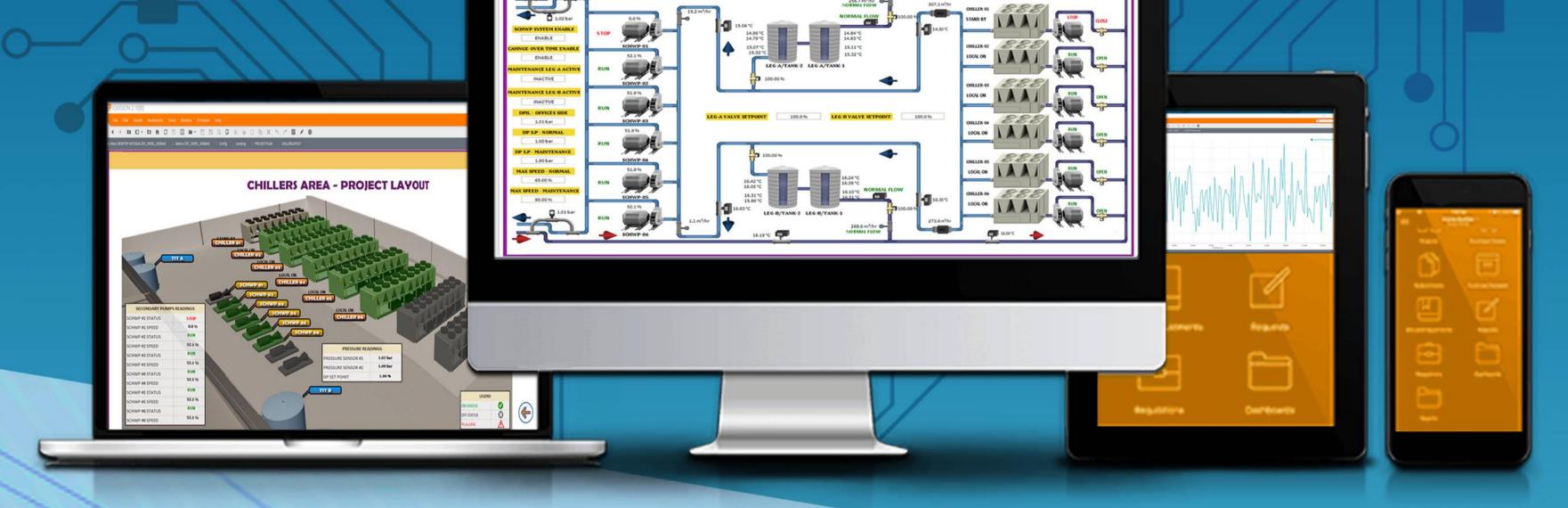


# **SMART BUILDINGS SOLUTIONS** & INDUSTRIAL AUTOMATION

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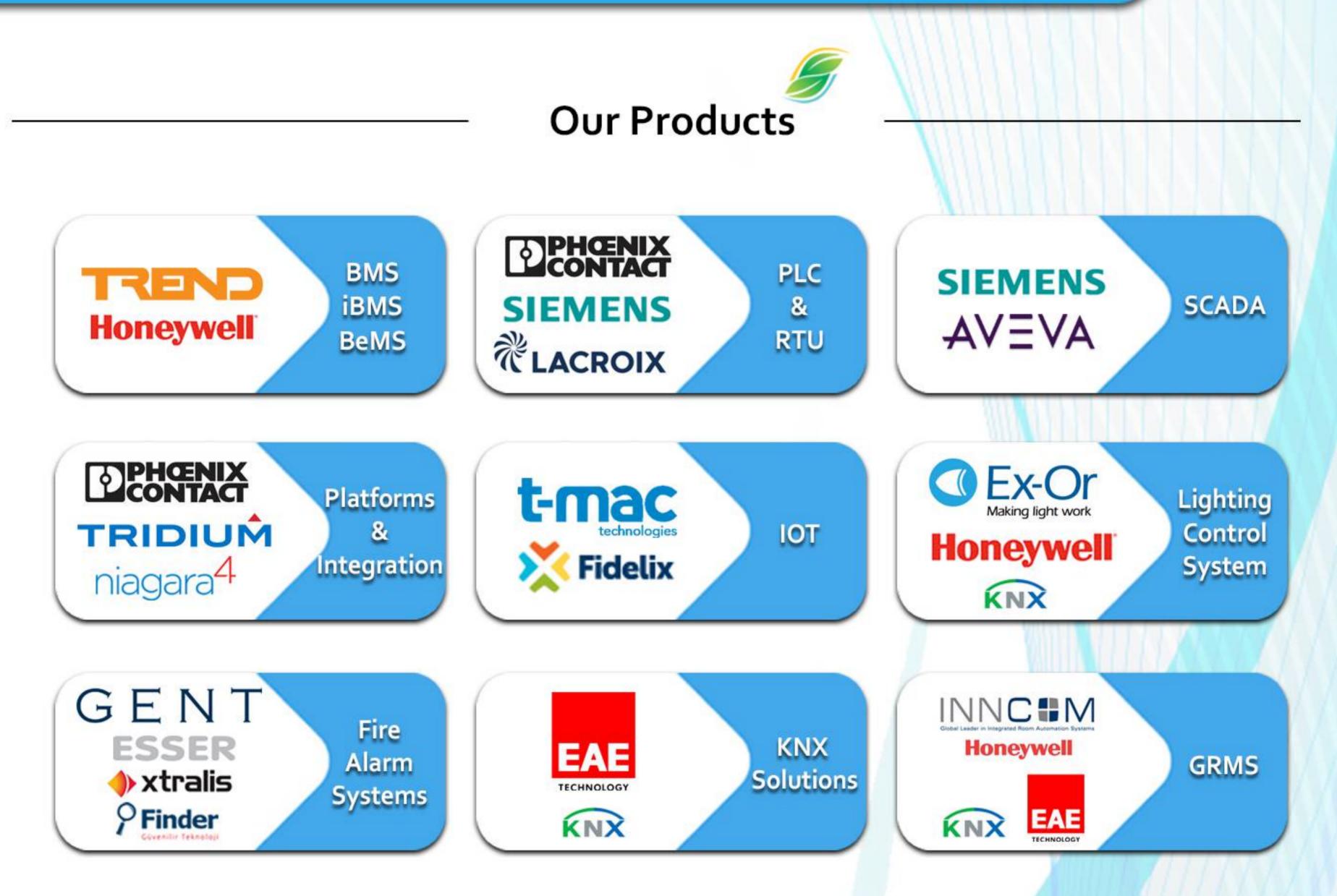
# EnergySecurityFire AlarmMotor ControlManagmentSystemsSystemsCenter



### 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.





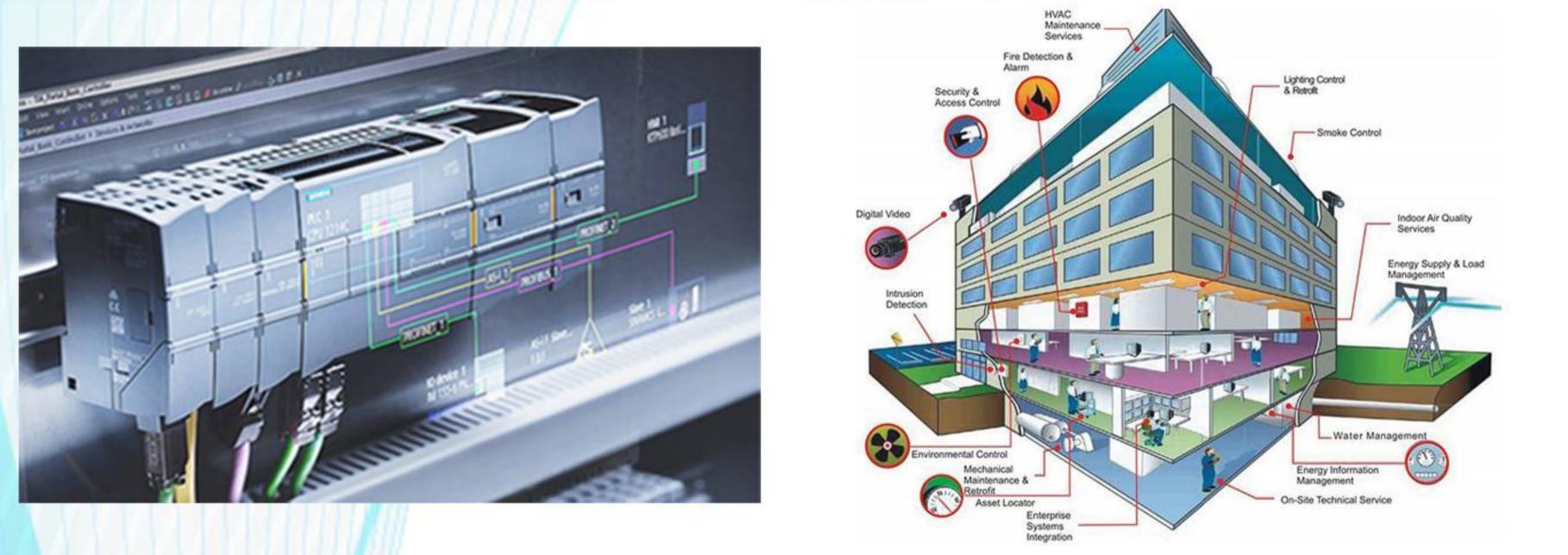


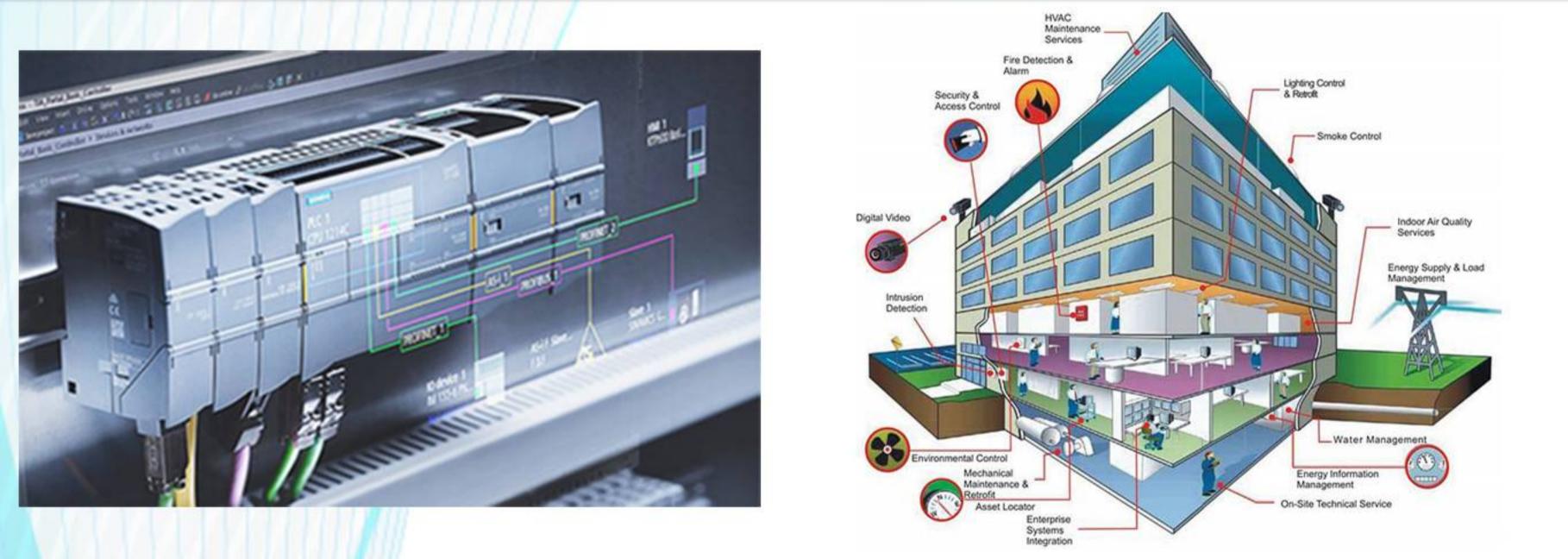
### **BMS & Integration (BUILDING MANAGEMENT SYSTEM)**

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 niag and integrates them into an enhanced IT infrastructure. Honeyw

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.

**SANA Controls** is certified Golden 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



#### IIOT Solutions

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





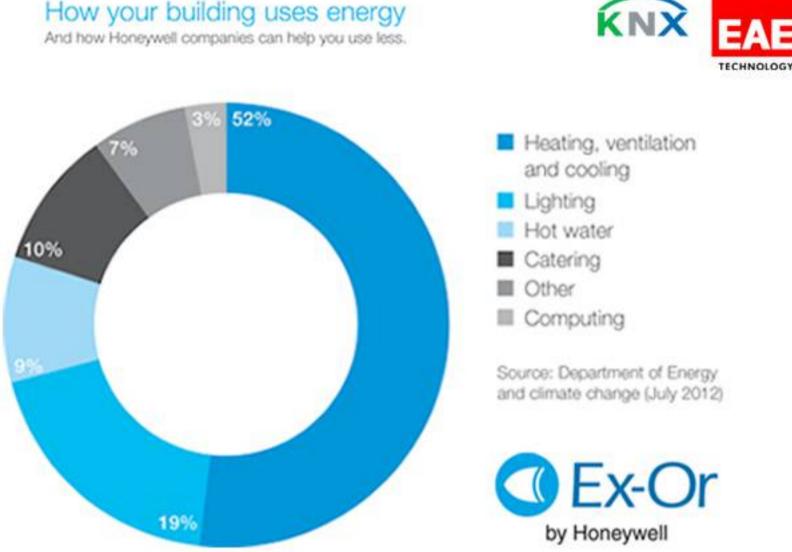


### **Guest Room Managment System**

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.

### 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.



### **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.





### **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.

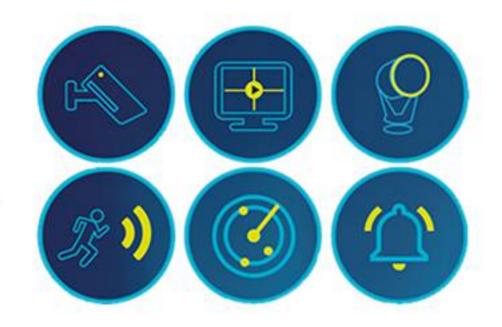
SANA is working on fundamental principles and methods for Energy Efficiency, Materials Efficiency, Indoor Environmental Quality Enhancement, Operations and Maintenance Optimization. The essence of green building is an optimization of one or more of these principles. Also, with the proper synergistic 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.



### IOT Metering, Monitoring & Control Systems



Metering is an essential tool when building an effective energy management strategy for your business. From identifying potential inefficiencies, to increasing the chances of environmental and financial benefits, consistent metering can offer many advantages.

Accurate and timely monitoring of your business sites is fast-becoming an essential part of any energy management strategy. More and more businesses are seeking out energy efficiency solutions, in an increasingly eco-conscious and competitive market. An awareness of inefficiencies, and your environmental impact, can help stack the odds in your favour.

Taking control of appliances across multiple sites can seriously improve your chances of becoming more energy efficient. This in turn opens your business up to new sustainable opportunities. Clients are also becoming increasingly eco-conscious, and attaining energy efficiency will be crucial if you wish to stay ahead of competitors.





### **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 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**

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.

### **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.

### Cabling & Installation Works

ESSER

by Honeywell

VESDA

xtralis

GENT

Finder

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.

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

## **Operation & Maintenance Services**

The building management and low current systems industry plays a crucial role in the operation and maintenance of datacentres, commercial buildings, offices, residential complexes, governmental facilities, educational institutions, hotels and healthcare facilities, offering centralized control and monitoring of various systems such as HVAC (Heating, Ventilation, and Air Conditioning), lighting, security, and energy management. With the increasing emphasis on energy efficiency, sustainability, and smart building technologies, the demand for BMS solutions and maintenance services is experiencing significant growth.

The Operations and Maintenance department offers a comprehensive range of services for Building Management Systems (BMS) and other Low Current (LC) systems, including Fire Alarm Systems (FAS), Closed-Circuit Television (CCTV), Public Address and Voice Alarm (PAVA), and more



#### **O&M PROJECTS**

- 1. STC Datacentres
- 2. Mobily Datacentres
- 3. Al-Bilad Bank Headquarter
- 4. STC Headquarter Morsalat
- 5. Riyadh Pharma
- 6. Salehiya RDC Warehouse



Preventive Maintenance

**OPERATION &** 

Regular inspections and preventive maintenance to identify and address potential issues before they escalate Pre-agreed timely response for troubleshooting and repairs to minimize downtime.

**Emergency** 

Maintenance

Corrective Maintenance

Addressing and rectifying issues that arise unexpectedly aiming to restore the systems to their normal operational state. On-Call & Remote Support

Respond to technical inquiry or remote support requested by our valued customers.

#### Operation Services

Encompassing a wide range of locally on-site or remotely activities aiming at ensuring the efficient and effective functioning of these systems. Calibration Services

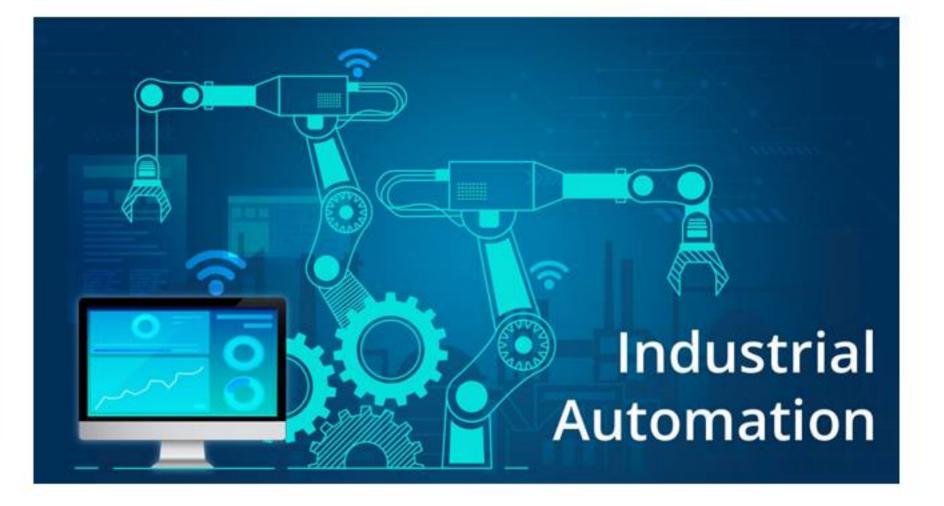
a series of precise adjustments and checks to ensure that devices within the systems are accurately measuring and reporting data.



### Industrial Instrumentation

Siemens Process Instrumentation offers you innovative, single-source measurement solutions to increase plant efficiency and enhance product quality. Our intelligent instruments are also designed for seamless interplay with the larger world of industrial automation & control systems – enabling greater process transparency and smarter decisions for your business.

### SIEMENS





### **MCCs & Variable Frequency Drive (VFD)**

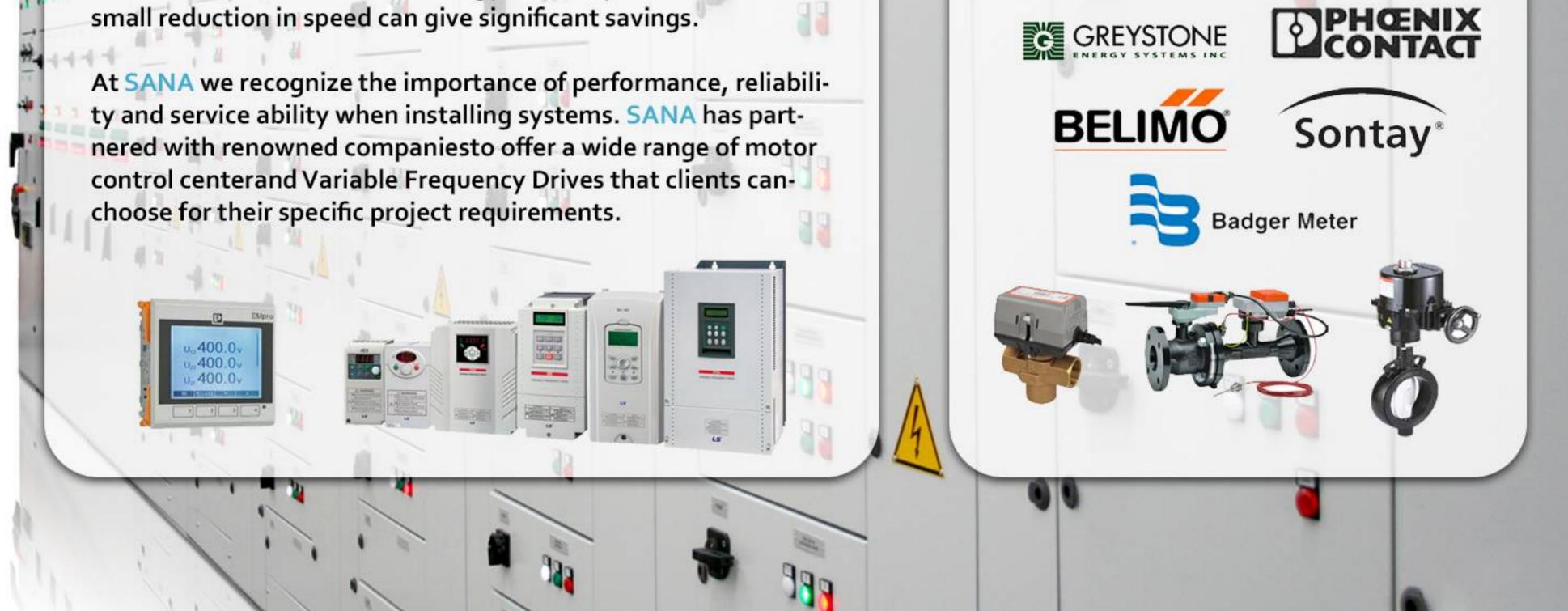
Variable frequency drives (VFD) are becoming more common place and more widely used in applications. They are capable of varying the output speed of a motor without the need for mechanical pulleys, thus reducing the number of mechanical components and overall maintenance. But the biggest advantage that 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

At SANA we recognize the importance of performance, reliability and service ability when installing systems. SANA has partnered with renowned companiesto offer a wide range of motor control centerand Variable Frequency Drives that clients canchoose for their specific project requirements.

#### Valves, Actuators & Field Devices

Distributing wide range of equipment & field devices, All Sensors, Valves, Valves Actuators, Dampers Actuators, Fire Dampers, Flow Meters, BTU meters, Air Quality Sensors, Chilled Water sensors, Thermostats, IP Switches & Routers and all related BMS field devices.

### Honeywell





#### 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:**

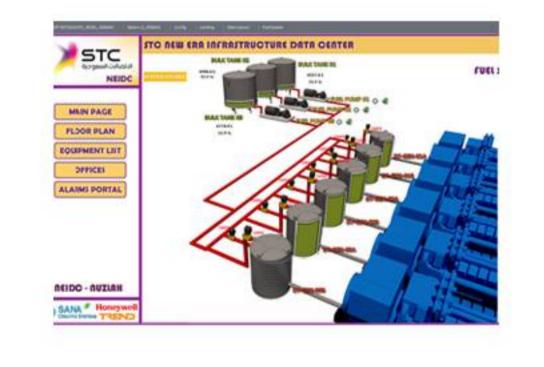
**DAY 01:** 

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





الهبئة الملكية لمدينة الرباض ROYAL COMMISSION FOR RIYADH CITY

#### **TRANSPORTATION CASE STUDY**

FOR BMS/SCADA & Integration

#### BRT BUS STATIONS - PH 01, 02 + 03







- 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)

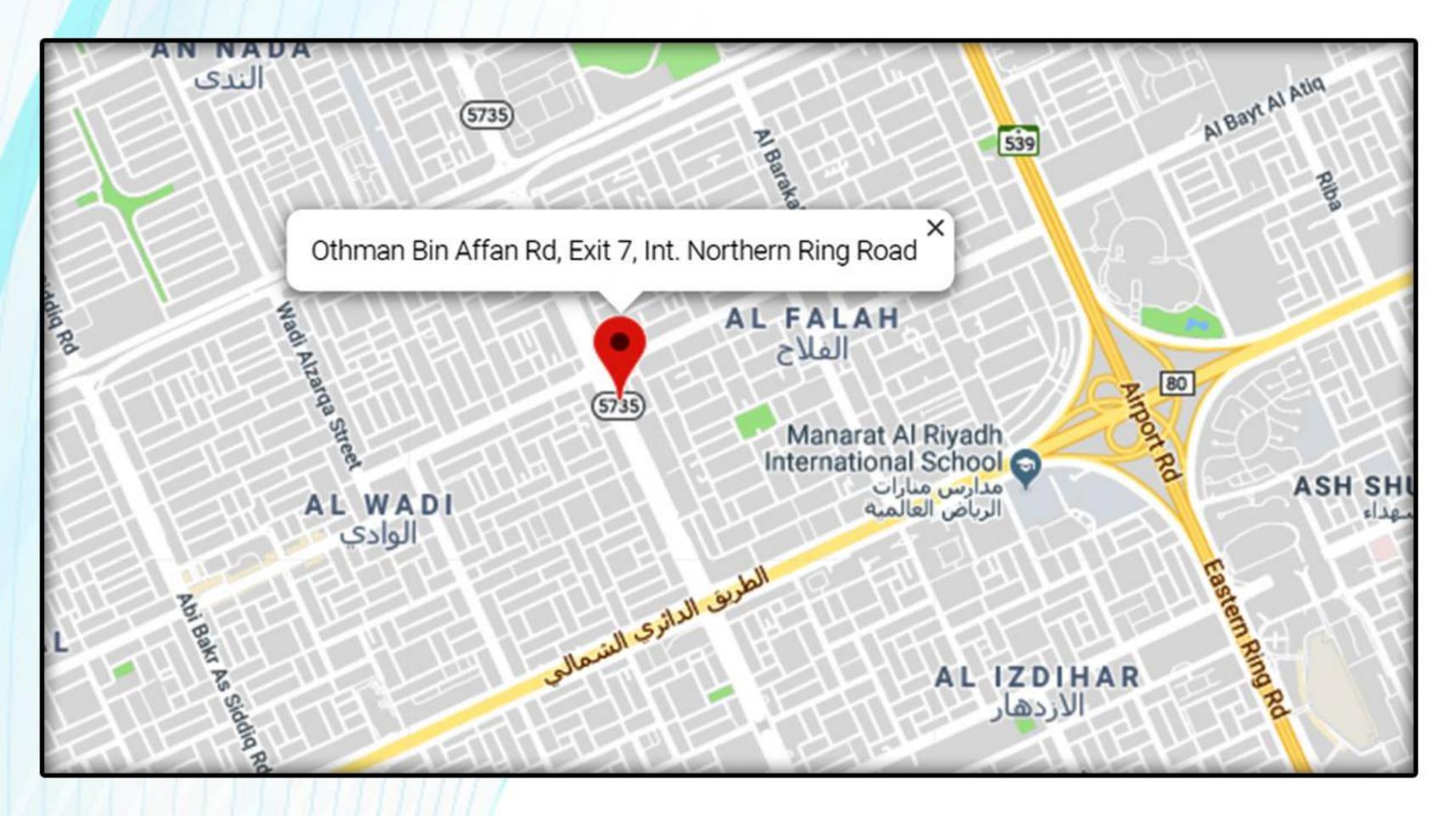


### **Projects & Refferences**

Project	System	End User / Contractor	Location
Bus Rapid Transit Project Stations	BMS & iBMS	Arrivadh Development	Riyadh
689 CBS – 128 BRTs – 3 Terminals – P&R		Authority ADA/RDA RCRC	
STC NEIDC Riyadh Data Center - TIER3	BMS & iBMS	STC - MMR	Riyadh
STC NEIDC Jeddah Data Center - TIER3	BMS & iBMS	STC - MMR	Jeddah
STC NEIDC Madinah Data Center - TIER3	BMS & iBMS	STC - MMR	Madinah
STC NEIDC Qassim Data Center - TIER3	BMS & iBMS	STC - MMR	Qassim
Mobily Melga-2 Data Center – BMS Upgrade	iBMS	Mobily	Riyadh
Mobily Fayha Data Center – BMS Upgrade	iBMS	Mobily	Jeddah
Mobily Adama Data Center – BMS Upgrade	iBMS	Mobily	Dammam
National Commercial Bank Data Center T4	BMS & iBMS	NCB	JEDDAH
Al-Bilad Bank HQ – KFR	BMS & iBMS	BAB - MOBCO	Riyadh
Jazan Regional Municipality – Amana HQ	BMS	Hasan Hadi Cont.	Jazan
EXP MADINAH EAST MDE 380/110KV	BMS	Saudi Electric Co.	Al-Madina
ALKHALIDYA TUNNEL 380/110/13.8KV	BMS	Saudi Electric Co.	Jeddah
Riyadh Pharma Factory	BMS	Riyadh Pharma	Riyadh
Royal Saudi Air Force – AEC	BMS & iBMS	RSAF	Riyadh
RSL KACST - City of Science & Technology	BMS & iBMS	KACST - Kinectics	Riyadh
K AbdulAziz Telecom Complex STC B13	BMS & iBMS	STC - STCS	Riyadh
K AbdulAziz Telecom Complex STC B41	BMS & iBMS	STC - STCS	Riyadh
K AbdulAziz Telecom Complex STC B45	BMS & iBMS	STC - STCS	Riyadh
STC Compound Project Dammam	BMS & iBMS	STC - STCS	Dammam
KSU – HOSNA Care Long Term Hospital	BMS	Accalis - KSU	Riyadh
KSU – HOSNA Care Long Term Hospital	Lighting Control	Accalis - KSU	Riyadh
SAPTCO West Bus Station Depot - PTC	BMS & iBMS	ADA - PTC	Riyadh
SAPTCO East Bus Station Depot - PTC	BMS & iBMS	ADA - PTC	Riyadh
Royal Protocol Head Quarters	BMS & iBMS	ENOVA - Tarsheed	Riyadh
Ministry of Municipal and Rural Affairs	BMS & iBMS	ENOVA - Tarsheed	Riyadh
SEC Head Quarter / GB	BMS / PS	Saudi Electric Co.	Khobar
Conference Center	BMS / PS	Nesma Co.	Riyadh
Al-Dana Mall – Western Province	BMS	Al-Dana Mall	Yanbu
SIMAH Saudi Credit Bureau Head Quarter	BMS / PS	SIMAH	Riyadh
Klybeck Life Science Factory - Vaccine	BMS & IBMS	Klybeck - Ibrize	Jubail
Tofeih Well field Plant WTS	BMS	SWCC	Jubail
Al-Zamil Tower - CO system	BMS	AlZamil	Riyadh
Nour Net Data Center [MTN]	BMS [SLA]	Nour Communication	Riyadh
Mobily Technical Buildings – DataCenters	BMS [SLA]	Etihad Etisalat	Riyadh
Riyadh Bank DataCenter [MTN]	BMS [SLA]	RBDC	Riyadh
GYM & YOGA Sport Center	BMS	GYM & YOGA Center	Riyadh
Kitchen Park	BMS	Al-Bujaidi Co	Riyadh
Honeywell Offices Power Management	Lighting Control	C&P Contracting	Riyadh
Al-Mana'a Hospital Building	Lighting Control	Al-Mana'a Contracting	Riyadh
Al-Fanar Compound - Kharj Highway	BMS	Al-Fanar	Riyadh
Shelter T1-T2-T3 PLC	PLC	Zain Telecom	Riyadh
Integration of TGS station to NWC SCADA	PLC & SCADA	NWC	Riyadh
Makhram Pumping Station & Wells	PLC & SCADA	NWC	Qassim
RTU System for Bulk FMs Southern cluster	RTU & SCADA	NWC - SWCC	Abha
Alhassa NWC Lifting Station SCADA	PLC & SCADA	NWC	Alhassa
NWC - Buwaib RO Plant Phase1	PLC & SCADA	NWC	Riyadh
KAUST WTP Plant	PLC & SCADA	NWC	Riyadh
Integrating Datalogger to NWC HQ AMR	DATALOGGER	NWC	Riyadh
integrating batalogger to NWC HQ AWK	DATALOGGER	INVVC	Riyaufi



### **Location & Contacts**



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

#### **Control Systems Office**

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#### **MEP & Power Office**

Sana Creative Systems Al-Falah District, Othman Bin Affan Rd. Riyadh, KSA mep@sanacontrols.com

#### **Head Office**

Sana Creative Systems Al-Mozvin District, K. Fahad Rd, Abha Aseer Province, KSA admin@sanacontrols.com

Bank Details: NCB, National Commercial Bank Account: 189-00000-33001 IBAN: SA-47-1000-001890000033001 SANA Creative Systems Est.

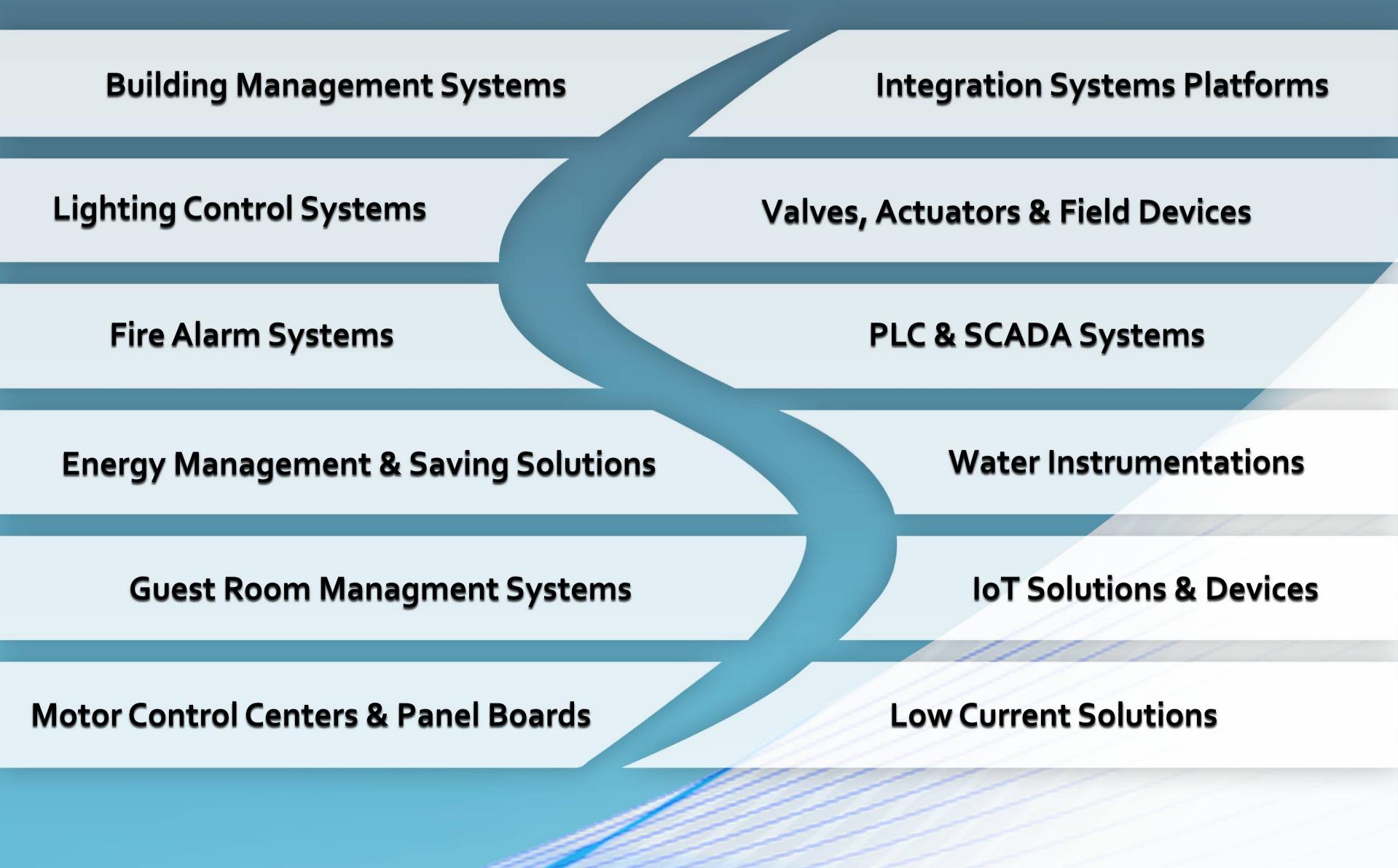


Building Fire Lighting Managment Alarm Control System System Guest Reem Low Automation





## COMPANY INTRODUCTION V8-2024



# SANA CONTROL SYSTEMS