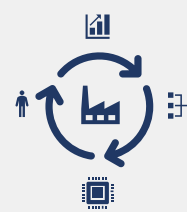


Sheikh Umar Samad

Industrial Technologies and Digitalization



Experience of 19+ years in various industries ranging from pharmaceutical, oil and gas, chemicals, sea ports to petrochemicals. This providential diversification has honored me with experience of various industrial production as well as business processes and cohesion in them.

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Recent Accountabilities

Senior Analyst Manufacturing Applications

Borouge PLC

(Nov, 2012 – Present)

Abu Dhabi, UAE

- Production/Business Process to Technology Mapping
- Integrated Advance Manufacturing Applications/Solutions (MES/MOM)
- Road-mapping and Lifecycle Management Manufacturing Application/Systems

Cross Functional (Digitalization)

- Digitalization Intrapreneurship
- Digital Organizational Transformation
- Use Cases identification to Delivery (POCs/Pilots)
- Digital Technologies/Platforms roadmap and lifecycle management

Projects Lead (Oil & Gas)

CIMAC Abu Dhabi LLC - (A Subsidiary of Schneider Electric)

(Aug, 2009 – Oct, 2012)

Abu Dhabi, UAE

- Engineering Management of Strategic Projects
- Leading Teams Delivering Advance Applications and/or Control Systems to customers
- Customer Technology Roadmap Advisory & Technical Sales

Education

Bachelor of Engineering in IT (BE-IT)

(Specialization in Embedded/Control Systems)

(Dec, 1999 – Sep, 2005)

Lahore, Pakistan

Competence Sketch

- Business/Production Process Technological Implementation
- Digitization & Digitalization (Ind. 4.0/5.0)
- Technological Strategy & Road mapping
- Technology Acquisition/Lifecycle
- Portfolio/Project/Use Case Management
- Advance Production/Industrial Applications/Solutions (MES/MOM)
- Front End Engineering Design
- Vertical & Horizontal System Integrations
- Industrial Controls (DCS/PLC/ESD/RTU)
- Technical Solutions/Sales

Experience Synopsis

- Senior IT Analyst- Manufacturing Apps. (Borouge PLC) - (since Nov, 2012)
- Projects Lead CIMAC Abu Dhabi (A Subsidiary of Schneider Electric) (Aug, 2009 - Oct, 2012)
- Project Manager / Projects Lead - Intech Process Automation (May, 2007 - Aug, 2009)
- Executive Engineer- SIEMENS Pakistan (Oct, 2005 - May, 2007)
- Trainee Engineer - SIEMENS Pakistan (Sep, 2004 - Sep, 2005)
- System Design Engineer – DANCOM Telecomm Pakistan (Sep, 2003 - Mar, 2004)



Foremost Accomplishments

- **Digital Transformation Program**

A Core member of **team leading the Digital Transformation** at Borouge.

Driving Intrapreneurship approach for the Program, **Strategy** Creation, Use Cases Inception/Identification to **establishing a new Digital Unit** responsible to for a **Digitally Transformed Organization**.

Delivered on **challenges** especially **Organizational, Technological, Strategic Roadmap** and **IPR** related licensor(s) alignments along **multi-million \$ Cost Avoidance and/or Savings**.

Incubation of Strategic Initiatives as **Pilots/MVPs** e.g. *Plant Operations Management System with AI, Product Transition Management through Procedural Automation, Global Supply Chain Optimizations etc.*

- **Site Wide Industrial Wireless**

Inception, Scoping, Award to Commissioning of this Digital Foundation towards the Industry 4.0/5.0 Transformation. Pervasive Industrial Wireless Designed for **Brown Field** with **Low Installation Cost, Zone Certified, MESH Based Backbone** with **IT/OT Security Built-in** Provisions Connectivity to i.e. Remote Assistance, ERP, Industrial IoTs, and Drones.

Largest in GCC and Potentially one of the **Largest Single Site Industrial Network Globally**.

- **IT/OT Front End Engineering Design**

(New Expansion – Complete Sub-Production Complex / New Production Unit)

From Inception, Scoping, Award to Successful execution of the IT/OT Front End Engineering Design for the upcoming petrochemical complex expansion. Focus on **Optimal Design** with highest **cost savings** during FEED from and **Operator's Perspective** keeping the Industry High standards of **mission critical Advance Operations / MES/ MOM Systems** with Vertical / Horizontal Integrations from **Sensor/Control** to **ERP**.

- **Integrated Asset Performance Management System**

Enables better leveraging the asset **ROI** with decreased **TCO** by enhancing the **reliability** of the plant asset through **proactive maintenance** strategies. Engineers are able to create **reliability centered asset management strategies**, perform **asset safety analysis** and **Inspection Management**, integrated to ERP (EAM)/CMMS.

- **Production Process Control & Site Logistics – During COVID-19**

A Production Complex wide integrated Production Process Control and Product Packaging ensuring automated, safe, and quality assured operation.

The Complete Process Control (**PCS**) & Manufacturing Operations Management (**MES/MOM**) was implemented during **Global Pandemic (COVID-19)** through **Cyber Technologies** across *Borders*

Design & Engineering at Abu Dhabi U.A.E and Remote Commissioning at Guangzhou China

The Solution is a combination of Industrial **Automation, Industrial Wireless, Barcoding, MES/MOM, Middleware** to **ERP**.

- **Site Logistics Management System**

Production Complex wide **Integrated Product Packaging** and **Terminal Operating System** ensuring automated, safe, quality assured operation assimilating Customer Centric Product Packaging and Supply Chain Management.

MES/MOM amalgamated with Various *Machine(s) Automation, Handheld and Barcoding* automatically **packs Millions of Tons** of Product in **Inter-Model Containers (Palletized and Bulk in Containers)**

Terminal Operating System (TOS) Manages *Wharf/Berthing Operations, Vessel Planning, Yard(s) & Equipment Management with KPIs*

The Complete Solution is integrated to **ERP** through Industry leading **Middleware**.



Foremost Accomplishments

- **Control System's Narratives** for the National Chevron Philips (NCP) Ethylene Plant Jubail KSA

Narratives vital to the configuration and design of the distributed control system (**DCS**) and safety instrumented system (**SIS**) resulted in safe, optimized and lowered cost startup through well documented base for operational future process optimizations.

- Noon and Shakarganj Sugar mills molasses **distillation** and **molecular sieve** plant's **control** and **instrumentation**

Process control, emergency shutdown and instrumentation of the integrated distillation and molecular sieve plants at Noon as well as Shakarganj sugar mills not created value out of the sugar industry's waste but also earned substantial cash by generating **99.9%** pure highly **rectified** ethyl alcohol improving the overall profitability of the plants at fraction of costs.

- **Port Operating System (Sea-POS)** Khalifa Port Abu Dhabi

Provides amalgamated management of the whole port operations, compliance and safety while lowering costs. This **system of systems** integrates multiple port special systems ranging from utilities to vessel traffic in a unique way which not only provides a unified **command and control** rather **automates action** directives to various systems to take certain actions based on the operational procedures. The system is vital to **ISPS** regulations and handling escalated situations.

- **Water Telemetry** Pakistan **Indus River System Authority**

Supervisory Control and Data Acquisition (**SCADA**) based on various technologies ranging from **sensor** level systems installed at all dams, barrages to **satellite** communication with water flow **calculations** programmed to report the outflows and inflow of all rivers/canals and the national water storage availability

- **Pipeline** Supervisory Control and Data Acquisition System (**SCADA**) for ADNOC Gas Processing (Ex. GASCO)

The system not only provides monitoring of the Buhasa-Habshan and Offshore Associated Gases 3 pipelines rather lies at the base of safe and optimized pipeline operations. The real time flow reporting enabled better customer billing, reduced time for return on investment as well as lower cost of ownership.





Professional Certifications / Workshops

Technologist	Certification/Workshop	Awarding Authority
Block Chain for Business	Block Chain for Business – Intro to Hyperledger Technologies	Linux Foundation
Industrial Cyber Security	Cyber Security Fundamentals Specialist (ISA 99 / IEC62443)	ISA
Meridium (APM Foundation)	APM Foundation, Administration, Reporting, Business Rules Enhancement, APM Matrices and Score Cards	Meridium (G.E Digital)
ITIL	ITIL Release Control Validation ITIL Foundation	AXELOS EXIN
YOKOGAWA	CENTUM CS3000 Engineering	Yokogawa Singapore
Rockwell Automation (Allen Bradley)	System Integrators workshop	Rockwell Automation Middle East
Proximex	Proximex Surveillint Configuration	Proximex USA
Psion TekLogix (Motorola/Zebra Technology)	TekLogix Narrowband Based Barcoding System Design and Deployment	PSILOG International UAE
Smart Plant Instrumentation	Smart Plant Instrumentation System Administration	Intergraph Middle East UAE.
OSISoft PI	OSISoft PI System User Training	OSISoft Middle East
SIEMENS	SIMATIC Programming 1 in TIA Portal SIMATIC WinCC SCADA in TIA Portal	SIEMENS UAE (SITRAIN) SIEMENS UAE (SITRAIN)
Professional PMP (Training CE1257)	Project Management Book of Knowledge – Fifth Edition	Cambridge Education Dubai U.A.E
JADE Master Terminal	JADE Master Terminal Administration and Super User	JADE Logistics
SCRUM.ORG (Training)	SCRUM Master (Workshop) SCRUM Product Owner (Workshop)	SCRUM.org



Skills Abridgement

- **Technology Roadmap and Portfolio**

Aligned to Vision; Driving Strategy, Technology Portfolio and Roadmap Lifecycle Management
Incubation to Scale-Ups of Technology Initiatives

- **Data Engineering & Analytics**

Apache HADOOP, QlikSense, Tableau, Power-BI, Grafana, Apache Kafka, Cloudera Data Science Platform, ETL/ELT (*Flink**, *Spark**, *Kafka*, *Storm*), Data Marts/Warehouse/Lake*, MS-SQL Server, MySQL, PostgreSQL, Oracle, InnoDB, SQLite, MongoDB, Cassandra*

- **Systems Integration**

Webservices (*SOAP/RESTful*, *SDK*, *SOA*)

Electronic Data Exchange (*UN/EDIFACT – BAPLIE*, *COPRAN*, *CODECO*)

- **Industrial Internet of Things:**

XMPP/MQTT (*Ejabberd*, *Prosody*, *Tigase*, *OpenFire*, *Mosquitto*)

Edge-Gateway (*Node-Red*)

Message Brokers (*RabbitMQ*, *Redis*)

Wireless HART / ISA-100A

- **ERP**

SAP (*User Level PP-QM*, *EAM*, *MM*, *PS*)

- **Data Center/Cloud Technologies**

Hypervisors-Type1/2 (*Vmware*, *Xen*, *KVM*, *Hyper-V*, *VirtualBox*)

Containers (*Docker*, *OpenVz*, *LXC*)

Storage/Backup (*vSAN*, *FreeNAS*, *Open Filer*, *Next Cloud*)

Public Clouds (*AWS*, *Azure**, *Digital Ocean*, *Linode etc.*)

Network (Basic Cisco Routing/ Switching)

Domain (MS-AD, LDAP)

OS (Linux, MAC-OS, Windows, FreeBSD)

- **Industrial Process Technologies**

SIEMENS (*S5*, *S7/PCS7,F/FH*, *TIA*, *WinCC*, *PmControl*, *PmQuality*, *PmANALYZE*, *Micromaster*, *SIMOREG*, *SIMOVERT*, *SINAMICS G/S*, *SIMEAS P*, *SIPROTEC*, *SITRANS P/T/F*)

YOKOGAWA (*CS-3000*, *Stardom*)

Schneider-Electric (*Modicon Quantum*, *Vijeo Citect SCADA*)

ABB (*AC 800 F/M*)

Rockwell Automation (*MicroLogix*, *Compact Logix*, *ControlLogix*, *Factory Talk View SE/ME*)

Emerson (*Delta-V engineering**)

Invensys (*Wonderware*), **Aveva** (*OSI-PI**)

- **ESD/SIS/VMS Systems**

HIMA (*HiQuad*), **Invensys** (*Triconex Trident*)

YOKOGAWA (*Prosafe-RS*), **G.E** (*BN 3500*)

- **Industrial Communications**

RS232/422/485, *Profibus/Profinet*, *ASi-Bus*, *ControlNet*, *Foundation Field Bus*, *Modbus/TCP/+*, *VNet/VNetIP*, *Device Net*, *Enternet/IP*, *Profinet*, *OPC (DA, HDA, TCP, UA, XML-DA, A&E)*

Wireless (*Narrowband*, *Industrial WiFi & MESH Backbone*)

- **Sea Terminal Operations**

NAVIS (*JADE/Master Terminal*)

- **Application Development**

Control System (*FBD*, *Ladder*, *STL/SL*, *S7-Graph*, *CFC*, *SFC*, *Control Drawings*, *SCL/ST*), **Generic** (*C*, *C++*, *Python*, *Java*, *VB*, *C#*, *Visual C++*, *RUST**)



Technical Sales

Customer	Project	Value (M US\$)
ADPC	Khalifa Port Abu Dhabi. Pre-Bid to Contract Award	4.9+
ADCO	ADCO Remote Drain System for Oil Field HVAC Control & Instrumentation for the BAB Area in Habshan, Abu Dhabi	1 0.7+
TOTAL	Total Yemen HVAC Control	0.28+
QPD	Qatar Petroleum Development Company Ltd. off shore Well Head RTU System and Integration	1
Petronas Carigali	Petronas Carigali Pakistan Ltd. Saquib Well Head RTU System and Integration	0.3
Noon Group	Noon Sugar Mills, Distributed Control System & Instrumentation – Rectified Ethyl Alcohol	1.3
Shakarganj Group	Shakarganj Sugar Mills Distributed Control System & Instrumentation – Rectified Ethyl Alcohol	1.3
	Shakarganj Sugar Mills Distributed Control System & Instrumentation – Distillery	1.1
PakArab Fertilizer	PakArab Fertilizer Process Control & Instrumentation for Ammonia Storage	0.5
	PakArab Fertilizer Distributed Control & Instrumentation for Nitric Acid Plant	1.3

Interests

- Book Reading on areas of technology, management, history etc.
- Magazines / Newspapers / Newsletters / Journals
- XMPP/Jabber/ Matrix and SIP Protocols/Communication over IP Technologies

Sports

Swimming, Basket Ball, Tennis, Table Tennis

Languages

English, Urdu

* *Comprehension of Workings and/or Pilot/POC/Only Design and Engineering*

Last Updated: 20 Apr, 2024