

Reframing Capital Project Delivery: Sustainability, Digitalization, and Biomimicry as Value-Generating Systems for Industry

My research investigates how capital project delivery systems can be theoretically reframed and empirically improved to generate long term value for owner organizations and the built environment. It hinges on crosspollinating a professional training in an engineering and management discipline with a personal interest in development economics and the human condition.

While this trajectory began during my PhD at The University of Texas at Austin and as a Doctoral Fellow at the Construction Industry Institute (CII), where I examined how sustainable development can be embedded within capital project governance and decision making structures, it was triggered by a previous life as an oil and gas and petrochemical consultant. Grounded in systems thinking and project governance literature, this early work investigated how Sustainable Development can operate not only as a compliance constraint, but as an internal organization's mechanism for improving project performance and strategic outcomes.

Building on this foundation, my research evolved over the years to examine industry concerns such as digitalization and biomimicry as complementary theoretical and methodological lenses for advancing capital project delivery. Ongoing work with PhD and MS students explores how digital infrastructures, data-enabled decision frameworks, and biologically inspired systems can enhance integration, adaptability, and lifecycle performance in complex capital projects.



Professor Salwa Beheiry, Ph.D.

Dr. Salwa Beheiry currently serves as Professor and Director of the Project Delivery Institute @ CSU, and the Director of the Construction Management Program at Cleveland State University. Dr. Beheiry also served as Professor of Civil Engineering, as Sustainable Construction Project Management Track Lead in the Engineering Systems Management PhD Program, and as Associate Dean for Undergraduate Affairs at the College of Engineering at the American University of Sharjah (AUS). During her academic tenure, Dr. Beheiry developed and established various undergraduate and graduate academic programs, advised nearly 40 M.S. and Ph.D. students, and authored/coauthored numerous peer reviewed papers. Before joining AUS, Dr. Beheiry worked in two preeminent organizations focused on capital project delivery in the Oil & Gas and Petrochemical area, starting out as a consultant with Independent Project Analysis Inc. (IPA) in Ashburn, Virginia, and later joining as a doctoral fellow the Construction Industry Institute (CII) at University of Texas at Austin.

Date

February 27th, 2026

Location

Virtual via Zoom
(See email for link)

Time

11:30AM - 12:20PM