PSET CLOUD

Promising Practice

Implemented by: JET Education Services

Where: South Africa

Status: Launched in January 2019

Summary: PSET CLOUD creates a digital environment that strengthens, integrates, coordinates, improves efficiency and solves challenges in the governance and management of the post-school education and training system in South Africa to enable citizens to make informed education and labour market decisions leading to increased employability.

Overview

JET Education Services is an organization that is able to manage the implementation and evaluation of education interventions, both locally and internationally, particularly on the African continent. In this initiative, JET has partnered with the Manufacturing, Engineering and Related Services Sector Education and Training Authority (merSETA), one of 21 Sector Education and Training Authorities (SETAs) established to promote skills development.

Description

Post-School Education and Training Collaboration and Learning Opportunities and Utilization of Data (PSET Cloud)

There is a big disconnect in South Africa's post-school worlds of learning and work, evident from the unemployment rate, which was at an all-time high of 33.56% at the end of 2022. In response, JET and merSETA have initiated the collaborative programme titled Post-School Education and Training Collaboration and Learning Opportunities and Utilization of Data (PSET CLOUD). The purpose of the PSET CLOUD platform is to establish a digital environment that will strengthen, integrate, coordinate, improve efficiencies and solve challenges in the governance and management of the post-school education and training system.

Assisting citizens to navigate learning and work

PSET CLOUD will assist citizens to navigate the post-school worlds of learning and work. This platform will help employers find suitable and competent candidates, and it will help the public to understand what work opportunities are available, what the formal and non-formal learning requirements are for these work opportunities, as well as where these competencies can be acquired and to guide individuals on their career pathways.

Initiating the programme

The first phase of the programme focused on background research and feasibility studies that culminated in several publications. A high-level theory of change has been developed for the PSET CLOUD programme, reflecting that the programme is designed to result in South African citizens being able to make informed decisions leading to employment.

To make this contribution, the PSET CLOUD seeks to influence the achievement of a long-term outcome where the South African PSET system is aligned to the demand and supply needs of the labour market. Achievement of this outcome will be supported through influencing the achievement of the following intermediate outcomes:

- citizens/learners utilize real-time data to make learning and career decisions; and
- PSET stakeholders utilize real-time data to develop their plans and projects.

A two-day virtual conference, Digitrans 2022, to introduce the PSET CLOUD and the Minimum Viable Product (MVP) to an international and local audience and initiate discussions on issues such as interoperable platforms, self-sovereign identity, credentials and micro-credentials, among others, was held at the end of February 2022.

Objectives

The long-term objectives are to create a digital ecosystem where:

- PSET stakeholders utilize real-time data and deliver their mandates based on high quality plans and programmes;
- Citizens and learners have easy access to their credentials, while government and agencies facilitate access through the PSET CLOUD;
- There is strong institutional and stakeholder buy-in to enable data sharing and use of the PSET CLOUD platform;
- There is identification of policy gaps with key partners (policy-makers) and commitments/plans made to address the gaps are easier; and
- There is an increase in South African citizens and learners who have real-time data to make career decisions.
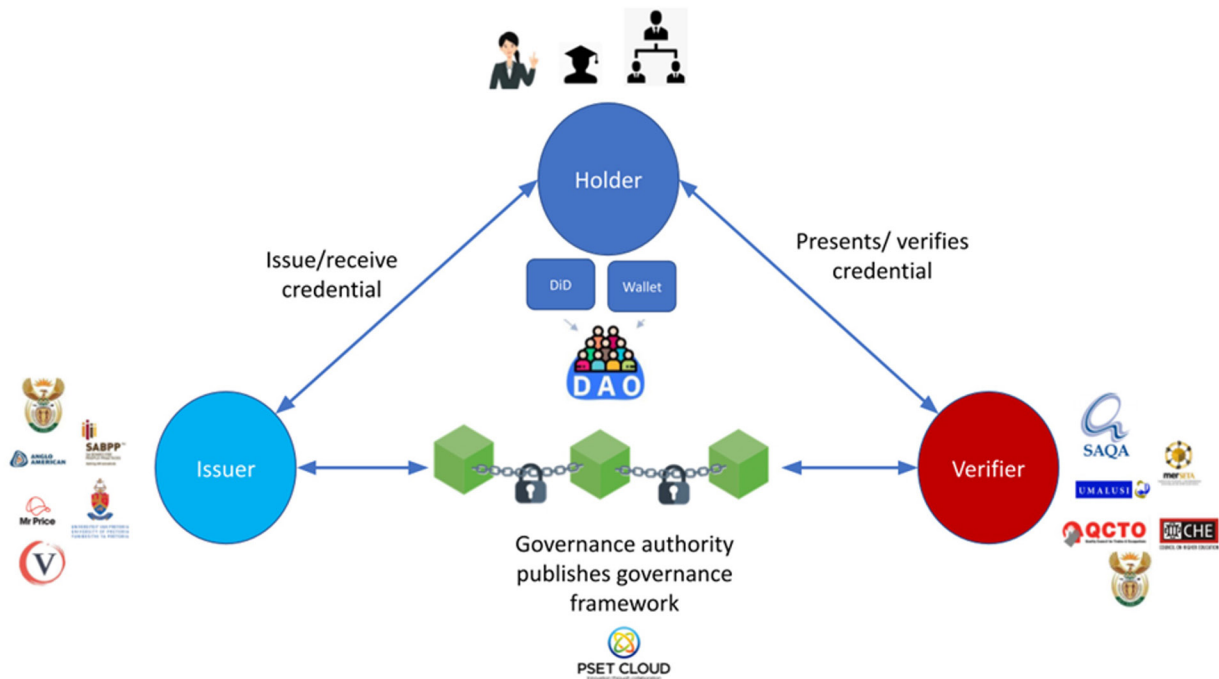
Key target user groups include:

- Citizens;
- Lifelong learners;
- Industry employers;
- Government institutions; and
- PSET providers.

Changing educational and employment needs in South Africa

The existing PSET landscape is static and unreceptive to changing educational and employment needs of the country. Largely, citizens have limited control over their own data and limited ability to accumulate learning across formal, non-formal and informal instances. The system relies heavily on manual processes that are costly and time consuming and excludes certain key partners that are essential for a well-coordinated system. The PSET CLOUD is an innovative way of addressing these deficits. Through an interoperable data flow, the blockchain-based platform will allow for:

- mapping and visualization of demand-side trends;
- opportunity matching;

- credential recognition; and
- the development of recommended learning pathways.

Three key principles

The PSET CLOUD works through three key principles. First, interoperability: the ability to exchange and meaningfully interpret information across systems in order to produce useful results. In other words, the PSET CLOUD brings "like-minded" systems together to provide the insights and information individuals, institutions and government need to successfully navigate the worlds of education, skilling and work.

Second, self-sovereign identity (SSI): SSI leverages blockchain technology, digital wallets and data mandates to give individuals control of their data, allowing them to grant third parties explicit access to a specific well-defined set of their own data. Trust between the issuer of a credential and the verifier of a credential is established through automated processes based on an immutable transaction using blockchain, thus improving efficiencies, reducing or eliminating fraud, and ultimately emphasizing the individual as the "owner" of their data.

Third, credential fluency: Every person is on a lifelong learning journey, but not all learning takes place in formal education. Credential fluency is the idea that informal and non-formal learning can be seamlessly integrated into the formal learning gained in schools, TVET institutions and universities. Credential fluency can be realized through the user-centric approach, transition to digital qualifications and credentials, improved data interoperability, and closer alignment between learning and the world of work enabled by the PSET CLOUD.

Outcomes and impact

Currently, the platform has access to 4,600 companies with 550,000 employees through the merSETA as an early adopter and over 2 million learners who can potentially be credentialed through the South African Qualifications Authority, annually.

In the medium term, the platform expects to garner at least 100,000 users. In the long term, it is envisaged that the PSET CLOUD will see at least a 2% uptake nationally by enrolled learners from the various learning institutions in South Africa's PSET landscape; the figure currently stands at around 2.5 million learners, of which 29% are in the TVET space, and at least 3% of the populace are not in employment, education or training (NEET), currently standing at 7.7 million. The success of these first stages will lead to a scaling up of the project across all 21 Sector Education and Training Authorities and increase numbers by more than 10% incrementally each year.

This practice targets a significant impact on the entire community. With the implementation of the platform, the expected impact is:

- Increased and improved discourse among citizens, learners, government officials and stakeholders about data rights and the importance of credentialing;
- Improved cross-sectoral collaboration and coordinated action to enhance data access and data use across the PSET platform; and
- Improved career guidance for all citizens and quick and efficient opportunity matching across both demand and supply sides of the labour market.

Challenges

Clarifying functional requirements for the technology stacks

One of the challenges faced was related to clarity in the functional requirements for the technology stacks to be used in developing the platform. The development of technology-based platforms requires internal capability and capacity to decompose functional requirements that clearly capture capabilities of the platform. Internal capacity was improved by onboarding a solutions architect and business analyst to ensure all software development processes were followed and quality assured.

Minimizing delays in development and delivery of a Minimum Viable Product

Another challenge concerns the delays in development and delivery of a Minimum Viable Product (MVP). An agile development approach that allows for delivery of an MVP in the quickest turnaround time has been purposively adopted. The conceptual architecture is developed internally and handed over to the service provider with a clear technology stack for incorporation.

Deciding a governance structure and legal form

A final challenge was deciding on the appropriate governance structure and legal form of the entity to be adopted in ensuring continuity and sustainability of the initiative. A multi-stakeholder advisory group (Launch Group) was put in place to advise and guide delivery of the programme. Its transitionary role is to ensure governance mechanisms are in place and to ultimately recommend a legal form that can be adopted going forward.

Insights

Adapting to changes in the PSET and world of work ecosystem requires new thinking around qualifications and qualification frameworks. One of the big challenges to transition into the job market is the individual's ability to identify and convey their competencies to employers. An evolution in the credentialing ecosystem will allow individuals to obtain more skills and communicate them clearly and in a verified manner to future employers. This implies the need to shift from thinking about developing programmes to developing systems of professional credentials aligned with different career outcomes over the career lifecycle.

Next steps

JET Education Services is committed to work on the following plans that are already in place:

- Strengthening communication and advocacy efforts to ensure maximum visibility and buy-in;

- Finalizing a suitable legal form as well as a suitable governance model for the PSET CLOUD;

- Delivering an MVP and an SSI solution for the PSET CLOUD that will allow onboarding early adopters and piloting of the platform; and

- Establishing partnerships that allow for an interoperable data flow into the PSET CLOUD.