REQUEST FOR QUOTATION (RFQ)

FOR SERVICES

Project Title:	**Consultancy work to develop SDMX visuals – Drupal plugin**
Nature of the services	Development of a Drupal plugin to generate visualizations for SDMX datasets
Location:	Home
Date of issue:	24/11/2022
Closing Date:	11/12/2022
SPC Reference:	22-4872

Contents

Part 1: INTRODUCTION

1.1 About the Pacific Community (SPC)

The Pacific Community (SPC) is the principal scientific and technical organisation of the Pacific region, established by treaty in 1947 with the signing of the *Agreement Establishing the South Pacific Commission* (the Canberra Agreement).

Our unique organisation covers more than 20 sectors and is renowned for knowledge and innovation in such areas as fisheries science, public health surveillance, geoscience and conservation of plant genetic resources for food security.

For more information about SPC and the work that we do, please visit our website: https://www.spc.int/.

1.2 SPC's procurement activities

SPC's procurement activities are guided by the principles of high ethical standards, value for money, open competition and social and environmental responsibility and are carried out under our Procurement Policy.

For further information or enquiries about SPC's procurement activities, please visit the procurement pages on our website: https://www.spc.int/procurement or email: procurement@spc.int

1.3 SPC's Request for Quotation (RFQ) Process

At SPC, procurement valued at more than EUR 2,000 and less than or equal to EUR 45,000 requires an evaluation of at least three quotations to determine the offer that provides the best value for money through a Request for Quotation (RFQ) process.

This RFQ sets out SPC's requirements for a project and it asks you, as a bidder, to respond in writing in a prescribed format with pricing and other required information.

Your participation confirms your acceptance of SPC's conditions of participation in the RFQ process.

Part 2: INSTRUCTIONS TO BIDDERS

2.1 Background

SPC invites you to submit a quotation to deliver the services as specified in Part 3.

SPC has compiled these instructions to guide prospective bidders and to ensure that all bidders are given equal and fair consideration. Please read the instructions carefully before submitting your bid. For your quotation to be considered, it is important that you provide all the prescribed information by the closing date and in the format specified.

2.2 Submission Instructions

You must **submit your quotation and all supporting documents** in English or in French and as an attachment to an email sent to **Elodiel@spc.int with copy to sandrag@spc.int** and with the subject line of your email as follows: **Submission RFQ22-4872**.The email should also be copied to **rfq@spc.int.**

The supporting documents expected in this RFQ are:

- The Conflict-of-Interest Declaration form completed
- Technical proposal and financial bid forms completed and signed including a proposed workplan/methodology and timeframe

- A Curriculum Vitae

Your submission must be clear, concise and complete and should only include a quotation and information that is necessary to respond effectively to this RFQ. Please note that you may be marked down or excluded from the procurement exercise if your submission contains any ambiguities or lacks clarity.

Bids will be evaluated on the basis of information received by **Midnight New Caledonia Time** on **11/12/2022**.

2.3 Evaluation & Contract Award

Each quotation validly received will be assessed against the evaluation criteria matrix set out in Part 4. Any changes in the evaluation criteria will result in the RFQ process being re-issued.

SPC may award the contract once it has determined that a bidder has met the prescribed requirements and the bidder's proposal has been determined to be substantially responsive to the RFQ documents, provide the best value for money (highest cumulative score) and best serve the interests of SPC.

In the event of a bid being accepted, procurement will take place under SPC's General Terms and Conditions of Contract and depending on the value or nature of the procurement, the award will be made by issuing a purchase order or a signed and dated contract, or both.

2.4 Key Contacts

Please contact SPC should you have any doubt as to what is required or if we can help answer any questions that you may have.

Mr Thomas Tilak – Senior Web Developer will be your primary point of contact for this RFQ and can be contacted at thomat@spc.int. You should copy any communications into **rfq@spc.int**.

Details will be kept of any communications between SPC and bidders. This assists SPC to ensure transparency of the procurement process. While SPC prefers written communication in the RFQ process, at any point where there is phone call or other conversation, SPC expects to keep a file note of the exchange, with all forms of communication with prospective bidders to be retained as source documents for the procurement of the services.

2.5 Key Dates

Please see the proposed procurement timetable in the table below. This timetable is intended as a guide only and while SPC does not intend to depart from the timetable, it reserves the right to do so at any stage.

STAGE	DATE
RFQ sent to potential vendors	24/11/2022
RFQ Closing Date	11/12/2022
Award of Contract	16/12/2022
Commencement of Contract	20/12/2022
Conclusion of Contract	31/03/2023

2.6 Legal and compliance

Confidentiality: Unless otherwise agreed by SPC in advance or where the contents of the RFQ are already in the public domain when shared with the bidder, bidders shall at all times treat the contents of the RFQ and

any related documents as confidential. SPC will also treat the information it receives from the bidders as confidential.

Conflict of interest: Bidders must take all necessary measures to prevent any situation of conflict of interest. You must notify SPC in writing as soon as possible of any situation that could constitute a conflict of interest during the RFQ process. If you have any familial connection with SPC staff, this must be declared, and approval will then be sought for you to engage in the RFQ process. **In support of your response to this RFQ, you must submit to SPC the Conflict-of-Interest Declaration form available on our procurement page website:** https://spc.int/procurement.

Breach of this requirement can result in SPC terminating any contract with a successful bidder.

Currency, validity, duties, taxes: Unless specifically otherwise requested, all proposals should be in Euro and NZD and must be net of any direct or indirect taxes and duties, and shall remain valid for 120 days from the closing date. The successful bidder is bound by their proposal for a further 60 days following notification they are the preferred bidder so that the contract may be awarded. No price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted at any time during this period.

No offer of contract or invitation to contract: This RFQ is not an offer to contract or an invitation by SPC to enter into a contract with you.

Privacy: The bidder is to comply with the requirements of applicable legislation and regulatory requirements in force for the use of personal data that is disclosed for the purposes of this RFQ. SPC will handle any personal information it receives under the RFQ in line with its Privacy Policy, and the Guidelines for handling personal information of bidders and grantees.

Warranty, representation, assurance, undertaking: The bidder acknowledges and agrees that no person has any authority to give any warranty, representation, assurance or undertaking on behalf of SPC in connection with any contract which may (or may not) follow on from this RFQ process.

2.7 Complaints process

Bidders that consider they were not treated fairly during any SPC procurement process may lodge a protest. The protest should be addressed to complaints@spc.int. The bidder must provide the following information: (1) full contact details; (2) details of the relevant procurement; (3) reasons for the protest, including how the alleged behaviour negatively impacted the bidder; (4) copies of any documents supporting grounds for protest; (5) the relief that is sought.

Part 3: TERMS OF REFERENCE

A. Background/context

Statistics for Development Division supports statistics production and dissemination in the region. It uses different ways to disseminate and advertise statistic data online. SDD provides assistance and technical support to our members for Drupal and Wordpress platforms.

The storage and dissemination of statistical data is handled by an open-source platform .stat suite. Every component that needs to pull data can connect to its API which delivers data in the Statistical Data and Metadata eXchange (SDMX) standard.

To facilitate data dissemination through web pages, a plugin has been developed for Drupal to generate charts from SDMX datasets. This plugin needs to be redesigned with a more user-friendly interface to be used by non-developers.

B. Purpose, objectives, scope of services

The main goal of this work is to develop a Drupal plugin that will generate a chart from a data source accessed through an API. Data is pulled out from a SDMX-JSON endpoint and the charts, built with a third-party JavaScript library are embedded in Drupal pages.

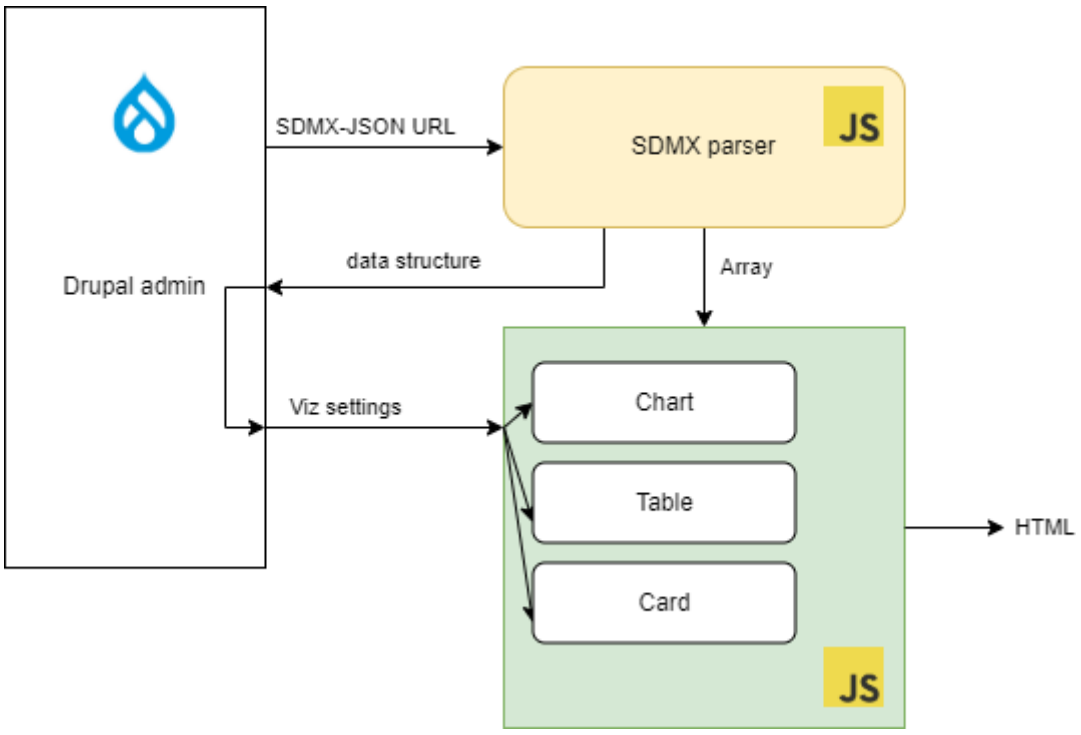


Figure 1: Overall schema

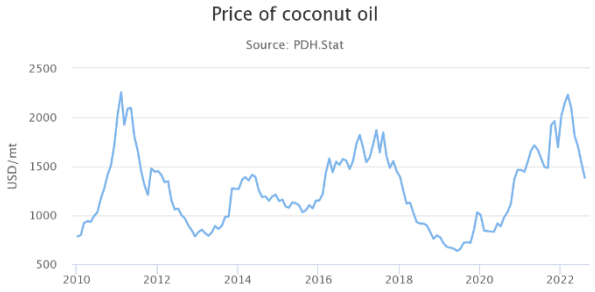
The plugin will provide to the Drupal logged-in users a friendly interface where one can:

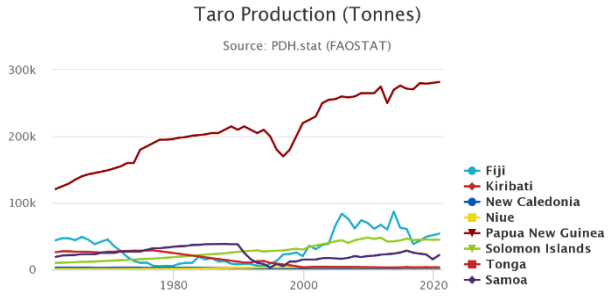
- Input a SDMX-JSON URL
- Choose between different type of visualization available for the selected dataset (it can differ according to the dimensions number and type) and customize the render for each visualization:
    - Single value in a card
    - Table
    - Charts

For advanced users, the plugin will also propose a way to directly access the chart configuration with an input text that could contain configuration object or even some JavaScript code. It will open an access to the charts' library API. The advanced user can also perform some simple operation on the input data (filtering, enrichment, …).

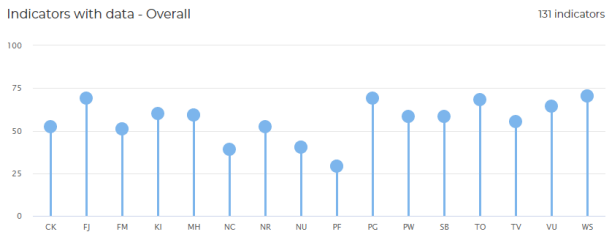
On Drupal admin panel, the plugin will propose to the user to pick a visualization type and customize the final rendering:

- For card values, the plugin let user select a single value for each dimension to extract a single observation
- For tables, the user will be able to select the 2 dimensions that will be displayed as rows and columns and select a value for the remaining dimensions.
- Regarding charts, the user will be able to chose between a list of chart types:
    - Timeseries: line chart with time on x-axis and observation value on y (this one will be made available only if the SDMX dataset contains a time dimension). The chart can have one or multiple lines. The form lets the user select the time dimensions for x-axis and fix a value for every other dimension (1 single line) or chose one of them to be used by the graph (N lines).

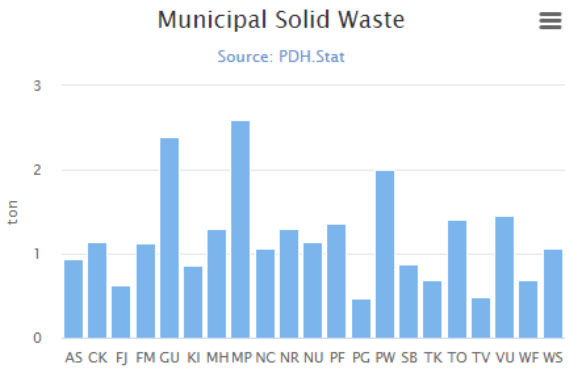


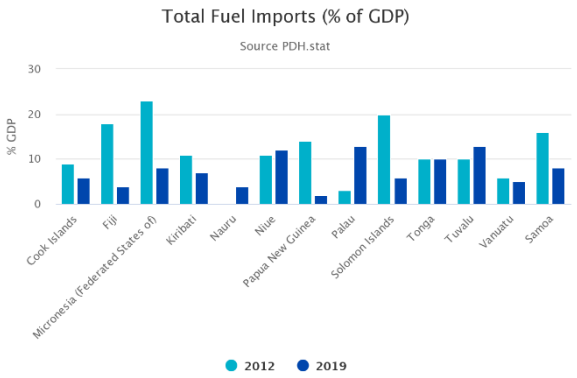


    - Lollipop: the user can select the dimension to use as x-axis and the y-axis will show the observation values.

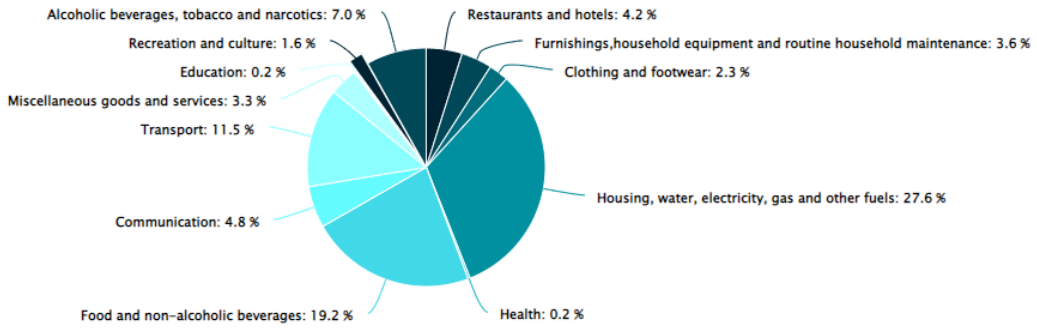


    - Columns: for single column charts, the user will select as for lollipop charts the dimension to display as x-axis and the observation values will be displayed on y-axis. The user can also have multiple columns if needed, another dimension can be selected then, and its values can be filtered (on the following example, the period is used as 2nd dimension but only 2012 and 2019 years are selected).

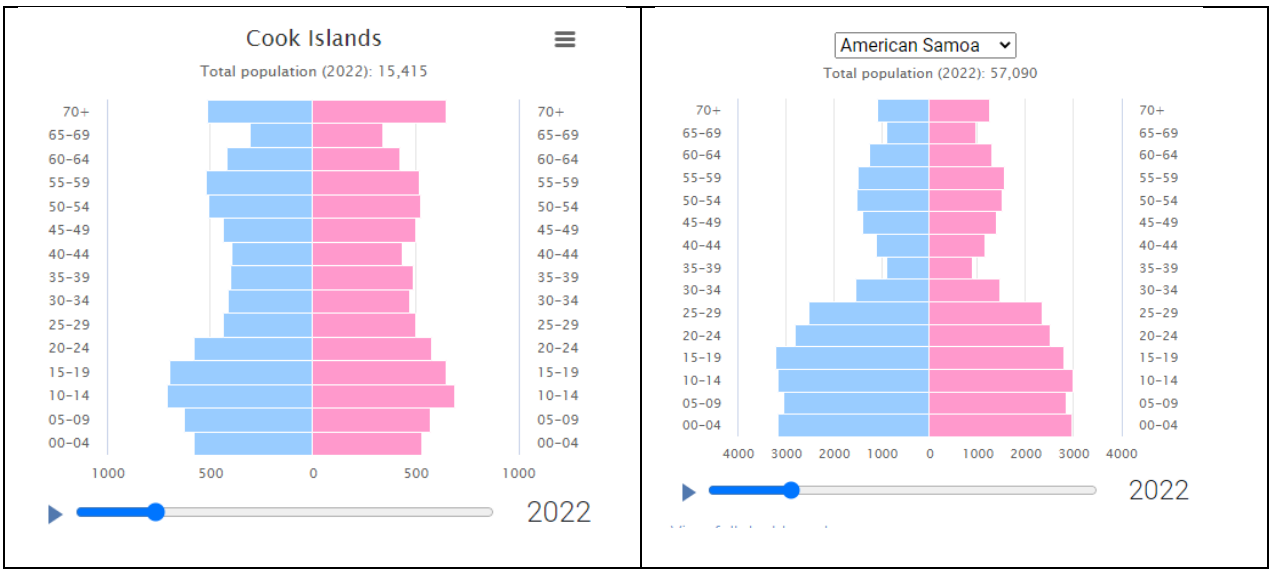




- Donut/Pie: the user will select the dimension to be used as input to create the pie slices.



- Population Pyramid: Population pyramid is built with 2 bar charts presented back-to-back. The contractor should propose a way to easily generate a population pyramid from the population dataset. The user will either select a country and a year and a single pyramid will be generated, select only a country and an interactive timeline is added to allow the selection of the year or select a year and a pick between countries with a combo box.



For all these charts, the colours used, axis titles and tooltip formatting should be customizable directly in the Drupal admin panel.

The SDMX-JSON format is not a format "ready for display", thus a parser component (see SDMX parser in Figure 1) will be developed to convert SDMX data to arrays that can be consumed by charts libraries. This component will be developed as a dependency (an external library) that can be reused in a different context. It will be developed following the state-of-the-art good practices and will be accessible as modules using the syntax:

```
import { parseSDMX } from 'sdmx_library';
```

Its main function is to parse the SDMX-JSON and convert it to an array of observation with all the dimensions/annotations described in the "structures" section of SDMX-JSON.

The plugin will create a visual as a Block that can be inserted in a Drupal region.

The developed plugin is meant to replace this plugin and the contractor will be able to use some of the concepts already developed here, the main goal remains to improve the UX design on the backend form and to develop a JavaScript parser.

The plugin will be made available with a GNU GPLv3 licensing with its source-code hosted on the SPC GitHub repository.

C. Timelines

A total of 33 working days are required under this contract, from the signature of the contract to the 27th of February 2023.

	Tasks	Outputs	Estimated deliverable time	No of days
1	Analysis of current state/Specification of needs/Designing	Detailed specification including mock-ups for Drupal back-office forms.	13.01.2023	3 days
2	Development of a SDMX parser JavaScript library	Source code of a JavaScript library that parses a SDMX-JSON API response.	02.02.2023	10 days
3	Phase 1 of Drupal plugin development: back-office forms for every type of charts specified above	Source code of a Drupal plugin.	20.02.2023	10 days
4	Phase 2 of Drupal plugin development: integration of a chart library to generate visualisation from Drupal forms	Source code of a Drupal plugin.	15.03.2023	10 days

D. Reporting and contracting arrangements

Reporting and Institutional Arrangements

The Contractor will work under the direct supervision of Mr Thomas Tilak, Senior Web Developer at the Statistics for Development Division of the Pacific Community. Weekly progress meetings will be held.

All reporting and interaction will be conducted thanks to GitHub tools. Every week or twice a week, when new functionalities are ready to test, the contractor will produce a release and the SPC will test the application in its own environment. A list of bugs/features will be produced as GitHub issues and will state the remaining work for the contractor.

Place of Assignment

The work will be desk-based at the consultant's usual work location. No travel will be required

E. Skills and qualifications

The contractor will need to have the following skills:

- Education: University degree in statistics, mathematics, IT or web development certification.
- Knowledge and experience:

- a minimum of 3 years of demonstrated experience of Drupal custom plugin development or references of at least 2 projects
- a minimum of 3 years of demonstrated experience JavaScript and developing libraries or references of at least 2 projects
- demonstrated good knowledge of git/GitHub/GitLab good practices
- some knowledge on the SDMX standard or experience with charting libraries will be considered as a good advantage

F. Scope of Bid Price and Schedule of Payments

The contract is lump sum payments based on 2 groups of deliverables:

- The first 2 deliverables: Specification of needs and the SDMX JavaScript library.
- The last 2 deliverables: Drupal Charts plugin.

The bidder must include all costs including professional fees, management and operating costs, and any other administrative costs in the contract price.

The terms of payment shall be in accordance with the provisions of Article 10 of the SPC General Conditions.

SPC shall make payments to the Contractor according to the following payment schedule and associated milestones:

Milestone/deliverables		**Deadline**	**Working days payment**
1	Detailed specification with mock-ups	13.01.2023	0
2	Source code of SDMX JavaScript library	02.02.2023	13
3	Drupal plugin V1	20.02.2023	0
4	Drupal plugin final version	15.03.2023	20
	TOTAL		33

Part 4: PROPOSAL EVALUATION MATRIX

4.1 Competency Requirements & Score Weight

The evaluation matrix bellow reflects the obtainable score specified for each evaluation criterion (technical requirement) which indicates the relative significance or weight of the items in the overall evaluation process.

Evaluation criteria	Score Weight (%)
University degree in statistics, mathematics, IT or web development certification.	5%
Minimum of 3 years of demonstrated experience in JavaScript development in the field of data science or at least references for 2 projects.	30%
Minimum of 3 years of demonstrated experience in Drupal plugin development or at least references for 2 projects.	30%
Experience in using GitHub/GitLab for development project management with knowledge of SDMX standard and a good statistical back ground	15%
Demonstrated understanding of the ToRs and the required outputs including a proposed methodology, workplan and ability to meet deadlines	20%
Total Score	**100%**