

# Integrating Occupational Safety and Health digitally using Digital Technologies – the case of Building Information Modelling

## Preface

Alfredo Soeiro

The book addresses a management tool approach to improve the results of Occupational Safety and Health actions towards Vision Zero in accidents and a healthy working environment. If there was no other reason the book recommends itself by wishing for a better future. Of course the book has many reasons to be bought or read or analysed. The first one comes from the backgrounds of the authors and co-authors, experienced professionals and active researchers in OSH. That is a major added value since experience and knowledge transmission in the era of information have to be recorded and transmitted. Otherwise the richness of competences, of histories, of case studies and of lessons learned may get lost. The second reason is created from the fact that new tools and digital techniques are incorporated in OSH in construction. It is known that construction is a conservative production sector with reactionary attitudes towards innovation. Thus the examples presented and discussed may create spin offs that will bring the construction sector to the XXI century. The third motivation is the presentation of guidelines and actions that can help action plans for the stakeholders involved. The training supported by some digital tools can bring easier ways to prepare technicians, workers, suppliers, students, officials and OSH practitioners to handle difficult and dangerous situations after acquiring competences related with OSH.

The adoption of BIM, designated Building Information Modelling, has evolved greatly to work as building information management. That change from model to management of information provides data that can be used to simulate and to assess the several scenarios throughout the construction execution. The issue is that each construction site is unique and deserves specific projects in terms of OSH. That means that the idea of the European directive 92/57 that tried to implement the notion that OSH in construction should be treated as any other design project, like reinforced concrete or HVAC. In this approach the possibility of simulating and of optimizing the OSH preventive measures provides the possibility of using limited resources that are generally available from the construction owners. Management of information using BIM tools can combine data from previous accidents related with each one the tasks to be executed, evaluate the risks and use the financial resources to decrease the impact that it is impossible to eliminate all risks in the construction sites. It will be easier and more effective to employ these digital tools to have an efficient way of using the time of OSH technicians and of distributing the safety equipment and materials to achieve a better future. It seems an unquestionable conclusion that this book

will save at least the life of a worker and that is a sufficient reason to write it and to publish it. Thank you for publishing the book.