

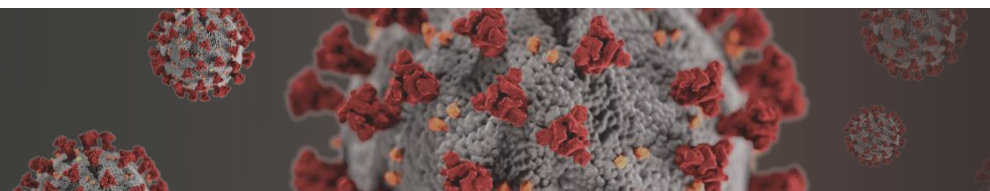


*Changing How  
the World Builds*

# WELCOME!


A few items to share while we wait to get started ...

**CII COVID-19 Web Seminar Series**



# Upcoming CII Research Team Presentations:

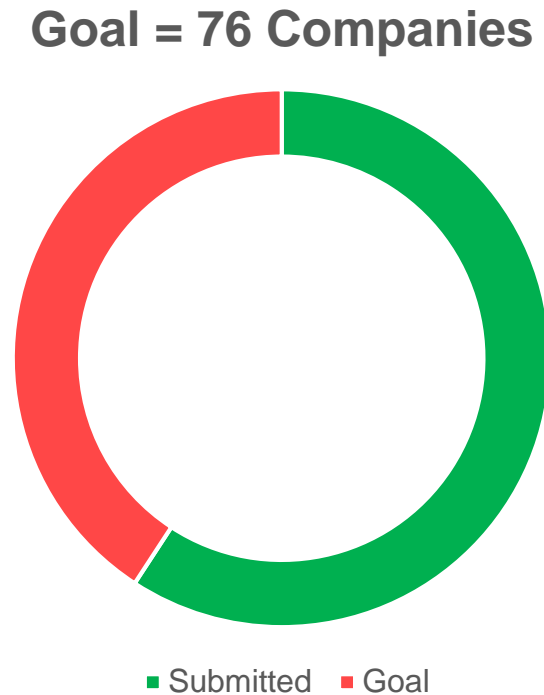
**Q: What happens to the CII Research Teams that were scheduled to present on stage this summer at the (cancelled) CII Annual Conference?**

- **All Research Teams** will have an “on demand” video in the  **Knowledge Base** *from CII*
- CII’s **Technology Committee’s** “Path for the Future” will be **ready next month!**
- **AWP Virtual Summit** (September 2020 – exact date TBD)
  - **Featuring FOUR CII Advanced Work Packaging (AWP) Research Teams**
- **Collaborative Scheduling** Research Team’s recording will be available by Fall 2020
- **PDRI for Mining** will be ready in October



# CII-CURT Safety Survey

- **45** of 101 CII Owners & Contractors have submitted data
- Goal is **76** (75%)
- Deadline extended to June 30
- Contact [zhe.yin@cii.utexas.edu](mailto:zhe.yin@cii.utexas.edu)



# Do you follow CII on Social Media?



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TWITTER

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Subscribe to CII's YouTube Channel!

<https://www.youtube.com/user/CIIProjectSuccess>

Get  
Engaged!



# Webinar Information

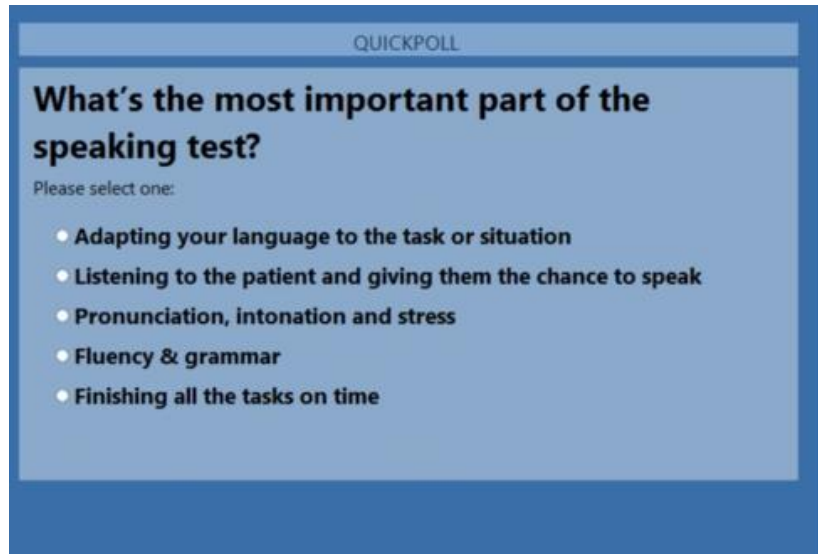
- Webinar will be recorded
- Recording and slides will be available at <http://www.construction-institute.org/blog>
- Ask questions via “Questions” box



# When Using the GoToMeeting Polling Feature:

If your poll “window” is maximized, you may experience difficulties responding to the questions.

However, if you **minimize your poll window**, you should be able to respond.



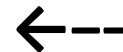
QUICKPOLL

**What's the most important part of the speaking test?**

Please select one:

- Adapting your language to the task or situation
- Listening to the patient and giving them the chance to speak
- Pronunciation, intonation and stress
- Fluency & grammar
- Finishing all the tasks on time

**Minimize this window**



# **Assuring Fairness and Profitability in the Next Normal**

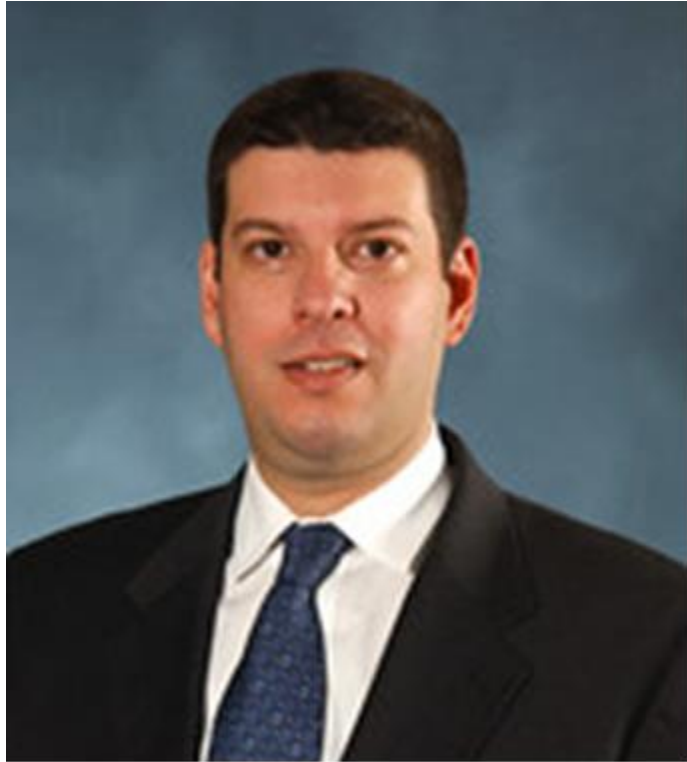
***An Information Session about the New OS2 Commercial Model and an Opportunity to Impact CII's Research Program***

CII Webinar | June 25, 2020

OPERATING  
SYSTEM 2.0

# Today's Presenters (OS2 IAP Co-Directors)

- ▶ Dr. Carlos Caldas
  - UT-Austin Professor (CAEE)



- ▶ Dr. Stephen Mulva
  - Director, CII



# Operating System 2.0 (OS2) Vision

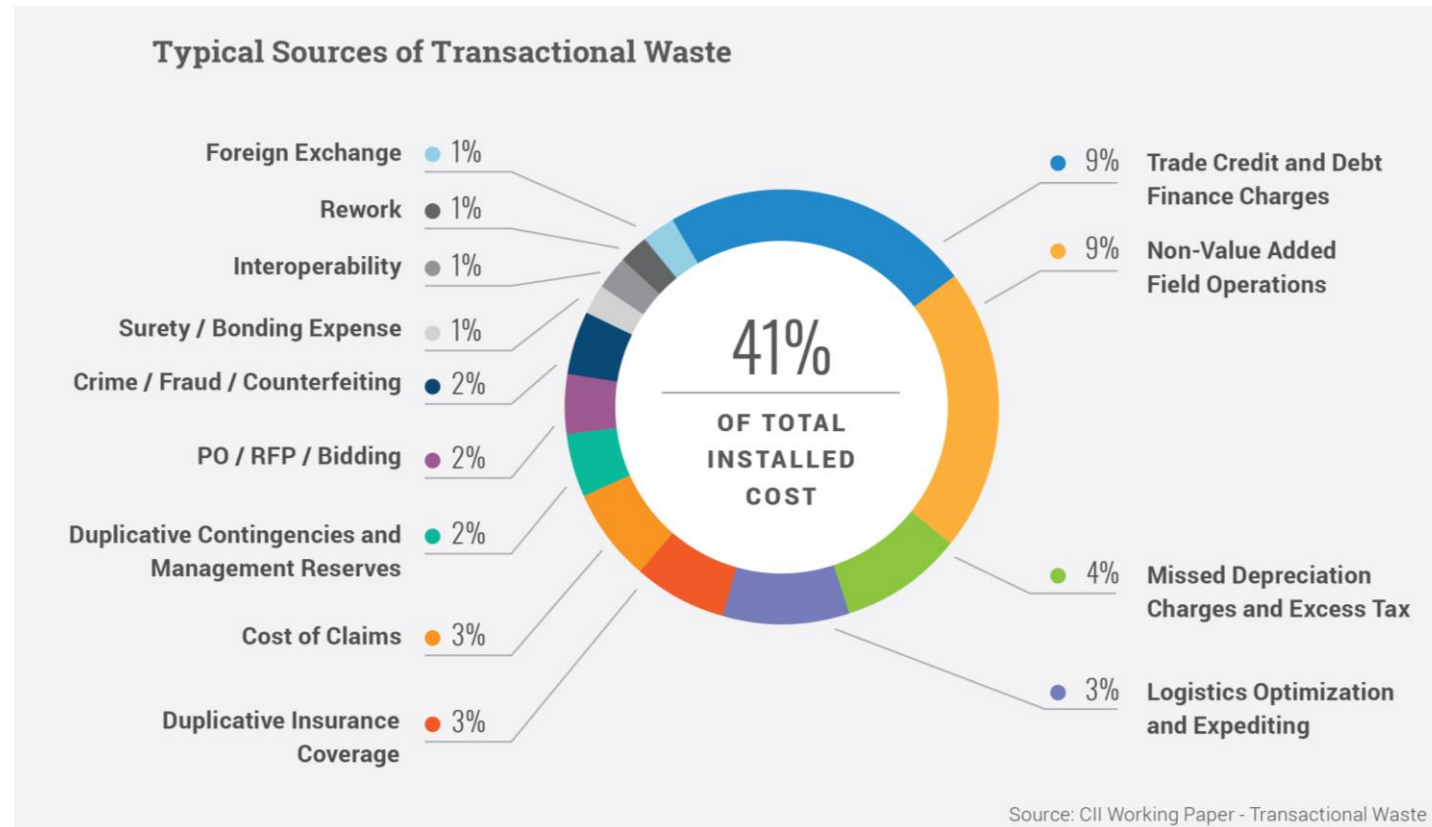
- ▶ As we adjust to and recover from the current global pandemic, preservation of the industry supply chain is critical. OS2 is seizing this opportunity to create a healthier industry.
- ▶ OS2 goal is to establish a new capital projects business model to:
  - Allow the execution of projects in a more collaborative way by using a community of like-minded companies that work together to ensure no one gets hurt, acting more as neighbors than as adversaries.
  - Deliver more predictable business results, with less risk, and more stable ROI.
  - Reduce transactional waste, manage risk with transparency and flexibility, and support a healthier business climate for all companies.

# Operating System 2.0 (OS2) Challenges

- ▶ Current business model is still characterized by a lack of trust, excessive friction in transactions, and burdensome financial waste.
- ▶ Risk is poorly managed and understood.
- ▶ Incentives promote adversarial participant behavior.
- ▶ Lack of an improved commercial model that activates its vast knowledge network to develop better solutions.
- ▶ If we don't act now, the capital projects supply chain may become damaged beyond repair.

# Operating System 2.0 (OS2) Benefits

- ▶ Slash significant transactional costs and their negative effects on schedule, predictability, productivity, and quality, to enable greater capital efficiency as well as increased profitability for supply chain members



# Operating System 2.0 (OS2) Approach

- ▶ Work with cutting edge researchers and experts to establish enhanced business models, improve supplier engagement, enable dynamic risk modeling and management, and better utilize technology for contracting and information sharing.
- ▶ Create a common digital platform to better assess and manage risk and engage partners collaboratively to get their best ideas up front.
- ▶ While this is a long-term effort requiring significant industry mobilization for ultimate success, we have developed a research plan that will begin showing results in the early 4th Quarter of 2020.

# Poll (Challenges in the Next Normal)

- ▶ What are the main challenges for the capital projects industry in the next normal?  
(check all that apply)
- A. Ability to deal with uncertainties and properly manage risks
- B. Low return on investment
- C. Reductions on capital budgets
- D. Preservation of the construction supply chain
- E. Lack of collaboration

# The OS2 IAP



# OS2 IAP Affiliates

**ExxonMobil**

**BHP**

**SUNCOR**



## OS2 IAP Research Focus

- ▶ Research on **shared success commercial models and practices** that can **streamline business transactions related to project delivery** with current focus on the following areas:
  - Organization Relationships and Behaviors
  - Partner Selection
  - Risk Management
  - Supply Chain Rationalization
  - Business Support for Practice and Technology Deployment

# OS2 IAP Current Research Topics

**Goal Congruency and Alignment**

**Supplier  
Engagement**

**Dynamic Risk  
Model**

**Blockchain  
for Smart  
Contracts and  
Risk  
Management**

# Goal Congruency and Alignment

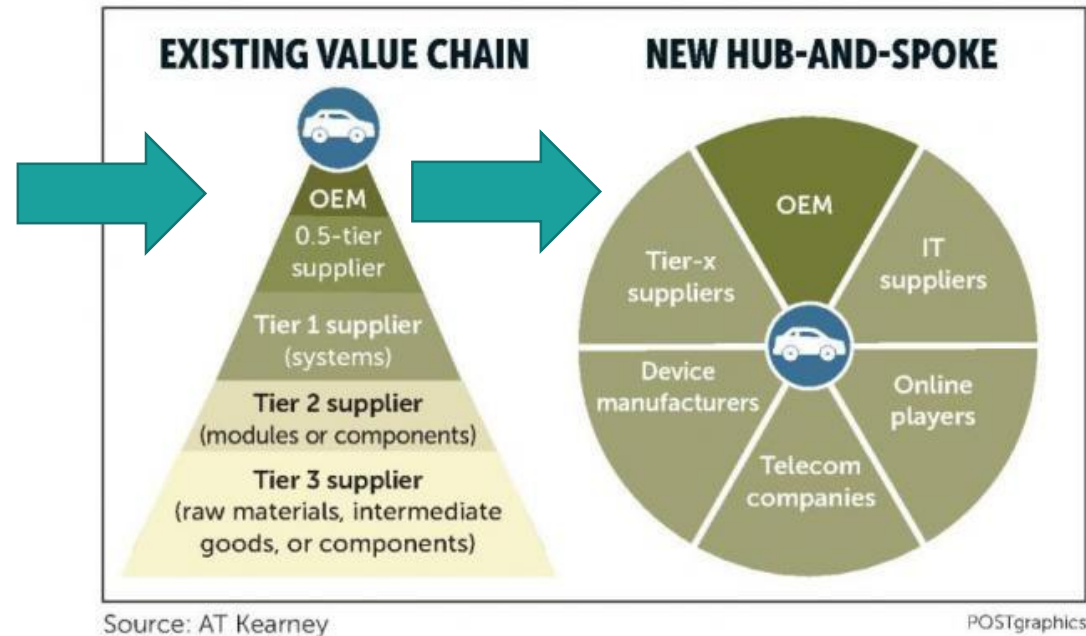
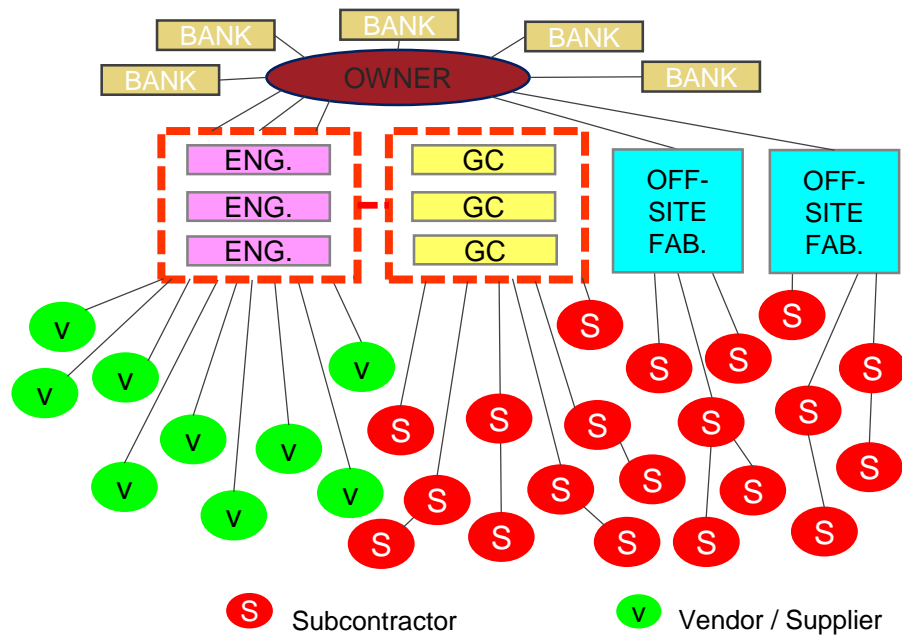
- ▶ Organizations typically interact with one another as “strangers,” requiring contracts to define their interactions and to shift risk, often disproportionately, onto the other party.
- ▶ However, companies that act as “neighbors” collaborate, working together to deliver the project’s business objectives and building a “neighborhood” that should outlive the project.



- ▶ This research will explore how we can create an effective “neighborhood” of collaborating owners and supply chain partners for capital projects.

# Supplier Engagement

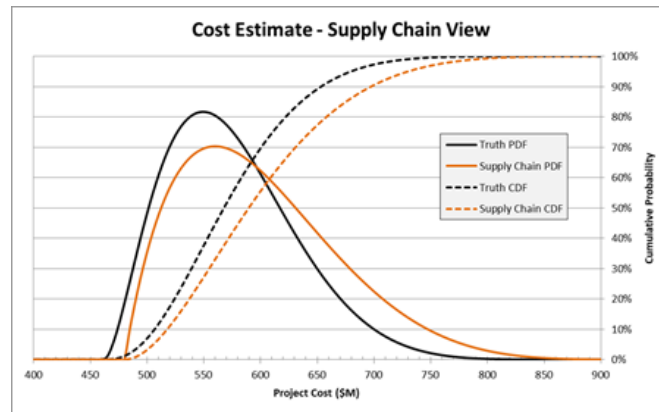
- ▶ Existing capital project supply chain engagement methods usually don't fully engage the expertise, knowledge, and innovation of service providers, contractors, and suppliers.
- ▶ Many times suppliers are engaged late since they are in the lower tiers of the supply chain. Other industries have invented more successful approaches to engage suppliers.



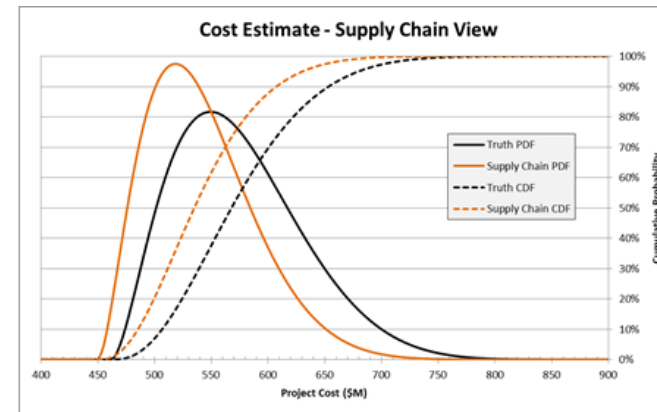
- ▶ This research will search for and apply leading practices that can improve the effectiveness of buyer-supplier relationships in capital projects.

# Dynamic Risk Model

- ▶ Risk occurs dynamically over the life cycle of a capital project and needs to be managed continually as conditions change throughout execution.
- ▶ Risk is impacted by the many project organizations whose perceptions of risk can differ widely.



*Supply Chain sees excess uncertainty, project overbid, investor economics distressed*

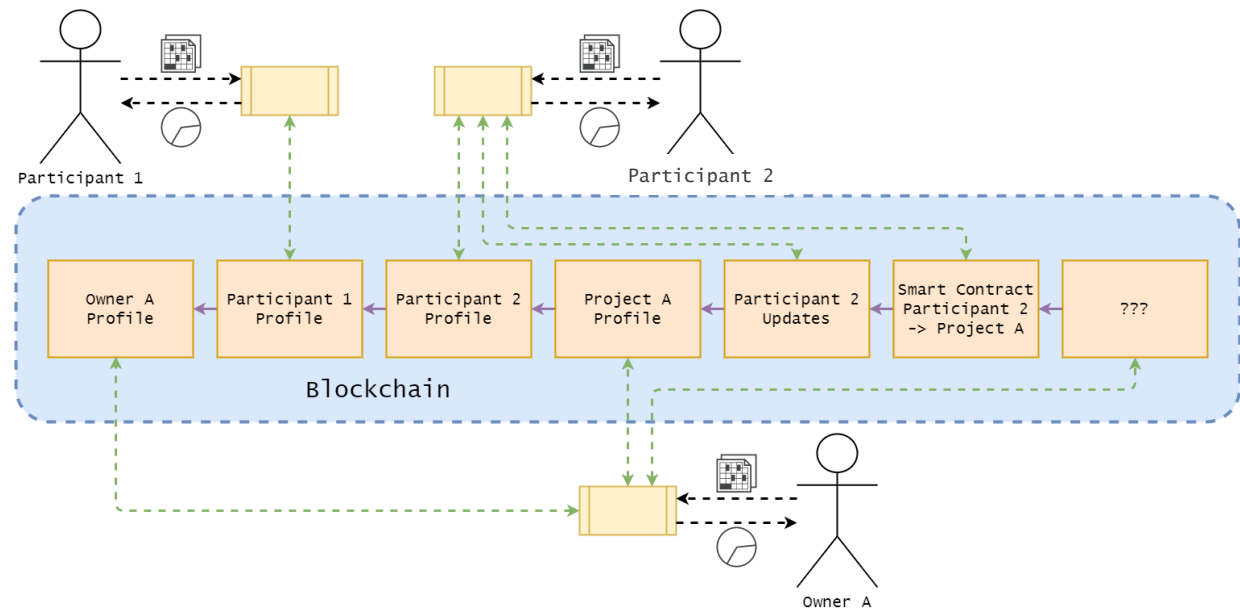
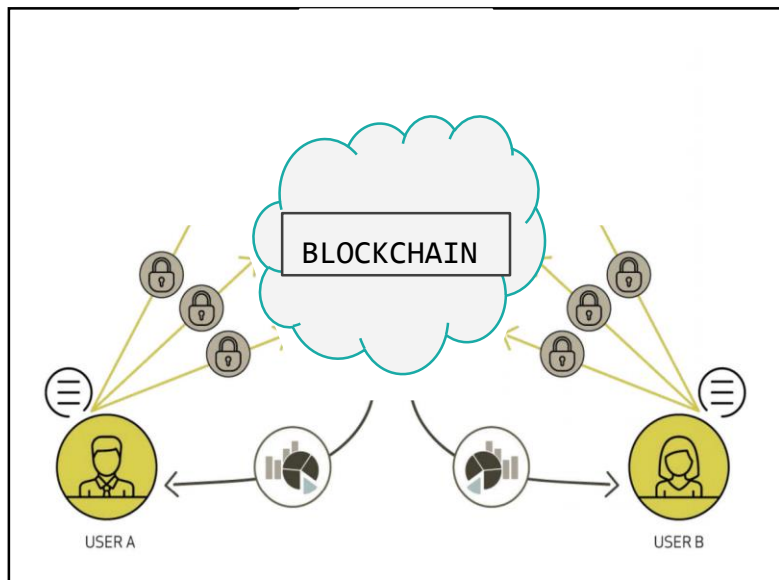


*Supply Chain misses uncertainty, project is underbid, contractor distressed, work suffers*

- ▶ This research will develop novel, collaborative, dynamic methods to identify, assess, and allocate significant capital risks at different levels: owner, project, contractor, and user.

# Blockchain for Smart Contracts and Risk Management

- ▶ Blockchain technology allows users to control access to information, are immutable and easily auditable, can automate functions, and can be connected to enterprise systems for real-time visibility of transparent data to all project participants.



- ▶ This research team will apply state-of-the-art thinking and technology to explore how this technology can facilitate trust, enhance security, speed up transactions, and improve the economic performance of capital projects.

## Poll (Research Interests)

- Which of the four OS2 research efforts are you interested in assisting?
1. Collaborative relationships amongst companies in a “digital” neighborhood
  2. Earlier supplier engagement to drive innovation and responsiveness
  3. Dynamically and appropriately allocating significant capital risks
  4. Capital efficiency gains from implementation of blockchain / smart contracts

# Pilot Projects

- ▶ Goal 1: Study the benefits of new business models by **analyzing their potential impact on completed projects.**
- ▶ Key considerations:
  - Working relationships
  - Engagement of suppliers and vendors
  - Risk management
  - Use of technology to streamline business transactions
- ▶ Goal 2: Deploy OS2 research findings by executing a smaller capital project with a cohort of 8-12 firms coordinating within a “digital” neighborhood



# Path Forward

- ▶ Advance a **new commercial model** and systems to assure **fairness and profitability** for all capital project stakeholders in the next normal
- ▶ An atypical approach:
  - Non-traditional researchers (business, psychology, and engineering)
  - Long-term “neighborhood” perspective beyond single projects
  - Tackling the largest sources of “transactional” waste
  - Starting with a focus on risk and technology (multiparty computing)
- ▶ **Please join CII on this landmark effort by agreeing to be interviewed by the University of Texas researchers** – participants will receive results

# Poll (Research Participation)

- Please indicate the extent to which you are willing to assist the OS2 research effort (check all that apply):
- A. I am willing to interviewed (~45 minutes) by one of the research teams in my indicated area of interest
  - B. I am willing to make introductions for the researchers with some of my key suppliers or customers in order to improve commercial relationships in the industry
  - C. I am interested in helping with the OS2 pilot projects (examination of past projects or the planning, design and execution of a new, small project using OS2 principles)
  - D. While I can't directly participate in the research at this time, I'm interested in learning more about OS2
  - E. Other – please contact me

# Research Team Information Sessions

## ► Blockchain for Smart Contracts and Risk Management

- Date: June 30, 2020 at 3 pm Central Time
- Meeting Information:  
<https://utexas.zoom.us/j/91501064030?pwd=Ujl5empJeDREb25HR3J0VUFpNi80QT09>
- Meeting ID: 915 0106 4030  
Password: 729932

## ► Supplier Engagement

- Date: July 9, 2020 at 2 pm Central Time
- Meeting Information: will be provided later

# Thank you!