Integrating Modern Surveying Tools with the Project Team in Nigeria

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SUMMARY

Over the years in Nigeria, most civil, construction and environmental engineering projects have operationally regarded and treated surveying tools and professionals as mere auxiliary data providers, hence placed outside the box of project teams and implementation strategies. The consequences of this subtle exclusion have been evident in sub-standard project deliveries and short lifespan of infrastructure, across the country. The fact that, all projects initiated by man starts and ends on the earth surface or subsurface suggests that, the lifespan and functionalities of the infrastructure so placed is a function of the physical stability and spatial balance of its host (the earth). This therefore places technical and professional demands for the use of surveying tools and expertise within the framework of project team for the accurate and periodic measurements, spatial representation and management of the project units and area. Most importantly, the rapid technological advances in modern surveying extend beyond measurements to include computing, information and communications technology (ICT), and geospatial data mapping and modelling. These developments have made surveying tools more suitable for accurate, reliable, timely, high level data integrity and user-friendly geospatial information system relevant for effective project implementation. This paper therefore aims at establishing the need for the integration of modern surveying tools with the civil and environmental engineering project teams for rapid and effective project delivery in Nigeria. The paper identified key modern surveying tools for rapid project delivery and justified the need for a balanced project team in modern project tasks and solutions. The benefits of integrating modern surveying tools in all physical development projects were highlighted, and strategies for archiving such integration outlined. The paper observed that, project teams work best when there is a balance of primary professional and technical roles, and when team members know and work to their strengths and actively manage weaknesses. The cutting-edge surveying technologies and expertise required for pre-project surveys and mapping, project monitoring (short-term), post-project and as-built surveys (medium term), and project facility management surveys and geospatial database management (long-term) are readily available today; but professional chauvinism and lack of mutual recognition for interoperability have been the bane of sustainable project management in Nigeria. The Surveyors should therefore be included among the project team comprising the Civil Engineer, Architect, Quantity Surveyor, Structural Engineer, Lawyer, etc., in order to encourage the implementation of the surveying contents in projects as core components, rather than supplementary.