

National Academy of Construction Focuses on Generational Imperatives¹

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The National Academy of Construction, founded in 1999, has continued to grow its focus and membership in ways that become increasingly relevant to the United States in the years ahead. Originally focused on honoring key individuals in the profession, the very nature of its members as leaders soon drove it to seek to proactively contribute to the industry in which they have served with distinction throughout their professional careers.

Initial contributions focused in the area of safety, a perennial industry challenge. Over the last 15 years nearly 50 safety white papers have been published and shared broadly throughout the industry with NAC often acting as a convener around this topic and also workforce development.

More recently the NAC has intensified its efforts to support the generational transfer of construction related knowledge while at the same time sharing their insights based on decades of senior executive experience and involvement in emerging challenges and opportunities the industry is facing. Today the National Academy of Construction (NAC) drives this increasingly important sharing of knowledge through two primary vehicles.

The first of these vehicles is Executive Insights. Executive Insights captures the knowledge, experience, and wisdom gained through individual NAC member's leadership roles in the construction industry. To date sixty insights have been published by NAC and are freely available to clients, engineers, project and construction managers, and contractors, worldwide.

Executive Insights cover a broad range of areas, reflecting the breadth and depth of its over 300 members. The major topical areas addressed include:

- General topics, encompassing strategies to improve large project delivery; the nuts and bolts of engineering and construction; capital project execution in an operating environment; and post disaster engineering and construction. Improving large project delivery is a theme that runs through many of the Executive Insights and reflects the ongoing imperative to improve project performance which has now risen to a generational imperative.

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- Accelerating project delivery, addressing topics ranging from owner procured materials, partnering and improving workflows on tomorrow's projects. Recent challenges faced as a result of COVID-19 highlight the importance of these capabilities and the insights shared, together with ones that will arise by NAC members most recent experience will help address what will undoubtedly become a growing generational imperative. The recognition of using schedule to drive project performance and outcomes was only made clear in the COVID crisis.
- Construction driven design, looks at some insights gained on major design-build efforts and reflects some of the considerations that likely were front of mind for the original "Master Builders". The NAC's members, through Executive Insights, seek to help the next generation of "Master Builders" including those contemplating entering the profession.
- Estimating project cost, focused on sharing best practices, insights from a C-suite level and lessons learned to improve the completeness and accuracy of the cost baselines of the projects we undertake. The range of Executive Insights already prepared is impressive, addressing scope required for quality estimates, costing of projects and bidding for profit under a number of different scenarios.
- Technical fundamentals for design and construction provides insights into some specialized aspects of construction.
- Procurement and supply chain encompasses a range of insights that could not be more relevant today. Faced with the prospect of greatly reconfigured supply chains the industry must benefit from the insights produced by the executives comprising the NAC. This set of insights ranges from supplier quality through improving capital efficiency, a significant owner-side imperative in the years immediately ahead, by positively influencing inventories.
- Dispute prevention and resolution provides insight into unfair contract provisions and the need for proactive prime contract management. As risk models continue to shift, driven by new realities and greatly changed frameworks, these insights will take on even greater importance.
- Leadership, in some ways is a narrower look at a core aspect of the NAC membership. Safety leadership is underscored and supported by the larger set of Safety White Papers prepared over the years by the NAC. "Wisdom's" are shared; various perspectives on leadership provided; and preparing an engineering and construction organizations for transitions of various kinds covered.

- Risk and opportunities, a key feature of what the industry faces in new ways today and in the years ahead are richly covered by the Executive Insights under this category. Uncertainty, complexity, assumption migration, risk coupling and challenges of traditional approaches to risk modeling are all covered as are more corrosive risks such as systemic risks like the one most recently experienced. The Executive Insights in this category don't look just at risk but also opportunities and how to identify and analyze them.
- Safety, richly covered in the Safety White Papers, is further enriched through Executive Insights looking at the achievement of safety through hazard elimination at the design stage. The specific suggestions provided are valuable in and of themselves but the intention to further build on this list of suggestions is part of NAC's commitment to help address existing and emerging generational imperatives.
- Technology, perhaps best demonstrates the forward looking nature of Executive Insights. This collection of Executive Insights looks at several aspects of the application of artificial intelligence (AI) as applied to the management and design of projects. The insights include emerging areas of attention such as what is the proper reliance on AI and the ethics of its use. There is an emerging generational focus on both of these areas and the NAC's work is helping inform these discussions.
- Project design focuses on two key topics. The first is the primacy of the scope baseline. This is essential to good quality estimates and realistic and achievable project schedules. The challenges on solid scope baselines will grow as stakeholders gain increased influence in project shaping, prioritization and definition.

The richness of Executive Insights can be seen in their use in university level and corporate in-house training programs. NAC has also encouraged their broader use in academia and by other industry organizations reflecting its commitment to helping address industry and generational imperatives.

The second vehicle NAC is using to aid in timely knowledge sharing and transfer is through a series of "Ask Me Anything" podcasts with three new ones added each semester and in the process of being made more widely available to students and professors in the fields of engineering and construction. Notably, a third of the podcasts have been with women leaders in the industry.

The National Academy of Construction has adopted a forward leaning posture to capture and share the collective experience of the over 300 industry leaders that comprise it. Their focus on addressing persistent industry challenges of safety, large project performance and the need to strengthen project baselines in itself is a needed contribution to the industry. But the breadth of their knowledge and insight sharing goes

further addressing many of the industries generational imperatives such as greatly improved capital efficiency; accelerated delivery of critical infrastructure; global restructuring of supply chains; realization that systemic risks, black swans, are real; step change adoption of AI technologies but with legitimate concerns on their proper use and a host of ethical issues; and the rising influence of stakeholders in the period ahead.

Cross industry sharing of knowledge and insight has never been more important to the industry, the profession and society. The open access nature of the NAC's Executive Insights and Ask Me Anything podcasts represent a model for other professional organizations to consider and should be considered a resource to readers of PM World Journal

More information about the National Academy of Construction can be found on their website at <https://www.naocon.org/>

About the Author



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Bob Prieto is a senior executive effective in shaping and executing business strategy and a recognized leader within the infrastructure, engineering and construction industries. Currently Bob heads his own management consulting practice, Strategic Program Management LLC. He previously served as a senior vice president of Fluor, one of the largest engineering and construction companies in the world. He focuses on the development and delivery of large, complex projects worldwide and consults with owners across all market sectors in the development of programmatic delivery strategies. He is author of nine books including “Strategic Program Management”, “The Giga Factor: Program Management in the Engineering and Construction Industry”, “Application of Life Cycle Analysis in the Capital Assets Industry”, “Capital Efficiency: Pull All the Levers” and, most recently, “Theory of Management of Large Complex Projects” published by the Construction Management Association of America (CMAA) as well as over 650 other papers and presentations.

Bob is an Independent Member of the Shareholder Committee of Mott MacDonald. He is a member of the ASCE Industry Leaders Council, National Academy of Construction, a Fellow of the Construction Management Association of America and member of several university departmental and campus advisory boards. Bob served until 2006 as a U.S. presidential appointee to the Asia Pacific Economic Cooperation (APEC) Business Advisory Council (ABAC), working with U.S. and Asia-Pacific business leaders to shape the framework for trade and economic growth. He had previously served as both as Chairman of the Engineering and Construction Governors of the World Economic Forum and co-chair of the infrastructure task force formed after September 11th by the New York City Chamber of Commerce. Previously, he served as Chairman at Parsons Brinckerhoff (PB) and a non-executive director of Cardno (ASX)

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