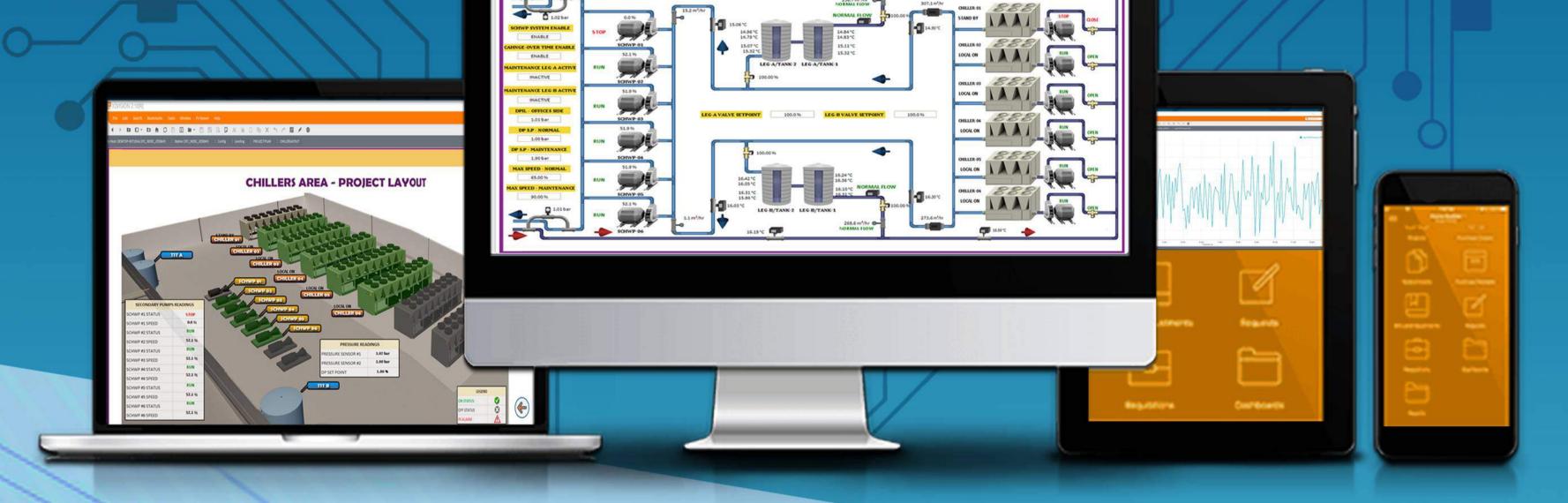


SMART BUILDINGS SOLUTIONS & INDUSTRIAL AUTOMATION

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EnergySecurityFire AlarmMotor ControlManagmentSystemsSystemsCenter

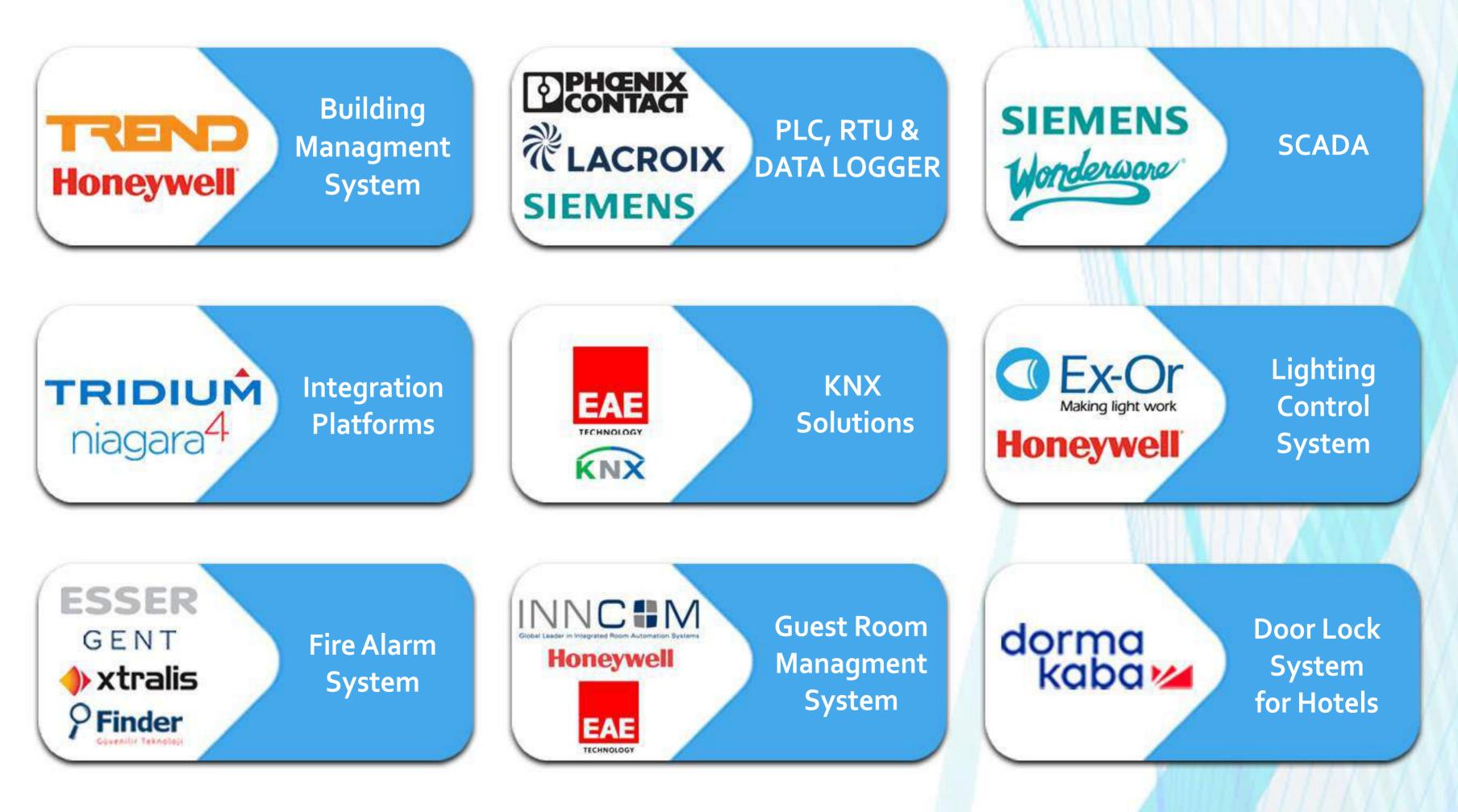


Introduction

SANA Creative Systems SCS for Contracting is a general engineering services establishment, Operating in the Kingdom of Saudi Arabia, specialized in mechanical and electrical construction works, where SANA Controls is the low current systems division in SCS.

Providing a selective added value services in the electromechanical contracting, industrial automation, energy saving and low current solutions industry. Having solid engineeing capabilities, offering systems design & engineering, to full project exection, makes us the best hub for a variety of demanding clients. Ensuring our commitment to provide top quality services, With a technology driven focus, first class services and finest engineering practices in place.









BMS & Integration (BUILDING MANAGEMENT SYSTEM)

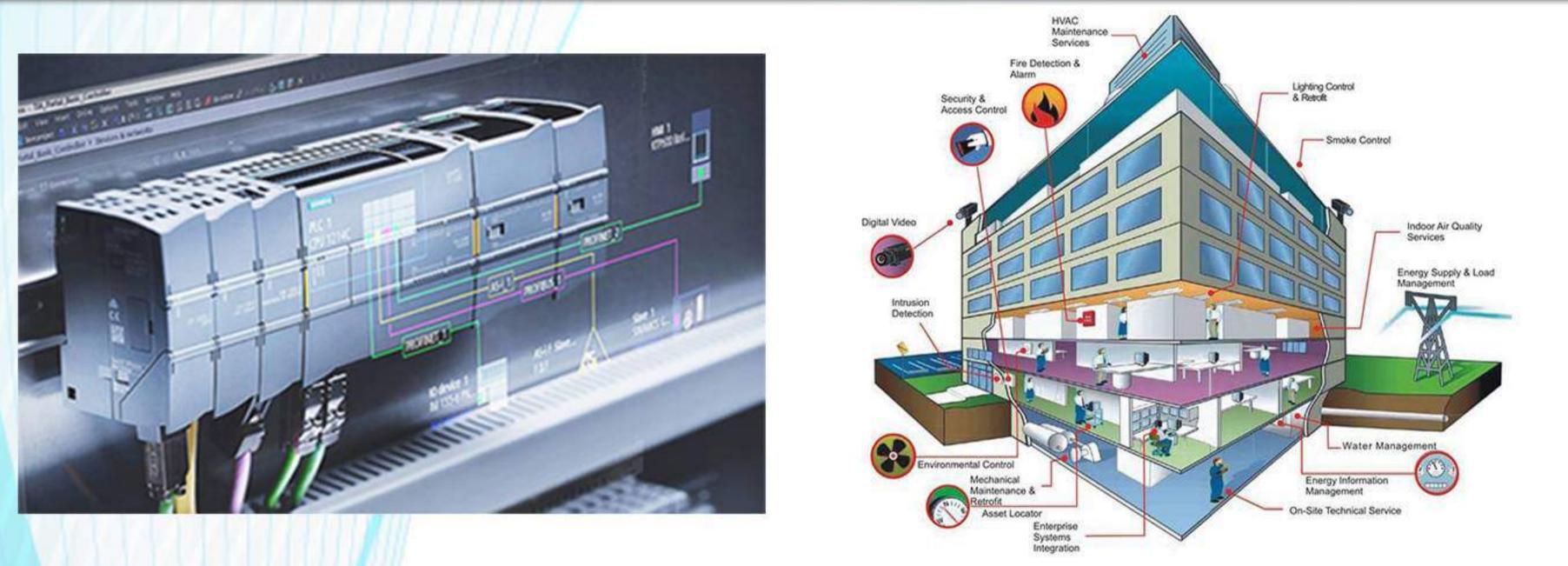
BMS is an innovative system that ensures that all your building systems lighting, air conditioning, live safety systems all operate in complete harmony. The system co-ordinates and organizes all the information logically and delivers on a 'need to know' basis. Today's Intelligent Building Management Systems go way beyond their usual role of being an integration platform by laying a foundation for new forms of services. Building Management System drastically improves functionality and overall performance of the various building systems and integrates them into an enhanced IT infrastructure.

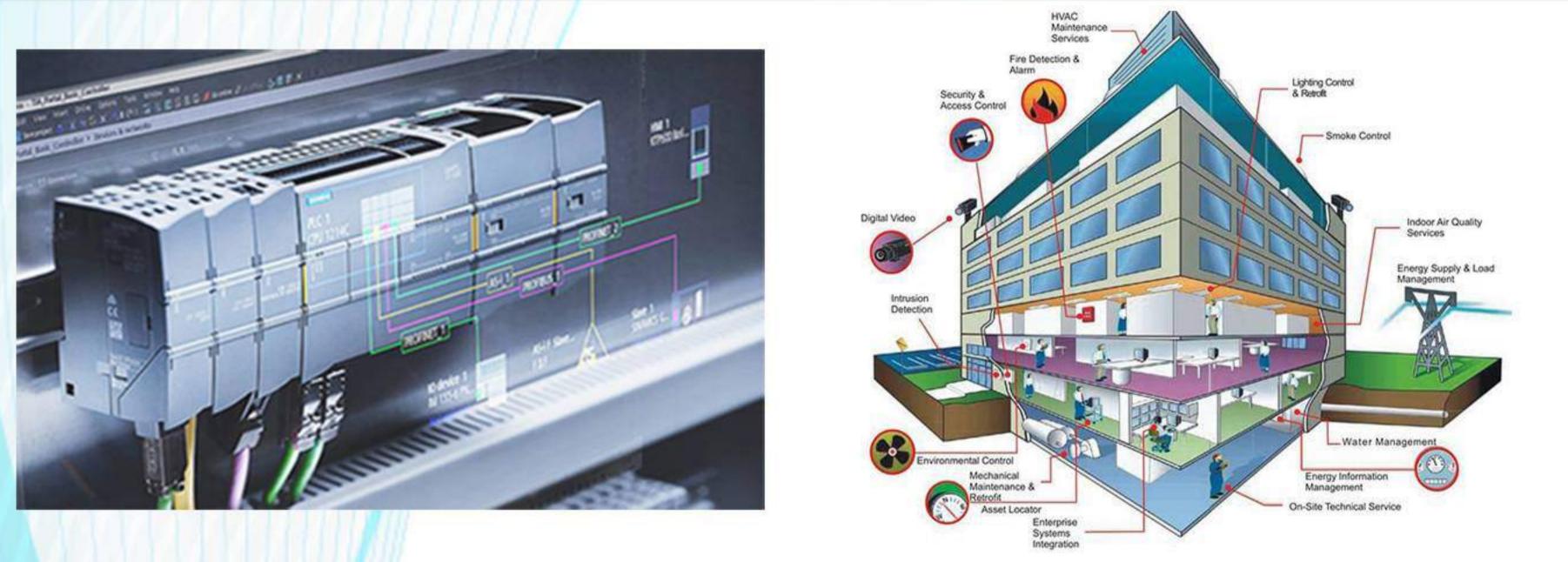
Today's buildings are installed with multiple proprietary networks for various systems the result is a complex and expensive network with management issues, SANA can help create a intelligent integrated system that provides functionality while integrating all your building systems efficiently.

Honeywell

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SANA Controls is certified Silver Partner for Honeywell Trend





PLC & SCADA system

Monitoring and control of installations is quickly and constantly evolving, whether it is process control, remote application integration or data logging, we understand very well the challenges involved and the best practices required. Our deep knowledge and exceptional service distinctly qualifies us to deliver solutions that improve operational and financial results. With top brands in industrial automation, instrumentation and communication, we guarantee your benefit of getting innovative solutions, vendor independence, proven project management, and a partner committed to delivering solutions with measurable results and clear return on investment.

Our SCADA solutions are reliable, have user friendly interfaces, and integrate historians and reports to capture application activities, we provide rugged Remote Terminal Units & Controllers for all environments, offering:

- SCADA systems
- PLC
- RTU & Data Logger IIOT Solutions



- Industrial communication solutions
- Water networks monitoring and leak detection devices Computerized Maintenance Management Systems
- Engineering Services
- Operation and Maintenance Services







IN COBIE COBIE Global Leader in Integrated Room Automation Systems

Guest Room Managment System

Savings on overhead expenses always translate into a better bottom line. Heating, cooling and lighting represent a big chunk of that overhead. INNCOM by Honeywell is the industry leader in providing cost-efficient energy management solutions for the hospitality industry; our systems can scale to any property, and are available in technologies that range from standalone to multi-building.

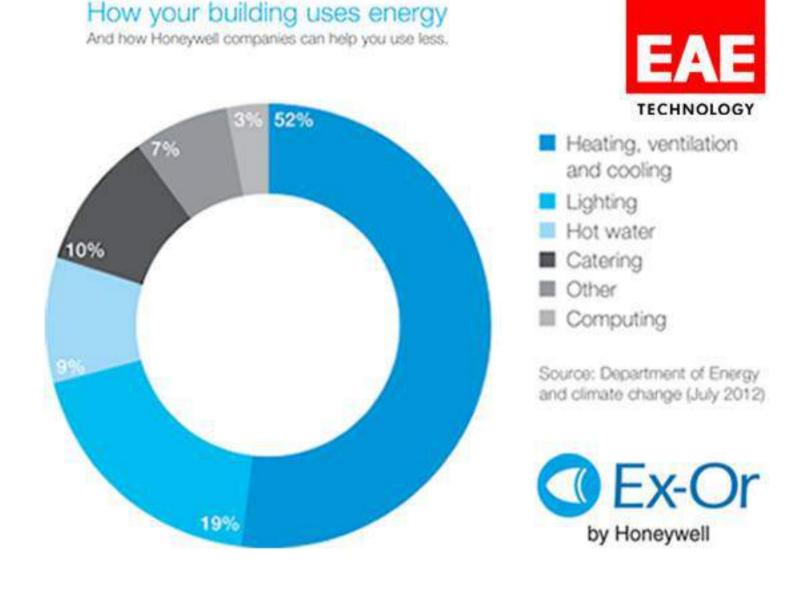
KNX Solutions, Lighting Controls & GRMS (RMS)

KNX is an open standard (see EN 50090, ISO/IEC 14543) for commercial and domestic building automation. KNX devices can manage lighting, blinds and shutters, HVAC, security systems, energy management, audio video, white goods, displays, remote control, etc. KNX evolved from three earlier standards; the European Home Systems Protocol (EHS), BatiBUS, and the European Installation Bus (EIB or Instabus). It can use twisted pair (in a tree, line or star topology), powerline, RF, or IP links . On this network, the devices form distributed applications and tight interaction is possible. This is implemented via interworking models with standardised datapoint types and objects, modelling logical device channels.



Lighting Control Systems

Lighting needs to be flexible – it needs to react to what's happening in the building. When there's no one around it might not be needed at all – and you can't always rely on people switching the lights off. With our lighting control system, you can have pre-set lighting configuration. Because it helps you be more environmentally friendly, it's easier to comply with energy legislation and building regulations such as BREEAM and LEED – and to be a green citizen. A lighting control system helps you save energy, and save money; 19% of a building's energy use is lighting – lighting controls can help you cut that by up to 70% Room sensors are a worthwhile investment they can yield a payback in less than one year.







Door Lock System Security for hotels

Kaba offers a comprehensive range of hotel locks and locking systems, including PIN and card locks with all the necessary administration software. The range also covers keyless, internet-based access management solutions for holiday homes. Kaba's hotel locking systems, which are used all over the world, are designed to increase security and convenience for guests. Numerous additional smart functions are offered as options.

Inncom GRMS Server



Quantum Locks - DormaKaba Saflok

KNX Thermostat

With its Saflok and Ilco product brands, Kaba is one of North America's leading providers. While Saflok focuses mainly on mid-range and luxury hotels, Ilco occupies a strong market position in the standard and budget hotel sector.





Fire Alarm Systems

Your fire alarm and detection control panel is the "brain" of your firefighting system. It will alert you as soon as a situation arises so that you can act quickly and prevent a major catastrophe. The panel's main function is to take input from fire and life system devices located throughout your property and raise the alarm whenever there is danger occurs. Maximum protection and effectiveness come from choosing the right fire alarm system and installing it in the most suitable location for your property.

Fire alarm and gas detection systems must be simple, reliable, and smart. Flexible solutions allow you to have the fire protection you want at a comfortable cost. Whether you wish to protect a commercial or a residential building, our control panel solutions can be tailored to suit even the largest and most complex requirements.

Very Early Warning Aspirating Smoke Detection

Xtralis is a global leader and pioneer in life safety. We invented VESDA very early warning aspirating smoke detection (ASD), the world's leading ASD brand. Customers worldwide rely on VESDA when business continuity is imperative, environments are challenging, and time is required to ensure safe and orderly evacuation. VESDA ASD systems also cpmtains GAS Detection, & OSID Beam Detectors.

VESDA aspirating smoke detection solutions with continuous air sampling provide the earliest possible warning of an impending fire hazard. VESDA aspirating smoke detectors buy the critical time needed to investigate an alarm and initiate an appropriate response to prevent injury, property damage or business disruption.



ESSER

by Honeywell

GENT

inder

UPS Devices & Solutions

In today's 24x7 world business processes and company productivity are increasingly based on the reliable availability of power. That's why it's critical to protect your systems, data and operations.

An Uninterruptible power Supply (UPS) is one of the most cost-effective ways to provide clean high quality power without any break in supply, regardless of what the mains power supply is doing, safeguarding sensitive electronic equipment and key business areas against potentially devestating power problems.

SANA has the knowledge and ability to understand your needs to provide you with the right clean power solution.

Cabling & Installation Works

The cable infrastructure in your office or building is a critical component of your entire network. Proper planning, design, installation and maintenance of this infrastructure can have a positive impact on your company's day-to-day operations and can contribute to its success. Whether your building is new location or want to upgrade your existing infrastructure. SANA is the only provider you need for your cabling projects As a full-service provider, our start-to-finish approach includes Consultation, Survey, Design, Engineering, Materials Supply, Installation, Termination, Testing, Commissioning and Maintenance.

Energy Savings Solutions & Solar (EV) Charging Stations

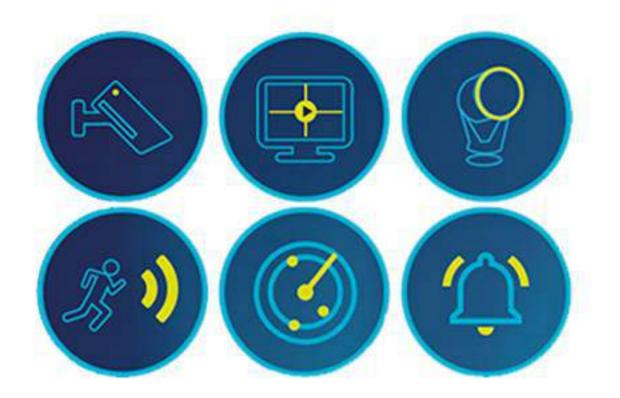
Green buildings bring together a vast array of practices, techniques and skills to reduce and ultimately eliminate the impacts of buildings on the environment and human health. Using sunlight through passive solar, active solar, and photovoltaic emphasizes taking advantage of the renewable resources. SANA is working on fundamental principles and methods for Energy Efficiency, Materials Efficiency, Indoor Environmental Quality Enhancement, Operations and Maintenance Optimization. The essence of green building is an optimization of one or more of these principles. Also, with the proper synergistic design individual green building technologies may work together to produce a greater cumulative effect.



CCTV & SECURITY INTEGRATION

INTERNET VIEWING ANYWHERE ANYTIME

We are experienced in providing CCTV security services to most market sectors and in particular town centers, government buildings and leisure complex sites. We offer a wide range of surveillance CCTV security systems that are designed to suit almost any application requiring a view of a given location. from single camera to multilevel surveillance and remote management.



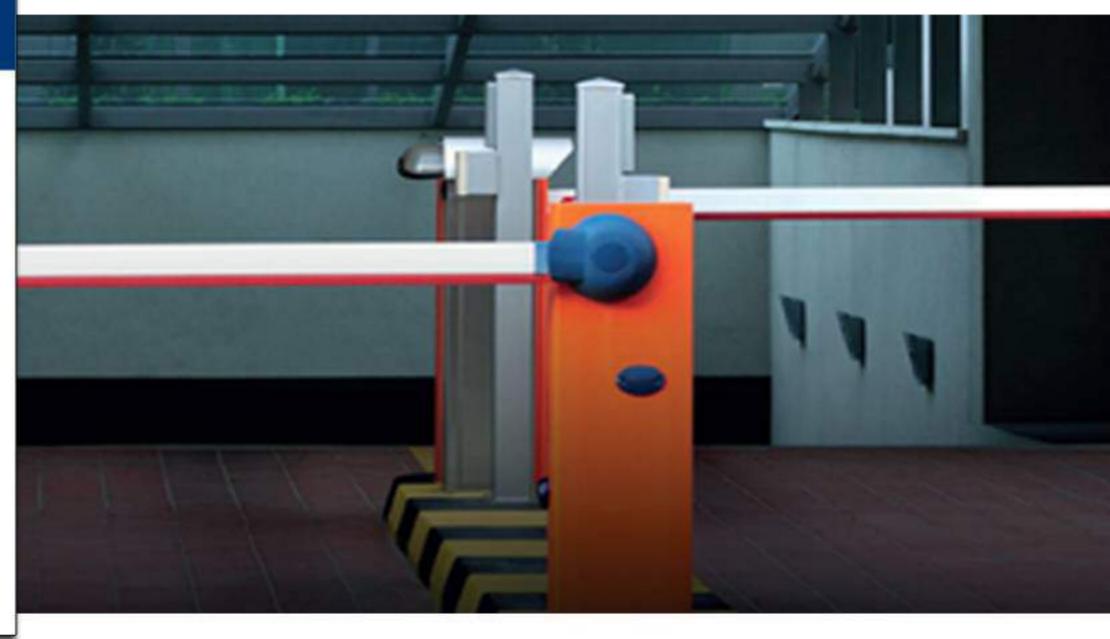


Security systems is the most widely used solution across corporates to restrict unauthorized access for outsiders. However, despite having installed high end access control systems, it is often encountered that there is a security breach. Therefore, an integrated security system is required. For example, there are instances where in an authorized person punches for access, and an unauthorized person walks alongside him to enter the premises without proving his identity In yet another scenario, people often forget to shut the doors after them, leaving the entire building vulnerable to outsiders. In absence of a system to provide visual evidence, it is impossible to identify the culprit even after

the breach. This integration at ensures foolproof security

Physical Security & Parking Management

Apart from an ideal solution for controlling vehicle transit, Gate Barriers also play defining role in marking your territory and its clear boundary. Also can be integrated with the ID card reader long range or ISO standard as per client require- ment. SANA has a wide range of products in the entry control system category. Depending on the needs and the ascension of degree of passage required, SANA provides flap barriers; swing gates for building access control and gate barriers for parking access control.



Home Automation

Security & Home Automation products keep you safe, manage energy consumption, and provide entertainment. Solutions for your home or business are available for every income level and lifestyle. Simply choose the automation, energy management, and convenience features you desire. Home automation systems may be installed in new or existing structures and controlled via your smartphone or tablet. Our automation and control solutions for buildings and homes let people control entire environments with the push of a button, integratingn systems such as A/V, lighting, shading, IT, security, BMS, and HVAC to provide greater comfort, convenience, and security. All of our products are designed and built to work together as a complete system, enabling you to monitor, manage, and control everything from one platform.





Variable Frequency Drive (VFD)

Variable frequency drives (VFD) are becoming more common place and more widely used in applications. They are capable of varying the output speed of a motor without the need for mechanical pulleys, thus reducing the number of mechanical components and overall maintenance. But the biggest advantage that a VFD has is the ability to save the user money through its inherit nature to save energy by consuming only the power that's needed. A variable speed drive can reduce energy consumption by as much as 60%. This is because the variable speed drive reduces the amount of energy drawn by the motor. Even a small reduction in speed can give significant savings. For instance, a centrifugal pump or fan running at 80% speed consumes only half of the energy compared to one running at full speed.



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Valves, Actuators & Field Devices

Distributing wide range of field devices, All Sensors, Valves, Valves Actuators, Dampers Actuators, Fire Dampers, Flow Meters, BTU, Air Quality Sensors, Chilled Water sensors, Thermostats and all BMS field devices.



Motor Control Centers (MCC)

PHŒNIX CONTACT

Schneider GElectric

LS

At SANA, we recognize the importance of performance, reliability and service ability when installing systems.

SANA has partnered with renowned companies to offer a wide range of motor control center and Variable Frequency Drives that clients can choose for their specific project requirements.

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DATACENTERS CASE STUDY

FOR BMS & Integration

NEW ERA INFRA DATA CENTERS



Sector: Telecommunications – Data Centers

- Uptime institute Certified Tier 3 Facility Design and Construction
- DC Location 1: Jeddah, KSA
- DC Location 2: Al-Madinah Al-Munawarah, KSA.
- DC Location 3: Riyadh, KSA.
- End User: Saudi Telecom Company STC
- Protocols Used: BACnet IP, BACnet MS/TP, MODBUS IP, MODBUS RTU & SNMP

PROJECT HEADLINES:

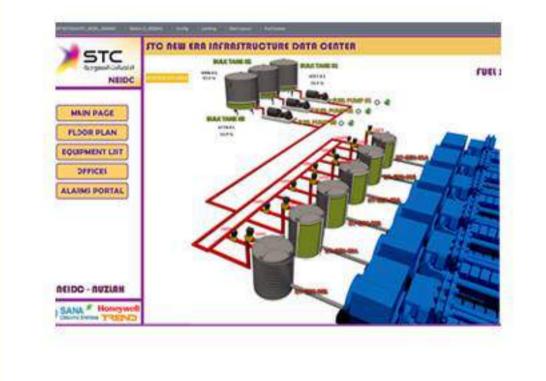
DAY 01:

For Each site of the 3 site the project consist of the following:





Total of 31 DDC Panels (Direct Digital Controllers in each site) Total of 12 Critical Dual Power Sources MCC for Critical Equipments 6 Vertiv Chillers (Primary - Secondary Variable) Connected Through BACnet MS/TP 6 SDMO Generators Connected Through MODBUS 50 Schneider Power Meters Connected Through MODBUS RTU 30 Computer Room Air Handling (CRAHs) Through BACnet. 1800 Monitoring Points for the TAP-OFF Breakers inside the Data Hall



Integration with Vertiv DCIM and Low Current Systems Other Integration Points: 5,000 Points Site Physical points total of: 3,000 Points

DAY 02:

Addtional PoD to be utilized and installed, expanding the Project to be Total 42 DDCs with 18 MCCs, Total 2400 Tap-Off Monitoring Points and 4,000 Total Physical Points.

Phase 02 - Qassim & Dammam Site in Progress (December 2020)





NATIONAL COMMERCIAL BANK DATACENTER TIER4 KING ABDULLAH ECONOMIC CITY - KAEC





Sector: Banks– Data Centers

- LOCATION: KAEC Jeddah, K.S.A.
- Uptime institute Certified Tier 4 Facility Design and Construction
- End User: National Commercial Bank
- Protocols Used: BACnet IP, BACnet MS/TP, MODBUS IP, MODBUS RTU & SNMP.

PROJECT HEADLINES:

Total of 12 DDC Panels (Direct Digital Controllers) compartments A & B Total of 07 Critical MCCs for Critical Data Center Equipment 2 Vertiv Chillers (Primary - Secondary Variable) Connected Through BACnet MS/TP 2 SDMO Generators Connected Through MODBUS 20+ Power Meters Connected Through MODBUS RTU



37 Computer Room Air Handling (CRAHs) Through BACnet. Integration with UPSs, PDUs, Leak Deetection System, Generators and Fuel Systems.

FAHUs, FCUs, Fans, MVDs and other Mechanical equipment.

Other Integration Points: 2,500 Points Site Physical points total of: 1,000 Points



BRT BUS STATIONS - PH 01, 02 + 03



الهيئة الملكية لمدينة الرباض POYAL COMMISSION FOR PEYADE CTT

TRANSPORTATION CASE STUDY

FOR BMS/SCADA & Integration





Sector: Transportation – Communications - Central Command Center

- LOCATION: Riyadh, K.S.A.
- Dar Al Handasah & Perkins + Will.
- Saudi Constructioneers Co. & Yüksel İnşaat Co.

PROJECT HEADLINES:

Automation, Control, Monitoring and Integration with all station equipment such as:

- AC indoor and Outdoor Units through BACnet/IP software integration
- Power Meter for the Station through MODBUS RTU software integration - Air Quality of the station through CO sensors and Tempreture sensors
- Smoke and fire Detection inside the station directly integrated to BMS DDC Panel
- Control and Monitor Station devices such as sliding door, Lighting Contactors & Electrical Panel
- Communication Through 4G routers & Centeral Redundant Firewalls & Hot **Redundant Servers with disaster recovery.**
- * 686 Community Bus Stations (CBS) Communicated over 4G routers * 120 Bus Rapid Station (BRT Station) in all over Riyadh

- * 3 Terminal Stations
- * 19 Bridges servicing the BRT stations
- * 2 Park and Ride Areas

* 2 Central Commands [TCC in PNU & DRC] for all Project with Firewalls & Servers

last updated in Oct/2020 project in progress

💻 شركة المواصلات العامة Public Transportation Co

TRANSPORTATION CASE STUDY

SAPTCO BUS STATIONS - WEST & EAST





Sector: Transportation – Communications - Central Command Center

- LOCATION: Riyadh, K.S.A.
- SAUDCONSULT Saudi Consulting Co.
- MOBCO Construction Company



PROJECT HEADLINES:

Automation, Control, Monitoring and Integration with all buildings equipment such as:

- AC Units through BACnet/IP software integration
- Power Meters Integration through MODBUS RTU software integration
- Tempreture sensors, water flow meters in all Buildings Area
- Smoke and fire Detection inside directly integrated to BMS DDC Panel
- Package units and Ehaust Fans with other Mechanical Equipment
- Integration with KNX lighting Control and Fire Alarm Main Panel
- ANPR Commissioning and programming with BMS

* 26 Buildings in Each Depots

* Total 52 Buildings in West and East Depots

* 31 DDC panel in Each Depots

* Total 62 DDCs in Both West & East Depots

* 2 Control Rooms (Main BMS Central Command Center)

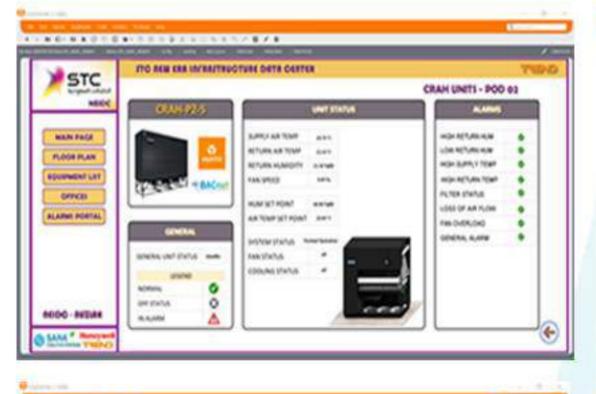


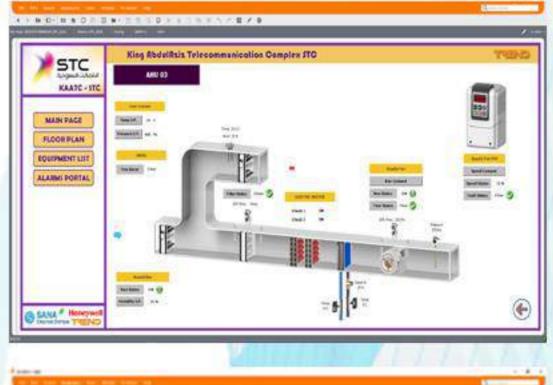
Projects & Refferences

Project	End User / Contractor	Location
SEC Head Quarter / GB	Saudi Electric Co.	Khobar
Conference Center	Nesma Co.	Riyadh
Water Treatments Plants - Delem	MEWA - GETCO	Delem
Water Treatments Plants - Aflaj	MEWA - GETCO	Aflaj
Water Treatments Plants - Shaqra	MEWA - GETCO	Shaqra
Water Treatments Plants - Dawadmi	MEWA - GETCO	Dawadmi
SIMAH Saudi Credit Bureau Head Quarter	SIMAH	Riyadh
Al-Fanar Compound - Kharj High way	Al-Fanar	Riyadh
lazan Regional Municipality - HQ	Hasan Hadi Contracting	Jazan
EXP MADINAH EAST MDE 380/110KV	Saudi Electric Co.	Al-Madina
ALKHALIDYA TUNNEL 380/110/13.8KV	Saudi Electric Co.	Jeddah
Al-Bilad Bank HQ - KFR	MOBCO	Riyadh
Riyadh Pharma Medical Factory	Riyadh Pharma	Riyadh
Long Term Care Hospital - HOSNA Care BMS	King Saud University	Riyadh
ong Term Care Hospital HOSNA Care Lighting Control	King Saud University	Riyadh
Almana'a Hospital Lighting Controls	Almana'a Hospitals	Dammam
Etihad Etisalat Mobily TB Datacenters (Maintenance)	Mobily	All Kingdom
Nour Net Data Center (Maintenance & Operation)	Nour Communication	Riyadh
Riyadh Bank Data center (Maintenance & Operation)	Riyadh Bank	Riyadh
National Commercial Bank NCB Data Center - TIER4	National Commercial Bank	Jeddah
STC NEIDC Riyadh Phase 01 - TIER3	STC - MMR	Riyadh
STC NEIDC Jeddah Phase 01 - TIER3	STC - MMR	Jeddah
STC NEIDC Madinah Phase 01 - TIER3	STC - MMR	Madinah
SAPTCO West Bus Station Depot	ADA - MOBCO	Riyadh
SAPTCO East Bus Station Depot	ADA - MOBCO	Riyadh
KAATC STC Complex - Automation Project B41	STC - STCS	Riyadh
KAATC STC Complex - Automation Project B45	STC - STCS	Riyadh
KAATC STC Complex - Automation Project BC 13	STC - STCS	Riyadh
Dammam STC Complex - Automation Project B11	STC - STCS	Dammam
Bus Rapid Transit (BRT) Project - 800 stations	RCRC - RDA	Riyadh
Al-Khozama Private Villa	Private	Riyadh
Saudi House warehouse in Sulay	Saudi House	Riyadh
German Embassy Riyadh	German Embassy	Riyadh
ARASCO Factory	Private	Riyadh
Zod backary Factory	Othaim Group	Riyadh
Hail Factory for chimicals	Private	Hail

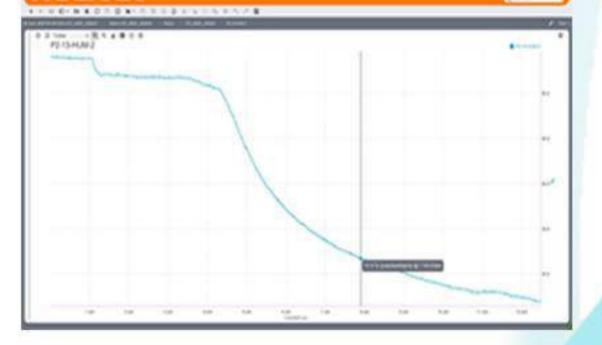
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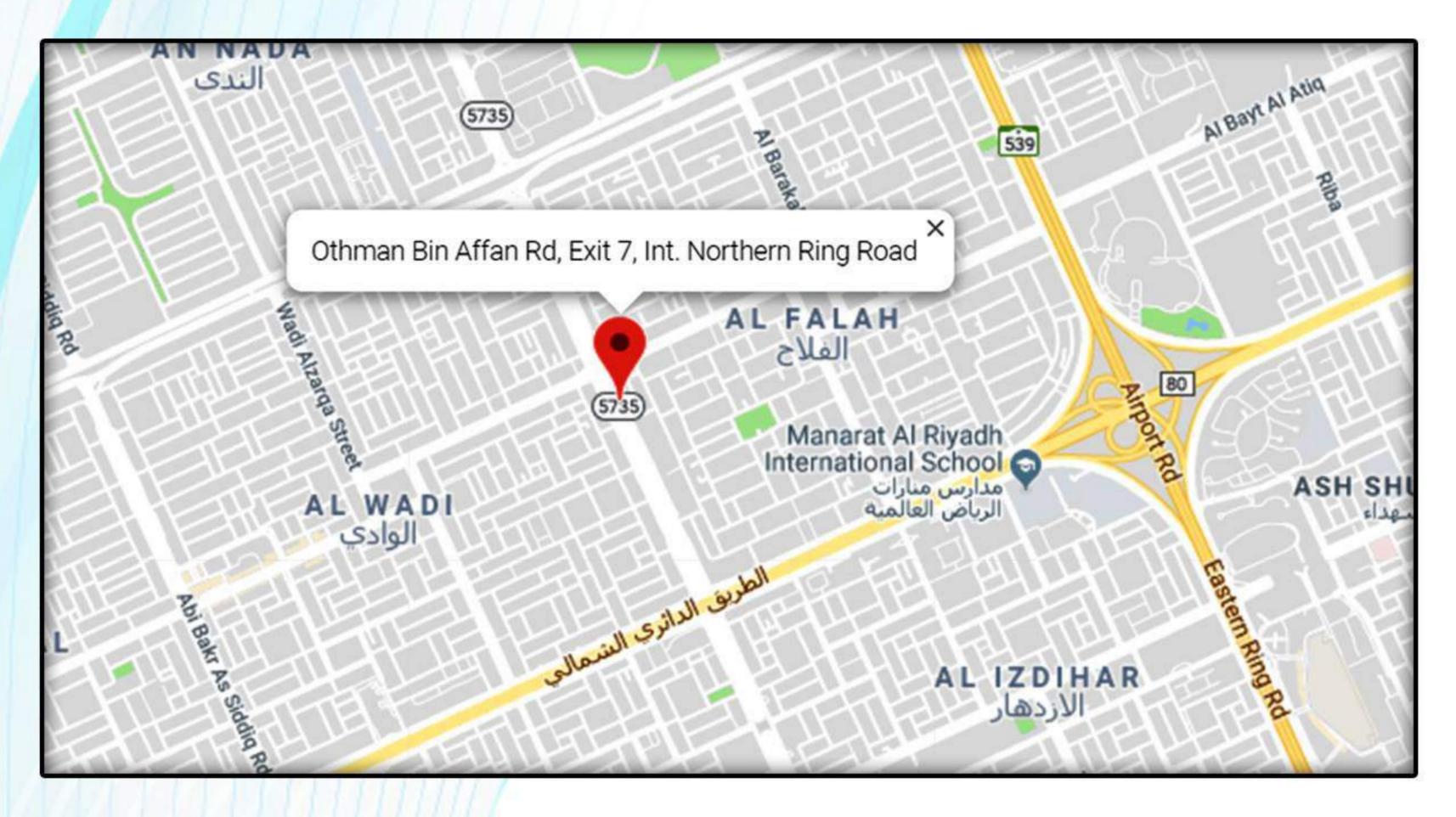






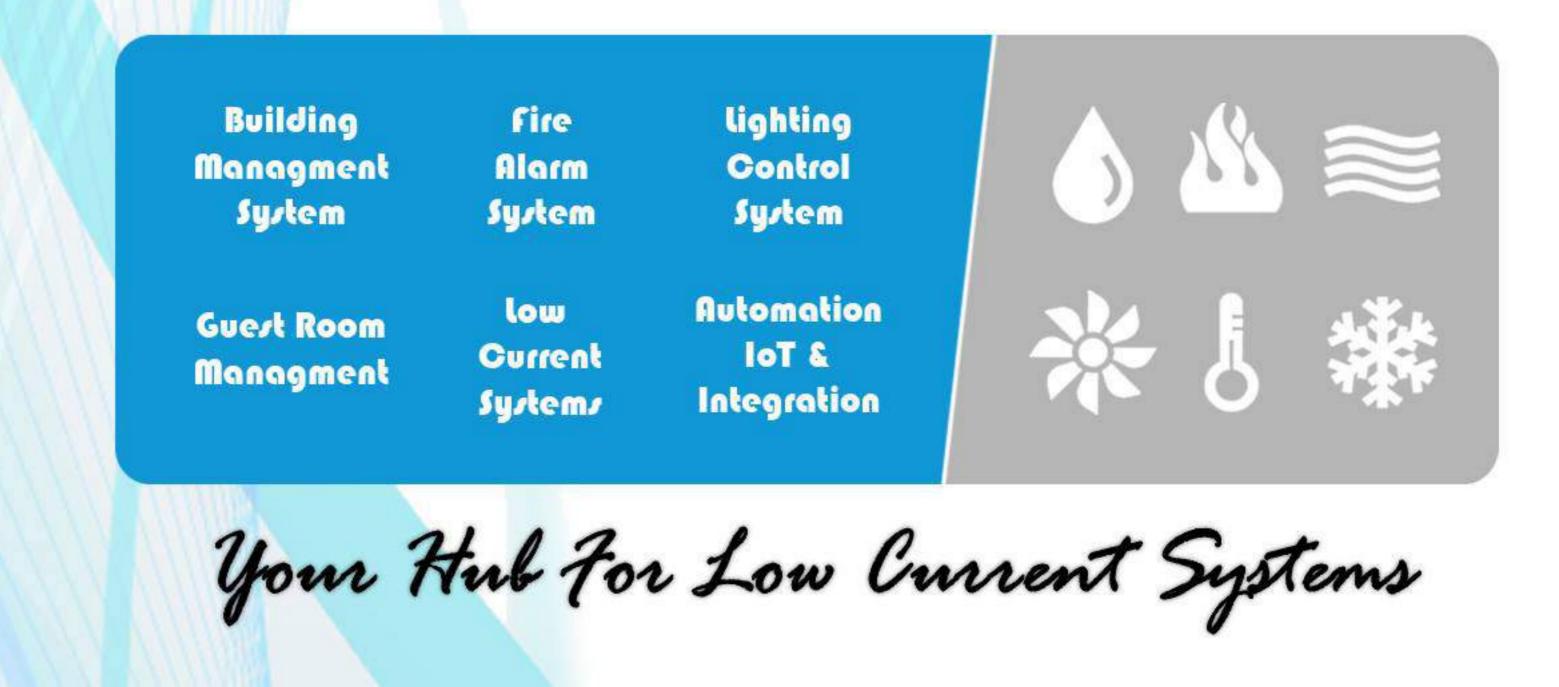


Location & Contacts



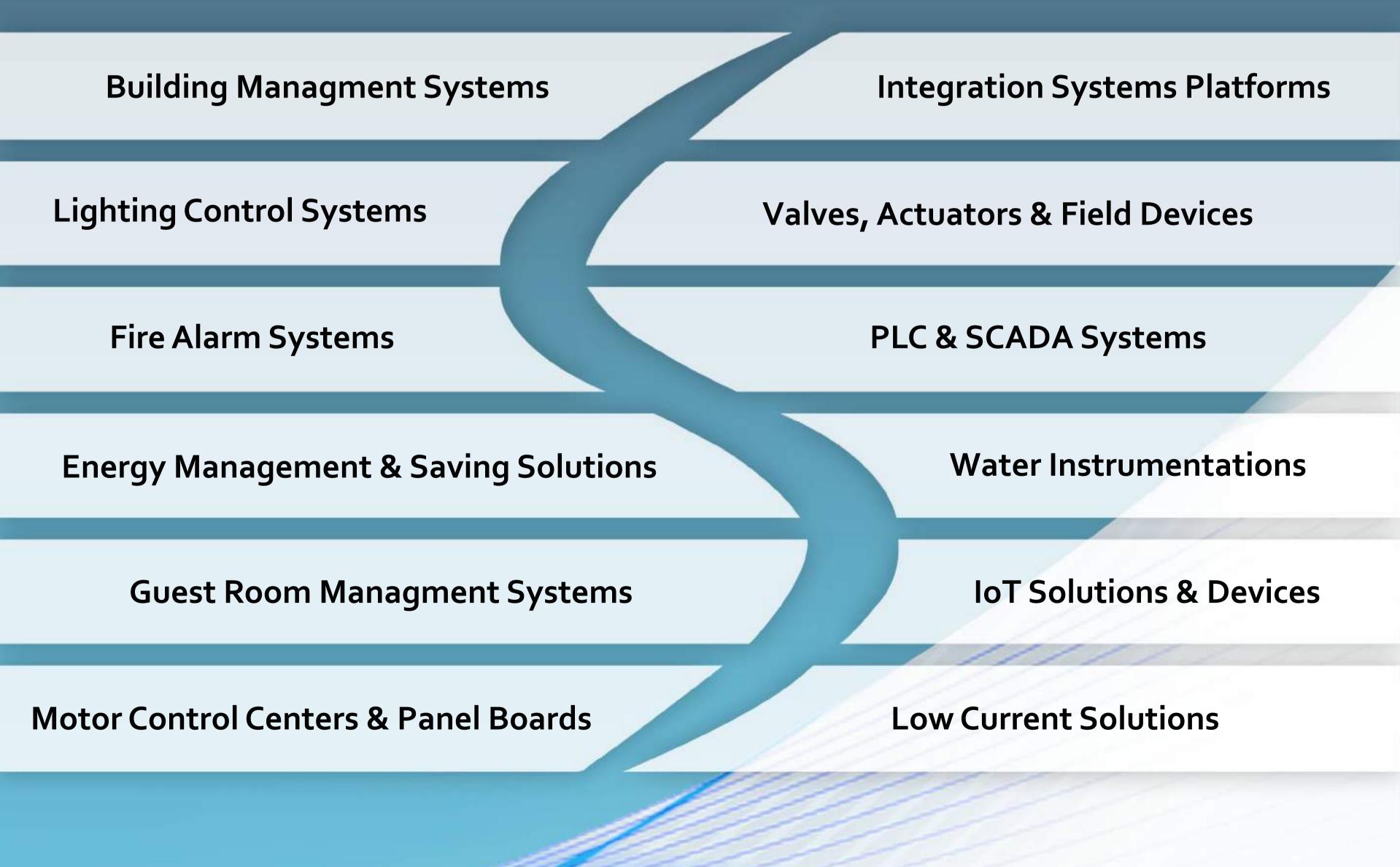
www.sanacontrols.com Automation, Controls & Low Current enquiries: sales@sanacontrols.com

Tel: +966-11-2785681 Mob: +966-58-0933307 Mob: +966-59-8921411 Fax: +966-11-2785681 12474, 8595 Riyadh SANA Creative Systems info@sanacontrols.com Bank Details: NCB, National Commercial Bank Account: 189-00000-33001 IBAN: SA-47-1000-001890000033001 SANA Creative Systems Est.





COMPANY INTRODUCTION V5-2020



SANA CONTROL SYSTEMS