaders – don’t accept the status quo

• QUESTIONS?