MIMOS Manpower Planning, Simulation and Analytics Tool (Mi-Resource)

The escalation and increasing complexity of crime cases due to developments in information and infrastructure poses a steep challenge to federal and local law enforcement agencies. MIMOS Mi-Resource is a simulation and analytics tool that optimises key performance indicators such as crime cases in relation to manpower resourcing, allocation and deployment.

Overview

MIMOS Mi-Resource analyses, allocates and manages personnel deployment in real time by centralising the processing of highly secured data sources of different volumes. Big data analytics technology is used to harness millions of GPS coordinate points generated by daily activities, historical reporting data, human resource data, and unstructured data. An active dashboard provides data-driven insights on the ratio of population activity (such as crime) to the personnel in the field. This facilitates enforcement agencies in accurate planning and managing manpower deployment/allocation over different geographical regions.

Features

Mi-Resource comprises the following features:

Advanced Information Analytics

The data harnessed by Mi-Resource is used to generate statistical and geographical heat maps giving insights into current and projected population activities.

Big Data Integration

Mi-Resource provides evidence-based analysis by integrating large historical datasets from various sources into a single big data ecosystem such as Hadoop.

Centralised Repository

Historical data from various resource and performance parameters aggregated as basis for accurate indicator-based predictions at city, district, state and national level.

Workforce Planning

Real-time data acquisition is used to produce correlated manpower charts to facilitate optimal resource distribution and forecast.

System Security and Integrity

Deep encryption and authentication systems ensure the confidentiality, integrity and availability of shared and processed data.

Simulation and Visualisation

Visualisation analytics of spatial and temporal data is provided through a business intelligence (BI) simulation with a geographical information system (GIS) interface layer.

Technology Benefits

The main impacts of Mi-Resource are:

Maximum Utilisation of Centralised Data Sources

Various data sources could be ingested and utilised for purposes such as data mining, validation and analysis through data, cleansing, transformation and integration.

Real-Time Data-Driven Insights

Real-time insights allow optimal resource planning, forecasting and deployment to rapidly address locations of critical need.

Flexible Integration with Various Products

Mi-Resource's interfaces, web services and configurable UI allows for uncomplicated integration with various BI, map, and data mining products and databases.

Scalable for Industry Sectors

Mi-Resource can be modelled and customised to fit other law enforcement agency requirements serving other industries.

Technology Summary

Mi-Resource

A simulation and analytics tool that provides data-driven insights for manpower versus the population activity being monitored.
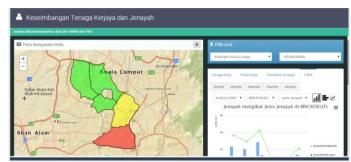
Industries: Enterprise, Government

Features

Mi-Resource addresses manpower deployment challenges through:

- Advanced information analytics
- Big data integration
- Centralised repository
- Workforce planning
- System security and integrity
- Simulation and visualisation

Technology Benefits

- Maximum utilisation of centralised data sources
- Real-time data-driven insights
- Flexible integration with various products
- Scalable for industry sectors

MIMOS Mi-Resource heat map for population activity vs. manpower visualisation

MIMOS Mi-Resource population activity correlation analysis

System Requirements

Mi-Resource	
Deployment Requirements	
Main Server	Quad-Core Processor, 96GB RAM, 2000GB Storage
Database Server	Triple-Core Processor, 10GB RAM, 200GB Storage
Heat Map Server	Triple-Core Processor, 8GB RAM, 200GB Storage
Main Dashboard App	Triple-Core Processor, 10GB RAM, 200GB Storage
Data Cleansing Engine	Quad-Core Processor, 8GB RAM, 200GB Storage
Visualisation Engine	Triple-Core Processor, 8GB RAM, 200GB Storage
Organisation Data	Triple-Core Processor, 8GB RAM, 200GB Storage
Load Prediction Engine	Triple-Core Processor, 14GB RAM, 200GB Storage
Health Prediction Engine	Triple-Core Processor, 14GB RAM, 200GB Storage

The above requirements represent a specific deployment. Please contact MIMOS for more details.

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