

# **ENGINEERING CHALLENGES FOR THE 21<sup>ST</sup> CENTURY**

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Down the ages, science, engineering and technology (S.E.T) have enabled humankind to exploit the resources of the earth and the environment for its physical, intellectual, institutional and societal development. It would be fair to state that human civilization has developed due largely to the progress of S.E.T, with engineering as a bridge between science and technology. Frenetic development since the end of the Second World War caused alarm bells from the S.E.T community to sound in the sixties and seventies, leading to global concern for sustainable development and the Rio Earth Summit and Agenda 21 of 1992. In the past decade, Agenda 21 was unsuccessful. The UN Secretary General in his 2002 Report "Implementing Agenda 21" expects the World Summit on Sustainable Development 2002 to reinvigorate Agenda 21 through a new approach integrating the three critical elements of political will, practical steps and partnerships. UN Secretary General also proposes the following means for implementing Agenda 21 after WSSD: Finance, Trade, Transfer of Environmentally Sound Technology and Science and Capacity Building. His emphasis on practical steps and partnerships would put engineering and applied sciences at center stage of Agenda 21 after Johannesburg. In the author's opinion, the engineering mission in the globalised world of this century is to enable humankind to achieve sustainability. The paper outlines the opportunities and challenges facing the engineering profession.