

GEOIMPACT WEST AFRICA I Q1 2026 EDITION

EMPOWERING WEST AFRICA WITH INTELLIGENCE



www.sambusgeospatial.com
info@sambusgeospatial.com



Sambus Geospatial Limited

▶ TABLE OF CONTENTS ◀



FOREWORD 2

IN FOCUS 3

Mapping Your Ideas: Why Geospatial Technology Matters for West Africa's Visibility

SOLUTIONS IN ACTION 5

-Redefining Geological Surveying With Geospatial Technology.
-Mapping the Future of Emergency Care.
-Mapping the Current: A Smarter Approach to Electric Distribution.

PHOTO GALLERY 10

-Launch of Ghana Armed Forces GIS Lab
-A visit to the Ministry of defense Demonstrating how GIS can be used in the Defense Sector.
-The West African Power Pool Staff at the office for a generic training
-Sambus partner meetings

UPCOMING EVENTS 11

-Q2 Webinar Series
-Esri User Conference
-Sambus Breakfast meeting
-Esri User Conference West Africa



FOREWORD

Welcome to the 14th edition of GeolImpact West Africa.

As we step into 2026, we do so with a renewed sense of purpose and a clear vision for the role geospatial intelligence plays in our region's development. The start of a new year is often a time for setting targets, but for the West African geospatial community, 2026 represents a pivotal moment to move beyond planning and into a phase of heightened visibility.

In this digital era, visibility is defined by data. To ensure that the narrative of West Africa's resources and growth is accurate and self-determined, we must be the ones to generate and interpret our own spatial information. This edition highlights several organizations that are doing exactly that, reclaiming control of their data to drive structural change.

Within these pages, you will find stories of "Solutions in Action" that set a high standard for the year ahead:

- **Modernizing Geoscience:** The Ghana Geological Survey Authority has marked a major milestone by migrating to ArcGIS Pro, significantly enhancing their capacity for geostatistical analysis and digital data management.
- **Infrastructure & Utilities:** We feature the Yola Electricity Distribution Company, which is utilizing an intelligent Utility Network Model to reduce fault isolation times from hours to minutes, showcasing the direct link between GIS and operational efficiency.
- **Public Safety:** We examine how the ArcGIS ecosystem provides a "single screen of truth" for Emergency Care, an essential tool for situational awareness and coordination during mass casualty incidents.

We also celebrate a strategic achievement with the official launch of the Ghana Armed Forces GIS Lab, a testament to the growing integration of geospatial technology within our national frameworks.

Looking forward, 2026 promises to be a landmark year for our community. Most notably, we are preparing to host the 2026 Esri User Conference West Africa in Accra this September.

As we begin this new year, let us commit to using these tools not just for mapping, but for shaping a more visible and prosperous future for our region.

Happy New Year and enjoy the 14th edition of GeolImpact West Africa.


Managing Director - Sambus Geospatial

IN FOCUS

Mapping Your Ideas: Why Geospatial Technology Matters for West Africa's Visibility

In the digital age, visibility is increasingly shaped by data. Nations that can generate, interpret, and communicate reliable information about their economies, resources, and development are better positioned to influence global conversations.

This becomes especially critical on issues such as climate change, the global economy, and security, where data is not just information, but a tool of influence, enabling countries to present informed perspectives, shape narratives, and propose practical, context-specific solutions grounded in local realities. In doing so, they are better able to ensure that decisions and outcomes align with their strategic interests. For West Africa, strengthening visibility on the global stage will depend on how effectively it harnesses data to inform decisions, shape narratives, and assert its place in these conversations. Technology offers a powerful opportunity to achieve this, if used strategically.

In parts of Greater Accra, seasonal flooding had become a recurring disruption, damaging homes, displacing families, and straining infrastructure. Despite the urgency, the scale and pattern of the problem were not always clearly understood.

That began to change when researchers and urban planners used maps and spatial data to analyse flood patterns. By applying Geographic Information Systems (GIS), they were able to visually pinpoint where flooding occurred and how severe it was, turning scattered data into clear, compelling evidence.

This clarity strengthened Ghana's case and contributed to securing World Bank funding for the GARID Project in 2019

One of the most important tools in getting visibility is Geographic Information Systems (GIS). By integrating spatial data with digital analysis, geospatial technology enables institutions to better understand their environments, manage resources, and communicate insights. More importantly,

it offers practical solutions to structural challenges that limit the region's presence in global knowledge systems.

Reclaiming Narrative Control Through Data

A key challenge for West Africa is that much of the data used to describe the region has been collected and interpreted externally. Surveys on poverty, health, education, and infrastructure are sometimes designed and analysed by international consultants and agencies. This leads to narratives that fully reflect local realities. Geospatial technology provides a pathway to reclaim this narrative.

By building local capacity in mapping and spatial analytics, governments and institutions can generate their own accurate datasets. These tools allow agencies to map infrastructure, track environmental changes, and analyze socio-economic trends. When local experts control the data, they shape the narrative, ensuring that development stories are accurate and context-driven.

Making Invisible Communities Visible

Many communities across West Africa remain underrepresented in official datasets, particularly rural settlements and informal urban areas. This lack of visibility can lead to gaps in infrastructure development and service delivery.

Geospatial technology helps address this by enabling detailed mapping of communities and resources. Using satellite imagery and spatial databases, planners can identify underserved populations, monitor urban growth, and track environmental changes. By literally putting communities on the map, these tools ensure more inclusive and informed development planning.

Supporting Evidence-Based Decision Making

The region faces complex challenges, from climate change to urbanization and agricultural productivity. Addressing these issues requires accurate and timely data, yet traditional planning methods often rely on fragmented information. Geospatial technologies integrate multiple data

sources into a single framework, allowing decision-makers to visualize patterns, identify risks, and plan interventions more effectively. Whether mapping flood-prone areas or analyzing transport networks, spatial intelligence improves the quality and credibility of policy decisions.

Strengthening Regional Competitiveness

Global investment decisions are increasingly driven by data. Regions that can clearly present insights about their markets, infrastructure, and opportunities tend to attract more investment.

Geospatial tools enable West African countries to present this information with clarity and precision. Spatial analysis can highlight economic corridors, infrastructure gaps, and resource potential in ways that traditional reports cannot. By showcasing their development landscape through data, countries can enhance their competitiveness and investor confidence.

Building Local Innovation Ecosystems

Geospatial technology is becoming a driver of innovation across West Africa. As universities, startups, and public institutions adopt these tools, new possibilities are emerging in areas such as urban planning, environmental management, and agriculture where location-based insights are reshaping how decisions are made.

In cities like Accra, Lagos, and Abidjan, digital ecosystems are already expanding rapidly. Mobile wallet solutions, for example, have become deeply integrated into everyday life, changing how people transact and businesses operate. Building on this foundation, the integration of geospatial capabilities can unlock new layers of innovation, helping entrepreneurs design location-aware services, improve logistics, and strengthen collaboration between the public and private sectors.

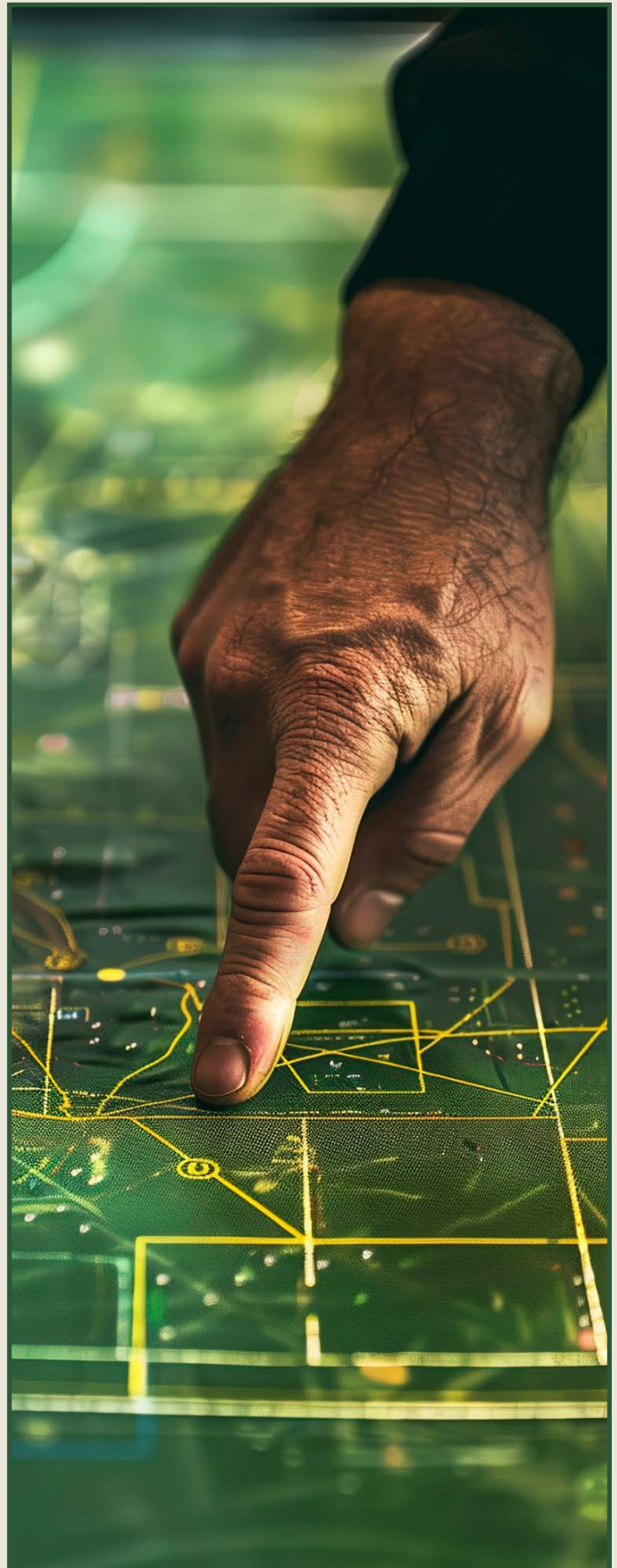
The Map Ahead

Technology alone will not determine West Africa's visibility, how it is adopted and used will. Geospatial systems offer a powerful foundation because they combine data, analysis, and visualization into one framework.

Investing in geospatial capacity is therefore not just a technical decision but a strategic one. By mapping its resources and opportunities, West

Africa can move from being described by others to confidently describing itself.

In today's digital world, those who control their maps are better positioned to shape their future.



SOLUTIONS IN ACTION



Redefining Geological Surveying With Geospatial Technology







Africa's digital transformation is limited without the use of location intelligence and geospatial technology.

This Quarter, the Training Team in completed a comprehensive capacity building exercise with the Ghana Geological Survey Authority to facilitate the organisation's digital transformation.

The training focused on the application of modern GIS and remote sensing tools, with emphasis on transitioning from ArcMap to ArcGIS Pro, performing spatial and geostatistical analysis, understanding core ArcGIS Enterprise Portal concepts, and applying satellite image processing and classification techniques using ENVI 6.2 software.



Technical Corner

	What was the challenge? Innovating workflows and decision-making processes.
	What was the solution? <ul style="list-style-type: none">• Migrating from ArcMap to ArcGIS Pro• Advanced spatial analysis using ArcGIS Spatial and 3D Analyst extensions• Introduction to ArcGIS Enterprise Portal• Satellite imagery processing using ENVI 6.2
	Who was the solution meant for? <ul style="list-style-type: none">• Ghana Geological Survey Authority
	What tools/technology were used? <ul style="list-style-type: none">• Spatial Analyst• 3D Analyst• Geostatistical Analyst• ArcGIS Enterprise• ENVI 6.2
	Where was the data from? <ul style="list-style-type: none">• Sample data from ArcGIS Online.
	Where else can the solution be applied? <ul style="list-style-type: none">• Surveying• Mining• Natural resource exploration

Africa's digital future begins where data meets location.

Mapping the Future of Emergency Care

When Every Second Counts, Geography Is the Answer

An ambulance speeds through the city, sirens cutting through traffic, but the nearest hospital is already at capacity, and no one knows it in time. In emergency response, the difference between coordination and chaos often comes down to one thing: access to accurate, real-time geographic information.

The Esri ArcGIS platform, long established as the world's leading geographic information system, is increasingly being deployed at the heart of healthcare emergency operations turning fragmented radio traffic into a live, shared operationa picture that saves lives.

The Core Challenge

- **Hospital Routing Without Real-Time Capacity Data Problem** - Ambulances risk delays and misallocation when hospital bed availability isn't updated live. ArcGIS Response: Field Maps integrates live hospital capacity layers, continuously updated by hospital coordinators.
- **Fragmented Teams and Broken Command Chains Problem** - Disconnected data silos lead to conflicting decisions and slow response coordination. ArcGIS Response: A single shared online Feature Layer feeds all tools simultaneously, creating one source of truth for all actors.
- **Critical Information Blind Spots at the Scene Problem** - At the scene, first responders also face information blind spots. ArcGIS Survey123 enables digital patient assessment, GPS capture, and instant synchronization to the central system, ensuring severity levels and location data are immediately visible to all stakeholders.

Together, the Esri ecosystem, Survey123, Field Maps, ArcGIS Dashboards, and ArcGIS Online, creates a connected operational environment where every actor works from the same real-time intelligence, closing critical gaps between response and outcome.

Built on the open XLSForm standard, Survey123 allows healthcare emergency managers to design sophisticated patient severity classification and patient intake forms without writing a single line of code. Forms deploy to iOS and Android in minutes, work fully offline, and sync automatically when connectivity is restored.

- START patient severity classification protocol (Red / Yellow / Green / Black) with colour-coded UI

- Auto-capture GPS coordinates at point of patient contact
- Responder identification and agency attribution
- Respiratory rate, consciousness level, and complaint logging

Situational Awareness

ArcGIS Field Maps

Field Maps transforms the Incident Commander's tablet into a live geographic command centre. Hospital capacity, ambulance staging zones, and the incident perimeter are all displayed on a single, authoritative map.

- Live Classification color-coding (Red / Yellow / Green / Black dots)
- Tap any patient for full patient severity classification details and assigned hospital
- Overlay hospital capacity status updated by facility coordinators
- Define and share incident perimeter with all field teams

Command and Control

ArcGIS Dashboards

The Dashboard is the Emergency Operation Command's single screen of truth; a live, no-refresh view of the entire incident. All widgets update automatically as field data arrives. Incident leadership, media liaisons, and hospital administrators see the same picture without needing field access or technical expertise.

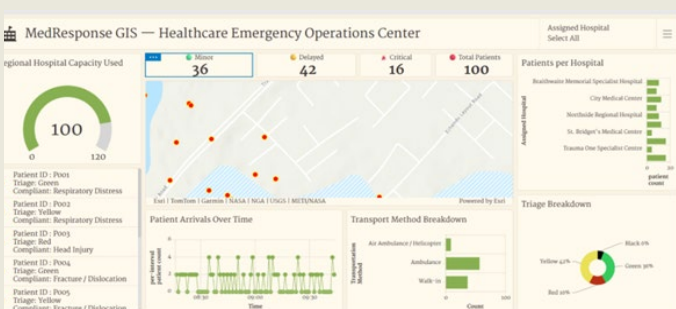
- Five KPI tiles: total patients, Red, Yellow, Green, Black counts
- Patient severity donut chart — proportion of severity at a glance
- Arrival timeline: MCI surge curve in 10-minute intervals
- Capacity gauge: regional hospital beds used vs. available

Cloud Platform

ArcGIS Online

ArcGIS Online is the secure, enterprise-grade cloud backbone that ties the entire Med Response ecosystem together. All data flows through a single Hosted Feature Layer — making every tool and every actor look at the same live, authoritative source. No custom infrastructure. No servers to manage.

- Role-based access: field staff vs. commander vs. EOC permissions
- Full data export: CSV, GeoJSON, Shapefile, Excel at any time
- Timestamped records for after-action reporting and audit



The screenshot shows the MedResponse GIS Triage Form interface. Key sections include:

- Incident Information:** A section for entering incident details, with a note that GPS coordinates are captured automatically.
- Triage Category (START):** A dropdown menu with options: Red - Immediate (life-threatening), Yellow - Delayed (serious but stable), Green - Minor (walking wounded), and Black - Deceased / Expectant.
- Patient ID / Tag Number:** A field for entering the patient's unique identifier.

Technical Corner

	<p>What was the challenge?</p> <ul style="list-style-type: none">• The need for a simpler, faster way of responding to emergency healthcare needs.
	<p>What was the solution?</p> <ul style="list-style-type: none">• An integrated Esri ecosystem for situational awareness, command control, and secure data storage.
	<p>Who was the solution meant for?</p> <ul style="list-style-type: none">• It is a general solution for every healthcare provider.
	<p>What tools/technology were used?</p> <ul style="list-style-type: none">• ArcGIS Survey123• ArcGIS Field Maps• ArcGIS Dashboards• ArcGIS Online
	<p>Where was the data from?</p> <ul style="list-style-type: none">• Sample data from MedResponse GIS.
	<p>Where else can the solution be applied?</p> <ul style="list-style-type: none">• Hospitals• Clinics• Welfare services

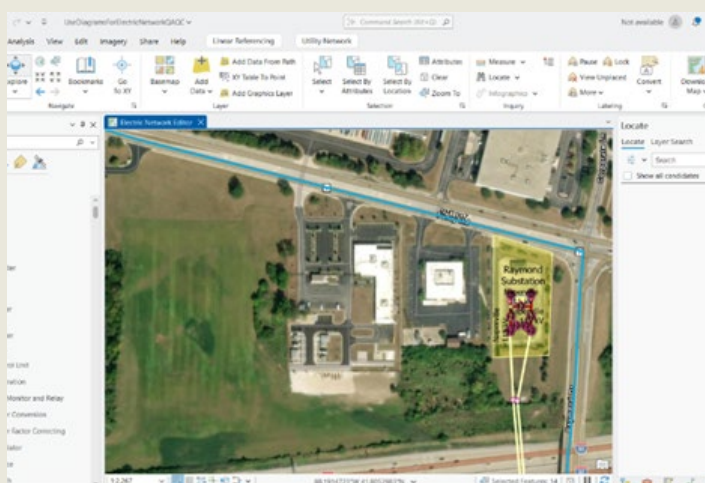
When Every Second Counts, Geography Is the Answer

Mapping the Current: A Smarter Approach to Electric Distribution

Across Nigeria and beyond, power outages do more than dim lights. They halt production lines, disrupt critical operations, and erode the confidence of communities that depend on a reliable power supply. Often, the deeper challenge is not the outage itself, but the uncertainty that follows; not knowing where it started, how far it has spread, or what it will take to restore electricity supply.

To address this, Sambus Geospatial partnered with Yola Electricity Distribution Company in a recent solution showcase, developing a smart, connected model of the entire distribution network. This approach provided utility teams with a clear, real-time understanding of their infrastructure, enabling faster fault detection, more informed decision making, and a more confident path to restoring power.

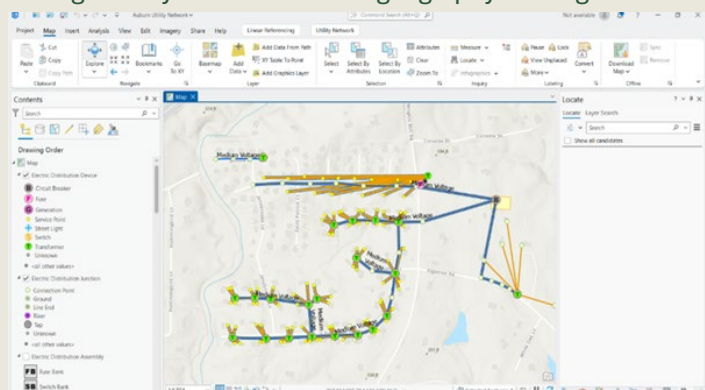
Built using industry-leading geospatial tools, every asset across the power network was mapped with precision, showing



exactly where each asset is, what it does, and how it connects to everything else. The outcome is transformative; faults are identified and isolated faster, maintenance teams are sent exactly where they are needed, and utility managers move from crisis response to confident, proactive planning.

This isn't just a technological upgrade. It's a fundamental shift in how utility companies operate from fragmented spreadsheets and guesswork to a data-driven, connected intelligence system built on the geography of the grid itself. Minutes, not hours; where maintenance crews are deployed with surgical precision; and where utility managers shift from reacting to outages to preventing them.

This isn't just a technological upgrade. It's a fundamental shift in how utility companies operate from fragmented spreadsheets and guesswork to a data-driven, connected intelligence system built on the geography of the grid itself.



Technical Corner

	<p>What was the challenge? Limited network visibility, poor asset connectivity understanding, slow fault isolation during outages, fragmented asset records, and inefficient maintenance planning.</p>
	<p>What was the solution?</p> <ul style="list-style-type: none"> • Spatially connected Utility Network Model for electric distribution • Network topology & connectivity analysis • Power flow tracing & outage impact assessment • Asset location analysis & maintenance planning insights
	<p>Who were the solutions meant for? Yola Electricity Distribution Company</p>
	<p>What tools/technology were used?</p> <ul style="list-style-type: none"> • ArcGIS Utility Network • ArcGIS Pro • ArcGIS Field Maps • ArcGIS Dashboards
	<p>Where was the data from?</p> <ul style="list-style-type: none"> • Pseudo utility infrastructure records & field data
	<p>Where else can the solution be applied?</p> <ul style="list-style-type: none"> • Water & gas pipeline distribution • Telecoms network management • Oil & gas pipeline monitoring • Transport & rail infrastructure • Mining site utility management



Launch of Ghana Armed Forces GIS Lab



A VISIT TO THE MINISTRY OF DEFENSE DEMONSTRATING HOW GIS CAN BE USED IN THE DEFENSE SECTOR

SAMBUS PARTNER MEETINGS



THE WEST AFRICAN POWER POOL STAFF AT THE OFFICE FOR A GENERIC TRAINING



SAMBUS PARTNER MEETINGS

UPCOMING GIS EVENTS



Q2 Webinar Series

- Topic: Geospatial Technology on Security & Intelligence Gathering
- Date: TBD
- Registration Link: bit.ly/4qrjH2R



Esri User Conference

- Date: 13-17 July 2026
- Location: San Diego, California
- Registration Link: www.esri.com/en-us/about/events/uc/registration




Esri User Conference West Africa

- Date: 15-16 September 2026
- Location: Accra, Ghana
- Registration Link: bit.ly/EsriUCWA2026



Join our mailing list to stay informed of product updates, industry trends, upcoming events and training opportunities:

 [Join our mailing list](#)