



higher education
& training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

INTEGRATION OF DIGITAL COMPETENCIES IN THE NATIONAL CURRICULUM: THE CISCO NETWORKING ACADEMY IN SOUTH AFRICA

DHET-CISCO PARTNERSHIP THROUGH TVET

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PRESENTATION OUTLINE

- Introduction
- TVET Landscape
- TVET Programmes Offering
- Cisco Partnership with DHET
- Curriculum Innovation for 4IR Readiness
- Conclusion

INTRODUCTION

The digital economy and Information & Communication Technology (ICTs) forms part of the priority sectors that Government has identified and anticipates growth in as part of the Fourth Industrial Revolution (4IR). TVET Colleges need to participate and support government initiatives towards 4IR through aligning their offerings and curricula with the needs of 4IR.

DHET/Cisco partnership is critical in achieving the 4IR goals. Furthermore, that the partnerships must be embedded and aligned in the current TVET offering for by in by stakeholders and for sustainability.

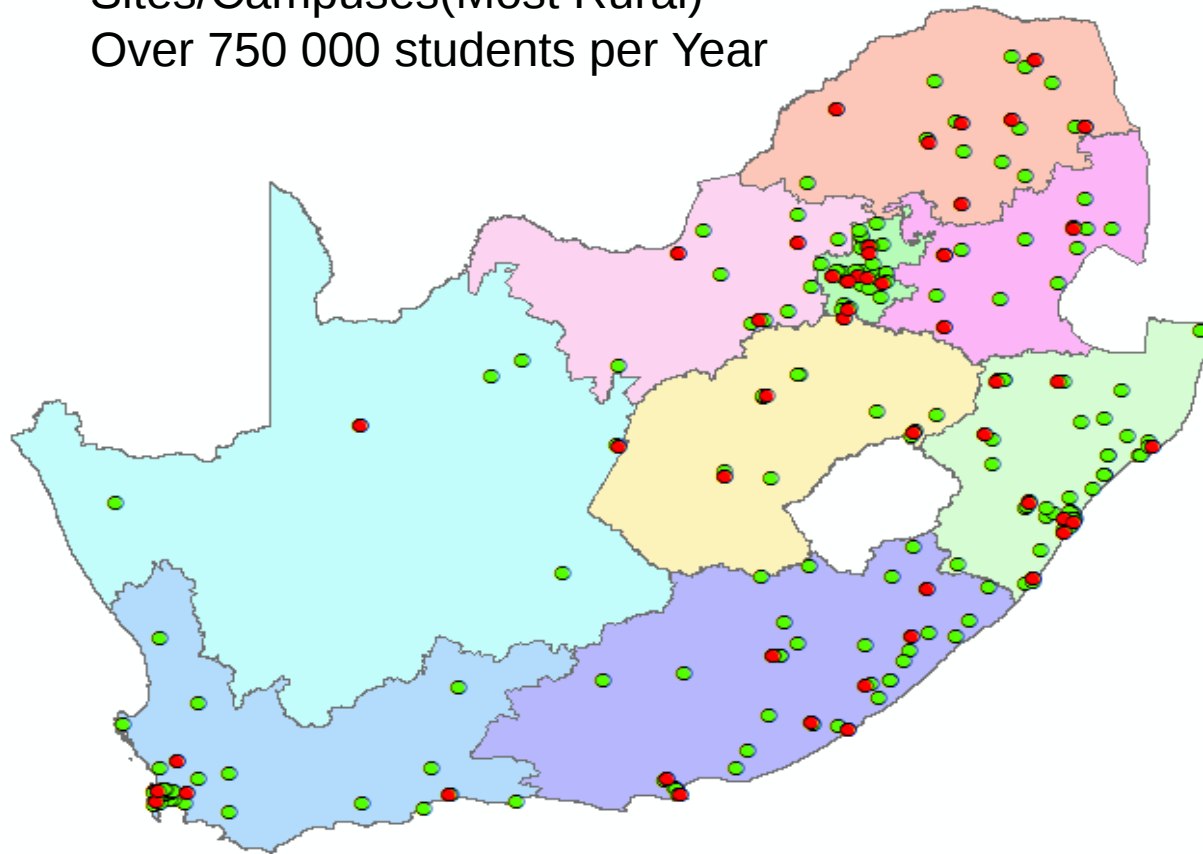
TVET LANDSCAPE

Red: 50 TVET Central Offices

Green: 270 Delivery

Sites/Campuses(Most Rural)

Over 750 000 students per Year



TVET PROGRAMMES OFFERING

- Four identifiable programme types
 - Programmes leading to qualifications that are registered on the NQF :
 - National Certificates (Vocational)
 - National Certificates (Occupationally directed and accredited by SETAs)
 - National Certificates and Diplomas offered under the authority of a university
 - Higher Certificates and Degrees in Partnership with Universities and University of Technologies
 - National N Certificates that are offered with an immediate focus to artisan development and providing options to the youth who have Matric, but cannot access higher education

DHET/CISCO PARTNERSHIP

THROUGH CURRICULUM INNOVATION FOR SUSTAINABILITY

The DHET signed a letter of cooperation with CISCO: The activities of such cooperation includes:

- Establishment of Cisco ICT Centres of Excellence
- Alignment with Life Orientation (LO) Curriculum: ICT Component
- Alignments with National Certificates (Vocational): IT&CS
- Development New 4IR NC(V) Stream: IT&CS Robotics
- Development of NATED Curriculum: Computer Practice: (N4 Intro to N6)

CURRICULUM INNOVATION

- Working with CISCO academy to introduce latest developments in ICT in Life Orientation.
 - Introduction to Cyber Security.
 - Introduction to Get Connected.
 - Introduction to Internet of Things (IoT).
- LO and IT& CS lecturers trained.
- Pilot with 13 TVET colleges in 2020 and full implementation in 2021.
- The 13 TVET colleges to become ICT centres of excellence.

CURRICULUM INNOVATION

- Revised report 191 Introductory to N4, N4, N5 and N6 in collaboration with TUT.
- Topics in the ICT for 4IR includes:
 - ICT digital world including e-books and gaming devices.
 - Electronic Notebooks.
 - Network Architecture.
 - Electronic communication.
 - Algorithms in Computational thinking.

NEW CURRICULUM: IT&CS ROBOTICS

- Student will have two choices in IT&CS, specialising in Software Developments or in Robotics

	Level 2	Level 3	Level 4
Compulsory	Electronics and Digital concepts for Robotic	Electronics and Digital concepts for Robotic	Electronics and Digital concepts for Robotic
Compulsory	Robotics fundamentals	Introduction to Robotics	Robotics and industrial automation
Compulsory	Basic Principles of computer programming and literacy	Introduction to technical programming	Technical programming
Optional	Physical Science	Physical Science	Data Computing and Networking
Optional	Mechatronics system	Engineering graphics and design	Applied Engineering Technology
Optional;	Electrotechnology	Mechatronic systems	Computer Integrated Manufacturing

CONCLUSION

The Partnership with Cisco is a much needed intervention for the implementation of 4IR strategies and goals. For sustainability, the following are essential:

- Integration of changes into curriculum and current offering.
- Assessment that is inclusive of this developments for relevance and meeting demands of quality assurance bodies.
- Not additional workload but support for lecturers
- Infrastructure and upgrading of ICT software and hardware
- TVET College project ownership through Champions program

CLOSURE

Thank you

Re a Leboga Dankie Siyabonga

Ha Khensa