



FTD LT

FOOD
TECHNOLOGIES
DIGITALIZATION LT

CLUSTER



“Food Technologies Digitalization LT” Cluster
ESCA “Cluster Management Excellence BRONZE” Awarded Cluster 2022, 2024
Certified European Cluster Collaboration platform member since October 15th, 2021

About us

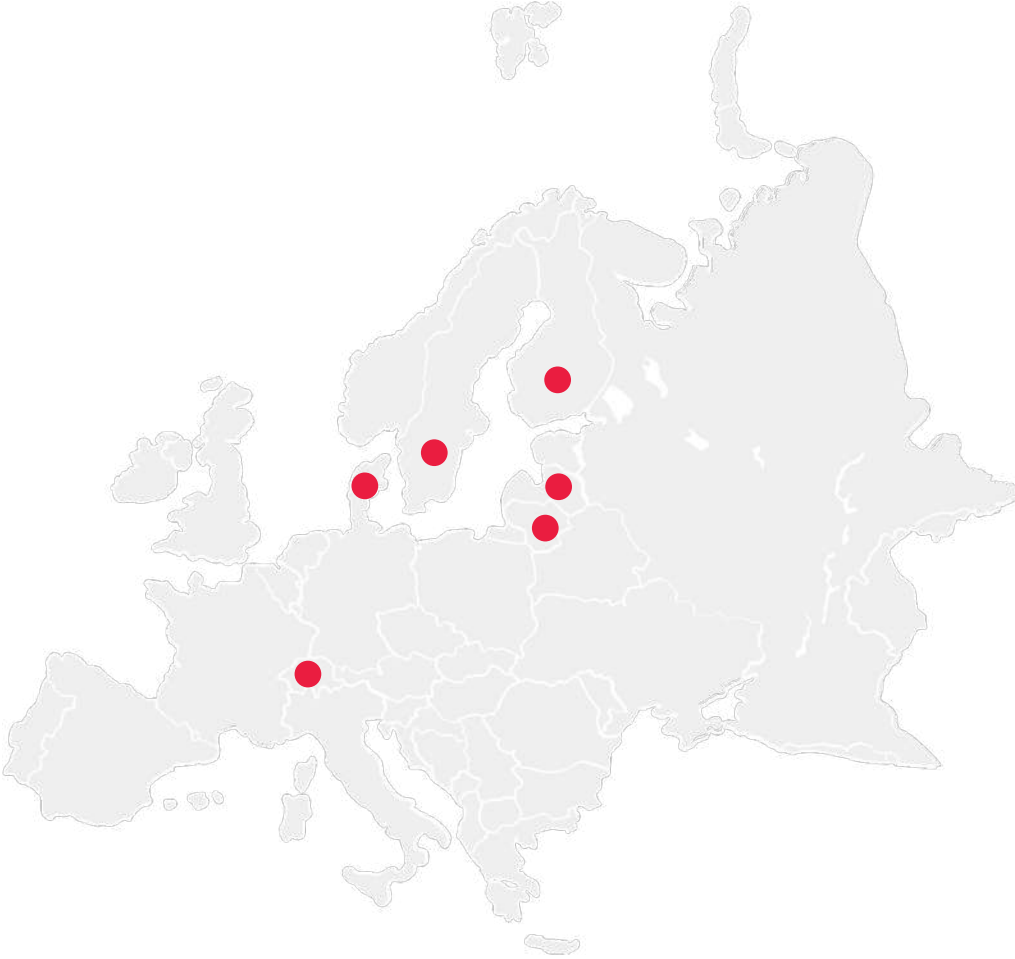
FTD LT Cluster is:

- an international,
- cross-sectorial organization,
- established on January 14, 2019.

It specializes in providing equipment and engineering solutions in the food, pharma, chemical and waste management industries. However food industry is a main area of cluster members activity.



FTD LT Cluster connects companies from six countries



-  Lithuania
-  Denmark
-  Finland
-  Sweden
-  Switzerland
-  Latvia



Among these companies, there are:

1. **Engineering and production companies – stainless steel equipment and road tankers for transportation;**
2. **Apple Juice Producers;**
3. **Vegetable Oil Companies;**
4. **Dairy Processing Companies – Milk Products;**
5. **Agricultural Companies – Apple Cultivation;**
6. **Logistics Companies – Liquid Food Product Transportation;**
7. **Digital solutions and automation providers;**
8. **R&D institutions;**
9. **The Education organizations performing administrative, consulting and project preparation activities.**

FTD LT Cluster Members

We cordially invite you to meet our esteemed members, who are among the leading companies in Europe.

Member	Country
Alytus Business Advisory Center (Cluster coordinator)	Alytus, Lithuania
Astra LT, JC	Alytus, Lithuania
Vaiskona, JSC	Vilkaviškis, Lithuania
Žiežmarių sodai, AC	Kaišiadorys, Lithuania
Licatrans, JSC	Kaunas, Lithuania
Lithuanian Energy Institute, Public Institution	Kaunas, Lithuania
Aksonas, JSC	Kaunas, Lithuania
Aumega, JSC	Kaunas, Lithuania
TRANS GROUP LT, JSC	Kaunas, Lithuania
Nordic Stainless Steel Tanks LT, JSC	Alytus, Lithuania
Sabiedriba ar ierobezotu atbildibu „Food Project Management“	Jaunmarupe, Latvia
NSST – Nordic Stainless Steel Tank	Nykoping, Sweden
Nordic Stainless Steel Tanks Oy	Inhann Tehaat, Finland
AC Mejerimaskiner	Looken, Denmark
K-Tech GmbH	Balterswil TG, Switzerland
Lanksti Linija, UAB	Alytus, Lithuania
UAB Termosnaigė ir Ko	Alytus, Lithuania
MB Išmanūs Inžineriniai sprendimai	Alytus, Lithuania

Why us?

01

**OUR COMPANIES ARE LEADERS
IN NORDIC EUROPE**

02

**OVER 85% OF OUR COMPANIES
PRODUCTION IS EXPORTED TO
COUNTRIES SUCH AS FINLAND,
SWEDEN, NORWAY, DENMARK,
FRANCE, GERMANY, BELGIUM,
THE NETHERLANDS, BALTIC
STATES, UKRAINE.**

03

**OUR EQUIPMENT IS NOT FOUND
ONLY ON THE ANTARCTIC
CONTINENT**

- ✓ **The cluster has been operating under a Joint Activity Agreement (JAA) since January 14, 2019.**
- ✓ **The cluster unites members:**
 - **SMEs,**
 - **Science and Research organizations,**
 - **Business support and Educational organizations.**
- ✓ **We connect members from 6 countries: Lithuania, Denmark, Finland, Sweden, Switzerland and Latvia.**
- ✓ **Total income in 2023 – 82 MLN €**
- ✓ **The cluster companies have more than 935 employees.**
- ✓ **72% of the members are located in the territory of South Lithuania (Alytus, Kaunas, Marijampole regions).**



Cluster services:

- 1. R&D activities in food technology development related to liquids: milk, juices, oils, chocolate, etc.**
- 2. R&D activities in food technology development related bulky products: cereal flakes, flour, pasta, dry milk proteins, whey proteins, promising sweeteners, xylitol, groats, etc.**
- 3. Training for cluster members;**
- 4. Projects for development an internal and external cooperation network between business, science and services providers in the Food Digital Technology industry.**

What are we looking for?

1. Digitalization of food industry technologies on the principles of “Industry 4.0”;
2. International markets and networks;
3. Solutions for the safe transportation of liquid foods;
4. Cooperation in R&D&I projects;
5. Cooperation in EU projects for development of competency for cluster members.

FTD LT Cluster provided member services overview

R&D

ERASMUS project "Circular Economy in Vocational Training in the Metal Industry" to the members of the cluster;

"Development of optimized technology for milling-extrusion processes using high-pressure lubrication through the spindle";

Ongoing **ERASMUS** project "Development of Next Generation PAW Welding Technology for Stainless Steel"

...in total 10+ finished and 2 ongoing and 2 coming national and international R&D projects with 15+mIn Eur value joining cluster members.

Internationalization

New industrial value chains, as part of EXPO FTD LT project;

Plan for expansion to 15...20 new international networks.

Networking

Organization of 8 events and meetings for members;

CEMIVET project – 3 events in 2022–2023.



CLUSTER

FTD LT Cluster has cross-sectorial value chain

1. Agricultural companies – growing apples, including new varieties of apples;
2. Apple juice manufacturers produce juice concentrate;
3. Vegetable oil companies process a variety of vegetable oils;
4. Dairies process milk and produce various dairy products;
5. Logistics companies transport liquid food products;
6. Engineering and manufacturing companies develop and manufacture stainless steel equipment for food processing and tanker transportation;
7. Digital solution providers develop IT products;
8. Research and experimental development organizations carry out research work aimed at implementing the cluster's goals;
9. The Education Organization performs administrative, consulting and project preparation consulting activities.

Cluster axis

Stainless steel equipment for food processing and transportation.



Metal and food engineering-machinery industry products for food related companies



Digital solutions and IT products.

R&D activities to create and adapt innovations in the sector through Design and Engineering.



Design and engineering

Development of new road tanker:

1. Modeling of frame-less road tanker **tank** parameters (calculations of stiffness, damping, damped and non-damped masses and resonances);
2. Calculations and optimization of the wall thickness of a new **lean duplex** steel road tanker under dynamic loads;
3. Frame-less road tanker sub-chassis design using stainless or biphasic steel (lean duplex used for the first time ever for this applicaton);
4. Creation of thermal insulation layers using composite insulation.

Manufacturing

- 1. Manufacture of tanks and pressure vessels with heating / cooling circuits;**
- 2. Manufacture of various mixing equipment;**
- 3. Welding of pressure and atmospheric tankers;**
- 4. Welding of frameless chassis;**
- 5. Methods of etching and passivation;**
- 6. Installation of composite thermal insulation;**
- 7. Maintaining the thermal regime of tanker products with less energy consumption (using renewable energy).**

Cluster commitment to Competences, Technology and Sustainability

- 1. Industrial food, pharma, chemical and waste management equipment development, detail engineering and manufacturing**
- 2. Food, pharma, chemical and waste management equipment manufacturing;**
- 3. Competences of world class welding technologies and techniques (some developed by cluster members);**
- 4. CNC machining;**
- 5. Internships in mastery of management skills and technology (Masters Academy);**
- 6. Dual training and apprenticeships;**
- 7. Green energy.**

FTD LT Cluster Strategic objectives for 2024–2027

TO INCREASE INTEGRATION

**OF DIGITAL TECHNOLOGIES IN
FOOD MACHINERY
ENGINEERING, FOOD
TRANSPORT MEANS
ENGINEERING AND
METALWORKING – MACHINERY
COMPANIES.**

TO INCREASE PRODUCTION

**AND EXPORT OF DIGITALIZED
FOOD MACHINERY AND FOOD
TRANSPORT MEANS PRODUCTS**

TO INCREASE PRECONDITIONS

**FOR THE DEVELOPMENT OF
HUMAN RESOURCES BETWEEN
CLUSTER MEMBERS IN THE FIELD
OF FOOD MACHINERY/ FOOD
TRANSPORT MEANS
ENGINEERING AND MACHINERY
INDUSTRY.**

Cluster achievements through 2019–2024

FTD LT cluster members „Astra LT“ and the „Lithuanian Energy Institute“ with 10 other cluster members had jointly developed a new product – an ultra-lightweight tanker made of innovative duplex steel for the transport of liquid food products.



LDX2101 Lean Duplex Steel Tank Truck: Superior Insulation for Liquid Food Transport



Extension of the tanker product family 2022–2023: New duplex tanker for transporting heated products has been designed and is now in production.



The product was exhibited in Vilnius on 16 May 2024 at the Automotive Industry Forum 2024 event.

Cluster partnership during the development

- ✓ JC Astra LT (Lithuania) – **Contributed to the project's development.**
- ✓ The Lithuanian Energy Institute (Lithuania) – **Played a significant role in project development alongside other cluster members.**
- ✓ JSC Transgroup LT (Lithuania) – **Provided guidance on technical decisions.** JSC Licatransa (Lithuania) – **Offered advice on technical and principal decisions, particularly regarding the need for tank insulation during the transportation of hot products.**
- ✓ JSC Premium Oils (Lithuania) – **Advised on requirements for transporting hot oils and the necessity of creating a nitrogen cushion over the transported product.**
- ✓ JSC Vaiskona and Žiežmarių Sodai (Lithuania) – **Provided expertise on transporting high-density liquids (e.g., apple juice concentrate with a density of 1.3 kg/l) and addressed construction issues from a hygiene perspective.**
- ✓ AC-Mejerimaskiner (Løgumkloster, Denmark) – **Offered guidance on dynamic calculations for chassis.**
- ✓ JSC Aumega (Lithuania) – **Assisted with research and measurements of thermal insulation properties.**
- ✓ JSC Aksonas (Lithuania) – **Provided expertise on strength calculations.**
- ✓ Nordic Stainless Steel Tanks OY (Ihantala, Finland) and Nordic Stainless Steel Tanks AB – **Advised on Scandinavian technical requirements.**
- ✓ SIA Food Project Management (Jaunmārupe, Latvia) – **Provided advice on hygiene and thermal insulation issues related to milk transportation.**

The Fat Melter

In 2024, members of the FTD LT cluster developed and marketed a new fat melting product for the food industry.

It is a special Fat Melter, capable of simultaneously melting 6 typical fat blocks at a capacity of 200kg/h, with an integrated 600L buffer tank for the dissolved product. The melter is heated by an internal electric heating unit with individual automation control panel and HMI.



The Fat Melter



A prototype of the melter has already been delivered and orders for two more have now been received, with the potential to sell up to 10 units per year. Considering that the unit price is over 40,000€, this is quite an interesting high added value product.

Cluster members that participated in the project: JSC Astra LT; CJSC Aumega; Nordic Stainless Steel Tank OY; Lithuanian Energy Institute; CJSC Nordic Stainless Steel Tanks LT; SC Mejerimaskiner.

The largest product of Astra LT JC

The largest product of Astra – designed and manufactured by Nordic Stainless Steel Tanks OY and sold to a Norwegian company. The product – a Stainless Steel Chemical Process Column – with a total length of 56m and a weight of 80t.



Cluster Management



**Algimanta
Ščiglinskienė**

FTD LT Cluster coordinator,
Alytus Business Advisory Center Director
algimanta@ftd.lt
+370 652 81500



**PhD Vaidas
Liesionis**

FTD LT Cluster Board Chairman,
JC Astra LT General Manager
vaidas@ftd.lt
+370 687 56780

We invite you to collaborate

We kindly invite you to contact us and start
our partnership today

algimanta@ftd.lt, +370 652 81500

vaidas@ftd.lt, +370 687 56780

www.ftd.lt

