Welcome! - How to Participate Online

• Use computer audio (versus telephone).
• All participants are muted upon entry. Please do not unmute yourself.
• Please do not turn on your camera unless you are speaking.
• Hover your cursor over the WebEx window to access the menu pictured below.
• To ask a question, type it into the Chat function on the bottom right.

• Raise your hand to request to be un-muted when we pause for questions and comments:
  • Open the Participants panel & click the hand icon next to your name
The AEC Supply Chain as a Strategic Partnership
Opening Remarks

William Raisch
Dr. Michael Horodniceanu, PE
Co-Directors, Project NEXT™
Applied Research

Practice-orientated research in Construction Engineering, Construction Management, and the Built Environment

For our NYU Tandon CE/CM Students – How to Build Highly Successful Projects
Project NEXT™: Adapt, re-imagine & innovate

Mission: To bring key stakeholders together to best adapt and re-imagine operations and operating environment for organizations in response to the current and emerging threats including infectious disease – while also innovating for the better.

1. Identify & Analyze Key Challenges
2. Evaluate Potential Solutions / Enhance / Innovate
3. Share Insights Widely
Serving as a Global Resource & Innovation Hub

Connecting Key Stakeholders to Collaborate on Shared Challenges
Collaborating with Leading Associations to Engage & Support Key Sectors

Key Associations

- Expert Briefings with Q&A
- Benchmarking
- Global Resource Hub
- Solutions Sourcing
- Key Articles / Media
- Exchange Forums on Practices
- Surveys of Needs / Practices
- Latest Public Health Guidance
- Latest Research

Join us:  JLC27@nyu.edu or INTERCEP@nyu.edu
Guest Panelists

Frank DarConte
Dir. of Applied Research
IDC Innovation Hub
NYU Tandon
School of Engineering

Joe Hogan
Vice President of Building Services, Associated General Contractors of New York State (AGCNYS)
Director of Construction Services for AGC Safety & Construction Services

Sadia Janjua
Chief of Program & Project Controls and Virtual Design & Construction
Port Authority of New York and New Jersey

Brendan Leary
Partner
McChrystal Group

Francisco Pineda
Program Director
M.S. in Construction Administration
Columbia University
Fellow, Royal Institution of Chartered Surveyors
The Supply Chain as a Strategic Partnership
Today’s Program

• Introductions

• A Brief Overview
  o IDC Innovation Hub
  o Project Next
  o Applied Research at NYU Tandon

• Defining the Supply Chain in the AEC Industry
  o Construction Supply Chains – An Introduction
  o Complex Systems
  o Supply Chain Implications

• Leadership and Teaming
  o Team of Teams Methodology
  o Case Study
Today’s Program

• Digital Transformation
  o Digital Transformation
  o Engineering Digital Strategy
  o Practical Implementation

• Rapid Alignment Initiated Delivery
  o Modeling an Optimal Project Delivery Environment
  o Setting Up the Project Delivery Team for Success

• Partnering Facilitation - Onboarding the Team
  o Partnering Facilitation - Alignment Principles
  o Alignment Assessments – An Evidence-Based Approach for Team Integration
“in no other industry in the world is the responsibility for design so far removed of the responsibility from production”

60 years later – still struggling with the same delivery issues
Francisco Pineda

Defining the Supply Chain in the AEC Industry
INDUSTRY IS CRUCIAL

**SOCIETAL RELEVANCE + IMPACT**

Construction is a determinant of where and how almost everyone lives, works and plays.

**ECONOMIC RELEVANCE + IMPACT**

A "horizontal" industry, serving all industry verticals; i.e., construction has considerable interaction.

**ENVIRONMENTAL RELEVANCE + IMPACT**

The construction industry is the single largest global consumer of resources and raw materials.

SMALL IMPROVEMENTS IN PERFORMANCE WILL HAVE STRONG EFFECTS IN ALL DOMAINS

- A mere 1% reduction in construction costs would save society about $100 billion annually.
- The global shortfall in infrastructure capacity is expected to reach $15-20 trillion by 2030.
- Harnessing the capacity of the building sector, many countries can achieve energy savings cost-effectively.
ROOT ISSUES >>>

> lack of innovation and delayed adoption

> little cross-functional cooperation

> limited collaboration with suppliers

> insufficient knowledge transfer from project to project

> quality project monitoring is difficult

> informal processes or insufficient rigor and consistency in process execution

> shortage of young talent and people development
THESE ISSUES INVITE DISCUSSION ABOUT…
THE IMPORTANCE OF PARTNERSHIP IN CONSTRUCTION SUPPLY CHAINS

Supply Chain has been defined as...

“the network of organizations that are involved, through upstream and downstream linkages, in the deferent processes and activities that produce value in the form of products and services in the hands of the ultimate customer”

1. LAGGING PRODUCTIVITY DEVELOPMENT
2. INCREASED ECONOMIC WEIGHT OF THE SUPPLY CHAIN
3. HIGHER SC INTERDEPENCE OVER LONGER AND WIDER GEOGRAPHY

The Supply Chain Management (SCM) views...

the entire supply chain rather than just the next part or level, and aims to increase transparency and alignment of the supply chain’s co-ordination and configuration, regardless of functional or corporate boundaries

Source: Adapted from Vrijhoef and Kaskeloo (2000), Christopher (1992), and (Cooper and Ellrm (1993)}
A sociogram showing the general communication network between roster members from a large capital project in the UK.

Source: Li, et al. (2019)

Source: Adapted from Pryke (2009)
CONSTRUCTION SUPPLY AND LOGISTICS...

PROCESS FLOW MAP

Source: Adapted from Pryke (2009); Van Weele (2010)
SYSTEMS MODELS ARE APPROPRIATE...
THE EDGE OF CHAOS!
# CHARACTERISTICS OF COMPLEX SYSTEMS

1. **MANY ELEMENTS**...  
   Complex systems consist of a large number of elements that in themselves can be simple.

2. **DYNAMIC INTERACTIONS**...  
   Elements interact dynamically by exchanging energy or information. These interactions are rich. Even if specific elements only interact with a few others, the effects of these interactions are propagated throughout the system. The interactions are nonlinear.

3. **DIRECT + INDIRECT FEEDBACK**...  
   There are many direct and indirect feedback loops.

4. **MEMORY**...  
   Complex systems have memory, not located at a specific place, but distributed throughout the system. Any complex system thus has a history, and the history is of cardinal importance to the behavior of the system.

5. **OPEN SYSTEMS**...  
   Complex systems are open systems — they exchange energy or information with their environment — and operate at conditions far from equilibrium.

6. **EMERGENT BEHAVIOR**...  
   The behavior of the system is determined by the nature of the interactions, not by what is contained within the components. Since the interactions are rich, dynamic, fed back, and, above all, nonlinear, the behavior of the system as a whole cannot be predicted from an inspection of its components. The notion of “emergence” is used to describe this aspect. The presence of emergent properties does not provide an argument against causality, only against deterministic forms of prediction.

7. **ADAPTIVE**...  
   Complex systems are adaptive. They can (re)organize their internal structure without the intervention of an external agent.
improving the interface between site activities and the supply chain
focus may be on the impacts of the supply chain on site activities, goal is to reduce costs and duration of site activities

improving the supply chain:
focus may be on the SC itself, with the goal of reducing costs, esp. those relating to logistics, lead-time and inventory

transferring activities from the site to the supply chain
focus on transferring activities from the site to earlier stages of the supply chain simply be to avoid inferior site conditions

integration of site and supply chain
focus may be on the integrated management and improvement of the supply chain and the site production. Thus, site production is subsumed into SCM

Source: Adapted from Vrijhoef and Kaskela (2000).
CURES FOR POOR PROJECT PERFORMANCE

**THEME 1: Team Culture and Behavior**
Theme 1 refers to how behaviors in the front-end and during project execution are associated with poor performance in decision making. This theme rejects technical explanations as the main reason for poor performance as a result of psychological and behavioral reasons and how those affect decision making.

**THEME 2: Leadership and Capable Teams**
Theme 2 refers to relationships among project team members, individual competencies, required skills, and organizational capabilities that contribute to the performance of projects.

**THEME 3: Stakeholder Engagement and Management**
The third theme is about engaging and managing stakeholders. This part of the literature addresses various factors considered to be outside of the project environment.

**THEME 4: Supply Chain Integration and Coordination**
This part of the literature is associated with the mechanisms used by different types of organizations (clients, delivery partners, main contractors, and Tier 2 suppliers) to coordinate and integrate a large network of suppliers.
goals in a system are contingent and negotiated

take stock of the organization, the structure, the systems, and the network geography...
...and then consider assessing the dynamics through the following lenses...
C/SUPPLY CHAIN IMPLICATIONS

1. CONSTRUCTION THROUGH A SUPPLY CHAIN MANAGEMENT LENS
2. CULTURE AND PARTNERSHIPS IN CONSTRUCTION SUPPLY CHAINS
3. EXAMINATION OF NETWORKS AND POTENTIAL PARTNERSHIPS
4. MAJOR BARRIER TO CREATING SUPPLY CHAIN VALUE
5. ACHIEVEMENT OF A HIGH-PERFORMANCE ORGANIZATIONS

Source: Sonja Blignaut. "Seven Implications of Seeing Organisations as Complex Systems"
SYSTEMS / LEADERSHIP

To see & act from the whole
People who are aware of the whole context and take actions that are aligned with it

Create conditions for emergence
Leaders empower others, they work with context to create the conditions for emergence

Integrate diversity
People who are working to unite across boundaries rather than divide

Change Systems
People who see the need to change whole systems rather than just any of the parts

SYSTEMS CHANGE / THE TWO SIDES

Outside the Box
Different thinking
Unleashing Potential

From
From centralized Linear pattern

To
To nonlinear Networked pattern

Inside the box
New tools
Fixing Problems

From
Fixed longterm planning

To
Systems Mapping & Leverage points
CSCM: **GO-FORWARD IDEAS**

1. Enterprise and Project Supply Chain Management
2. Client-Driven Supply Chain Management in Construction
3. Focus on the Structure Not the Technology
4. SCM Metrics and Indicators
5. Design of SC Architecture with Focus on Collaboration over Time
6. Use of Data and Analytics to Go Beyond Tier 1
7. Explore, Translate, and Adapt SCM Practices from Other Project-Based Sectors

Source: Denicol (2020)
Brendan Leary

Leadership and Teaming
Team of Teams Methodology

McChrystal Group
Behavior + Process = Team of Teams

INDEPENDENCE

STABILITY

Self-Awareness

Applied Curiosity

AGILITY

Process

Tolerance of Tension

Common Purpose

Trust

INTERDEPENDECE

INTERDEPENDECE

Empowered Execution

Shared Consciousness
October 2003
1 raid per week
4 raids per month

August 2004
1 raid every other night
18 raids per month

August 2006
10 raids every night
300 raids per month
Connecting a Global Investment Firm

THE SITUATION

McChrystal Group partnered with a globalizing, best-in-class, real estate investment bank to scale their primary competitive advantage: a highly-connected senior team capable of blending expertise and capability to provide strategic advisory to clients.

• Organizational learning and collaboration were siloed by geography and asset class, preventing mid-level professionals from leveraging a strategic market view to innovate and create differentiated solutions for their local clients
• Cultural perception that information sharing was secondary to execution for all but the most senior professionals, limiting their ability to scale the quality of service across a wider client base and risking loss of growth opportunities
• Low trust in the performance management system was limiting the firm’s ability to maintain sustained high-performance in its junior and mid-level

THE SOLUTION

• Connect more than 300 deal professionals on a regular cadence with a focused and inclusive intelligence forum to enable them to jointly identify, interpret, and respond to emerging market trends and opportunities
• Create a liaison network to develop and connect professionals who are networked within their own specialty and region. The liaisons are arteries pushing opportunities and best practices across the organization.
• Overhaul performance management to support efforts transforming the organization into an intelligence-driven and networked firm.
Connecting a Global Investment Firm

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McChrystal Group partnered with a globalizing, best-in-class, real estate investment bank to scale their primary competitive advantage: a highly-connected senior team capable of blending expertise and capability to provide strategic advisory to clients.

RESULTS

• 10x increase in professionals who are considered “strategic advisors” by their clients

• Increased situational awareness, enabling them to execute faster and more effectively and to provide increased value to their clients

McChrystal Group has provided us with a pathway toward our objective of creating a sustainable and empowered organization. They care a great deal about our success; it’s been and continues to be a terrific partnership”.

- Managing Director
Sadia Janjua

The PANYNJ
Contents

1. Digital Transformation
2. Engineering Digital Strategy
3. Practical Implementation
Digitizing Delivery
The Blockers…

20% Structured Data

30% Compliant Data
The Blockers…

Projects are typically **20 percent longer** than scheduled and up to **80 percent over budget**. Productivity in construction lags other industries and is amplified by a lack of investment in modern, and digital, technologies.

*Low digitization and high fragmentation.*

Construction labor productivity has not kept pace with overall economic productivity.

![Graph showing labor productivity](image)

**Labor productivity, gross value added per hour worked, constant prices,**¹

Index: 100 = 1995

¹Based on 2010 prices.

*Source: Organisation for Economic Co-operation and Development*

*Source: McKinsey*
Collaborative Delivery Strategies

Action Points for the Industry

01. Transparency and Risk Sharing in Contracts
Agile Project Management

Requirements → Design → Develop → Test → Deploy

Requirements
Design
Develop
Test
Deploy

Requirements
Design
Develop
Test
Deploy

Requirements
Design
Develop
Test
Deploy

Requirements
Design
Develop
Test
Deploy

Requirements
Design
Develop
Test
Deploy

Requirements
Design
Develop
Test
Deploy
More Robust Governance
Digital Transformation

“Automation applied to an inefficient operation will magnify the inefficiency.”

Bill Gates
Digital Transformation

People

01. Organization
02. Roles and Responsibility
03. Capability

Business strategy comes before investment in technology

Change Readiness and Management

Technology

04. Governance
05. Service Design
06. Operating Procedures

Recognize that technologies provide the possibilities!

Design customer experience from the outside in

People need to envision the future, to drive the technology, not be driven by it.
Engineering Digitalization

To optimize project delivery.

1. Digitize and automate project delivery with world class procedures and 21st century technology.
2. De-risk project delivery through controls, governance, and enhanced reporting.
3. Improve our customer’s experience.
4. Identify areas for improvement and implement sustained enhancements in performance.

O - Objective

S - Strategy

T - Tactics

1. Develop and implement a blueprint for digitalization, control, and governance:
   1. Service delivery
   2. Capability and scalability
   3. Procedures
   4. Technology
   5. Data
2. Establish an appreciation of the value of our data by:
   1. Buying the right data (requirements management and specification)
   2. Making sure it’s submitted (information management)
   3. Making sure it’s right (data assurance)
   4. Consistent analysis and reporting.
3. Identify, assess, measure, and improve capability:
   1. Design
   2. Controls
   3. Environment and sustainability
   4. Construction management
   5. Asset management
4. Support our customers with a formal change management process:
   1. Identify and define the rationale for change
   2. Prepare each discipline for change with options appraisals, engagement, and feedback
   3. Implement and support change with the future state deployment.
Blueprint

Capabilities

- Schedule, Risk and Cost Management
- Construction Management
- Quality Management
- Environmental and Sustainability
- Enterprise Asset Management

Blueprint

- Service Design
- Capability
- Procedures
- Technology
- Data

Design
Transformative Change

**START**

- **Develop Plan**
  Review and validate processes, recommend additions and plan.

- **Document Current State**
  Document processes, technology, data and capability.

**Functional Design**
Validate and prioritize enhancements.

**Develop Future State**
Refine future state plan, operating model, RACI, procedures and technology.

**Implementation Plan**
Develop implementation schedule and roll out new processes ensuring continuity of service.

**Organization Design Reevaluation**
Support workload demand and continuously refine resource skillsets and capabilities.

**FINISH**
Our Objective and Digital Toolkit

To complete projects on time and to budget.

Claims
Delays
Change Orders / Scope Creep
Bidding Errors
Constructability
Take Away and Next Steps

1. Digital is **not** technology & does not come ‘in a box’

2. We have a digital transformation strategy

3. We are delivering real world outcomes on our projects.
Frank DarConte

Rapid Alignment
Initiated Delivery
Rapid Alignment Initiated Delivery™
Designing Performance into Construction Project Delivery
Introducing

A “Neutral” Project Team Alignment Facilitation Process

To Develop an Optimal Project Delivery Environment & Build High-Performance Teams

Onboarding the “A” Team
Carrying Out a Capital Project

Starts with an idea

• Projects are typically complex, one-off events
• Diverse community of stakeholders
• Project Delivery Team comes together as a temporary organization
• Traditional focus on Planning, Budgets, Schedule, and Scope
• What about the inner dynamics of the team and the project delivery environment – issues of sensemaking, social interaction, power relations?
• Nature of individuals working on projects
Considerations for Project Execution Before the Shovel Hits the Ground

- Onboarding and Integration of the Team – Up and Down the Supply Chain – Siloed to Seamless
- Selection of the PDM - ADMs
- Issues of Culture – Creating the Optimal Conditions for Project Success
- Alignment of Organizational and Project Interest
- Construction Readiness
- Team Alignment Assessment – How do we Engage?
Systems Approach to Aligning the Project Delivery Team

- Project Success is dependent on how the primary and secondary stakeholders work with one another – project owner, design consultants, contractors, trade contractors, and suppliers.

- Resource Dependencies.

- Treat the Project Delivery Environment as a system of desired behaviors and conditions interdependent of one another.
State University Construction Fund (SUCF)

United States Tennis Association
Billie Jean King National Tennis Center (USTA-NTC)
United States Tennis Association

- Billie Jean King National Tennis Center (USTA-NTC)
- Governing body of tennis in the USA
- Demanding private sector owner – high performance expectations
- Premier Annual Event: The U.S. Open, Flushing Meadows, N.Y.
- Strong in-house capital projects and engineering management
Highly Complex Building Program

New Tournament Courts with Grandstand and Viewing Gallery
New Practice Courts and Viewing Gallery Grandstand
New Players Transportation Hub
Broadcast Booth Facility

A Mission Critical, Cannot Fail (MCCF) Project
Completion Required for 2014 U.S. Open
Required every Tournament Court in play for the First Round

Construction Start Date: March 31, 2014
Tournament Commencement Date: August 25, 2014
Our research has crystallized two ideas for consideration:

- The first, with highly successful, mission-critical cannot fail projects (MCCF) a shared vision for project execution exists that inspires delivery team members to work with one another for a common goal,

- Second, an ideal set of project delivery conditions exists that permits the team to function as a high-performance team.
Best Practices Attributing to Project Success

• Early engagement of the project delivery team members – CMR; ability to “fast-track” the project – USTA – experienced facility management

• Best value selection of all team members – equitable contract agreements

• Previous working relationships with the USTA - amongst many of the project stakeholders – vendors required institutional knowledge

• Transparent and open communication between the CM and trades – trust in relationships

• An early focus on high-risk tasks/events with a mitigation strategy to quickly remove obstacles whether real or perceived for the construction partners.
Best Practices Attributing to Project Success

• **Incentivizing** the process with the likelihood of a continuing relationship with project team members and future work with the USTA-NTC
• Bi-weekly requisition periods – prompt payment
• **Fair** valuations of change order work – full transparency
• Sustained visible **leadership** especially from the project owner and CM
• Stakeholders held a sense of **urgency**; clearly understood the project goals and objectives
• Design management and scope control were a team priority
E Pluribus Unum
Out of Many, One

Operating as a seamless project delivery team

Professor Griffis
USTA – NTC West Campus Case Study
Critical Stakeholder Alignment factors

- Agility and Flexibility
- Organization Culture
- Ethics
- Transparency
- Mutual Trust
- Influence
- Clear Project Goals and Objectives
- Achievability
- Leadership
- Capabilities

- Competencies and Experience Levels
- Resources
- Team Integration and Collaboration
- Relationships
- Engagement
- Accountability
- Responsibility
- Risk Allocation
- Financial Objectives
Research Initiative - State University Construction Fund (SUCF)

- 7-year partnership with SUCF exploring critical factors connected to project success and team culture.
- SUCF was willing to look under the hood.
- Investigation resulted in the identification of an optimal set of project delivery conditions and modeling of six elements that are correlated with highly successful project outcomes.
- Currently conducting Team Alignment Assessments for the $120M-SUNY Albany-ETEC academic facility.
SUCF - Providing a Public Owner’s Perspective – Project Data

- 180 Projects evaluated for Cost Growth
  - 20 Best Performing (HS)
  - 20 Worst Performing Identified (SC)

Identified the Senior PMs to Participate in a Blind Survey of the Projects

Concurrent AEC Industry-Wide Investigation – 65 Firms
Descriptive statistical analysis was performed on the SUCF and AEC Industry-Wide SAS datasets

- to identify all essential information about individual stakeholder perception of key issues
- Describe, show, or summarize data: identify emerging patterns
- Measures of central tendency and measures of spread
- Side by side SUCF and AEC I-W comparison of data to evaluate differing perspectives
**Meeting predetermined cost performance goals**

<table>
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<tr>
<th>Survey Group</th>
<th>Low-High Response</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
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<td>2 – 5</td>
<td>3.94</td>
<td>0.66</td>
</tr>
<tr>
<td>SUCF SC</td>
<td>1 – 3</td>
<td>2.27</td>
<td>0.80</td>
</tr>
<tr>
<td>AEC I-W HS</td>
<td>2 - 5</td>
<td>4.19</td>
<td>0.81</td>
</tr>
<tr>
<td>AEC I-W SC</td>
<td>1 – 4</td>
<td>2.27</td>
<td>1.10</td>
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Effective level of **trust** established amongst team members

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<th>Std. Deviation</th>
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<td>2 – 5</td>
<td>3.00</td>
<td>1.00</td>
</tr>
<tr>
<td>AEC I-W HS</td>
<td>2 – 5</td>
<td>4.25</td>
<td>0.85</td>
</tr>
<tr>
<td>AEC I-W SC</td>
<td>1 – 4</td>
<td>2.64</td>
<td>1.21</td>
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</table>
An atmosphere of *cooperation and collaboration* was established to meet project objectives

<table>
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<td>SUCF HS</td>
<td>2 – 5</td>
<td>4.18</td>
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<tr>
<td>SUCF SC</td>
<td>2 – 5</td>
<td>3.40</td>
<td>0.83</td>
</tr>
<tr>
<td>AEC I-W HS</td>
<td>2 - 5</td>
<td>4.35</td>
<td>0.81</td>
</tr>
<tr>
<td>AEC I-W SC</td>
<td>1 – 4</td>
<td>2.82</td>
<td>0.87</td>
</tr>
</tbody>
</table>
SUCF and AEC I-W Findings

Respondents always felt their performance was satisfactory while other team members were falling short.

“all about individual perspective”
• ETHICAL BEHAVIOR
Characterized by honesty, fairness and equity in relationships. Team leadership puts forth attributes such as transparency, accountability and fairness that subordinates are likely to replicate.

• EQUITABLE RISK ALLOCATION
Reasoned risk allocation, prompt payment and change management practices all supported by ethical behavior.

• CLEARLY DEFINED OBJECTIVES AND GOALS
Statements that define what the team is going to accomplish or the business value the project will achieve. Goal setting involves the team’s conscious process of establishing high levels of performance and a shared vision for achievability to obtain desired performance outcomes.

• SUSTAINED VISIBLE LEADERSHIP
The visible leader sets a clear vision for the project, creates a tone for engagement, actively discusses the path to accomplish goals and objectives. Sustained visible leadership requires ethical leaders.

• RELATIONSHIPS AND INTEGRATED TEAMS
Primary stakeholders working together in the best interest of the project. The arrangement supports an interdependent, team based approach to the work. (Project First Thinking)

• DEMONSTRATED COMPETENCIES AND CAPABILITIES
Demonstrated competencies and capabilities lead to excellence in project team performance. Appropriate experience and capabilities to complete projects similar in scope, scale and complexity.
Joe Hogan

Partnering Facilitation

Onboarding the Team
SUNY Albany - ETEC
Integrating the Delivery Team through Partnering
The Primary Stakeholders

- SUNY Albany
- Turner Construction
- Cannon Design
- State University Construction Fund
- Consigli Construction

Internal Stakeholders

- Project Owner
- Primary Constructor
- Major Trades and Material Vendors
- Design Consultants
Leading the Team to Project Success

• A Vision for Team Engagement
• Aligning the Team
• Creating a Culture of One
The Supply Chain is traditionally siloed and fragmented.

How do we effectively onboard and align the team members?

Alignment means ensuring the project team is working to a common set of project objectives.
What are the expectations for the delivery team and the procurement process?....

• How should the project delivery team members come together and engage with each other to attain better performance outcomes?

• Is it possible to bridge traditional organizational silos – facilitating the development of a seamless high-performance team?

• What should project delivery look and feel like?

Collaborative or Combative?
Onboarding the Project Delivery Team

What are the expectations for the delivery team and the procurement process?....

- Building the “A” team
- Full team on-boarding – where does it begin?
- Assessing the readiness of the team
- Pre-construction *Project Team Alignment Assessment*
- Evidence-based process to work towards a vision for project success
How do you determine if a project delivery team is being effective or not?.....

• Understanding the characteristics of an effective project construction delivery team.

• Evidence-based assessments to facilitate changes in behavior.

• Benchmarking alignment of the team with the ideal project delivery conditions needed to ensure successful project outcomes.

• Readiness assessment revealing the impacts of people, technology, and processes.
Change the Culture from protecting individual self-interests to looking out for each other

Project First Thinking
The concept of Third Level Thinking is based on directing the focus of people away from what you do not want and onto what you do want.

You Get what you focus on!
Level One
Personal/Professional

LEVEL 1 THINKING

Diagram of points and arrows indicating thinking process.
Level Two Organizational
Level Three
Project/Venture
The Eight Alignment Principles

1. Align Focus
2. Align Forecasting
3. Align Systems
4. Align Professional Standards
5. Align Confrontation
6. Align Authority
7. Align Feedback
8. Align Expansion Strategies
Supporting Partnering Facilitation

- Conduct Pre-Construction Project Team Alignment Assessment Survey (NYU Qualtrics Platform) for Onboarding the Team
- Evaluation of strengths and weakness in each of the SAPEs and the impact on project team effectiveness
- Determination of adjustments that are required for process, behaviors, expectations, leadership, relationships, goals, and risk allocation
The **Rapid Alignment Initiated Delivery** Model serves as a guide and evaluation tool used to analyze pre-construction team alignment and a proposed future team alignment.

- A framework to evaluate the delivery process and the potential effectiveness of the team.
- Initiated before a shovel hits the ground and monitored throughout the lifecycle of the project.
RAID Stakeholder Alignment Survey

- Eight question blocks (Approx. 150 Questions)
- Evaluate the current state of the team through the perceptions of the primary stakeholders
- Benchmarking the alignment level and potential effectiveness of the team
- Identify strengths, weaknesses, gaps and potential conflicts
- Determination of adjustments that are required for process and behaviors
Designing Performance into PDS

Initial Project Team Alignment Assessment Facilitation

- Conduct Team Alignment Assessment
- Review RAID Assessment Findings
- Understand Metrics that Matter
- Identify Alignment Issues
- Develop Actionable Tasks
### A Benchmarking Strategy - KPIs

#### Ethical Behavior
- **1. “Best for the Project” Decision-Making**
- **2. Team Member Level of Influence**
- **3. Provide Fair Value for Approved Contract Work in Place**
- **4. Provide Fair Value for Change Orders**
- **5. Developing a Culture that Facilitates a Willingness to Share Information**
- **6. Team Member Acknowledges and Accepts Responsibility**
- **7. Developing a Culture that Promotes Transparency**
- **8. Acknowledge Changes to the Project Scope of Work**
- **9. Behaviors Grounded in Accountability**
- **10. Design Consultants Acknowledge Errors or Omissions in Docs**
- **11. Organization’s Commitment to Successful Project Completion**
- **12. Acknowledge Failure to Complete Scope of Work per Contract Docs**
- **13. Developing a Culture that is Fostering Trust in Relationships**
- **14. Ethical Behavior Consistently Exhibited by the Team Member**
- **15. Overall Team Developing an Ethical Approach to Project Execution**

<table>
<thead>
<tr>
<th>Stakeholder Alignment Proposition Element (SAP)</th>
<th>SUNY Albany - ETEC</th>
<th>Team Member</th>
<th>Team Mean Scale Valuation</th>
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<tbody>
<tr>
<td>SUCF SUNY C annon Consigli Turner CP SAS 2 CP SAS 3 CP SAS 4 CP SAS 5 CP SAS 6</td>
<td>5 - 6 % ∆</td>
<td>789</td>
<td>5 − 6 % ∆</td>
</tr>
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</table>

#### Performance Outcomes - Current Assessment Period

1. **Cost Performance - Maintaining Budgets**
   - **2. Cost Performance - Acceptable Cost Growth**
   - **3. Schedule Performance - Maintaining Baseline Schedule**
   - **4. Schedule Performance - Acceptable Schedule Growth**
   - **5. Quality Performance - Project Design**
   - **6. Quality Performance - Construction Workmanship**
   - **7. Meeting Team Engagement Expectations**
   - **8. Meeting your Organization’s Required Project Admin Deliverables**
   - **9. Partnering Team Members Meeting Required Admin Deliverables**
   - **10. Team Members Working to Exceed Consigli 96% Safety Rating**
   - **11. Team Members (including trades) working towards Zero Punch List Goal**
   - **12. Meeting LEED Certification Objectives**
   - **13. Minimizing Project Scope Changes**
   - **14. Meeting Earned Value Expectations**
   - **15. Adoption of Innovative Process Improvements**

#### Survey Group

<table>
<thead>
<tr>
<th>Survey Group</th>
<th>Low - High Response</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard Deviation</th>
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<tbody>
<tr>
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<td>2 – 5</td>
<td>3.94</td>
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#### Ethical Behavior

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#### Fig. 1. CP3. How successful was the project in meeting predetermined cost performance goals? (5 Point Likert Scale 1=Failed to meet any established goals to 5= Outstanding - Met all Cost Performance Goals)
Benefits of Project Team Alignment Assessments

**Engages Team**
- Shared Vision for Achievability are Understood

**Aligns the Team**
- Easier to identify trouble across the Delivery Team

**Building a High-Performance Team**
- Fewer Surprises
- Teams Share a Vision for Project Success
- Better Quality Data for Decision Making
- Resources invested where they are needed

**Alignment of Self-Interests with Project Interests**
QUESTIONS & ADDITIONAL DISCUSSION
Guest Panelists

Frank Dar Conte
Dir. of Applied Research
IDC Innovation Hub
NYU Tandon
School of Engineering

Joe Hogan
Vice President of Building Services, Associated General Contractors of New York State (AGCNY)
Director of Construction Services for AGC Safety & Construction Services

Sadia Janjua
Chief of Program & Project Controls and Virtual Design & Construction
Port Authority of New York and New Jersey

Brendan Leary
Partner
McChrystal Group

Francisco Pineda
Program Director
M.S. in Construction Administration
Columbia University
Fellow, Royal Institution of Chartered Surveyors
Closing & Next Steps
Welcome & Overview

Bill Raisch
Co-Director, Project NEXT™
Director, International Center for Enterprise Preparedness (INTERCEP)
New York University
Tandon School of Engineering