HELIX
ENGINEERING SOLUTIONS CO.

Kingdom of Saudi Arabia

CORPORATE PROFILE · 2026

One partner for industrial engineering.

From a single machine to a full EPC project — the capability, the engineering, and the commitment to grow together.

EXECUTIVE SUMMARY

Keeping critical assets running when failure is not an option.

Precision manufacturing, reliability, and industrial engineering — for the plants, shutdowns, and projects that cannot afford to wait.

Helix Engineering Solutions Co. is a Saudi-based precision engineering and industrial solutions provider, serving energy, petrochemical and heavy-industry clients across the Kingdom and beyond. We combine advanced manufacturing, engineering expertise and Industry 4.0 technology to deliver components and turnkey solutions that meet the highest standards of quality, safety and reliability.

Our mandate

To be the partner of choice for precision manufacturing and industrial engineering in the GCC — engineering reliability into every component we deliver.

Proudly based in Saudi Arabia. Committed to the world.

CEO'S MESSAGE

A Commitment

Industry is no longer built — it is engineered, instrumented, and optimized in real time. At Helix, we operate at that intersection. We deliver the precision, the data, and the discipline our clients need to compete in Saudi Arabia's new industrial era along with global prosperity. Every project we accept is a promise: that we will arrive prepared, build to standard, and leave systems running better than we found them. That promise is signed below.

BUSINESS PHILOSOPHY

"Engineering solutions should deliver measurable business value, operational excellence, and sustainable growth."

Eng. Asaad Fakharuddin · Founder & CEO

VISION, MISSION & VALUES

Direction & principles

VISION

To be the GCC's most trusted partner in precision engineering and advanced manufacturing, contracting & industrial trading — powering industrial & infrastructure progress across the Kingdom and beyond.

MISSION

To deliver precision-engineered components and integrated solutions that exceed expectations in quality, safety and on-time performance — every project, every time.

CORE VALUES

- Integrity
- Quality
- Safety
- Innovation
- Partnership

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THE INDUSTRIAL REALITY

In heavy industry, the clock is the most expensive asset on site.

A stalled line, a failed spare, a delayed shutdown — each one converts directly into lost production. The question is never whether a problem will arrive. It is who you can call when it does.

01

Unplanned Downtime

A single critical failure can cost more per hour than the repair itself.

02

OEM Lead Times

Imported spares are quoted in months while the plant waits idle.

03

Shutdown Windows

Turnaround schedules are fixed. There is no room to run late.

04

Fragmented Supply

Many vendors, many handoffs, and no single point of accountability.

WHERE HELIX FITS

One accountable engineering partner — from the machined part to the running plant.

Helix Engineering Solutions manufactures, maintains, and modernizes the critical assets Saudi industry depends on. We machine the components, execute the shutdowns, instrument the equipment, and secure the supply — under one roof, to one standard of accountability.

REGISTRATION
CR 7054613364

HEADQUARTERS
Industrial Area 2, Dammam, KSA

OPERATIONS
Saudi Arabia, Bahrain

DELIVERY MODEL
EPC + Lifecycle

COMPLIANCE
API · SBC · ISO

SECTORS
Energy · Petrochem · Industry

ENGINEERING CAPABILITIES

From concept to component

Precision CNC Machining

3-, 4- & 5-axis turning, milling and grinding to tight tolerances.

Reverse Engineering

3D scanning, CAD modeling and exact component replication.

Design & Analysis

Engineering design, simulation and manufacturing support.

Metrology & Inspection

CMM inspection and full dimensional verification.

Full-cycle engineering

We take a part from scan or drawing to a finished, inspected component — controlling design, machining and quality end to end.

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FACILITIES & EQUIPMENT

Advanced manufacturing floor

CORE EQUIPMENT

- 5-Axis CNC Machining Centers
- CNC Turning & Vertical Lathes
- Precision Grinding & Milling
- Structural & Piping Fabrication Bay
- Welding & Heat-Treatment Stations
- CMM Metrology & Inspection Lab

5-Axis	±0.001mm	24/7
MACHINING	TOLERANCE	CAPACITY

INDUSTRIES WE UNDERSTAND

Built for the heavyweights.

HELIX
ENGINEERING SOLUTIONS CO.

Energy

Oil & Gas · Refineries · LNG · Petrochemicals

Power & Utilities

Generation · Transmission · Water · Cooling

Heavy Industry

Steel · Aluminium · Cement · Mining · Chemicals

Manufacturing

Food & Bev · Pharma · Automotive · Packaging – Wood - Plastic

Infra & Marine

Marine · Ports · Rail · Airports · Cities

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OUR CAPABILITIES

Eight divisions. One accountable partner.

01

Precision Manufacturing & Tooling

Parts made in-Kingdom, on shortened lead times.

02

Reverse Engineering & Product Dev

Recreate obsolete and imported components.

03

Maintenance, Reliability & Assets

Maximize availability, minimize downtime.

04

Automation, IIoT & Smart Factory

Instrument the asset, decide on data.

05

Projects, Fabrication & EPC

Built to code, from completion to commissioning.

06

Process Flow & Rotating Equipment & Chemicals

Pumps, valves and seals to API standards.

07

Supply Chain & Technical Procurement

The right specification, sourced and stood behind.

08

Energy, Sustainability & Consulting

Efficiency turned into measured kWh.

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DIVISION 01

Precision Manufacturing & Tooling

THE CHALLENGE

A critical imported spare fails, and the OEM quotes months for delivery — while production stands still.

HELIX RESPONSE

We manufacture high-precision replacement components and production tooling in-Kingdom, restoring operation on compressed lead times.

CNC Machining

3/4-axis milling · Turning · Boring · Deep-hole drilling · Gear cutting · Grinding

Heavy Machining

Engine lathe · Vertical turning · Large shafts · Flanges · Rollers · Sleeves

Precision Components

Pump & compressor parts · Turbine blades · Seals · Impellers · Wear rings · Rotors

Tooling & Prototyping

Dies · Injection moulds · Jigs · Fixtures · Gauges · Rapid prototyping · OEM localization

Industries Oil & Gas · Petrochemical · Power · Heavy Industry

Business value — shortened lead times, localized supply, obsolescence protection.

DIVISION 02

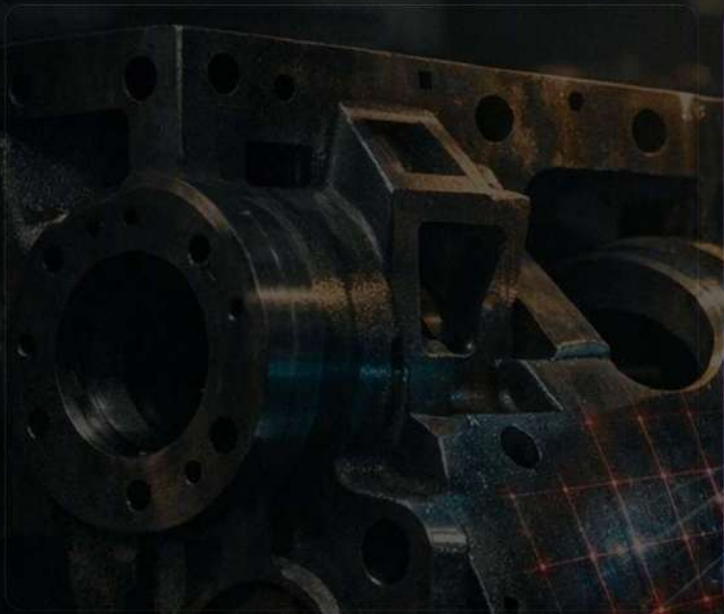
Reverse Engineering & Product Development

THE CHALLENGE

The drawings are lost, the supplier is discontinued — and the component still has to keep running.

HELIX RESPONSE

We recreate obsolete and imported parts through digital scanning, engineering analysis, and validated manufacturing.



Digital Engineering

3D laser & structured-light scanning · CAD modeling · CAD/CAM · Manufacturing drawings

Reverse Engineering

Component replication · Obsolete-parts recreation · Imported-equipment localization

Engineering Analysis

Failure & root-cause analysis · Metallurgical investigation · Tolerance analysis · FEA

Product Development

OEM replacement parts · Custom components · Design validation · Value engineering

Industries Oil & Gas · Power · Manufacturing · Marine

Business value — reduced OEM dependency, extended asset life, failure modes engineered out.

DIVISION 03

Maintenance, Reliability & Asset Services

THE CHALLENGE

Unplanned downtime costs more per hour than the repair — and the shutdown window never moves.

HELIX RESPONSE

Maintenance, overhaul, on-site machining and turnaround execution that maximize availability and hold the schedule.

Mechanical

Pump & compressor overhaul · Gearbox rebuilding · Rotor balancing · Alignment · Bearings

Valve Services

Repair · Testing · Refurbishment · PSV maintenance · Control, gate & globe valve servicing

On-site Machining

Line boring · Flange facing · Portable milling & turning · In-situ shaft machining · Stud removal

Reliability & Shutdown

Laser alignment · Vibration & thermography · Predictive & RCM · Turnaround execution

Industries Refineries · Petrochemical · Power · Heavy Industry

Business value — maximum availability, minimized downtime, reliability built in.

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DIVISION 04

Automation, IIoT & Smart Factory

THE CHALLENGE

Your assets generate data all day — and tell you nothing useful until the moment they fail.

HELIX RESPONSE

We instrument infrastructure into a live, queryable system that flags failure before it happens.

Automation

PLC programming · SCADA · HMI · Industrial networking · Control-panel design · MCC

CNC Automation

Retrofitting · Servo & controller upgrades · Fanuc, Siemens & Mitsubishi · Motion control

Smart Factory

Machine connectivity · OEE & downtime monitoring · Dashboards · MES · Digital twin

Analytics

AI predictive maintenance · Energy & equipment-health monitoring · Remote monitoring

Industries Manufacturing · Petrochemical · Utilities · Power

Business value — decisions in minutes, not month-end reports — outages avoided.

DIVISION 05

Projects, Fabrication & EPC Support

THE CHALLENGE

Multiple subcontractors, one schedule, and no single point of accountability when it slips.

HELIX RESPONSE

Code-compliant fabrication and EPC support to Aramco SAES/SAEP and SBC standards, from mechanical completion to commissioning.

Mechanical Construction

Equipment & machine installation · Plant relocation · Erection · Skid assembly · Pipe racks

Fabrication

Structural steel · Pipe spools · Tanks · Pressure equipment · Platforms · Sheet metal

Welding

SMAW · GTAW · FCAW · GMAW · SAW · Stainless & duplex · Alloy welding · Hardfacing

EPC Support

Engineering · Procurement · Construction · Civil, MEP & ICT, HVAC · Testing & Commissioning · Maintenance · Facilities Management

Industries Oil & Gas · Petrochemical · Infrastructure · Giga-projects

Business value — compliance held for decades, operational risk transferred to Helix.

DIVISION 06

Process Flow & Rotating Equipment

THE CHALLENGE

The wrong pump or seal specification doesn't fail on the datasheet — it fails in the field, under load.

HELIX RESPONSE

Pumps, valves, seals and power transmission — specified, supplied and supported to API and process standards.

Pumps

Centrifugal · Vertical · Multistage · API · Slurry · Chemical · Fire pumps

Valves

Ball · Butterfly · Globe · Gate · Check · Control · Safety relief valves

Sealing & Fluid Control

Mechanical & cartridge seals · Seal support systems · Expansion joints · Strainers

Power Transmission

Bearings · Couplings · Chains · Belts · Pulleys · Sprockets

Industries Oil & Gas · Water · Petrochemical · Mining

Business value — the right spec, API-grade reliability, rapid critical-spare mobilization.

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DIVISION 07

Supply Chain & Technical Procurement

THE CHALLENGE

Procurement that only chases price ships you the wrong part — perfectly on time.

HELIX RESPONSE

A technical procurement partner that sources the right specification from the right OEM — and stands behind it.

Industrial Equipment

CNC & conventional machines · Welding equipment · Compressors · Generators · Expansion Joints

OEM Spare Parts

Rotating-equipment & automation parts · Electrical · Mechanical · Hydraulic

Consumables

Cutting tools · Abrasives · Welding consumables · Fasteners · Lubricants

Technical Procurement

Global sourcing · OEM qualification · Vendor management · ZATCA-compliant invoicing

Industries All industrial sectors · EPC contractors

Business value — specification integrity end-to-end, value engineering without compromise.

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DIVISION 08

Energy Efficiency, Sustainability & Consulting

THE CHALLENGE

Energy is the largest controllable cost in most plants — and the least measured.

HELIX RESPONSE

Audits, ESG support and asset consulting that convert efficiency into measured kWh and carbon reductions.

Energy Services

Industrial energy audits · Power-quality analysis · Compressed-air, steam & HVAC optimization

Sustainability

Carbon-footprint assessment · ESG support · Renewable integration · Waste-heat recovery

Asset Consulting

Asset management · Maintenance strategy · Reliability engineering · FMEA · RCA · LCC

Transformation

Digital-transformation roadmap · Predictive analytics · IoT-enabled monitoring

Industries Petrochemical · Power · Manufacturing · Utilities

Business value — measured kWh reductions, ESG-ready reporting, Vision 2030 alignment.

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INDUSTRIAL ASSETS WE SUPPORT

If it turns, holds pressure, or carries load - we support it.

Organized around your plant, not our org chart - from the rotating heart of the process to the utilities that keep it alive.

Rotating Equipment

Pumps · Compressors · Turbines · Fans · Gearboxes · Motors

Static Equipment

Pressure vessels · Heat exchangers · Tanks · Columns · Piping

Flow Control

Valves · Actuators · Seals · Regulators · Strainers

Electrical Systems

Switchgear · MCCs · Transformers · Drives · Distribution

Automation Systems

PLC · DCS · HMI · Instrumentation · Panels

Manufacturing

CNC machines · Machine tools · Presses · Conveyors · Robotics

Utilities

Compressed air · Steam · Cooling water · HVAC · Boilers

Production Assets

Process lines · Packaging · Material handling · Cranes · Skids

SELECTED REFERENCES· PROJECTS, FABRICATION & EPC SUPPORT

Engineering Industrial Projects from Design to Delivery

CASE STUDY · SAUDI ARAMCO

Industrial Infrastructure Development

THE CHALLENGE

Execute multidisciplinary civil, underground utility and LV electrical works inside active Saudi Aramco facilities while maintaining uninterrupted operations and full compliance with Aramco engineering, safety and quality standards.

THE SOLUTION

Delivered integrated civil works, underground utility networks and LV electrical upgrades through phased, quality-controlled execution and disciplined project management.

CASE STUDY · ROYAL COMMISSION

12 km Industrial Road Infrastructure

THE CHALLENGE

Construct 12 km of industrial roadway able to carry continuous heavy logistics traffic while meeting Royal Commission engineering specifications and an aggressive construction schedule.

THE SOLUTION

Completed earthworks, grading, pavement construction, asphalt surfacing and road marking — durable transport infrastructure built for long-term industrial operations.

CASE STUDY · SAMSUNG ENGINEERING

Workforce Accommodation Infrastructure

THE CHALLENGE

Deliver complete accommodation camps for 5,000 and 1,300 personnel — civil works, utilities, electrical systems and supporting infrastructure — under strict mobilization timelines.

THE SOLUTION

Executed multi-discipline EPC delivery, enabling rapid workforce mobilization through fully integrated infrastructure ready for immediate operation.

12 km
Industrial road delivered

6,300
Workforce capacity housed

100%
Standards compliance

EPC
Multi-discipline delivery

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SELECTED REFERENCES · PROJECTS, FABRICATION & EPC SUPPORT

Building Industrial Facilities That Power Production

CASE STUDY · FLOW CONTROL WORKSHOP

Industrial Facility Modernization

THE CHALLENGE

Upgrade an operational manufacturing workshop — integrating structural steel, overhead crane supports, industrial flooring and electrical infrastructure — without disrupting live production.

THE SOLUTION

Delivered complete modernization: structural modifications, electrical systems, epoxy flooring and utility upgrades that extended operational capability and production efficiency.

CASE STUDY · PETROL STEEL

Industrial Manufacturing Facilities

THE CHALLENGE

Construct reinforced-concrete facilities, fabricate industrial warehouses and deliver supporting infrastructure for heavy manufacturing operations.

THE SOLUTION

Completed reinforced-concrete works, structural-steel fabrication, warehouse erection, hardstands and precast foundations to industrial quality standards.

CASE STUDY · MÖVENPICK AL NAWRAS MARINA

Marina Service Pedestal Power Distribution

THE CHALLENGE

Engineer a reliable LV power distribution network for marina service pedestals — ensuring electrical safety, load balancing, future expansion and compliance with IEC and the Saudi Electrical Code.

THE SOLUTION

Designed a scalable LV system with optimized feeder routing, protection coordination, voltage-drop control and balanced electrical loading for long-term marina operations.

2,000 m²
Industrial roofing installed

400 m
RC boundary wall built

LV
Distribution system design

Upgrade
Industrial facility scope

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SELECTED REFERENCES · ENERGY EFFICIENCY, SUSTAINABILITY & CONSULTING

Driving Smarter Energy Performance Through Engineering

CASE STUDY · McDERMOTT

Industrial Power Distribution

THE CHALLENGE

Engineer and commission a reliable LV electrical distribution system supporting continuous industrial operations while maintaining safety, reliability and future maintainability.

THE SOLUTION

Designed and commissioned an optimized distribution network with coordinated protection, balanced loading and dependable power delivery for production.

CASE STUDY · RAS TANURA REFINERY

DRA Chemical Injection Skid

THE CHALLENGE

Commission a critical DRA chemical injection skid inside an operating refinery while ensuring instrumentation accuracy, process integrity and safe start-up.

THE SOLUTION

Completed engineering review, instrumentation verification, functional testing and commissioning for reliable integration into refinery process operations.

CASE STUDY · STC | HUAWEI | MOBILY

Smart Telecom Infrastructure

THE CHALLENGE

Modernize legacy telecom infrastructure through nationwide 4G LTE BTS upgrades while maintaining uninterrupted network availability.

THE SOLUTION

Executed BTS modernization, fibre integration, testing and commissioning — improving network performance, capacity and long-term service reliability.

CASE STUDY · KING ABDULAZIZ INTL AIRPORT

Digital Asset Management

THE CHALLENGE

Optimize maintenance performance across one of Saudi Arabia's busiest airports through digital asset management and preventive maintenance planning.

THE SOLUTION

Implemented MAXIMO-driven asset management, preventive maintenance, KPI monitoring and work-control processes that improved efficiency and reliability.

24/7
Critical operations

4G LTE
Network modernization

MAXIMO
Asset management

100%
Commissioned systems

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STANDARDS & DELIVERY

Compliant by architecture, not by effort.

- Aramco SAES & SAEP standards
- MODON & Saudi Building Code (SBC)
- API · ASME · EGMA · NFPA · IEC · ASHRAE
- ISO 9001 · 14001 · 45001
- ZATCA e-invoicing · Saudization (Nitaqat)

Q **Quality**
ITPs, MARs, and inspection workflows built into the schedule — not bolted on.

H **HSE**
A zero-harm philosophy operationalized through daily toolbox talks, audits, and digital incident logging.

P **Project Controls**
Primavera P6 scheduling, EVM-based reporting, structured WBS, and live dashboards from day one.

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HELIX is built for businesses that are growing.

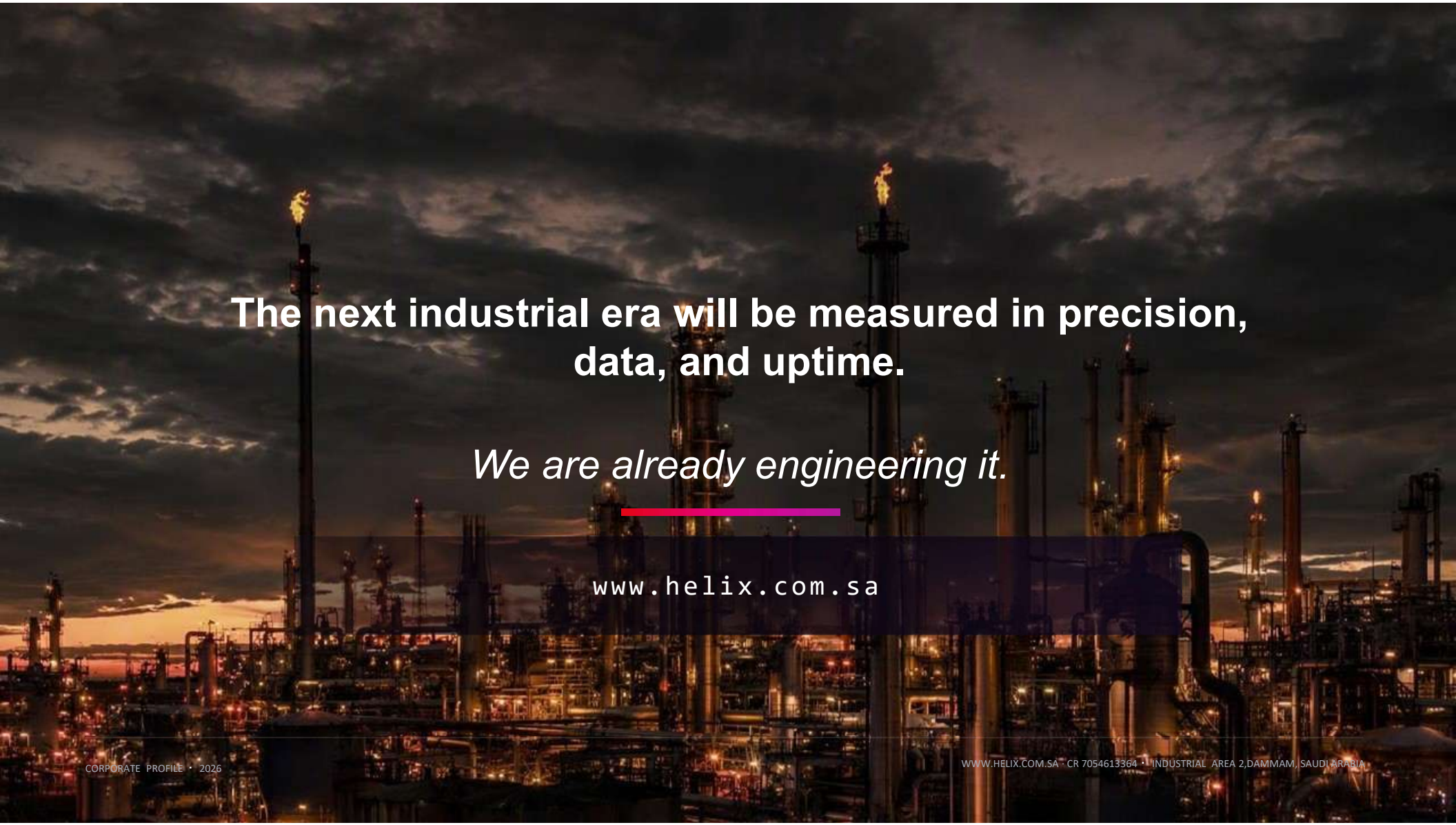
Whether you're upgrading one machine, expanding a factory, delivering a major EPC project, improving energy performance, or planning the next generation of industrial facilities — we're ready to engineer the journey with you.

HELIX
ENGINEERING SOLUTIONS CO.

Trusted by industry leaders

We are proud to serve and be an approved partner to the Kingdom's foremost energy and industrial organizations.

Saudi Aramco	SABIC	Ma'aden	GE Vernova
Saudi Energy & NWC	HADEED	KAEC	Saudi Energy Efficiency Center



The next industrial era will be measured in precision, data, and uptime.

We are already engineering it.

www.helix.com.sa

LET'S TALK

Let's discuss your next industrial challenge.

Send us the problem — a failed part, a tight shutdown, a stalled line. We'll return a technical response within 48 hours.

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