



Federated States of Micronesia  
**National Department of Education**  
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**Call for Letter of Interest  
for  
Senior Full Stack Developer and Software Architect**

Position	Senior Full Stack Developer and Software Architect (International)
Project budget (maximum)	USD 70,000
Nature of the assistance	Mostly remote and partially on site
Tentative Duration	1 June 2020 to 30 September 2020 (intermittent).
Deadline for Submission of Letter of Interest	<b>28 May 2020.</b>
Implementing Agency	National Department of Education, FSM
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### **Background**

In order to improve Education Management Information System (EMIS) a joint-project<sup>1</sup> was launched in the Federated States of Micronesia (FSM) in FY 2016/17. Through this joint project, an integrated system has been set-up by developing a platform for EMIS, equipping National Department of Education (NDOE) and State Department of Education (SDOE) with appropriate hardware and software upgrades, and has already digitized most of the historical data that were available in different formats and at the different State departments. Moreover, through the joint initiatives, capacity of school principals and data managers at SDOE has been built by giving them a thorough orientation on data management and hands on training to the data managers about the integrated platform called FedEMIS.

FedEMIS has laid down a platform that can cater basic data requirements at the national and State Department of Education. However, the needs in each State Departments vary to some extent and hence the need to incorporate them in the FedEMIS is crucial. While FedEMIS has been initially designed largely to addresses national interests and requirements<sup>2</sup>, there has been requests for specific data requirement from SDOEs to be included in the EMIS. Notably, such features as a new revised School Accreditation Framework to be supported into the EMIS, an improved Annual School Census Workbook, a budget module to be exposed into the EMIS among others.

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<sup>1</sup> Technical Assistance was received from the US government under the Supplementary Education Grant (SEG) and ADB's regional grants for National Educational Planning and Management (NEPM).

<sup>2</sup> JEMCO recommended 21 education indicators to be covered by the FedEMIS, however, it was not possible at this stage to include all 21 indicators. Hence, FACSSO agreed to go ahead with the indicators that are possible in terms of its cost and feasibility.

Meanwhile, FSM has recently made an agreement with the Asian Development Bank for the implementation of a six-year long project which broadly aims to Improving Quality of Basic Education (IQBE) in the FSM. The primary outcome of the IQBE is to improving student's learning achievement in reading to 50%, from its baseline, by 2023. This will require regular collection and reporting on student performance data. Similarly, FSM as a signatory to Sustainable Development Goal has commit to achieve SDG targets by 2030.

In view of all of these and also considering the nature and complexity involved in the development of an efficient EMIS, NDOE has already draft a five-year master plan for EMIS for the FSM. The Master plan has laid down some initial thoughts on having an integrated model of education data management system that incorporates State specific data needs by having State's own sub-platform that are almost like independent but are integrated within the main EMIS.

Hence, the NDOE intends to solicit Letter of Interest (LOI) from qualified and competent individuals to provide technical assistance to provide support in refining and consolidating the FedEMIS by developing a robust system that is capable of managing State and school level needs as well as making it a one integrated system.

### **Objective**

The objective of this solicitation is to provide continued assistance to NDOE to support the on-going development of an integrated FedEMIS that incorporates both National and State DOE's requirements, including building capacity of the National and State DOE's data managers so that they are competent enough to manage FedEMIS independently.

### **Scope of Work**

The consultant will be required to be proficient in achieving the **tasks** outline in the following addendum:

- indicators-and-data-warehouse-srs-FY2019-20-v1.docx
- scholarship-srs-FY2019-20-v1.docx
- school-accreditation-revised-framework-backend-srs-FY2019-20-v1.docx
- school-annual-census-workbook-srs-FY2019-20-v1.docx
- schools-srs-FY2019-20-v1.docx
- software-features-srs-FY2019-20-v1.docx
- software-tooling-srs-FY2019-20-v1.docx
- special-education-srs-FY2019-20-v1.docx
- students-srs-FY2019-20-v1.docx
- teachers-srs-FY2019-20-v1.docx
- users-groups-access-controls-srs-FY2019-20-v1.docx

All addendum above (among others) can be found at <https://drive.google.com/drive/folders/1eOmBbklfaqDwoRPMfsHagu3qKCq7jlC-?usp=sharing>

In particular, all the task of high priority are the ones sought out for this work.

All tasks within the above addendum software requirements specifications are completed on a best effort basis. Challenges sometimes can hinder the completion of some tasks which would then need to be shifted in lower priority requirements and pushed to a future phase.

## **Outcome**

- Issues with previous contracts deliverables are fixed
- A new Scholarship module is developed
- The school annual census workbook tool is improved
- The Special Education module is upgraded with previous year feedback
- New general features are developed along with various new warehouse enhancements
- On-going support on existing and new features has been provided to the local National Department of Education (NDOE) technical team.
- Assessment (Exams) integrated into the FedEMIS

## **Budget and Timeframe**

Maximum budget available for this project is USD70,000. Tentative timeframe is between 1 June 2020 to 30 September 2020. Consultant should provide his/her daily rates and estimated schedule of intermittent work. This should however remain flexible to the extent possible as this will be finalized jointly with the NDOE team once the contract is awarded.

All the work can be done remotely due to the world travel restrictions cause by the coronavirus pandemic

## **Reports To**

Consultant reports to the National Department of Education (NDOE) technical team. Consultant must confirm with the NDOE team before proceeding with any of the work as the team will define priorities based on the needs on the grounds here in the FSM and its states.

## **Required experience**

A minimum of 30 years of experience in the following technologies:

- SQL environments with MS SQL Server in particular
- The C# programming language including related compiling, build tools, IDEs, etc.
- The Javascript programming language (and more recently the TypeScript superset)
- Javascript charting libraries (plottablejs/d3js in particular is an advantage)
- HTML/CSS
- AngularJS framework
- Material design and AngularJS Material
- Excellent English communication skills
- Education data and Statistics
- Strong mathematics background
- Work in developing countries, small Pacific Island nation more specifically
- Knowledge of .NET framework, C# programming language
- Knowledge of Javascript and TypeScript
- Knowledge of HTML/CSS

**Desirable experience:**

- Basic knowledge of JasperReport, JasperSoft Studio and JasperServer and their RESTful APIs

**Submission of Letter of Interest (LOI):**

NDOE encourages submission of Letter of Interest (LOI) from qualified and competent individuals that meet the basic requirements. Submit your LOI including your detailed CV, proposed and expected daily rates to the National Department of Education secretary Kalwin Kephias ([kkephas@national.doe.fm](mailto:kkephas@national.doe.fm)), Wayne Mendiola ([wmendiola@national.doe.fm](mailto:wmendiola@national.doe.fm)) and CC the assistant secretary Quincy Lawrence ([Quincy.Lawrence@national.doe.fm](mailto:Quincy.Lawrence@national.doe.fm)) **no later than 28 May 2020**.