

A Handbook of Drivers of Construction Health, Safety, and Wellbeing Continuous Improvement

The state of health, safety and wellbeing (HSW) in the Architecture, Engineering, Construction and Facility Management (AECFM) sector, without a doubt, requires improvement in both developing and developed countries. While a marginal reduction in accidents, injuries, and fatalities has been recorded in specific industry sub-sectors, the potential of harm to people and damage to properties remains significant. Applications of lessons learnt and innovation lag that of advanced industries such as manufacturing. Research attention is disproportionally focused on the issues and challenges with little detailed attention on the opportunities in the industry and countries for improving HSW. This collection, therefore, presents best practices and case studies that engender continuous improvement (CI). The drivers of CI shared are robust, resonate with practice and promote policy deployment in varying projects and complexity through planning, control, and improvement. While not exhaustive, the handbook will cover:

HEALTH

- Design for health
- Worker involvement in policy making and enforcement
- Operational initiative and programmes, for example health awareness and education
- Lifestyle including alcohol and drug usage
- Technology for improving health, for example, reducing ergonomics injuries and claims using wearable technologies
- Developing ergonomics programmes for workers including the remote ones

SAFETY

- Early consideration of safety in projects including prevention through design in HSW
- Safety education and training including using personalized and immersive technology
- Sharing best practices with front-line workers
- Artificial intelligence in serious industry and fatalities identification
- Innovative use of safety data, e.g., predictive forecasts
- Hazards recognition based on humancomputer interaction
- Proactive right-time methods for hazard avoidance during the construction phase
- Opportunities in the characteristics of the construction industry and its political, cultural, social, and institutions contexts for improving safety.

WELLBEING

- Design for wellbeing
- Technology for managing and improving wellbeing including creating awareness
- Work-life-balance
- Data-driven strategies, programmes, and policies for wellbeing improvement
- Human resource management supported roles in mental and wellbeing management
- Implications of the Internal and external contexts of construction businesses for wellbeing.

Emerging related topics in HSW, e.g., the current and future role of digital twins, automation, and robotics, can be explored as well.

Academics, faculty in collaboration with students, and industry professionals interested in contributing to the book can contact **Dr. Nnedinma Umeokafor** (nnedinmaik@hotmail.com (preferred) or n.umeokafor@greenwich.ac.uk) to obtain the chapter summary form. Call for chapter summary, **31 December, 2022.** Further key dates will be announced.

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