LAMflow Enhancements

OPENING REMARK
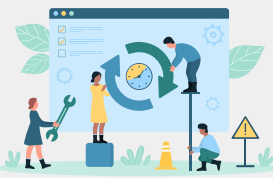
To boost LAMflow, we'll use both our tech skills and the unique knowledge and experiences everyone here offers.

LAMflow System Stacks Overview:

- **Apps Stack**: An Apps Stack consists of individual software applications, each performing its specific function..

- **PI Interface Stack**: Bridges LAMflow with the PI Server database, facilitating data transfer.

- **DataOps Stack**: Manages the secure storage and easy access of our data.

- **Monitoring Stack**: Keeps an eye on system performance, ensuring smooth operations.

- **Middleware Stack**: Connects all LAMflow stacks, aiding in effective communication.

- **Service Handler Stack**: Organizes tasks and workflows, driving operational efficiency.
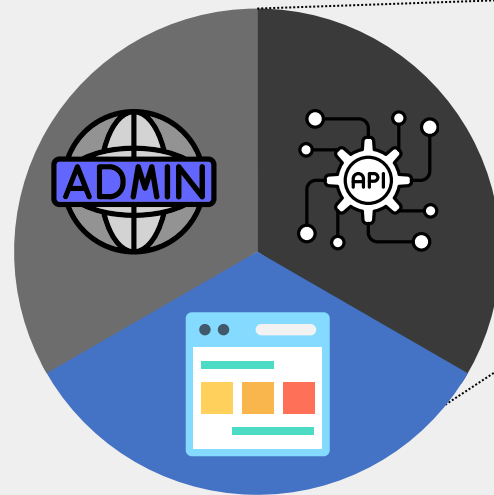
ISSUES RESOLVED

	Customization & Integration	**Unique client systems made modifications and integrations complex.**
	Architecture & Updates	**Rigid system with complex update processes.**
	Data Management	**Used non-optimal RDBMS for time-series data.**
	User Experience	**Non-flexible dashboards and notifications.**
	Configuration	**Windows-only, no web access.**

APPS STACK

Definition: An Apps Stack consists of individual software applications, each performing its specific function.
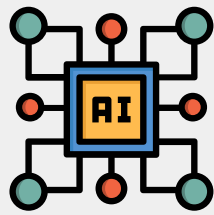
Role in LAMflow: In LAMflow, we use stacks to organize tasks. Each part of our system has its own app, making things more flexible and easy to update.
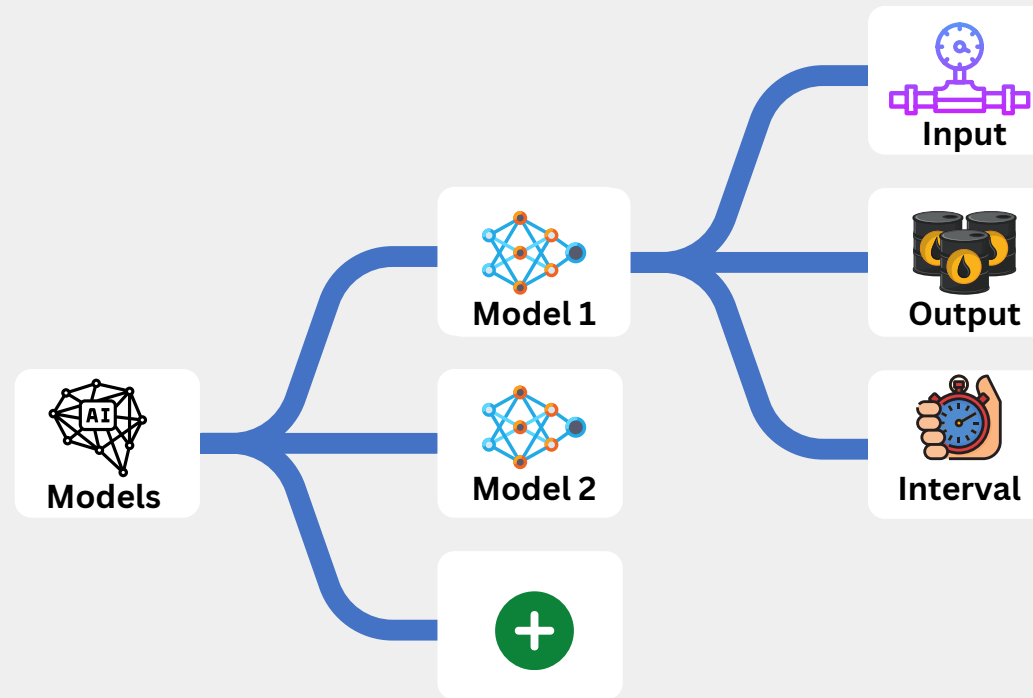
APPs Stack

Data Collection

Core

CORE

Models in LAMflow::These are Machine Learning or Neural Network models that help us make predictions or analyze data patterns.

Features vs Outputs: Models analyze 'Features' and give us 'Outputs'.

Data Flow:Models receive data at set intervals. For time series analyses, they often review past intervals to detect trends.
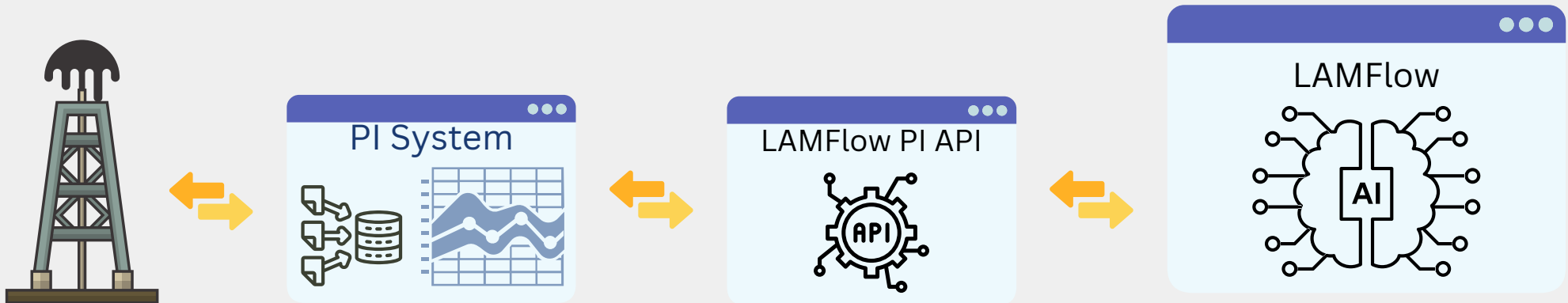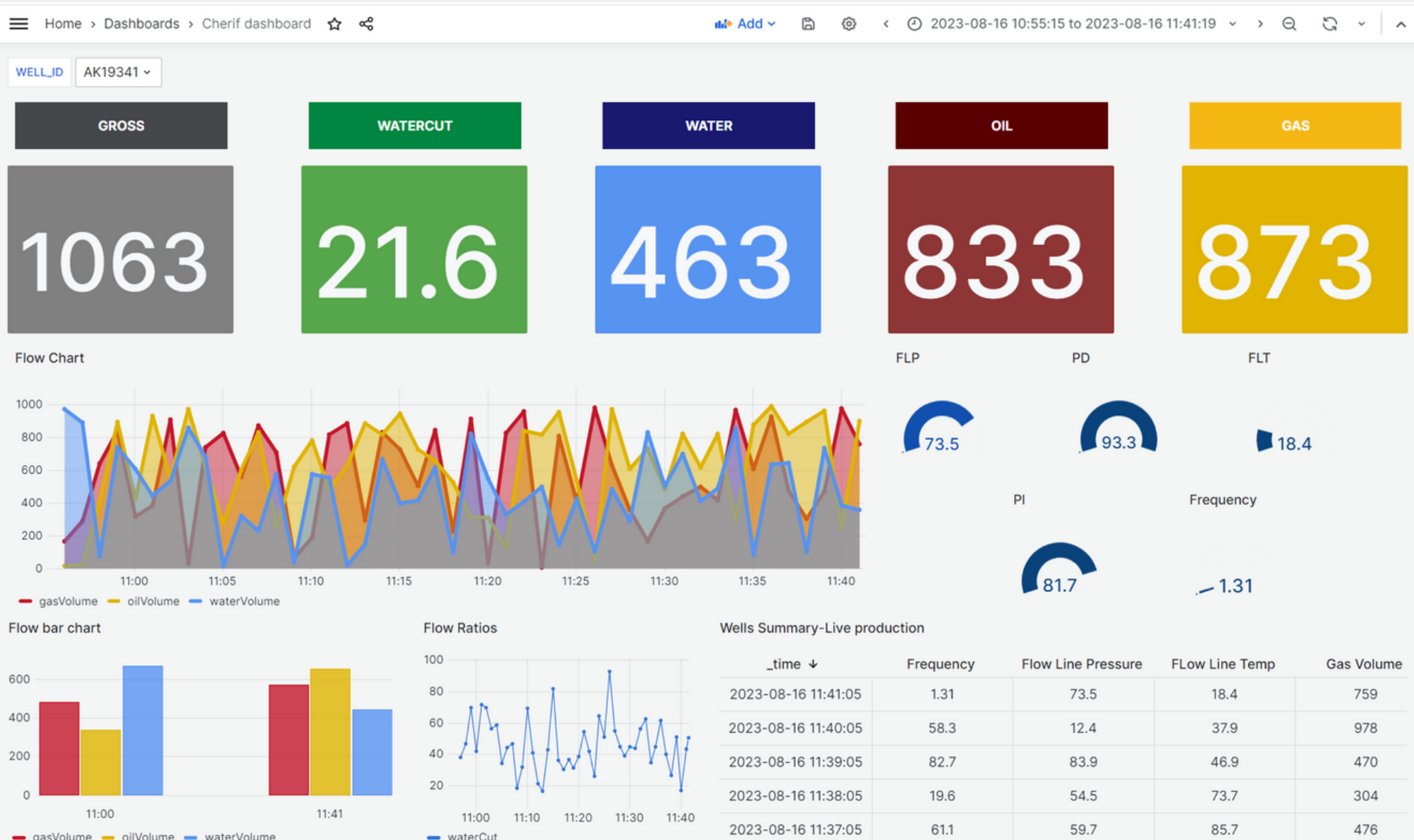
PI INTERFACE STACK

Definition: Applications that can serve as a communication medium between LAMFlow and PI Server time-series database.

LAMFlow PI API: The currently developed application to transfer data between LAMFlow and PI System. This API is able to read data from PI and write new data to PI.

LAMFLOW DASHBOARD

WELL_ID | Enter variable value

AI10341
AJ05341
AJ06341
AJ10341
AK19341

Absolute time range

From

2023-08-16 10:55:15

To

2023-08-16 11:41:19

Apply time range

Recently used absolute ranges

2023-08-16 10:55:15 to 2023-08-16 11:41:19

Browser Time Oman   UTC+04:00   Change time settings

Q Search quick ranges

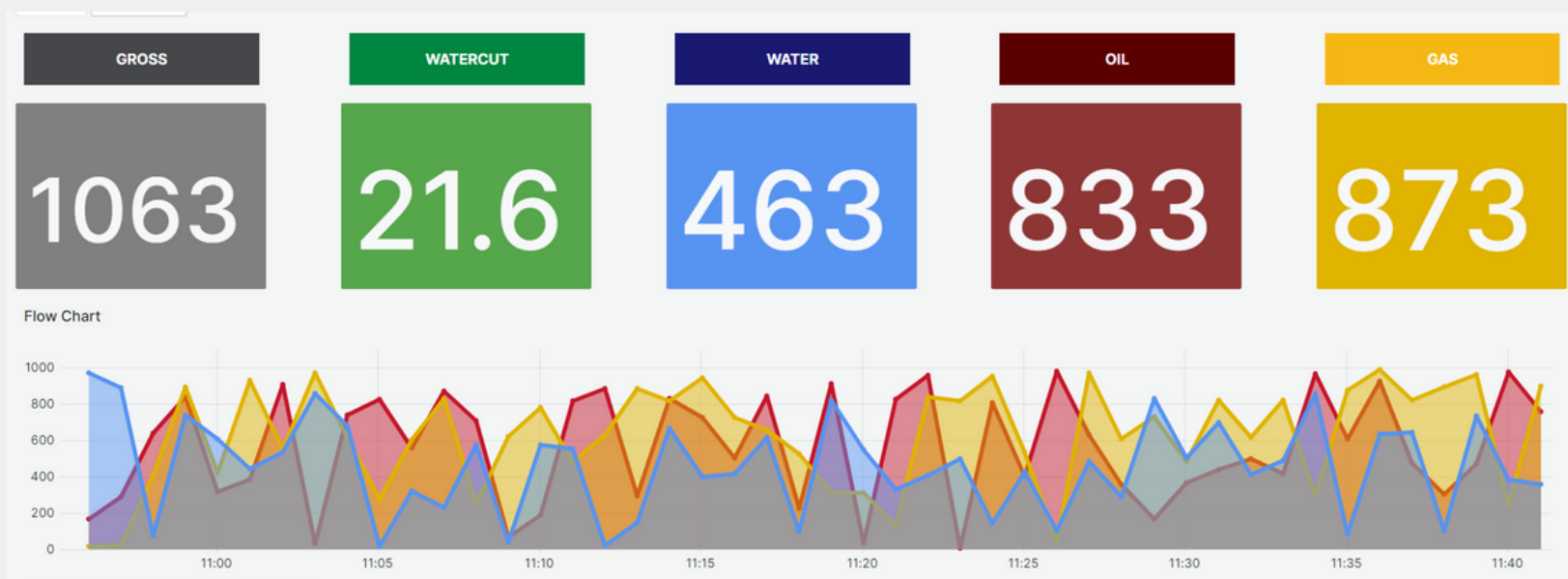Last 5 minutes
Last 15 minutes
Last 30 minutes
Last 1 hour
Last 3 hours
Last 6 hours
Last 12 hours
Last 24 hours
Last 2 days

GROSS	WATERCUT	WATER	OIL	GAS
1063	21.6	463	833	873

Flow Chart

FUTURE PLANS

Excel Integration: Enabling predictions directly from spreadsheets.

GPT-Integration: Leverage advanced AI for better insights.

More Pump Predictions:Support for additional pump types.

Pump Health Alerts:Detect and warn about pump issues.