

**AN INVESTIGATION INTO THE SKILLS AND COMPETENCIES REQUIRED OF  
NON-ENGINEERING BUILT ENVIRONMENT PROFESSIONALS IN SOUTH  
AFRICA.**

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**A research report submitted to the Faculty of Engineering and the Built Environment, of  
the University of the Witwatersrand, Johannesburg, in partial fulfillment of the  
requirements for the Master of Science in Building.**

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## **DECLARATION**

I declare that this research report is my own, unaided work. It is submitted in partial fulfillment of the requirements of the degree of Master of Science in Project Management in Construction in the University of Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

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\_\_\_\_\_ day of \_\_\_\_\_ 2008.

## ABSTRACT

Sustaining reconstruction and development, on the scale designed by the South African government – in particular enhanced provision of infrastructure – will require adaptable, available and competent built environment professionals. This research report investigates the skills and competencies required of non-engineering built environment (NEBE) professionals, and evaluates the perceived disparity that exists between the level of importance given to each of the competencies required of NEBE professionals in South Africa today and the level of importance given to each of the competencies that have been published in literature as ideal for each profession.

To achieve this study's objectives, a questionnaire was developed using information from literature review and pre-test questionnaires administered to a select set of NEBE professionals. The questionnaires were completed by 58 professionals from a non-probability sample of NEBE professionals in Gauteng province of South Africa. Propositions relating to the objectives of the study were developed using the data obtained from the questionnaires.

The study has established that: *professionalism; leadership/management; solving problems; knowledge and practice of construction; and planning, design and supervision* are the most significant core competencies currently required by NEBE professionals in South Africa. Furthermore, NEBE professions still lag behind in the development of Professionalism. It is advocated, therefore, that Professionalism should be encouraged and promoted at all levels amongst NEBE professions.

## **DEDICATION**

I dedicate this report to my parents,

His Royal Highness Samuel and Elizabeth Sorinolu

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## **GLOSSARY OF TERMS**

### **Competency**

Coyne et al (1997) proposes a core competence to be a combination of complementary skills and knowledge bases embedded in a group or team that results in the ability to execute one or more critical processes to a world class standard. Two ideas are especially important here. The skills or knowledge must be complementary, and taken together they should make it possible to provide a superior product.

### **Built Environment (BE)**

The built environment can be described as a complex, techno-socio-economic system comprising physical components (e.g. bridges, roads, ports, rail, schools, healthcare facilities), and the institutional, management and operational relationships among these components and the society they serve (Gueli and Liebenberg, 2006).

### **Infrastructure**

The basic physical and organizational structures and facilities needed for the operation of a nation, society or enterprise. It includes a nation's basic system of transportation, communication, power supplies, housing, sewer and water systems, drainage systems, and essential public utilities (Gueli and Liebenberg, 2006).

### **Effectiveness**

- The degree to which a purpose is achieved.
- Extent to which actual performance compares with targeted performance.
- The power or capacity to produce a desired result.
- Doing the "right" things. (Hornby, 1983).

## Efficiency

- The quality or degree to which someone or something possesses adequate skill or knowledge for the performance of a duty.
- In human movements, the relationship between the amount of work done and the energy expended during the work.
- The ratio of the effective or useful output to the total input in any system.
- The ratio of the energy delivered by a machine to the energy supplied for its operation (American Heritage Dictionary, 2000).

## Skill

- Proficiency, facility, or dexterity that is acquired or developed through training or experience.
- An art, trade, or technique, particularly one requiring use of the hands or body.
- A developed talent or ability (American Heritage Dictionary, 2000).

## **LIST OF ABBREVIATIONS**

CIOB – Chartered Institute of Builders

NEBE – Non-Engineering Built Environment

NQF - National Qualification Framework

SAQA - South African Qualifications Authority

NSB – National Standard Body

SAIA - South African Institute of Architecture

SAILA - South African Institute of Landscape Architecture

SAICPM - South African Institute of Construction and Project Management

SAIQS - South African Institute of Quantity Surveying

SAIPV - South African Institute of Property Valuation

SAILS - South African Institute of Land Surveyor

SAIURP - South African Institute of Urban and Regional Planning

RIBA - Royal Institute of British Architects

Wits – University of Witwatersrand, Johannesburg

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