

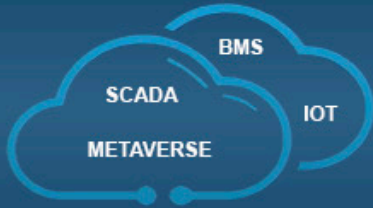
Z | ZETA PLATFORM

BMS - SCADA - IOT - AI - METAVERSE - ROBOTS IOT

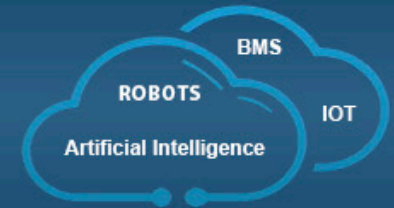
A MORE RELIABLE APPROACH TO CREATING THE PERFECT PLACES.

The comprehensive building automation and smart control systems allows us to perfectly tailor an -automation and control- each project's individual needs. Combining electrical and HVAC systems in a comprehensive, multi-discipline approach and designing for reliability.





PARTNERS



SIEMENS

CISCO

python

VISUAL STUDIO

aws

ORACLE



Z | **ZETA**
PLATFORM



ZETA PLATFORM SECTORS

TOWERS & HOSPITALS & FACTORIES

WAREHOUSE & SCHOOLS & MALLS

OIL & WATER & ELECTRICAL PLANTS





ZETA PLATFORM

INCREASE ENERGY EFFICIENCY

INCREASE ENERGY SAVINGS

INCREASE BUILDING VALUE

FACILITY MANAGEMENT COST

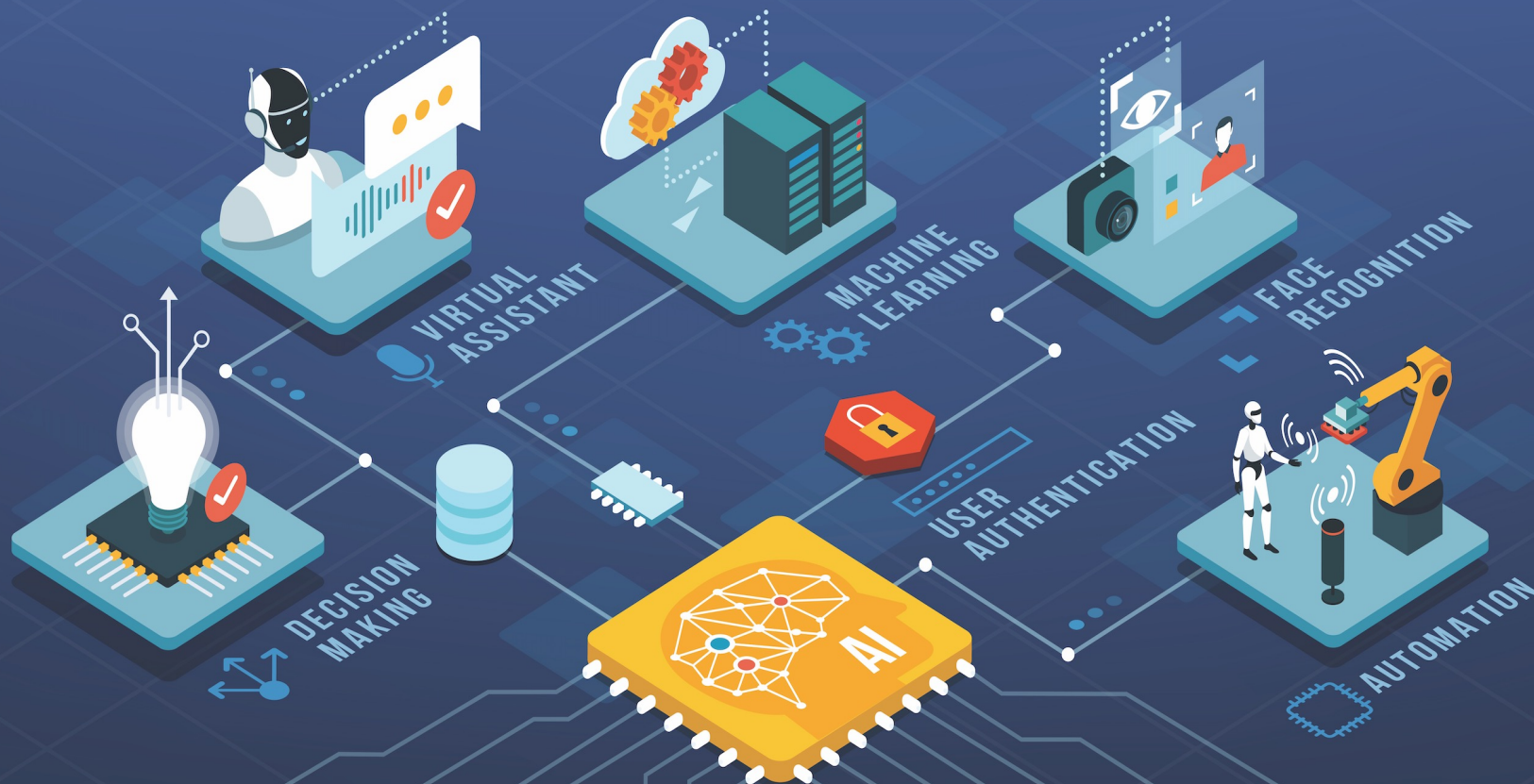
INCREASE SUSTAINABILITY

MAINTENANCE EFFICIENCY





Z | **ZETA**
PLATFORM

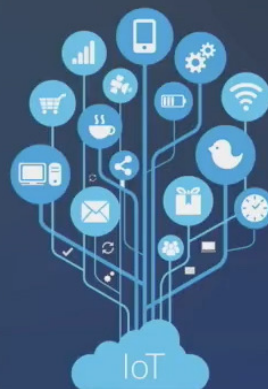




Z | **ZETA**
PLATFORM



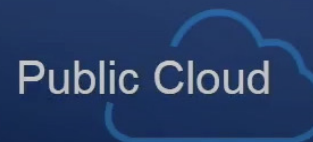
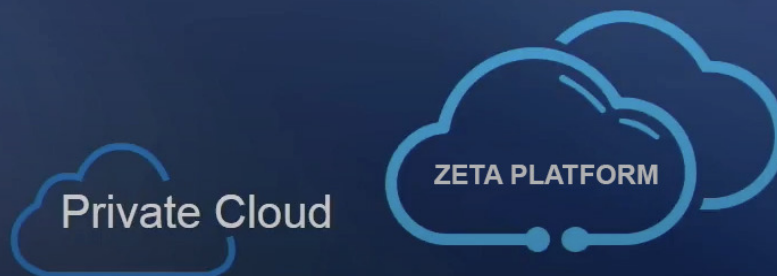
Building Management Systems - SCADA

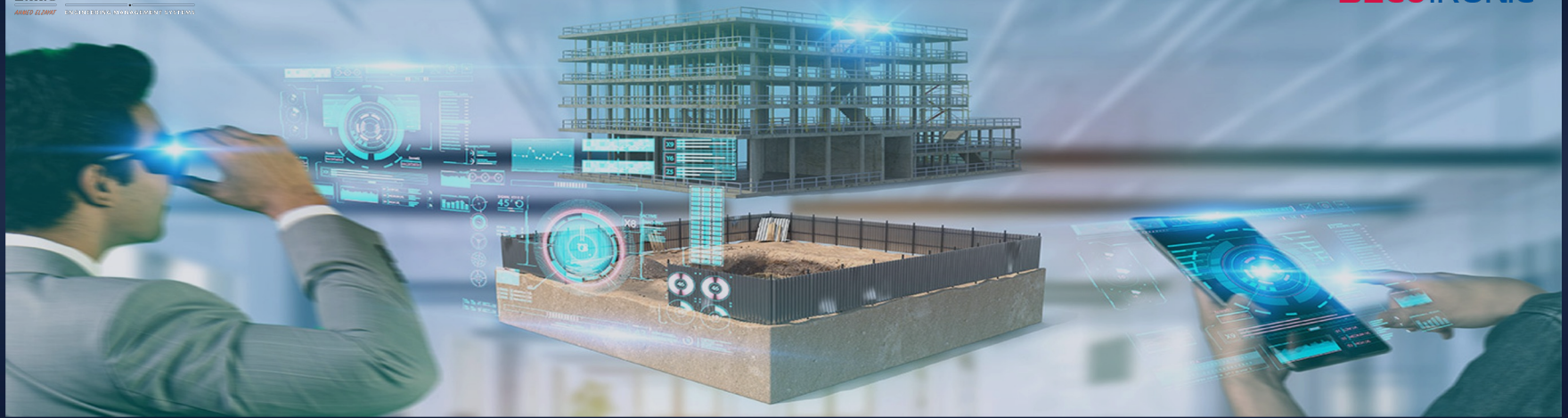


Internet of Things



Artificial Intelligence





ARTIFICIAL INTELLIGENCE

ZETA PLATFORM

ANALYZE INFORMATION AND DATA FROM THE IOT SYSTEM

ARTIFICIAL INTELLIGENCE REVOLUTIONIZES FACILITIES MANAGEMENT BY STREAMLINING OPERATIONS AND REDUCING COSTS. WITH PREDICTIVE ANALYTICS, WE CAN OPTIMIZE ENERGY USAGE, ANTICIPATE MAINTENANCE NEEDS, AND ENHANCE PRODUCTIVITY. THIS TECHNOLOGY EMPOWERS TEAMS TO MAKE DATA - DRIVEN DECISIONS, ENSURING RESOURCES ARE UTILIZED EFFICIENTLY, ULTIMATELY LEADING

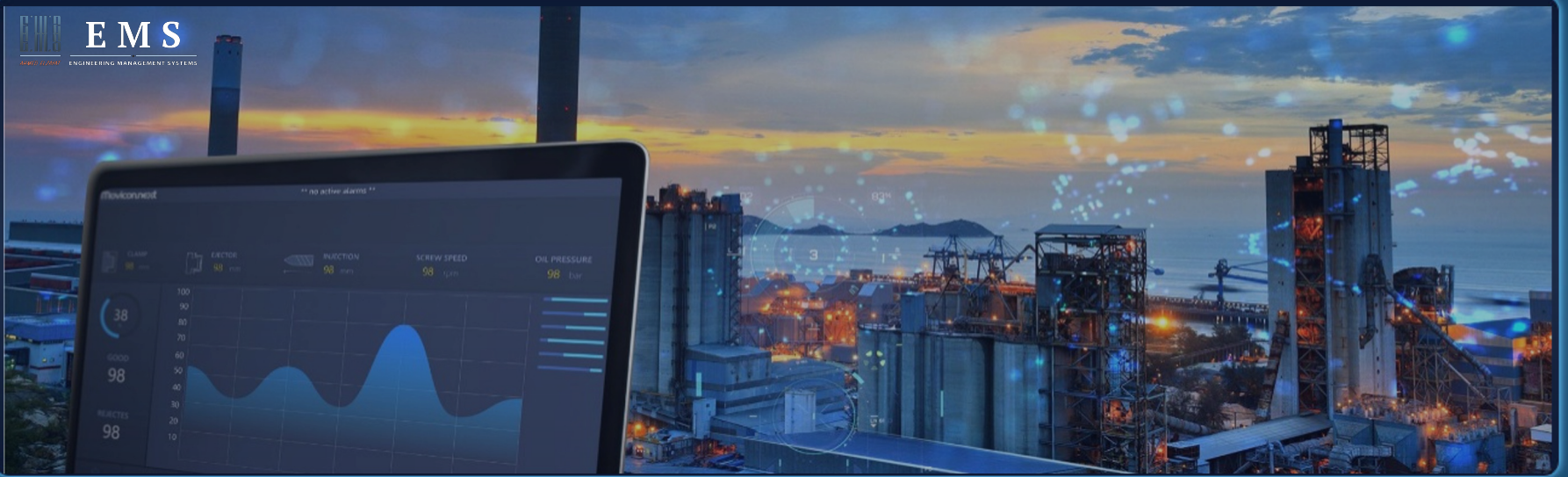


INTERNET OF THINGS - IOT

ZETA PLATFORM

Data Management, Data Collection, Processing and Visualization

THE INTERNET OF THINGS REVOLUTIONIZES OUR INTERACTION WITH TECHNOLOGY. SMART BUILDING OPTIMIZE ENERGY USE, HEALTHCARE SYSTEMS MONITOR PATIENTS IN REAL-TIME, AND CITIES BECOME MORE EFFICIENT. THIS ENHANCES OUR LIVES, DRIVING INNOVATION AND EFFICIENCY, MINIMIZING THE NEED FOR HUMAN INTERVENTION.



SCADA SYSTEMS

ZETA PLATFORM

CONTROL AND MONITOR ALL THE ELECTROMECHANICAL SYSTEMS

SCADA SYSTEM SERVES AS THE BACKBONE OF OUR ELECTROMECHANICAL OPERATIONS. IT ENABLES REAL-TIME MONITORING AND CONTROL, ENSURING EFFICIENCY AND SAFETY. BY INTEGRATING DATA FROM VARIOUS SENSORS, WE CAN MAKE INFORMED DECISIONS, OPTIMIZE PERFORMANCE, AND ADDRESS ISSUES, ULTIMATELY DRIVING INNOVATION AND RELIABILITY IN OUR INFRASTRUCTURE.



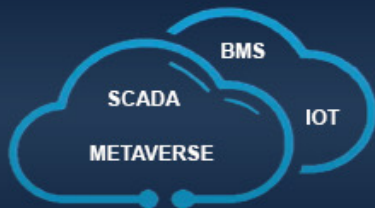
BULIDING MANAGEMENT SYSTEMS

ZETA PLATFORM

CONTROL AND MONITOR ALL THE ELECTROMECHANICAL SYSTEMS

(POWER TRANSFORMER, ELECTRIC BORDERS, LIGHTING, ELEVATORS, VENTILATION, AIR CONDITIONS, WATER TANKS AND PUMPS, FIRE TANKS, PUMPS, GARBAGE, FIRE ALERTS, FIREFIGHTING SYSTEM SECURITY SYSTEMS, ELECTRIC CARS CHARGING UNITS.

Case Study
Treatment Water Plant



Pumping Station 4 - New Cairo



Transformers

1 3

Generators

2 0

ELE Panels

2 4

Station3 Flow

680 m³/h

Flow L1400 A

320 m³/h

Flow L1400 B

260 m³/h

Flow L1000 A

180 m³/h

Flow L 000 B

160 m³/h

PUMPS G A

2 3

PUMPS G B

1 4

Water Line 1000

Water Line 1400

www.ems-me.com



Tank 1 8 M

Tank 2 6 M

Tank 3 8 M

8 M 6 M 8 m

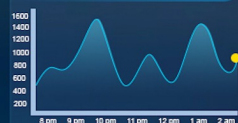
Flow L1200 A Pressure L1200 A

430 m³/h 1200 bar

Flow L1200 B Pressure L1200 B

320 m³/h 1150 bar

Station Flow 740 m³/h



Flow L1000 A Pressure L1000 A

290 m³/h 950 Bar

Flow L1000 B Pressure L1000 B

230 m³/h 850 Bar



1 Water Tank 1

2 Water Tank 2

3 Water Tank 3

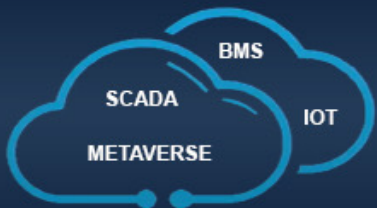
4 Pumping

5 Hammer

6 Transformer

7 ELE Panels

8 Generator



Power House - Qassasen Hospital - Ismailia

SIEMENS

Transformer

Transformer1 Status Running
Transformer2 Status Stopping
Transformer 1 Trip Normal
Transformer 2 Trip Normal

Electrical Panels

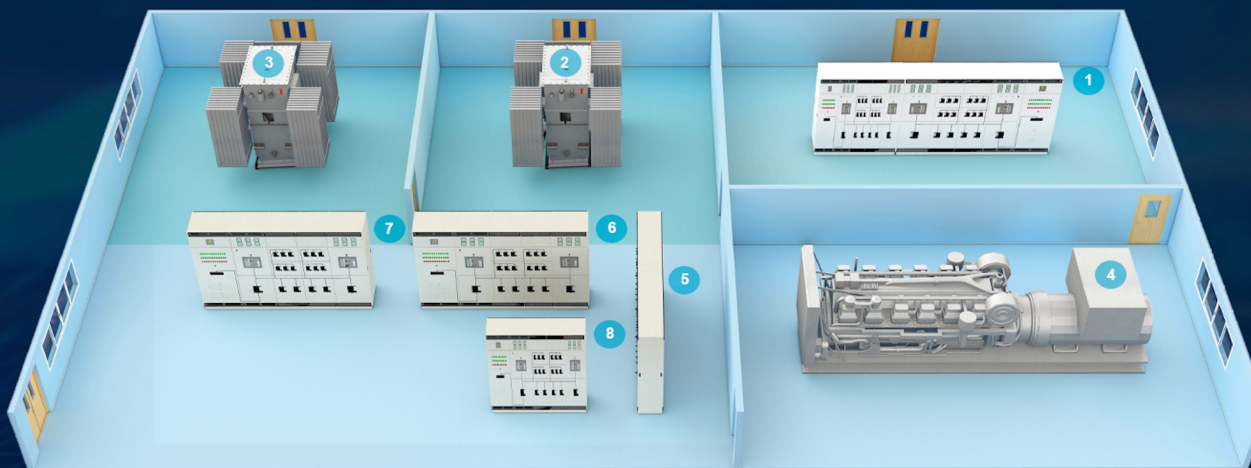
ELE MDB 1 Status ■
ELE MDB 1 Alarm ■
ELE MDB 2 Status ■
ELE MDB 2 Alarm ■
ELE EMDB Status ■
ELE EMDB Alarm ■

OFF

Transformer 2

Transformer 1

ON



Generator

General - Alarm Normal
Oil Temp Alarm Normal
RPM -- - Alarm Normal
Engine - Failure Normal
Solar Tank Level Normal



Switchgear Panel

Switchgear Staus ■
Switchgear Alarm ■

1 Switchgear

2 Transformer 1

3 Transformer 2

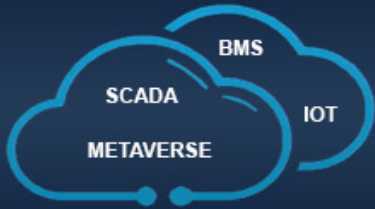
4 Generator

5 ELE - MDB 1

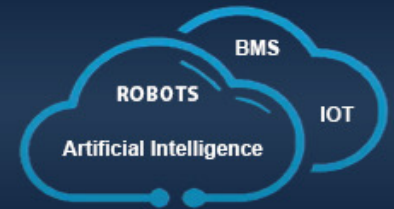
6 ELE - MDB 2

7 ELE - EMDB

8 ELE - ATS



Z | ZETA PLATFORM



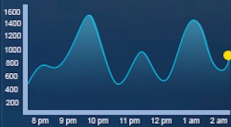
EMS
ENGINEERING MANAGEMENT SYSTEMS

Generator - Pumping Station 4 - New Cairo

SIEMENS

Generator 1

General - Alarm Normal
Oil Temp Alarm Normal
RPM -- Alarm Normal
Engine - Failure Normal



Electrical CELL

ELE CELL Status ■
ELE CELL Alarm ■

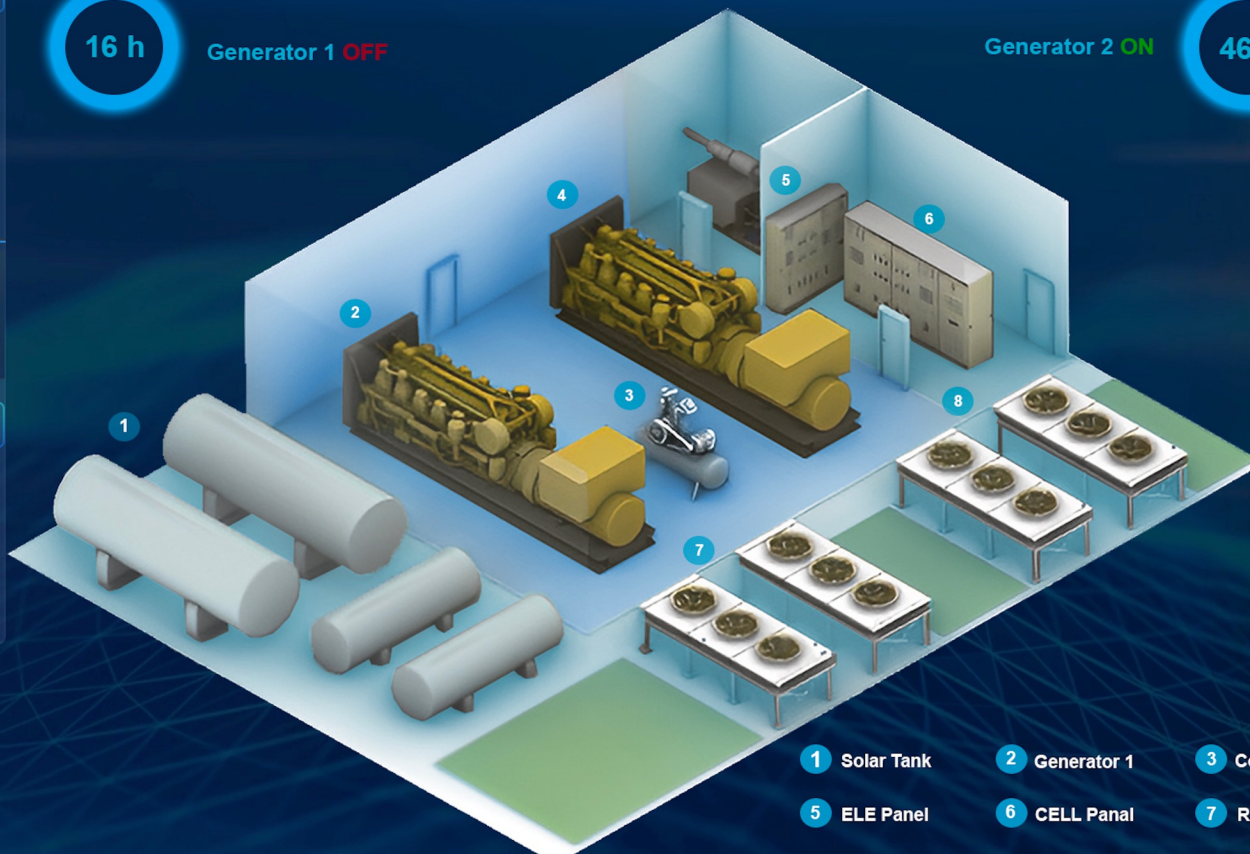
2 4

16 h

Generator 1 OFF

Generator 2 ON

46 h



Generator 2

General - Alarm Normal
Oil Temp Alarm Normal
RPM -- Alarm Normal
Engine - Failure Normal

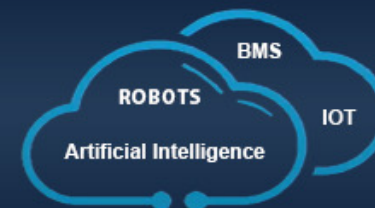
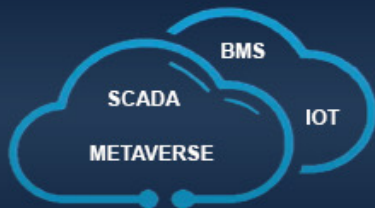


RAD FANS

Rad Fans Staus ■
Rad Fans Alarm ■

1 5

- 1 Solar Tank
- 2 Generator 1
- 3 Compressor
- 4 Generator 2
- 5 ELE Panel
- 6 CELL Panel
- 7 RAD Fan 1
- 8 RAD Fan 2



Hammer Water - Pumping Station 4 - New Cairo

SIEMENS

Hammer 1



Hammer 1 Solenoide 1 OPEN

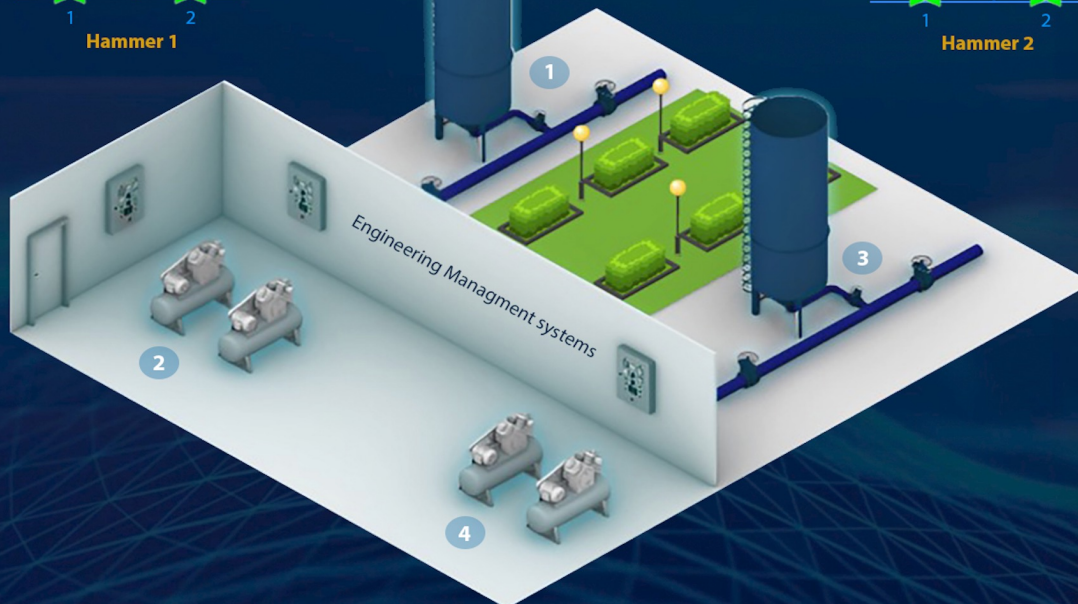
Hammer 1 Solenoide 2 OPEN

Hammer 1 Solenoide 3 CLOSED

Compressor 1 Status RUNNING

Compressor 1 Trip NORMAL

www.ems-me.com



Hammer 2



Hammer 2 Solenoide 1 OPEN

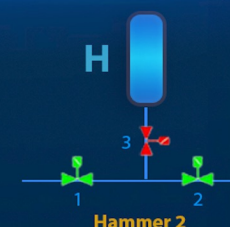
Hammer 2 Solenoide 2 OPEN

Hammer 2 Solenoide 3 CLOSED

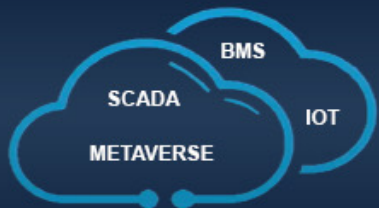
Compressor 2 Status RUNNING

Compressor 2 Trip NORMAL

www.ems-me.com



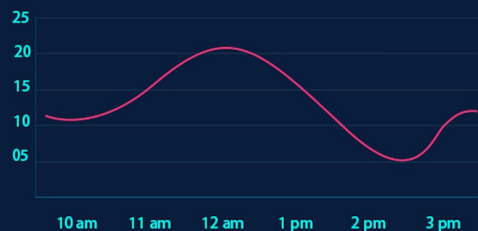
1 Hammer 1 2 Compressor 1 3 Hammer 2 4 Compressor 2



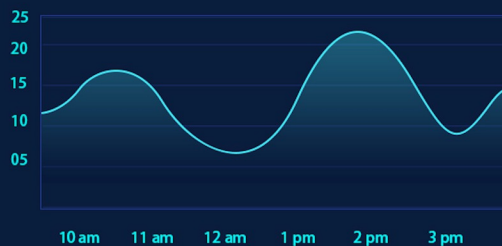
Water Tanks - Pumping Station 4 - New Cairo

SIEMENS

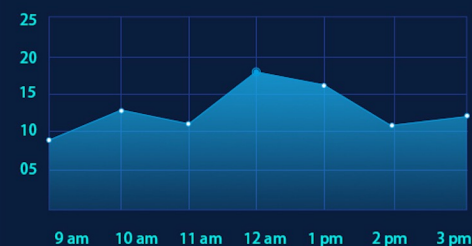
Water Tank 1



Water Tank 2



Water Tank 3



Sump Tank

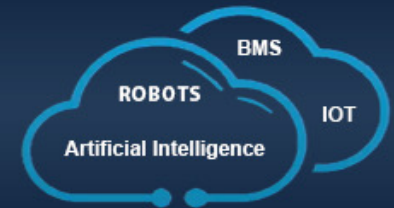
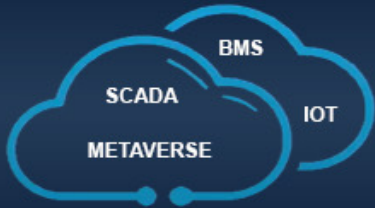


Tanks Values



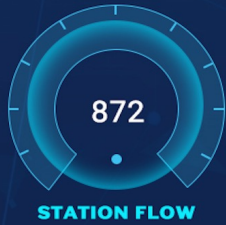
Tanks Levels





Station 5 Flow & Levels & Pressure - New Cairo

SIEMENS



FLOW RATE OF STATION 5

Flow Line 1200

★ 265 M3 / H

Flow Line 900

★ 195 M3 / H

Flow Line 800

★ 236 M3 / H

Flow Military Line

★ 187 M3 / H

Station 5 Tanks

Tank 1 3.6 m

Tank 2 4.1 m

Tank 3 2.7 m

Station 5 Pressure

L 1200

3.8

L 900

6.7

L 800

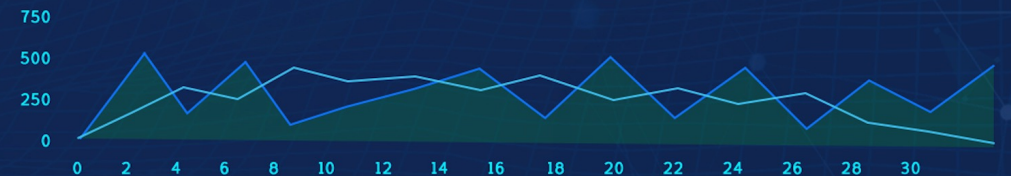
4.6

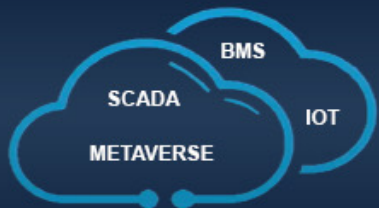
L Military

0



Flow Rate of Station 5





EMES
ENGINEERING MANAGEMENT SYSTEMS



Energy and water Consumption - Suez Medical Complex

SIEMENS



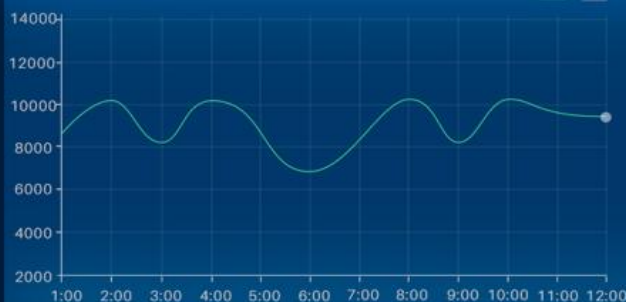
Electrical

RECORDING TIME: 18:00:00

Incoming 2
4756 KWh

Incoming 3
7856 KWh

12613 KWh



Total Energy OF Suez Medical Complex

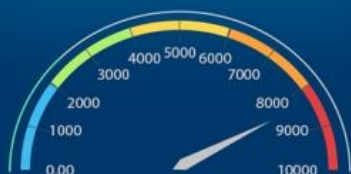
Energy 12613 KWh

Total Energy Of Builiding

Hospital 7654 KWh

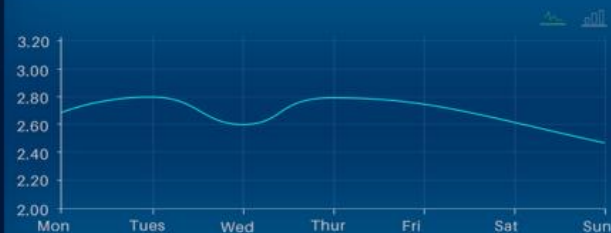
Clinics 4765 KWh

Utilities 2543 KWh



Water FLOW

673 m3/h



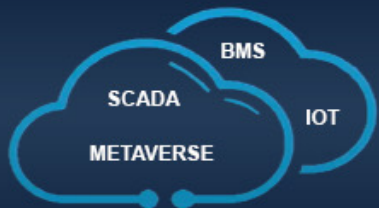
Water FLOW OF Suez Medical Complex

Hospital 341 m3/h Clinics 252 m3/h

Housing 137 m3/h Utilities 26 m3/h

Hoppital Beds	350	Residence Beds	164	ICU Beds	34	Emergancy Beds	12	Infant Cribs	16
---------------	-----	----------------	-----	----------	----	----------------	----	--------------	----

Case Study
Smart Hospital & healthcare



Suez Medical Complex

SIEMENS

Home



Home



Hospital



Clinics



Electrical



HVAC



Medical Gas



Utilities



Complex Occupancy / Month

52 %
Inpatient Outpatient
7138 10492

Department	Used	Unused
Resedntion Beds	1404	1025
ICU Beds	1752	629
Emergency Beds	1103	738
Neonatal Incubator	1411	686
Total Beds	5491	3078

Invoice Electrical / month

724140 EGP

Invoice Water / month

83614 EGP

Invoice Oxygen / month

439326 EGP



DOCTORS : 137 /Day



NURSES : 235 /Day



STAFFS : 469 /Day

Outside Temp
30 °C

Inside Temp
21 °C

Transformer



Generator



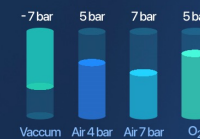
Elevator



Ask Zeta



Medical Gas System



Carbon Footprint



Electrical



Water



Oxygen



FAHU - System

46

23

Oxygen Monthly Cost 156528 EGP



System

Alarm

HVAC System



Medical Gas



Fire Fighting

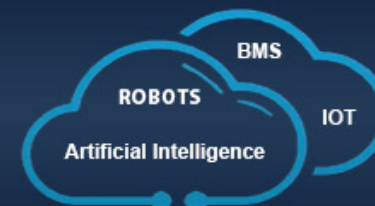
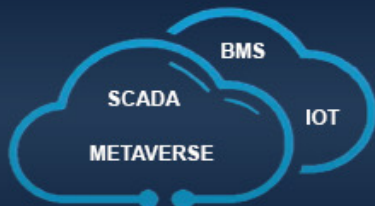


Transformer



Generator





Suez Medical Complex

SIEMENS



Home

Hospital

Clinics

Electrical

HVAC

Medical Gas

Utilities



Suez Medical Complex

The main hospital building consists of a ground and four upper floors, allocated for diagnostic and treatment services, and medical and non-medical services, with a capacity of approximately 420 beds.

Total Cost 62483 EGP

Invoice Electrical 32640 EGP

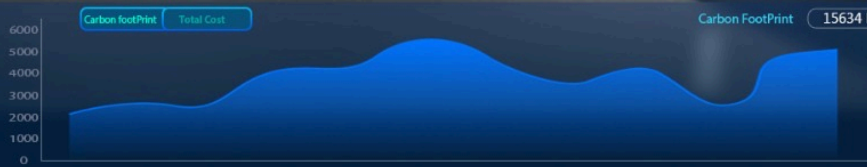
Invoice Water 17236 EGP

Invoice Oxygen 12607 EGP

Carbon Foot Print



Hospital 38%
Utilities 28%
Clinics 34%



Suez Medical Complex Occupancy



56 %

Inpatient Outpatient
1473 3692

Electrical Consumption



2% From Last Month

Water Consumption



58%

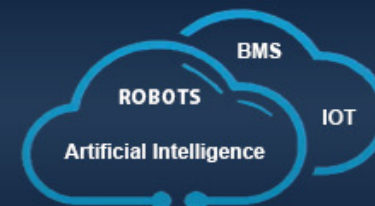
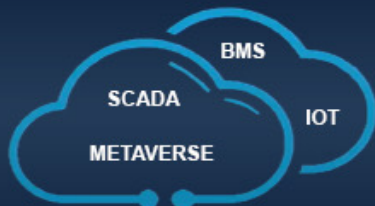
Oxygen Consumption



34%

Carbon FootPrint/m²





Suez Medical Complex

SIEMENS



- Home
- Hospital
- Clinics
- Electrical
- HVAC
- Medical Gas
- Utilities

Inpatient and outpatient

Inpatient 48
Outpatient 112

Electrical Consumption

28348 KWh

HVAC - AHU Units

8

Carbon Footprint / M2

178 sqm/sqft

ELE Consumption / Month

78456 KW

16 %

ELE Invoice / Month

13583 EGP

21 %



Suez Medical Complex Occupancy



56 %

Inpatient 1473
Outpatient 3692

Ground Floor Patient/ Month

Department	Used	Unused
Resiention Beds	164	100
ICU Beds	34	75
Emergency Beds	12	14
Neonatal Incubator	23	31

Hospital Carbon Foot Print / M2



Outside Temp
43 C

Inside Temp
24 C

Electrical

187 kw

Water

630 m3

Oxygen

138kg

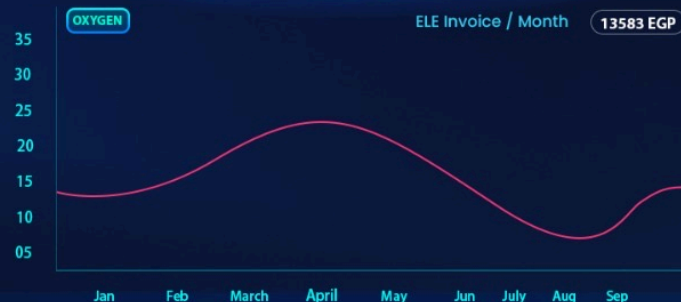
System Alarms

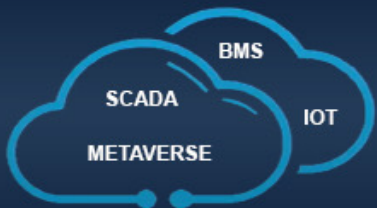
Ground Floor Department

Energy

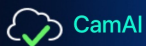
Cost

Dental X-ray & Mammography	1374 Kwh	2198 EGP
Radiology -lab- Isolation room	1269 Kwh	2030 EGP
Bio Tanks,Vacuum,Compressor	795 Kwh	1272 EGP
TRIAGE,Resuscitation,Burns	1479 Kwh	2366 EGP
Administration Department	2593 Kwh	4148 EGP





Suez Medical Complex



- Home
- Hospital
- Clinics
- Electrical
- HVAC
- Medical Gas
- Utilities

Residential Beds

Used 1404 Unused 1025
58%

Emergency Beds

Used 1103 Unused 738
60%

Intensive Care - ICU

Used 1752 Unused 629
74%

Neonatal Intensive

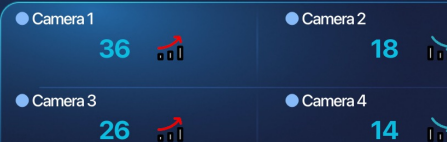
Used 1411 Unused 686
67%

Camera View

Cam1 Cam2 Cam3 Cam4



Camera System Analysis / Ground Floor



Carbon Footprint



Complex Occupancy / Month



Electrical Consumption



Water Consumption

30405 m³

Oxygen Consumption



Complex Zone 1 Camera History

Mask Violation
Distance Violation

cam4 first floor 24.Sep 10:34pm
cam3 first floor 27.Sep 12:34am

Smoke Detection

Complex Zone 1 Camera Trend



Complex Zone 2 Camera History

Patient Movement Violation
Occupancy Violation

Emergency Waiting Room cam8 24.Sep 10:34pm

Unauthorized Access

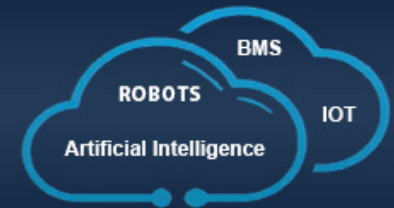
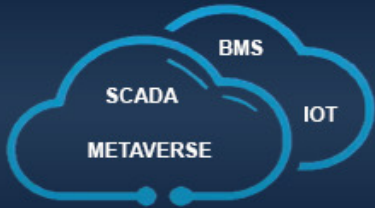
Complex Zone 2 Camera Trend



Notification

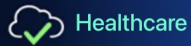
Mask Violation
cam1 first floor 28.Sep 4:34pm
Distance Violation
cam7 third floor 28.Sep 4:34pm
Smoke Detection





Suez Medical Complex

SIEMENS



- Home
- Hospital
- Clinics
- Electrical
- HVAC
- Medical Gas
- Utilities



Doctor Present
137



Doctor Absent
89



Nurse Present
235



Nurse Absent
28



Staff Present
341



Staff Absent
32



Suez Medical Complex

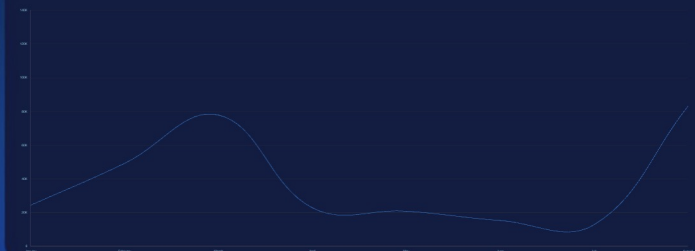
The main hospital building consists of a ground and four upper floors, allocated for diagnostic and treatment services, and medical and non-medical services, with a capacity of approximately 420 beds.

Suez Complex Occupancy

Department	Status
Residential Beds	31%
Emergency Beds	20%
Intensive Care	20%
Neonatal Intensive	28%

Electric Water Oxygen

Water Monthly Cost 83163 EGP



Surgery Appointment

Patient Name	Age	Gender	Data & Time	Surgery	Surgeon
Ahmed Farouk	42	Male	27.Sep 1:49am	Colonoscopy	Dr. Ayman
Eyad Weal	10	Child	27.Sep 1:55am	Adenoidectomy	Dr. Ahmed
Hend Amr	33	Female	26.Sep 9:38pm	Laparose	Dr. Galal
Sara El-Sayed	28	Female	26.Sep 10:38pm	Appendectomy	Dr. Nader

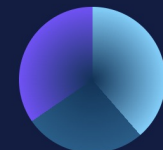
Surgical Department Utilization



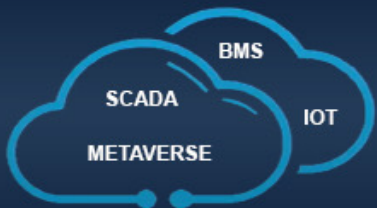
Surgeons Efficiency

Surgeon	Surgical Team	Surgeries Performed
Dr. Hassan	Oncology Team	13 / Month
Dr. Mona	Trauma Team	12 / Month
Dr. Zain	Gastroenterology Team	10 / Month
Dr. Karim	Plastic Surgery Team	8 / Month
Dr. Lina	ENT Team	6 / Month

Patient Visit By Department

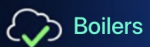


Cardiology 105 Neurology 73 Dermatology 94



Suez Medical Complex

SIEMENS



- Home
- Hospital
- Clinics
- Electrical
- HVAC
- Medical Gas
- Utilities

Hospital Boiler 1

Boiler 1 Status **Running**

Boiler 1 Alarm **Normal**

Hot water **86 °C**

BC Sequence Time
46579 s

Operation Time
12 h/month

Gas Consumption / Month

1546 m³



Gas Invoice / Month

5565 EGP

Boiler Alarms

Types Of Alarms Boiler 1 Boiler 2

High Gas Pressure Inactive Inactive

High Oil Pressure Inactive Active

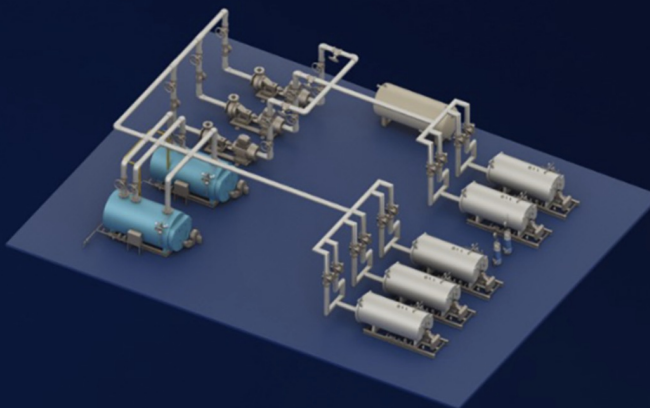
Low Oil Pressure Inactive Inactive

Air Flow Switch Active Active

Last Operation 24/8/2024 24/8/2024

1365 Liter

Hot Water Volume



Hospital Boiler 2

Boiler 2 Status **stopping**

Boiler 2 Alarm **Alarm**

Hot water **0 °C**

BC Sequence Time
22537 s

Operation Time
9 h/month

Gas Consumption / Month

934 m³



Gas Invoice / Month

3362 EGP

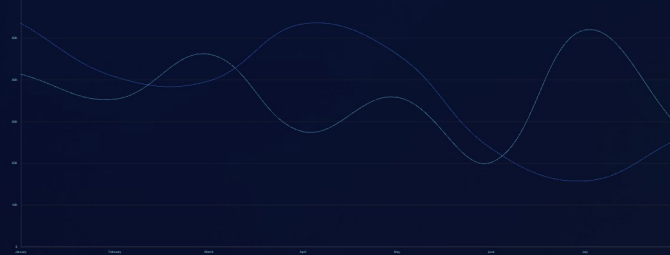
978 Liter

Hot Water Volume

Monthly Average Hot Water Volume In Boilers

Volume Invoice

Boiler 1 Boiler 2



Primary Pump

P.Pump1 **Running**

P.Pump2 **Running**

P.Pump3 **Stopping**

2
Running

1
Stopping

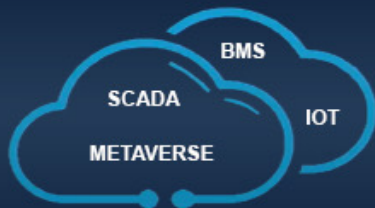
Secondary Pump

S.Pump1 **Running**

S.Pump2 **Stopping**

1
Running

1
Stopping



Suez Medical Complex

SIEMENS



- Home
- Hospital
- Clinics
- Electrical
- HVAC
- Medical Gas
- Utilities



Complex Occupancy / Month

52 %

Inpatient Outpatient

7138 10492

Suez Complex Occupancy

Department	Status
Residential Beds	58 %
Emergency Beds	60 %
Intensive Care	74 %
Neonatal Intensive	67 %

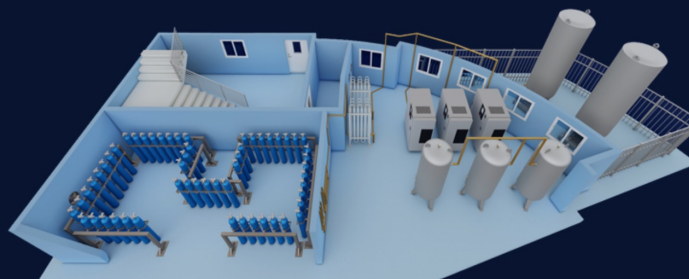
DOCTORS
137 / Day

NURSES
235 / Day

STAFFS
469 / Day

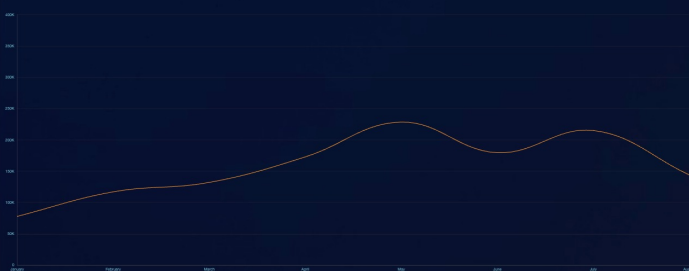
Medical Gas Consumption / Month

	Oxygen	Vaccum	Air 7 bar	Air 4 bar
Gr Floor	2.4 bar	-3.2 bar	6.5 bar	3.6 bar
1st Floor	2.2 bar	-3 bar	6.7 bar	3.8 bar
2nd Floor	2.6 bar	-3.4 bar	6.8 bar	3.5 bar
3th Floor	2.4 bar	-3.2 bar	6.5 bar	3.6 bar



Cost Consumption

Oxygen Monthly Consumtion 144636 KG



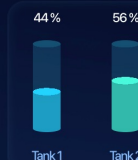
Vaccum Consumption Pressure -6.6 bar



Pump 1 ON last operation 28.Sep.12:03pm	Pump 2 ON last operation 28.Sep.25:4pm	Pump 3 OFF last operation 28.Sep.12:04pm
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Oxygen Consumption Pressure 4.2 bar

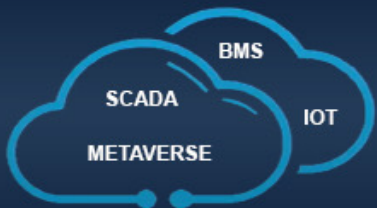
Consumption
337943 Kg
Invoice
439326 EGP



Air Consumption

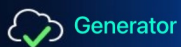


Comperssor1 last operation 28.Sep.3:43am	Comperssor2 last operation 28.Sep.8:51am	Comperssor3 last operation 28.Sep.9:02am
Dryer1 Status ON	Dryer2 Status OFF	



Suez Medical Complex

SIEMENS



- Home
- Hospital
- Clinics
- Electrical
- HVAC
- Medical Gas
- Utilities

Generator 1

Operation hours: 812 hours

Fuel Consumption: 3831 Liter

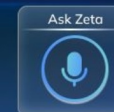
Fuel Tank: 354L (68%)

Standby: Ready

Voltage: 381 V

Current: 6 A

Energy: 886 Kw



Generator 2

Operation hours: 679 hours

Fuel Consumption: 2271 Liter

Fuel Tank: 419L (69%)

Standby: Ready

Voltage: 381 V

Current: 16 A

Energy: 325 Kw

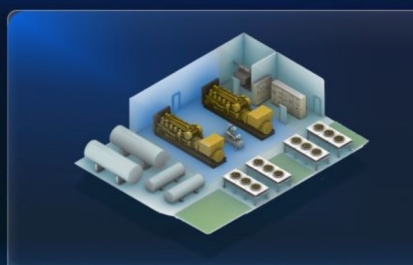
Generator 1

724 kw 2 hour

Gen 1 Gen 1

Estimated Load Estimated Hour

Energy Load Of Generator	
Location	Energy
H Ground F	146 kwh
H First Floor	246 kwh
Chiller 1	262 kwh



Generator 2

487 kw 5 hour

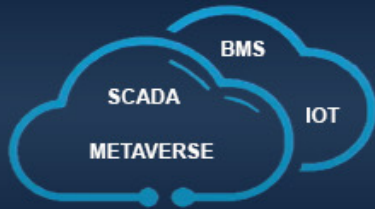
Gen 2 Gen 2

Estimated Load Estimated Hour

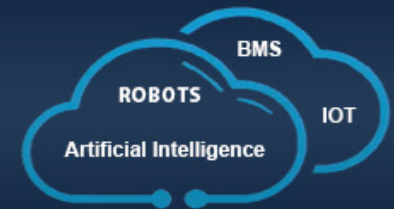
Energy Load Of Generator	
Location	Energy
H Second F	137 kwh
H Third Floor	210 kwh
H Elevator z1	93 kwh

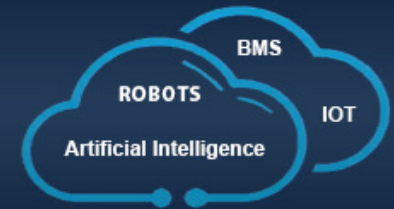
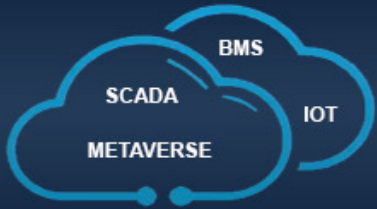
Case Study
Commercial Building





Z | **ZETA**
PLATFORM





SIGMA
SMART CITIES

ZETA Platform - Podia Tower - New Capital

SIEMENS

Water consumption



Water consumption



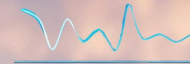
Power Consumption

357--KWH

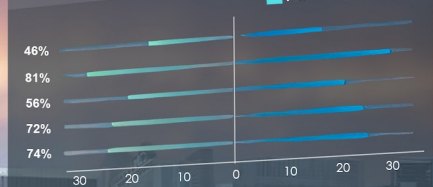


Water Consumption

4834--M3



Power consumption



CO2 - LEED Building



Zone1 Zone2 Zone3 Zone4 Zone5

Flow Water Measurement

Phase A

Phase B



Level Water Tank A

38%

Out Side Temp

35

IN Side Temp

23

Level Water Tank B

46%

Level Water Tank C

92%

HVAC Water Consumption

36L/H





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