



**THE FIVE YEARS EXPERIENCE IN GHANA'S
DOWNSTREAM PETROLEUM SECTOR:
SHARING THE ACHIEVEMENTS OF
STRATEGIC MOBILISATION GHANA LIMITED (SML)**

MAY 2025

Confronting Impossibilities With Technology!



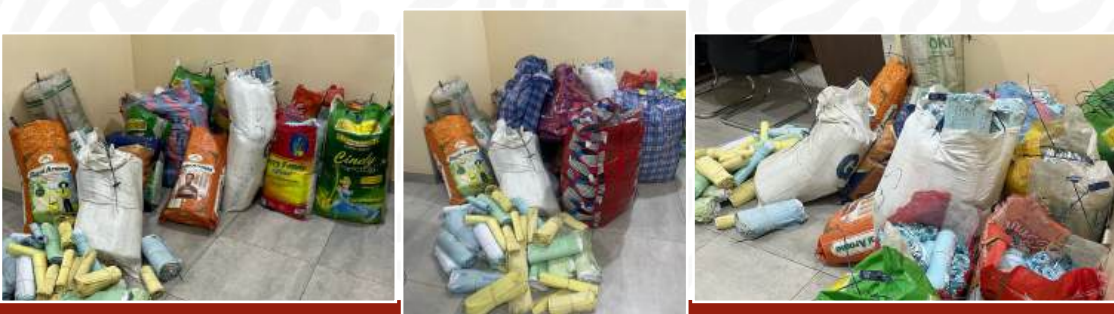
A Key Driver of **National Revenue**

The petroleum sector is a key pillar of Ghana's economy, contributing nearly 20% of the nation's GDP. Even during global disruptions like COVID-19, The sectors resilience helped Ghana meet revenue targets.

Major plays in Ghana's downstream, including Bulk Distribution Companies (BDCs), Oil Marketing Companies (OMCs), National Petroleum Authority (NPA), and the Ghana Revenue Authority (GRA), with the GRA responsible for overseeing tax collection.

The downstream process starts with BDCs importing refined petroleum products, which are stored at depots before being sold to OMCs. Waybills are issued after product sale transactions between BDCS and OMCS, and the fuel is transported to stations nationwide.

The post-tax excise structure demands accurate recording and measurement of petroleum transactions at depots, as unaccounted products result in lost revenue for the state. However, the lack of a unified platform for data triangulation and independent verification, along with modern metering and automated systems for real-time monitoring, and reliance on outdated manual processes such as dipstick measurements, handwritten data reconciliation, and physical storage of waybills, have created significant gaps for human error, data manipulation, reporting, and revenue losses for the state.



Waybills Were Stored In Sacks

The Birth of **SML-** **A Proudly Ghanaian Enterprise**

SML is a wholly Ghanaian-owned company. It was founded by a Ghanaian entrepreneur and core leadership team with backgrounds in international trade, oil and gas, forestry, taxation, logistics, mining services, and systems design. The company is part of a broader portfolio of locally driven ventures built around a clear vision: to use homegrown innovation to solve nationally significant problems. We employ over 450 Ghanaians across technology, engineering, auditing, and data analysis, creating local opportunities in sectors often dominated by foreign entities.

Our journey began in 2018 as a subcontractor for transaction audits. Impressed by our performance, the GRA appointed us as a primary service provider in 2019, expanding our role to include External Price Verification. In October 2019, GRA formalized two five-year contracts for transaction audits and downstream petroleum audits, approved by the Public Procurement Authority (PPA) in 2020.

In 2023, our mandate expanded to include upstream petroleum and solid minerals monitoring, consolidated into a single five-year agreement approved by the PPA on 27th September 2023.

Our partnership with GRA follows a full risk-reward model we are paid solely based on performance, bearing all financial and operational risks, ensuring zero financial burden on the government. This model reflects our commitment to delivering top-tier results while ensuring no financial burden on the government a rare value proposition in today's competitive landscape.

SML's local ownership strengthens the economy, as revenue stays within Ghana, supporting local supply chains, boosting SMEs, and driving GDP growth. Unlike foreign firms that often repatriate profits, SML reinvests its earnings in Ghana.



Mission

To offer durable and efficient solutions that power businesses and drive trade, enhancing revenue through the deployment of state of the art technology and skilled human resource across multiple channels.



Vission

To be a key decision driver by 2025 as far as Trade and Revenue Assurance matters are concerned.



Values

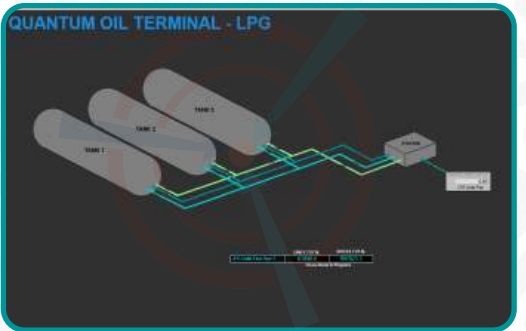
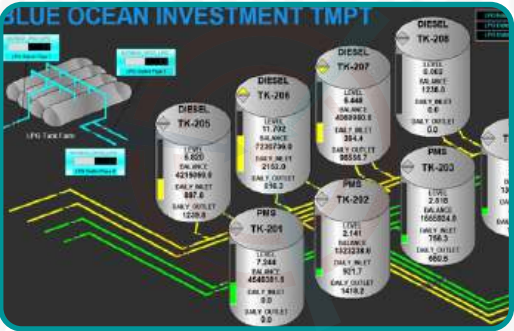
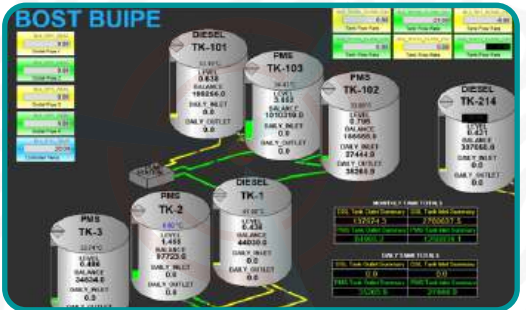
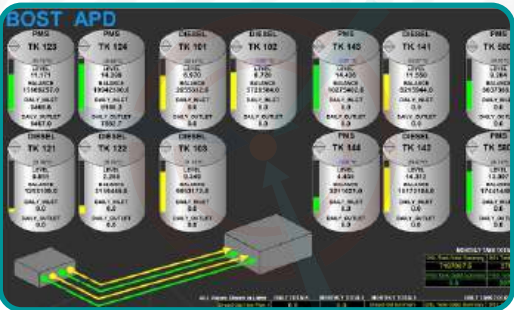
To adopt industry's best practices, methodologies and take an uncompromising approach to meeting our client's needs, through consistency of standards and flexibility of services offered.

Our Legacy of Excellence

When we first entered the petroleum downstream sector, a significant issue was the volume gap, where millions of litres of petroleum products went unaccounted for each month, resulting in tax revenue losses (EY Petroleum Stock Reconciliation Report, October 2020). GRA had little to no visibility into lifting volumes in real time.

To address these gaps, we deployed a suite of innovations:

- **Electronic Metering Systems & ATGs:** Introduced electronic metering systems and automatic tank gauges (ATGs) to replace manual volume readings, improving measurement accuracy at depots.
- **SML Experion:** Our flagship software integrates data from GRA, NPA, and depots, and works seamlessly with national platforms like GRA's ICUMS and Ghana.Gov for real-time triangulation and reconciliation of volumes, ensuring prompt identification and resolution of inconsistencies.
- **Audit Features in SML Experion:** Automates tax reconciliation audits and monitors OMC activities, ensuring real-time reporting and consistency across product orders, waybills, and depot readings.
- **Optical Character Recognition (OCR) integration:** Digitises physical records, offering easy accessibility, improved record retrieval and analysis at the click of a button.
- **AI-powered Risk Management:** Provides 24/7 surveillance, flagging anomalies in real-time and reducing the risk of unauthorized product liftings.



SML Field Deployments at **Depots**



SML Ultrasonic Flowmeters
on Depot Pipes



SML Automatic Tank
Gauging System(ATGs)



SML Radio Converter

What This **Means**

Through a combination of real-time monitoring, automated centralised data capturing, and advanced audit-grade analytics, we have achieved:

- **Elimination of Manual Errors and Risks:** Replacing traditional manual reporting with transparent, verifiable processes has minimised human error, delays, and data manipulation.
- **Nationwide Real-Time Oversight:** With our certified flow meters and Automatic Tank Gauges (ATGs) installed at 25 strategic depots from Tema to Bolgatanga we monitor product liftings and movements in real time.
- **Accurate Fuel Measurement:** Instant capturing of fuel volumes at the point of lifting ensures accurate and tamper-proof data across the entire value chain.
- **Automated Data transmission:** Seamless digital feeds to a centralised national data centre power smart analytics, real-time discrepancy alerts, and audit tools, generating specialist reconciliation reports that strengthen enforcement and tax verification.
- **End-to-End Payment Monitoring:** Real-time tracking of payments through Ghana.Gov to the Bank of Ghana ensures that funds are correctly received, recorded, and reconciled, providing end-to-end financial accountability.

Overall, SML's downstream intervention allows the GRA to reconcile actual liftings in real time and monitor activities throughout the value chain, closing loopholes and enhancing compliance. This ensures full traceability of transactions, fostering accountability, trust, and efficiency in tax revenue collection.

Our Impact: **By the Numbers**

Before SML's involvement in the downstream petroleum sector in 2020, GRA had no centralised computer systems; they depended on NPA for data transmission. There was a significant disconnect between the volumes of fuel lifted and the volumes reported for tax purposes (EY Petroleum Stock Reconciliation Report, October 2020). In 2019, the monthly recorded fuel lifting volumes, as recorded by NPA, were 450 million litres, while the taxable volumes reported by GRA were approximately 208 million litres. The discrepancy of approximately 243 million litres per month, at the prevailing tax rate of GHS 1.44 per litre, represented an estimated monthly revenue loss of nearly GHS 298 million. This pointed to a serious gap in visibility and accountability.

Before SML- **Data Gap Between NPA & GRA Volumes**

Period	Liftings Volumes (NPA)	Taxable Volume (GRA)	Difference Between NPA and GRA
January-19	417,509,071.00	237,690,910.00	179,818,160.80
February-19	378,913,500.00	151,420,073.00	227,493,426.88
March-19	406,561,369.00	237,157,323.00	169,404,045.97
April-19	438,642,890.00	210,305,404.00	228,337,486.32
May-19	410,850,950.00	220,547,087.00	190,303,862.81
June-19	369,640,051.00	158,574,082.00	211,065,969.09
July-19	409,058,753.00	251,843,852.00	157,214,900.58
August-19	393,360,860.00	209,742,501.00	183,618,359.21
September-19	382,133,810.00	169,047,118.00	213,086,691.85
October-19	415,804,479.00	236,970,188.00	178,834,291.07
November-19	397,844,510.00	209,875,050.00	187,969,459.53
December-19	434,419,120.00	201,447,107.00	232,972,012.84
January-20	406,312,740.00	333,981,561.00	72,332,179.06
February-20	407,257,945.00	50,155,223.00	357,102,721.70
March-20	404,713,630.00	145,359,303.00	259,354,327.06
April-20	314,311,365.00	156,410,476.00	157,900,888.78
Totals	6,387,335,043.00	3,180,526,259.00	3,206,808,783.53

Source: 1. Bank of Ghana Petroleum Holding Account.
2. NPA BDC Performance Report 2019

SML’s entry since May 2020 has been revolutionary. By deploying our advanced, real-time data collection and monitoring systems, we have bridged the gap between liftings and taxable volumes. Today, the monthly reported volumes for tax purposes have risen to match the actual lifting volume of 450 million litres per month, effectively closing that revenue gap and delivering significant value to the state. From May 2020 to December 2024, our systems have helped track and recover excess volume discrepancies totalling approximately 14.1 billion litres, translating to over GHS 20 billion in additional tax revenue secured for the state (see Tables in pages from 5 -10).

After SML’s Intervention - Data Gap Between NPA & GRA Volumes

Period	Liftings Volumes (NPA)	Taxable Volume (GRA)	Difference Between NPA and GRA
May-20	406,379,657.00	397,846,713.00	8,532,944.00
June-20	451,505,170.00	444,597,900.00	6,907,270.00
July-20	449,157,369.00	423,027,236.00	26,130,674.00
August-20	427,082,320.00	398,531,144.00	28,551,176.00
September-20	459,341,709.00	438,289,425.00	21,052,284.00
October-20	451,547,688.00	425,356,591.00	26,191,097.00
November-20	483,085,749.00	451,926,989.00	31,158,760.00
December-20	513,101,900.00	510,888,021.00	2,213,879.00
January-21	443,162,000.00	442,635,115.00	526,885.85
February-21	439,258,590.00	439,746,024.00	487,434.00
March-21	521,817,425.00	511,769,924.00	10,047,501.00
April-21	499,940,778.00	467,485,474.00	32,455,304.00
May-21	440,259,080.00	416,210,277.00	24,048,803.00
June-21	482,288,577.00	442,322,130.00	39,966,447.00
July-21	466,785,989.00	463,359,150.00	3,390,839.00
Aug-21	469,670,850.00	469,463,394.00	207,456.00
Totals	7,404,385,392.00	7,143,491,507.00	260,893,885.00

Source: GRA-ICUMS Platform

Monthly Average Benchmark for Taxable Volumes Before SML

Month	Year	Credit Summary (BOG)	Translated Volumes(Litres)	Average Translated Volumes(2019)(Litres)
January	2019	342,274,910.71	237,690,910.22	207,885,058
February	2019	218,044,905.30	151,420,073.13	
March	2019	341,506,545.17	237,157,323.03	
April	2019	302,839,781.30	210,305,403.68	
May	2019	317,587,805.55	220,547,087.19	
June	2019	228,346,677.95	158,574,081.91	
July	2019	362,655,147.48	251,843,852.42	
August	2019	302,029,201.14	209,742,500.79	
September	2019	243,427,850.13	169,047,118.15	
October	2019	341,237,070.62	236,970,187.93	
November	2019	302,220,072.67	209,875,050.47	
December	2019	290,083,834.31	201,447,107.16	

Source: Bank of Ghana Petroleum Holding Account.

Monthly Average Benchmark for Taxable Volumes After SML

Period	Petroleum Product (Litres)				Average Taxable Volume (2020–2021) Litres
	PMS	AGO	LPG	Total Monthly Volumes	
May-20	156,223,450	197,918,057	25,540,550	388,682,057	450,175,163
June-20	187,575,700	205,654,820	29,197,150	422,427,670	
July-20	181,489,900	208,153,250	30,402,560	420,045,710	
August-20	166,754,700	208,954,000	29,391,820	405,100,520	
September-20	176,518,000	219,929,000	29,113,970	425,561,909	
October-20	191,156,650	210,805,158	21,911,580	423,873,388	
November-20	198,780,600	216,957,159	35,939,890	451,677,649	
December-20	220,242,450	222,017,500	30,180,850	472,278,800	
January-21	213,138,450	219,728,800	31,863,642	464,730,892	
February-21	214,877,000	243,478,895	30,517,430	488,873,325	
March-21	235,442,250	271,662,005	34,138,140	541,242,395	
April-21	223,760,850	240,932,608	32,914,180	497,607,638	

Source: GRA-ICUMS Platform

Excess Taxable Volume Gains Reported Monthly in 2020

Period	Petroleum Product (Litres)					
	PMS	AGO	LPG	Total Monthly Volumes	Average Taxable Volume 2019	Excess Gain Volumes
May-20	165,223,450	197,918,057	25,540,550	388,682,057	207,885,058	180,796,999
June-20	187,575,700	205,654,820	29,197,150	422,427,670	207,885,058	214,542,612
July-20	181,489,900	208,153,250	30,402,560	420,045,710	207,885,058	212,160,652
August-20	166,754,700	208,954,000	29,391,820	405,100,520	207,885,058	197,676,462
September-20	176,518,000	219,929,939	29,113,970	425,561,909	207,885,058	217,676,851
October-20	191,156,650	210,805,158	21,911,580	423,873,388	207,885,058	215,988,330
November-20	198,780,600	216,957,159	35,939,890	451,477,649	207,885,058	243,792,591
December-20	220,242,450	222,017,500	30,018,850	472,278,800	207,885,058	264,393,742
Total Taxable Volume Of Excess Gains In 2020-Post SML Audit and Assurance						1,746,567,239
Total Taxable Revenue of Excess Gains in 2020-Post SML Audit and Assurance						2,515,056,824

Source: GRA-ICUMS Platform

Excess Taxable Volume Gains Reported Monthly in 2021

Period	Petroleum Product (Litres)					
	PMS	AGO	LPG	Total Monthly Volumes	Average Taxable Volume 2019	Excess Gain Volumes
January-21	213,138,450	219,728,800	31,863,642	464,730,892	207,885,058	256,845,834
February-21	214,877,000	243,654,820	30,517,430	488,873,325	207,885,058	280,988,267
March-21	235,442,250	271,662,005	34,138,140	541,242,395	207,885,058	333,357,337
April-21	223,760,850	240,932,608	32,914,184	497,607,638	207,885,058	289,722,580
May-21	210,536,650	213,898,440	29,889,800	454,324,890	207,885,058	246,439,832
June-21	232,271,609	245,983,338	35,212,420	513,467,367	207,885,058	305,582,309
July-21	223,358,850	226,611,289	33,306,100	483,276,239	207,885,058	275,391,181
August-21	185,107,600	197,439,010	28,154,450	410,701,060	207,885,058	202,816,002
September-21	151,447,300	170,432,458	23,660,430	345,540,188	207,885,058	137,655,130
October-21	158,818,450	175,939,227	22,830,082	357,584,757	207,885,058	149,702,699
November-21	133,050,300	152,587,956	19,115,640	304,753,896	207,885,058	96,868,838
December-21	168,675,400	183,267,810	26,141,960	378,085,170	207,885,058	170,200,112
Total Taxable Volume Of Excess Gains in 2021-Post SML Audit and Assurance						2,745,570,121
Total Taxable Revenue of Excess Gains in 2021-Post SML Audit and Assurance						3,953,620,947

Source: GRA-ICUMS Platform

Excess Taxable Volume Gains Reported Monthly in 2022

Period	Petroleum Product (Litres)					
	PMS	AGO	LPG	Total Monthly Volumes	Average Taxable Volume 2019	Excess Gain Volumes
January-22	201,189,800	194,189,797	29,344,242	424,723,839	207,885,058	216,845,781
February-22	191,987,150	211,556,424	26,753,863	430,297,437	207,885,058	222,412,379
March-22	178,371,850	210,750,360	26,555,695	415,677,905	207,885,058	207,792,847
April-22	221,115,600	231,405,997	29,509,921	482,031,518	207,885,058	274,146,460
May-22	198,861,400	214,763,528	27,725,877	441,350,805	207,885,058	233,465,747
June-22	187,923,700	233,709,420	27,243,859	448,876,979	207,885,058	240,991,921
July-22	182,687,450	196,116,190	28,823,002	407,626,642	207,885,058	199,741,584
August-22	204,693,500	225,637,953	30,979,363	461,310,798	207,885,058	253,425,584
September-22	196,361,000	186,381,089	29,695,903	412,437,992	207,885,058	204,552,934
October-22	179,157,400	192,692,322	31,167,612	403,017,334	207,885,058	195,132,276
November-22	172,661,800	177,582,900	28,292,324	378,537,024	207,885,058	170,651,966
December-22	224,724,100	197,488,019	27,764,818	449,976,937	207,885,058	242,091,879
Total Taxable Volume Of Excess Gains in 2022-Post SML Audit and Assurance						2,661,244,512
Total Taxable Revenue of Excess Gains in 2022-Post SML Audit and Assurance						3,832,192,100

Source: GRA-ICUMS Platform

Excess Taxable Volume Gains Reported Monthly in 2023

Period	Petroleum Product (Litres)					
	PMS	AGO	LPG	Total Monthly Volumes	Average Taxable Volume 2019	Excess Gain Volumes
January-23	181,450,800	176,045,930	22,575,739	380,071,669	207,885,058	172,186,611
February-23	176,604,200	186,102,520	30,909,441	393,616,161	207,885,058	185,731,103
March-23	226,684,800	261,355,516	33,355,991	521,396,307	207,885,058	313,511,249
April-23	194,529,400	202,967,590	25,410,928	422,907,918	207,885,058	215,022,860
May-23	219,359,700	230,278,346	26,866,390	476,504,436	207,885,058	268,619,378
June-23	213,200,000	241,247,524	35,114,379	489,561,903	207,885,058	281,676,845
July-23	209,803,700	233,595,710	33,304,293	476,703,703	207,885,058	268,818,645
August-23	211,093,400	228,992,792	32,923,029	473,009,221	207,885,058	265,124,163
September-23	202,392,500	271,274,926	33,004,691	452,672,117	207,885,058	244,787,059
October-23	228,715,200	262,275,837	46,727,452	537,718,489	207,885,058	329,833,431
November-23	249,327,700	240,253,150	39,961,259	529,542,109	207,885,058	321,657,051
December-23	240,179,800	220,690,304	35,201,557	496,071,661	207,885,058	288,186,603
Total Taxable Volume Of Excess Gains in 2023-Post SML Audit and Assurance						3,155,154,998
Total Taxable Revenue of Excess Gains in 2023-Post SML Audit and Assurance						4,543,423,197

Source: GRA-ICUMS Platform

Excess Taxable Volume Gains

Reported Monthly in 2024

Period	Petroleum Product (Litres)					
	PMS	AGO	LPG	Total Monthly Volumes	Average Taxable Volume 2019	Excess Gain Volumes
January-24	191,899,577.89	251,055,066.44	35,882,425.00	478,882,361.33	207,885,058	270,997,303.33
February-24	197,911,325.15	218,286,188.22	34,893,899.93	451,136,736.30	207,885,058	243,251,678.30
March-24	208,718,493.85	214,835,141.55	32,585,206.16	456,184,193.56	207,885,058	248,299,135.56
April-24	259,725,911.24	213,685,020.48	34,641,645.28	508,097,960.00	207,885,058	300,212,902.00
May-24	240,155,303.35	280,469,295.61	32,732,050.98	553,402,062.94	207,885,058	345,517,004.94
June-24	221,802,544.52	259,735,300.79	35,384,908.20	516,968,197.51	207,885,058	309,083,139.51
July-24	235,856,361.50	259,689,943.38	37,964,597.16	533,556,376.04	207,885,058	325,671,318.04
August-24	212,476,305.23	271,064,414.81	36,871,774.09	520,457,999.13	207,885,058	312,572,941.13
September-24	252,638,680.47	233,529,351.54	30,191,752.26	516,405,320.27	207,885,058	308,520,262.27
October-24	257,161,166.09	246,854,407.65	41,585,878.66	545,647,018.40	207,885,058	337,761,960.40
November-24	314,515,498.30	292,441,722.80	40,553,706.69	647,556,524.79	207,885,058	439,671,466.79
December-24	241,118,737.10	281,132,777.97	40,752,150.15	563,049,292.22	207,885,058	355,164,234.22
Total Taxable Volume Of Excess Gains in 2024- Post SML Audit and Assurance						3,796,723,346.49
Total Taxable Revenue of Excess Gains in 2024-Post SML Audit and Assurance						5,467,281,618.80

Source: GRA-ICUMS Platform

Excess Annual Volume Gains and

Related Revenue (May 2020–Dec 2024)

Period	Excess Volume Gains	Excess Revenue Gains (GHS)
May-Dec 2020	1,746,567,239	2,515,056,824
2021	2,745,570,121	3,953,620,974
2022	2,661,244,514	3,832,192,100
2023	3,155,154,998	4,543,423,197
2024	3,796,723,346.49	5,467,281,618.80
Totals	14,105,260,218	20,311,574,714

Source: GRA-ICUMS Platform

Our Impact: **Beyond the Numbers**

Our impact goes beyond numbers. On the qualitative front, our real-time monitoring and digital surveillance across 25 fuel depots nationwide have strengthened institutional oversight, providing an unprecedented level of transparency, accuracy, and accountability in downstream petroleum operations. Our automated systems, coupled with tamper-proof data reconciliation and payment tracking audits, have significantly reduced the risk of human error, manipulation, and payment inaccuracies.

Client's **Validation**

"SML solely financed the capital expenditures and cutting-edge technology that is employed in the monitoring and auditing services provided to GRA in the Downstream Petroleum Sector." (GRA Press Release, 2024)

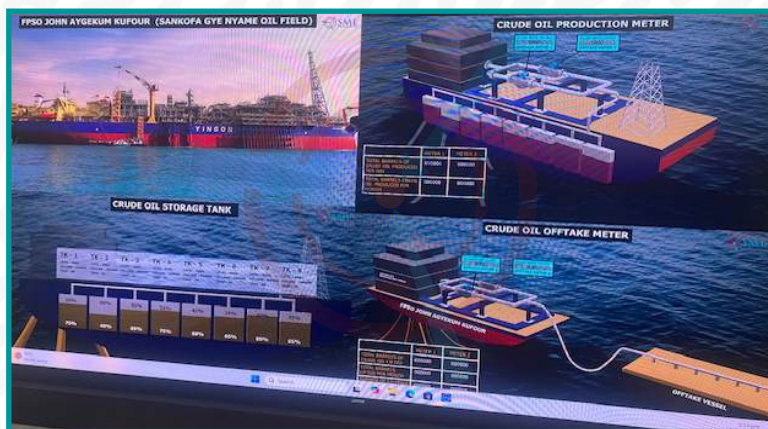
Progressing with **Purpose**

Building on our success in the downstream petroleum sector, SML is extending its expertise to Ghana's upstream petroleum and solid minerals sectors. These sectors are vital to the nation's economy but face significant challenges due to limited infrastructure for independent verification, leading to data inconsistencies, revenue leakages, and underreporting.

In the upstream petroleum sector, the absence of real-time surveillance and independent production measurement hampers accurate tax assessments. SML Upstream Suite, deploying advanced metering technology and real-time digital monitoring tools, aims to provide transparent accounting for every barrel of crude oil extracted, thereby enhancing revenue assurance.

Similarly, the minerals sector, particularly gold, is a substantial contributor to Ghana's economy, exporting about US\$7.1bn in 2023 (ISODEC, 2024). However, it is plagued by issues such as underreporting, illicit trade, and inadequate traceability mechanisms. Consequently, this leads to a loss of revenue during a period when every cedi is of significant importance.

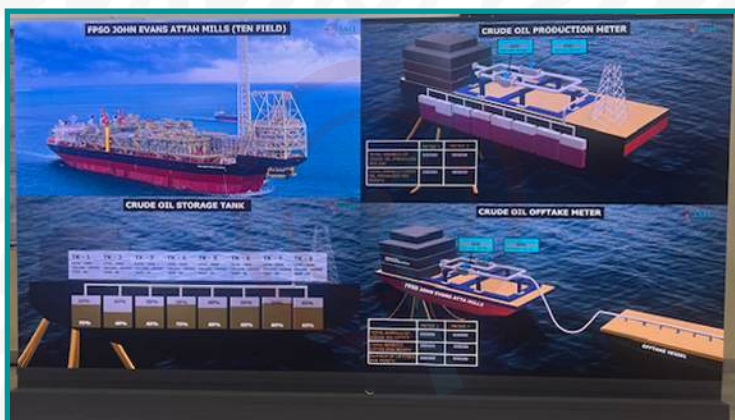




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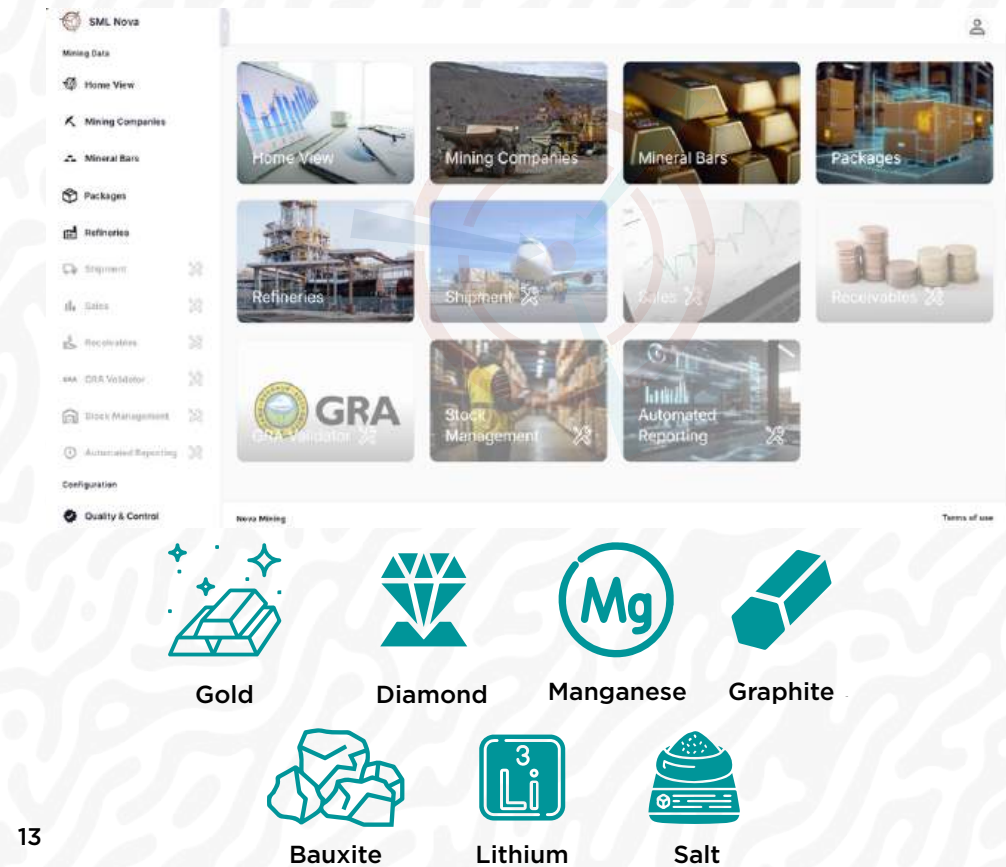


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SML NOVA

Our latest flagship solution for real-time tracking of minerals from extraction to export, is intended to enable traceability, audit assurance, and compliance monitoring across the entire mining value chain. It captures and consolidates data from mining sites, transportation hubs, and export terminals to ensure that every ounce of mineral resource is properly declared, tracked, and taxed. By this initiative, our robust monitoring systems seek to address these issues by enhancing transparency and accountability in the sector.

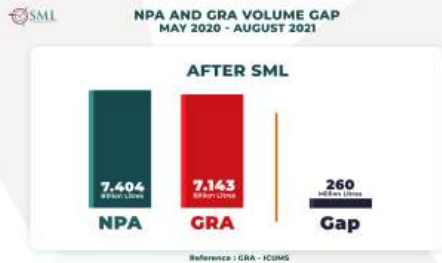
The SML's model is a scalable, sector-agnostic solution that can be applied across water, electricity, aviation, and telecommunications sectors, similarly facing challenges around revenue leakages, underreporting, and data management inefficiencies. Ghana alone loses approximately US\$9 billion annually in revenue leakage (Prof. Boadi, University of Professional Studies, UPSA, Accra), and Africa loses about \$88.6 billion annually 3.7% of its GDP to illicit financial flows (UNCTAD, Economic Development in Africa Report 2020). Our vision is to lead Africa's audit and revenue assurance transformation by 2030, partnering with nations to co-design tailored, scalable technology solutions.



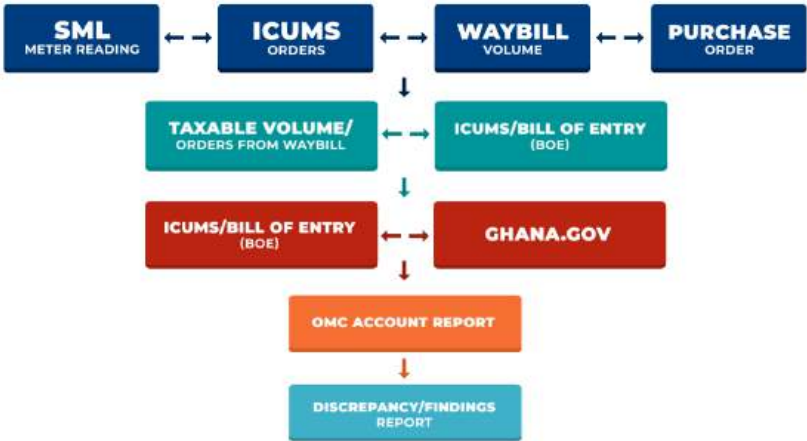
Conclusion

We have transformed GRA's vision of digital revenue assurance into reality, making Ghana the first in Africa to implement a real-time petroleum monitoring and specialist tax audit solution. Through our platform, Ghana is transitioning from revenue fragility to resilience by closing long-standing gaps in key sectors, such as petroleum and solid minerals.

SML's impact is not just measurable - it's transformational. We strengthen institutions, protect revenue, and set a new standard for public financial management, proving that with the right tools and partnerships, Ghana can stand tall, build boldly through home-grown, globally benchmarked solutions, and finance its destiny on its own terms.



SML PROCESS FLOW IN DOWNSTREAM




This is the story of Strategic Mobilisation Ghana Limited!

**Confronting Impossibilities with Technology!
Join Us!**

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