PREMIER'S COUNCIL ON SKILLS

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Interim Project Manger

SOLAR PHOTOVOLTAIC SERVICE TECHNICIAN OCCUPATIONAL QUALIFICATION

The purpose of this qualification is to prepare the learner to operate as a service and maintenance technician at a stand-alone installation, which would include domestic roof-top installations.

SARETEC was the first national Renewable Energy Training Centre established at CPUT with funding from the National Skills Fund and opened in 2015.

The QCTO accredited SARETEC as a Skills Development Partner for Solar Photovoltaic Service Technician in 2019

SOLAR PHOTOVOLTAIC SERVICE TECHNICIAN OCCUPATIONAL QUALIFICATION

Curriculum Title: Solar Photovoltaic Service Technician
Curriculum Code: 313109000
Development Quality Partner: merSETA

Curriculum Structure

This qualification is made up of the following compulsory Knowledge and Practical Skill Modules:

Knowledge Modules: 122 Credits   1220 Nominal Hours
Practical Skill Modules: 94 Credits   940 Nominal Hours

This qualification also requires Work Experience Modules:

Work Experience Modules: 128 Credits   128 Nominal Hours

PART QUALIFICATION CURRICULUM STRUCTURE

Part Qualification 1:

Title: Solar Photovoltaic Installer (Stand-alone Installation)

NQF Level 4, Credits 218

Part Qualification 2:

Title: Solar Photovoltaic System Mounter (Stand-alone Installation)

NQF Level 2, Credits 84

Part Qualification 3:

Title: Solar Photovoltaic Technician (PV Farm)

NQF Level 5, Credits 229

Part Qualification 4:

Title: Solar Photovoltaic (PV) Service Technician (Stand-Alone Installation)

NQF Level 5, Credits 245

SOLAR PHOTOVOLTAIC SERVICE TECHNICIAN DERIVED SKILLS PROGRAMS

Renewable Energy Workshop Assistant (REWA)

The qualifying learner will be able to assist in the planning, preparation, installation and maintenance in the renewable energy environments and will know the functioning and operating requirements of hand tools, power tools and measuring and testing instruments

Workplace Essential Skills Program (Wes)

Workplace Essential Skills (WES) training is aimed at helping adults who are employed or seeking employment and require additional essential skills to succeed. It is also available to employers who are experiencing skilled labour shortages and in need of recruitment support.

Learning activities focus on the specific tasks associated with either an individual's current job or desired occupation. Training is customized to respond to the specific needs of the work environment.

SOLAR PHOTOVOLTAIC SERVICE TECHNICIAN DERIVED QUALIFICATIONS

SARETEC and merSETA repackaged the related part-qualifications of the registered Solar Photovoltaic Service Technician into 3 (three) new qualifications:

Occupational Certificate: Solar Photovoltaic Standalone Installer.

Occupational Certificate: Solar Photovoltaic Standalone System Mounter.

Occupational Certificate: Solar Photovoltaic Farm Technician.

The qualification is currently being reviewed by QCTO, from which the team is completing a status update report.

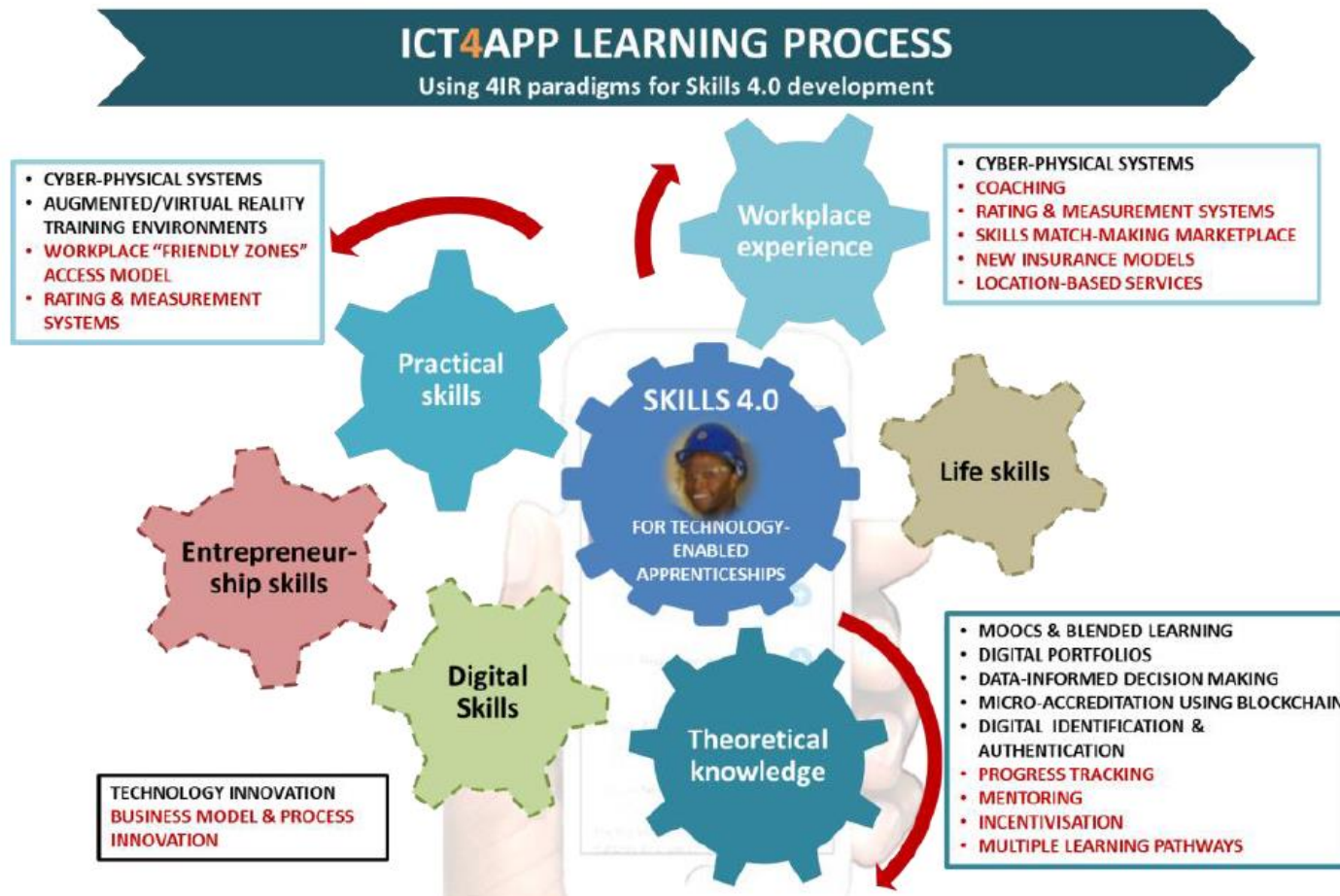## THE ICT4APP APPRENTICESHIP LEARNING PROCESS

- The new occupational qualifications consist of a combination of theoretical knowledge, practical skills and workplace experience.

- During the concept development phase of the project, a further three skills development areas were proposed (Life Skills, Entrepreneurship Skills and Digital Skills) in order to prepare apprentices for the needs of Industry 4.0.

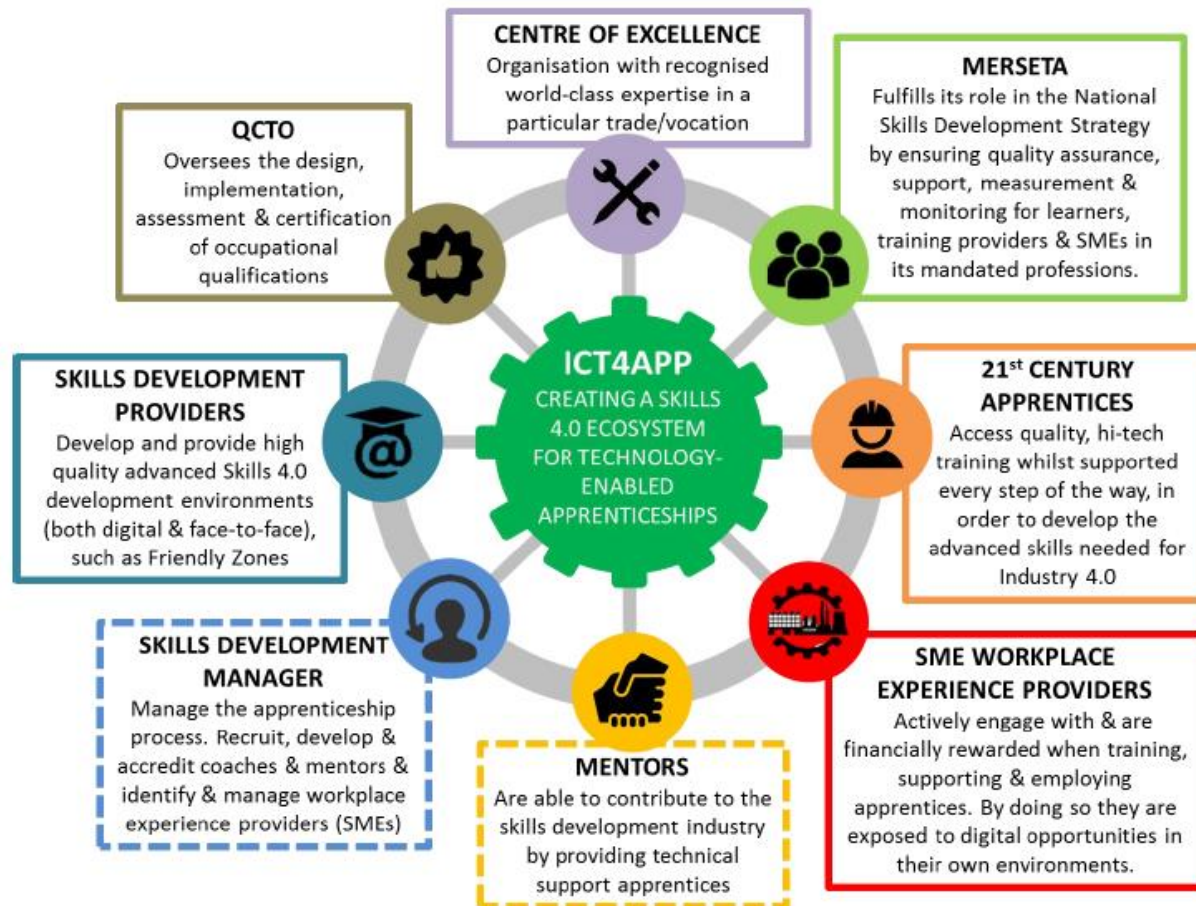- In addition, various technology and business innovations were identified, as part of the ICT4APP Platform.

THE ICT4APP APPRENTICESHIP LEARNING PROCESS

ICT4APP ECOSYSTEM

ICT4APP APPRENTICESHIP TECHNOLOGY
INFRASTRUCTURE DEVELOPMENT AND FUNDING

merSETA
Project owner and main funder.

CSIR Meraka Institute
Development of the ICT4APP

SARETEC
Learning infrastructure and learning content development

Western Cape Government
Funder for development of eLearning content

CANVAS LEARNER MANAGEMENT SYSTEM

- A cloud-based LMS technical solution that is accessible from anywhere with an internet connection and hosted on the web.

- All information is housed (in the cloud) and **learners can log into a web portal to gain access to the platform from any device.**

- Amazon Web Services assisted SARETEC in identifying Canvas LMS for the project.

- Canvas LMS is an open and reliable web-based software that allows institutions to manage digital learning, educators to create and present online learning materials and assess student learning, and students to engage in courses and receive feedback about skill development and learning achievement.

PREMIER'S COUNCIL ON SKILLS

LEARNER MANAGEMENT SYSTEM

CANVAS Student View

Professional Voice Over Artist

CANVAS Student View

Embedded Video

CANVAS Student View

Practical Assessment

Assessor Rubric

313109000-PM-06-PS01: Install the mounting system
Due: no due date - 313109000

0/1 Graded   1/1

Test student

Grading

PM-06-PS01

Criteria	Ratings						Points
Installation tools and personal protective equipment are correctly and safely used during the installation of the mounting system view longer description	5 pts Exceeds Expectations	4 pts Above Expectations	3 pts Meets Expectations	2 pts Below Expectations	1 pts Needs Training	0 pts Does Not Meet Expectations	1 / 5 pts
	Student need assistance with this outcome						
Roof/site is prepared to designer/installer requirements view longer description	5 pts Exceeds Expectations	4 pts Above Expectations	3 pts Meets Expectations	2 pts Below Expectations	1 pts Needs Training	0 pts Does Not Meet Expectations	2 / 5 pts
Structural attachments, module support frame and rack components are mounted according to instructions view longer description	5 pts Exceeds Expectations	4 pts Above Expectations	3 pts Meets Expectations	2 pts Below Expectations	1 pts Needs Training	0 pts Does Not Meet Expectations	4 / 5 pts
Array rails are installed safely and correctly view longer description	5 pts Exceeds Expectations	4 pts Above Expectations	3 pts Meets Expectations	2 pts Below Expectations	1 pts Needs Training	0 pts Does Not Meet Expectations	5 / 5 pts
Weatherproofing is applied according to requirements view longer description	5 pts Exceeds Expectations	4 pts Above Expectations	3 pts Meets Expectations	2 pts Below Expectations	1 pts Needs Training	0 pts Does Not Meet Expectations	4 / 5 pts

PREMIER'S COUNCIL ON SKILLS

Work Host   Logbook

313109000-WM-01-WE01: Work as a team member
Due: no due date - 313109000

0/1 Graded   1/1   Test student

Grading

Some rubric		
Criteria	**Ratings**	**Points**
Act as a team member for some projects in the workplace view longer description	**Comments** ☐ Save this comment to reuse	/ 1 pts
Report on own progress and achievement within target dates and times for specific activities or tasks view longer description	**Comments** ☐ Save this comment to reuse	/ 1 pts
Demonstrate the ability to respond constructively to problems experienced in the workplace and to provide guidance when required view longer description	**Comments** ☐ Save this comment to reuse	/ 1 pts
Job cards view longer description	**Comments**	/ 1 pts

THANK YOU VERY MUCH FOR YOUR TIME