



Presents

Air Quality Monitoring Dashboard

Project Type: **National Air Quality Analytics Platform**

Other Stations

AFAQ-008 Al-Ghurabi, Riyadh	218
AFAQ-009 Al-Khalidia, Riyadh	37
AFAQ-010 Al-Marooj, Riyadh	608
AFAQ-011 Ad-Dhubaat, Riyadh	37
AFAQ-012 Al-Taawun, Riyadh	32
AFAQ-013 Al-Jazeera, Riyadh	23
AFAQ-014 Ar-Ruwabi, Riyadh	46
AFAQ-015 Al-Areeja, Riyadh	46
AFAQ-016 Ash-Shamaisy, Riyadh	37
AFAQ-017 Al-Khaleej, Riyadh	205
OMAQ-022 Mobile 4392, Riyadh	156
AFAQ-007 Al-Haram, Riyadh	30
AFAQ-026 Al Umrah, Riyadh	46

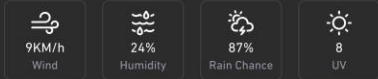
AFAQ-008 Al-Ghurabi, Riyadh



Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.



Weather

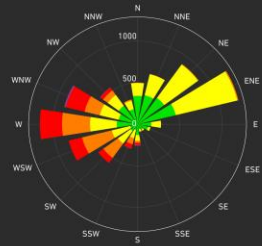


Wind Direction: South-Southeast (SSE - 157.5°)

Other Pollutants

CO ₂	CO2	28 ppm
H ₂ S	H2S	28 ppm
Benzene	Benzene	28 ppm

Pollution Rose



Average AQI

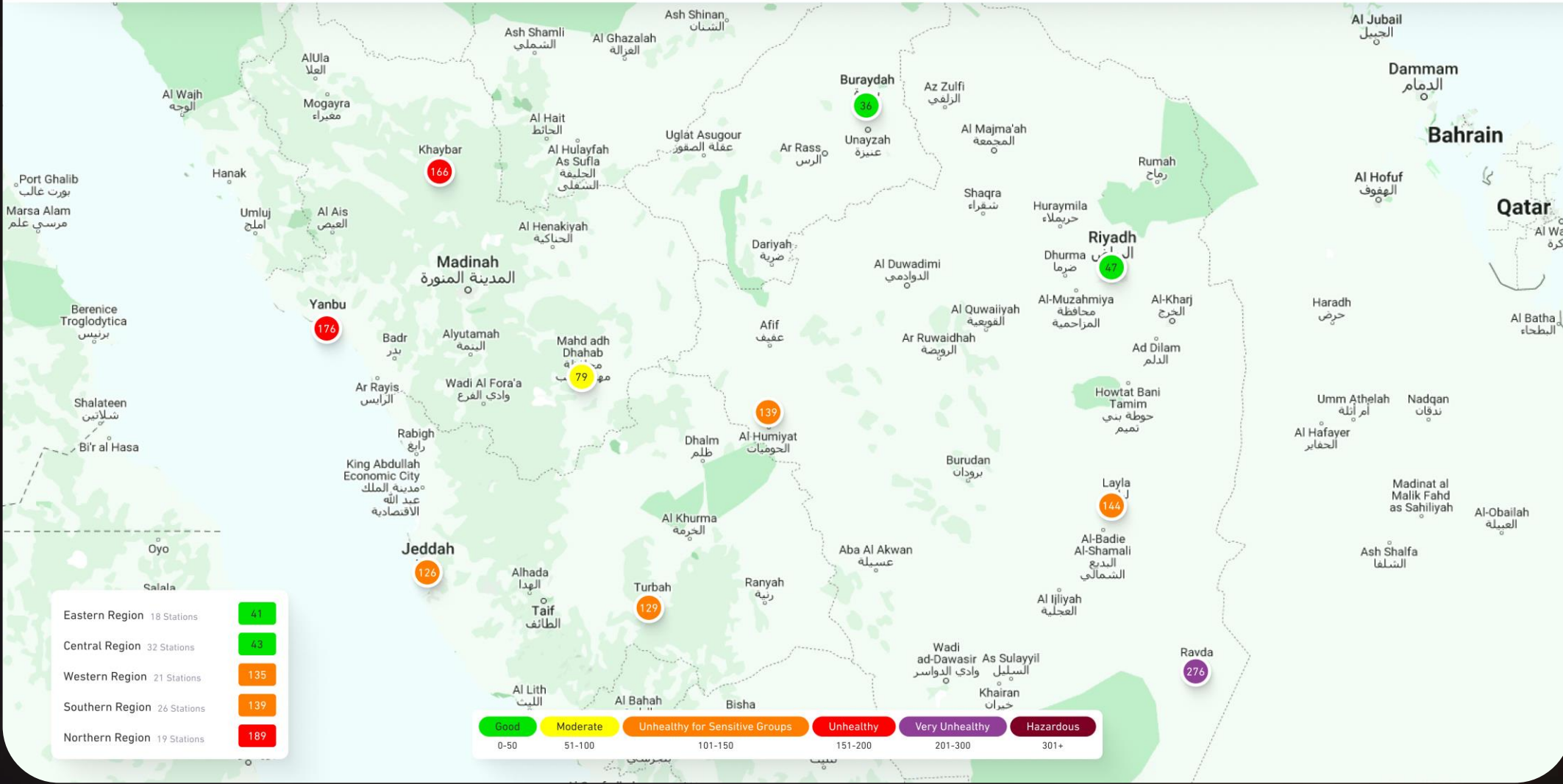
7 Days

Project Overview

Developed an advanced air quality monitoring dashboard providing real-time and historical insights across multiple monitoring stations. The platform enables environmental authorities to analyse pollution trends, monitor air quality conditions, and make informed decisions using interactive visualizations.

Search Region, City, or Station

En Ar



Eastern Region	18 Stations	41
Central Region	32 Stations	43
Western Region	21 Stations	135
Southern Region	26 Stations	139
Northern Region	19 Stations	189

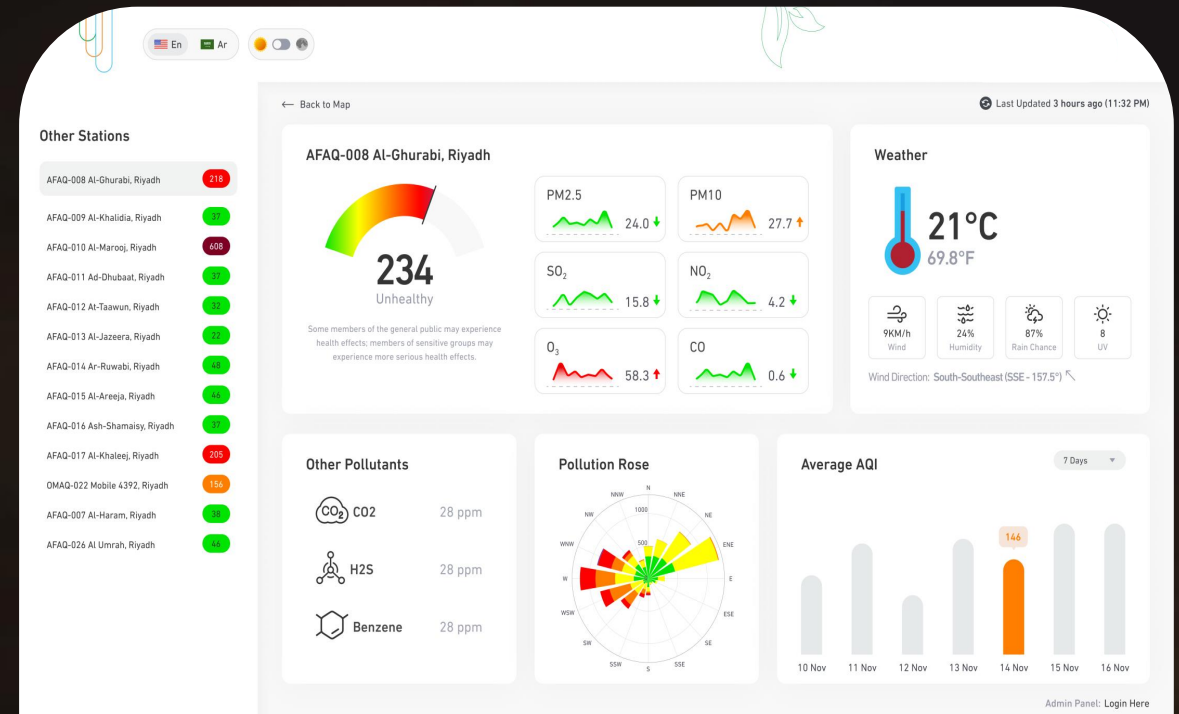


The Challenge

Environmental monitoring organizations required a more efficient way to analyse air quality data due to:

- ❖ Lack of centralized monitoring visibility across stations
- ❖ Complex sensor data difficult to interpret
- ❖ Limited tools for analysing historical pollution trends
- ❖ Slow response to environmental risks
- ❖ No intuitive dashboards for decision-makers
- ❖ Challenges in identifying pollution sources and patterns

These issues created inefficiencies in environmental management and response planning.



The Solution

We designed and developed an interactive analytics platform integrating live monitoring stations, pollutant metrics, and weather data into a unified dashboard. The platform provides real-time insights, historical analysis, and advanced visualizations to support environmental intelligence and proactive decision-making.

Other Stations

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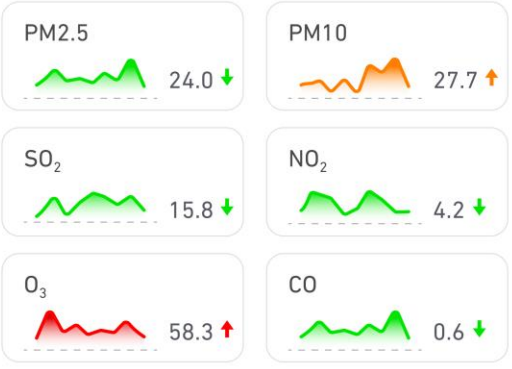
← Back to Map

🕒 Last Updated 3 hours ago (11:32 PM)

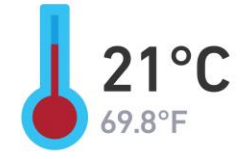
AFAQ-008 Al-Ghurabi, Riyadh



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Weather

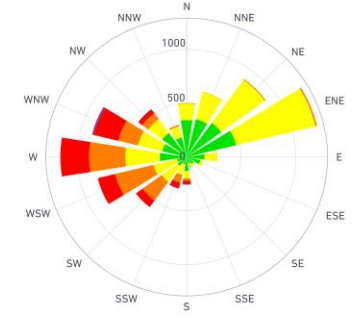


Wind Direction: South-Southeast (SSE - 157.5°) ↘

Other Pollutants

- CO₂ CO2 28 ppm
- H₂S H2S 28 ppm
- Benzene Benzene 28 ppm

Pollution Rose

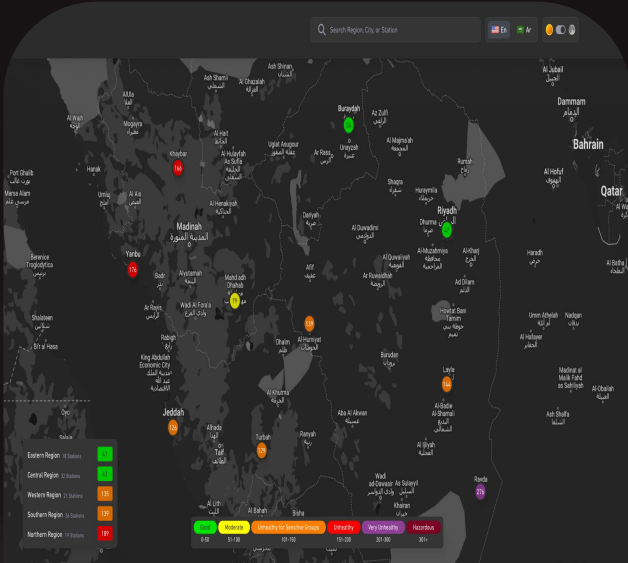


Average AQI

7 Days ▾



Admin Panel: [Login Here](#)



Key Features

- ❖ Real-time AQI monitoring
- ❖ Multi-station environmental analytics
- ❖ Pollutant trend visualization
- ❖ Weather integration
- ❖ Pollution rose analysis
- ❖ Historical data insights
- ❖ Station comparison tools
- ❖ Environmental risk monitoring



Technologies & Capabilities

- ❖ Real-time data processing
- ❖ Advanced data visualization
- ❖ Environmental analytics
- ❖ Weather data integration
- ❖ Interactive dashboards
- ❖ Scalable system design

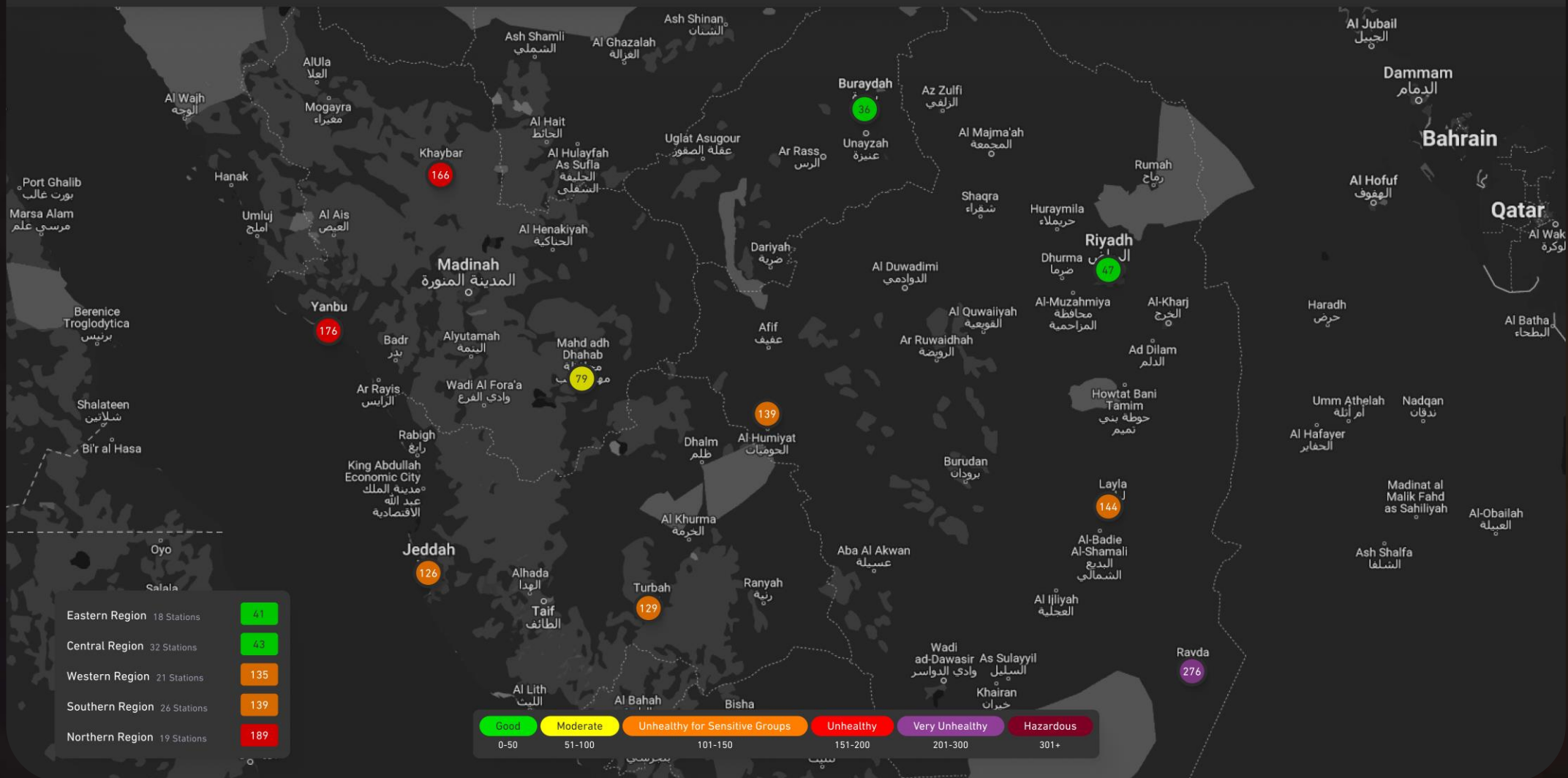


Business Impact

- ❖ Improved environmental awareness and monitoring efficiency
- ❖ Faster response to pollution events
- ❖ Data-driven decision-making for authorities
- ❖ Enhanced analytical capabilities
- ❖ Better public health risk assessment

Search Region, City, or Station

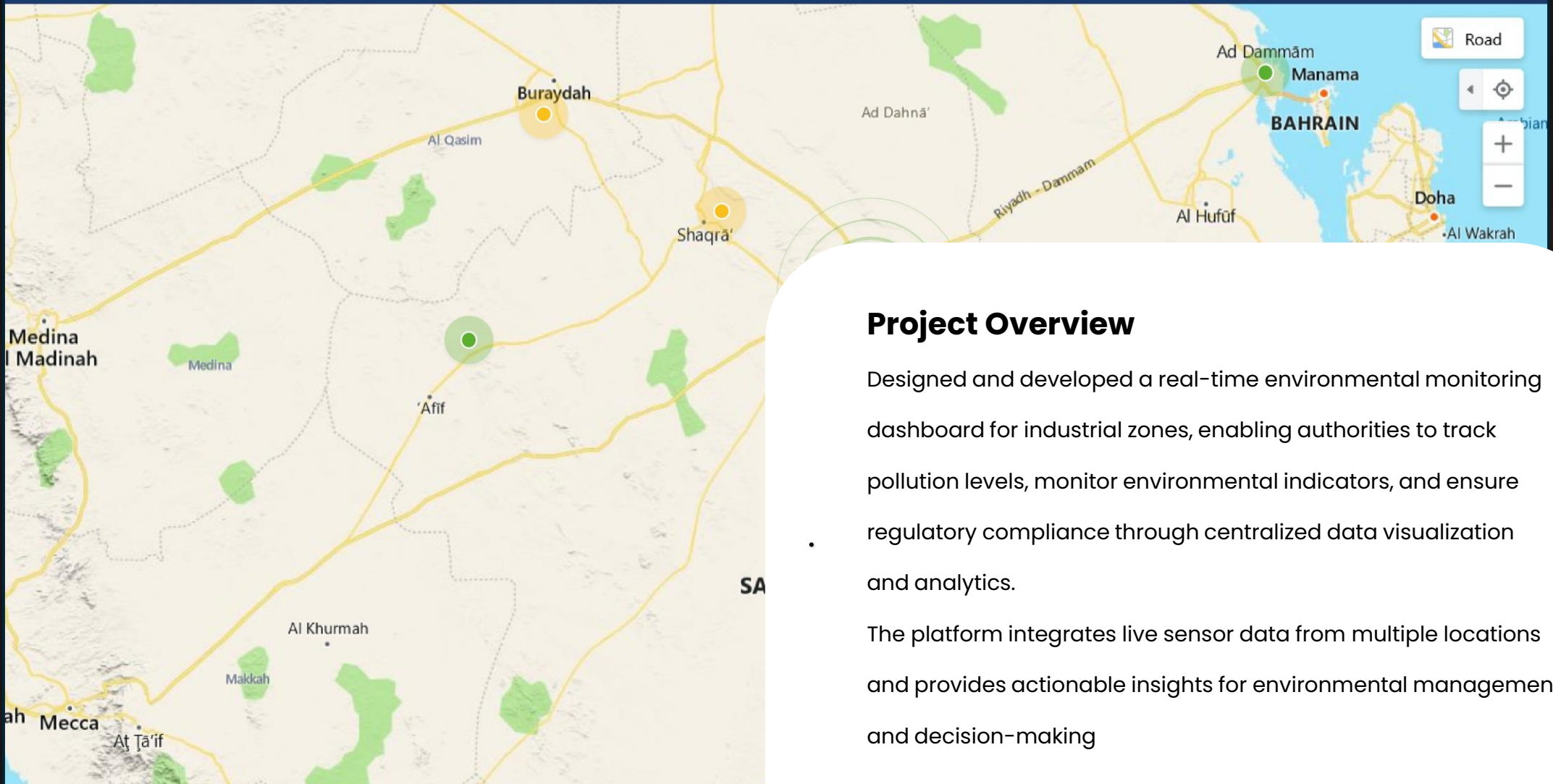
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Industrial Pollution Monitoring Dashboard

Project Type: **Environmental Monitoring & Analytics Platform**



Project Overview

Designed and developed a real-time environmental monitoring dashboard for industrial zones, enabling authorities to track pollution levels, monitor environmental indicators, and ensure regulatory compliance through centralized data visualization and analytics.

The platform integrates live sensor data from multiple locations and provides actionable insights for environmental management and decision-making

The Challenge

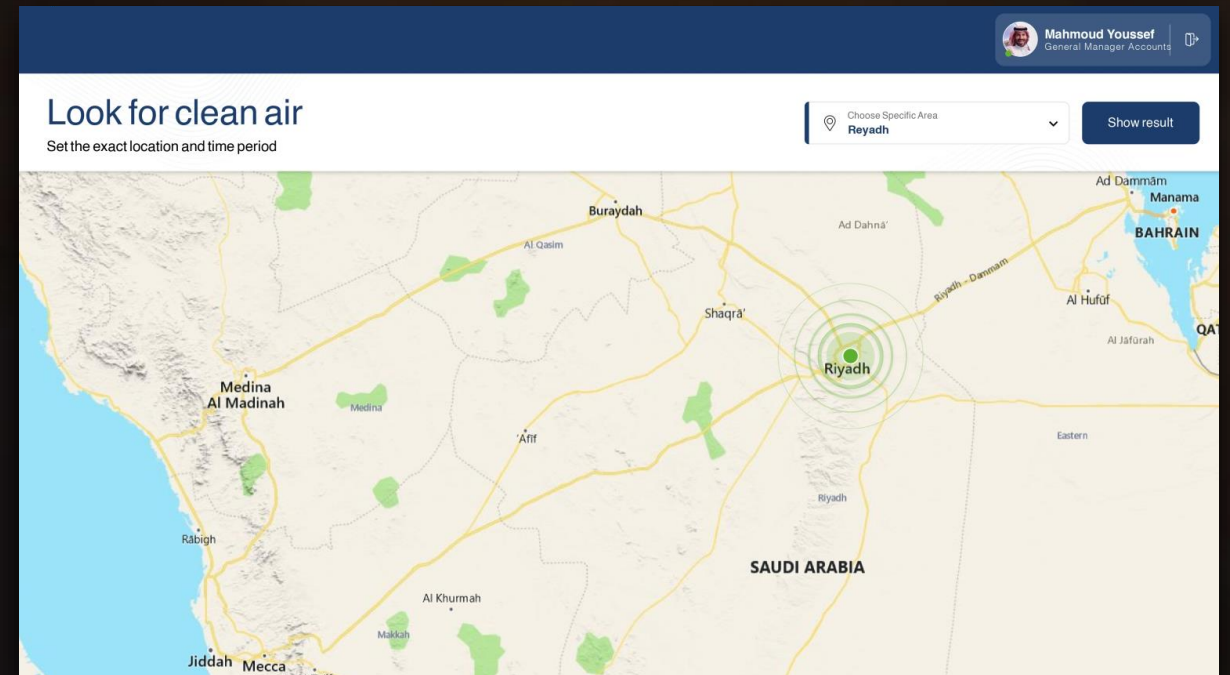
Industrial authorities faced several challenges in monitoring environmental conditions across multiple zones:

- ❖ Environmental sensor data was distributed across different systems
- ❖ No centralized visibility into pollution levels across industrial areas
- ❖ Manual processes for monitoring and reporting compliance
- ❖ Delayed detection of pollution spikes and environmental risks
- ❖ Difficulty identifying high-risk zones requiring immediate attention
- ❖ Limited analytical tools for decision-makers

These limitations reduced operational efficiency and increased environmental risk.

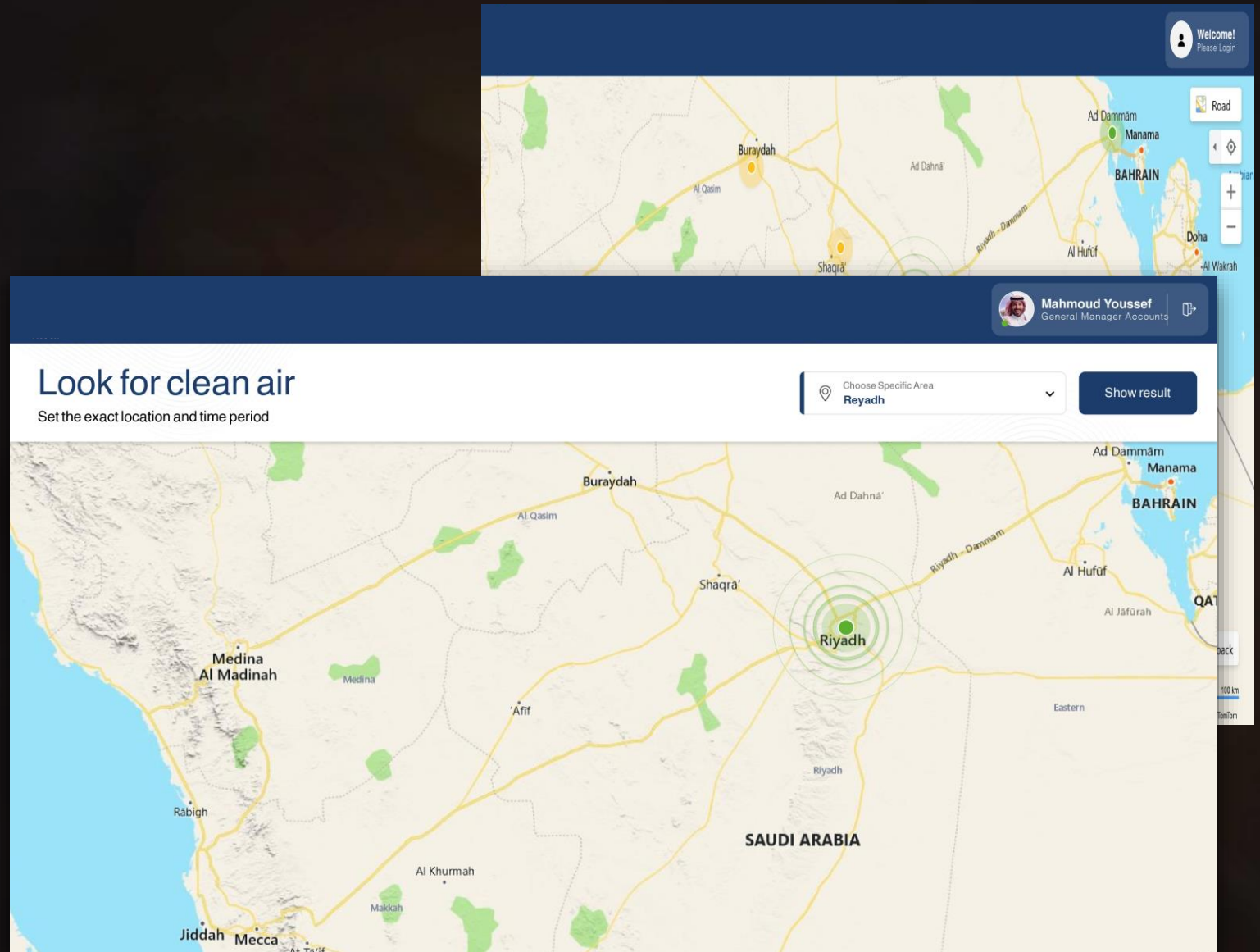
The Solution

We developed a centralized real-time dashboard that integrates live IoT sensor data from industrial zones into a single platform. The system provides geographic visualization, environmental analytics, automated alerts, and historical insights to support proactive environmental management. The solution enables authorities to monitor conditions instantly, detect anomalies, and respond faster to potential risks.

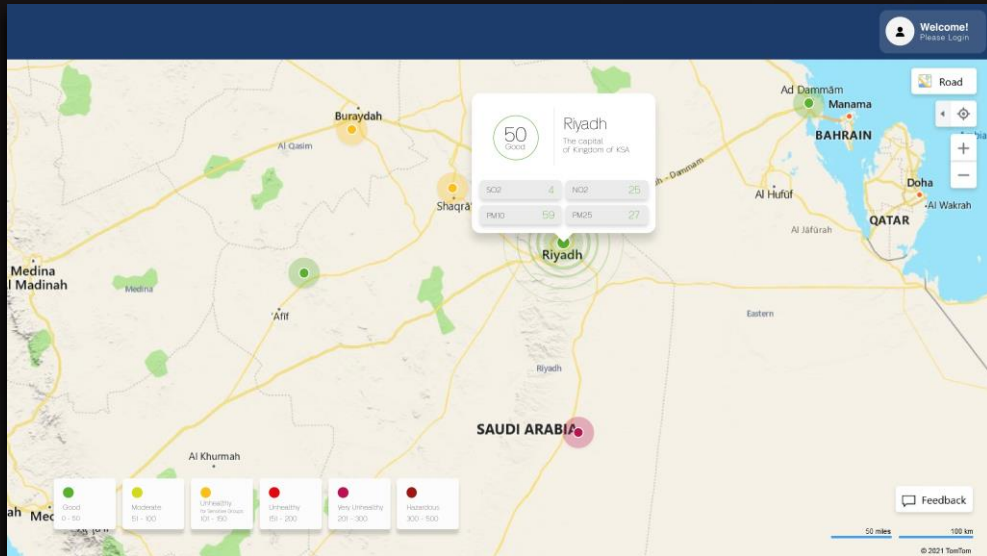


Key Features

- ❖ Real-time industrial pollution monitoring
- ❖ Interactive geographic map with live indicators
- ❖ Zone-based environmental analytics
- ❖ Pollutant tracking (PM2.5, PM10, NO₂, SO₂, CO)
- ❖ Weather data integration
- ❖ Automated threshold alerts
- ❖ Historical trend analysis
- ❖ Multi-location comparison
- ❖ Compliance monitoring support



The screenshot displays the VirtueNetz web application interface. At the top right, there is a user profile for Mahmoud Youssef, General Manager Accounts, with a 'Welcome! Please Login' message. Below this is a search bar with the text 'Look for clean air' and a subtext 'Set the exact location and time period'. The search bar contains 'Choose Specific Area' and 'Riyadh', with a 'Show result' button. The main map shows Saudi Arabia with various cities labeled, including Riyadh, Medina, Jeddah, Mecca, and others. A green circle highlights the Riyadh area. The map also shows the borders of Bahrain and Qatar. The bottom right corner of the map includes a scale bar for 100 km and a 'back' button.

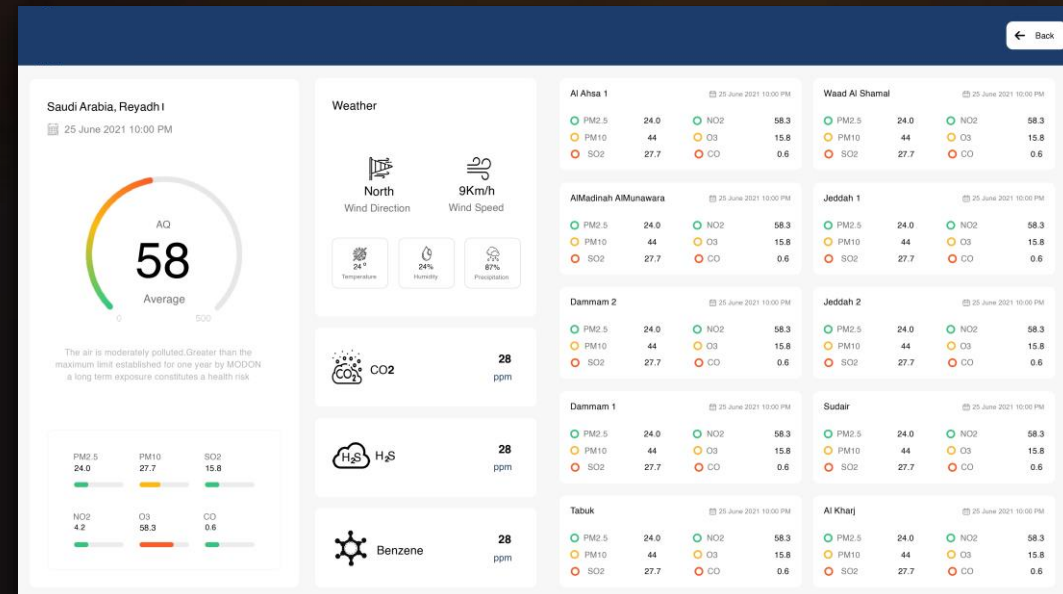


Business Impact

- ❖ Faster detection of environmental incidents
- ❖ Improved compliance monitoring and reporting
- ❖ Centralized visibility across industrial zones
- ❖ Enhanced decision-making capabilities
- ❖ Reduced environmental risks through proactive monitoring

Technologies & capabilities

- ❖ Real-time data integration
- ❖ IoT sensor connectivity
- ❖ Interactive data visualization
- ❖ Geographic information mapping
- ❖ Analytics dashboards
- ❖ Scalable architecture





Thank You

Your Partnership Fuels Our Success

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