

# **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

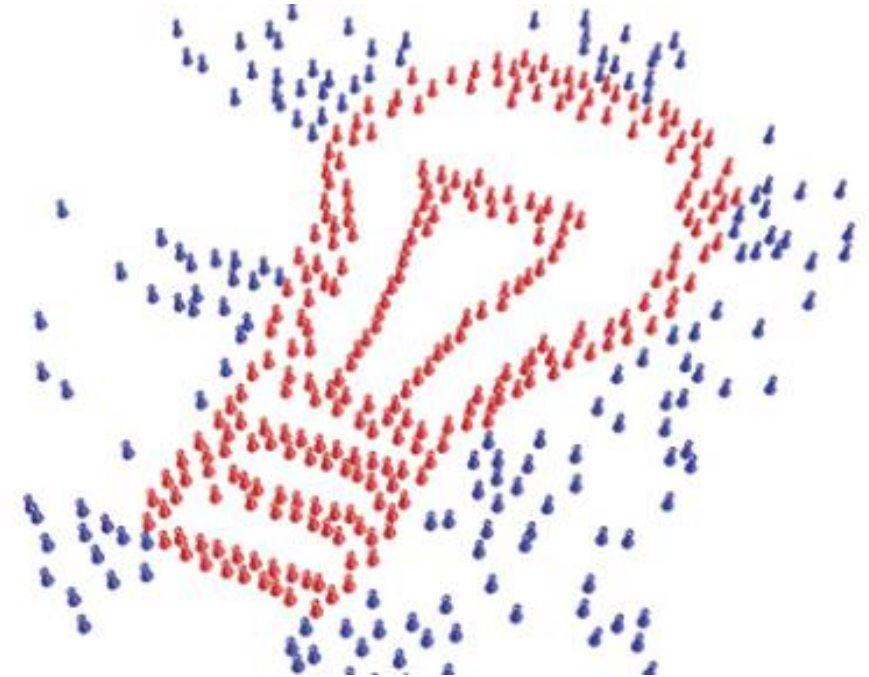
45% unsure whether their organisations are well placed to take advantage

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



# Risk, Insurance, Surety and Bonding



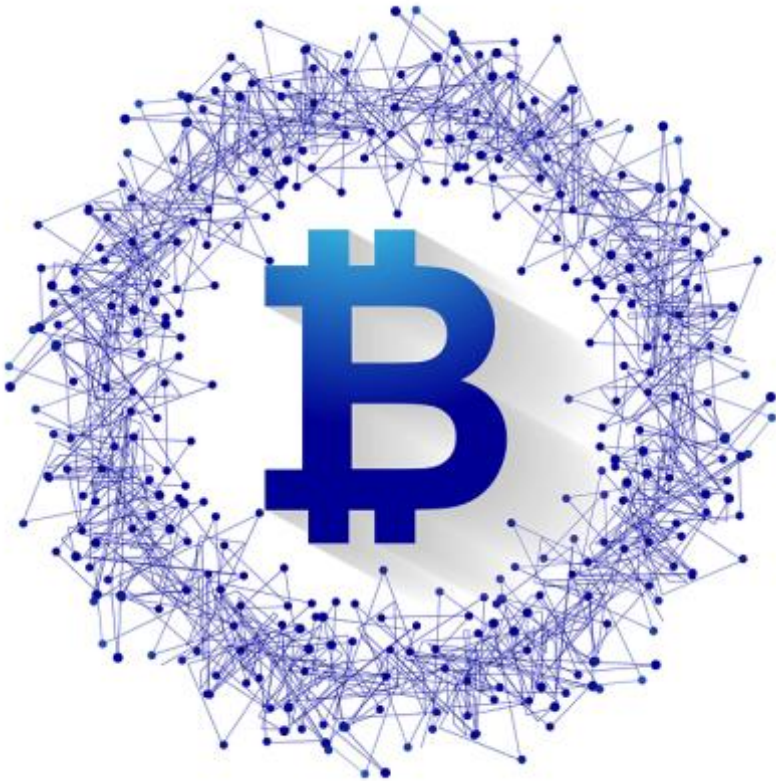
- Lack of trust = protectionist schemes
  - Unfair allocation of risk is common
  - Can we engineer trust back into the system?
- Duplicative insurance (400% excess insurance is common)
- Entire cost centers may be unnecessary

# Rewire the Contractual Framework

- Need to eliminate organizational layers
- Transactional costs too high today (40%) – *needs to be 1/10<sup>th</sup> 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



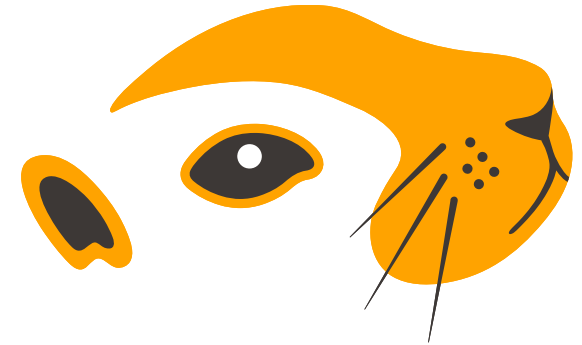
# Supply Chain Rationalization



- 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**



**PRAIRIEDOG**

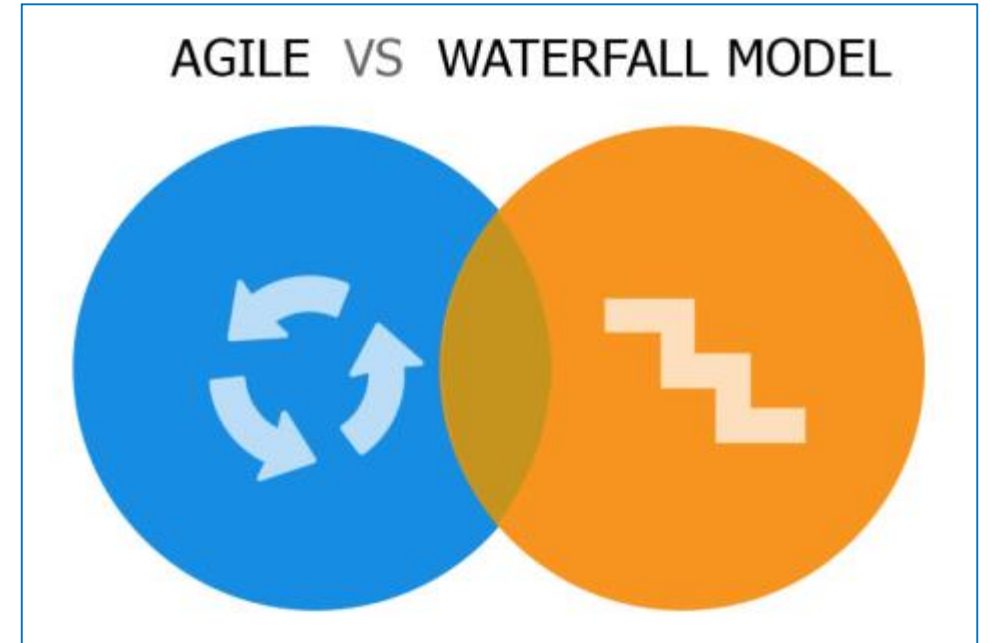
# Cloud-Enabled Thin Platform

- 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
  - 1/6<sup>th</sup> 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?**

