

LEVERAGING CULTURE AND BEHAVIOR TO DRIVE AWP SUCCESS

The significant role of organizational culture in the success of AWP projects has long been acknowledged; however, there is a lack of a tangible tool for measuring organizational culture within these projects. To address this need, CII RT405 has embarked on defining cultural dimensions relevant to AWP projects, involving experts in organizational psychology, construction management, and, most importantly, practical insights from industry practitioners. The team has identified four cultural dimensions that are relevant to AWP projects: leadership (the ability to guide and influence the team toward project goals), coordination (efficient collaboration and communication), value (shared beliefs and principles), and norm (established standards and expectations). These dimensions were broken down into 17 measurable items using a five-point behavior anchor scale (BARS). Validation of this tool through 142 construction professionals has proven that we can measure culture and predict outcomes based on “why” and “how” people do their work. Furthermore, a performance database of 14 completed AWP projects is collected, and the data is analyzed statistically to better understand how culture shapes project performance and the degree of AWP adoption. Throughout a two-year journey, RT405 has defined that culture is real, measurable, and understandable within the construction domain and from an AWP perspective. It can be leveraged through leadership and teamwork. Begin to utilize BARS to define where you are, where you want to improve, and how to achieve project success and team winning.



BEHZAD ESMAEILI
ASSOCIATE PROFESSOR
PURDUE UNIVERSITY



HYEWON (HAILEY) SEO
PH.D STUDENT
PURDUE UNIVERSITY

Behzad Esmaeili, Ph.D., is an associate professor with joint appointments in the School of Industrial Engineering and Lyles School of Civil and Construction Engineering at Purdue. His research focuses on making breakthrough discoveries in human factor-related theories and applying data analytics to advance occupational safety in the construction industry. His research group—Safety, Risk Management and Decision Making (SARMAD)—has established a sustainable research program that charts his research course and paves the way for the future growth of his students and colleagues. SARMAD’s motto is to set the standard in quality and innovation. Dr. Esmaeili’s research in this field has been funded by the National Science Foundation (NSF), National Institute of Occupational Safety and Health (NIOSH), Construction Industry Institute (CII), Nebraska Department of Transportation (NDOT), Virginia Department of Transportation (VDOT), Indiana Department of Transportation (IndOT), Department of Labor (DOL), and Center for Construction Research and Training (CPWR).

Hyewon (Hailey) Seo is a Ph.D. student in Civil Engineering at Purdue University, specializing in construction safety and advanced work packaging. She has been involved in construction safety research since her master’s degree in civil engineering, where she focused on motion data-driven biomechanical assessment to identify and evaluate ergonomic interventions in construction work. Currently, she is actively working on the neuro-ergonomic impact of exoskeletons in the construction domain as part of an NSF project. Additionally, she has been a leading graduate student on a Construction Industry Institute (CII) project for two years, investigating organizational culture in the AWP domain to enhance project success as part of the RT 405 team, in collaboration with the industrial-organizational psychology team from Purdue. She was recently honored with the “Best Student Award” of 2024 from the CII and invited to an international seminar held in South Korea to share the results from the RT 405 team.

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