

# Implementation of Wearable Technology in Aerospace Production Systems

## BIOGRAPHY

Dr. Dongjoon 'D'J Kong is a Technical Fellow in Industrial Engineering (IE) at the Boeing Company. He has been working with the BCA IE Core team supporting all BCA Programs and Enterprise projects since he joined the Boeing company in 2007. He is currently working on improving the ergonomic issues via testing and implementing wearable technologies. Dr. Kong has 35+-years of experiences in Industrial Engineering field across academia, research institutes, and industries and 50+ publications including peer-reviewed journal papers, conference papers, book chapters. Dr. Kong was an Assistant Professor with the Industrial and Systems Engineering department at the University of Tennessee, Knoxville.

## ABSTRACT

Boeing has been working through an advancement in its safety programs, with the biggest concerns during the production processes such as safety (collisions, accidents, slip/fall, etc.) and injury prevention (resolving ergonomic issues, preventing musculoskeletal disorder (MSD), and improving working conditions). Market available wearable technologies have been evaluated, tested, and implemented to identify, mitigate, and resolve the issues for many years through transforming Boeing's paradigm shift from Reactive to Proactive Safety Assurance strategy. Well-planned deployment of wearable sensors provided meaningful information for developing risk mitigation solutions, though. There are different sensors for different applications and no single solution could resolve all problems. This presentation illustrates the examples of recent wearable technologies tested and implemented.