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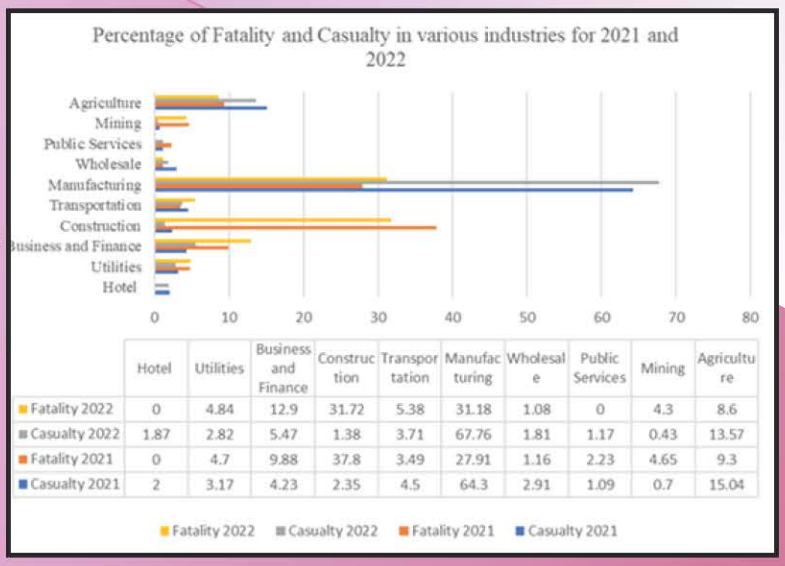
LEGAL RISK ASSESMENT FRAMEWORK FOR PREVENTION THROUGH DESIGN OVER HIGH-RISE RESIDENTIAL BUILDING LIFE CYCLE IN MALAYSIA

A dedicated team of researchers, including Ts. Dr. Mazlina Zaira Mohammad, Dr. Nor Syamimi Samsudin, Assoc. Prof. Sr. Dr. Natasha Khalil, and Mashitah Binti Mohamad Hanafiah, is investigating ways to improve construction safety in Malaysia by emphasizing the concept of "Prevention through Design" (PtD). Occupational accidents in the construction industry are a significant concern, impacting worker safety, industry stakeholders, and the national economy. Malaysia's construction industry, which relies heavily on foreign laborers who often receive minimal training, ranks third in occupational accidents after manufacturing and services, according to the Department of Occupational Safety and Health (DOSH).

Much research has long established that the upstream phases or design and planning phases have inseparable relation with downstream phases or construction phases. Traditionally, the responsibility to ensure safety and health at the construction site is on the contractor, it is important to note that half of the issues that arise are due to inadequate design. Thus, collective efforts to control hazards should be practiced at all stages of construction which resulted to the new risk management theory, prevention through design. Other than Singapore, United Kingdom, New Zealand and Australia, PtD concept is practice on volunteer basis mainly due to the absent of mandatory legislation and regulation instrument to ensure its application during planning stage by the designers like architect or engineer.



	Hotel	Utilities	Business and Finance	Construction	Transportation	Manufacturing	Wholesale	Public Services	Mining	Agriculture
Fatality 2022	0	4.84	12.9	31.72	5.38	31.18	1.08	0	4.3	8.6
Casualty 2022	1.87	2.82	5.47	1.38	3.71	67.76	1.81	1.17	0.43	13.57
Fatality 2021	0	4.7	9.88	37.8	3.49	27.91	1.16	2.23	4.65	9.3
Casualty 2021	2	3.17	4.23	2.35	4.5	64.3	2.91	1.09	0.7	15.04

Construction (Design and Management) Regulations 2015 in the United Kingdom, Work, Health and Safety Act 2011 in Australia, Health and Safety at Work Act 2015 New Zealand and Workplace Safety and Health (Design for Safety) Regulation 2015 for Singapore mandated designers to consider safety of workers during maintenance and operation and not only in construction. In Malaysia, Occupational Safety and Health in Construction (Management) (OSHCI(M)) was introduced as volunteer guideline to encourage designers and other construction key player to consider safety as part of the design process in 2017. A positive addition in effort to ensure safety consideration during design, Department of Occupational Safety and Health Malaysia (DOSH) has introduced Occupational Safety and Health (Construction Work) (Design and Management) Regulation 2024 in the latest amendment of Occupational Safety and Health 1994 (Amendment 2022) which is compulsory to comply.

To achieve the objective of this research, 15 experts from building and construction key players are involved to comply with the objectives set. The experts were determined based on their years of technical experience in the industry and familiar with the safety legal framework in Malaysia via online conference or face to face depending on the expert's availability or preference Through Fundamental Research Grant Scheme (FRGS) under the Ministry of Higher Education Malaysia (MOHE), in-depth study of the issue may offer some important opportunity to fill the need for legal risk management framework to facilitate designers to consider safety during design process for high rise building in Malaysia. By providing the room to improve understanding of safety related legal framework among construction industry key player especially designers, the quality and application of safety for the whole life cycle of a building is improved.

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