

# CYPHERCRESCENT ENERGY TECHNOLOGY & SERVICES





# Welcome

The primary goal of every E&P company is to maximise production and profitability. We are delighted to be considered as your partner in achieving this critical objective. Our Energy Technology Products and Services are designed to remove barriers to efficient asset management, enabling your teams to achieve set goals more effectively.

Our suite of asset management solutions addresses common industry challenges such as limited access to validated data for daily decision-making, insufficient technologies to maximise asset reliability and availability, and constrained budgets for re-entry and asset development programs. Adoption of our solutions transforms the way teams manage assets, driving production enhancement and operational excellence through our software suite.

For teams with unique requirements beyond our current offerings, our petroleum engineers, research specialists, and software developers are ready to co-create tailored solutions. We look forward to supporting your team in delivering superior asset performance and profitability.

# Table of Content

- 01** About Us
- 05** Our Asset Management Software Solutions
- 06** Our Data Digitalisation Democratisation Service
- 07** Our Success Stories

## CypherCrescent's Energy Technology Products and Services

CypherCrescent's Energy Technology products and services are aimed at collaborating with our clients to drive production increase, constant asset performance surveillance, operating cost reduction, and improved operational efficiency. Central to this is an active engagement and synergy with clients to understand their unique operational challenges. Suitable solutions and services are thereafter tailored to address these unique needs and challenges. Driving these solutions and services are seasoned experts with decades of experience across the energy value chain.



### Our Services

- Co-Creation and Provision of Asset Management Software Solutions.
- Data Digitalisation and Democratisation Services.

- Subsurface Data Integration and Analysis (SEPAL WRM).
- Well Integrity Management & Digitisation Services (Eagle Gaze WIMS).
- Enterprise Business Planning and Production Forecasting Service (EPS & BFS).
- Drilling and Well Intervention Activity Planning Digitisation (SOMA DIAP).
- PVT Report Digitalisation (PVT RMS)

#### 1 Development of Asset Management Software



#### 2 Data Digitalisation and Democratisation Services

- Subsurface Data Integration and Analysis (SEPAL WRM).
- Well Integrity Management & Digitisation Services (Eagle Gaze WIMS).
- Enterprise Business Planning and Production Forecasting Service (EPS & BFS).
- Drilling and Well Intervention Activity Planning Digitisation (SOMA DIAP).
- PVT Report Digitalisation



# 1 Co-Creation and Provision of Asset Management Software Solutions

We provide a proprietary, innovative suite of software that E&P operators can leverage to achieve their four key asset management objectives:

**Enhance Production**

**Enhance Efficiency**

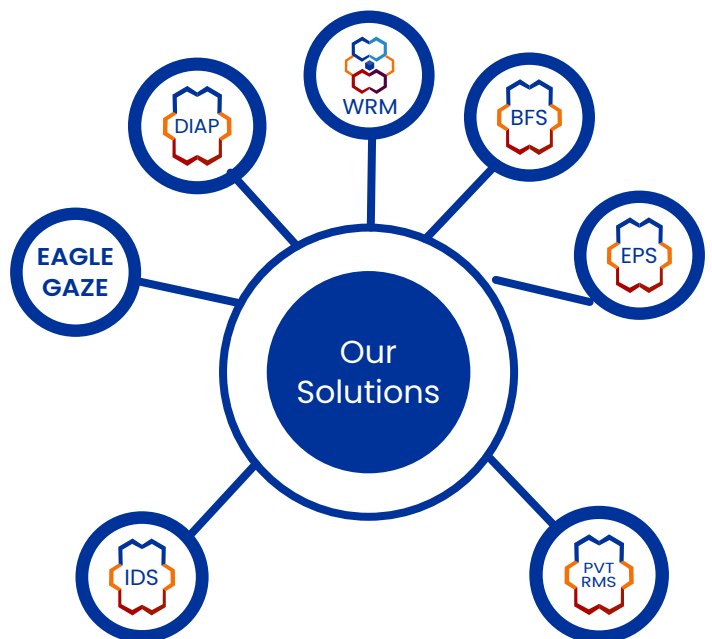
**Reduce Cost**

**Improve HSE**

Our asset management technologies are invaluable to E&P operators in the management of WRFM surveillance data, analytics for automated short-term oil & gas opportunities generation, well and reservoir performance analysis, data-driven production forecasting, well integrity management, and business efficiency evaluation.

**Some of our Innovative Integrated Asset Management Solutions (co-created with renowned energy companies in Nigeria) include:**

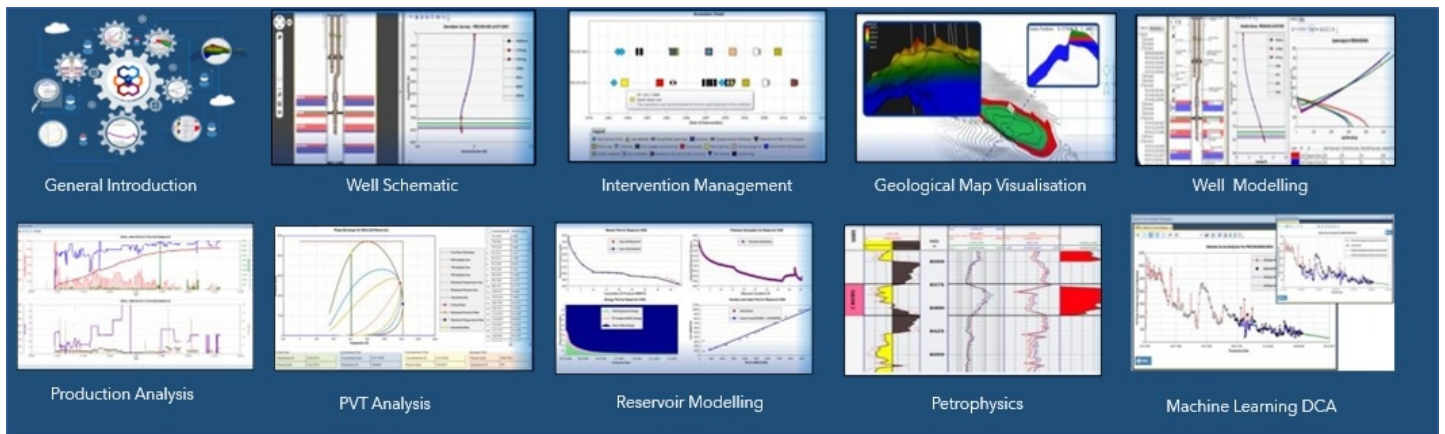
- **SEPAL WRM:** Integrated well, reservoir, and facility management.
- **SEPAL BFS:** Realistic Production Forecasting.
- **SEPAL EPS:** Enterprise Resources Planning Tool for E&P Operations.
- **SOMA DIAP:** Digital Drilling and Intervention Planning Activity.
- **Eagle Gaze WIMS:** Well Integrity Management System.
- **PVTRMS:** PVT Report Management System.
- **IDS:** Injectivity Decline Solution



## A Asset Management Technology 1 SEPAL Well and Reservoir Management Solution (SEPAL WRM)



SEPAL WRM is an innovative well and reservoir management, digitalisation, and collaboration technology developed by CypherCrescent. It supports enterprise data integration (EDI) of WRM discipline data from different sources and provides a unified platform to manage, access, visualise and analyse all this information for informed business decisions.



### Value Proposition

SEPAL WRM provides a three-fold value-addition to the asset management experience of clients through:

- improved management of well engineering and performance data (schematics, intervention histories, petrophysical logs, models, etc.) and reservoir performance data (volumes, models, fluid contacts, etc.) in a single digital repository.
- enhanced access to asset information with the ability to quickly query large and complex database in addition with embedment of a natural language processing (NLP-based) assistant to aid information extraction.
- quick well reviews and identification of opportunities for production optimisation.

# How SEPAL WRM Transforms Well & Reservoir Management



**INTEGRATE**  
Well & Reservoir multi-discipline interpretation.



**COLLABORATE**  
Promotes teamwork and breaks down functional silos



**AUTOMATE**  
Automate asset management process

## Data Integration

- Create unified digital database for well and reservoir management.
- Ensure validation and coherence of key WRM data across disciplines.
- Establish a single source of truth for WRM reviews.

## Team Collaboration

- Enhance teamwork and discourage functional silos.
- Operationalise a shared database across team members.
- Access WRM data at anytime and from any location.

## WRM Analytics

- Drive WRM reviews with embedded analytics.
- Automate workflows to support quick decision making.

## Notable gains for users of SEPAL WRM include:

- enhanced well & reservoir data availability, accessibility, reliability, and visualisation
- deeper understanding of well & reservoir performance for optimum recovery
- improved success rate of well intervention activities through reliable data analytics
- enhanced well integrity management
- improved efficiency of well & reservoir management

## Our Client

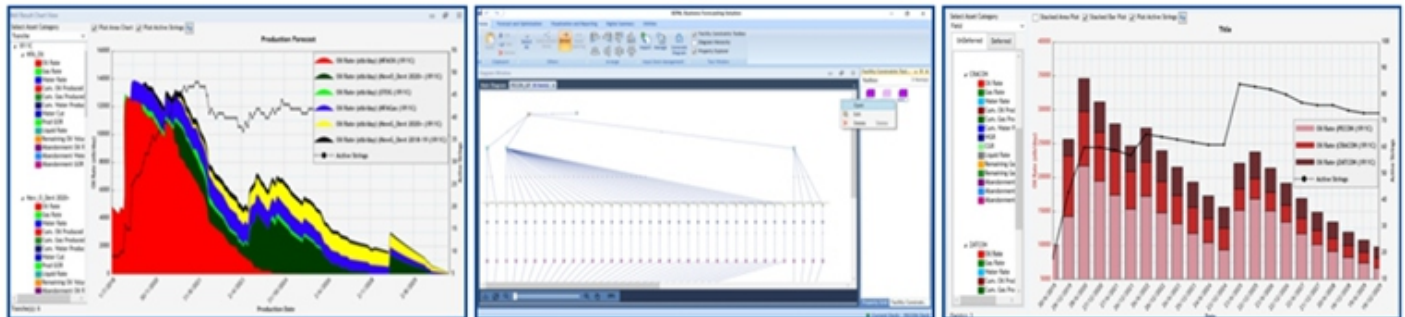


**General Manager, Operations at Eroton:** Automated review of assets has tremendously helped us achieve one of the lowest unit operation cost (UOC) in the industry. Thanks to **SEPAL WRM**.

**Manager, Data Management at NPDC:** Our data are now connected. **SEPAL WRM** has provided us with the ability for everyone within the company to access the information that they need at the time they need it.

## B Asset Management Technology 2 SEPAL Business Forecasting Solution (SEPAL BFS)

SEPAL Business Forecasting Solution (SEPAL BFS) is a volume based production forecasting tool developed with CypherCrescent's proprietary technology SEPAL. It enables seamless generation of realistic business forecasts associated with integrated production systems within the ambit of commercial, regulatory, economic and production availability constraints.



### Value Proposition

- Transparency, repeatability, and auditability in assigning prioritisation to well streams.  
Run multiple forecast scenarios to optimise production and business plan implementation.
- Improve asset investment decision as deduced from forecast.
- Set up robust forecast to generate time stamped forecast results.
- Robust economic/profitability evaluation using various fiscal regimes (e.g, embedded are Nigeria's PPTA and PIA fiscal terms).



# Our Client



**SPE-203736:** "The development and use of the tool greatly reduced turn-around time for generation of forecast and enabled the generation of multiple output in a short turn-around time. The tool in addition generates more realistic and robust forecast that honours all defined constraints and gives a more holistic view of the business performance based on current plan and realities." - **Eroton Oil and Gas**

"SEPAL BFS has revolutionised our business planning and hydrocarbon asset management. It accommodates unique constraints and provides unparalleled transparency and repeatability." - **Eroton Oil and Gas**



## Asset Management Technology 3 Enterprise Planning System (EPS)



EPS is an integrated planning and decision-support platform that unifies production forecasts, operational activities, budgets, and economic evaluations across oil and gas assets under PIA and PPTA frameworks. It enables accurate financial modelling and investment evaluation through automated cashflow and economic calculations, providing clear insight into the impact of project decisions on portfolio performance.



Variance Analysis

Compare Performance with: UK Business Plan - Budget NBA Equity

Production Q1 Yearly 2022

Consolidated Oil Production MBOE

Asset	2022 Plan	YTD			
		Plan	Actual	Variance	%
OAS_13	26.96	26.96	14.07	-12.8	-47% ↓
OAS_24	15.67	15.67	5.91	-10.06	-64% ↓
OAS_34	11.2	11.2	21.42	10.22	91% ↑
OAS_65	15.1	15.1	14.22	-1.08	-7% ↓
OAS_96	7.56	7.56	6.7	-0.86	-11% ↓
OAS_111	5.75	5.75	5.34	-0.41	-7% ↓
OAS_119	22.79	22.79	19.21	-3.52	-15% ↓

## Value Proposition

- Unifies production planning, operational activities, budgeting, and economic evaluation in a single integrated platform.
- Enables faster investment decisions through automated cashflow modelling aligned with PIA and PPTA fiscal frameworks.
- Optimises asset portfolios by instantly assessing the impact of adding or removing projects on production, CAPEX, OPEX, and overall value.
- Delivers real-time visibility into project performance with centralised dashboards and automated variance analysis.
- Improves budgeting accuracy and cost discipline through automated benchmarking of budget line items.
- Prioritises the most profitable opportunities using data-driven economic thresholds such as ROI and NPV.

**Actively used by oil and gas operators to drive integrated enterprise planning, portfolio performance management, and strategic decision making across assets.**

## Our Client



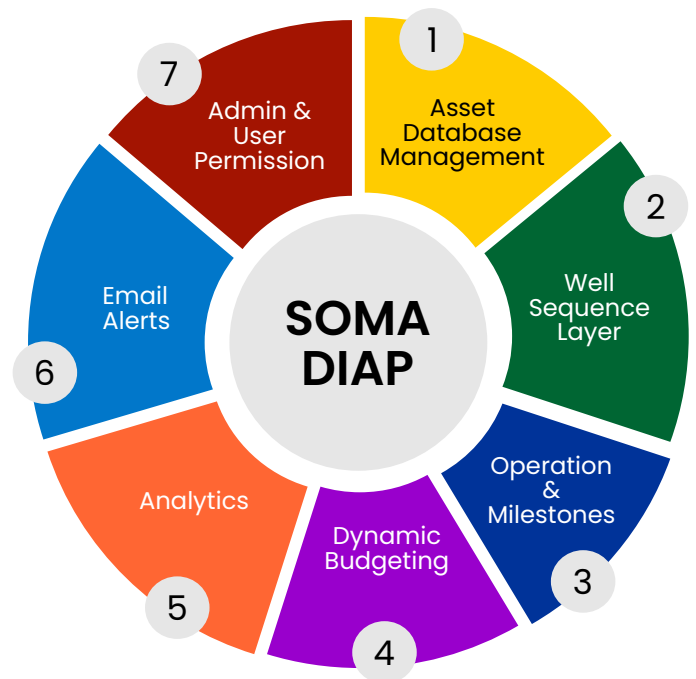
## D Asset Management Technology 4 SEPAL Drilling and Intervention Activities Planner (SEPAL DIAP)

SEPAL Drilling and Intervention Activity Planner is an innovative digital sequence optimisation solution, designed to help E&P companies manage their integrated well activities schedule effectively and efficiently. The collaborative platform enables critical stakeholders and teams to co-create activities schedule, track the schedules, monitor the execution, and control the integrated activities efficiently and effectively, greatly simplifying scheduling complexities, increasing the probability of success and minimising time and cost overruns.

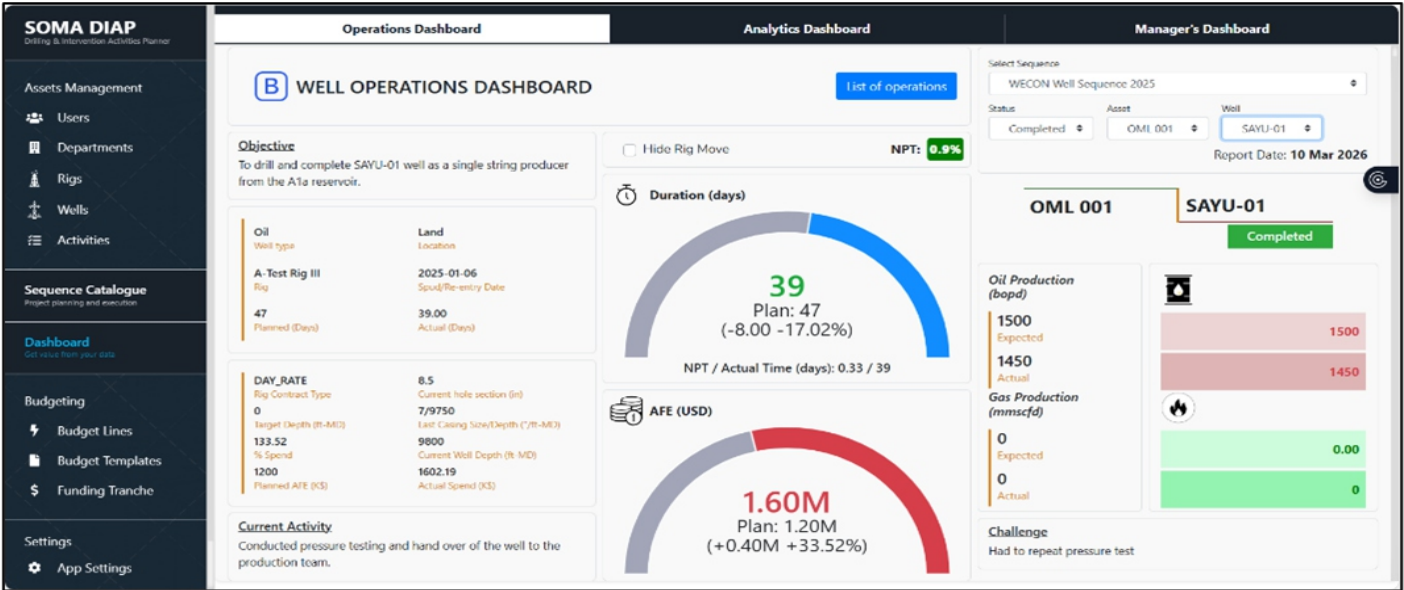


### Value Proposition

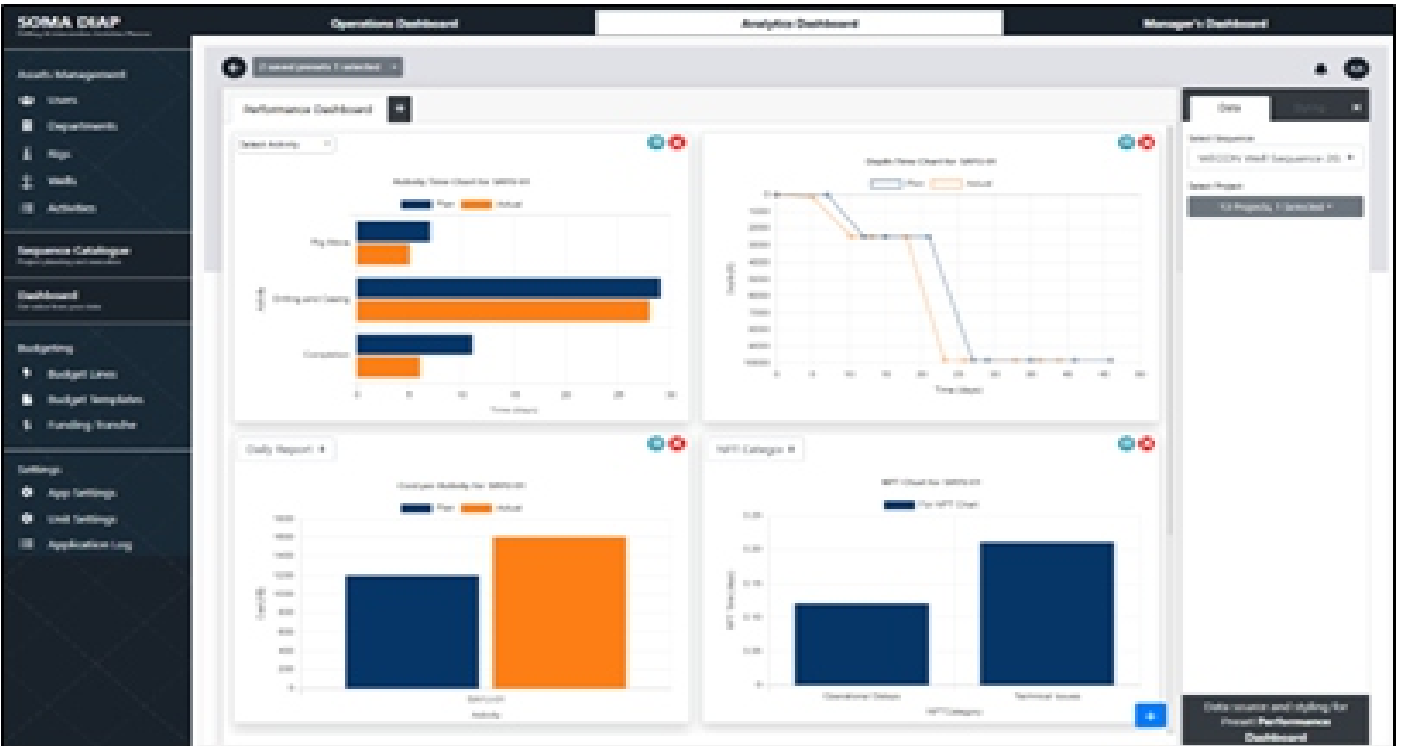
- Easy and rapid scheduling of well intervention, workover, and drilling projects.
- Seamless management of schedule evolutions.
- Effective collaboration and co-creation, management, and execution of the operations schedule.
- Enterprise-wide visibility & collaboration for daily wellsite operations planning and execution.
- Efficient tracking with alerts and notification systems.
- Reduced non-productive time or idling of critical well equipment.
- Easy implementation of “what-if” scenario analysis.



# Operations Dashboard



# Analytics dashboard



# Our Client



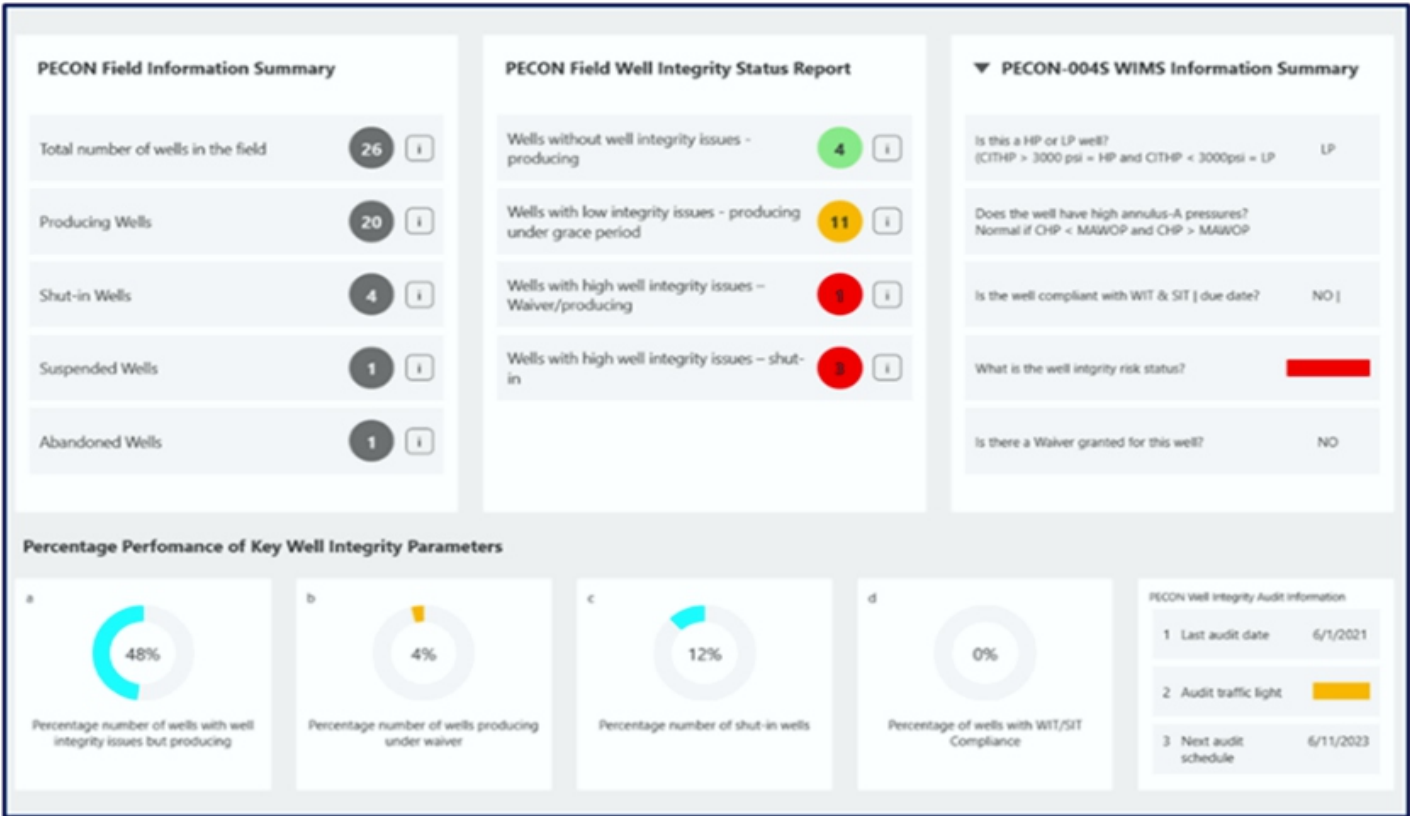
# E Asset Management Technology 5 SEPAL Well Integrity Management System (EAGLE GAZE)



CypherCrescent's well integrity management system (EAGLE GAZE) provides an integrated framework that incorporates technical, operational, and organisational efficiency to mitigate well integrity failure in the operating phase. It was designed in line with NORSOK-D010 and ISO 16530-2 well integrity standards for the operating phase

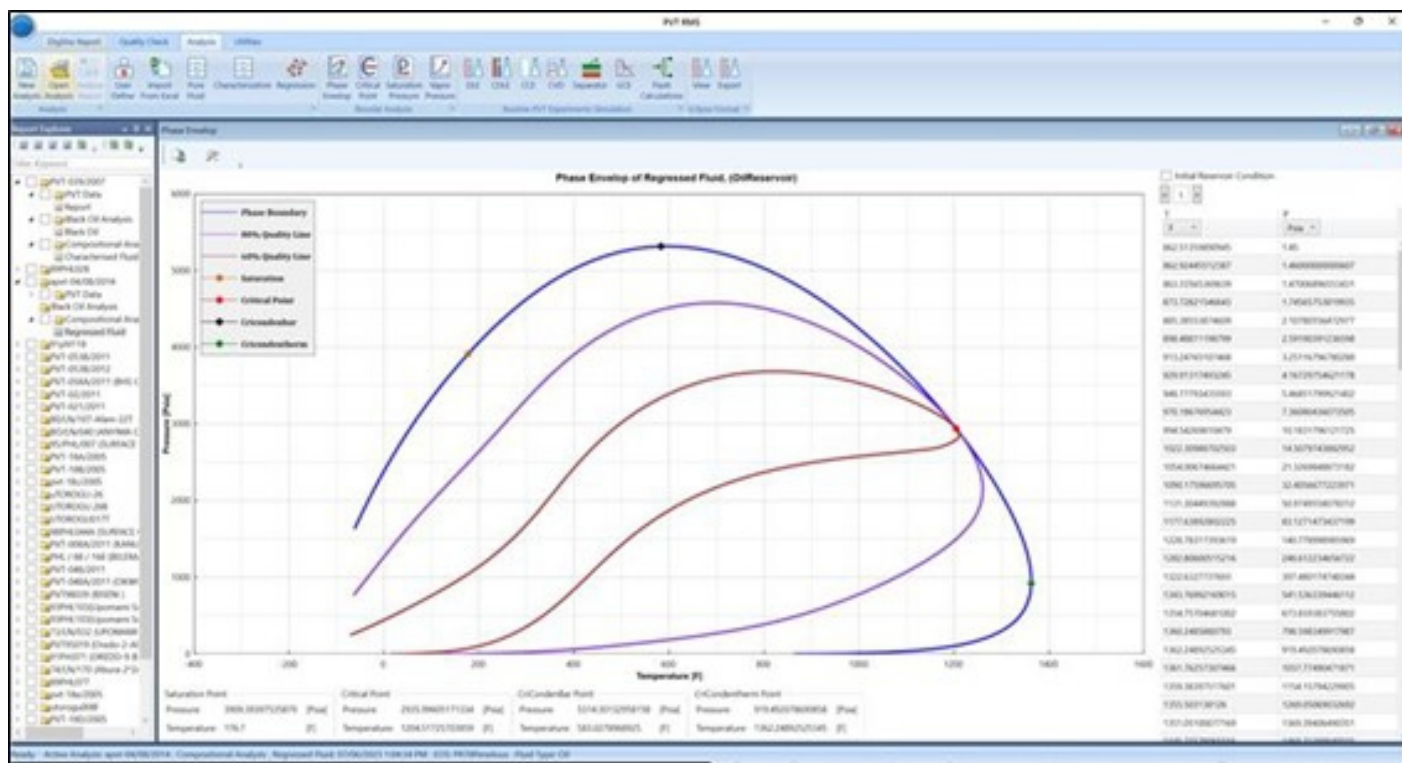
## Value Proposition

- Digital repository for well integrity and annulus pressure data.
- Automated well integrity management activities scheduling.
- Customisation of client-specific well integrity management policies, such as component failure models.
- Critical safety barriers assurance processes.
- Seamless querying and visualisation of well integrity data.
- Asset well integrity status summary dashboard.



# F Asset Management Technology 6 PVT Report Management Solution – PVTRMS

PVTRMS is a purpose-built digital platform that converts scattered and unstructured PVT data into a structured, searchable, and analytically powerful digital asset. Designed for reservoir engineers and technical teams, it streamlines PVT data management, model development, and regulatory compliance, enabling faster, more accurate, and fully traceable decision-making across the oil and gas value chain

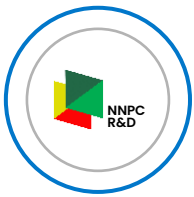


## Value Proposition

- Continuous organisation, updating, and accessibility of PVT data, transforming PVT oversight into a predictable, professional workflow.
- Converts scattered hardcopy reports into a structured digital library, preserving every detail and making decades of historical data instantly searchable.
- Centralises PVT information with controlled access, ensuring all technical teams work from the same trusted source, eliminating hidden files or single-owner data.
- Provides a unified workspace for cocreation, validation, and traceability of PVT models across multidisciplinary teams.

- Eliminates data silos and repeat sampling, enabling immediate availability of PVT data for simulations, well tests, flow assurance, and other technical studies.
- Ensures audit-ready documentation and accurate PVT data for informed development planning, reducing reliance on external service providers and supporting compliance with NUPRC and OPEC standards.

## Our Client

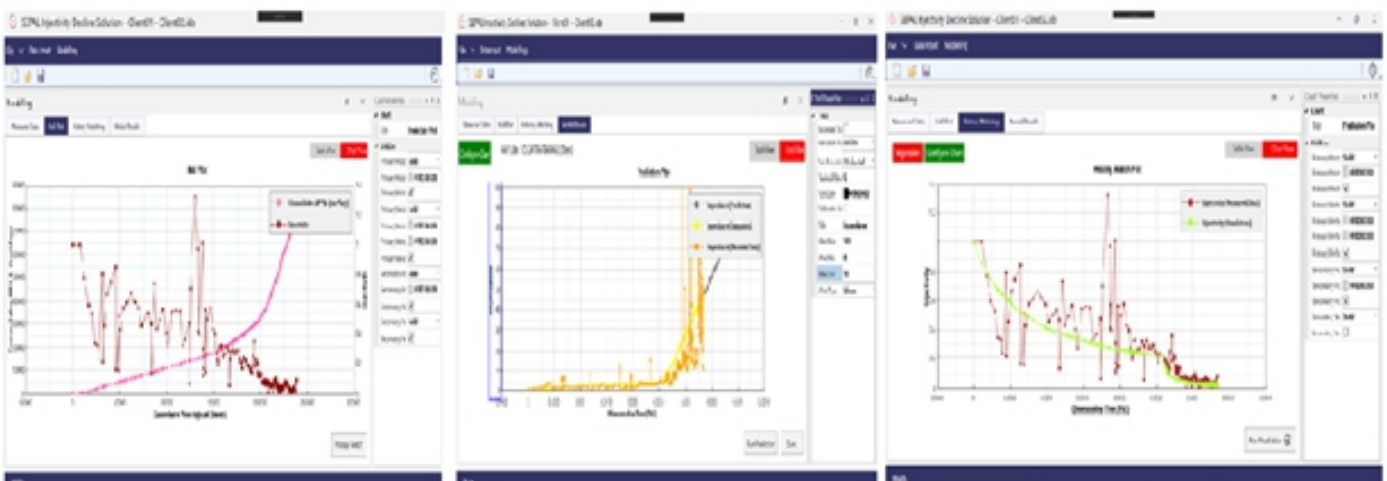


G

### Asset Management Technology 7 SEPAL Injectivity Decline Solution (IDS)



SEPAL IDS is a user-friendly simulator for the prediction of injectivity decline in water injection wells. It is designed as a practical and easy-to-use tool for engineers involved in planning and maintenance of water injection programs.



## Value Proposition

- Reliable prediction of injectivity decline.
- Higher injection well availability.
- Effective planning of injected water treatment and water stimulation procedures.

- Optimal well completion designs and injection system.
- Training on injectivity decline.
- Get to first oil faster and more consistently.

## Our Client



## Other Products



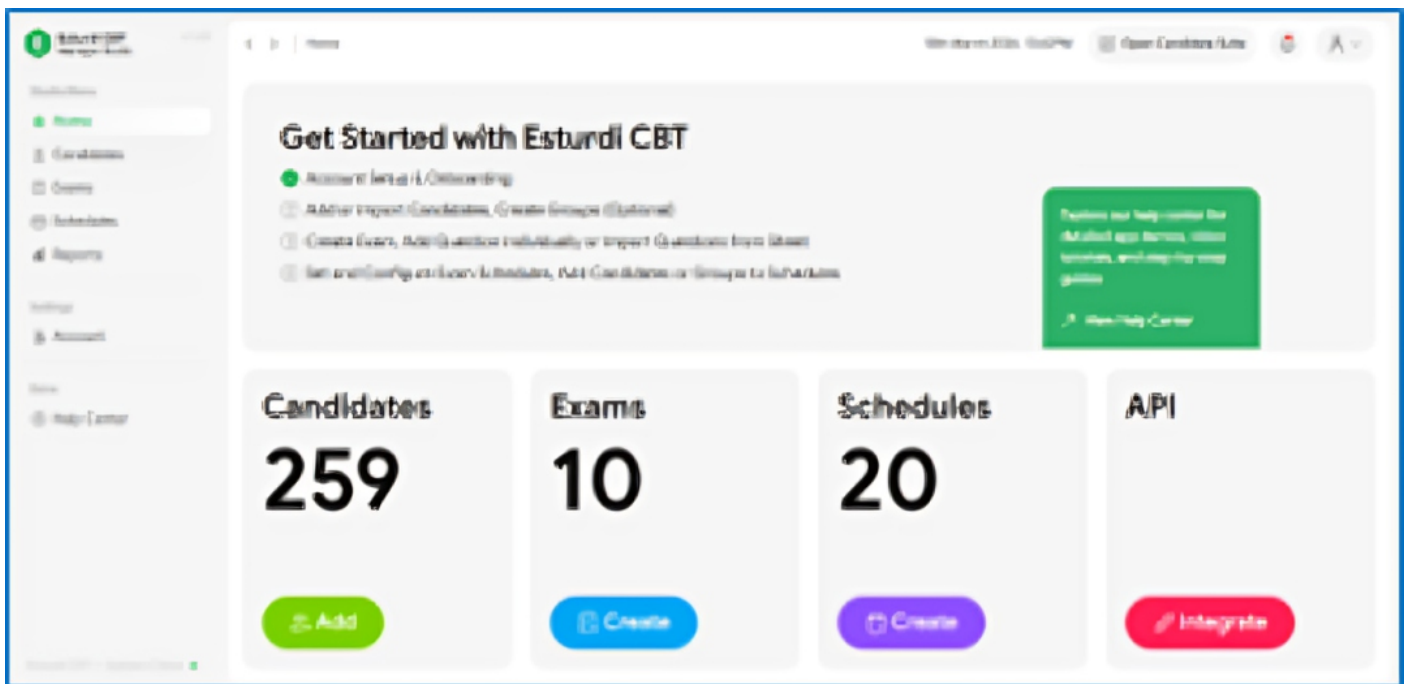
Reineur is CypherCrescents premier collaborative hub for bridging research and industry through innovation, expert networking, and strategic partnership. It is a trusted platform for industry-academia collaboration, having successfully hosted Triple Helix Nigeria and an Energy Training Institute (ETI) Uniport course.

The screenshot shows the Reineur community interface. On the left is a navigation menu with options: Dashboard, Communities (highlighted), Events, Messages, Settings, and Logout. The main content area is titled 'Community' and features a 'Create post' button. Below it is a post by Okechukwu Orjionuchie, dated Feb 10 at 9:55 AM, with the text: 'Appreciation I humbly wish to appreciate NCDMB for this wonderful opportunity, I have gained an experience in customer Experience and relationship management... project management and Entrepreneurship...God bless NCDMB community and God bless us all'. The post has 0 Upvotes, 0 Downvotes, and a Reply button. Below the post is a card for 'St. Leo's Hospital, Enugu' with the address: '57 Nike Lake Road, (Opposite Amazing Love Church), Trans-Ekulu, Enugu'. On the right side, there is a 'Create Private Community' button and a list of communities: NDI SOUTH EAST (22 Members), NDI South-South (21 Members), NDI NCDMB Community (38 Members), NDI- HMO (40 Members), and Small and Medium Enterprises (SME) (73 Members).



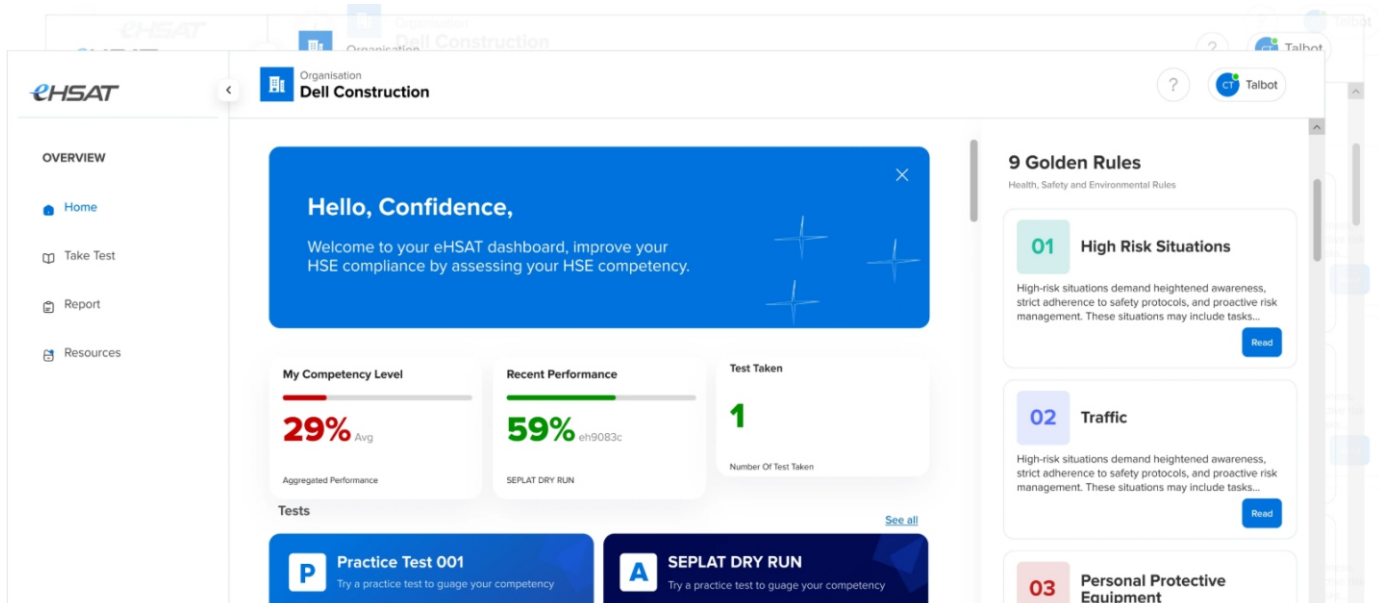
## Esturdi CBT

Esturdi is CypherCrescent's digital framework designed to drive structured training delivery and measurable learning outcomes. By integrating automated tracking with data-driven analytics, Esturdi empowers facilitators and organisations to monitor engagement, analyse progress, and ensure training objectives are effectively met. It is a robust assessment solution for high-stakes corporate recruitment, having successfully powered the Oando Graduate Acceleration Program (OGAP) Training



eHSAT is CypherCrescent's premier cloud-based solution for Health, Safety, and Environment (HSE) management. By unifying assessments, advanced analytics, and immersive learning into a single ecosystem, eHSAT empowers organisations to strengthen workforce competence, ensure regulatory compliance, and cultivate a proactive safety culture across diverse operational environments.





## 2

## Data Digitisation and Democratisation Service

Our Data Digitalisation and Democratisation Services transform scattered, unstructured, and siloed asset information into centralised, accessible, and analytically powerful digital assets. Using SEPAL WRM, we digitise and democratisate multi-disciplinary subsurface data, providing a validated single source of truth for WRM interpretations and STOG opportunity identification. With Eagle Gaze WIMS, we standardise and digitise well integrity and asset management data, ensuring consistency and alignment with global best practices. Through EPS & BFS, we integrate business planning and production forecasting, enabling accurate, data-driven investment and operational decisions.

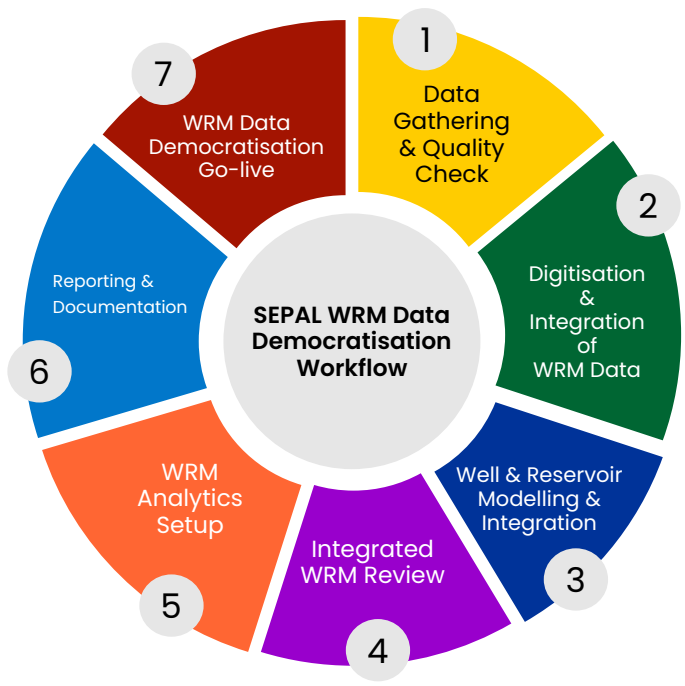
Using SOMA DIAP, we digitise drilling, workover, and well intervention planning to streamline execution and improve operational success. With PVT RMS, we convert historical PVT reports into structured, searchable digital datasets, making decades of reservoir data instantly accessible for simulations and engineering analysis.

By providing these services, we enable all stakeholders to securely access centralised, validated datasets with embedded analytics, supporting informed decision-making, operational efficiency, production optimisation, cost reduction, and regulatory and HSE compliance.

# SEPAL WRM Data Digitisation and Democratisation Service

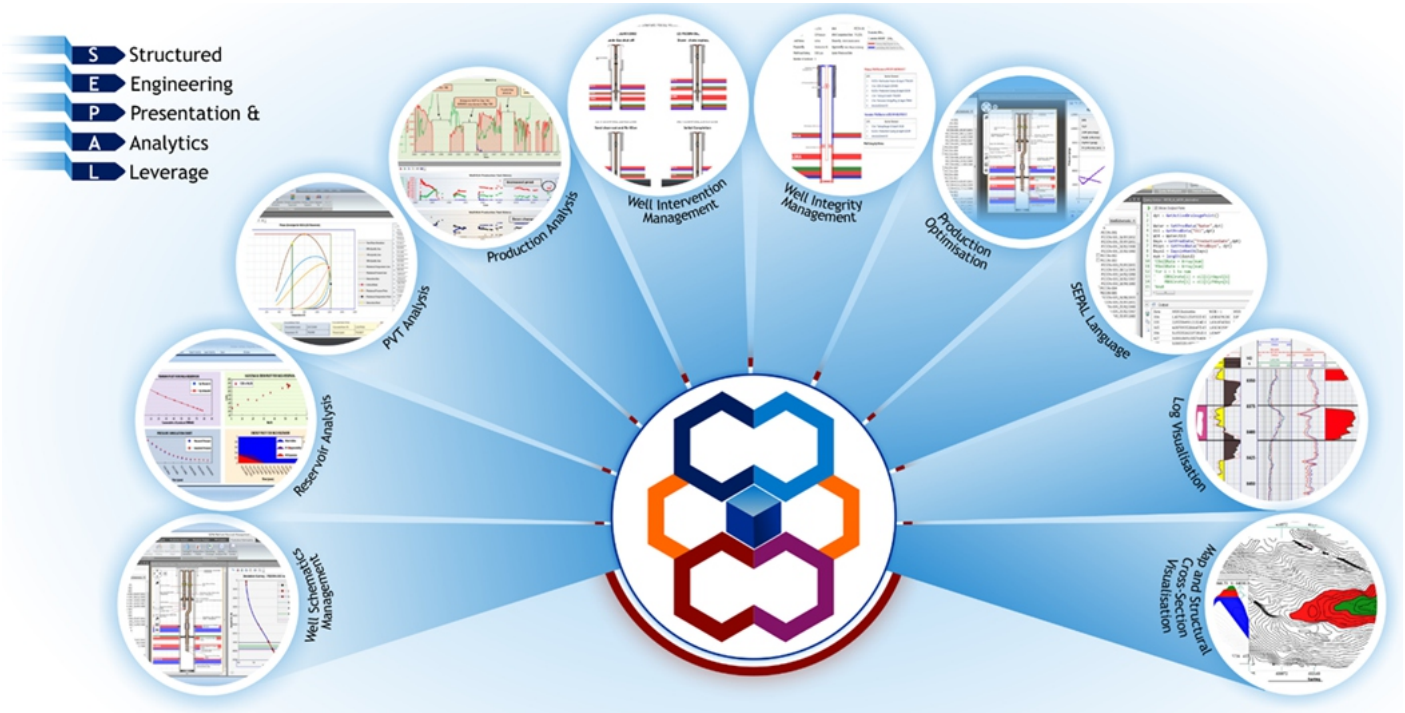


Our WRM data democratisation service tackles a fundamental asset management bottleneck, which is the difficulty in accessing validated single-source-of-truth WRM data for day-to-day asset management and decision making. Leveraging our SEPAL WRM solution, thoroughly vetted multi-disciplinary asset data is digitised and integrated into a digital repository with embedded analysis, which can be accessed by all stakeholders from any location. This service thus provides a framework for improved operational efficiency, production enhancement, cost reduction and improved HSE.



## Value Proposition

- Access to critical WRM data and their evolutions from inception to the present day, providing a unique understanding of historical performance and operational conditions and constraints.
- High degree of confidence in the accuracy and validity of WRM data, occasioned by our robust data validation workflow.
- Seamless access to the digital repository from any location, leveraging of the democratisation of the database.
- Robust quality control leveraging on read-and-write privileges provisioning, ensuring that only approved team members can modify the data in the database.
- Seamless opportunities identification and maturation, powered by critical WRM data visualisations and process automation.



**Sample Output from the WRM Solution**

## TESTIMONIAL



"Following the embedment of SEPAL WRM's democratised digital database, our team now spends an average of 1 hour per well in preparing for Asset Reviews, a 94% time-savings on the previous 2 Days per well."

**Pre-Data Democratisation**

**2 Days Per Well**

**Reduction in Time Spent Preparing for Asset Review**

**94%**

**Post-Data Democratisation**

**1 Hour Per Well**



# Projects and Success Stories

## SEPAL WRM Software and Data Democratisation Service

### Outcome

- Quality-checked legacy well and reservoir data to ensure reliability and validity.
- Digitisation and integration of validated WRM data into a digital database leveraging SEPAL WRM.
- Democratised the digital database to ensure accessibility from any location.
- Identification of production enhancement opportunities.

## Summary Statistics



## Realised/Testimonials

Identified and matured a matrix stimulation opportunity, which resulted in 411% increase in oil production, leveraging SEPAL WRM (SPE-198875-MS).

## SEPAL BFS Software

### Outcome

- Generation of realistic production forecasts that accommodate unique business constraints like crude losses, surface capacity constraints, deferrals, gas flares, etc.
- Seamless economic analysis and opportunities ranking with embedded PPTA and PIA fiscal regime algorithms.
- Entrench repeatability, auditability, and transparency in the forecasting and economic analysis process.

## Summary Statistics



**3+**  
Clients



**300+**  
Drainage  
Points



**30+**  
Software  
Users

## Values Realised/Testimonials

Improved business planning and hydrocarbon asset management leveraging SEPAL BFS (SPE 203736-MS)

## SEPAL PVTRMS Software

### Outcome

PVTRMS has been applied across a range of real-world scenarios in Nigeria's oil and gas sector:

- Characterisation and digitisation of over 1,000 PVT reports for a national operator.
- Detection of missing, incomplete, and edge-case PVT reports flagged for targeted resampling.
- Classification of Nigerian crude oils in line with OPEC quality specifications for a national regulatory project.
- Generation of black oil and compositional PVT inputs for reservoir simulation, well test, wellbore hydraulics, and flow assurance studies.
- Simulation of routine PVT laboratory experiments for quality validation against existing measurements.
- Democratisation of PVT models across multidisciplinary project teams with role-based access controls.

## **CYPHERCRESCENT NIGERIA LIMITED**

Plot 76A Fiddil Avenue, off Ordinance Road,  
Trans Amadi Industrial Layout,  
Port Harcourt, Nigeria.

✉ [portharcourt@cyphercrescent.com](mailto:portharcourt@cyphercrescent.com)

📞 +234(0)8111113988, +234(0)8111113974

🌐 [www.cyphercrescent.com](http://www.cyphercrescent.com)

