



PSET CLOUD
Innovation through collaboration

15 December 2022

CALL FOR EXPRESSIONS OF INTEREST

Subject: The development of a Minimum Viable Product (MVP) for the PSET CLOUD

JET Education Services (JET) & the Manufacturing, Engineering and Related Services Sector Education and Training Authority (merSETA) will be issuing a solicitation for the **The development of a Minimum Viable Product for the PSET CLOUD in the week of the 2nd - 9th January 2023**. JET and the merSETA are requesting expressions of interest (EOIs) from eligible and qualified firms. The development of the MVP is expected to run from February to June 2023.

Objective of Consultancy Services

Introduction

JET Education Services (JET) and the Manufacturing, Engineering and Related Services Sector Education and Training Authority (merSETA) have initiated the Post School Education and Training Collaboration and Learning Opportunities and Utilisation of Data (PSET CLOUD) programme that seeks to develop an integrated national digital ecosystem which is interoperable, can be used for effective skills planning and provisioning, and puts information in the hands of citizens and other stakeholders so they can make informed decisions about education, training and career opportunities.

The purpose of the programme is to enable the government and citizens to make informed decisions relating to education, training and work. The programme seeks to ensure that data sets are interoperable, well synchronised and used effectively as sources of information for planning and improving efficiency in the PSET system as well as for individual decisions. In pursuit of this goal, the programme will establish a digital ecosystem that will strengthen, integrate, coordinate, improve efficiencies and solve challenges in the governance and management of the PSET system.

The PSET CLOUD programme has many different workstreams including governance, partnership, advocacy, monitoring and evaluation, and the development of an interactive platform, all of which support the achievement of the PSET CLOUD goals. This call for expressions of interest pertains to the development of an interactive platform which will serve as a main point of contact between learners, jobseekers, citizens, employers, education & training entities, and other stakeholders in the value chain.

Background

The service provider will be required to **build from scratch and complete the development of the Minimum Viable Product (MVP)** for the PSET CLOUD. It is mandatory that the service provider has experience working with the stipulated technology stack in order to be able to build from it; however, if the service provider can suggest new and additional technology stacks that could help develop the required functionality while meeting the timelines stipulated, then the service provider is welcome to use a framework of its choosing. It's important to note that the development of the PSET CLOUD MVP is happening in parallel with the development of a self- sovereign identity (SSI) solution for the PSET CLOUD MVP, and the solution is being developed using a Sovrin framework. It would thus be beneficial for the service provider to have an understanding of blockchain technology and SSI in order to seamlessly integrate with the work completed by the SSI team.

The proposed PSET CLOUD platform has a number of key focus areas:

- 1) Mapping and visualisations of demand-side trends
- 2) Opportunity matching
- 3) Credential recognition
- 4) The development of recommended learning pathways and
- 5) The recognition of prior learning (RPL)

The SSI project is working with some aspects of credential recognition and with the development of recommended learning pathways, and a long-term vision for the platform is also to provide solutions for the recognition of informal and non-formal learning. The MVP service provider is expected to leverage these efforts as well as develop advanced solutions for these components to create a full solution in these areas.

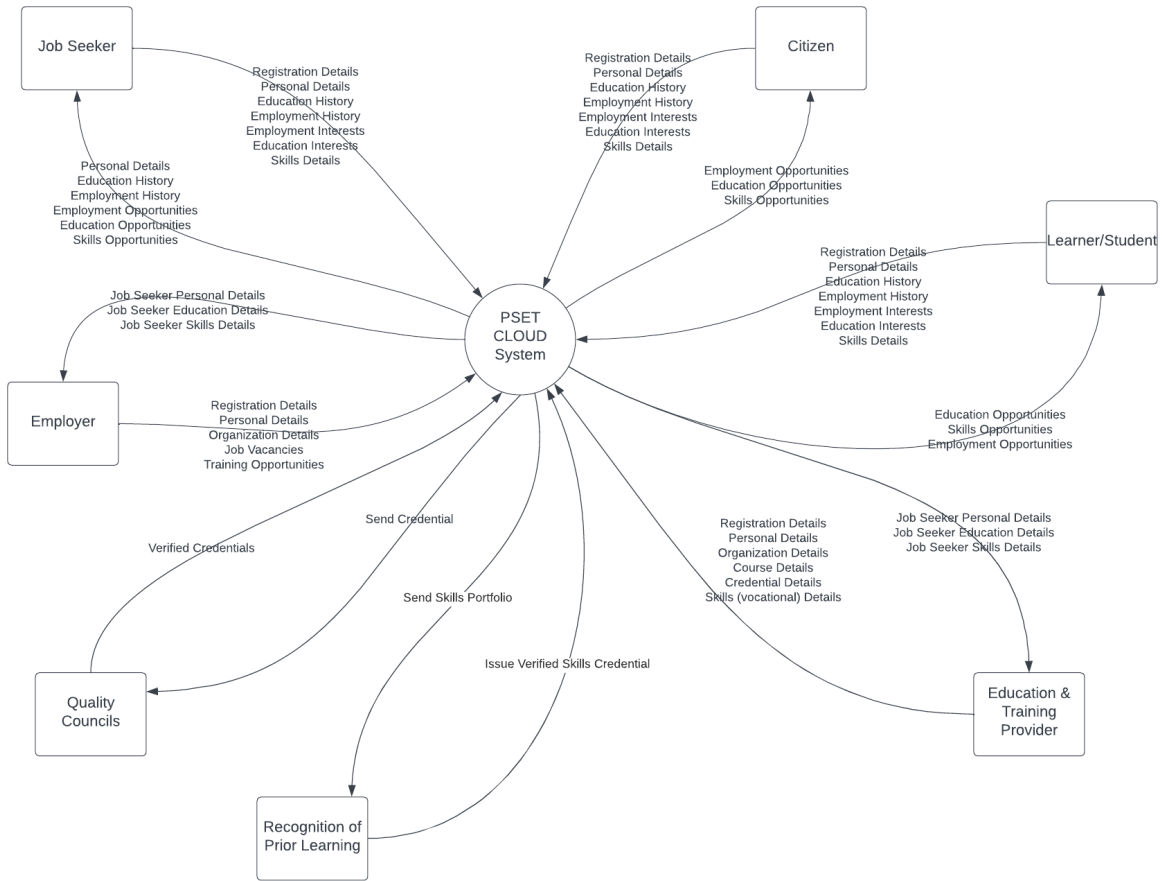
The MVP service provider should provide a fully functional MVP which leverages *ideal as well as actual* solutions, for example, what can be achieved once interoperability of systems and integration is complete. This MVP will include elements such as direct access to trusted third-party data; the verification of credentials (see the SSI component) as well as the storage, retrieval and sharing of verified credentials; detailed trends mapping (for an example of the kinds of trends and insights we are looking to demonstrate see [the skills OVATE portal in Europe](#)); and recommended education and work opportunities based on both user profiles and current industry trends (for example, we would ideally want to be able to inform PSET CLOUD members working in or training to be in the automotive sector that there is a trend towards demand for hybrid vehicles and recommend courses that can train them on this). It would also be beneficial if the MVP could demonstrate how RPL would be factored into stored credentials, but note this aspect is not expected to appear in the current scope of the MVP and is envisioned as a longer-term development. In short, the MVP should demonstrate what is possible, with those aspects which will then be built out for the MVP clearly indicated. Due to the complexity of the project, the development of the MVP will be an iterative process using agile methodology; thus it is important for the service provider to be familiar with this methodology.

The MVP development process itself will work towards the MVP within the limitations of what we can currently achieve. For example, we do not currently have real-time data or direct data access, so the MVP will leverage the available data of partner organisations such as merSETA, which includes skills requirements data collected annually and data on learnerships, to build the supply and demand insights. Where necessary, dummy data can be used to test various functionalities (for example, opportunities matching); in this case sufficient quantities of dummy data should be used to demonstrate the system. Currently, data is ingested into the system manually and this needs to be expanded. Ideally, the system should have multiple ways of ingesting data into it, such as:

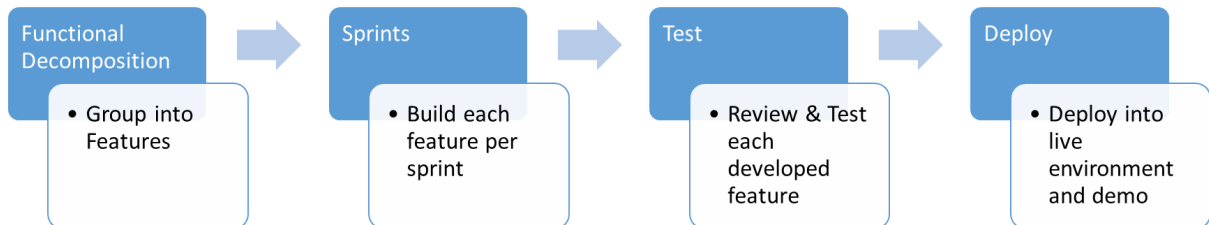
1. APIs
2. Message brokers
3. Bulk uploads
4. Web scraping

A first priority is that the MVP must be launch-ready, with desirable functionalities (Real-time trends analysis; Opportunity matching; Recognition/verification/storage and retrieval of credentials including informal learning credentials; Development of learning pathways) that will encourage citizens, higher education institutions and employers to join and contribute their own data to the system. This contributed data must then feed back into the insights we are able to provide on the system. We are looking for a full, launchable solution that includes all aspects necessary to interact with the platform, including UX/UI. To get an overview of the proposed MVP platform, please click this link to watch the short video. (<https://psetcloud.org.za>)

PSET CLOUD - Business Context Diagram



Development-to-Deploy Approach



The above approach will assist in not only streamlining the development process, but also speed-up the develop-to-market of the MVP platform. Each sprint will ensure that there is a ready-to-test-and-demo feature.

Qualification Criteria

- Understanding of labour market intelligence
- Understanding of PSET Industry

The service provider must have a balanced team that has key competencies to cater for the various components of the project. A good ratio of senior to junior developers is important. The team must have demonstrable prior experience in executing a project of this size and technical complexity and must comprise, at minimum, members with the following competencies:

- Artificial Intelligence (Machine Learning)
- Data Integration/Enterprise Application Integration
- Blockchain Development (specific focus on Self Sovereign Identity)
- Quality Assurance Automation Engineering
- DevOps Engineering
- Cloud Infrastructure Engineering (AWS)
- Agile Project Management

We are cognisant that one company may not have all these competencies; in such a case, should the service provider opt to enter into a joint venture or similar arrangement, compliance documents must be furnished for every company proposed to be involved in said arrangement. To expand on the availability of expertise, we are opening the development of the MVP to international service providers that have the requisite competencies.

The detailed Scope of Work (SoW) will be given under the Request for Proposal document that will be sent to the firms who react to this EOI call.

Submission Process & Details

Interested firms/organisations should forward their EOI by e-mail to Boitumelo Manci, boitumelo@jet.org.za.

Please complete and submit the below form & table (Company Details and Experience).

NOTE: Please do not send any offers or price quotations as a response to this call for EOI.

Subject of email should read: EOI - PSET CLOUD MVP

Closing date of this EOI: 04 January 2023

Company Details form

Please provide an EOI on a company letterhead with the following information (in the case of a joint venture, a joint expression can be made but all companies need to be listed). The EOI must be signed by a duly authorised person.

1. Name of company
2. Type of company (Partnership/ Pvt. Ltd/Public Ltd/ Public Sector/ NGO)
3. Date of company registration / commencement of business (Please specify)
4. Country of registration
5. Registered office/place of business
6. Telephone no; e-mail address
7. Name of authorised contact person/designation
8. Name of authorised local agent (where applicable)
9. Total number of staff
10. Number of regular professional staff

(Provide a company profile of no more than 2 pages with a description of the organisation's background, and, if applicable, for each joint venture partner for this assignment.)

Experience Table

Name of Assignment	Location	Value of contract	Year completed	Client	Description of work carried out