SAHM ALBRAQ

ALBRAQ
ARROW

CONTENTS

ALBRAQ ARROW

COMPANY OVERVIEW

Sahm Albraq is an emerging and innovative and futuristic technology company with a committed ambition to support and grow with the vision of Modern Kingdom of Saudi Arabia. We are Head Quartered in Riyadh, Capital City of Saudi Arabia.

Sahm Albraq is the technology provider with an aim to bring solution to every requirement in the field of smart, cognitive and green technologies in the sectors like Heath, Education, Aviation, Sea Ports, Hospitality, Entertainment, Transportation, Palaces, Public & Private Sectors etc.

LEADERSHIP

MARKETING

TEAMWORK

STRATEGY

SUCCESS

COMPANY OVERVIEW

Sahm Albraq brings the expertise in the field of System designing, installation, Testing & Commissioning, System Integration, Handover, Operations & Maintenance with the help of specialized global partnered companies, Latest global trends & Technologies and Futuristic Technologies. Sahm Albraq is more concerned and respectful in addressing the Local culture, Environmental challenges, Renewal energy options, RRR (Reduce, Reuse and Recycle) in all aspects of their approaches.

ALBRAQ ARROW

VISION MISSION

Our Vision

Our vision is to become leading System Integrator company with Innovation, Digitization and future-proof technologies in Saudi Arabia by 2030 expanding from the Middle East to Africa to Asia. Leader in Smart, Cognitive & Green Technologies in Saudi Arabia and Middle East Region.

Our Mission

To support the Saudi Arabia and Worlds transformation towards Smart & Cognitive Technologies and Sustainable Energy
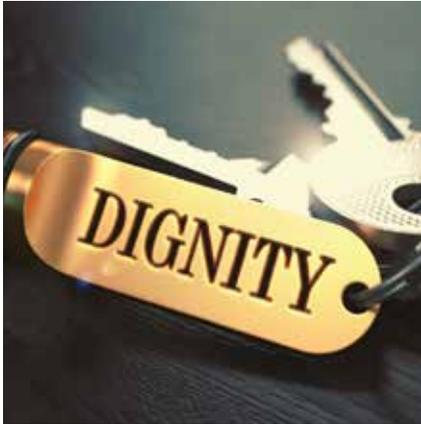
ALBRAQ ARROW

STRATEGIC OBJECTIVES

- Our strategy incorporates retaining experienced staff members, hiring competent employees and establishing partnerships with world leading organizations.

- Develop and maintain a strategic position in the Middle East, Africa and Asia market.

- Keeping utmost priority to the values and beliefs of the people.

- Continual Improvement Process in all the aspects of solutions and services to meet the client needs.

- Constant Training for the Staff in all the areas.

- Target to open more offices in other countries of the Middle East and Asia continent.

- Bringing a very transparent CCC – Communication, Collaboration and Coordination

- Focusing on collaborative meetings and networking with local companies in the regional conferences, exhibitions and at an individual level

- Build a relationship based on trust with key decision makers.

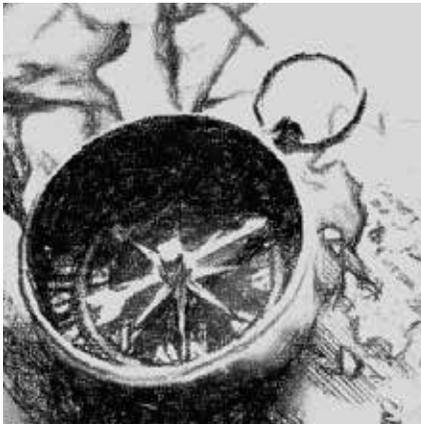- Keeping Dignity, Discipline and good culture at utmost priority
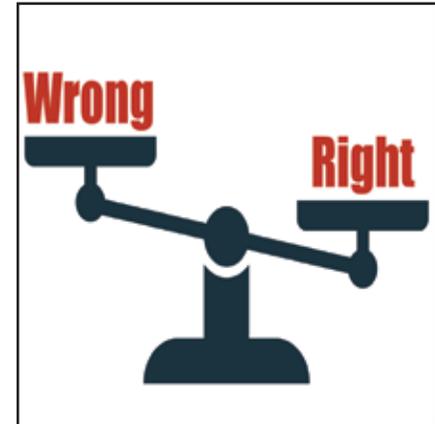
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CORE VALUES

Dignity

Discipline

Culture

Accountability

Integrity

Ethical Behavior

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ALIGNMENT WITH VISION 2030

VISION رؤيـــة 2030

المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

All success stories start with a vision, and successful visions are based on strong pillars.

Our company will be aligned with Kingdom's Vision 2030 Programs by aligning with its digital transformation and its Mega/Giga projects.

NEOM	NEOM نيوم	Red Sea Development	The Red Sea Development Company	Al Amaala	AMAALA
Qiddiya	Qiddiya	Diriyah Gate	DIRIYAH GATE DEVELOPMENT AUTHORITY	NREP	البرنامج الوطني للطاقة المتجددة National Renewable Energy Program

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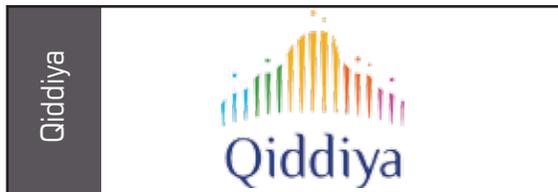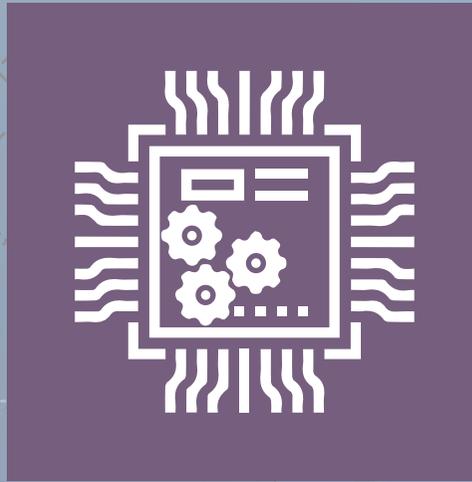
OUR TECHNOLOGIES

Smart Technologies
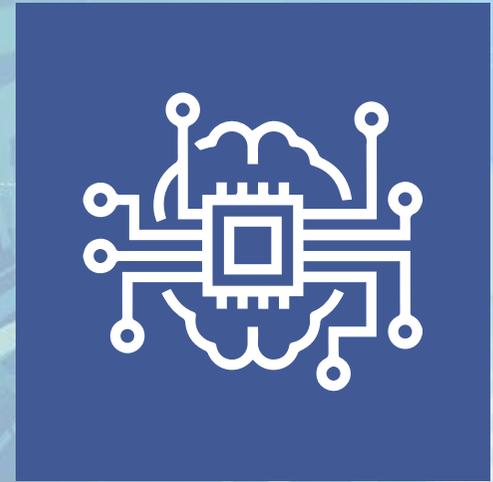
Cognitive Technologies

Green Technologies

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SMART TECHNOLOGIES

- Automation
- Robotics
- 5G/6G
- LORA
- WiFi-7
- 3D Printing/Additive Manufacturing
- Smart Cities
- Smart Homes and Offices
- AI-Artificial Intelligence
- IOT- Internet of things

- Cloud Computing
- Edge Computing
- Quantum computing
- Nanotechnology
- Biotechnology
- Block-chain
- Virtual Command Control Centers
- Wearable Technology and Virtual/Augmented Reality
- Immersive Technologies

- Self-driving cars/ Connected and Autonomous Vehicles
- Drones/Air Taxis
- Face ID & Biometrics
- Digital/Crypto Currencies
- E-Commerce and Online Business
- Mobile Apps/Chat bots
- Smart Transport and Mobility
- Digital Twin

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AUTOMATION

Automation is the creation and application of technologies to produce and deliver goods and services with minimal human intervention.

The implementation of automation technologies, techniques and processes improve the efficiency, reliability, and/or speed of many tasks that were previously performed by humans.
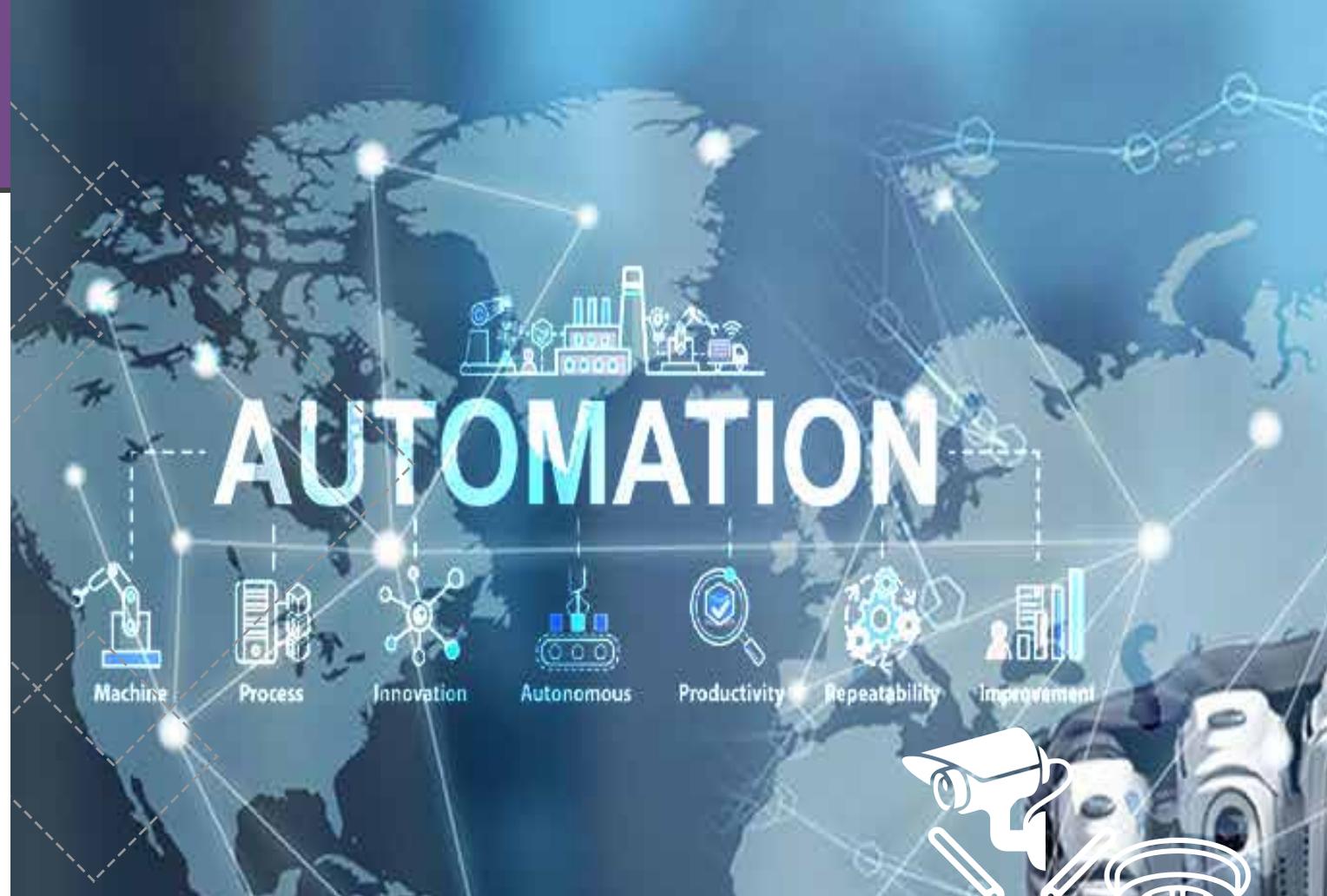
Automation or automatic control, is the use of various control systems for operating equipment such as machinery, processes in factories, boilers and heat treating ovens, switching in telephone networks, steering and stabilization of ships, aircraft and other applications with minimal or reduced human intervention.

With rapid development in artificial intelligence (AI) and robotics technology, automation is at a tipping point. Today, robots can perform a slew of functions without considerable human intervention.

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ROBOTICS

Robotics is an interdisciplinary research area at the interface of computer science and engineering.

Robotics involves design, construction, operation, and use of robots. The goal of robotics is to design intelligent machines that can help and assist humans in their day-to-day lives and keep everyone safe

- Service robotics will show far more disruptive effects on the competitiveness of non-manufacturing industries such as agriculture, transport, healthcare, security and utilities
- Robotics has the potential to positively transform lives and work practices, raise efficiency and safety levels and provide enhanced levels of service.
- Driving technology underpinning a whole new generation of autonomous devices and cognitive artefacts that provide the missing link between the digital and physical world

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IOT
Internet of things

The internet of things, or IoT, is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction

Manufacturing:

The IoT can connect various manufacturing devices equipped with sensing, identification, processing, communication, actuation, and networking capabilities.

Agriculture:

There are numerous IoT applications in farming such as collecting data on temperature, rainfall, humidity, wind speed, pest infestation, and soil content.

Environment:

Environmental monitoring applications of the IoT typically use sensors to assist in environmental protection by monitoring air or water quality, atmospheric or soil conditions, and can even include areas like monitoring the movements of wildlife and their habitats.

Industrial and Medical:

Industrial IoT devices acquire and analyze data from connected equipment, operational technology (OT), locations and people.
Internet of Medical Things (IoMT) is an application of the IoT for medical and health related purposes, data collection and analysis for research, and monitoring

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3D PRINTING / ADDITIVE MANUFACTURING

3D printing or Additive manufacturing, is the construction of a three-dimensional object from a CAD model or a digital 3D model.

The term "3D printing" can refer to a variety of processes in which material is deposited, joined or solidified under computer control to create a three-dimensional object, with material being added together (such as liquid molecules or powder grains being fused together), typically layer by layer.

5 industries in where Additive Manufacturing is unstoppable

Aerospace: 3D printing delivers complex, consolidated parts with high strength. Less material and consolidated designs result in overall weight reduction – one of the most important factors in manufacturing for aerospace.

Medical: Rapidly innovating medical industry is using 3D printing to deliver breakthroughs to doctors, patients and research institutions.

Transportation: Helped automotive suppliers and companies develop consolidated, lightweight components that lead to more efficient vehicles

Energy: Producing efficient, on-demand, lightweight components and environmentally friendly materials provides answers for diverse requirements and field functions.

Consumer Products: 3D printing is great for producing detailed consumer electronics early in the product development life cycle with realistic aesthetics and functionality.

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SMART CITIES

A smart city is an urban area that uses different types of electronic methods and sensors to collect data. Insights gained from that data are used to manage assets, resources and services efficiently; in return, that data is used to improve the operations across the city. This includes data collected from citizens, devices, buildings and assets that is then processed and analyzed to monitor and manage traffic and transportation systems, power plants, utilities, water supply networks, waste, crime detection, information systems, schools, libraries, hospitals, and other community services.
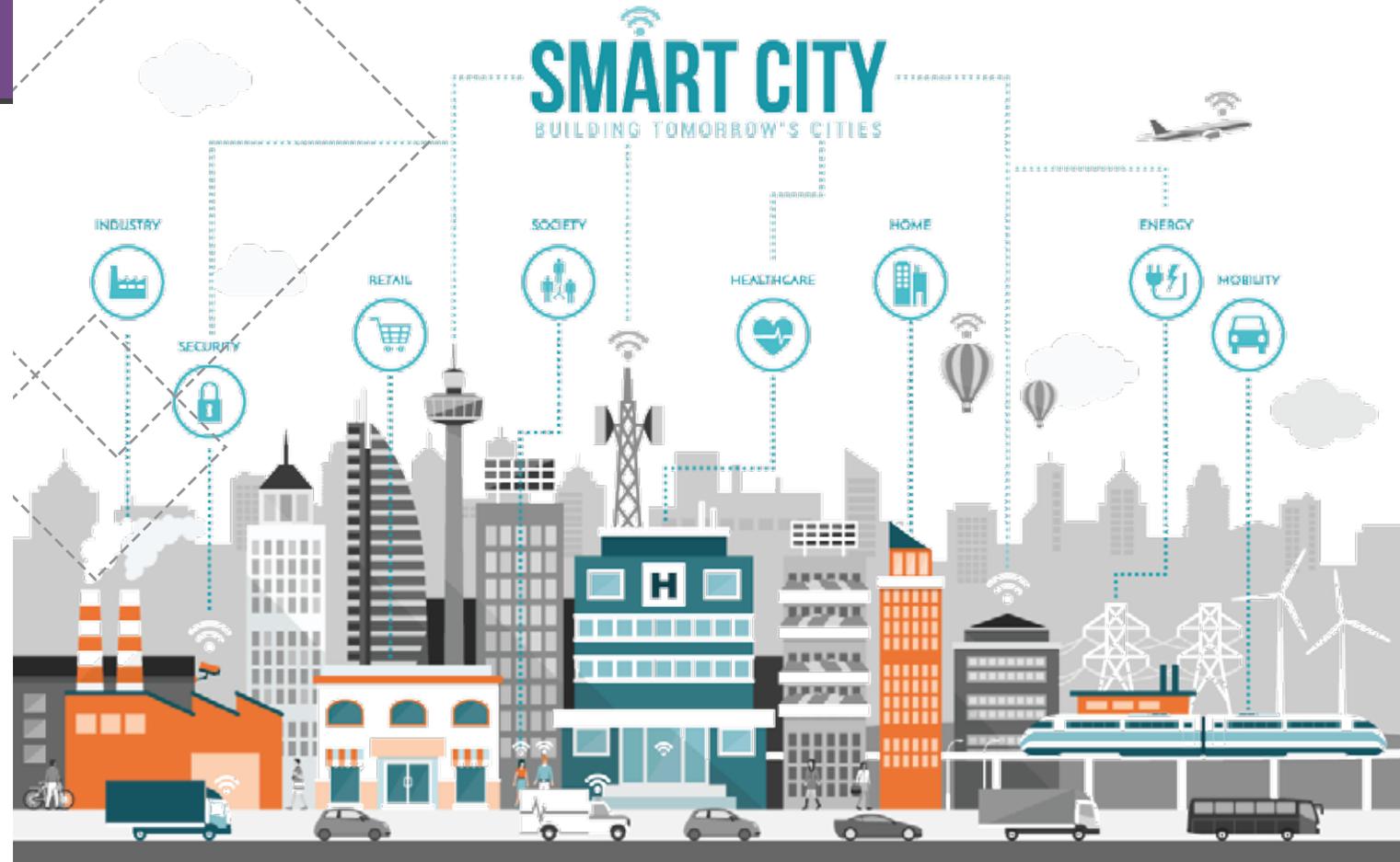
Smart city

- Smart Wi-Fi zones
- Real-time traffic monitoring
- Crowd management
- Real-time traffic and crowd maps
- Smart traffic lights
- Smart parking

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Virtual Command Control Centers

- Integrate data from multiple sources to a single platform to enable real time operations.

- Enable collaboration from different locations (Including Home) and facilitate decision making

- Facilitate chat/video conferencing in the operational context and create audit trial for post operations analysis.

- Improve efficiency as relevant people can participate in decision making without being physically located in the control room.

- Optimize resources on the ground.

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COGNITIVE TECHNOLOGIES
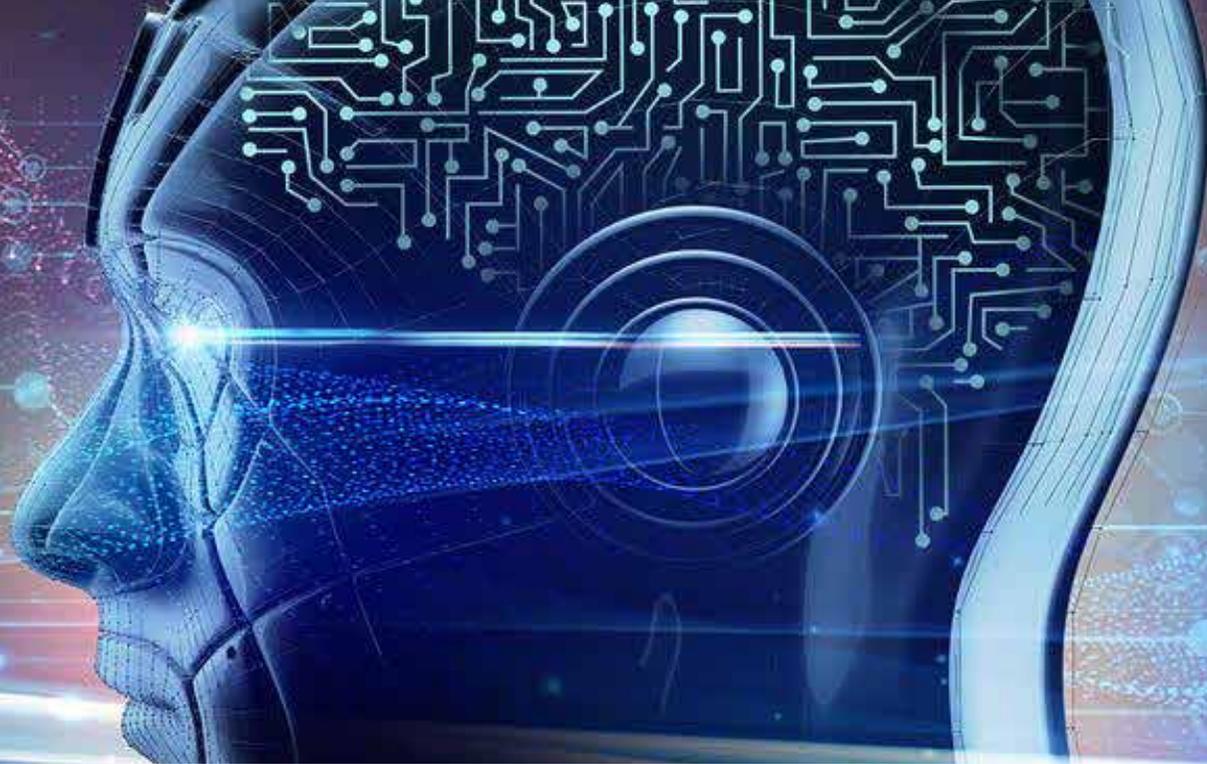
- Data Science
- Big data
- Natural language processing
- Data mining
- Pattern recognition
- Content Insights

- Intelligent Dashboards and Reports
- Decision making and Trending
- Data Analytics
- Predictive Analysis and forecasting
- Predictive modeling and operations simulation tools

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Cognitive technologies mostly deal with the data.

Cognitive Technologies allow a system to learn from its past – meaning, the past behavior of the user/system and to adapt to changes in the environment and thus to new requirements.
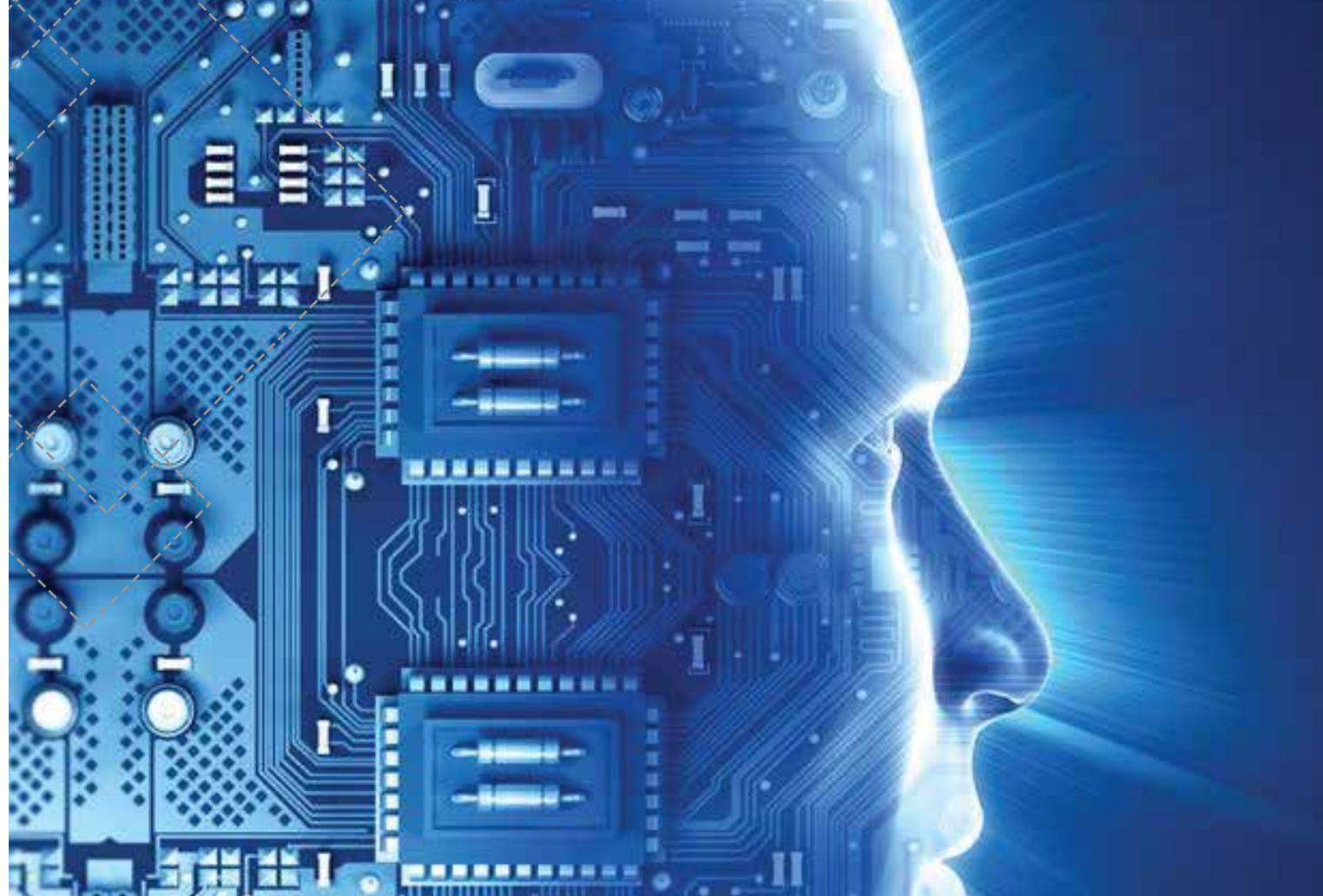
Data science is an inter-disciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from many structural and unstructured data. Data science is related to data mining, machine learning and big data.

The Predictive analytics encompasses a variety of statistical techniques from data mining, predictive modelling, and machine learning, that analyze current and historical facts to make predictions about future or otherwise unknown events.

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GREEN TECHNOLOGIES

- Renewable Energies like solar, wind and hydroelectric power
- Hydrogen fuel powered solutions
- Electric Vehicles/Aircrafts
- Water conservation
- Solid waste management
- Bio Fuels
- Environmental friendly solutions
- Net Zero Emissions products/solutions
- RRR (Reuse, Recycle and Reduce) solutions

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Environmental technology (envirotech), green technology (greentech) or clean technology (cleantech) is the application of one or more of environmental science, green chemistry, environmental monitoring and electronic devices to monitor, model and conserve the natural environment and resources, and to curb the negative impacts of human involvement.

- **Recycling**
- **Purifying of Water**
- **Purifying of Air**
- **Conserving Energy**
- **Rejuvenating Ecosystems**

Green Technologies offers a lot of benefits to not only nature itself but also for a clean and greener human lifestyle.

Human beings need Earth to stay alive. This technology ensures that the Earth remains healthy for all life to continue existing.
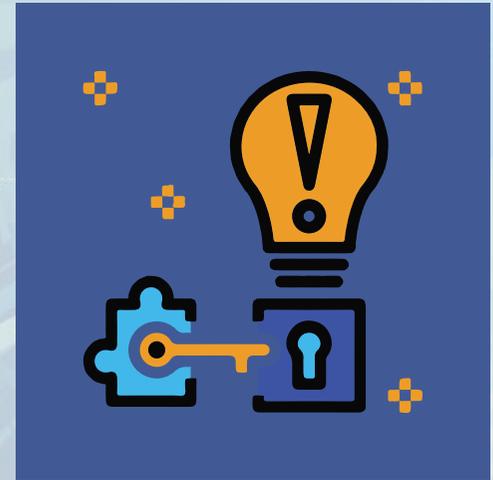
The term is also used to describe sustainable energy generation technologies such as photovoltaics, wind turbines, bioreactors, etc.

Sustainable development is the core of environmental technologies.

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OUR
Solutions
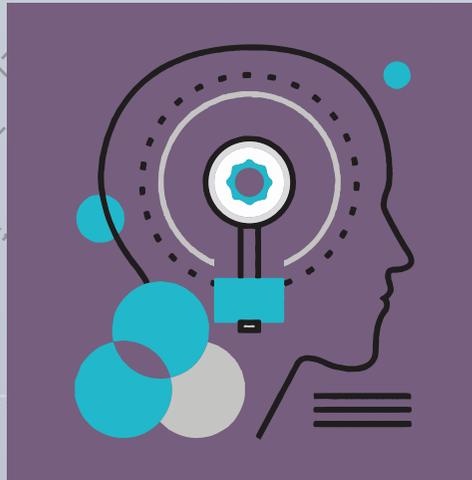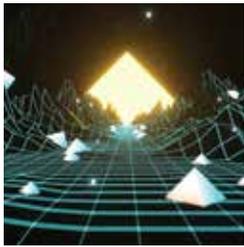
Smart Solution

Cognitive Solution

Green Solution

ELV Solution

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SMART SOLUTION

Virtual Gate

Virtual Gate shall enable a seamless and non-intrusive immigration control during arrival and departure at border in the airport, without the need for any officers

Personalized Wearables

Wearable technology customize and personalize the visitor experience at any Smart Destination

Voice Enabled Assistance

Voice Enabled Assistance service shall be enabled by the platform which integrates with hotel bookings, dining and entertainment reservations, concierge, transportation and making them accessible through voice interaction
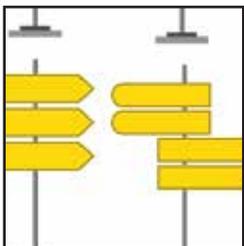
Smart Street Signs

Smart street sign or Variable message signs (VMS) are digital traffic signs used on roads to give travelers information about any abnormal conditions or events
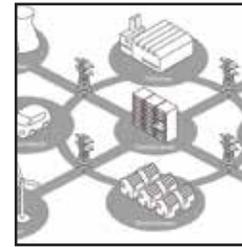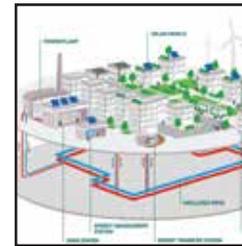
Smart Electric Grid & Metering

Smart Electric Meters should accurately monitor energy consumption and can send usage information via a variety of communication technologies for billing or for helping operator to effectively manage energy use.
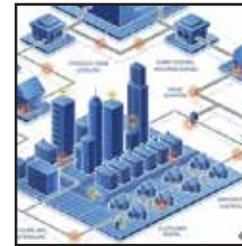
Smart Water Network & Metering

Smart Water Meters should accurately monitor water consumption and send usage information through a variety of communication technologies for billing or for helping operator to effectively manage water use

District Cooling Network & Management

Smart BTU Meters should accurately monitor cooling energy consumption and can send usage information via a variety of communication technologies for billing or for helping operator to effectively manage energy use

Smart EV Charging & Management

Smart EV Charging Stations should allow EV drivers to charge many types of vehicles (e.g. cars, trucks, or buses) using the same infrastructure and shall be typically located in the public areas such as the parking spots.

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Smart Building

Smart building offers data sharing, information sharing and leverage building infrastructure resources across different services. The Smart Building services shall enable the building facility operators and managers to improve occupant/visitor services and provide an enhanced user experience.
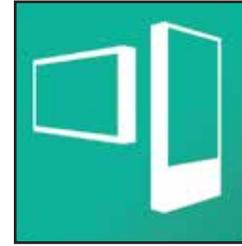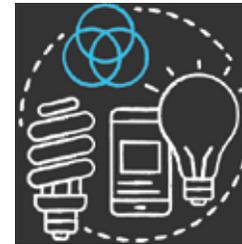
Smart Signage

Smart Signage solution is an end-to-end digital signage solution that shall enable the visitors at any facility/area to communicate and engage in new and more impactful ways

Smart Facility Management

The systems optimize the use of all facilities resources by centrally managing all facilities assets, and their use and performance.

Smart Lighting Management

Smart Lighting poles shall not only serve as automated LED lighting source which can be remotely managed, they shall support multifunctional light-pole design which can provide the required physical infrastructure to support other sensors and devices.
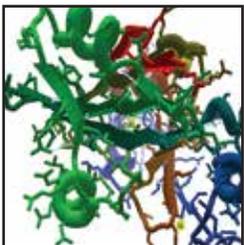
3D Model (SEZ Digital Twin)

3D Model (SEZ Digital twin) provides virtual replica of the physical assets, which would continuously collect information from the built environment (via sensors, drones, or other IoT and IIoT data collection tools) and applies advanced analytics, machine-learning (ML) and artificial intelligence (AI) to gain valuable real-time insights about the physical asset's performance, operation, or profitability.

Smart Street Furniture

The service provides tech-enabled furniture that fosters visitor's interaction & engagement with the attraction and its services. This is delivered through different types of furniture offering: WI-FI connectivity throughout the outdoor; lighting, CCTV & other service through smart poles; USB charging & environmental & usage sensors built into smart benches. This integrates with smart signage

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SMART PARKING & TROLLEY MANAGEMENT

- Navigation to suitable parking slots
- Barrier Gates
- LPR Cameras
- Automatic Payment Machine
- RFID Readers
- CCTV and surveillance

Sensor integration is also a good upgrade for smart parking systems. The most applicable are:

- Ultrasonic sensors
- Electromagnetic field sensors
- Infrared sensors (IR sensor)

IOT BASED SMART PARKING SYSTEM DEVELOMENT

Smart parking development implies an IoT-based system that sends data about free and occupied parking places via web/mobile application. The IoT-device, including sensors and microcontrollers, is located in each parking place. The user receives a live update about the availability of all parking places and chooses the best one.

SMART Trolley Management
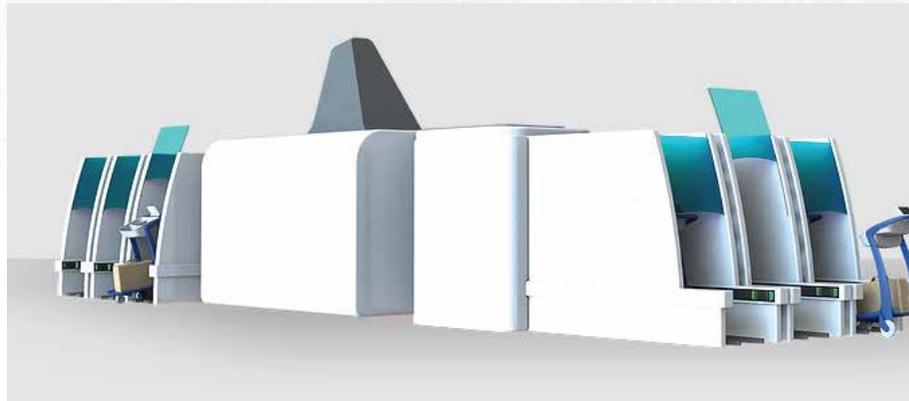
Sahm Albraq provides IOT enabled Smart trolles with LORA(Long Range) wifi plotform for tracking and mainteinaing the availablity of baggage trolleys for passengers in the real time acroos airport and Train stations

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COGNITIVE SOLUTION

Social Analytics & Sentiment Analysis

Social Analytics & Sentiment Analysis shall be enabled by destination wide platform and tools that can structure and analyze massive amounts of natural language feedback and automatically evaluate the overall feeling behind visitor's messages.

Shopper/Visitor Analytics

Shopper/Visitor Analytics should allow airport operators and other authorities get visibility into their guest's behavior within the airport/other premises. This shall be done by leveraging information from sensors, systems, applications and assets such as airports, public spaces, restaurants, recreational area and events.

Chatbot: Chatbot or bot – is a computer program that simulates a natural human conversation. Users communicate with a chatbot via the chat interface or by voice, like how they would talk to a real person. Chatbots interpret and process user's words or phrases and give an instant pre-set answer.

Cognitive computing is a different field altogether where it serves as an assistant instead of the one completing the task. In this way, cognitive computing gives humans the power of faster and more accurate data analysis without having to worry about the wrong decisions taken by the machine learning system.
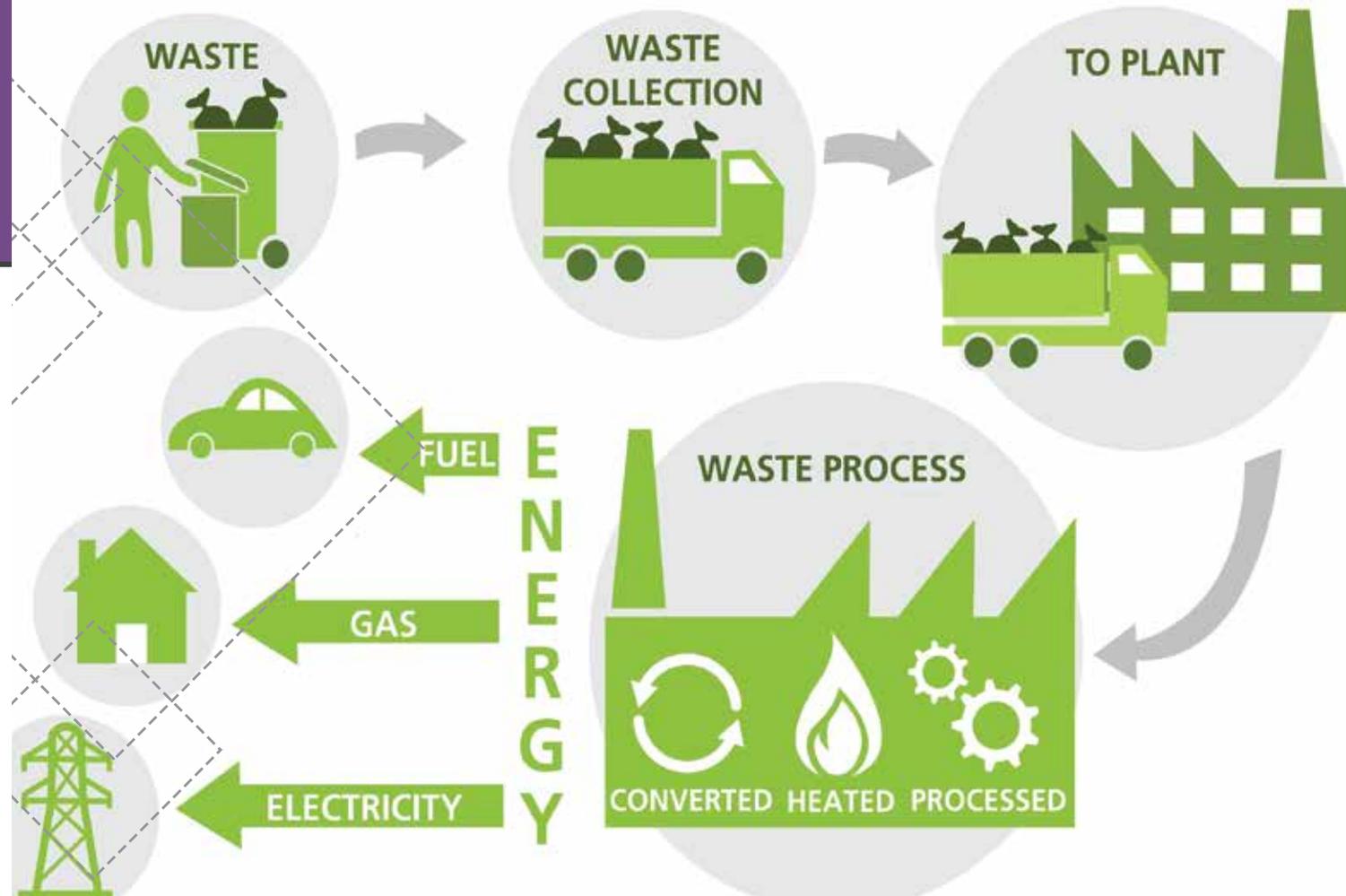
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GREEN SOLUTION

Environmental Monitoring & Management

Solution that enables real-time capturing of environmental data (e.g. air quality, water quality) through distributed sensors in the indoor and outdoor facilities

Smart Waste Management

The service utilizes IoT based fill monitoring sensors to optimally manage, track, dispose or recycle the waste from the trash bins - without any overflows - to avoid major health and visual disturbances to guests.

WASTE → WASTE COLLECTION → TO PLANT → WASTE PROCESS (CONVERTED HEATED PROCESSED) → ENERGY (FUEL, GAS, ELECTRICITY)

- **Wastewater treatment**
- **Recycling and waste management**
- **Electric Automobiles**
- **Smart Meters**
- **Self-sufficient buildings**
- **Renewable Energy (sunlight, wind, rain, tides, waves, and geothermal heat)**

- **Hydropower**
- **Waste Sourced Biofuel/Pyrolysis**
- **Waste-to-Energy solutions**
- **Generation of energy from the waves**
- **Waste Water electricity Generator**
- **BIOMIMICRY - Biomimicry has given the rise to self-healing materials. The self-healing materials will have the capability to "heal" themselves when cut, torn or cracked**

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ELV SOLUTIONS

Passive Systems

ICT - (Information & Communication Technologies)

SSS - Safety & Security Systems

SAS - Special Ancillary Systems

BMS - Building Controls and Automation

OCC - Operation Control Centres

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PASSIVE SYSTEMS

Sahm Albraq provides all the Passive systems related ISP(Inside plant) and OSP(Outside Plant) for making the base infrastructure of the ICT systems

Sahm Albraq provide a complete solution for Passive Networking solutions, as we have in-house capabilities with teams of certified technicians & project management skills to cater for all kinds of your UTP/Fiber Optic Cabling requirements to handle large & complex requirements Structured Cabling has become quite common for inter-connecting the various active devices in an IP network. The following passive components are commonly utilized in an IP Network for Structured Cabling:

- Cat 6 UTP (Un-shielded Twisted Pair) Copper Cables
- Cat 6 UTP Patch Cords
- UTP Patch Panel
- Optical Fiber Cables

- Communication Pathways
- Communication Equipment Room Fittings
- Cable management system

- Grounding & Bonding for Communication System
- Communication Horizontal Cabling
- Communication System Identification

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ICT
Information and Communications Technology

Sahm Albraq Provides information & Communication technologies related to voice and data, wireless, storage including the data centers.

Sahm Albraq provide companies with customized IT infrastructure solutions enabling them to provide a richer experience to their clients resulting in higher revenues, less costs and improved customer loyalty.

- Communication Backbone Cabling
- Voice Communication (VoIP)
- Data Network (DNS)
- Data Centers

- Radio & Wireless (Radio - TETRA) Indoor (RW-TETRA-I)
- Radio & Wireless (Radio - TETRA) Outdoor (RW-TETRA-O)
- Radio & Wireless (WIFI) - RWIFI
- Computing and Storage -CSS

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SSS
Safety & Security Systems

Sahm Albraq provides turnkey solutions in the field of security in the areas of Critical Infrastructures, Identity Management and Access Control, Video Surveillance, Perimeter Intrusion and Border Security etc.

Some of the solutions:

- Video Surveillance System (VSS)
- Security Access Control System(SACS)
- Public Address and Mas Notification System
- Fire Alarm System (FAS)
- Fire Fighting & Protection System
- Vehicle access solutions (Bollards, Gate Barriers)
- Vehicle Scanners

- Explosive detection
- Metal detection
- X-Ray Detection
- Under vehicle inspection System
- Turnstiles
- Automatic gates
- Physical Security Management Systems- PISM

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SAS
Special Ancillary systems

Sahm Albraq offers Special & Ancillary Systems that help customers in seamless user experience especially in the form of Audio Visual, IP TV, Digital Signage and Master Clock Systems

We offer services that meet client current requirements in helping grow their business effectively with future proof solutions.
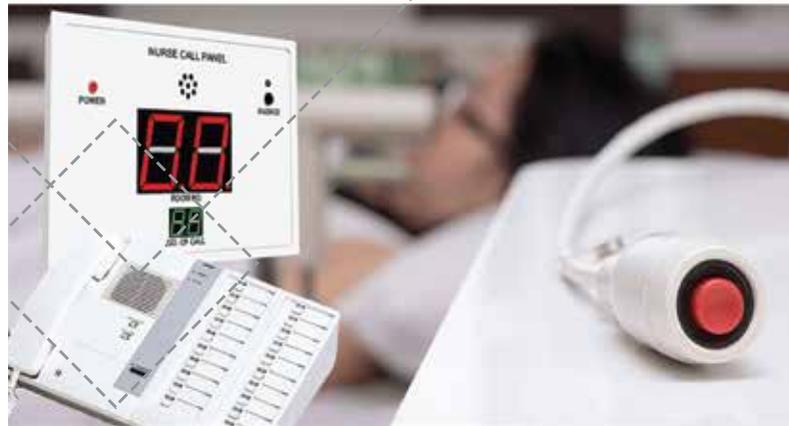
- Audio Visual System (AV)
- Master Clock System (MCS)
- IP Television System (IPTV)
- Information Kiosk System (IK)

- Trolley Management System (TMS)
- Nurse Call System (NCS)
- Car Paring Management System (CPMS)

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BMS
Building Management Systems

Sahm Albraq offers a latest state of the art building management and Automation Control systems that monitors and operates a wide variety of Building Systems.

Sahm Albraq can offer BMS Solutions and provide life cycle support for facilities making it easier to increase comfort, safety and security for the occupants.

■ **BMS (Building Management Systems) are systems providing integrated management of all the technological functions of a building, including access control, security, fire alarms, lights, intelligent lifts and air-conditioning.**

■ **There is an increasing need to connect together controllers made by different companies, something that requires not only a common electrical standard, but also a language, or communication protocol, that all the devices can understand.**

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OCC
Operation Control Centres

An Operation Control Centre is usually a single central space from where the operations and services are monitored, evaluated, recorded, analyzed and influenced.

The size of an operation control center can range from very small to larger teams with a hierarchy of leaders covering all the departments and systems.

An operation control center (OCC) is manned by staff overlooking operations. They can communicate with the outside world to intervene in the event of unwanted situations following (un)expected events listed next.

- Changes
- Disruptions
- Incidents and accidents
- Breakdowns
- Security and safety issues
- High demand
- Staffing problems

NOC - Network Operation Centers

SOC - Security Operation Certers

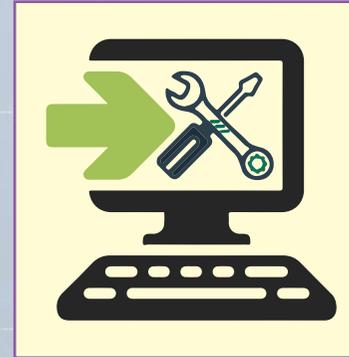**CPOC - Car Parking Operatrion Centers**

TOCC - Terminal Operation Control Centers

ALBRAQ ARROW

OUR SERVICES

System Integration

Design Installation

Testing & Commissioning

Operation & Maintenance

Consultancy

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SYSTEM INTEGRATION

Sahm Albraq is a leading system integration company specializing in integrating ICT, ELV, Building Control & Automation systems. Our expertise and abilities from a system integrator perspective are extensive.

We can provide complete and comprehensive systems solutions that fit customer requirements and budget. We are experts at finding innovative solutions to deliver the optimum balance between Quality, Cost of Ownership and Technical Excellence.

- System integration means – associating many subsystems in one whole system with the aim of saving resources such as money, time and work.
- SI involves interfacing and enabling the interactions of component elements to collectively provide the functionality needed by the system to accomplish its goals.
- SI is part of the overall system development life cycle.
- SI increases in complexity when there are legacy systems that need to be integrated, and when humans are an integral part of the system

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DESIGN INSTALLATION

Sahm Albraq takes a systematic, holistic, consultative approach in providing solutions.

Design features include:

- **Performance and efficiency optimization**

- **Ability to scale and adapt High Security**

- **Ease of management and monitoring**

- **Reduced costs and return on investment (ROI)**

- **As a trusted adviser and partner, we assist clients manage and improve solutions to ensure they continue to meet the needs of the business and provide continuing return on investment.**

- **Creating solutions that will improve daily business activity**

- **Future proof design solutions**

- **Creating solutions that will improve daily business activity**

- **Future proof design solutions**

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TESTING & COMMISSIONING

Sahm Albraq Offers professional expertise in Testing, pre-commissioning and commissioning services of all the ICT and ELV systems

- Factory acceptance test
- Laboratory acceptance test (test platform),
- Functional test,
- Site acceptance test,

- Integration acceptance test,
- Full systems testing and commissioning test
- And system availability test

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OPERATION & MAINTENANCE

Sahm Albraq provides comprehensive Operation & Maintenance solutions along with most successful operation & maintenance strategies that clients can take advantage

Handles Breakdowns and emergencies in a professional way

- **Predictive Maintenance**
- **Corrective Maintenance**
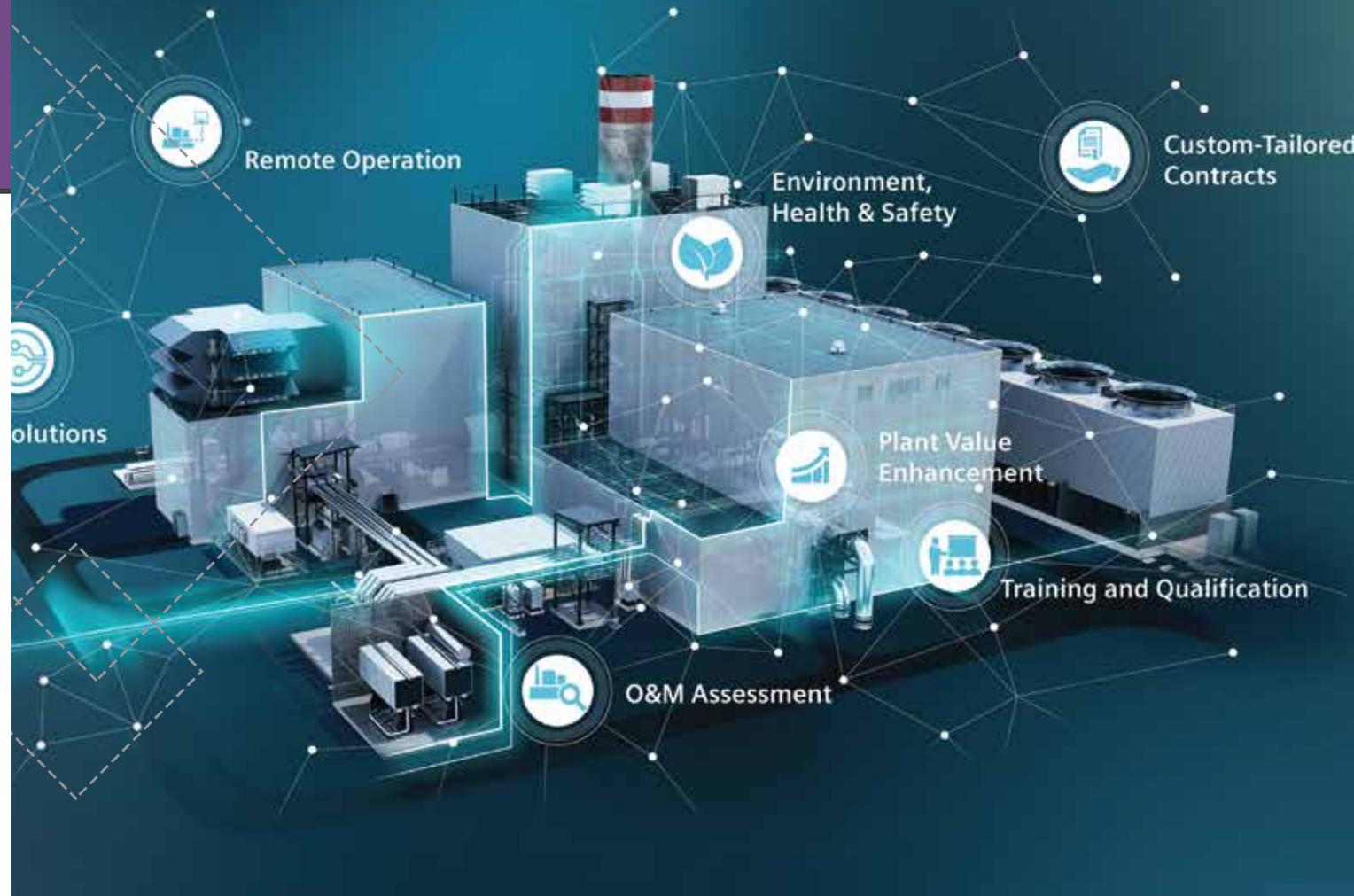
O&M services include:

- **24x7 support services with Level 1, Level 2 and Level 3 support**
- **IT Managed Services**
- **Project management**
- **ITIL Process**
- **QoS- Quality of Service**
- **Continual Improvement**

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CONSULTANCY

Sahm Albraq provides specializesd and profes-sional consutlancy services in the areas of ELV system Design and T&C services by building and bridging the gaps between businesses and technology.
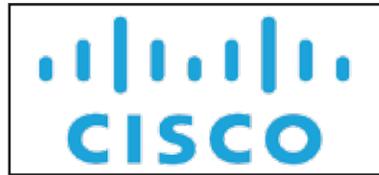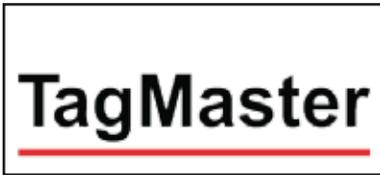
Sahm Albraq provides due diligence, assess-ment, Gap Analysis and Predictive Analasis in chosing the right solution to fit the client requirements.

The consulting team combines a professional pool of senior consultants, subject matter experts, and project managers.

We provide services related to the implementation of system analyses, we prepare and manage the integration of software and provide evaluation of the impact of the implementation of measures in the field of ICT and Security systems.
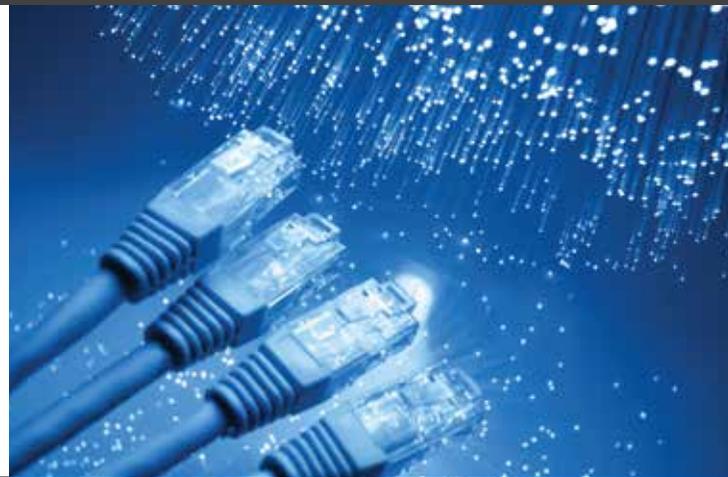
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OUR VENDORS

SB SCHEIDT&BACHMANN	TagMaster	CISCO	SIEMENS	Honeywell
Hanwha	AVAYA	HUAWEI	BOSCH Invented for life	PARK ASSIST REALLY SMART PARKING
CAME	DELL	SUPREMA	TOA	LINKSYS A Division of Cisco Systems, Inc.
nedap	ARH	TiSO	Juniper NETWORKS	hp Networking
FORTINET	FAAC	Polycom	Simplex	Zeta ALARM SYSTEMS
Symantec	EMC²	FLUKE networks	Ruckus Simply Better Wireless.	APC by Schneider Electric

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Yes! Here is Solution

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