

# LACTOFERRIN



Company: Lactoferrin Production I (LPI)  
Copy: No. 1/1  
Date: 22.12.2020  
Business plan: 01/2021 - 12/2023  
(1.-3. Business year)  
Founder (Team): Akram Talibov  
Harald Gruebel

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# EXECUTIVE SUMMARY.

# 1. EXECUTIVE SUMMARY

## Lactoferrin and Global Market

- Lactoferrin <sup>1)</sup>
- *Lactoferrin (LF), also known as lactotransferrin (LTF), is a multifunctional protein of the transferrin family. Human colostrum has the highest concentration, followed by human milk, then cow milk (150mg/L). Lactoferrin belongs to the innate immune system. Apart from its main biological function, namely binding and transport of iron ions, lactoferrin also has antibacterial, antiviral, antiparasitic, catalytic, anti-cancer, and anti-allergic functions and properties. LF's primary role is to sequester free iron, and in doing so remove essential substrate required for bacterial growth.*
- *The use of LF in global industry mainly includes products of infant formula, dairy products, cosmetics, nutritional supplements and pharmaceuticals.*
- *The global market volume in 2020 (90%+ purity LF) is estimated **at 2000 tons p.a.**, which*
- *indicates an average growth by three times over the last 5 years. Only Japan consumes about 200 tons p.a. Future global market growth is expected by 30-50 % p.a. Main producers are located in Australia, USA, Germany, Netherland and France. Market price per ton LF (FOB) fluctuates from 800 to 1.800 TUSD. Highest purity can achieve best prices.*

1) <https://www.researchgate.net/publication/317258941>

2) various studies and estimates based on dialogs with customers and producers by RLP

# 1. EXECUTIVE SUMMARY

## Business Approach in Russia

- Business Approach in Russia <sup>1)</sup>
- *Russia has a growing dairy industry with a total of 2,9 Mil tons of raw milk produced in 2019. The excessive milk supply combined with decreasing consumption power forces large dairy producers to explore high value-added products, such as LF with 90%+ purity.*
- *Unlike other developed countries, Russian legislation allows extraction of LF from raw milk without discarding it for further processing. The LF extraction has no impact on the remaining milk quality. Large dairy processors of raw milk are an integral part of an LF production project.*
- *LF produced in Russia is targeting only export markets and would add value to the global health and food industry.*
- *Total production capability in Russia is about 50 tons p.a. (90%+ purity) with about Revenue*
- *30-40 Mio USD p.a.*
- *The business plan covers stage 1 with one (1) production unit and LF delivery of 3 tons p.a. with a Revenue > 2.4 Mio USD <sup>2)</sup>*
- *Total investment < 3.7 Mio USD (within 10 months); ROI < 36 month; EBITDA > 35%.*

1) <https://agrotrend.ru/news/2366-obyavlen-reyting-liderov-po-proizvodstvu-moloka> and RLP

# 1. EXECUTIVE SUMMARY

## Success Criteria and Prospects

- Why RLP (Russian Lactoferrin Production)?
- *RLP comprises a small team of senior executives with global industry background, successful and proven entrepreneurship, especially of biological, health and pharma incidents, plus scientific roots.*
- *RLP has deeply investigated the LF market and understands customer and producer mechanisms. The already developed production process and technology is adapted to Russian specific conditions. RLP is able to launch production within 12 month and already has a customer, who has confirmed the initial contract of collaboration. Production capability of high purity LF in Russia has been approved and certified.*
- Business Model & Future Shareholder
- *Lactoferrin Production I (LP-I) is looking for two to three groups of shareholders.*
- *The core team of LP-I itself, who will be also responsible for the operational implementation and running growth.*
- *A well-established Russian Dairy Producer with supply of raw milk and who covers the financial fund of 3.7 Mio USD*
- Start of Operation and Ramp-Up Objectives
- *With financial funds available, first LF can be produced and delivered within 15 month. During Ramp-Up, focus is to produce high quality LF production and extend customer base.*

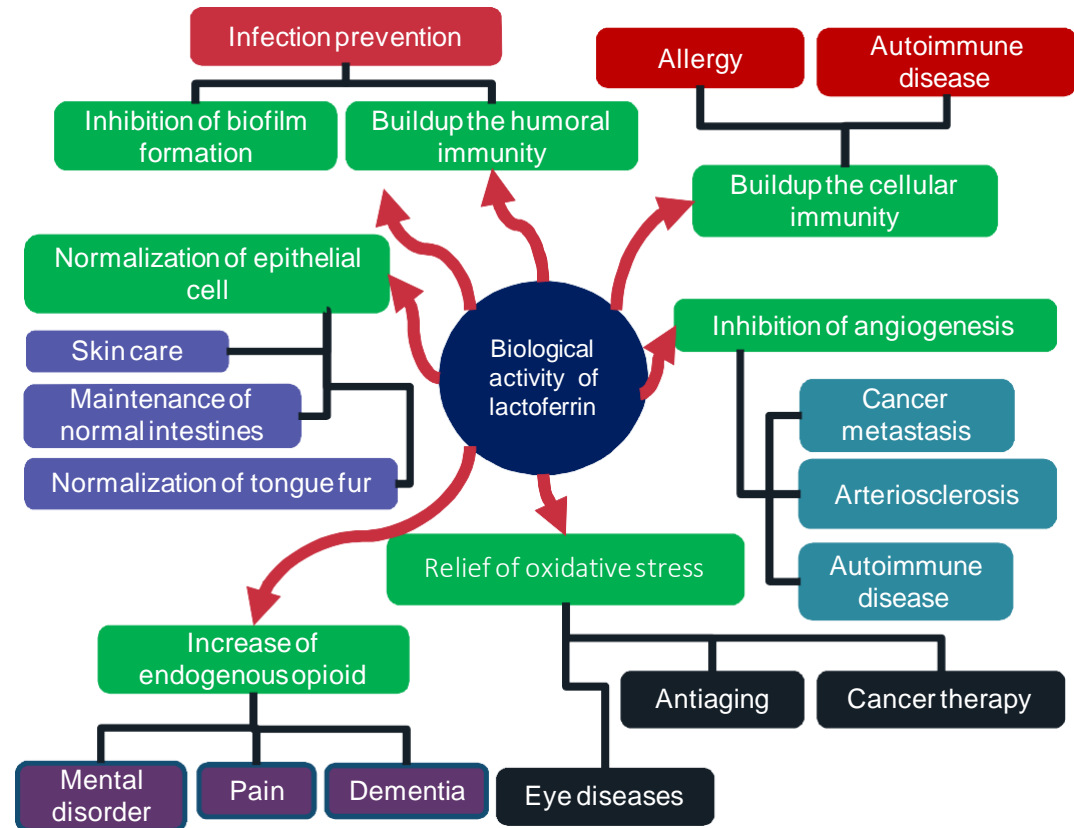
# PRODUCTS and SERVICE



# 2. PRODUCT / SERVICE

## 2.1 Current situation - Scientific and clinical proof of Lactoferrin (LF) efficacy

LF is contained in human mother's milk and it maintains the healthy growth of newborns. Recent researches for the last several decades have shown that LF works effectively not only for newborns but also for adult bodies to enhance immune activity, to maintain normal activity of central nerve system, to reduce visceral fat, etc. Central nerve system and immunity are the important function for human beings to keep healthy life. LF works in the brain passing through the blood brain barrier. It also has the function to activate the immune function. Also, it works effectively to inhibit carcinogenesis, to prevent biofilm formation that relates to infectious diseases, etc.



Growing consumer market since 2001!

## 2. PRODUCT / SERVICE

### 2.2 Customer benefit (the business idea)

#### **Service / Product:**

Extract LF from row milk at dairy product plants with a daily consumption of 300-500 tons of row milk.

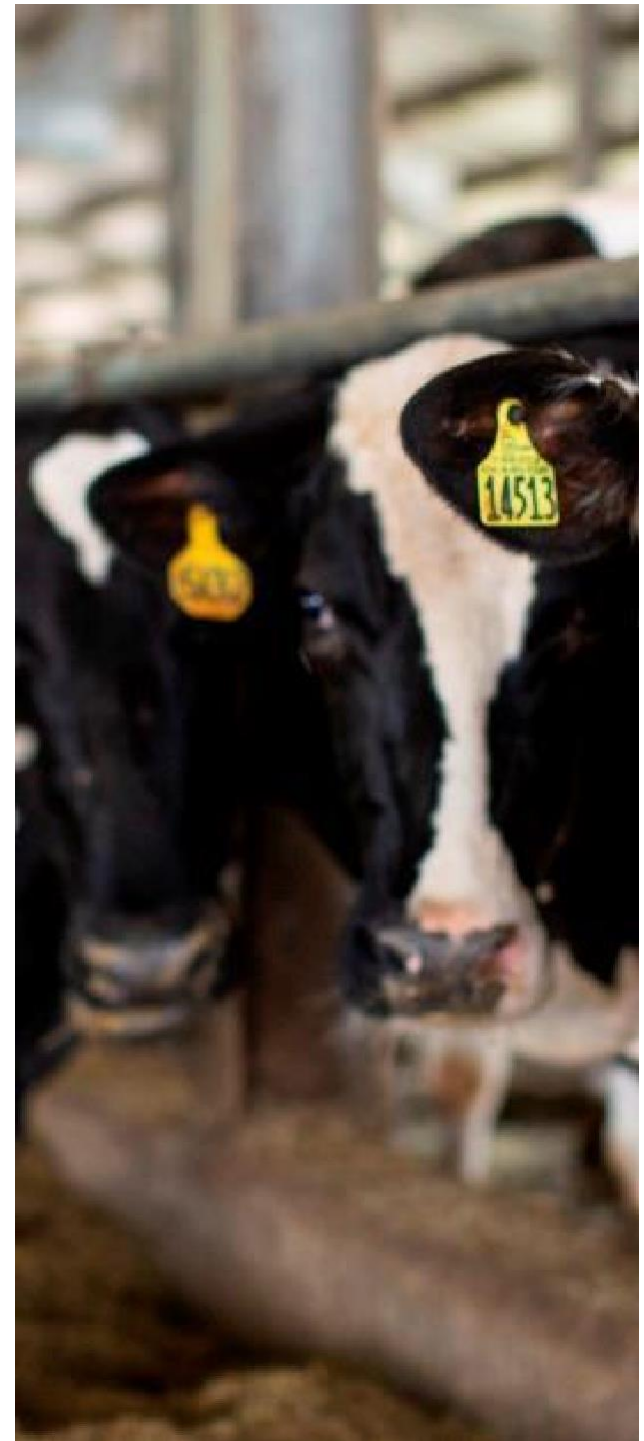
#### **Uniqueness:**

In Russia, the extraction of LF from row milk would not limit the further usage for dairy production. The LF extraction equipment design is adaptable to any dairy plant, because movable within different locations.

#### **Competitiveness:**

Less production cost, because further usage of the row milk and huge row milk production in Russia.

**LP-I is the First mover in the Russian market.**





# 2. PRODUCT / SERVICE

## 2.3 LF Production process & equipment / cost

### Production Process :

Process Flow attached.

Assumption: 3kg LF / 100 tons row Milk (worst case)

Target LF capacity: 14 kg p.d. / 5 tons p.y

Target Row Milk consumable: 450 tons p.d.

### Production Facility & Office Facility:

Time Spec – Order / Delivery / Transport: 3-4 / 6-8 / 1 month

Supplier location: Europe

Investment 3.0 Mio USD (incl. commissioning ,tax, custom, etc.)

Cost ROW Milk/L :0.005 USD

Labor workforce: 4 HC

Consumables (Energy, Water, etc): tbd /

Operational Office location / cost: tbd

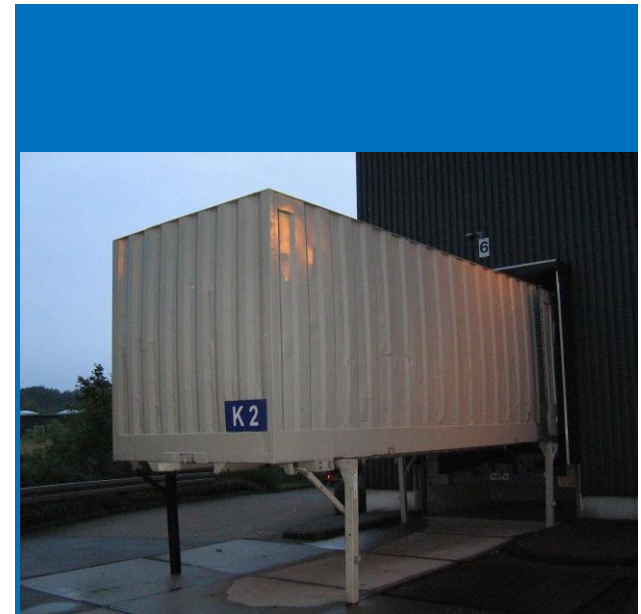
### Laboratory Equipment:

For Quality inspection

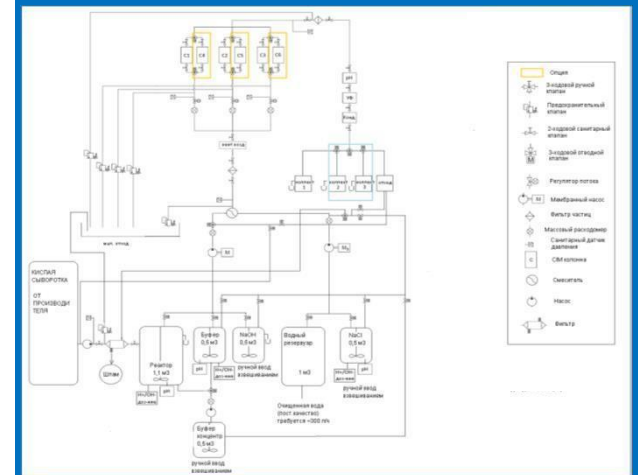
Investment: 300.000 USD

### Pilot Production:

Verification of Row milk quality is required to determine achievable yield (kg LF/ tons Row Milk) to confirm business plan and to start the order of production facility



LF Extraction / Production Facility in 45 ft Container



Process Flow of LF Extraction

## 2. PRODUCT / SERVICE

### 2.4 Customer, Marketing & Logistics

#### **Customers:**

B2B business to Food & Nutrition producers or via regional distributors

#### **Marketing & Sales:**

Already a Japanese customer, exclusive importer and distributor, assigned promise to consume 5 tons p.a.

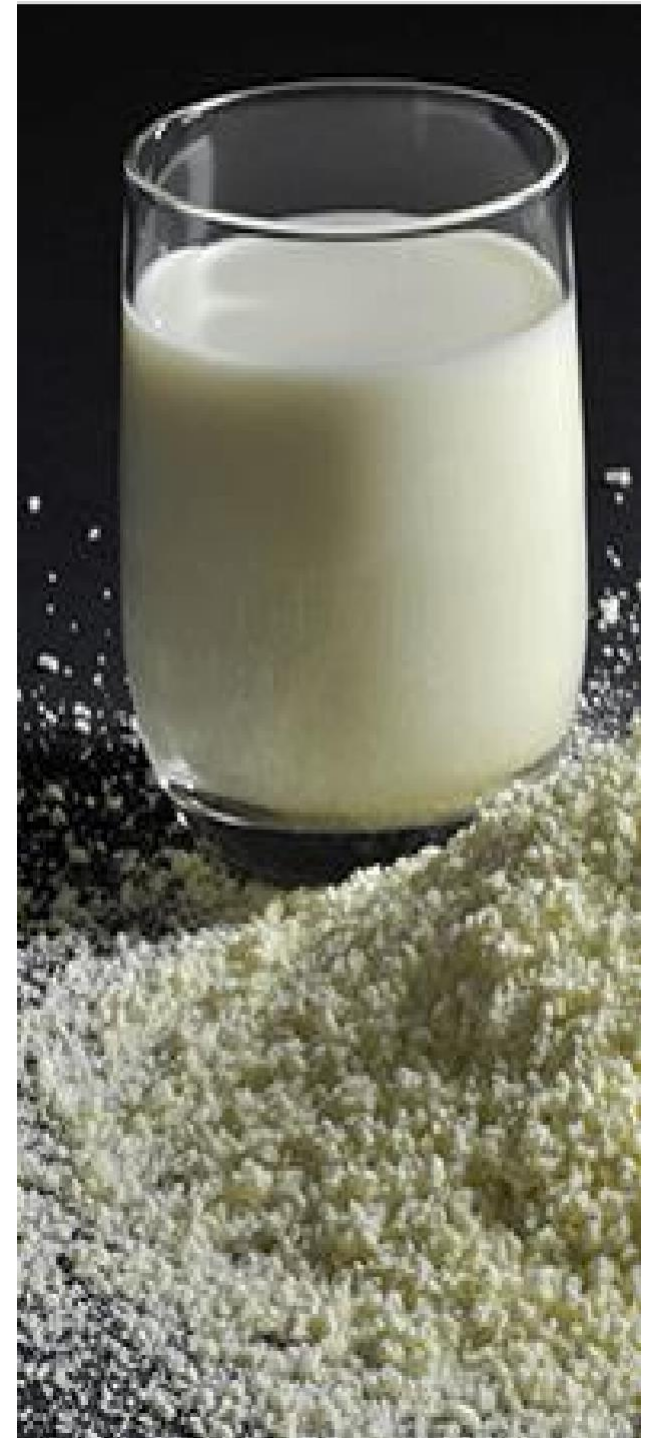
#### **Operational Office, Storage & Logistics:**

LF storage in cooling chamber  
Delivery containers tbd by customer  
Airfreight delivery on monthly base

#### **Start of Production / Sales:**

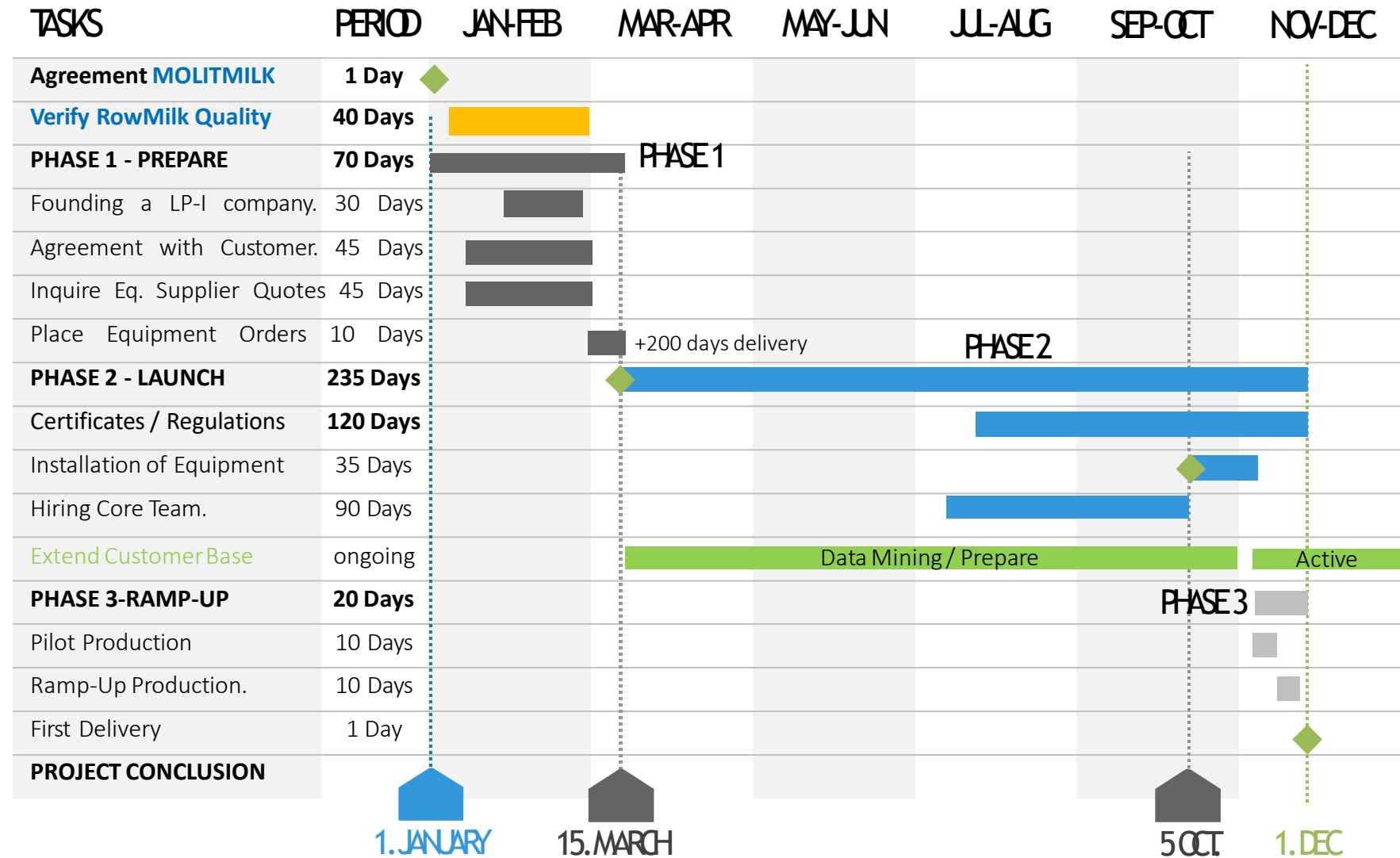
12-15 month after agreement of financial funds :

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# 2. PRODUCT / SERVICE

2.5 Product development / schedule STAGE 1: 5 tons LF p.a.



# Market Overview.

# 4. MARKET OVERVIEW

## 4.1 Market segmentation of LF usage

### Food & Nutrition

- Infant Formula (Milk Powder for Baby)
- Food Supplement (Tablet, Capsule, Sport Drink etc.)
- Dairy Products (Yogurt, Milk-related Beverage)
- Others (Cereal, Granola by Microcapsule Technology)

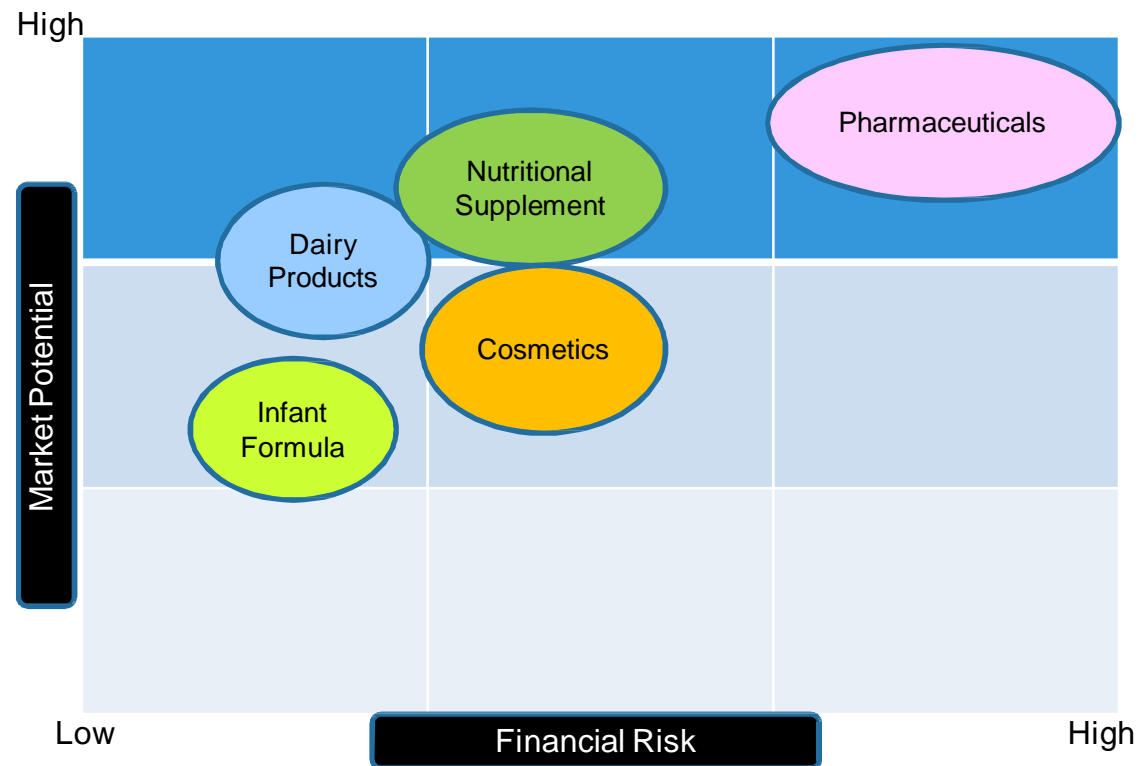
### Pharmaceuticals

- Iron Tablets
- Immune System Stimulation
- Health of Intestinal Flora

### Cosmetics & Hygiene

- Skin Care
- Body Care
- Oral Hygiene

### Others



Business Plan focus on the Segment of Food & Nutrition.

# 4. MARKET OVERVIEW

## 4.2 Competitor (competitor analysis) 1/2

Competitors are expanding:





# Marketing and Sales.

The image is a graphic design with a diagonal split. The top-left portion is a solid black triangle, and the top-right portion is a light blue area with a fine, grid-like texture. A solid white horizontal bar runs across the bottom of the image. The text 'Marketing and Sales.' is written in a white, sans-serif font across the black and blue areas.



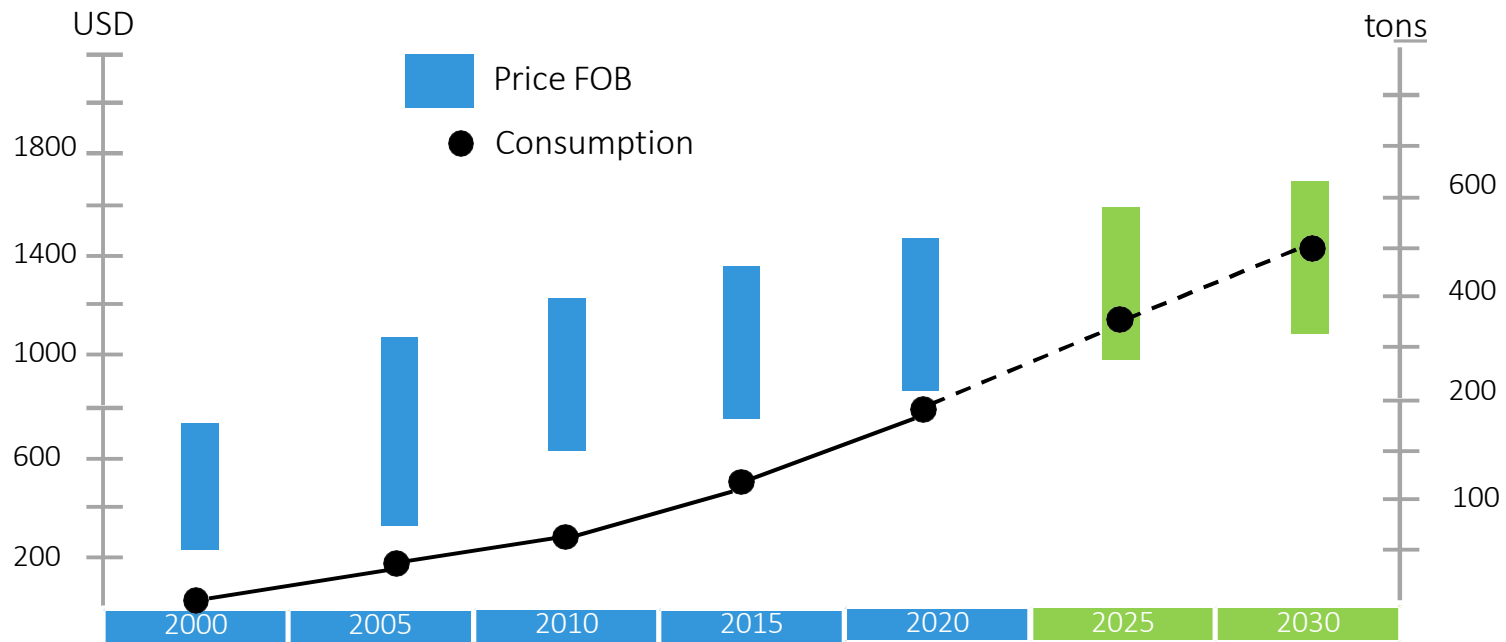
# 5. MARKETING & SALES

5.1 Marketing strategy within this business case to be based upon a limited tools of the 4Ps



# 5. MARKETING & SALES

## 5.2 Price Trend / Consumption of LF (high purity) example JAPAN



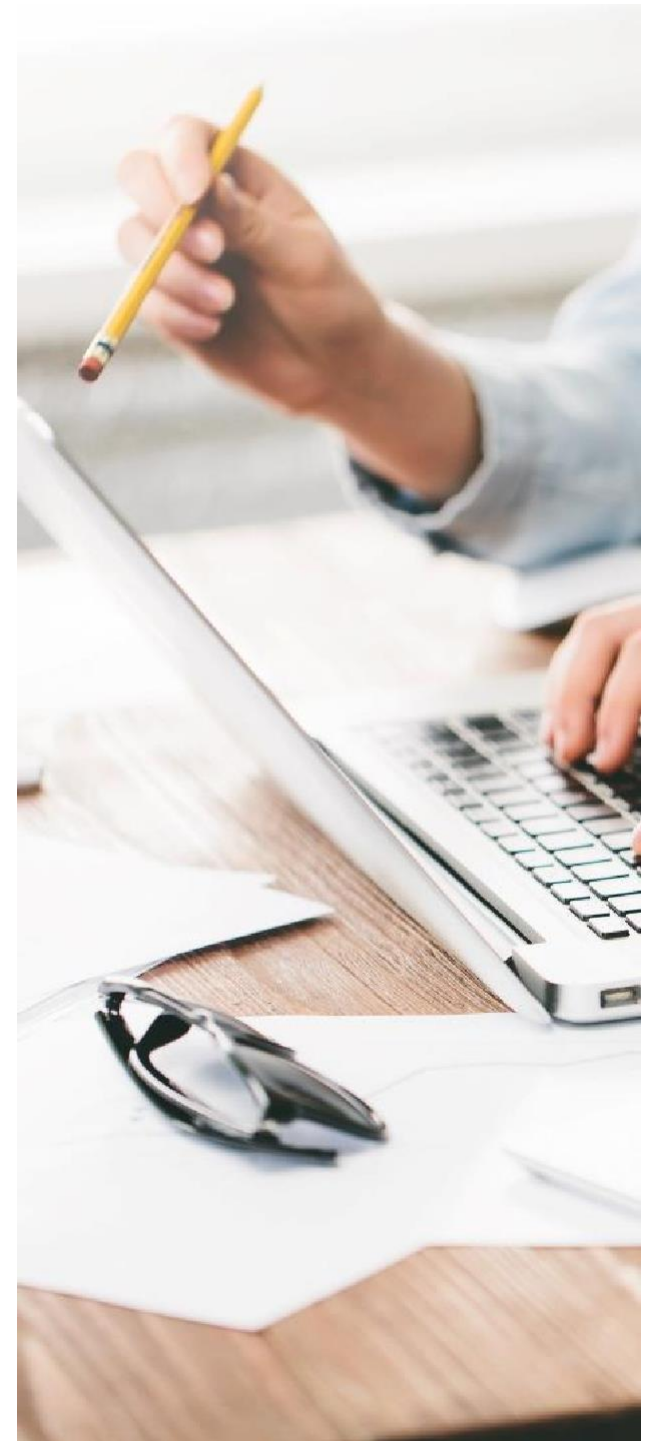
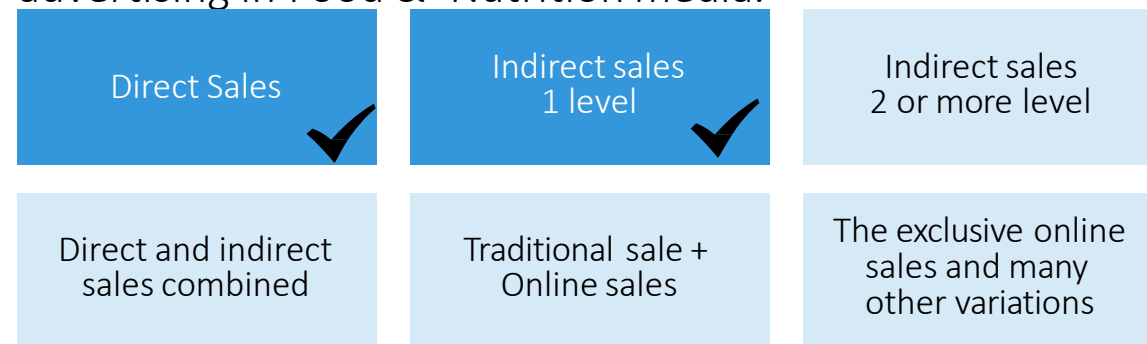
# 5. MARKETING & SALES

## 5.3 Sales & Advertising

Cost of Sales is mainly driven by creating visibility of LP-I within the

B2B platforms, like Direct Sales and Indirect Sales by exclusive regional importers

Cost of Sales is driven by global travelling to pursue B2B customers and distributors. Also conferences and advertising in Food & Nutrition media.



The background of the slide is a blurred office scene with a desk, papers, and a chair. A large, blue, textured geometric shape, resembling a triangle or a large 'L' shape, is overlaid on the right side of the image. The text is positioned on the left side of the slide.

# 8. FINANCIAL PLANNING

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## 8.1 Sensitivity analysis - WC vs BC related to 3-5 tons p.a. of LF with MOLTIMILK

	Worst	Medium	Best
KG LF / 100.000 Tons Row Milk	3	3	3
Row Milk Consumption Tons /day	300.000	400.000	450.000
LF KG/day	9	12	13,5
LF Tons / year	3,285	4,38	4,9275
LF Sales Price / KG in USD	800,00	1000,00	1200,00
<b>Revenue p.a. in USD</b>	<b>2.628.000</b>	<b>4.380.000</b>	<b>5.913.000</b>
Cost of kg Row Milk in USD	0,005	0,005	0,005
Cost of Row Milk p.a in USD	500.000	666.667	750.000
Cost Consumables in USD	365.000	486.667	547.500
Opertional Cost USD	530.000	530.000	530.000
<i>Reserve</i>	200.000	200.000	200.000
<b>COST</b>	<b>1.595.000</b>	<b>1.883.333</b>	<b>2.027.500</b>
<b>EBITDA in USD</b>	<b><u>1.033.000</u></b>	<b><u>2.496.667</u></b>	<b><u>3.885.500</u></b>
<b>EBITDA %</b>	<b><u>39%</u></b>	<b><u>57%</u></b>	<b><u>66%</u></b>
<b>Investment in USD</b>	<b>3.700.000</b>	<b>3.700.000</b>	<b>3.700.000</b>
<b>ROI w/o Interest in years</b>	3,6	1,5	1,0

\*ROI assumes no distribtion of profits until Investment has been paid back

Cost Consumables are estimated, final value will base on market price and Spec Data of Production facility

Higher production yield Kg LF/ 100.000 tons of row milk e.g. 5 Kg instead of 3 Kg would raise EBITDA up to 10%

# 3. FOUNDER/ FOUNDINGTEAM

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## Overview



**Akram Talibov**

General Management  
Sales, Technology & Production  
Food & Protein



**Harald Gruebel**

President  
Investor Relations  
Business Development  
Industry Start-ups & Growth