

RFI-001/26

Request for Information for a Forecast Product Generator (FPG) solution

Closing Date and Time: 7 October 2026 at 11:00

THIS REQUEST FOR INFORMATION WILL CLOSE ELECTRONICALLY ON THE eTENDER PLATFORM WHICH MAKES PROVISION FOR THE ELECTRONIC SUBMISSION OF BIDS, RFQs AND RFIs (<https://www.etenders.gov.za/>)

Responses to this RFI must ensure that they complete and submit all the documents issued with this RFI together with the response from the responder before the closing date and time of the RFI. Responses received after the closing time will NOT be considered.

ENQUIRIES:

Any clarification required regarding the meaning or interpretation of the document or any aspect concerning the submission is to be requested **in writing** from:

SCM: Acquisition Department
South African Weather Service
Email: rfg@weathersa.co.za

1 PURPOSE

This Request for Information (RFI) issued by the South African Weather Service (SAWS), is solely to conduct a market analysis to determine a solution for a Forecast Products Generator (FPG) Solution.

2 INTRODUCTION

The South African Weather Service (SAWS) is a public entity of Department of Forestry, Fisheries and the Environment (DFFE) and derives its mandate from the South African Weather Service Act (No 8 of 2001 as amended). The public entity is listed as a Schedule 3A Public Entity in terms of the Public Finance Management Act (PFMA).

SAWS is tasked with providing timely and accurate scientific data in the field of meteorology to the broader South African society: a combination of both public good and commercial services. The organisation plays a vital role in South African public life, not just as a provider of key services, but also in empowering citizens to adapt the effects of the ever-changing weather.

3 BACKGROUND

The South African Weather Service (SAWS) requires the appointment of a qualified service provider to supply, implement, and support a Forecast Product Generator (FPG) solution.

The solution will be used to facilitate the efficient generation, management, visualization, and dissemination of weather forecast products and other related meteorological and non-meteorological information.

The solutions will enhance SAWS ability to create, manage, visualize, and disseminate weather and climate forecast products. The intended solution should support operational forecasting, improve consistency of forecast outputs, facilitate multi-channel dissemination, and integrate with existing meteorological systems and future modernization initiatives.

The Forecast Product Generator must support the production and distribution of forecast products for both public good services and commercial service offerings, ensuring accuracy, consistency, timeliness, and accessibility across multiple dissemination platforms. The solution should also enhance operational forecasting capabilities by enabling forecasters to create, edit, manage, and publish weather products in an integrated and user-friendly environment.

Furthermore, the solution should support automated workflows, integration with existing meteorological systems and data sources, and the dissemination of forecast information to various stakeholders, including government institutions, disaster management agencies aviation, marine, agriculture, and other businesses.

This procurement forms part of SAWS' ongoing commitment to modernizing its forecasting systems and improving the delivery of weather and climate information services in support of public safety, socio-economic development, and commercial operations.

4 OBJECTIVE OF THE REQUEST FOR INFORMATION

In issuing this RFI, SAWS aims to gather information from qualified service providers on the available Forecast Product Generator (FPG) solutions that would facilitate the South African Weather Service (SAWS) in the production, management, visualization and dissemination of weather forecast and other products. SAWS is interested in learning about existing technologies, best practices, implementation options, system functionality, licensing possibilities, support options, and integration needs for Forecast Product Generator solutions.

The data collected will help SAWS to evaluate the market, improve their business and technical needs, and help to shape their procurement plans.

In particular, the goal of SAWS is to:

- List available and proven Forecast Product Generator solutions. Know how proposed solutions work, how they are structured and what they can do.
- Assess the ability of solutions to support the generation and dissemination of forecast products for both public-good and commercial services.
- Identify the integration needs on existing meteorological, forecasting and dissemination systems.
- Understand implementation techniques, support and training needs, and maintenance procedures. Secure indicative cost data for licensing, hosting, operational and lifecycle.
- Delve into new technologies and cutting-edge attributes which could potentially improve forecasting functions and service provision.

5 CURRENT FORECASTING SYSTEMS

Currently, SAWS uses the MeteoFactory solution for the generation of forecast products. The system enables forecasters to initiate forecasts using selected Numerical Weather Prediction (NWP) models and make any necessary adjustments before finalisation. In addition, forecasters can manually compile and produce various meteorological reports on the system.

Forecast products are then designed and developed to use information derived from forecasts, reports, observations, and other relevant data sources both within and outside the SAWS operational environment. The system also supports the generation of composite products, such as the Fire Danger Index, by integrating multiple meteorological parameters into a single operational product. In addition, it is used to disseminate severe weather warnings through a variety of formats and communication channels, ensuring timely delivery of critical weather information to stakeholders and the public.

More recently, SAWS procured and implemented the Synergie-Web Forecaster Workstation Solution, which provides enhanced data visualisation capabilities to support forecasters in the analysis and interpretation of meteorological information.

6 STRATEGIC ALIGNMENT

Vendors should indicate how the solution supports:

- WMO Unified Data Policy
- WIS 2.0
- Common Alerting Protocol (CAP)
- Impact-Based Forecasting
- Multi-Hazard Early Warning Systems (MHEWS)
- Digital Transformation of National Meteorological Services
- Climate Services Modernization

7 FUNCTIONAL REQUIREMENTS

REQUIREMENT AREA	REQUIREMENT
Forecast Editing	Graphical and text-based editing of forecasts
Product Generation	Automated generation of forecast products
Workflow Management	Configurable approval workflows
Visualization	Interactive map and GIS capabilities
Alerting	Severe weather warning generation
Dissemination	Web, email, SMS, API, mobile channels
Templates	Configurable forecast templates
Multi-language Support	Support for multiple South African languages
Audit Trail	Full audit logging
Reporting	Operational performance dashboards

8 REQUIREMENT PRIORITISATION

REQUIREMENT	PRIORITY
Forecast Editing	Mandatory
Product Generation	Mandatory
Alert Generation	Mandatory
Multi-Channel Dissemination	Mandatory
Audit Logging	Mandatory
AI-Assisted Forecasting	Optional
Mobile Forecasting	Desirable

9 TECHNICAL REQUIREMENTS

Bidders to provide:

9.1. Solution Architecture

- Cloud, hybrid or on premises
- High availability capabilities
- Disaster recovery functionality
- Scalability options
- Cybersecurity controls
- Identity and access management
- API framework

9.2. Integration

Bidders to confirm compatibility with:

- REST APIs
- OGC Services
- WMO standards
- WIS 2.0
- GRIB2
- BUFR
- NetCDF
- GeoJSON
- CAP

- XML
- JSON

10 METEOROLOGICAL SYSTEM INTEGRATION REQUIREMENTS

Bidders to stipulate how their proposed solutions will integrate with:

- Numerical Weather Prediction (NWP) systems
- WRF outputs
- ECMWF products
- UKMO products
- GFS products
- Radar systems
- Lightning detection systems
- Satellite systems
- Observation databases
- Climate databases
- Aviation systems

11 ARTIFICIAL INTELLIGENCE REQUIREMENTS

Acknowledging that the modern FPG platforms increasingly include AI capabilities. Bidders to provide information on:

REQUIREMENT	DESCRIPTION
AI Assisted Forecast Drafting	Generate initial forecast text
Forecast Consistency Validation	Compare forecast against model outputs
Automated Product Generation	Generate standard products
Impact Forecasting	Link hazards to impacts
Explainable AI	Ability to explain AI recommendations
Human Override	Forecaster remains final authority

12 HOSTING OPTIONS

Bidders to describe information on:

OPTION	DESCRIPTION
On-Premises	SAWS data centre
Private Cloud	Dedicated cloud deployment
Public Cloud	Azure/AWS/Google
Hybrid	Combination of cloud and on premises

For each hosting model, bidders can expand on:

- Infrastructure sizing
- Minimum CPU requirements
- Minimum memory requirements
- Storage requirements
- Backup requirements
- Network bandwidth requirements
- Disaster recovery architecture
- RPO/RTO capabilities

13 SUPPORT REQUIREMENTS

Bidders to provide information on:

- Support model
- Support hours
- Incident response times
- Service Levels
- Upgrade process
- Local support presence in South Africa
- Knowledge transfer

14 TRAINING REQUIREMENTS

Bidders to provide information on:

- Administrator training
- Forecaster training
- Super-user training
- Documentation
- Certification programs

15 CYBERSECURITY REQUIREMENTS

Bidders to provide information on:

- ISO 27001 certification
- SOC reports
- Vulnerability management
- Encryption at rest
- Encryption in transit
- SIEM integration
- Security monitoring

Identity & Access

- Active Directory integration
- Azure AD integration
- LDAP support
- SAML 2.0
- Single Sign-On

Security Controls

- MFA
- Password policies
- Privileged access controls
- Session management

Compliance

- POPIA compliance
- ISO 27001
- NIST CSF alignment
- CIS Controls alignment

Integration

- Microsoft Sentinel
- LogRhythm
- Splunk
- Syslog

16 HIGH AVAILABILITY REQUIREMENTS

An operational weather forecasting platform is mission critical.

- Active-active architecture
- Active-passive architecture
- Geographic redundancy
- Automated failover
- Disaster recovery testing
- Recovery Time Objective (RTO)
- Recovery Point Objective (RPO)

17 Mobile and Remote Forecasting Capability

Modern forecasting operations increasingly require remote access.

- Web-based forecasting
- Mobile access
- Tablet support
- Browser compatibility
- Secure remote access

18 INDICATIVE COST STRUCTURE

ITEM	COST
Software License	
Annual Maintenance	
Professional Services	
Project Management	
Configuration	
Integration	
Training	
Cloud Infrastructure	
DR Environment	
Support Year 1	
Support Year 2	
Support Year 3	
Support Year 4	
Support Year 5	

19 VENDOR RESPONSE TEMPLATE

- Company Profile
- Proposed Solution Overview
- Product Maturity
- Architecture
- Functional Capabilities
- Integration Capabilities
- Security Features
- Hosting Options
- Implementation Approach
- Training
- Support Model
- Reference Sites
- Indicative Pricing
- Future Roadmap

20 REFERENCE IMPLEMENTATIONS

Vendors to provide information on

- Meteorological agencies currently using the solution.
- National Weather Services deployments.
- Aviation Meteorological Service deployments.
- International references.
- Contactable references.

21 COST IMPLICATIONS

The costs incurred by a service provider in respect of the preparation of any response to this RFI or the cost of attendance of the briefing session will be borne by the individual / organisation responding to this RFI. SAWS shall in no way be liable to reimburse any individual / organisation for such costs incurred.

This RFI does not constitute an offer to do business with SAWS but merely serves to facilitate a requirements-based decision process. Nothing in this RFI or any other communication made between SAWS (including its officers, directors, employees, advisers and representatives) is a representation that SAWS will offer, award or enter into an agreement with the Respondent.

22 SUBMISSION OF RESPONSES

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