



LUDAN
GROUP

LUDAN
GROUP
Business
Overview
2023





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**General
Who We Are**



Who we are

LUDAN GROUP is proud to be a most diverse provider of integrated solutions for Industrial Development, Plant Optimization, Environmental Issues, and Industry-Specific Implementation Knowledge.

LUDAN GROUP is a unique blend of companies in the fields of Engineering, Software, Process Control, Environment, Energy and more, located in Israel, western Europe (Holland, Belgium), Eastern Europe (Romania, Bulgaria).

Ludan: Stable, Dynamic & Innovative



Stable

- Cultivates a multi-disciplinary approach
- A public, financially stable company
- Highly diversified market activity



Dynamic

- Invests in continuous growth
- Responds quickly to global macro changes and local micro changes
- In selected sectors, the company's maintenance portfolio acts as an extension of projects implementation



Innovative

- Back office and vehicle fleet management software development for the public transportation market
- Electric bus, management and charging system Payment solutions: EMV

Top Management





Arnon Aharon
CEO - Ludan
Group



Avi Lieber
CEO of Ludan
Tech & CEO of
Symcotech



Marc Steigenga
CEO of KH Group



Enat Winograd
CFO Ludan
Group



Dmitri Militescu
CEO of Ludan
Engineering SRL
& Regional
Manager Of
Eastern Europe



Yehuda Drucker
CEO of Ludan
Engineering Israel



Sivan Davit
CEO Ludan
ATF



Yuval Alon
VP Engineering
& Marketing



Oz Midian
CEO Ludan
Environmental
Technologies

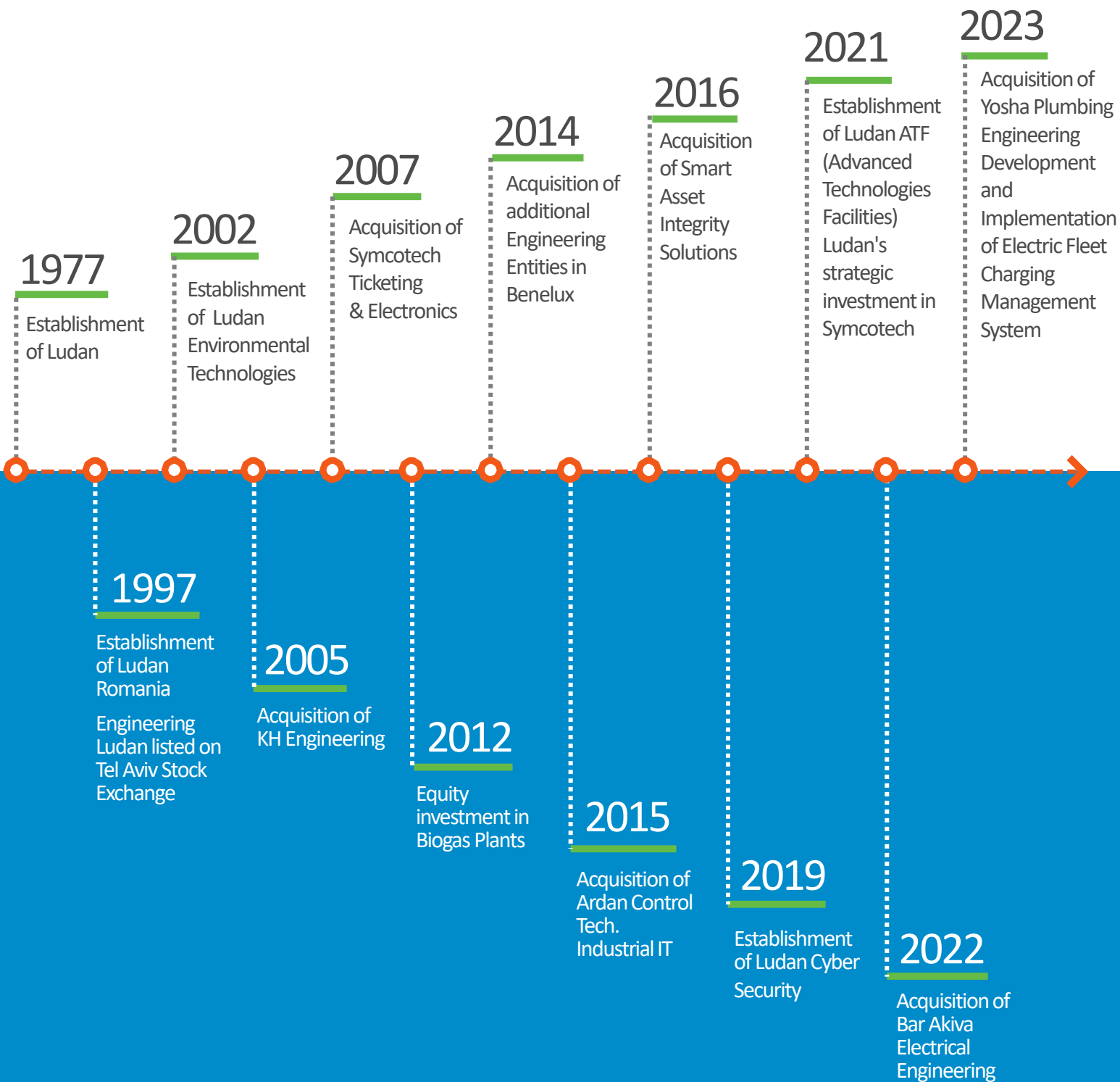


Omri Harel
VP Business
Development

Milestones



Stability and Development Milestones



Group Structure



GROUP COMPANIES














LUDAN GROUP



SW & Control Sector

Engineering Sector

SW & Control	Public Transportation & Defense Industry	Industrial Engineering Services	Environmental Services	Civil Engineering Services
 <p>www.ardatech.com</p>  <p>לודן מערכות תוכנה ובקרה Ludan Software and Control systems</p>	 <p>SYMCOTECH</p>	 <p>KHEngineering</p>  <p>LUDAN Engineering Israel Ltd</p>  <p>Ludan Romania</p>  <p>SMART ASSET INTEGRITY SOLUTIONS</p>	 <p>LUDAN ENVIRONMENTAL TECHNOLOGIES</p>  <p>ECO-TECH</p>	 <p>YOSHA ENGINEERS</p>  <p>BarAkiva ENGINEERS</p>  <p>LUDAN INFRASTRUCTURE & BUILDING</p>

Market Presence & Major Clients



Markets / Industries



Chemical



Civil Projects



Natural gas



Petrochemical and Refining



Pharmaceuticals



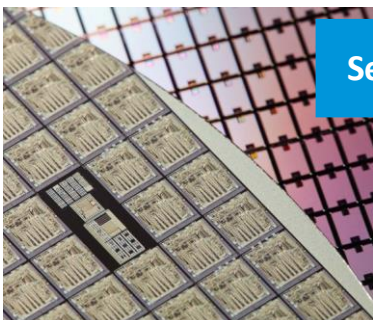
Public Transportation



Defense Industry



Food



Semiconductors



Agrochemical



Engineering Sector Customers (Partial list)

 Abbott A Promise for Life	 JACOBS	 Shell	 ch2m	 Chevron
 BASF The Chemical Company	 BROMINE COMPOUNDS	 ICL	 TATA	 BAZAN GROUP FORMERLY ORL
 HES International	 PETROM	 KLM	 IDE Technologies	 ROTEM AMFERT NEGEV LTD.
 Vopak	 SIEMENS	 DOR	 vtti energy partners	 ADAMA
 ShinEtsu	 amec foster wheeler	 bp	 Cargill	 HUNTSMAN
 DEAD SEA WORKS LTD	 ENGINE OIL GAZPROMNEFT	 bam	 Corbion	 janssen
 esc חטיבת אספקת המים והחשמל	 תנובה	 Perrigo	 מקורות חברת המים והחשמל	 TOTAL
 AGROPOLYCHIM	 תשתיות אנרגיה	 Bayer	 HEXION Specialty Chemicals	 AZOMURES An AMEROPA Company
 AGROPOLYCHIM	 PAZ refinery	 KOOLE TERMINALS	 DUCOR Petrochemicals	 Tulip Oil Exploration and Production



S/W & Control Customers (Partial List)

Highlights



Tank farm Upgrade

Client: EVOS

Project Goal: Upgrade the storage facility to support denatured Ethanol

Scope: Basic Engineering, Cost estimations, Detail Engineering

Year of Completion: 2023

Project Value: Confidential

Existing storage tanks shall be prepared to store the supplied Ethanol, including the engineering, purchasing and installation of a new pipe system, equipment, steel structures and electrical installations.



New Storage Facility & Quay

Client: EVOS

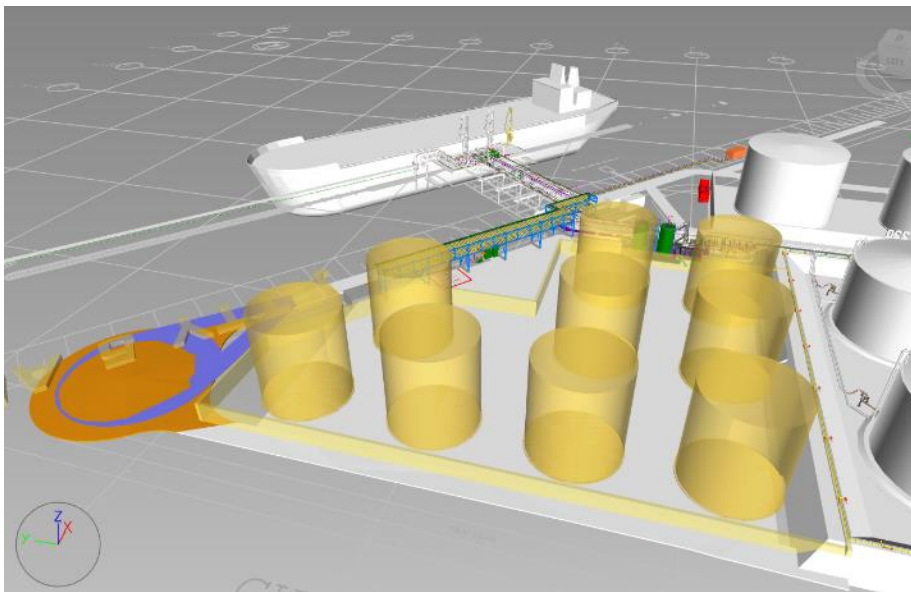
Project Goal: Expanding a new tank farm with unloading facilities to quay.

Scope: Conceptual Design

Year of Completion: 2025

Project Value: Confidential

Seven storage tanks shall be connected to the existing network. New pumps, pipework, equipment, with loading facilities to new quay including foundation and electrical installations part of the scope.



Above Ground Installation of a Geothermal Facility

Client: HVC

Project Goal: Using green energy from a geothermal facility

Scope: Front End Loading (FEL-2) Geothermal Installation

Year of Completion: 2022

Project Value: Confidential

KH Engineering delivered a Front-End Loading (FEL-2) package that will enable HVC to appoint a construction company for the realisation (procurement & construction) of the above-ground installation.

- Engineering disciplines including Process, HSSE, Mechanical, Electrical, Instrumentation, Process Control and Piping
- HAZOP
- Plot lay-out & Equipment sizing
- 3D model for construction
- Technical input subcontracting for the works
- Electrical design (20kV)
- Explosion safety
- Instrumentation including safeguarding, start-up and shutdown protocolling



Alon Tavor, 230 MW Power Plant

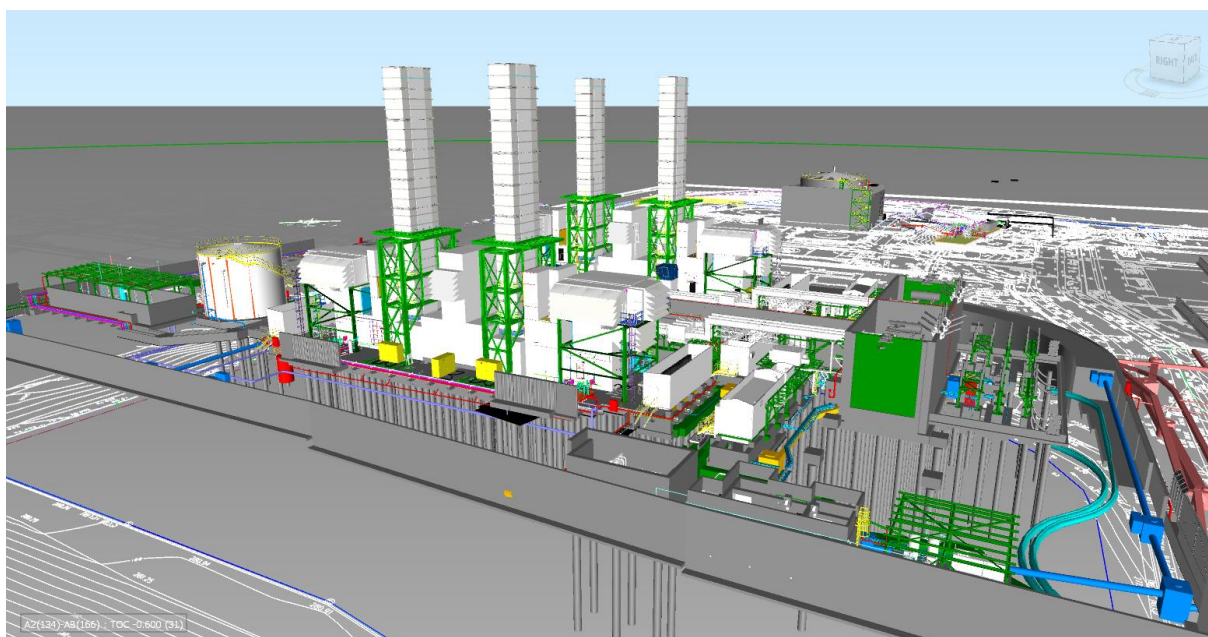
Client: Energy Services LLC

Project Goal: New Expansion of the existing MRC, Alon Tavor power plant. Additional 4 units, open cycle, 230 MW.

Scope: Multidisciplinary detailed Design: Permitting, Process, Piping, Civil Traffic & Roads, Structural, Grounding, UG utilities and duct banks, Fuel gas, Overall design coordination. and instrumentation Year of Completion: 2022

Project Value: Confidential

- MRC Alon Tavor are increasing the production capacity.
- Energy Services LLC (Part of Mitsubishi Power) were selected as EPC contractor.
- Ludan Engineering Israel were awarded to provide the detail design coordination & permitting for the project.
- The plant consists of 4 gas turbines, 2 generators, 2 step up transformers, DI water tank and liquid fuel tank. Tens of miscellaneous equipment units and enclosures. Hundreds of meters of process piping. Site development, roads, retaining walls. Thousands of kilometers of UG duct banks and conduits.
- As part of operational continuity, Ludan provided the design of sheltered structures.



Paz 155 SRU

Client: Paz Ashdod Refinery

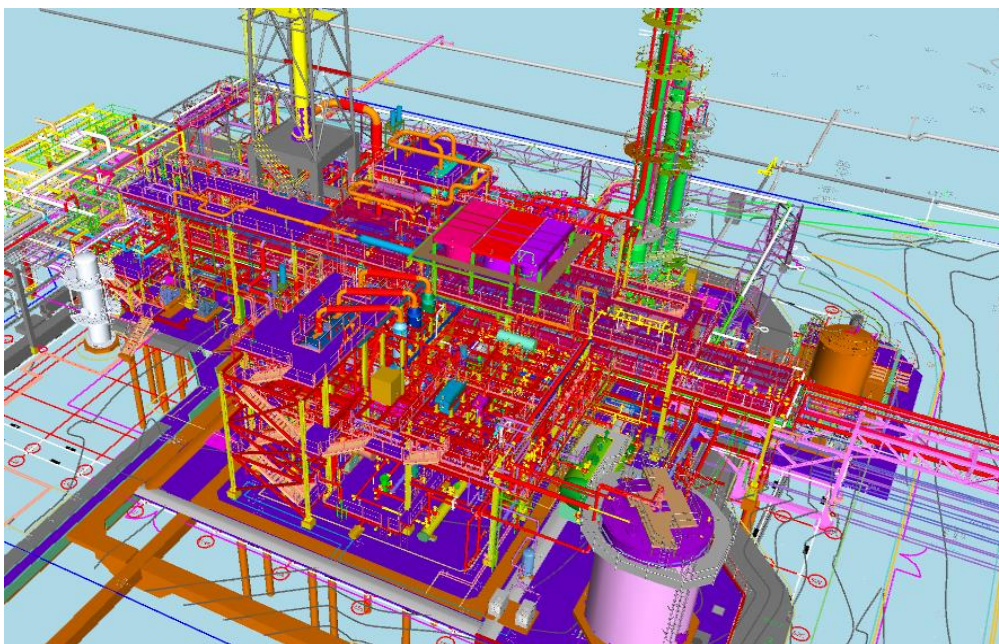
Project Goal: New unit that will replace existing old Sulfur Recovery Unit (SRU)

Scope: Multidisciplinary detailed Design: Process, Piping, Mechanical, Civil, Instrumentation and Control

Year of Completion: 2023

Project Value: Dozens of millions of NIS

- Paz Ashdod Refinery are planning to construct a new SRU unit.
- Wood (Amec Foster Wheeler) were selected to perform Feed design for the unit.
- Ludan Engineering Israel were awarded the FEED review, Detail design and Design management for the project, which includes more than thousand lines and hundreds units of equipment which were manufactured all over the world. Ludan Engineering Romania were involved as well in broad range of activities.



Cold Reversible Rolling Mill & Degreasing including Heat Treatment Line

Client: OTELINOX S.A.

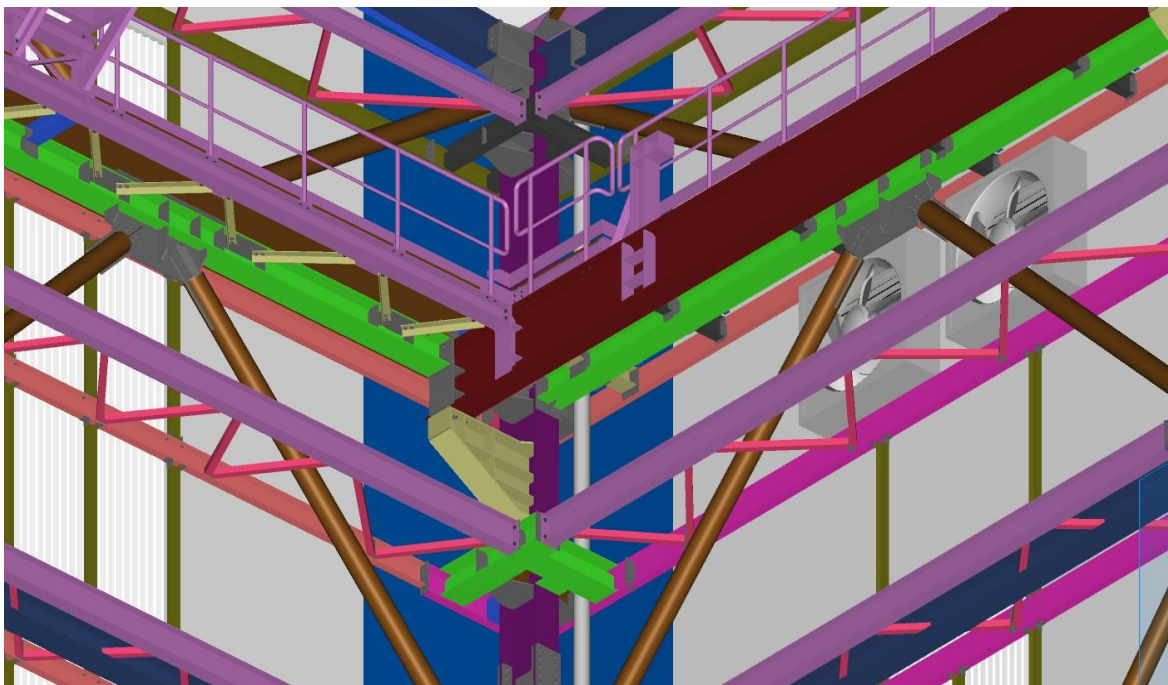
Project Goal: New Facilities for Increasing the Production Capacity

Scope: Permitting, Design and Construction Supervision

Year of Completion: 2024

Project Value: 45M CAPEX

Description: The Client intends to increase its production capacity by adding a new line for Rolling Mill and a new Bright Analing Line. Installation of the main equipment imply to adapt the existing buildings and to execute all necessary civil works, including infrastructure, special foundations, pits, steel structures, etc. Beside of the main equipment arrangement, the investment contains other objectives related to utilities.



A New Combined-Cycle Power Plant

Client: AVAX Greece, MASS Group (End Client)

Project Goal: New Power Plant of 1,750MW

Scope: Permitting , Civil Engineering

Year of Completion: scheduled for 2026

Project Value: Confidential

Description: The Mintia Combined Cycle Power Plant, 1,750 MW unit, is the biggest CCPP built in Romania in the last 30 years. The unit will run on natural gas and will comprise two SGT5-9000HL gas turbines, one SST5-5000 steam turbine and three SGen5-3000W generators by SIEMENS. The project will be delivered on a turn-key basis in the summer of 2026.



Supply of Validation equipment and advanced peripherals for The Green Line of the TLV Light train

Client: Alstom

Project Goal: Implement Hardware, software & Integration of ticketing capabilities

Scope: Turnkey

Year of Completion: implementation: 2029, O&M: 20 to 25 years

Project Value: several Dozens millions of NIS

- Alstom Israel serves as the executive contractor of a JV between Alstom, Dan and Electra, which was selected as the concessionaire for the construction and operation of the green light rail line in Tel Aviv.
- Alstom's scope of work includes the ticketing system.



Installation of Security & Cyber Systems in a Governmental facility

Client: Ministry of Finance

Project Goal: Implement Hardware, software & Integration of homeland security systems at Governmental facility

Scope: Turnkey

Year of Completion: 2023

Project Value: Several millions of NIS

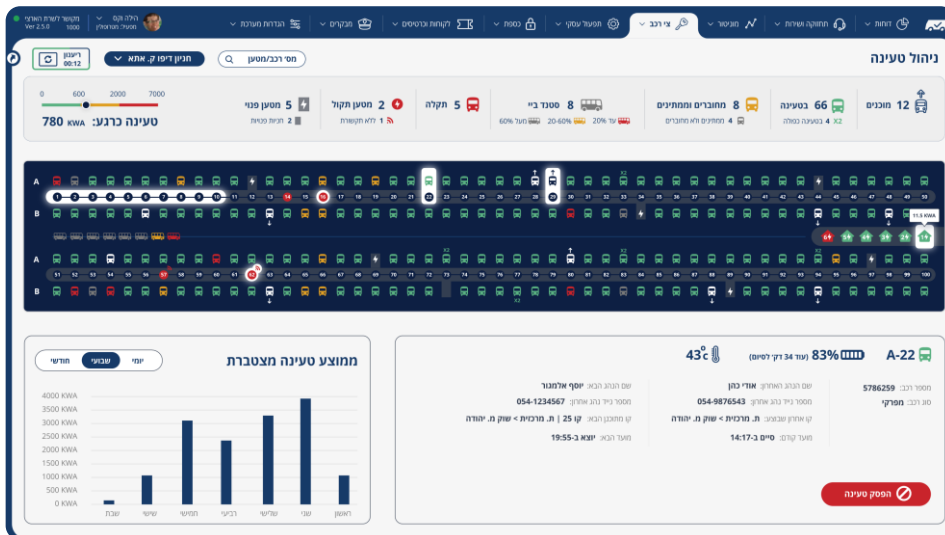
- Establishment of security, cyber, communication and computing systems. The project contains unique cyber systems for security and communication needs as well as Milestone's control systems



Electric Fleet Management System

Client: Dan Public Transportation electric Bus parking Dipo @ Bnei Brak
Project Goal: Charging priority according to the operational needs of the next day while facing limited charging capacity & optimizing charging costs.
Scope: Turnkey
Year of Completion: 2023
Project Value: Several millions of NIS

- A first implementation of a Strategic cooperation with the Dan Group and the establishment of a joint company (OPCAR-EV) that develop and implement the Electric Fleet Management System.



Rehabilitation of contaminated land for Real Estate purposes

Client: A real estate company located in a factory formerly occupied by a pharmaceutical factory

Project Goal: Rehabilitation of contaminated land

Scope: Turnkey

Year of Completion: 2022

Project Value: Several millions of NIS

- Step 1 soil vapor extraction
- Supply and installation of equipment to treat volatile pollution
- Step 2 land survey
- Drilling, analyzes and reports to the relevant authorities
- Step 3 Water treatment
- Supply and installation of a groundwater purification system



Plumbing design for One Tower Project

Client: Rogovin – Acro

Project Goal: A luxurious and innovative office tower

Scope: Plumbing & Fire extinguishing Design

Year of Completion: 2023

- The ONE TOWER of the companies Rogovin and Acro Group won the award of excellence on behalf of the International Organization for High-rise and Urban Construction (CTBUH)
- The tower rises to a height of 160 meters over 35 floors, and contains approximately 50,000 square meters of offices (over 5 parking basements)
- In a unique space tower, the Wellness Zone is advanced and fully equipped, offering employees a wide range of sports and rest options: dedicated exercise rooms, leisure and game corners, treatment and rest areas, and a locker room and shower area with lockers



Electrical design for Vitania Tel Aviv Phase B

Client: Vitania Ltd.

Project Goal: Vitania Tel Aviv, Phase B

Scope: Detailed Electrical Design

Year of Completion: 2025

Project Value: 95,000,000 NIS

- Vitania, in cooperation with Delek Motors, is constructing phase B of its leading project in Tel Aviv.
- The project includes two 42-story towers with a total area of 100,000 sq m on top of an 8-floor underground parking lot containing 1,350 parking spaces.
- The Eastern Tower, with an area of 60,000 sq will serve upon completion as Bank Hapoalim's headquarters.
- The Western Tower is a mixed-used building consisting of a commercial ground floor topped by offices, and 130 residential units in the top 22 floors with a total area of 48,000 sq m.
- Alongside the tower, two rhythmic gymnastics sports halls will be constructed, as a public service for the Tel Aviv Municipality.



Financial Data



2023 - Financial Data

Consolidated Balance Sheet (in '1.000 NIS)

	% of the balance	31.12.22	% of the balance	31.12.23
Cash and cash equivalents	12%	45,716	8%	36,461
customers and revenue to receive	46%	180,174	48%	206,715
Other current assets	11%	44,561	14%	58,833
Total current assets	69%	270,451	70%	302,009
non-current assets	31%	119,121	30%	131,643
Total assets	100%	389,572	100%	433,652
short term credit	4%	17,057	5%	21,955
Suppliers and eligibles	39%	150,753	39%	170,283
other current liabilities	6%	23,306	5%	19,533
Total current liabilities	49%	191,116	49%	211,771
Long term commitments	17%	66,801	18%	79,561
Shareholders' Equity	34%	131,655	33%	142,320
Total liabilities and Shareholders' Equity	100%	389,572	100%	433,652

2023 - Financial Data

Consolidated P&L (in '1.000 NIS)

	2021	2022	2023
Revenues	513,740	575,966	625,485
Gross profit	52,646	67,715	66,808
Gross profit margin	10.2%	11.8%	10.7%
Operating profit (before other income)	26,185	40,926	37,478
Operating profit rate	5.1%	7.1%	6.0%
Net Profit	16,304	28,862	29,335
Net Profit Rate	3.2%	5.0%	4.7%
EBITDA	32,296	47,196	44,635
(*) EBITDA Rate	6.3%	8.2%	7.1%

(*) 16 IFRS Effect Neutralized

Strategic Paths for Future Evolution





Strategic Paths for Future Evolution

Software & Control Sector



Defense Industry



Electric fleet management



Clearance

Engineering Sector



Civil structures and infrastructure systems

Group Contacts



Group Contacts

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LUDAN
GROUP

global experience
local approach