

# Pengembangan Metode Pengukuran Standar Volume Pekerjaan Design Development, Sitework dan Struktur Berbasis Wbs pada Kawasan Stadion Bangunan Khusus Gedung Negara Dengan Kontrak Terintegrasi Rancang dan Bangun untuk Meningkatkan Akurasi Perhitungan Volume = Development of Standard Measurement Method Based on WBS for Design Development, Sitework and Structural Work Volume of Stadium Area of Special State Building with Integrated Design Build Contract to Increase Accuracy of Work Volume Measurement

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## Abstrak

Pembangunan bangunan gedung negara dengan klasifikasi khusus seperti stadion merupakan salah satu infrastruktur yang dalam penyelesaiannya memerlukan teknologi khusus, ini dikarenakan pembangunan stadion memiliki tingkat kompleksitas yang tinggi. Sehingga pemilihan kontrak rancang bangun dirasa paling cocok untuk penyelesaian pembangunan stadion. Namun, penggunaan kontrak rancang bangun di Indonesia perlu adanya perbaikan, keadaan di lapangan yang kadang mengakibatkan perselisihan karena perbedaan pemahaman dalam pengukuran volume pekerjaan menjadi hal yang paling sering terjadi. Oleh karena itu, penelitian ini bermaksud untuk mengembangkan standar measurement method (SMM) dengan berbasis WBS untuk pekerjaan design development, sitework dan struktur pada kawasan stadion agar dapat meningkatkan akurasi perhitungan volume pekerjaan. Metode SEM digunakan untuk mendapatkan model hubungan antara SMM berbasis WBS dengan tingkat akurasi perhitungan volume pekerjaan. Hasil analisa menggunakan SEM-PLS didapatkan R-Square sebesar 0.680 dan Model Matematikanya yaitu  $Y = 0.578 X_1 + 0.390 X_2$ . Penelitian ini diharapkan dapat menghasilkan standar measuremet method yang sudah dikembangkan dan disesuaikan dengan keadaan pembangunan infrastruktur di Indonesia khususnya pada pekerjaan design development, sitework dan struktur pada kawasan stadion sehingga dapat menyamakan pemahaman antar pihak proyek.

.....The construction of state building with a special classification such as stadium is one of the infrastructures which in its completion require special technology. It is because the construction of stadiums has a high level of complexity. Therefore, the selection of the design-build contract is considered the most suitable for the completion of the stadium construction. However, the use of design-build contract in Indonesia needs to be improved since the conditions in the field often lead to disputes due to the differences in understanding the measurement of work volume. This study intends to develop standard method of measurement (SMM) based on WBS (Work Breakdown Structure) for design development work, site work and structures in the stadium area in order to increase the accuracy of measurement of work volume. Furthermore, the SEM method was used to obtain a model of the relationship SMM based WBS and the level of accuracy in measurement of work volume. The results of the analysis using SEM-PLS obtained an R-Square of 0.680 and the mathematical model is  $Y = 0.578 X_1 + 0.390 X_2$ . This study are expected to produce a standard measurement method which has been developed and adapted to the conditions of infrastructure development in Indonesia; especially, in design development work, site work and structures in

the stadium area. Thus, it can provide a common understanding between the project parties.