







WWW.XSAT.GLOBAL

Manufacturing Execution Systems for the Oil and Gas Industry

Overview



X SAT—Your reliable ICT Provider

2020 Partnership with Huawei in Iraq

2017 Partnership with Yahsat for YahClick Service in Africa

2009 Partnership with DU Telecom in UAE

2006 Partnership with Iridium and Inmarsat

2005 Partnership with Thuraya

2002 X SAT FZE established in the UAE



Offering complex of industrial IT Services



Creating Unique Integrated Solutions



Operating in harsh and hard to reach Remote Areas



Facts about X SAT

Our company was established in 2002 in Dubai; we have offices in the U.A.E., Kazakhstan, India, and the U.S.A

18 years

X SAT has been providing services

15

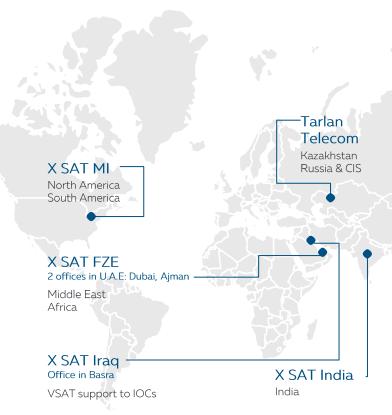
Multi cultural team from 15 different countries

150+

Projects planned and installed

24 countries

Our team have visited clients in the Middle East and Africa





We Believe in Building Long-Term Relationships with Our Clients



We have more than 18 years of experience in the Oil & Gas Industry



We develop deep understanding of the customers' needs and requirements



We provide the best solutions that are costeffective and that maximize efficiency



We believe sales is just the beginning of the journey. We work hand in hand with our customers during the whole project.



We have a friendly and professional team who are able to build a great rapport with our customers



We Care About Each of Our Client and Build A Great Rapport With Them

















































+964 782 5908462

LUKOIL

Date: 31.07.2020

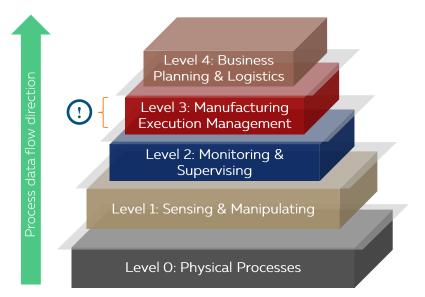
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LUKOIL Mid-East Limited



Enterprise and Control Systems Layers

• ISA-95 "Enterprise-Control System Integration" is an international standard of the International Society for Automation for the development of an automated interface between an enterprise and control systems.



Level 4: Business Planning & Logistics

- Defines the business-related activities needed to manage a manufacturing operation.
- ✓ Includes Business logistics systems (e.g., ERP).

Level 3: Manufacturing Execution Management

- ✓ Defines the activities of workflow to produce the desired end products.
- ✓ Includes Manufacturing operations systems (e.g., MES).

Level 2: Monitoring & Supervising

- ✓ Defines the activities of monitoring and controlling the physical processes.
- ✓ Includes Process Control Systems (e.g. PCS, SCADA).

Level 1: Sensing & Manipulating

- Defines the activities involved in sensing and manipulating the physical processes.
- ✓ lincludes PLC, intelligent devices, sensors & signals.

Level 0: Physical Processes

- ✓ Defines the actual physical processes.
- Includes reservoirs, gathering systems, processing facilities, transport infrastructure.



Vital Functions of MES



COLLECTION, PROCESSING AND STORAGE OF REAL TIME DATA

- Information model of production
- Big data processing
- Workflows for data control
- Reliable data storage and backup
- Redundancy of communication channels

ACCOUNTING OF HYDROCARBONS

- Accounting of oil & gas, treated and injected water
- Distribution of production volumes by wells / tanks / etc
- Measurement of material flows;
- Accounting of oil delivery and well downtime losses
- Accounting of chemical injection
- Control and maintenance of well modes

VISUALIZATION OF INFORMATION

- Technological web portals & dashboards (graphic displays, trends, KPIs, alarms & events, etc.)
- Reports, tables, graphs, charts, visual analytical information
- Support for personal notifications about process& its deviations



Vital Functions of MES



LABORATORY INFORMATION MANAGEMENT

- Collection, analysis, optimization, return and reporting of laboratory data
- Search across multiple data arrays
- Audit trails, electronic signatures, and chain of custody capabilities

MODELLING & FORECASTING, INTEGRATION WITH ERP LEVEL

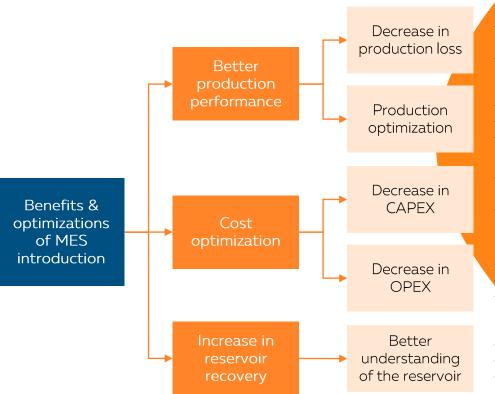
- Support for the main business processes of the company (forecast, planning, analysis, etc.)
- Actual real-time data for production adjustments, planning and forecasts
- Reduction of manual data entry on the boundaries of information system layers

24/7 DATA ACCESS FOR USERS

- Top management
- Planning specialists
- Hydrocarbon accounting specialists
- Shift supervisors
- Production engineers
- Process engineers
- Operators
- Geological engineers
- Laboratory specialists
- Maintenance engineers
- HSE engineers
- Project engineers
- Engineering contractors



MES Benefits & Optimizations



- ✓ Reducing the time to identify and resolve problems
- ✓ Better understanding of the causes of losses and the possibilities of their elimination
- ✓ Improving the quality and shortening the maintenance and workover of wells
- ✓ Improving of ground facilities performance
- ✓ Improving well performance
- ✓ Improving the predictability of reservoir behaviour
- ✓ Precise and actual design and engineering data of the process
- ✓ Efficient use of resources personnel, equipment, spare parts, materials
- ✓ Improving maintenance efficiency
- ✓ Reducing equipment downtime
- ✓ Reducing incident response time
- ✓ Improving the quality of hydrodynamic modelling data
- ✓ Improving monitoring of water breakthrough during injection
- ✓ Improving the predictability of reservoir behaviour



Our Typical Solutions

We offer a complete set of Manufacturing Execution Systems and Production Applications for industrial plants, developing fields, and enterprises, which cover each aspect of production process of the Client:

- Production Accounting System (Tieto Energy Components)
- Integrated Activity Planning System (Anyplan)
- Integrated Asset Modelling (OVS, IFM Petex)
- Events and Deferments Management System (PI System)
- Laboratory Information Management System (Abbott STARLIMS)
- Production Web Portal (AVEVA PI Web-server, Wonderware IAS)
- Real-time Databases (AVEVA PI System, Wonderware Historian, Honeywell PHD)
- Relational Database Management System (MS SQL, PosgreSQL, Oracle DB, eXtremeDB)
- Reporting System (MS SQL Reporting, SAP BO)



















Manufacturing Execution Systems for the Oil and Gas Industry



Project Life-Cycle

Conceptual Design FEED Detail Engineering Supply & Construction Operation

Explore Design Select Execute Support

- Understanding the objectives for implementing a MES and benchmark against ISA-95
- Analysis of best practices
 and the latest
 technologies at the
 market
- Create high level concepts, philosophies, roadmap for gradual realization based on priorities.

- Design business processes;
- Creating solution architecture and detailed
 solution roadmap;
- Application of best practices basing on global standards
- Design of high level documentation – architecture, philosophies, etc.

- Selection of optimal technologies available for digital transformation
- Gap analysis of existing and future infrastructure
- Developing a transitioning plan
- Design of engineering and construction documentation (specifications, data sheets, block diagrams, etc.)
- Cyber security analysis and domain policies

- Design of application software and configurations
- Assembling and testing of hardware
- Demonstration of assembled systems to the Client
- Installation of hardware and deployment of new system at site
- Pre-/commissioning and start-up with live data
- Training of Client's personnel.

- End-to-end support after the project go-live stage for continuous production
- 24/7 global support with both local (physical) and remote support with a global helpdesk
- Implementation of effective and robust support models with clear communication structures



Example of Software Landscape

Reporting & Analytical Tool Spotfire TIBC Spotfire	Reporting System SAP BO Production Reports and		Electronic Document management System OPENTE	Corporative Web Porta MS Share Point SharePoint	Process modelling HYSYS aspentech	Geomodelling and Reservoirs modelling Tempest, RMS
Integrated Activity Planning Tool IAP AnyPlan PosgreSql	Project Planning Primavera	Production Wel	o-portal & Dashboard	ESP design	Integrated Asset Modelling IAM - OVS Forecast for Production, Well Test	roxar
		Dashboard Mobile App	olication	SubPUMP iHS		Drilling and Well-workover
		Events Management Tool Panda for Production and Injection OSIsoft		Hydrocarbon Allocation EC (Energy Component Production Accounting System, Loss/Deferment/Back Allocation	Online	operation OpenWells WellPlan DescisionSpace
		LIMS			Petroleum Experts Ltd	EDM HALLIBURTON
		STARLIMS Lab Information Mana	gement System STARL	ims [.]		
		Real Time Database - PI System PI AF-Asset Framework, PI ACEA-Advanced Calculation Engine Collect, Store, Calculate and Processing ALL production data OSIsoft			Geological & Hydrodynamic modelling Eclipse & Petrel Schlumberger	



CONTACT US

We propose tailor-made offers



