

# **LONG-SHELF LIQUID DAIRY PRODUCTS: TRADITIONAL AND INNOVATIVE TRENDS AND PROSPECTS**



# ABOUT THE SPEAKER

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Managing Partner

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EXPERIENCE IN SALES AND MARKETING MANAGEMENT OF OVER 20 YEARS  
OF WHICH IN THE DAIRY INDUSTRY – 14 YEARS

Find in any social networks

# TDNT\_Engineering

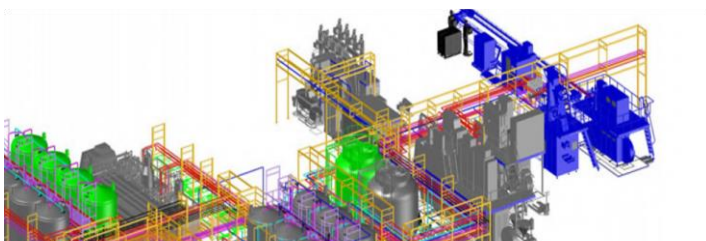


## EXPERIENCE IN COMPANIES

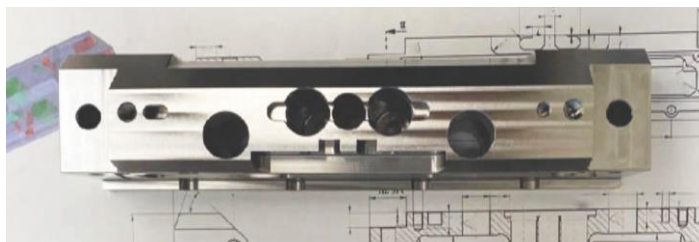


# ABOUT THE COMPANY

**Extensive expertise in the production of aseptic beverages:** dairy industry, plant-based beverages, beverage industry, baby food, including solutions for warm shelves and cold supply chains



**ENGINEERING  
AND TECHNOLOGICAL DESIGN**



**PRODUCTION OF UNIQUE PARTS  
AND COMPONENTS FOR THE FOOD INDUSTRY**



**AUTOMATION  
AND PROGRAMMING**



**SUPPLY OF PROCESSING AND PACKAGING  
EQUIPMENT BASED ON REFURBISHED  
TETRA PAK EQUIPMENT**

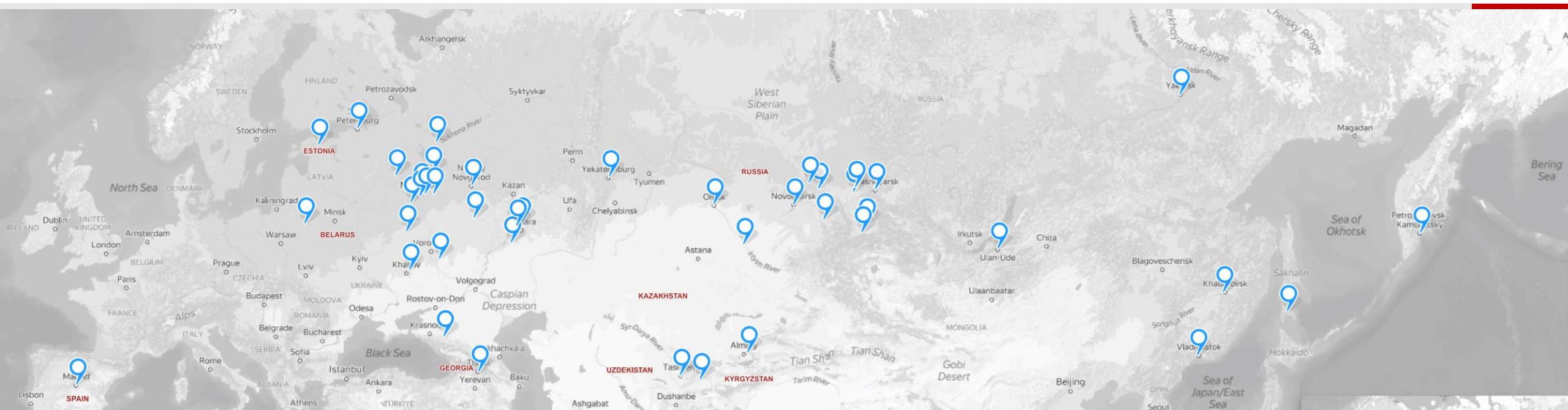


**TECHNICAL MAINTENANCE,  
REFURBISHMENT AND MODERNIZATION  
OF TETRA PAK EQUIPMENT**



**PROCESSING EQUIPMENT  
OF OUR OWN PRODUCTION**





## ABOUT THE COMPANY

**Extensive expertise in the production of aseptic beverages:**  
dairy products, juices and nectars,  
plant-based beverages, etc.

### TDNT ENGINEERING DEPARTMENTS

- **Krasnodar** (Head office, Production site №1)
- **Krasnoyarsk** (Refurbishment center, Production site №2)
- **Moscow** (Project office)
- **Rostov-on-Don** (Representative office)
- **Omsk** (Representative office)

### GEOGRAPHY OF COMPLETED PROJECTS

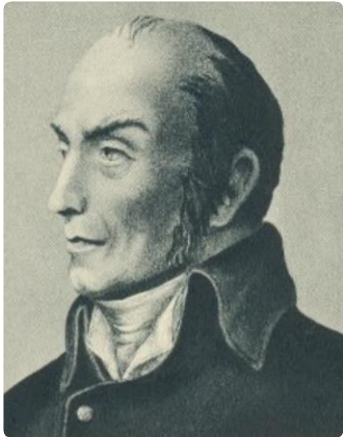
- **Russia**
- **CIS** (Belarus, Georgia, Kazakhstan, Kyrgyzstan, Uzbekistan)
- **Europe** (Spain, Estonia)

# WE ARE TRUSTED BY

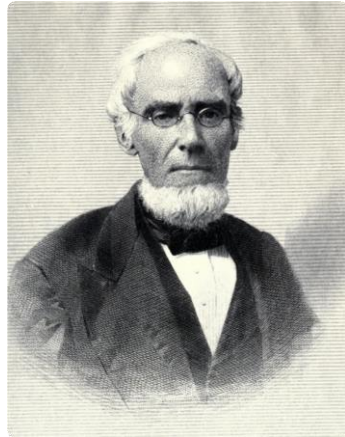


# HUMANITY HAS BEEN DEVELOPING FOOD PRESERVATION **TECHNOLOGIES** **FOR THOUSANDS OF YEARS**

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**Nicholas  
Appert  
(1749-1841)**



**Gail  
Borden  
(1801-1874)**



**Louis  
Pasteur  
(1822-1895)**



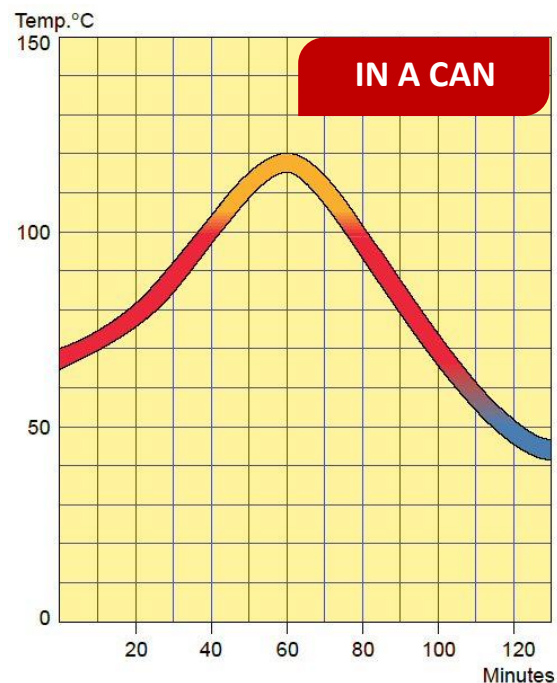
**Dr. Ruben  
Rausing  
(1895-1983)**



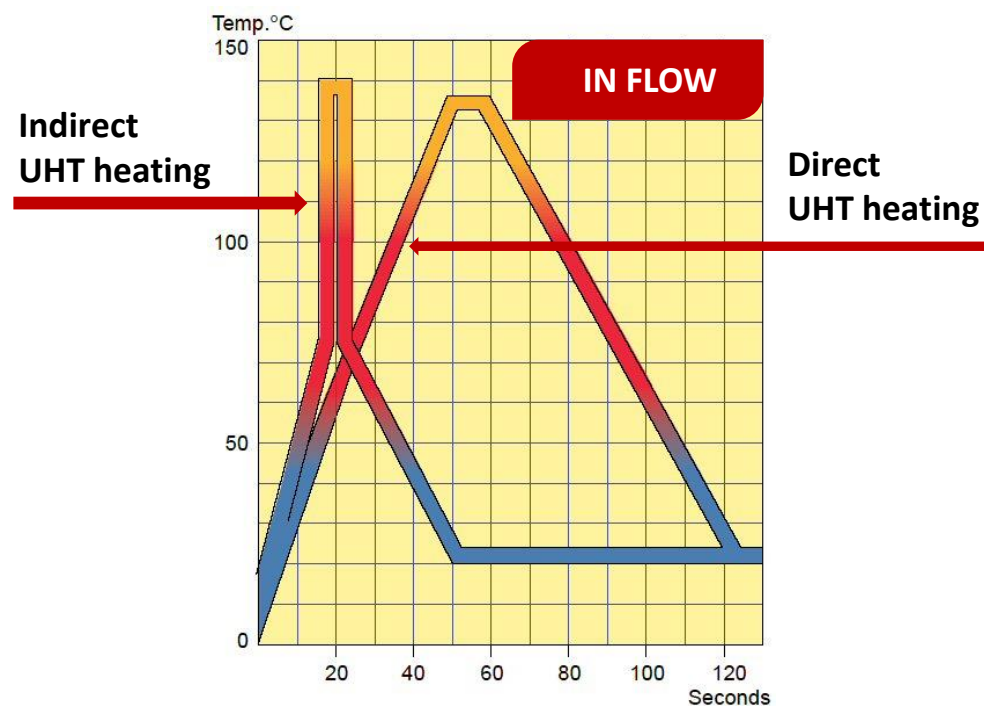


# A REVOLUTIONARY BREAKTHROUGH FOR LIQUID DAIRY PRODUCTS **UHT TECHNOLOGY**

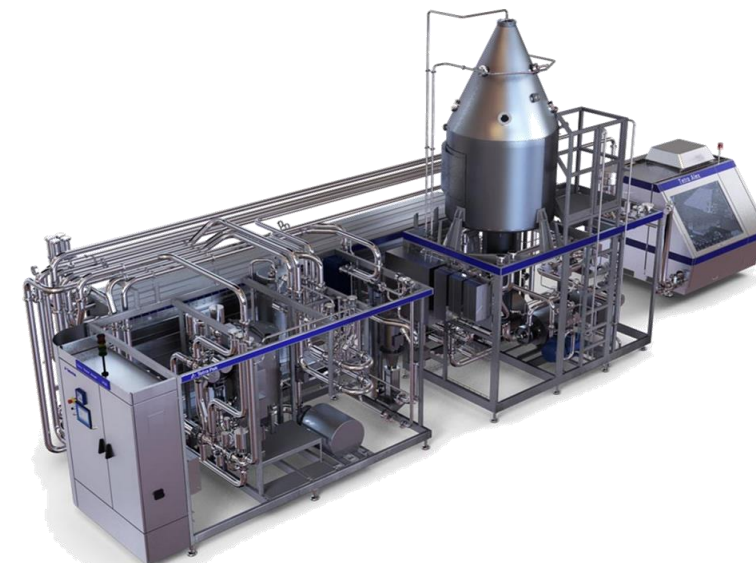
## TEMPERATURE PROGRAMS



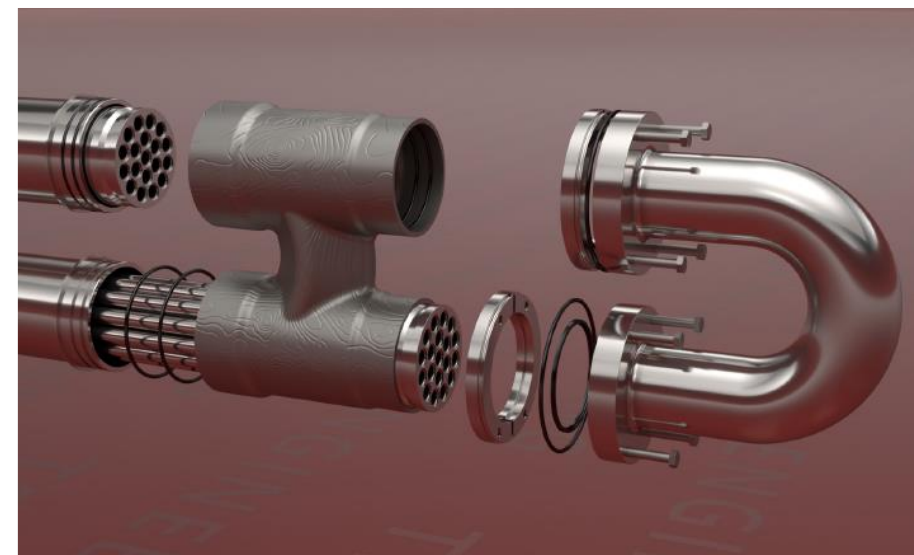
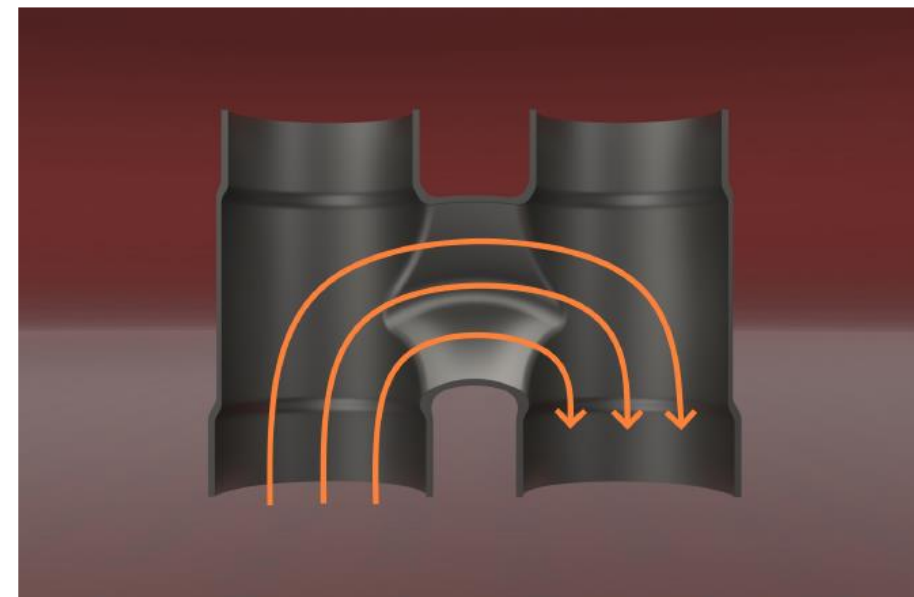
Standard program:  
121°C hold 20 minutes



Standard program:  
137°C hold 4 seconds



# A REVOLUTIONARY BREAKTHROUGH FOR LIQUID DAIRY PRODUCTS UHT TECHNOLOGY



## IMPLEMENTATION OF INNOVATIVE SOLUTIONS

Thanks to the use of **SLM technology**, it was possible to create a unique form of nodal connections in the circuit of heat exchanger service media

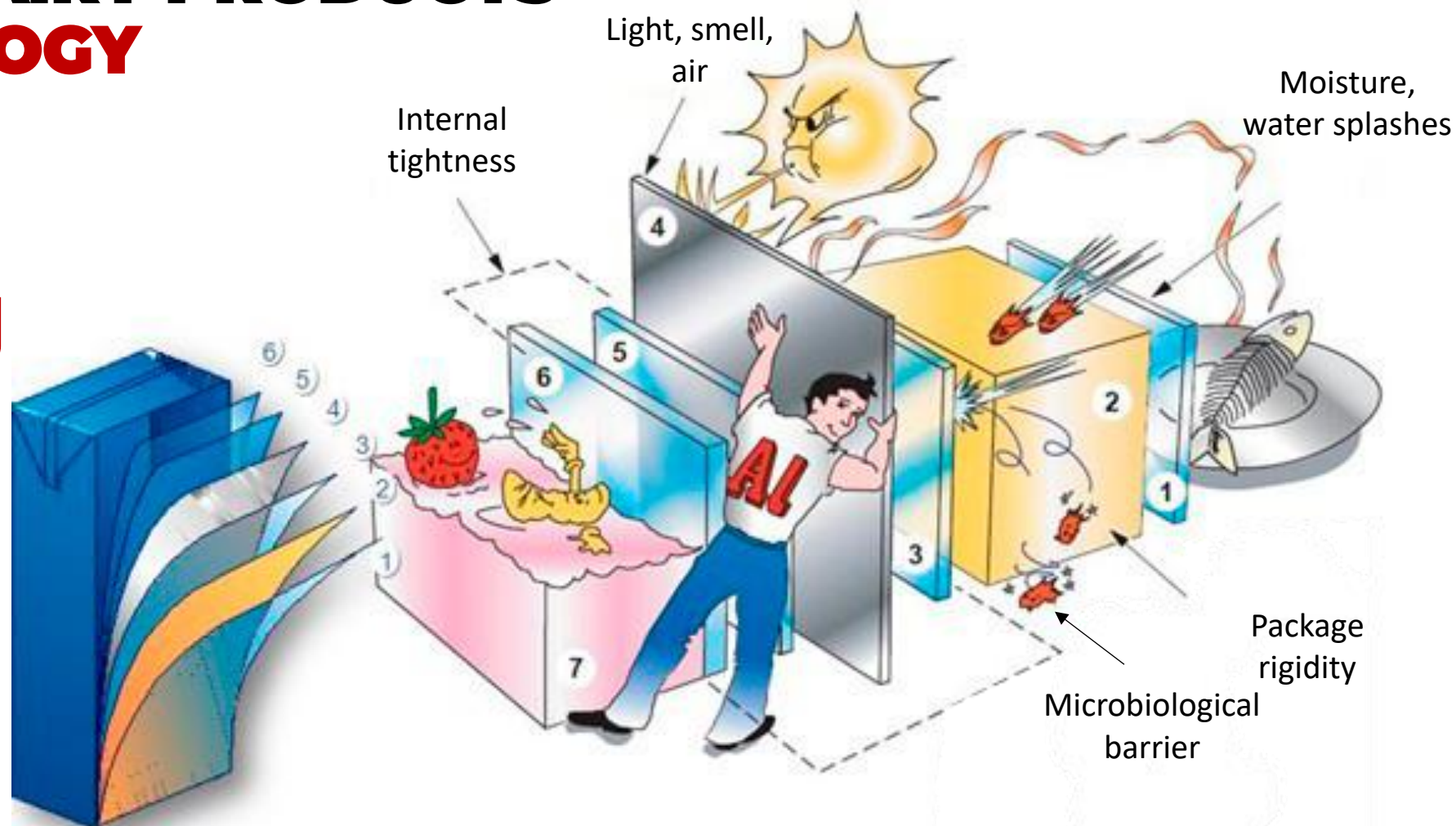
This made it possible to reduce the risks of increased pressure and mixing with the product



# A REVOLUTIONARY BREAKTHROUGH FOR LIQUID DAIRY PRODUCTS **UHT TECHNOLOGY**

## PACKAGING COMPOSITION

1. Outer coating
2. Cardboard
3. Lamination
4. Aluminum foil
5. Inner coating 1
6. Inner coating 2
7. Product

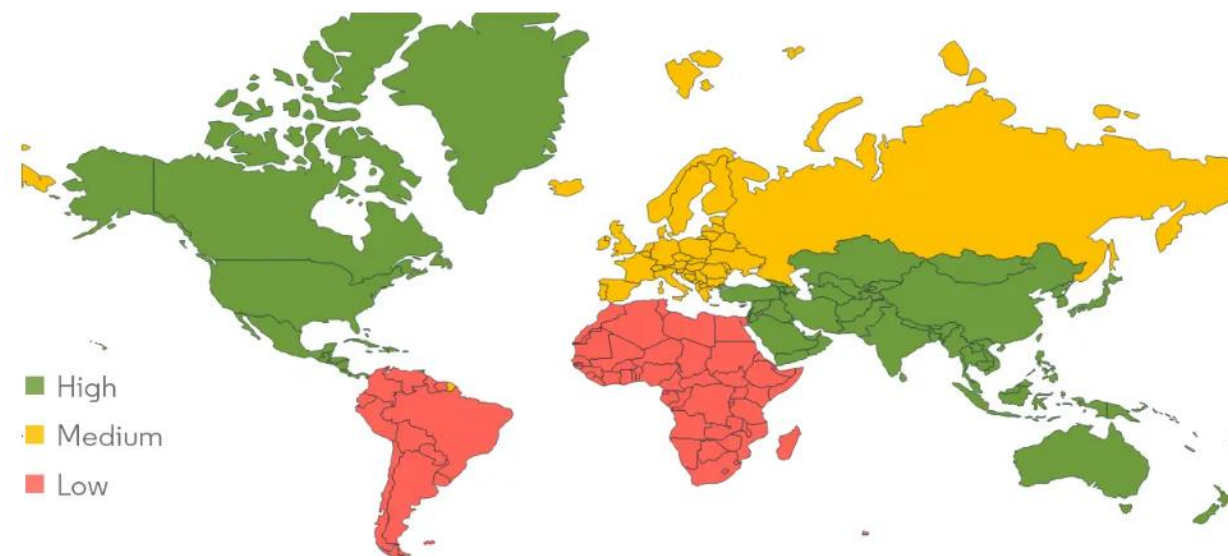


# GLOBAL TRENDS: UHT MILK

- The market size in 2024 is estimated from **67.81 / 74 to 130.77 billion USD**
- **BUT!** All experts see (CAGR) 2025-2033 from 5.1 to 6.1%
- During the forecast period, the global share of UHT milk according to various estimates is from **25 to 35%**
- The main growth region is the countries of the Asia-Pacific region
- The main world markets for UHT milk:
  - Asia-Pacific
  - North American
- **Key global players:** Nestle SA, Groupe Lactalis SA, Fonterra, Danone Group and others

## GLOBAL REASONS FOR GROWTH:

- Retail and marketplace needs («warm shelf»)
- Consumption growth in developing countries («low base effect») and change in consumption type
- Lifestyle change («consumption on the go», etc.)
- Innovative products (lactose-free, fortified)
- Consumption growth through HoReCa (LSC packaging growth trend)



Source : Mordor Intelligence



# GLOBAL TRENDS: UHT MILK

## RUSSIAN FEDERATION MARKET

- The share of UHT milk is stable, according to various estimates, it is from **22 to 24%**, with **1.03%** (GAGR)  
**BUT!** Growth of the UHT cream category: **7.2%** in 2024, CAGR - **6.8%**
- Growth of the lactose-free milk category (**by 55%** in 2024, share of **1.2%** in drinking milk)
- Fortified (functional) drinks - the start of a new category
- Growth of LSC for HoReCa

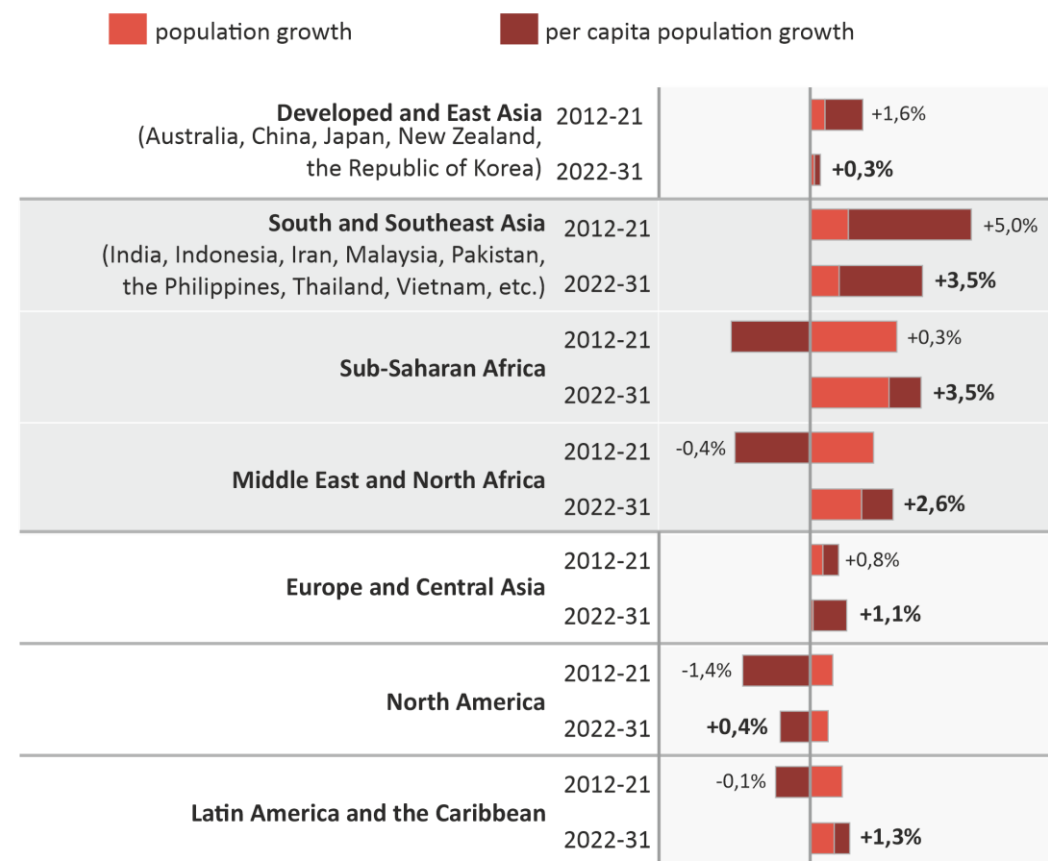
## MARKET OF THE REPUBLIC OF KAZAKHSTAN

- The share of UHT milk is stable at about **48%**, with 3% (CAGR)

## MARKET OF THE REPUBLIC OF UZBEKISTAN

- The most promising market in terms of its development. Consumption growth is about **8-10%** per year. Large population and reorientation to packaged milk, as well as a change in the structure of consumption under the influence of Westernization

Forecast for growth in dairy consumption in regions of the world





# TREND: LSC (LARGE SIZE CONTAINERS) – HORECA

Large fast food chains with large-scale consumption are faced with the inefficiency of using UHT milk, milkshakes and soft ice cream in 1L and 2L packages

Main problems: high cost of packaging, large volume of waste, etc.

Large HoReCa (fast-food) establishments are moving towards aseptic BiB (3-20 L) formats and returnable sterile containers (B2B 500/1000 L)



At the moment, the TDNT Engineering team has implemented 2 similar projects in the Russian Federation. Another project is at the implementation stage



# TREND: GROWTH OF UHT CREAM

One of the fastest growing segments on the Russian dairy market is ultra-pasteurized cream

High growth rate of the category (GAGR) **8,6%**

Of the 16 projects implemented over the past three years, 15 projects have a cream program





# **TREND:** **CONSUMER AND RETAIL –** **GROWTH OF PORTION FORMAT**

**1**

Changing lifestyle – «Life on the go and consumption on the go»  
Growth of «on the go» consumption formats:  
different types of snacks for one-time consumption

**2**

Changing socio-demographic portrait within the  
framework of modern post-industrial society

Reduction in the number of family households and  
increase in the number of single householders





# THERMIZED YOGURT: A SUCCESS STORY

## THE FIRST INNOVATIVE YOGURT IN CHINA

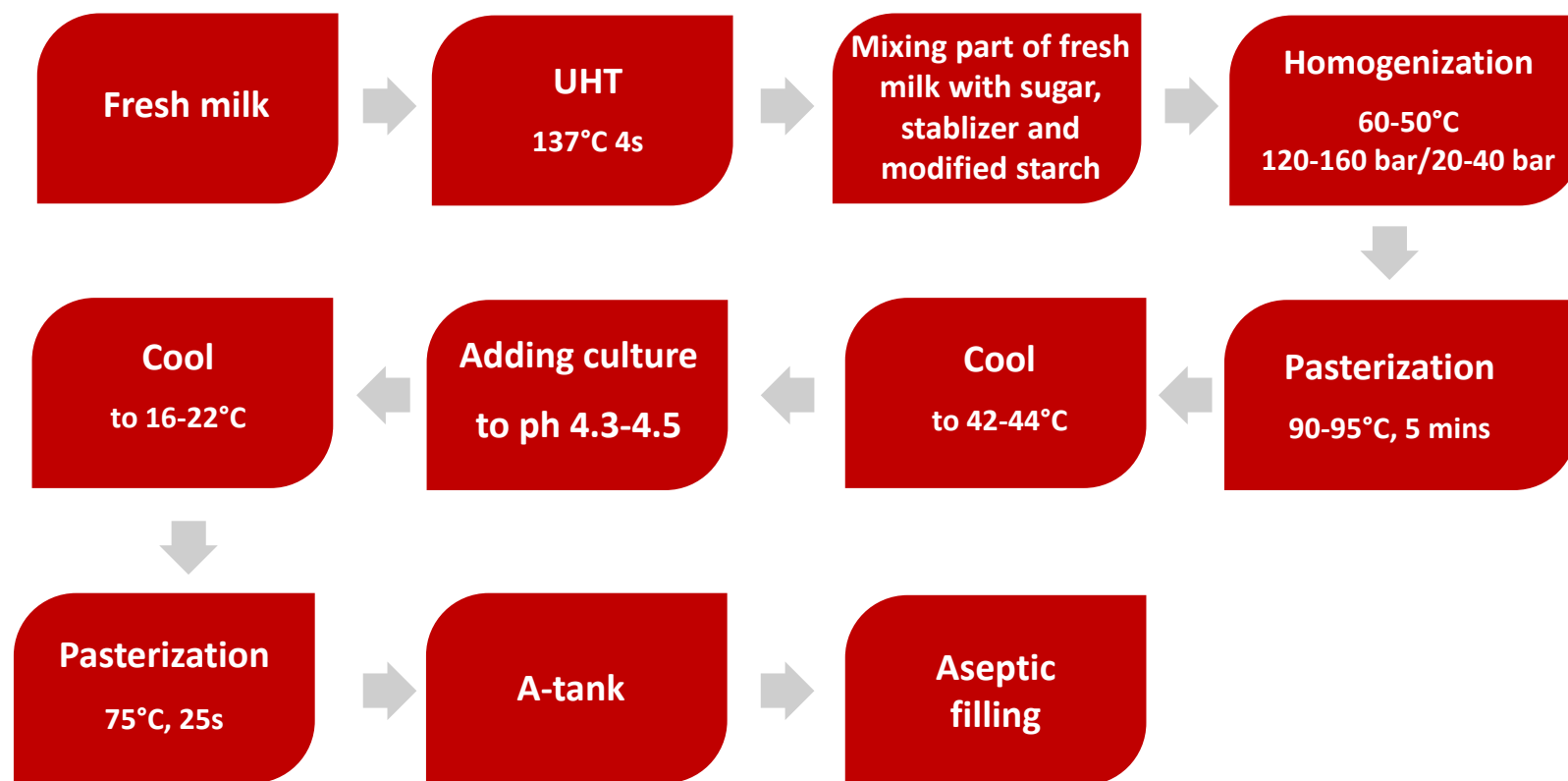
In 2010, Bright company launched the production of the first aseptic yogurt **Mosili'an** in China. TPA 200 ml packaging format

Market estimate of the growth of the aseptic yogurt market share in the yogurt category from **0% to 86%** as of 2023 (at least 11.5 billion packs per year)



# THERMIZED YOGURT: TECHNOLOGY

TECHNOLOGICAL ASPECTS USING  
THE EXAMPLE OF ASEPTIC YOGURT  
(PRC)



# THERMIZED KEFIR

IT IS MORE PROFITABLE FOR RETAIL TO WORK WITH «WARM SHELF» PRODUCTS

## REQUEST FOR ASEPTIC KEFIR DRINKS, YOGURT AND SOUR CREAM

These products are already presented  
on the market of the Republic of Kazakhstan

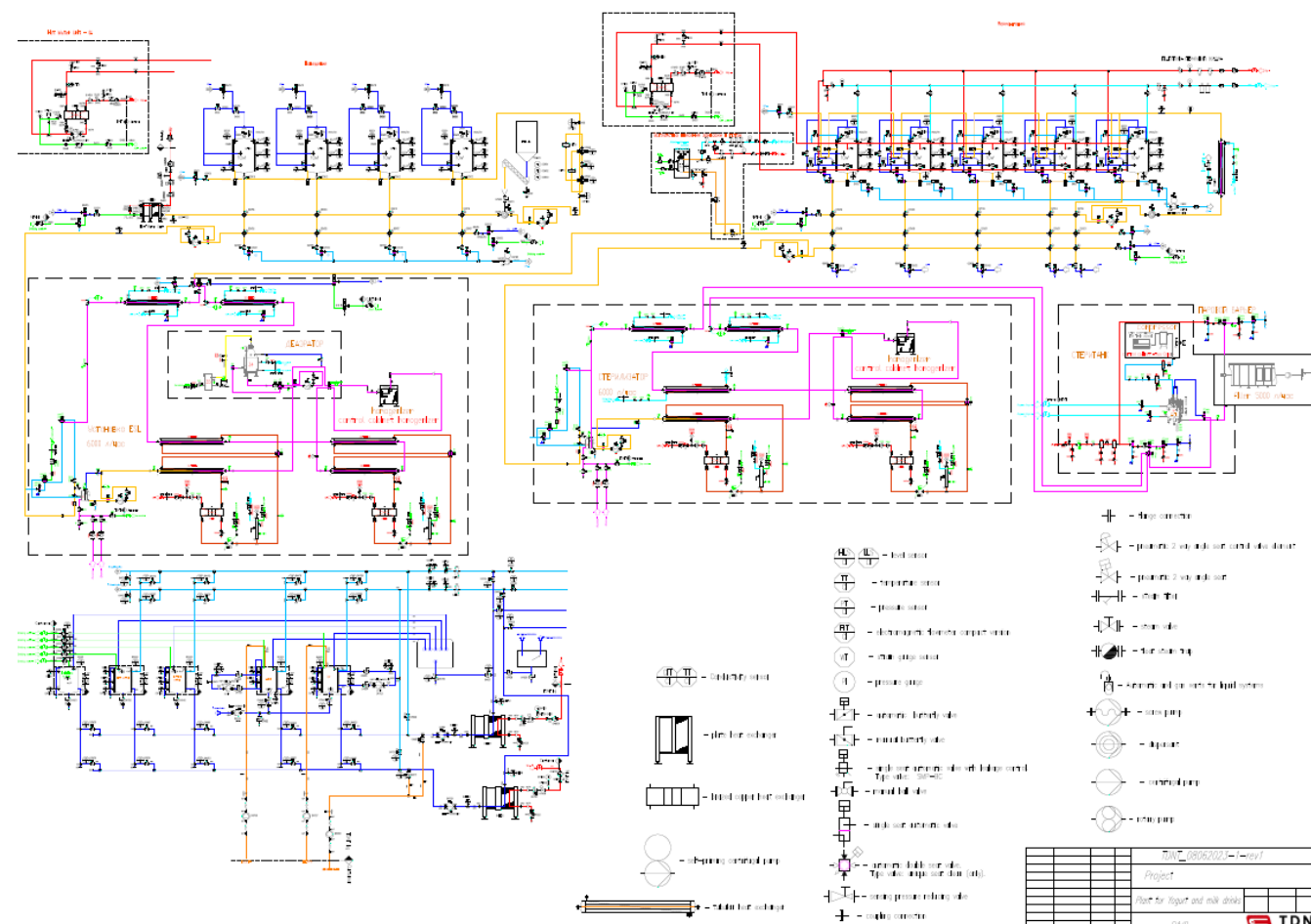
TDNT Engineering has implemented the first  
project in Russia – a kefir drink with a long  
shelf life (4 months) for the «warm shelf»





# NEW CATEGORY: FUNCTIONAL DRINKS

## HIGH PROTEIN DRINKS (WPC & MPC)



# FUNCTIONAL DRINKS

## MAIN INGREDIENTS:

- **Milk proteins:**

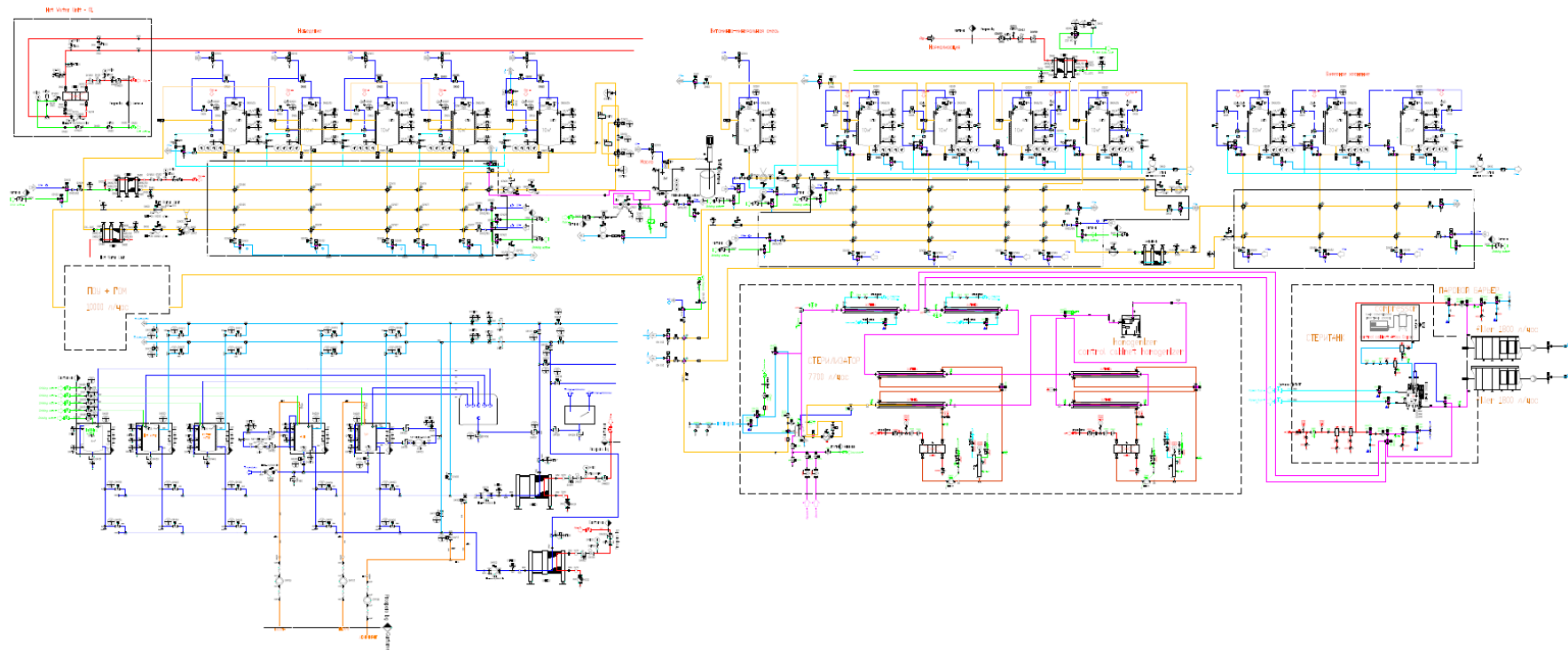
**WPC** – whey protein concentrate for thermized fermented milk products

**MPC** – milk protein concentrate for UHT

- **Vitamins**

- **Minerals**




- **Flavourings**



# CONTACTS



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