

Varysian & ARC

Weather - Climate - Agriculture - Energy



Overview

- Background
- Partners
- Infrastructure & MHEWS
- Renewable Energy
- Parametric Insurance
- DARE (Data Rescue)
- Agriculture & Irrigation
- Financial Options & Building Projects

Who is Varysian?

- Mission originally to connect public sector with private sector, academia, donors and other stakeholders
- Events, publications, reports and a digital network
- Working across Africa, Caribbean, Latin America and the South Pacific, with a focus on the African continent
- Had a very realistic and practical view of common issues faced by weather, climate, agriculture and energy challenges
- In 2022, we moved into more of a consultancy position, working directly with governments to solve some of these issues
- Created strategic partnerships to cover all these areas

Varysian's Partners



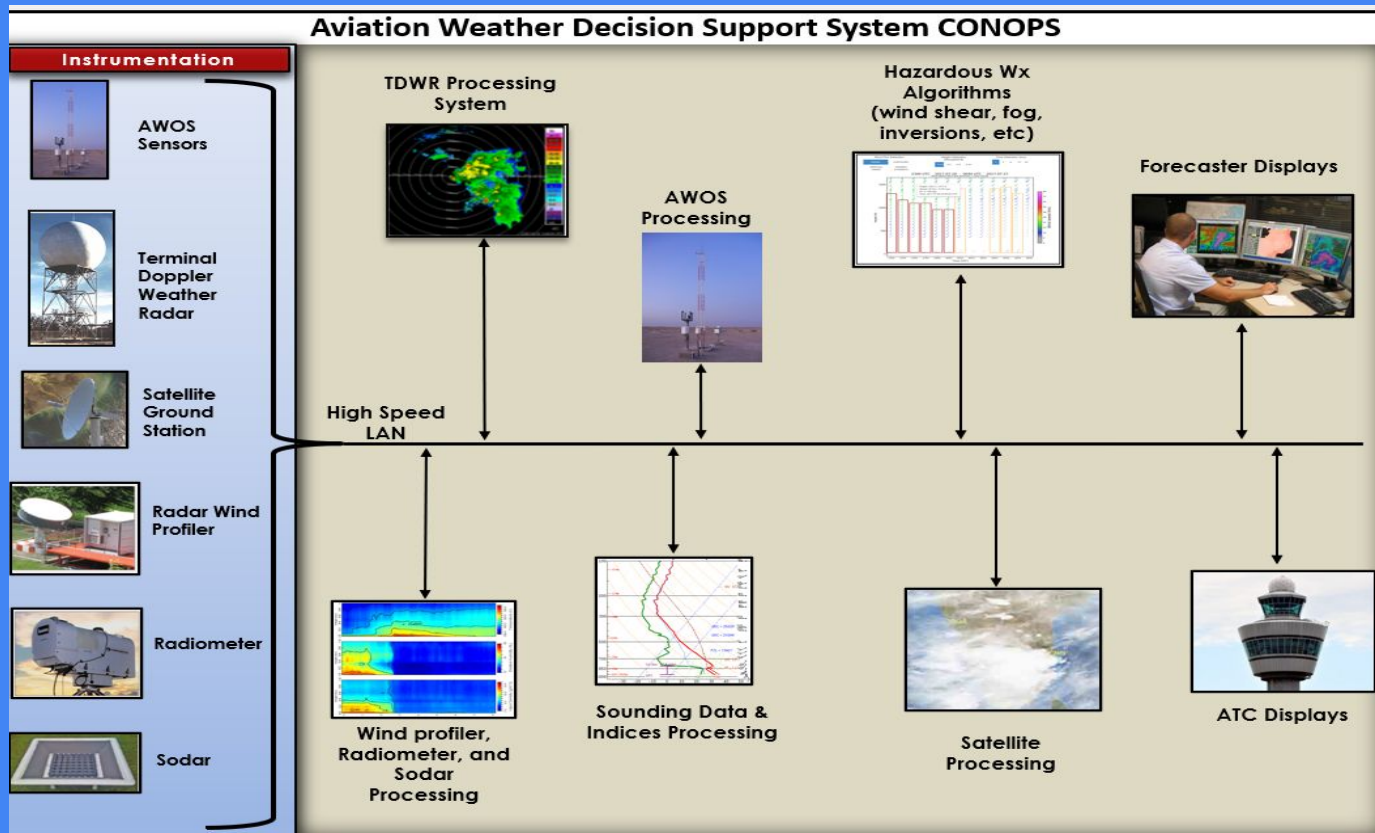


MH-EWS Architecture

Multi-Hazard Early Warning Systems



- Provides monitoring and alerting for both non-convective and convective aviation weather hazards
- Integration of several instrumentation sets
- Detection and alerting on aviation weather hazards
- Custom displays for forecasters and ATC
- ICAO compliant instrumentation and warning system



Infrastructure & System Integration

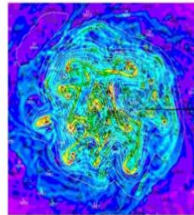
AWIPS for all Data and Information



The software ingests data from many different instruments in various data formats



Radar



Model/NWP



**Lightning
Detection**



AIREP/PIREP



Satellite Data

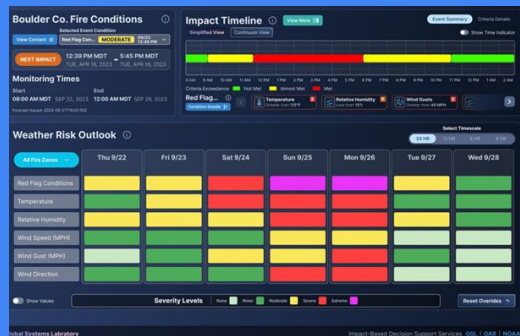


Surface Obs



Weather Balloons

Weather Products for all Industries and Purpose



Advanced Weather Interactive Processing System

- Originally designed and built by GSL
- used by NOAA / National Weather Service
- Goal to have all operations on one workstation
- Contains several components:
 - **G**raphical **F**orecast **E**ditor (**GFE**)
 - **H**azard **S**ervices (**HS**)
 - **D**isplay-**2-D**imension (**D2D**)
 - many others



Renewables and Private Investment



- Innovative and Sustainable Focused Partner - Solavert
- Looking at Power Purchase Contracts in green energy
- Green Energy Fund creates sustainable financial support for renewable programs
- Carbon Credit Market:
 - UNFCCC's Clean Development Mechanism (CDM)
 - ISO50001, CDP, CDM, and ISO 14064 standards.
- Complete Grid Deployment, Management and Technology Transfer
- Solar, Wind and Hydro-Static
- South Africa and Zambia Projects underway



Parametric Weather Insurance



- What is Parametric Weather Insurance
- The need for NMHSs / ground-base systems
- Food Security issues and the economy
- “Climate Tax” - “Free” insurance premium
- Partners
- Can be “championed” from the NMHS to begin with

Data Rescue (and digitisation)



- The issue is there is a lot of data still remaining in paper form which is at risk
- There have been efforts to rescue this data on many occasions but the time and cost is great
- We are developing technology to speed this process up through use of AI
- After imaging, AI can scan the page to create useable databases
- This data can also be a source of revenue for NMHS through commercial and academic uses

Agriculture / Irrigation



- US technology built for the right climate
- Pulse irrigation system
- Cost effective & easy to maintain system suitable for Sierra Leone
- Very replaceable parts
- Utilising gravity
- Excellent cost per hectare

Building and Financing Projects

- Building projects from the ground up
- Doing an initial assessment of the key requirements of governments
- Bring a holistic approach to projects - building in maintenance, cost recovery and all elements to allow project success
- Working with technical and financial experts
- Cost Recovery Programs and Marketing
- Private investment into infrastructure



Thanks!

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