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Improving Monitoring and Evaluation of Performance using Spatial Data: Case Study GWL

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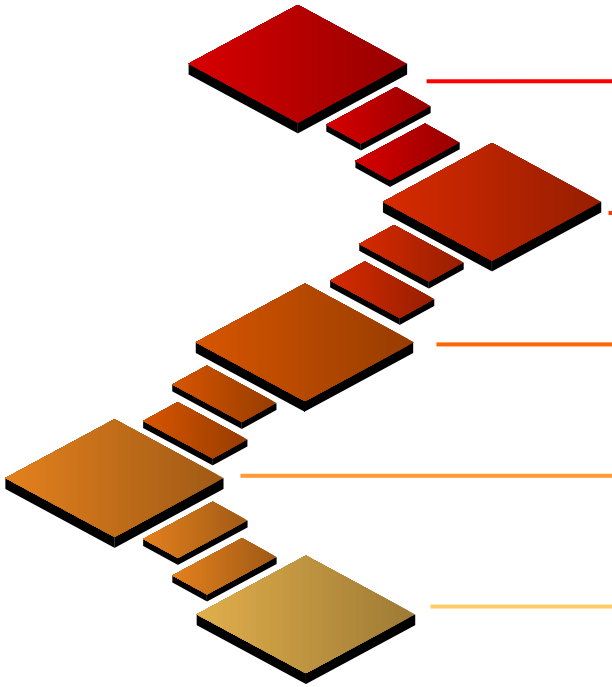
OUTLINE



5 SDGs

4 CONCLUSION

3 M&E – GIS ADVANTAGES

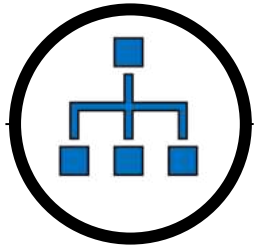
2 M&E – GIS DEVELOPMENT

1 INTRODUCTION

INTRODUCTION

Abstraction and Treatment of raw water from **surface water** and **groundwater** sources

Treated water is **Transported** through relatively large transmission networks



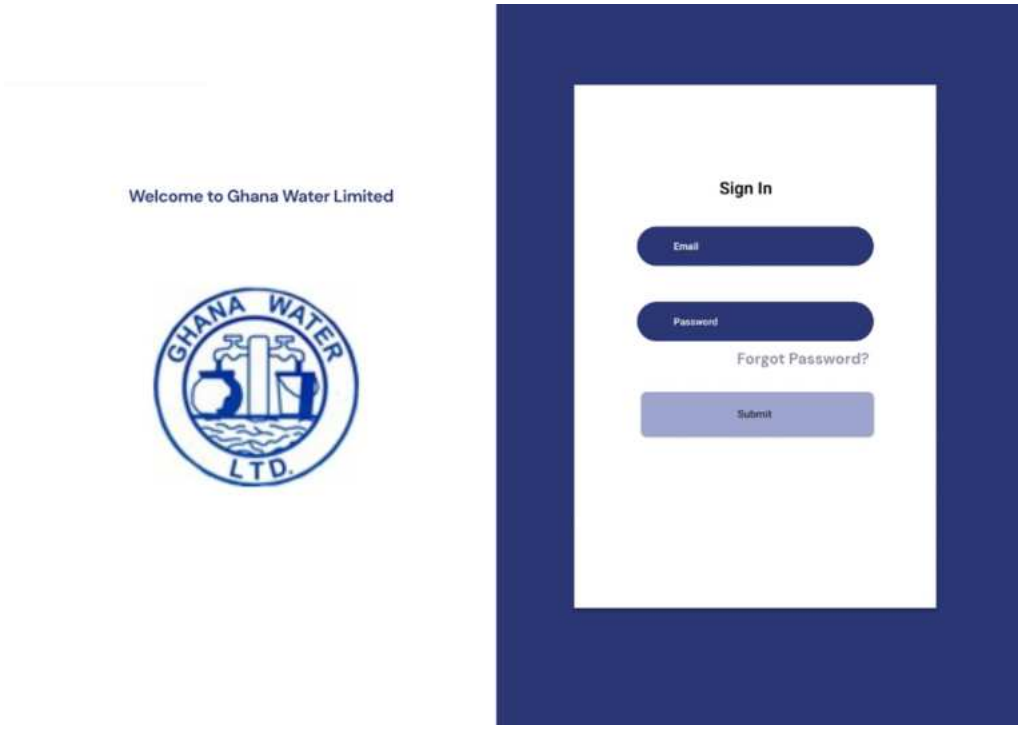
Water is further distributed through a **network of mains** to consumer premises/households

Consumers are **billed** with applicable tariffs, and are expected to honor the bills delivered to them

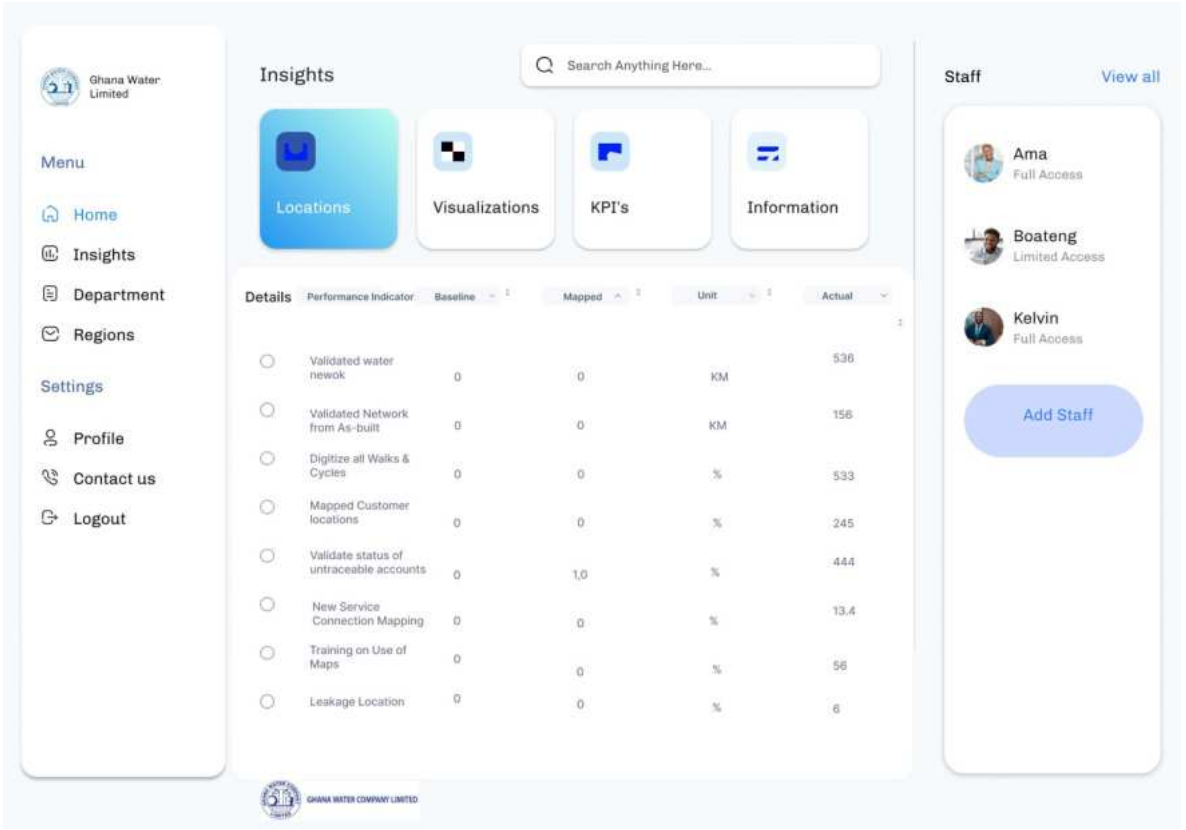
INTRODUCTION CONT'D

KPIs	ASHANTI NORTH REGION						
Customer Complaints (%)	ABOABO	SUAME	TAFO PANKRONO	ASOKORE MAMPONG	OFFINSO	Total Complaints (%)	Ranks
C1 Complex Tariff	0.58%	0.00%	21.95%	5.97%	2.61%	3.90%	9
C2 Estimated Bill	0.00%	7.14%	0.00%	0.00%	0.00%	0.69%	15
C3 Overbilling	2.34%	23.81%	0.00%	31.34%	6.96%	9.86%	4
C4 Meter Replacement	0.00%	0.00%	0.00%	4.48%	0.00%	0.69%	15
C5 Penalty	9.36%	21.43%	4.88%	1.49%	3.48%	7.34%	6
C6 Pipe Burst	0.58%	0.00%	19.51%	1.49%	14.78%	6.19%	7
C7 Pipe leakage	4.09%	0.00%	0.00%	4.48%	57.39%	17.43%	2
C8 No Flow	0.58%	0.00%	14.63%	40.30%	2.61%	8.49%	5
C9 Low Pressure	0.00%	4.76%	0.00%	1.49%	0.00%	0.69%	15
C10 Quality of water	0.00%	2.38%	0.00%	0.00%	0.87%	0.46%	19
C11 Incorrect Meter Reading	1.17%	0.00%	7.32%	0.00%	0.87%	1.38%	13
C12 Faulty Meter	2.92%	4.76%	0.00%	5.97%	1.74%	2.98%	10
C13 Stolen Meter	5.85%	0.00%	4.88%	0.00%	0.00%	2.75%	11
C14 Illegal connection	1.75%	0.00%	0.00%	0.00%	0.00%	0.69%	15
C15 Wrong Disconnection	0.00%	0.00%	9.76%	0.00%	0.00%	0.92%	14
C16 Delay in connecting Water	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20
C17 High Estimate	45.03%	4.76%	0.00%	0.00%	0.00%	18.12%	1
C18 Wrong Category of Service	3.51%	0.00%	0.00%	0.00%	0.87%	1.61%	12
C19 Poor Accecibilty to Company	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20
C20 Untimely Response to Complaints	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20
C21 Enquiries	17.54%	0.00%	17.07%	0.00%	7.83%	10.55%	3
C22 Request for Statement	4.68%	30.95%	0.00%	2.99%	0.00%	5.28%	8
Total Complaints (%)	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	

M&E – GIS DEVELOPMENT

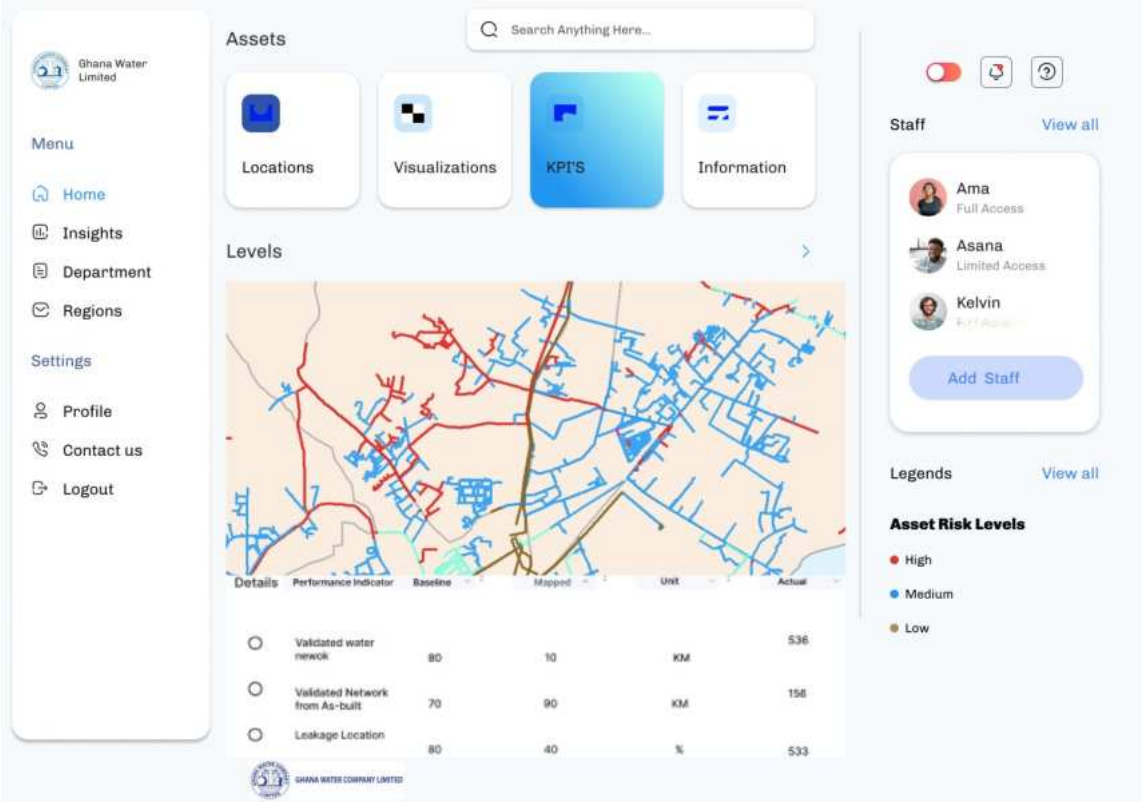


User login Interface

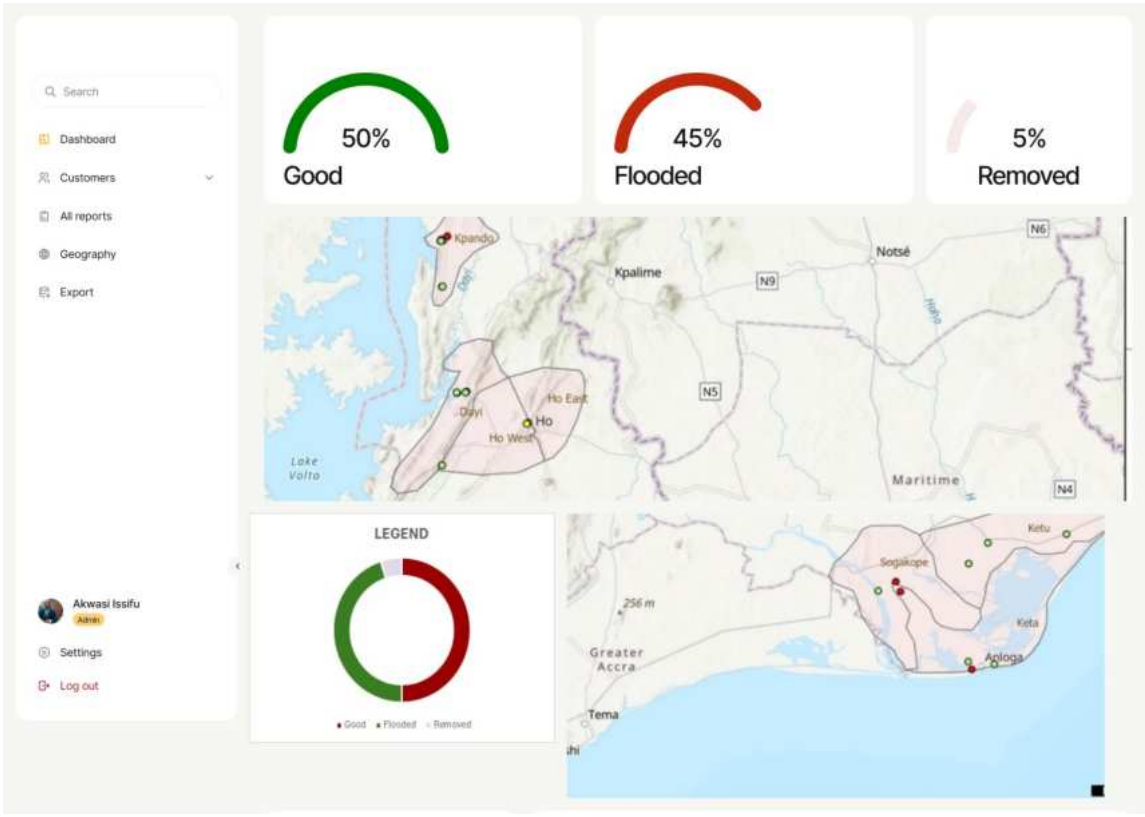


Reports and KPIs

M&E – GIS DEVELOPMENT CONT'D



Asset Risk levels based on historical maintenance



Status of production meters in Volta Region

M&E – GIS ADVANTAGES

- Comprehensive and user friendly.
- Centralized database & General Structure.
- Improved asset management.
- Easy monitoring & analysis of performance trends.
- Reduction in Scope 1 emission.

CONCLUSION

The study on the improving Monitoring of performances using spatial data by GWL has demonstrated the potential of improving insights gleaned from data to improve performance which was not considered beforehand.

The proposed system provides very valuable insights to the M&E team to drill deep into operational gaps to improve the efficiencies of the utility.

SUSTAINABLE DEVELOPMENT GOALS | International Federation of Surveyors supports the Sustainable Development Goals

Commission 4

Hydrography **SDG 6 & 13**

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Thank You