



Government of the Republic of Trinidad and Tobago  
Ministry of Education



# TRINIDAD AND TOBAGO'S **ENERGY SERVICES SECTORAL INNOVATION MAPPING (SIM) STUDY**



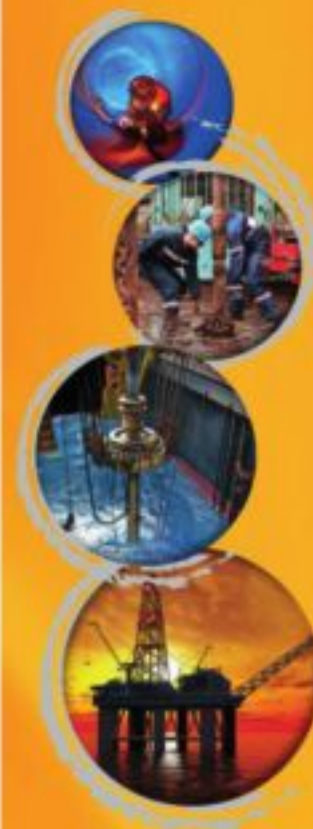
The present state of the economy in Trinidad and Tobago is a clarion call to the citizens of Trinidad and Tobago and to the players in the energy services sector to support and do what we know best - the export of energy services. Locally grown energy services companies have been servicing the energy sector upstream and downstream for many years and in so doing, have developed knowledge, skills and competencies that equal and in some cases, surpass others in the global energy industry. Truth be told, in an economy as open and unprotected as T&T's economy, the competition is stiff. However, our locally grown energy services companies are resilient. Utilizing various business models and thereby successfully integrating into internationally reputed energy services firms, they have survived and are determined to remain open for business, operating both at home and abroad.

The conduct of the Sectoral Innovation Mapping (SIM) Study on the locally grown Energy Services Sector is timely and relevant. The SIM unveils the actors, their interactions and the activities that initiate, import, modify and diffuse new technologies. The concept of the innovation system rests on the premise that understanding the linkages among the actors involved in innovation is key to improving the uptake of new and improved technologies to enhance performance. As observed, in the Energy Services Sector, innovation and technical progress are the result of a complex set of relationships among actors, producing, distributing and applying various kinds of knowledge.

The SIM methodology is inclusive. Using a bottom-up approach, the study draws on the experience of the drivers of the Energy Services industry. For this SIM exercise, methods used for collecting data were key informant interviews, semi-structured questionnaires, conversations via telephone, Skype, electronic correspondence and networking at industry events.

The Energy Services SIM identifies five (5) categories of actors in the industry: public sector stakeholders - Ministries and state agencies; industry stakeholders inclusive of the operators and international and locally grown energy services providers; education and training institutions; bridging Institutions; and institutions supportive of the enabling infrastructure.

## *Executive Summary*



Equally important, the SIM also features the framework conditions that exist. Examples include transparency, trust, good governance, the propensity to innovate and others that lend to a smoother performance of the industry. These intangible conditions, though often perceived as trivial, are significant. Their absence or existence influences the behaviours of the actors and by extension, impacts the industry.

The findings reveal that there are two (2) types of innovations dominating the local energy landscape. These are product and process innovations. To a lesser degree, some firms have employed organisational innovations. Notwithstanding the adoption of a new piece of equipment or technology necessitates the introduction of a new or improved production process, both product and process innovations appear to be inextricably linked.

The research also highlights the drivers and the impediments to innovation. Locally grown energy services firms innovate to meet a need - the need may be to reduce operational costs; improve the efficiency of performance; address a problem encountered by the operators; or even minimise the negative impact on the environment. Several factors also impede innovation. These include in many instances, the lack of dedicated resources, a physical laboratory and the human capital to conduct the R&D and in some cases, the technical know-how to modify equipment or a process.

The SIM also focuses on initiatives undertaken to build capacity in the sector and attempts to analyse the intensity of the interactions between actors. Criteria used to assess the linkages vary depending on the actors. All told, the findings of this exercise are many. The results add to the national research resource pool which inform and support evidence-based decision-making. Lastly, it is anticipated that the SIM will support the government's efforts in diversifying the energy sector towards the exportation of energy services.

