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**SMART MANAGEMENT SYSTEM (SMS) IN ASSISTING  
PROJECT MANAGERS' ROLES IN CONSTRUCTION  
PROJECTS**

**NOOR SYUHADA BINTI RAZALI**

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## **ABSTRACT**

The aim of this research that of to acknowledge the effectiveness of Smart Management System ( SMS ) in assisting Project Managers' ( PMs ) roles in construction project. As we knew, Project Managers are individuals that were obligated to drive the projects in achieving goals and objective by linking all resources through planning and execution. Safe working environment in the construction site was believed to be a success factor of the construction projects. Nowadays, the absence of safe working environment was derived by the lack of safety management performance. Not only that, unsafe behaviour of workers often happens in the construction site due to lack in construction personnel's safety practices. In addition, the negligence in handling plant and machineries would impact the projects flows, injuries and accidents. This is due to, the workers and the higher - uppers were lack in the capabilities in preventing and supervision in conducting machineries. The problem statement are the lacking in construction personnel's safety practices, lack of safety prevention and supervision in conducting machineries and lastly, lack in safety management performance in the organization. The research methodology that were used in this research is purposive sampling. This is due to, only targeted respondents were asked to answer the questionnaire. A total of 361 surveys were distributed to Project Managers ( PMs ) that were selected to answer the questionnaire. The sample number were derived from Krejcie & Morgan 1970, hence, the population size of 6091 contractors, grade G1 to G7 originated in Pulau Pinang was finalized. The number of population size was acquired from Construction Industry Development Board ( CIDB ) website. The

questionnaire is in the form of GoogleForms that consists of 4 sections were distributed through online platforms, namely, Facebook, Instagram, Telegram and Twitter. Section A : Demographic Question, Section B : The Challenges of Using Smart Management System ( SMS ), Section C : The Factors Contribute To Readiness In Implementing Smart Management System ( SMS ) and Section D : The Strategies In Implementing Smart Management System ( SMS ) In Malaysia. The survey was answered by 122 respondents that was collected from online platforms, namely, Facebook, Instagram and Telegram to match aim of the research which is to learn the effectiveness of Smart Management System ( SMS ) to assist Project Managers ( PMs ) roles in construction projects. Upon completing the survey, the data was analyzed by SPSS Version 25.0. The analysis was done by comparing the frequency and percentage of each variables in each section. Next, the mean scores and the standard deviations were used to extract out the findings. The research findings that was winkle out in Section B : The Challenges In Using Technologies In Construction is to indicate that integration and management is the most crucial thing to be taken into account. Integration and management that was meant was creation of a centralized platforms of the Smart Management System ( SMS ) due to its vulnerability, mainly the data insecurity, misplacement and overlapping while establishing, collecting, deriving and storing it. Meanwhile, for Section C : The Level Of Readiness In Implementing Smart Management System ( SMS ) In The Project, the most fundamental finding is teamwork and partnership. This is so because collaboration between stakeholders are important to urge others in using Smart Management System ( SMS ). Positive influences from the higher uppers would impact the working etiquette of other construction personnel. Lastly, in Section D : The Strategies To Implement Smart Management System ( SMS ) In Construction Project, the software trial is considered important to increase its implementation. Software trial offered by the software company to captivate user's

interest in buying the products for future. Hence, the variables with highest mean score and the least standard deviation would be at the top tiers of the findings table. Hence, this marks that the most voted variable as the most important catalyst that become the main challenges, factor of readiness and strategies to the implementation of Smart Management System ( SMS ). To sum up, the process of requiring data was conducted to achieve the objective of the entire research that are to determine the challenges of using Smart Management System ( SMS ) in the project, to identify the level of readiness of Project Managers ( PMs ) in using Smart Management System ( SMS ) and to propose the strategies in implementing Smart Management System ( SMS ) in construction project.