



LUDAN
GROUP

LUDAN GROUP

Business
Overview
2021



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General



Who 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
- ▶ Payment solutions: EMV, cellular and more
- ▶ Cyber security: OT infrastructure solutions for industry and IT communication fields

Top Management



Top management



Arnon Aharon

C.E.O - Ludan Group



Avi Lieber

C.E.O of Ludan
Tech & C.E.O of
Symcotech



Willem Pronk

CEO – LudanCom -
KH Group



Yuval Alon

V.P. Engineering
& Marketing



Dmitri Militescu

C.E.O of Ludan
Engineering SRL &
Regional Manager
Of Eastern Europe



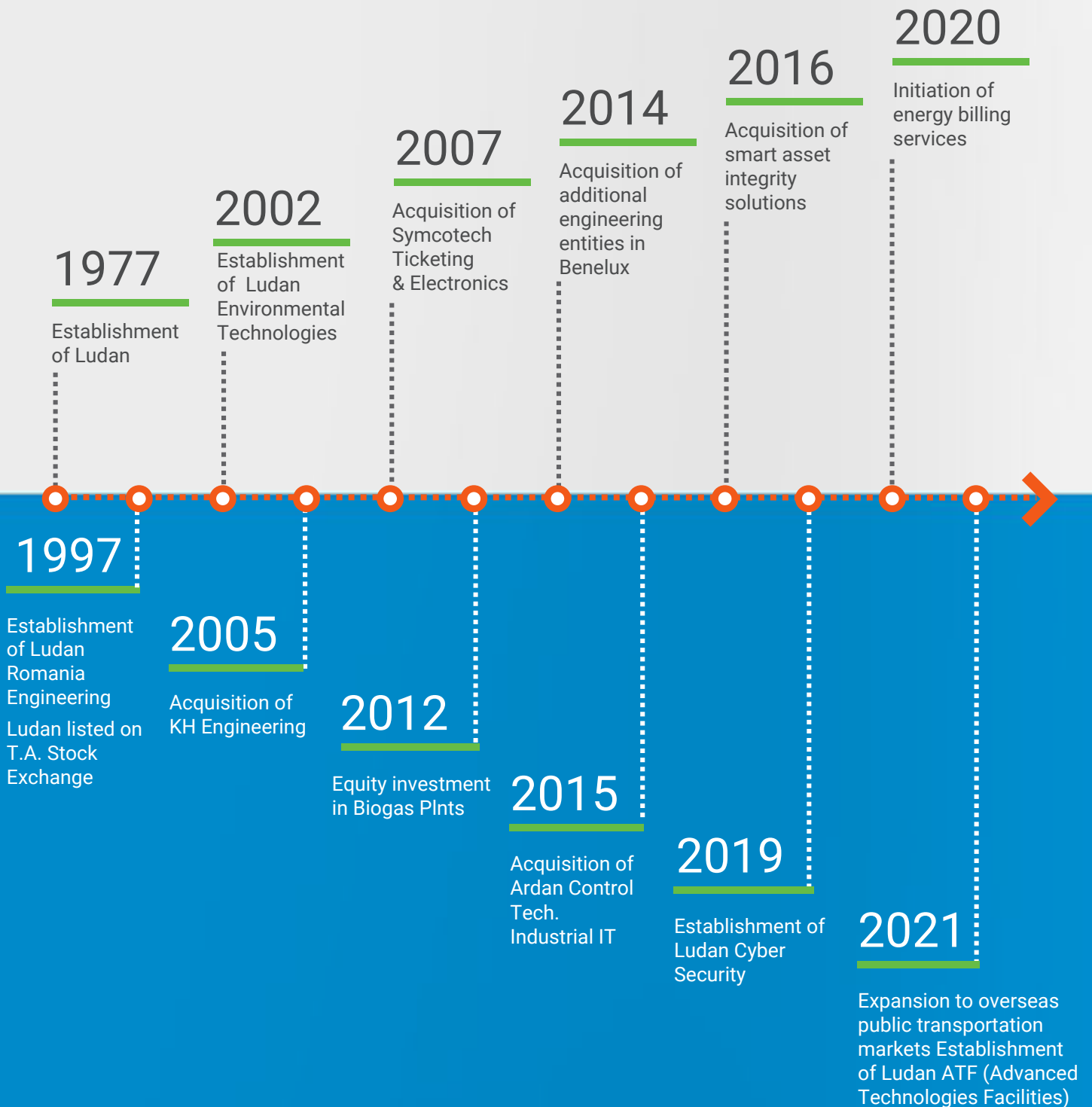
Yehuda Drucker

C.E.O of Ludan
Engineering Israel

Milestones



Stability and Development Milestones



Group Structure



Corporate Structure



International Engineering Services Ltd.

Subsidiaries in the engineering field

- Ludan Engineering Israel
- Ludan Engineering SRL Romania
- Ludan Engineering Ltd. Bulgaria
- KH group - The Netherlands & Belgium
- Ludan Advanced Technology Facilities (ATF)



Ludan - Tech

Subsidiaries in the systems integration field

- Ludan Software & Control Systems
- Symcotech, Public Transportation
- Ardan Control Tech
- Ludan Cyber Security



Ludan Environmental Technologies Ltd.

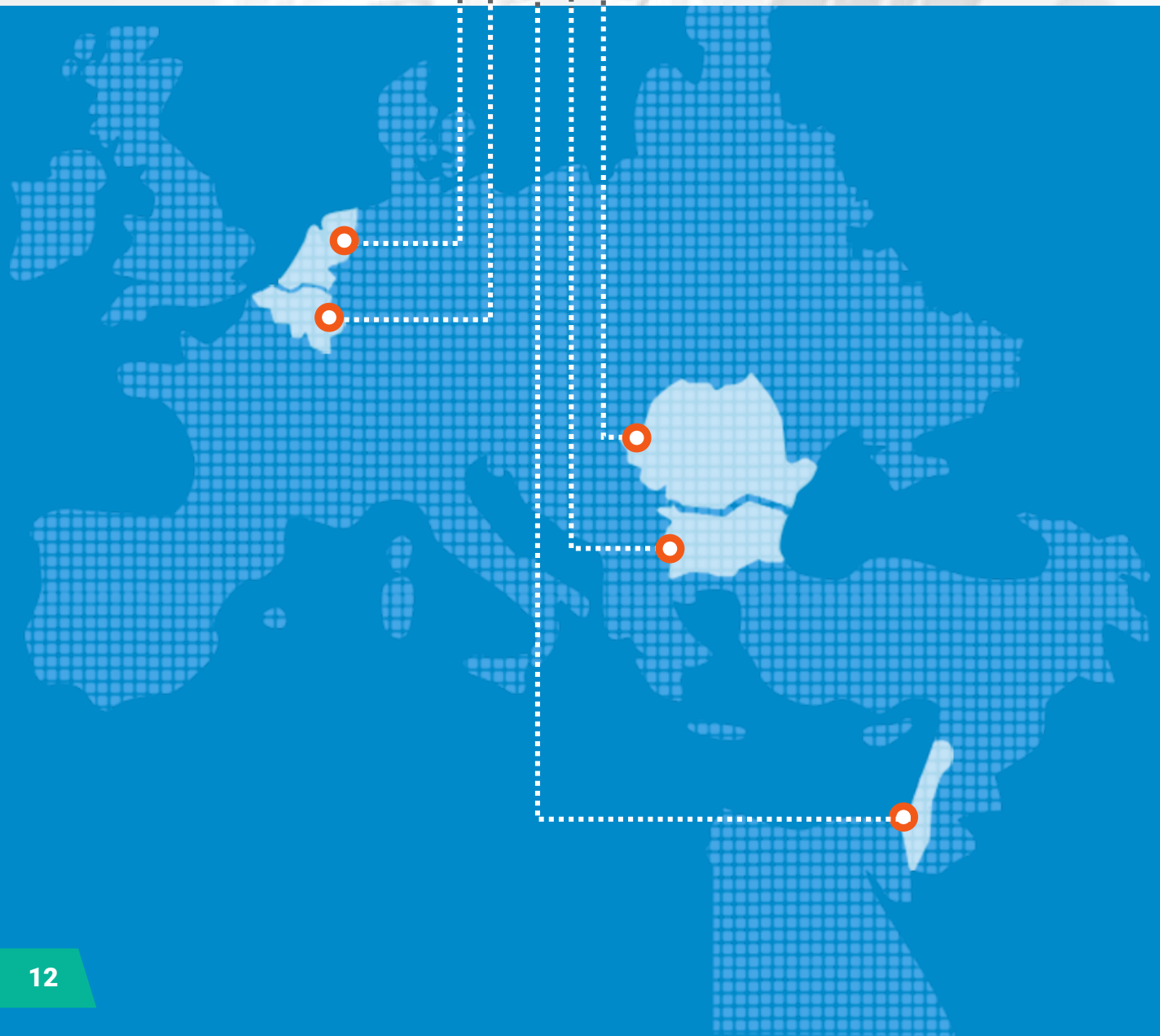
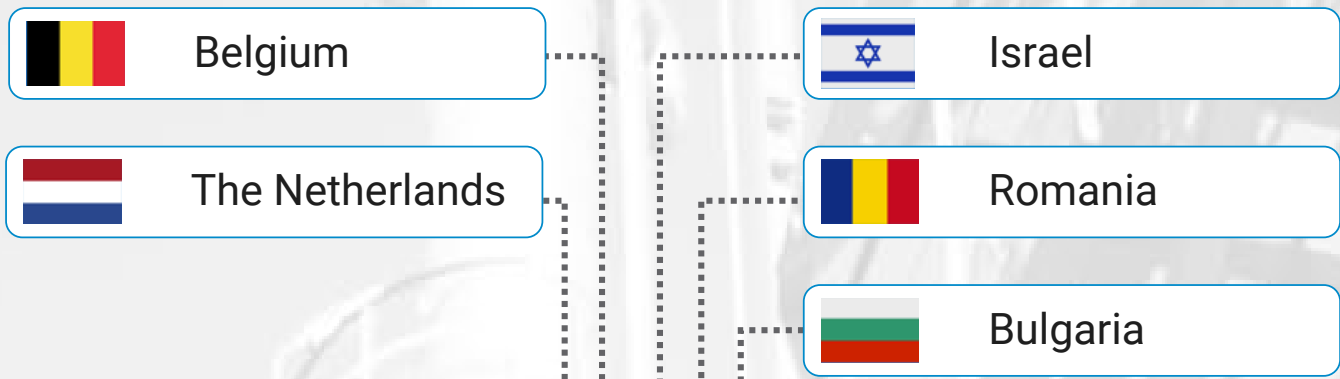
Subsidiaries and SPCs in the environmental and energy fields

- Ludan Environmental technologies Israel
- Eco Tech, Emissions measurements, Israel
- Ludan Energy Overseas Israel/Holland

Where to find us



Global Reach



Spectrum of Services & Clients Sectors



Spectrum of Services & Clients Sectors

Engineering Sector Over 600 active clients

Current Activity

- A significant player in the process industry
- A widespread geographic presence

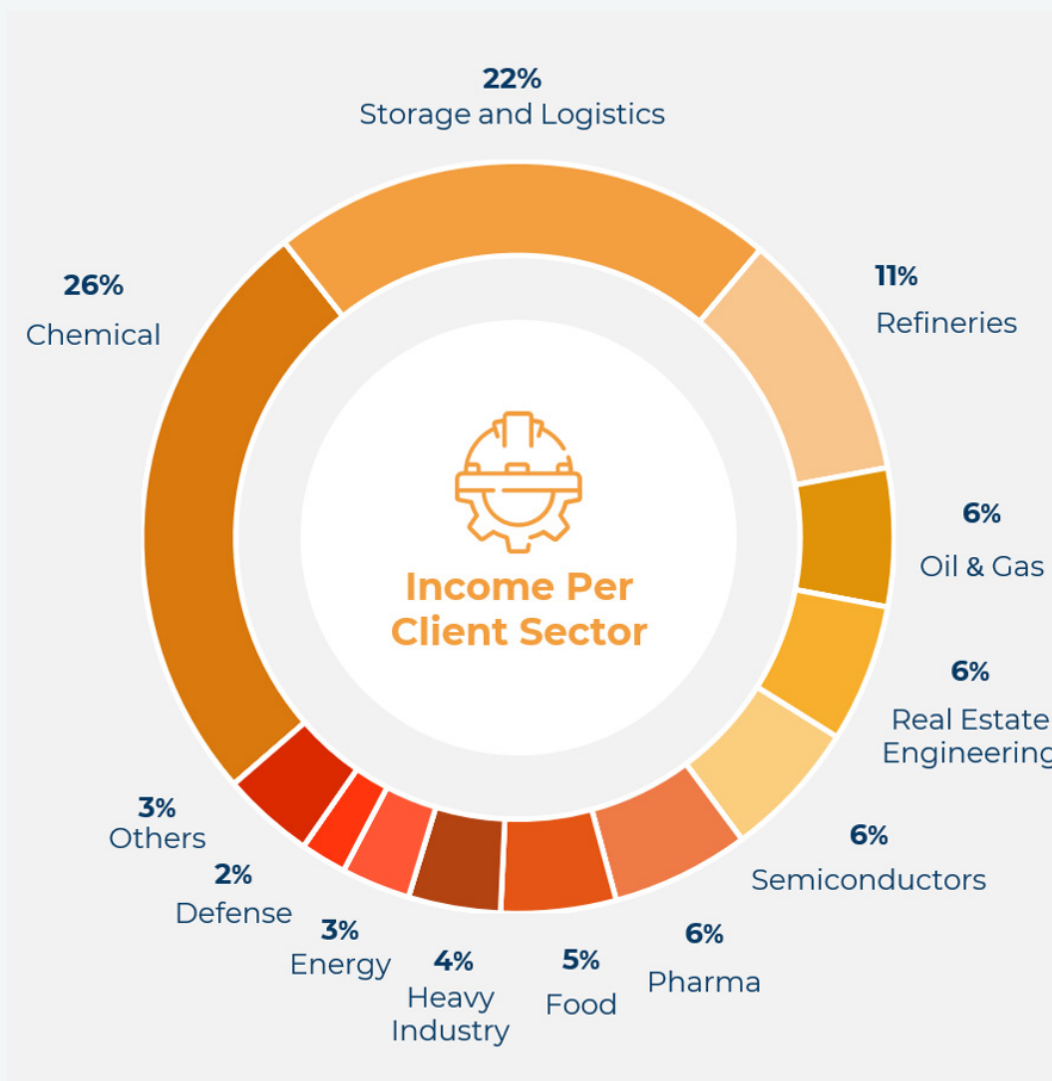
Establishing a Competitive Advantage

- Low Cost Center (LCC) operations
- EPC & Technological project implementation

Services

Services are provided as engineering services in the EPCM or EPC framework, which, inter alia, include:

- Project management
- Preparation and Control of budgets and schedules
- Permitting Authority Engineering
- Multidisciplinary engineering design
- Procurement and contracting
- Construction management and Supervision
- Validation (implementation of international standards, such as FDA/GMP)
- Commissioning



Spectrum of Services & Clients Sectors

Tech Sector Over 550 active clients

Current Activity

- Public transportation
- Homeland Security
- Building management
- Testing equipment for the defense industries
- Software & Cyber security
- Industrial control systems implementation

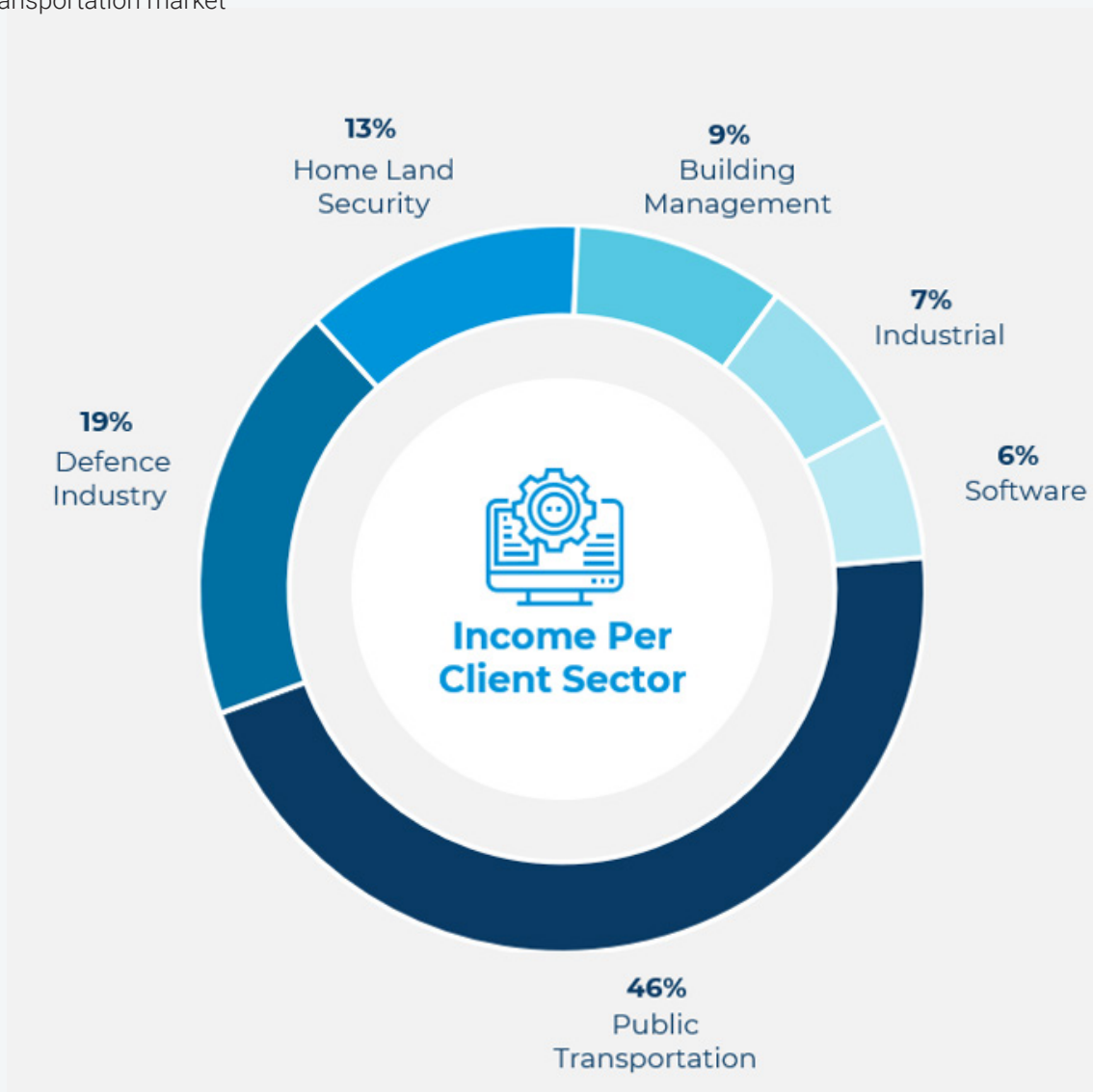
- EMV & cellular payments
- Industry app. software portfolio expansion

Activity Expansion

- Europe based public transportation
- Europe based cyber security
- Rapid growing maintenance portfolio

Establishing a Competitive Advantage

- Product & software development for transportation market



Spectrum of Services & Clients Sectors

Environmental Technology Sector Approx 100 active clients

Current Activity

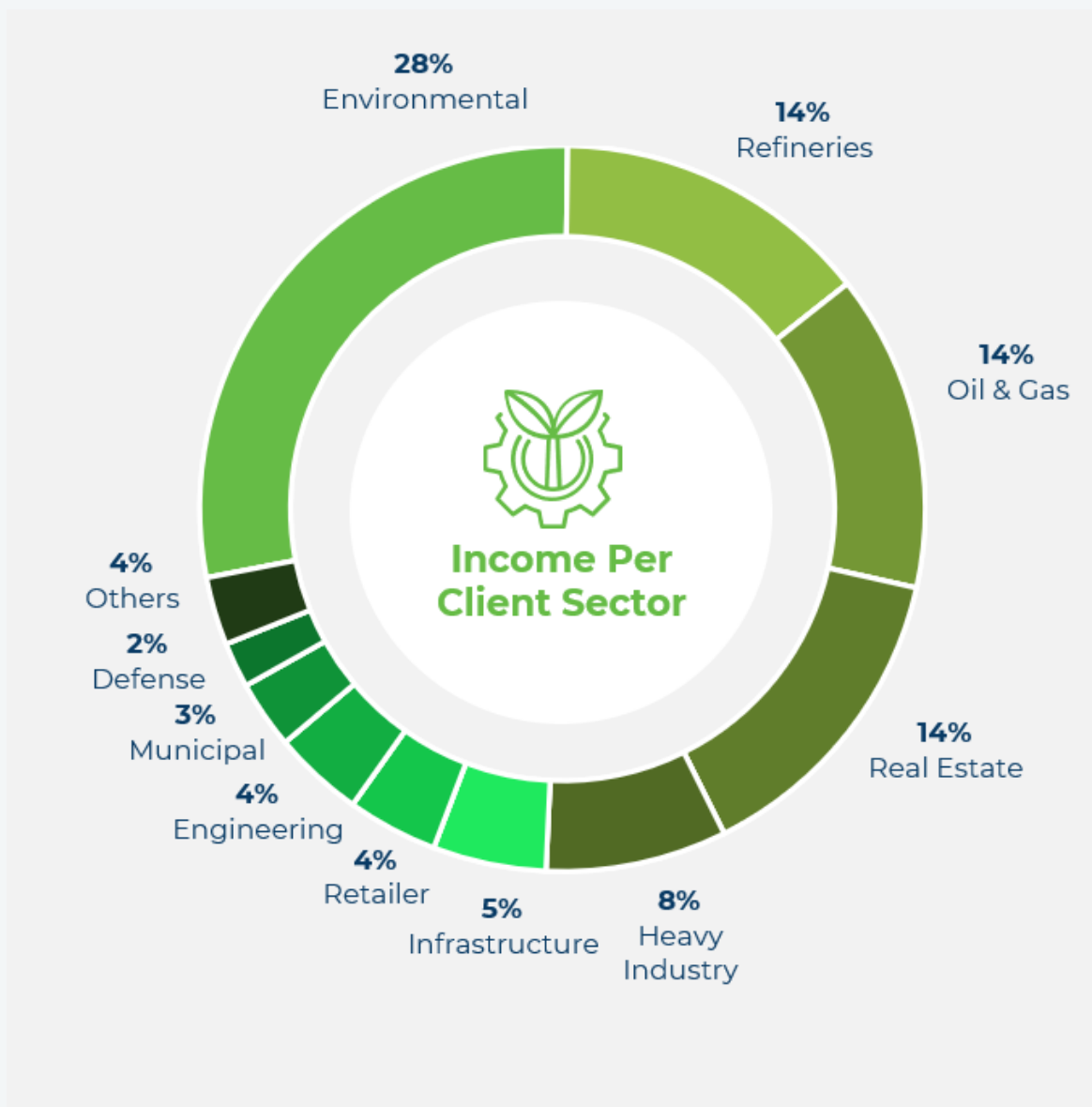
- Environmental consultation for industries & infrastructures
- Pollutant measurements & solution implementation
- Rehabilitation project implementation

Activity Expansion

- Land rehabilitation
- EPC & technology projects
- WTE system initiation, implementation & operation

Establishing a Competitive Advantage

- Relationships with know how providers



Market Presence & Major Clients



Market Presence & Major Clients

Markets/ Industries



Chemical



Energy



Natural gas



Petrochemical and Refining



Pharmaceuticals



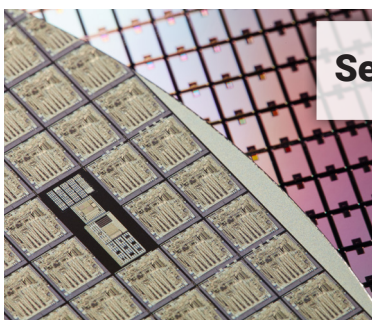
Public Transportation



Defense Industry



Food



Semiconductors



Agrochemical

Major Clients

SEKISUI inovyn one dyas ShinEtsu

HUNTSMAN kooole TERMINALS HEXION™

HES International Abbott gasurhe

ExxonMobil janssen ALBEMARLE® KLM

nyrstar NAM Vopak

TATA STEEL ROTTERDAM ANTWERPEN PIJPLEIDING RAPL Nouryon

Corbion AVR. Aurubis

lyondellbasell Emerald Kalama® Chemical STEDIN.NET

umicore Oiltanking AGT RUBIS TERMINAL vtti

Market Presence & Major Clients



Main 2021 Highlights



Main 2021 Highlights

Sulfur Recovery Unit

Client: Refinery

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

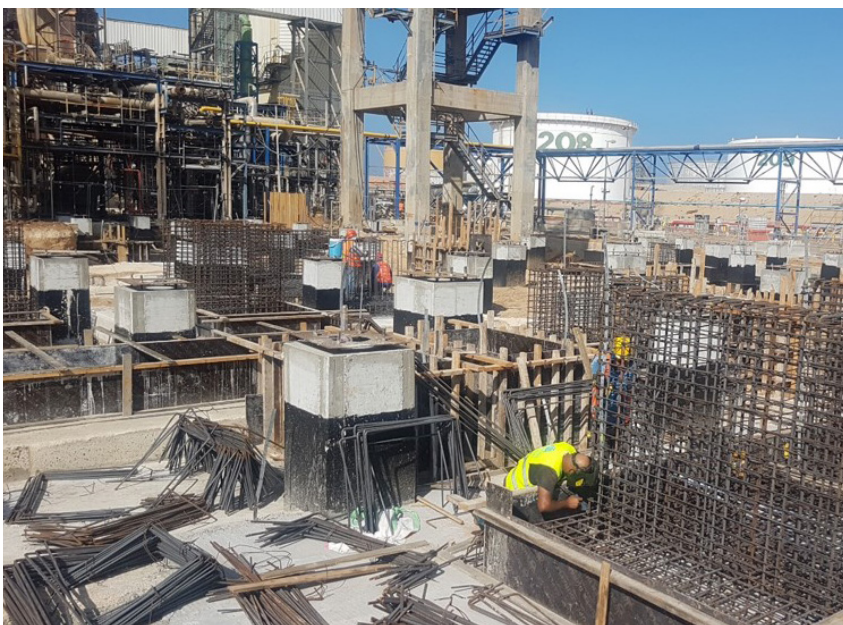
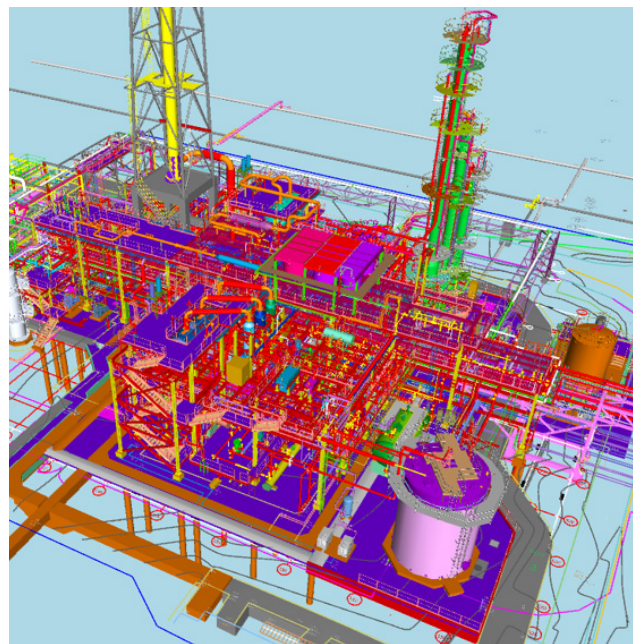
Technology By: Wood, Compimo

Scope: Detail design, Design Management.

Year of Completion: 2022

Project Value: Tens of M USD

- Local Refinery was planning to construct 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.



Main 2021 Highlights

Soreq 2 – Desalination Plant

Client: IDE

Scope: Control System

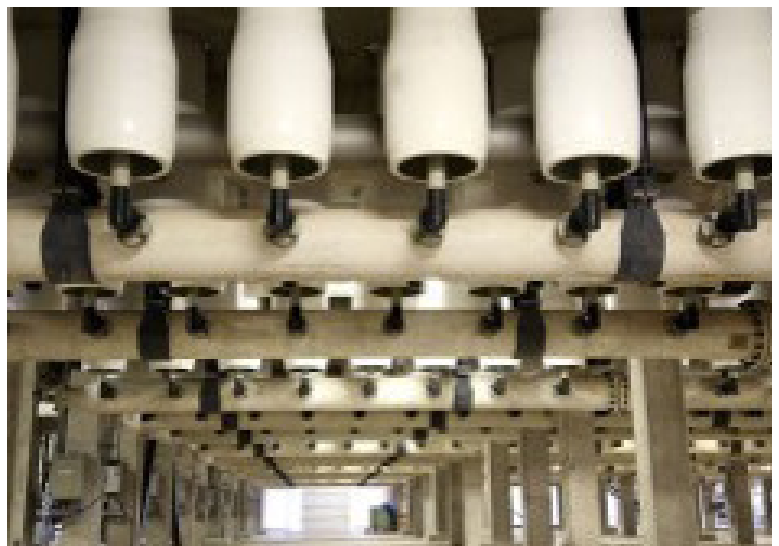
Project Value: Several M NIS

Technology: DCS

Year of Completion: 2023

Project Description

- Soreq 2, is one of the world's largest desalination plants, Ludan Engineering Israel has provided the Instrumentation design & provided the instrumentation & control HW.
- Ardan Control Tech, a Ludan-Tech company was awarded the DCS (Distributed Control System) design and execution. Ardan's project's scope included the design, supply, and programming of the system.



Main 2021 Highlights

Project name: Metronit

Client: Superbus mass transit company

Project Goal: replace the Metronit, a metro – like bus service in the Haifa area

Technology: Ticketing, Fleet Management

Year of Completion: 2021

Project Value: Tens of M NIS

Project Description

Superbus won the Metronit Metro – like bus service in Haifa. Being a long time customer of Symcotech, a Ludan group company, a decision was taken with a few important notes:

- End to End ticketing solution
- Fleet Management
- The debut of an own - manufactured stationary payment equipment.



Main 2021 Highlights

Project name: TEVA Asia Soil Remediation

Client: A real estate company located in a plant previously occupied by a pharmaceutical plant.

Project Goal: Polluted land rehabilitation for construction purposes

Technology: Bioventing, SVE

Year of Completion: 2020

Project Value: Several M NIS

Project Description

- Historical survey and soil sampling program.
- Conducting soil survey using drilling machinery and analytic laboratories .
- Preparing soil pollution status report.
- Preparing soil remediation plan, engineering plan and budget frame.
- Purchase ,supply, installation and test run of advance soil treatment system targeted for volatiles materials in the ground.



Main 2021 Highlights

Project name: PAMA Steam Boiler

Client: Pama

Project Goal: Installation and operation of a new steam boiler.

Scope of work: Connection of a new steam boiler to the national Natural Gas transmission system.

Year of Completion: 2022

Project Value: Several M NIS

Project Description

- As part of the effort for polluting reduction, Ludan EPC Division won the bid to connect a new steam boiler to the natural gas grid.
- The project consists of a 1 km above and below ground 4", 16 bar CS pipeline,
- Erection of PRMS station and an 8" connection to the new boiler.



Main 2021 Highlights

Project name: Yad Haruzim Bus Dipo

Client: Native Ayalon

Project Goal: Upgrading & electrifying public transportation hub

Scope of work: Civil inspection

Year of Completion: 2022

Project Value: several hundreds of K NIS

Project Description

- Upgrading & electrifying public transportation hubs a national interest.
- Ludan infrastructure is providing Management and supervision services for Earthworks, infrastructure & construction of a bus parking site, including energy room and installation of 73 electric charging hubs.



Main 2021 Highlights

Project name: Chemical Plant

Client: Confidential

Project Goal: New chemical manufacturing facility

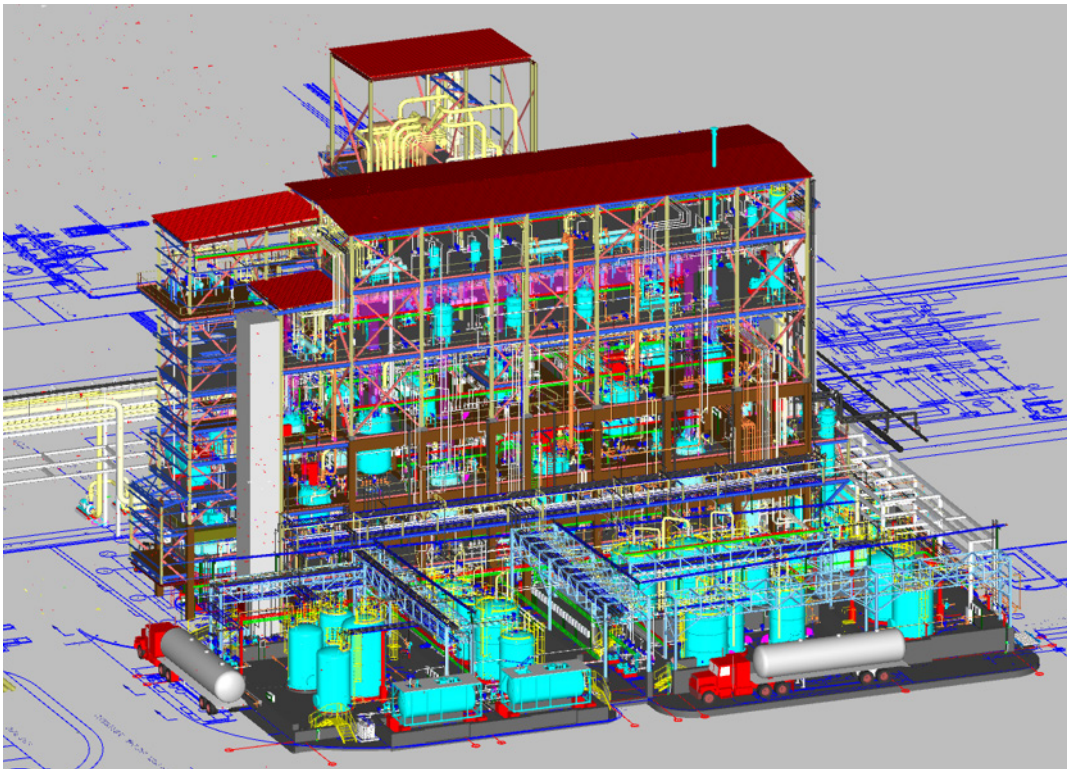
Scope of work: Design & modeling

Year of Completion: 2022

Project Value: several M NIS

Project Description

- Piping design and preparation of 3D modules for the entire project.
- Design of 3,000 isometrics.
- Modeling of 350 equipment units.



Main 2021 Highlights

Project name: Electrolysis Plant

Client: Confidential

Project Goal: New chlorine manufacturing facility

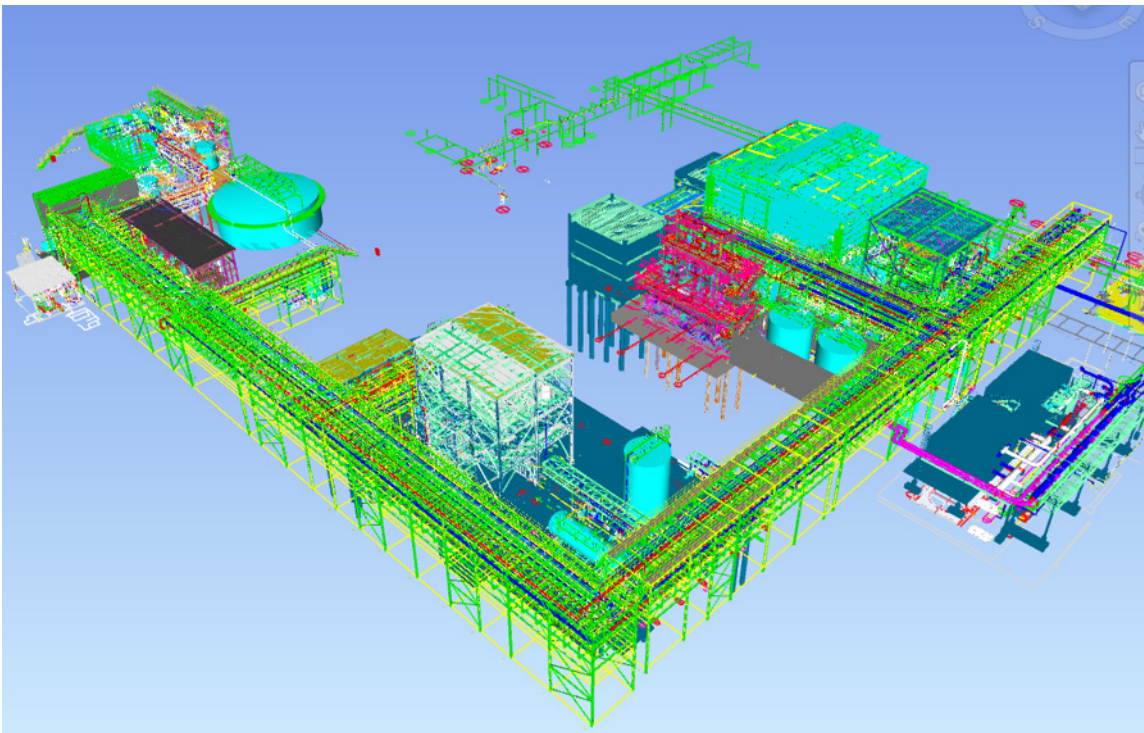
Scope of work: Design

Year of Completion: 2023

Project Value: several M NIS

Project Description

- New Chlorine Production Plant with membrane process which will replace the existing chlorine production plant with mercury cells alkali process.
- The plant is designed to produce 50,000 TPY of chlorine.



2021 - Financial Data



2021 - Financial Data

Consolidated Balance Sheet (in '1.000EUR)	<u>2019</u>	<u>2020</u>	<u>2021</u>
Current assets	63,311	57,738	68,482
Investment in long-term receivables	24,238	20,114	21,055
Fixed assets	3,862	3,563	3,896
Intangible assets after amortization	<u>6,687</u>	<u>7,252</u>	<u>8,308</u>
Total assets	<u>98,098</u>	<u>88,668</u>	<u>101,741</u>
Current liabilities	59,185	52,402	58,032
Long-term liabilities	22,730	18,292	20,392
Minority interest	15,840	17,529	22,940
Shareholders' equity	<u>343</u>	<u>444</u>	<u>377</u>
Total liabilities and shareholders' equity	<u>98,098</u>	<u>88,668</u>	<u>101,741</u>
Consolidated P&L Results (in '1.000 EUR)	<u>2019</u>	<u>2020</u>	<u>2021</u>
Sales	<u>141,500</u>	<u>135,534</u>	<u>134,355</u>
Gross Profit	<u>13,347</u>	<u>14,953</u>	<u>13,768</u>
Operating earnings	6,234	7,726	7,318
Earnings before income tax	4,203	6,416	6,268
Earnings (losses) after income taxes	<u>1,855</u>	<u>3,899</u>	<u>4,264</u>
EBITDA	14,673	15,621	14,503

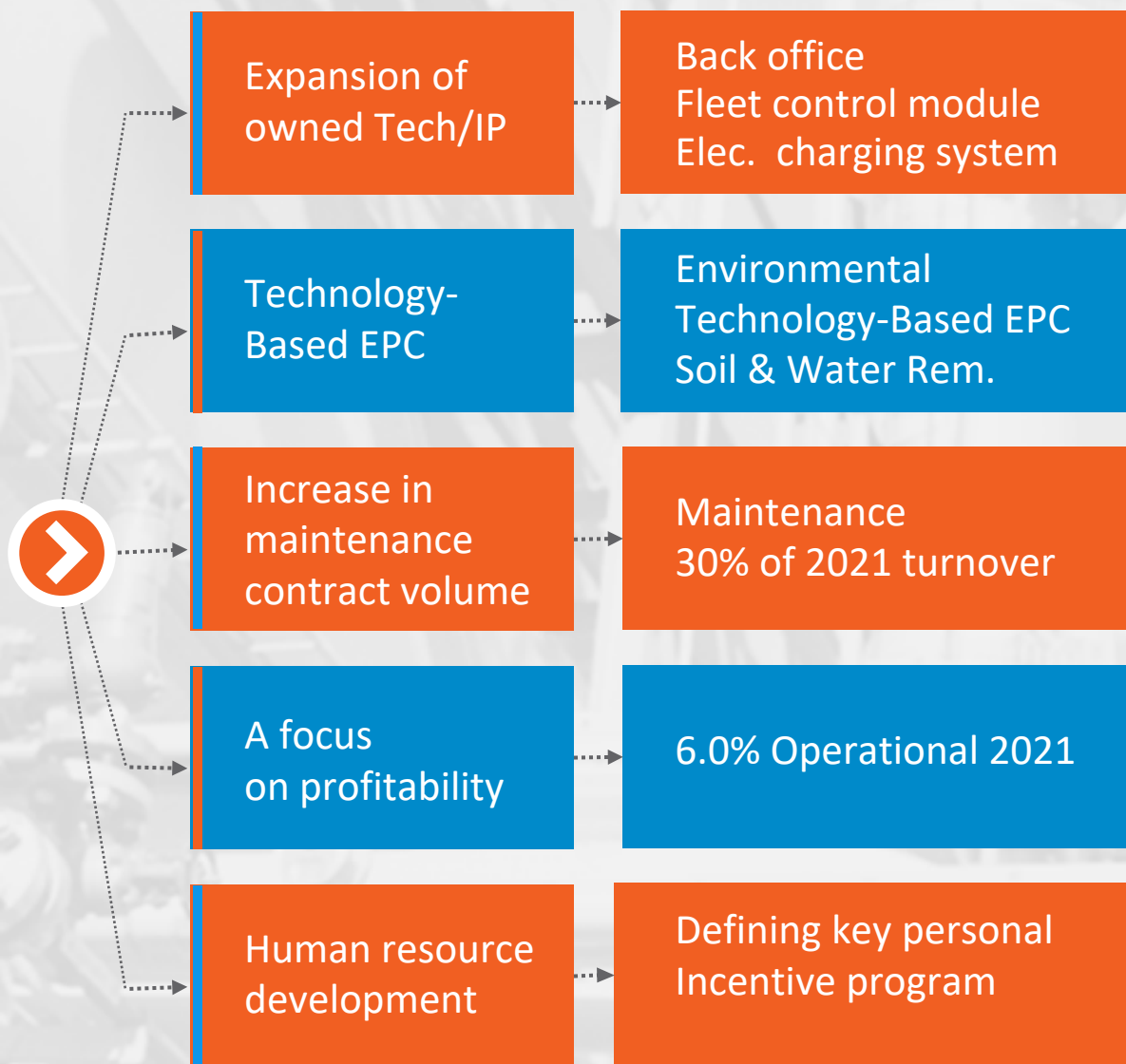
Strategic Objectives



| Strategic Objectives



Realization Methods










Strategic Paths for Future Evolution



Strategic Paths for Future Evolution



Division	Strategic Paths for Future Evolution	
International Engineering Services	Electrical Engineering	
	Energy Storage	
	Protein replacements	
	Circular Industry	
Ludan Tech	Public Transportation	
Environmental Technologies LTD	Waste Water treatment	
	CO2 Capture	

Group Contacts



Group Contacts

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LUDAN
GROUP

global experience
local approach