TRIVIA INDUSTRY Ltd.

Unified presentation

Energy efficiency improvement for industrial investors · Consulting · Design · Implementation

TRIVIA INDUSTRY Technology Integrator and Contractor Ltd. (TID)

Managing Directors: Zoltán Elinger · Róbert Harajka

rev 1.2 · 2026.05.03 · Unified horizontal overview

Presentation structure — modular, customer-perspective structure

EHN = Energy Efficiency-Increase · the chapters can also be used independently

Company presentation

TRIVIA INDUSTRY as an integrated system-level partner — a single contractual relationship across the entire chain

→ Detailed material: TID company presentation source presentation

One contractual partner — full technological responsibility

What TID can do throughout the entire life cycle of an industrial investment

TECHNOLOGY

Equipment delivery

From an internationally qualified manufacturer portfolio, site-specifically designed and prepared. Non-resale: system integrator role.

PLANNING

Engineering design and preparation

Concept plans, regulatory preparation, scheduling and resource planning. Involving design competence centers.

DESIGN

On-site implementation and handling

Logistics, subcontractor coordination, site management, test run, handover. A single responsible partner for timeliness, cost containment and quality.

Official IDs and Contact

Hungarian-owned company suitable for general contractor position

Company name	TRIVIA INDUSTRY Technology Integrator and Contractor Limited Liability Company
Short name	TRIVIA INDUSTRY Ltd. (TID)
Headquarters	H-1021 Budapest, Hűvösvölgyi út 14.
Office	H-1037 Budapest, Máramaros Street 47.
Company registration number	01-09-307721
Tax number	26205494-2-41
MKIK registration number	11B20714 (construction contractors)
TEÁOR (main)	4299 — Construction of other engineering structures n.e.c.
Availability	info@triviaindustry.com · www.triviaindustry.net

Structured operation, documented project work

Since 2017 — with ownership expertise and direct management participation

FOUNDATION

Foundation and construction

Founded in 2017 and headquartered in Hungary. The current ownership group built the operating structure in 2019; full-scale industrial project activity started in 2020.

EXPERIENCE

Owner's professional experience

Management experience in the implementation of energy, chemical, gas and water industry projects. Industrial systems delivery, contract project management, general contractor position.

OPERATION

System-level, documented operation

Flexible organizational structure. Project-based operation, documentation discipline, direct executive decision-making — a unified technical approach.

Nine international technology partnerships

Each manufacturer is a certified, validated technology player in their own field

BMH Technology FI

Waste and biomass fuel

Large-scale solid waste/biomass preparation. TYRANNOSAURUS® RDF/SRF systems; 200+ references.

GASSO SA ES

Liquid handling (since 1875)

Loading bridges, loading arms, safety switches, excise meters. 90+ countries; API/EN/ATEX.

Kelvion DE

Industrial heat exchangers (since 1920)

Plate, tube bundle, welded and air side heat exchangers. 60+ manufacturing units and service centers.

Kraftblock DE

Industrial thermal energy storage

Patented solid-state heat storage up to 1300 °C, 1.2 MWh/m³. Modular containerized design; 85% recycled material.

Leanbyte DE

Industrial digitalization and Lean

Digital work orders, maintenance, KPI dashboard. ERP/MES/SCADA compatible SaaS platform.

Rantotek FI

Industrial boiler design (since 1985)

Member of Comatec Group. Oil, gas, biomass, waste combustion. EN/PED/ASME; 200+ projects.

SIAD IT

Industrial gas technology (since 1927)

Biogas, CO_2, LNG, oxygen, nitrogen treatment and liquefaction. ISBT/EIGA/API/GMP certified.

Sumitomo SHI FW JP

Fluidized bed boiler systems

BFB and CFB fluidized bed boilers — biomass, waste, coal. Low NOx/SOx, high efficiency, CHP.

ZenRobotics FI

AI-based waste sorting (since 2007)

ZenBrain AI control with HD cameras, 3D laser scanner, multispectral sensors. 24/7 robotic arms.

Main areas of offer

Site-specific selection, integration, installation, commissioning and maintenance — with project-based integration

Heat exchangers and cooling

Plate, tube bundle, finned tube, compact heat exchangers; air coolers, cooling towers, condensers, evaporators.

Combustion technology and energy

Fluidized bed and grate fired boilers, steam generators, heat recovery units, emission reduction, cogeneration.

Fuel preparation

Waste and biomass-based systems, RDF/SRF technologies, shredding, sorting, dosing.

Energy and heat storage

High-temperature solid-state storage (Kraftblock); time-shifted energy consumption, peak support.

Gas and filling technology

Air separation, LNG, biogas, CO_2; loading docks, safety systems; excise measurement.

Robotic sorting and digitalization

AI-based sorting systems (ZenRobotics); digital work management (Leanbyte); SCADA/MES integration.

Trade and investment service package

From technical consultation to handover — within a unified methodological framework, modularly

TRADE

Equipment delivery across the entire chain

- Technical consultation and specification
- Bidding and scheduling
- Coordination of factory services (testing, documentation, packaging)
- Project-specific logistics (customs clearance, partial shipments)
- Installation and test run (mechanical, electrical completion)
- Long-term support (maintenance, spare parts, training)

INVESTMENT

Full life cycle, in a general contractor position

- Decision preparation (technology and manufacturer selection)
- Project preparation (technical requirements, regulatory frameworks)
- Manufacturer preparation (specification, configuration, contract)
- Execution (on-site construction management, subcontractor coordination)
- Handover and commissioning (test load, training, documentation)
- Post-investment services (maintenance, controlling)

Modularly scalable, pre-configured project packages

Fast quotation · lower investment risk · standardized technical, economic, legal parameters

BASIC

Open cycle wet cooling tower

For water cooling in energy, chemical and technological processes. Countercurrent evaporative cooling.

BASIC

Cooling tower for power plant recooling

For cooling high-performance condensing power plants, as an open counterflow wet system. Also an optimization variant for nuclear power plants.

BASIC

Air cooler for recooling compressed natural gas

Waterless cooling for gas compressor stations. Particularly advantageous in areas with water shortages.

BASIC

Modular grate-fired boiler facility

Biomass/co-fueled heat and/or electricity production equipped with Sumitomo–WOIMA modules. Also suitable for cogeneration.

Certified quality assurance and industry references

ISO systems · key customers · own TID projects

Certifications and standards

- ✓ **ISO 9001** — quality
- ✓ **ISO 14001** — environment
- ✓ **ISO 45001** — occupational health
- ✓ **EN ISO 3834** — welded manufacturing
- ✓ **ASME** — American Pressure Vessel
- ✓ **PED** — European Pressure Vessel

Key customers (energy, chemical, gas, utility sectors)

Veolia	**MVM Mátra / ERBE**	**Kozloduy AE**	**FGSZ**	**BorsodChem**
MOL Group	**Hamburger Hungary**	**Hungarian**	**Bunge**	**Aerzen Hungary**

My TID general contractor references

Lips — Industrial investment processing · zero warranty claims

Urban land — Industrial investment processing · zero warranty claims

Modular organization · industrial association · continuous development

Details in chapters [6] NPM, [7] investment facilitation and [8] partnership

ORGANIZATION

Modular, clustered operation

40 well-defined areas of expertise, cross-functional collaboration, common IT and quality assurance platform. Contractual involvement of external resources (subcontractors, consultants).

ASSOCIATION

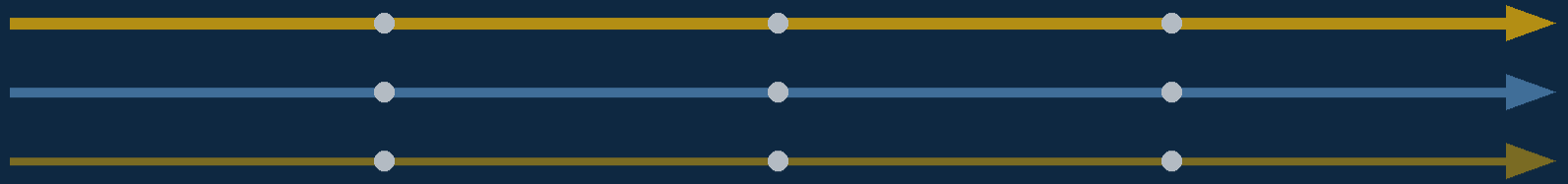
Hungarian-owned integrated system

Association of Hungarian companies in the position of general contractor. Extensive range of contracted consultants (with experience in technical management, plant management, system integration).

DEVELOPMENT

System program with eight focus areas

Project management · product portfolio · cluster structure · template system · digital operation · QA · knowledge management · communication. Continuous system-level development.



1 Lean management

Loss-based interpretation — Lean starts with precise problem definition

→ Detailed material: Lean Management Executive Study (TID-EHN-LEAN)

What does TID.EHN mean and why is it Lean?

Less energy for the same or improved production performance — per unit of product, operation, operating hour

01

Multiple energy types at once

Electricity, natural gas, steam, heat, cooling, compressed air, pumping, ventilation, process water, wastewater and related CO_2 impact. Not just electricity reduction.

02

Not a voluntary reduction

Technology cannot be stopped, quality cannot be compromised, operational safety cannot be compromised. Finding a balance between production, quality, cost and sustainability.

03

Loss-based interpretation

Not all energy use is a loss. A loss is one that does not contribute proportionately to value creation or is unreasonably high for technical, regulatory, or maintenance reasons.

What NOT and what YES Lean approach TID.EHN

Lean starts with defining the problem precisely — technology selection is a consequence, not a starting point

✗ WRONG APPROACH

Not Lean

- Energy audit in itself — without system boundary, baseline, responsible and back-measurement logic
- Pre-selected technology (heat exchanger, heat pump), for which a reason for savings is sought afterwards
- Analysis based solely on energy bills — without operating conditions and production normalization
- Investment decision without a clear recipient, utilization time window and reversibility

✓ LEAN APPROACH

Correct approach

- Cleared test system boundary, identifiable loss location, interpretable initial state
- Available or developable measurement system, financially quantifiable loss
- Prioritizable measures, measurable results after the intervention
- Receiving side and uncoupling point pre-determined

Structured tools and measurable results

Baseline · specific KPIs · responsibility order · auditable document output

TASK COMPONENTS

9-step method

Goal setting → system boundary → data collection → loss identification → indicators → action → project preparation → implementation → maintenance. Document output and responsibility for each step.

KPI HIERARCHY

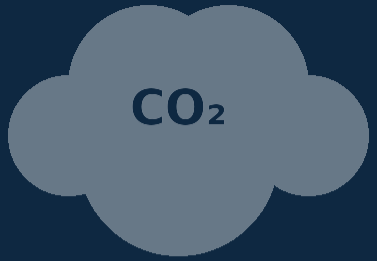
Measurable result

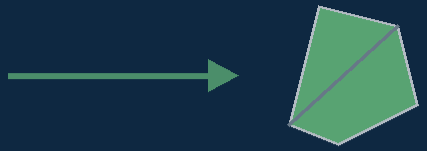
Baseline recording, specific energy consumption indicators (kWh/t, kWh/m³, kWh/operating hour), normalized comparison for production and environmental variables. Back-measurement from the first to the last step.

CUSTOMER ADVANTAGE

Auditable project fund

A structured study that is suitable for both managerial and financial decisions, bank/tender financing negotiations, and later evaluation — not advertising material, but a basis for decision-making.





2

CO_2 management

No quota promise — value discovery system from industrial loss to investment value

→ Detailed material: CO_2 management public management material (TID-EHN-CO_2-PUB-01)

Four key messages for executive decision preparation

Customer and decision-preparation approach — does not replace the existing energy partner, but builds on it

PRINCIPLE 1

No quota promise

CO_2 management in EHN is not a quota promise, not a stand-alone emissions register. Measurable energy savings, emission impact and financial value come from energy and operational losses.

2. FITNESS

It makes sense with an existing partner

Audit, expert reference report, measurement data, ETS or HEM/EKR background are not obstacles to be overcome, but inputs. From these, a system boundary, decoupling point, receiving side and CAPEX/OPEX picture can be created.

3. RESPONSIBILITY

Distinguished statements

We precisely separate the proven fact, the calculated effect, the conditional possibility, and the question yet to be examined. This provides a basis for decision-making — not a mood picture or advertising material.

4. VALUE LAYERS

Separately managed values

Basic return from net energy savings realized in own system. CO_2, ETS and HEM/EKR value separate value layers. External heat utilization separate contractual revenue — not the same as own CO_2 savings.

What we do and what we don't do — clear positioning

Decision-preparation fund — technical-financial content, not marketing message

✓ ASSIGNABLE

What TID does

- Determination of measurable net energy savings on a system boundary basis
- Calculation of CO_2e equivalent for the given operating mode and fuel mix
- CAPEX/OPEX picture, payback period and risk ranking
- Preliminary examination of HEM/EKR and ETS compatibility
- ESG/CSRD relevance indication (with CSRD-ESRS reference points)
- Auditable, documented investment package

✗ NOT ACCEPTABLE

What we don't promise

- Forecast of specific ETS quota value (depends on market factors)
- Issuance of official certificates (task of a separate accredited organization)
- Guaranteed application success (fund owner's own decision)
- Automatic addition of external heat sales revenue to your own CO_2 savings
- We are not replacing the existing energy specialist — we are building on him/her

What does the TID CO_2 management package give the customer?

Built on existing data — fast entry, low administrative burden

FINANCIAL

Numerical value

Net energy savings in financial equivalent. CO_2 and ETS value in separate layers. CAPEX-OPEX payback model. Banking/tender negotiation with solid figures.

TECHNICAL

System-wide image

System boundary, decoupling point, receiving side clearly defined. Internal vs. external utilization separated. Investment risk managed in a structured manner.

COMPLIANCE

ESG and reporting

CSRD/ESRS relevant data points, ETS and HEM/EKR compatibility, CBAM impact pre-indicator. Auditable documentation trail — for later investigations.

3

EHN concept

Energy Efficiency-Increase — industrial loss detection · investment preparation · implementation · financing

→ Detailed material: EHN sales guide source presentation

Industrial energy loss: hidden, but measurable and recoverable

Exhaust steam, heat released in cooling towers, condensate, waste heat from engine cooling circuits — normal operating side effect, not an exception

OBSTACLE 1

Not measured

The loss does not appear on a separate measurement — it is merged into the general energy bill. There is no system-boundary, technology-level measurement breakdown available.

OBSTACLE 2

Not quantified

Natural losses are not translated into a financial equivalent and are therefore not visible to decision-makers. The annual equivalent of each loss category can be in the order of tens of thousands to millions of EUR.

OBSTACLE 3

No receiving site

Heat can only be recovered if there is a place to introduce it. The receiving side and the disconnection point must be examined separately — otherwise the investment cannot be realized.

OBSTACLE 4

No investment program

The loss is known, but there is no CAPEX, OPEX, return on investment number, or project package — that's why it remains in the account. Without a study, there is no basis for banking/tender negotiations.

Five-step value chain — from exploration to implementation

A seamless process — a single contractual partner for on-time, cost and quality

1

Loss-exploration

The role of TID

Study, data processing, system boundary, financial calculation

Customer benefit

It becomes clear where and how much the loss is.

2

Project-training

The role of TID

Uncoupling point, receiving side, investment concept

Customer benefit

Turn a loss into an investment opportunity

3

Live-making

The role of TID

On-site clarification, request for quotation, CAPEX/OPEX, scheduling

Customer benefit

A project package suitable for decision-making is being prepared.

4

Financial-Syrianization

The role of TID

Mediated search for tender or banking resources

Customer benefit

Reduced need for own resources, project can be financed

5

I-implementation

The role of TID

EPCM / project management / construction integration

Customer benefit

The study doesn't stay in the drawer — the project becomes a reality

Financial · technical · compliance benefits

Not a long-term theoretical green project — a quickly returning investment, documented

FINANCIAL

Quick payback, numerical basis

Hidden loss expressed in financial equivalent. 2–5 year payback for well-selected projects. Investment ranking — CAPEX in the most valuable direction. Documented, calculated project for the bank.

TECHNICAL

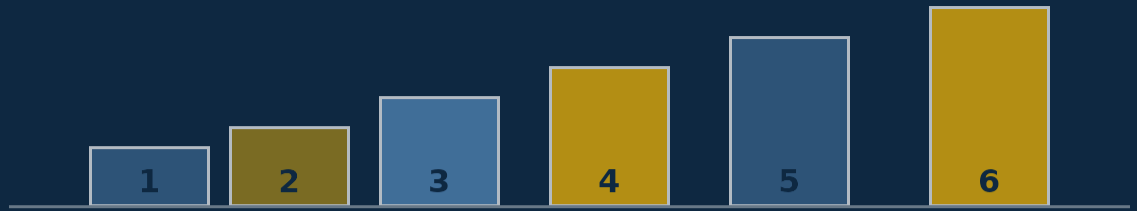
Systems thinking

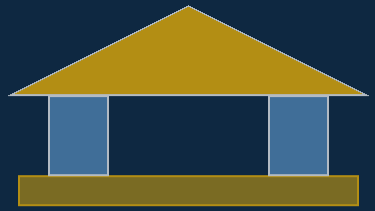
Source → decoupling → receiving side → integration set. Precise system boundary, site-specific solution. Non-manufacturer offer — independent engineering assessment.

ESG / COMPLIANCE

Handling external pressure

Energy price volatility, EU expectations, financier and customer chain pressure. CSRD/ESRS-relevant data, ETS and HEM/EKR alignment, CBAM preliminary signal. Timeliness: why now.





4 Product portfolio

Packaged, modular portfolio — pre-defined scope, inputs, deliverables, and verification points for each element

→ Detailed material: TID products portfolio catalog (rev 1.5)

Clearly defined packages — same issues for all elements

Stable conceptual basis, customer decision support — common technical and business language from offer to handover

QUESTION 1

Scope

What is included in the package and what is not — a pre-set technical and commercial boundary.

QUESTION 2

Inputs

Data, location, documents, collaboration points — precisely named.

QUESTION 3

Outputs

Concrete, transferable result — technically understandable and commercially accountable.

QUESTION 4

Verification points

How to check compliance — protocol order, measurement and test points.

QUESTION 5

Connections

Connection points with other actors and systems — no gray area.

QUESTION 6

Exclusions

What is not part of the package — communicated in advance so there is no subsequent discussion.

Six building blocks — system-level integration of goods and services

Goods · Service · NPM · Product · Facility · BASIC facility — the conceptual basis of the portfolio

GOODS

Physical technical object

Article number, catalog management. Natural · financial · time characteristics (size, price, deadline).

SGT — SERVICE

Time-based activity sequence

Inputs (goal, location, data) → outputs (plan, protocol, commissioning). Transferable result.

NPM

Network-based project management

Structured processing of goods + services on an agent basis. For EPC, EPCm, BASIC implementation.

TMK — PRODUCT

Goods and services together

Unified value proposition: technically understandable, commercially accountable, operationally maintainable.

LTS — FACILITY

Connected set of equipment

Complex product — subsystems with system-level delivery. 11 main types (energy generation, heat supply, cooling, …).

BSC — BASIC FACILITY

Standardized, repeatable package

Pre-recorded technical content, documentation package, risks and exclusions — quick to understand.

Nine targeted partial packages — fast, accountable partial sorting

It is worth signing a partial contract if the buyer is not signing for the entire investment, but only for a specific area.

3.4.1
Planning and design control

Requirements program, plan list, requirements matrix.

3.4.2
Document digitization

Retrievability, document repository, metadata order.

3.4.3
Energy/water efficiency, CO_2

Measurable savings, intervention package.

3.4.4
Environmental impacts

Risk map, list of deficiencies and measures.

3.4.5
Property valuation

Asset inventory, condition matrix, valuation method.

3.4.6
Maintenance organization

Maintenance program, inventory policy, records.

3.4.7
Condition diagnostics

Error list with urgency, order of intervention.

3.4.8
Facility digitalization

Unified device and system trunk, hierarchy.

3.4.9
Remote monitoring

Monitoring checklist, reaction schedule, logging.

Planning · Document · Energy/water/CO_2 · Environment · Assets

Customer value and deliverables — each package can be ordered separately

3.4.1	**Planning and design control**	**Customer value:** Accountable design basis; clarification of requirements program and design phase requirements **Deliverables:** Design schedule, requirements matrix, inspection report, schedule and cost horizon
3.4.2	**Document digitization**	**Customer value:** Tidying up facility documentation; usability in operation **Deliverables:** Structured digital document repository, metadata order, list of gaps
3.4.3	**Energy/water efficiency, CO_2**	**Customer value:** Measurable savings with operational safety; verifiable emission reduction **Deliverables:** Baseline image, intervention package, calculation logic, verification points
3.4.4	**Environmental impacts**	**Customer Value:** Evidence-Based Risk Assessment; Steps to Compliance **Deliverables:** Risk map, shortage list, sampling plan proposal
3.4.5	**Property valuation**	**Buyer value:** Replacement value, depreciation, insurability, renovation needs **Deliverables:** Asset inventory and condition matrix, method description, list of renovation proposals

Maintenance · Condition diagnostics · Digitalization · Remote monitoring

Customer value and deliverables — modularly integrated into existing operations

3.4.6	**Maintenance organization**	**Customer value:** Planned, traceable maintenance; criticality, responsibility, parts order **Deliverables:** Maintenance program, worksheet schedule, inventory policy, critical parts list
3.4.7	**Condition diagnostics**	**Customer value:** Quickly uncover hidden errors with evidence; prevent downtime **To be submitted:** Photographic fault list with urgency, intervention sequence, parts and work recommendations
3.4.8	**Facility digitalization**	**Customer value:** A unified digital technical image suitable for operation; device and system mapping **Deliverables:** Unified device and system master, facility hierarchy, document reference
3.4.9	**Remote monitoring and condition monitoring**	**Customer value:** Continuous remote monitoring; early warning; verifiable response plan **Deliverables:** Monitoring point list, alarm logic, remote access and logging

Three interconnected product focuses — a unified methodology

Needs and losses identification · measurement and verification scheme · scheduled savings and emission reduction values

ENERGY

Energy management

- Exploring needs and losses
- Reduction of primary and secondary energy consumption
- Heat recovery and integration
- Own production and storage
- Contractual optimization of purchased energy
- Measurement and verification procedure

WATER

Water management

- Water balance and critical user points
- Recycling and reusing
- Cooling water and process water circuits
- Wastewater pretreatment and environmental compliance
- Measurement and zonal analytics (AMI, DMA)
- Maintaining operational safety

CARBON DIOXIDE

Carbon management

- Direct emissions (Scope 1)
- Purchased energy emissions (Scope 2)
- Continuous emission monitoring (CEMS-CO_2)
- Emissions reduction program
- CCUS — separation, condensation, storage
- Verification and reporting procedure

5

Equipment portfolio

Retrofit-type main equipment — for operating, high-energy industrial facilities

→ Detailed material: TID equipment portfolio (rev 0.2B)

Seven system categories — a canonical product family with 76 equipment types

The starting point of the portfolio is not a single technology, but a system of loss sources

11 EQUIPMENT TYPE

Snow

Waste heat, flue gas, surface heat losses, process heating integration, heat recovery and heat storage.

9 EQUIPMENT TYPE

Steam

Steam and condensate systems, losses between pressure levels, steam traps, blowdown, feedwater preparation.

9 EQUIPMENT TYPE

Water

Technological water recycling, utilization of hot water, cooling circuits and water treatment side losses.

7 TYPES OF DEVICE

Drive

Motor systems, part-load losses, power quality, brake energy recovery, high-efficiency drives.

7 TYPES OF DEVICE

Pumping

Pressure boosting, hydraulic separation, buffering, fluid movement, loss reduction of hot fluids.

6 TYPES OF DEVICE

Air

Compressed air systems, compressor heat recovery, condensate treatment, leakage, central control.

8 TYPES OF DEVICE

Cooling

Utilization of condensation heat from refrigerators, free cooling, superheat utilization, waste heat-based cooling.

Retrofit focus · three mechanisms for loss reduction

Equipment selection is always a system integration task — not just product selection

SCOPE — includes

✓ Retrofit solutions for operating industrial facilities
✓ Main equipment that can be installed additionally
✓ Systematic management of sources of loss
✓ Interpreted as a system integration task

EXCLUSION — not included

✗ Complete core technology replacement
✗ Establishment of a new plant (greenfield)
✗ Solutions that can only be understood by redesigning the entire technological line
✗ Site audit, detailed feasibility study

Three basic mechanisms for loss reduction

M1

Prevention/reduction

Preventing or reducing loss at source.

M2

Internal return

Disconnecting the loss current and returning it to the same or another internal consumer circuit.

M3

External utilization

Utilization of the loss in an external or other system.

Thermal systems — main equipment groups

Equipment types by system category — selection from the 76-item canonical product family

HEAT — 11 equipment types

Waste heat recovery and heat storage

- Flue gas economizer
- Plate and tube bundle heat exchangers
- High temperature industrial heat pump
- Waste heat generator (HRSG)
- High temperature solid state heat storage
- Air preheater (LUVO)
- ORC organic fluid power plant

STEAM — 9 equipment types

Steam, condensate, blowdown

- Degassing tank (deaerator)
- Steam-water heat exchange station
- Vapor jet compressor (MVR)
- Steam trap station and monitoring
- Steam accumulator
- Condensate accumulator
- Blow-off heat recovery unit

WATER — 9 equipment types

Recycling and water treatment

- Technological water recycling system
- Heat-loaded water heat recovery
- Closed water circuit heat exchanger station
- Condensate recovery tank
- Blowdown water heat recovery module
- Reverse osmosis (RO) system
- Membrane filter / ultrafilter (UF)

Mechanical and energy systems — main equipment groups

Equipment types by system category — selection from the 76-item canonical product family

DRIVE — 7 equipment types

Motorized systems

- Frequency converter
- Regenerative frequency converter
- Brake energy regeneration
- Common DC bus regenerator
- Soft starter
- IE5 high-efficiency motor
- Active filter

PUMPING — 7 equipment types

Fluid movement

- Speed-controlled pump
- Hydraulic separator
- Buffer tank for pump circuit
- High temp. circulation pump
- Vacuum pump
- Magnetic clutch pump
- Density meter control

AIR — 6 equipment types

Compressed air systems

- Oil-free screw compressor
- Frequency converter compressor
- Heat recovery module
- Central pressure controller
- Leakage measurement system
- Adsorption dryer

COOLING — 8 equipment types

Cooling technology

- Heat recovery chiller
- Free-cooling
- Adiabatic dry cooler
- Central water cooler (chiller)
- Absorption refrigerator
- Air-cooled condenser
- Hybrid cooling tower

Portfolio building strategy — fast / project / niche

Not just technological, but also risk and organizational order — it determines the customer entry point

WAVE I

Core portfolio — rapid market opening

Standardizable, fast-recommended items. Moderate integration risk, repeatable offering logic.

Typical product range:

- Flue gas economizer
- General heat exchangers
- Frequency converters for standard drives
- Basic elements of a compressed air system

TID role: fast pre-screening, offer preparation

WAVE II

Project portfolio — integrator role

Technologies requiring more serious technical preparation, system boundary interpretation and CAPEX/OPEX preliminary study.

Typical product range:

- High temperature industrial heat pump
- Mechanical vapor compressor (MVR)
- Waste heat generator (HRSG)
- Technological water recycler

TID role: system integrator, preliminary study creator

WAVE III

Special portfolio — niche

Technologies that are technically interesting, have a rarer market, require more references, or have a higher manufacturer support risk.

Typical product range:

- ORC (Organic Rankine Cycle)
- Kalina cycle waste heat recovery plant
- Thermoelectric generator
- Membrane condensation systems

TID role: technology qualifier, niche partner

Three time horizons for customer decision and implementation sizing

The portfolio is modular — the buyer is not obligated to sign up for the entire package from the first to the last step

SHORT DISTANCE

90 days

What the buyer can expect:

✓ Quick-win projects — frequency converter connection, heat exchanger replacement, compressor modernization

✓ Loss analysis study with specific savings ranges

✓ Quick quote for standard equipment

✓ Initial measurement package and baseline

MIDDLE RANGE

12 months

What the buyer can expect:

✓ System integration projects — heat pump, waste heat boiler, process water recycling

✓ CAPEX/OPEX model and investment package with financing directions

✓ Site-specific system boundary designation

✓ Implementation of the first complex investment

LONG DISTANCE

36 months

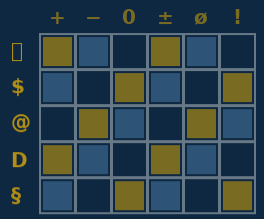
What the buyer can expect:

✓ Strategic partnership — site or program-level investment packages

✓ Combined solutions (energy · water · CO_2)

✓ Selective introduction of niche/special technologies (e.g. ORC, Kalina cycle)

✓ Long-term maintenance and controlling support



EDVE
Előkészítés
Döntés
Végrehajtás
Ellenőrzés

6

NPM methodology

Network-based project management — structured, agent-based, IT-integrable project management

→ Detailed material: NPM methodology management study

What is TID NPM and what does it offer to industrial investment?

Unified regulation, transparent powers, auditable implementation — can be run directly on an IT platform

1. STRUCTURE

Network-based, agent-based system

Each activity is organized as a separate, yet integrable agent. The agents are arranged in a matrix to cover the entire operation of the project — there is no unoccupied area.

CYCLE 2 — EDVE

Four-phase operating cycle

All agents run in the same order: Preparation → Decision → Execution → Control. Uniform language, transparent powers, auditable execution.

3. MATRIX

Two-axis organization

Ordinate = content (product, money, communication, document, contract). Abscissa = role (sales, procurement, cooperation, compliance, inventory, development).

4. MODULARITY

Scalable organization

Agents can be divided into mandatory and optional modules — adjustable according to project size and complexity. From simple project to general contractor EPC, the same principle applies.

All agents follow the same four-phase life cycle

EDVE is an internal operational standard for agents — a common language for auditability

This — **PREPARATION**

Setting the subject, requirements, responsibilities, templates, legal/technical frameworks and deadlines — creating the prerequisites for the process.

D — **DECISION**

Internal approval, commitment, assignment of roles, finalization of specifications — a formal act of the management layer.

Sun — **IMPLEMENTATION**

Operational processing: documents, physical movements, communication, contract fulfillment — the actual stage of processing.

This — **CONTROL**

Auditing, deviation management, quality feedback, recording, corrective action — the final activity of the management layer.

Two-axis matrix organization

Ordinate (↓) — content axis: product, money, communication, document, contract (5 flow types)

Abscissa (→) — role axis: sales, purchasing, collaboration, compliance, inventory, development (6 roles)

Cell = agent: 5 × 6 = 30 modules to cover the entire distribution cycle. For EPC main contractor up to 7 × 6 = 42 agents.

Runs on existing IT platforms without development

AI and automation can be built directly — no custom software development risk

IT PLATFORMS

Can be run directly

- MS Planner
- Zoho Projects
- ClickUp
- Notion
- Wrike
- MS Project Online

No custom development, no platform lock-in.

AI AND AUTOMATION

Built-in components

- Power Automate (process)
- Microsoft Copilot (AI assistant)
- Custom triggers and notifications
- Dashboard monitoring
- Alarm logic

Occasional integration work, not a development project.

CUSTOMER ADVANTAGE

Auditable, transferable

- A common language among all project participants
- Traceable chain of decisions and actions
- Protocol order automatically generated
- Project handover documented
- Investor control at any stage

The project is not in the manager's head — it is visible, controlled.

7

Investment complexity

Integrated general contracting partner — single contractual relationship for the entire lifecycle

→ Detailed material: Investment-complexity management study

Investment: ad hoc, high-risk, complex intervention

Not a daily routine — it is structurally different from operations. Outsourcing is a strategic decision, not a cost-cutting one

1. STRUCTURAL DIFFERENCE

Unique expertise required

Development decision preparation, technical + economic documentation, permitting, construction organization, funding, project controlling, commissioning. This competence is rarely available within the framework of an existing plant.

2. GRAVITY OF ERROR POSSIBILITIES

A wrong decision can cost you years.

Poorly sized technology, unsuitable subcontractors, incomplete performance documentation — can adversely affect the operation of the entire company for a long time. External professional structure: not only technical, but also business+legal+financial framework.

3. STRATEGIC ADVANTAGE

Risk minimization

Time savings, professional responsibility, organizational relief. In the case of multiple sites or technological modules, with authority involvement, the facilitator is not an additional function, but a structural prerequisite for project success.

4. TIME POSITIONING

Integrated settlement partner

Not a subcontractor or subordinate supplier. Within its own organizational framework, but fully representing the interests of the investor, as a subordinate structured system. Strategic decision points remain with the investor.

Configurable service portfolio — four pillars

Not a fixed product package, but a modular framework — scalable regardless of investment size

1. MANAGEMENT

Business management modules

Strategic and operational management, financial and contractual systems. Operational decision support, financial controlling, cash-flow management, project-based accounting, legal and contractual structure building.

2. COMPLICATION

Investment Facilitator Modules

Direct project management. Development of technical content, resource and asset coordination, structured selection of suppliers and subcontractors, professional management of product production, operational implementation control.

3. SUPPORT

Support and integration modules

IT, documentation, communication and organizational integration. Standalone IT architecture, database system, communication protocol — fits the investor's internal operations, suitable for involving authorities and financial institutions.

4. MARKET

Market and relationship modules

Mapping + building a business environment: benchmark analysis, supplier + customer network building, partner qualification, cash flow systematization, product distribution chain support.

Seven basic dimensions + seven additional dimensions

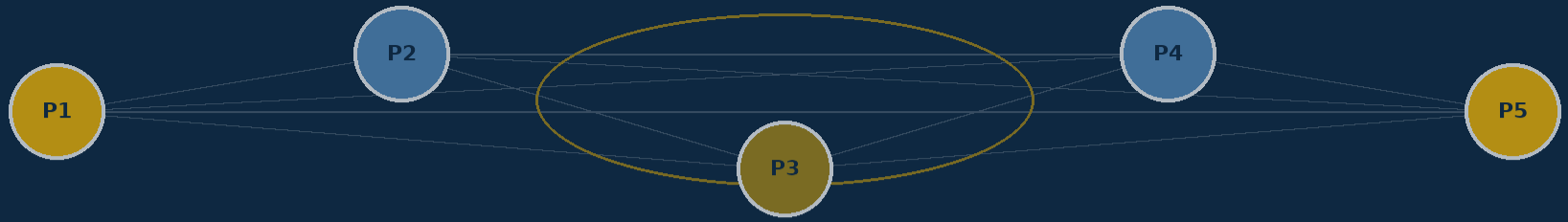
Investor tasks in an organized system — scale-dependent combination, nothing is left unattended

SEVEN BASIC DIMENSIONS — mandatory for every project

1. **Technical preparation** — Requirements-based system; on-site data, integration
2. **Economic (cash-flow)** — Investment limit, ROI, cost breakdown, financing
3. **Legal** — Ownership, contractual structure, regulation
4. **Communication** — Internal and external information system, official
5. **Document Management** — Types, Formats, Approval, Version Management
6. **IT** — Platform strategy, architecture, data security
7. **Organizational, work order** — Project organization, RACI matrix, procedures

SEVEN ADDITIONAL DIMENSIONS — depending on scale

8. **Licensing and regulatory** — Legal prerequisite, regulatory protocol
9. **Quality Assurance (QA)** — ISO, GxP, ATEX, HACCP, certification purpose
10. **Environmental protection, sustainability** — Material flow, ESG indicator, EPD/LCA
11. **Operability, maintainability** — TPM/RCM-compatible specification
12. **Internal training, human capacity** — New technology, training program
13. **Safety technology, occupational health and safety** — Fire and occupational safety, responsibilities
14. **Digital twin, data assets** — BIM, CAD, P&ID; SCADA/MES integration



8

Association and expert background

Hungarian-owned, integrated industrial association — with complementary competencies, in a joint general contractor position

→ Detailed material: TID Partnership call and cooperation framework

Industry challenges and the TID association's response

The industrial construction market is fragmented, under-capacity and dominated by gigaprojects — joint efforts are needed

⚠ INDUSTRY CHALLENGES

The market situation that requires a common response

- Fragmentation of industrial enterprises — low independent volume
- Persistent capacity and skills shortage
- Market dominance of gigaprojects
- Limited access to international markets with a single appearance
- Uneven access to applications and project funding

✓ TID ASSOCIATION ANSWER

Complementary competencies — common market presence

- Bringing together members with complementary competencies
- Joint bidding and general contractor position with TID management
- Shared infrastructure (IT, quality assurance, marketing)
- Open book financial framework — transparency and fair profit sharing
- EU and export market presence as a joint brand and with tenders

Four main areas of benefit for members and customers

Concrete, measurable business and operational benefits with direct market impact

MARKET

Market presence and business opportunities

Access to new domestic and international markets. Joint EU tender opportunities. Participation in the WebShop operated by TID — sales of industrial equipment and standardized BASIC facilities on a single platform.

QUALITY

Quality assurance and organizational support

Unified ISO certification system for compliance in international markets. Coordination of processes between members according to common quality assurance principles — the customer receives a unified certification.

FINANCE

Cost-effectiveness and financing

Common financing models and bank revolving credit for project liquidity. Fair profit sharing based on the open book principle. Cost sharing on a common infrastructure.

MARKETING

Marketing and communication

Joint market presence in marketing campaigns organized by TID. Display of individual products and services in the association's web store. Unified visual identity and communication guidelines.

Contractual expert base · legal framework · development services

The buyer receives TID as the sole contractual partner, backed by the professional capacity of the entire partnership

EXPERT BASE

Modularly activated knowledge

Independent expert with experience in dozens of industrial investments — with a framework agreement.

Areas covered:

- Project management
- Technical inspector
- Energy engineer
- Technology integrator
- Cost and financial controller
- Contract and Legal Coordinator
- Authority specialist

LEGAL FRAMEWORK

12-point bilateral preliminary agreement

A civil law-based, project-based cooperation framework without legal personality.

Key elements:

- Purpose, organization, SZMSZ
- Geographic and technological focus
- Project-based regulation
- Loyalty and non-circumvention
- Unified identity
- Open book cost accounting
- Indefinite confidentiality
- Termination and dispute resolution policy

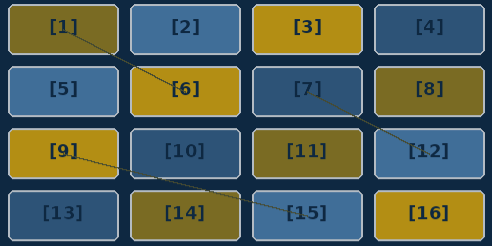
DEVELOPMENT SERVICE.

For the competitiveness of members

Structured 8-dimensional business management package — coded in a system [0.0]–[0.8].

Areas covered:

- Leadership and decisions
- Product-service portfolio
- CRM and benchmarking
- IT and management platforms
- Law and finance
- Accounting and controlling



9

Link library

Structured web interface map for TID's portfolio — 16 main categories, 45 links

→ Detailed material: TID link library (16 main categories, 45 links)

Sixteen main categories — structured access to TID online content

Access: NY = public · PW = password · WIP = work in progress

1.0 NY **Company information**	2.0 NY **Company presentation**	3.0 NY **Company representation**	4.x NY **Equipment**
5.x NY **Services**	6.x NY **Plant units**	7.0 NY **Main references**	8.0 NY **Project management**
9.x NY **Business association**	10.0 NY **Web assistant**	11.x NY **News channels**	12.x PW **Developments**
13.0 WIP **Industrial platform**	14.x PW **News compilation**	15.x PW **Information technology**	16.x PW **Company organization**

Company information · manufacturer representation · product and service catalogs

All links are publicly available — the buyer can click directly to the detailed materials

[1.0]–[3.0]

Company and manufacturer representation

• [1.0] Company information — TID general company presentation (online catalog)

• [2.0] Company presentation — TID Association, managers, cooperation model

• [3.0] Company representation — dedicated subpages of 9 represented manufacturers (BMH, Gasso, Kelvion, Kraftblock, Leanbyte, Rantotek, SIAD, Sumitomo, ZenRobotics)

[4.x]

Equipment — 12 catalogs

Detailed equipment catalogs by category:

• Heat exchangers and cooling
• Combustion technology
• Fuel preparation
• Energy storage
• Gas and filling technology
• Robotic sorting
• Digital platforms

(5 more categories)

[5.x] and [6.x]

Service and plant catalogs

[5.x] — 4 service catalogs:
• Engineering services
• Execution services
• Operational support
• Development services

[6.x] — 2 plant catalogs:
• BASIC typed facilities
• Custom configurations

References · project management · web assistant · developments

Deeper technical and business content — for decision-making and technical questions

[7.0]–[8.0]

References and project management

EPC main contractor references, documented project case types. Detailed description of NPM (Network Project Management) methodology — a guide that can be used directly by investors.

[9.x]–[10.0]

Business association and web assistant

TID Association operations, membership conditions, preliminary cooperation agreement. ChatGPT-based TID assistant — instant answers to technical and commercial questions in the context of the portfolio.

[11.x]–[12.x]

News channels and developments

Industry news, technology trends, project successes (Facebook, LinkedIn, newsletter). Current TID development programs and pilots — with password access for members and key partners.

[13.x]–[16.x]

Industry platform and company organization

Industrial platform infrastructure (under construction), news compilation framework, IT documentation system, company organizational documents — for internal use and for qualified partners.

One contractual partner — full life cycle

From consulting, design, procurement, construction to operational support — one source, documented responsibility

PREPARATION

A decision-making partner

Loss detection, system boundary determination, receiving side, CAPEX/OPEX model, return on investment, financing direction. Banking/tender negotiation base from one place.

IMPLEMENTATION

A general contractor responsible

Design, manufacturer coordination, procurement, subcontractors, on-site supervision, test run, handover. A single contractual relationship — no gray areas between two suppliers.

OPERATION

A long-term supporter

Maintenance, parts policy, training, remote monitoring, condition diagnostics. Post-investment controlling — the return is measurable, not a promise.

Hungarian-owned partnership + international manufacturer portfolio

Local responsibility, Hungarian-language administration — with world-class technological depth

HUNGARIAN OWNER

Domestic responsibility and communication advantage

- Hungarian Ltd., with headquarters in Hungary and Hungarian management
- Hungarian-language project communication — from proposal to handover
- Contractual framework under domestic law — jurisdiction of Hungarian courts
- Local authority relations (permitting, industrial authorities, utilities)
- Connection to Hungarian financing circles (banking, tenders, SMEs)
- EU tender mediation as a Hungarian partner

INTERNATIONAL PORTFOLIO

Nine certified technology partners

- BMH Technology (FI) · GASSO SA (ES, since 1875) · Kelvion (DE, since 1920)
- Kraftblock (DE) · Leanbyte (DE) · Rantotek (FI, since 1985)
- SIAD (IT, since 1927) · Sumitomo SHI FW (JP) · ZenRobotics (FI, since 2007)
- ISO/EN/PED/ASME/ATEX certifications — global compliance
- European Supplier Partnership — project experience DE/AT/HR
- Handling foreign language documentation and customs clearance

Digital, documented, auditable operation

The project is not in the manager's head — it is visible, controlled, and deliverable in every phase

DIGITAL

Project run on an IT platform

MS Planner, Zoho Projects, ClickUp, Notion, Wrike. AI and automation (Power Automate, Microsoft Copilot) can be built directly — no custom software development risk.

DOCUMENTED

Structured project documentation system

A record for every decision, a completion certificate for every delivery, a settlement for every milestone. Version management, metadata management, authorization management — all in one place.

AUDITABLE

EDVE cycle for all agents

Preparation → Decision → Execution → Control. Traceable chain for all activities. The investor can get involved at any time, take control at any time.

CERTIFIED

ISO/EN quality assurance

ISO 9001 / 14001 / 45001 + EN ISO 3834 welded manufacturing + ASME + PED pressure equipment. ESG/CSRD-compatible data output — reporting compatible.

What TID gives the buyer — in summary

Single contractual partner · full life cycle · documented responsibility · measurable return on investment

TECHNOLOGY

9 international manufacturers · 76 devices

Retrofit focus, site-specific integration. ISO/EN/PED/ASME certifications. Core, project and niche portfolio — scalable to all customer entry points.

METHODOLOGY

EHN Lean CO_2 NPM

Loss-based interpretation, packaged portfolio, network-based project management. Not a quota promise, but a value discovery system — with an auditable decision basis.

RESPONSIBILITY

One partner · complete chain

Hungarian-owned partnership in an integrated general contractor position. Single contractual relationship from preparation to operation — in Hungarian, according to Hungarian law.

Three customer promises — which we also respond to in the contract

✓ Measurable savings

Net energy savings in financial equivalent. CO_2 and HEM/EKR value in separate layers. Payback in 2–5 years.

✓ Auditable documentation

All decisions are in protocol order. EDVE cycle for all agents. ESG/CSRD-compatible data output.

✓ Subordinate partnership

Strategic decision points for the investor. Open book accounting. Hungarian language, Hungarian legal framework.

Thank you for your attention.

Questions, request for quotation, project consultation

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Tax number: 26205494-2-41 · Company registration number: 01-09-307721