## Wits TCSE Aiming to Address Competency Gaps in Collaboration with the TPT ICI (Innovation and Continuous Improvement)

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The Wits Transnet Centre of Systems Engineering (TCSE) has taken up the challenge to, amongst others, find mechanisms to address identified competency gaps in order to enable project delivery.

Tackling project delivery is core to enabling the ICI's objective of focusing on TPT and Transnet MDS implementation and process improvements, whether by means of technological and/or process/human interventions.

Competencies are envisaged as representing the longer-term fabric of Transnet (or any similar organization) in terms of rolling out the implementation of its Market Demand Strategy.

As a point of reference, the definitions below show some keywords normally associated with competencies:

Competency - Individual ability of a person, result of connecting different competencies: knowledge, skills, capabilities and attitudes.

Competence - Organisation's ability to sustain the co-ordinated deployment of assets (e.g. people, facilities, processes) in ways that are helpful to achieve the firm's goals.

Competence group - A combination of people, skills, knowledge, facilities, processes etc. that enables synergy of effort directed at providing expertise in a specific field of interest.

Our view is that workforce effectiveness relies on two critical characteristics: **competence** (sufficient mastery of the knowledge, skills, and abilities—or competencies) and **readiness** (the ability to apply a set of competencies to complete a real-world task).

But before one can even start talking about which competencies to look at, it is useful to start with the end objective. We have three basic categories to consider, that is whether ICI is targeting Emulation competencies, Incremental competencies or Independent competencies summarized as:

**Emulation** stage – aims to emulate key cross cutting competencies needed compete in the medium to long term through collaborative research and development.

**Incremental** stage – aims to facilitate technology innovation by transferring accumulated knowledge and experience to industry through applied research and development.

**Independent** stage – aims to develop new processes, technologies, products and services.

The process improvement agenda of the TPT ICI can be catered for under the incremental competencies.

However, ICI's objective where innovation functionality will be established as part of ICI, could translate in ICI also looking some emulation and independent type competencies as well.

The competencies can be mapped to the identified thematic areas like Operational Efficiency and Environmental Sustainability, and the relevant projects can be identified as part of the MDS implementation.
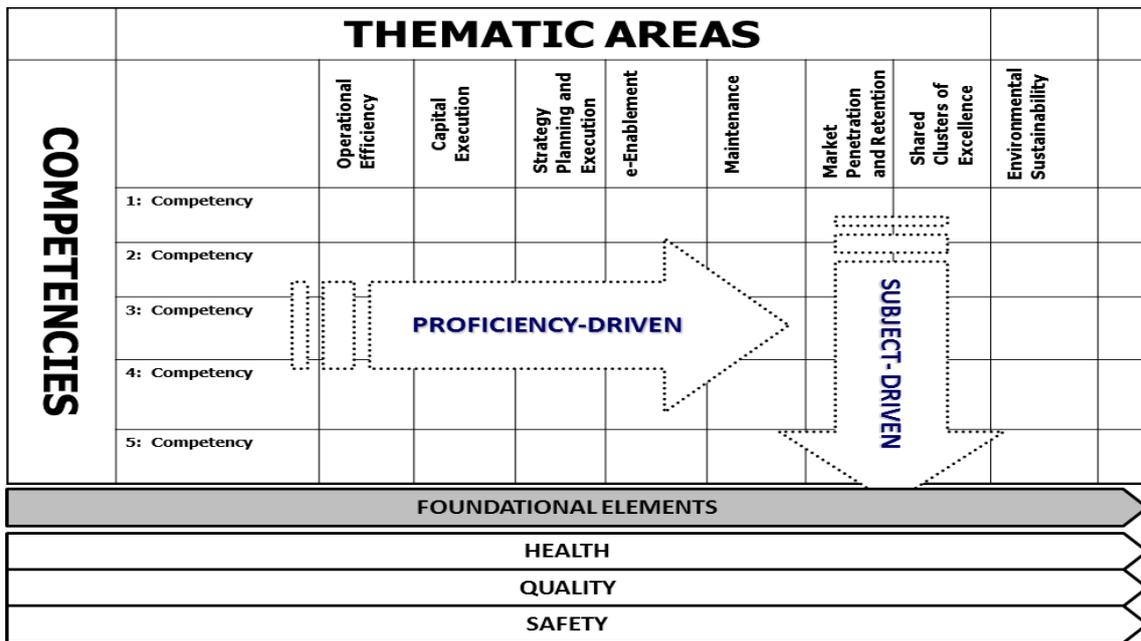


Relevant competencies are normally identified through a workshop where TPT stakeholders would list, debate and collectively review the identified areas in a systematic manner. The identification of competencies is just the beginning of a value adding **competence lifecycle roadmap** that aims to result in workforce effectiveness in those short-listed competency areas.

The Competency Lifecycle Roadmap is summarised in the table below:

| Competencies Lifecycle Roadmap | | | | | |
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| **Activities** | | | | | |
| **IDENTIFY** Determine required competencie | **ASSESS** Assess competency levels | **PLAN** Develop action plans | **ACQUIRE** Acquire competencies | **VALIDATE** Validate Knowledge | **TEST READINESS** Test Know-how |
| **Foundational Elements** | | | | | |
| **Criteria** (to determine required readiness level of technical and enabling competencies) | | | | | |
| **Environment** (processes, culture, and context that influence the execution of the competency lifecycle activities) | | | | | |

For more information, please contact Letlotlo Phohole who is responsible for competencies at the Wits TCSE.

**The Wits TCSE's vision is to be a significant, value-adding and trusted partner with Transnet.**