



**Valio**  
**food**  
**solutions**



**THE EXPERT AND PARTNER IN**  
**LACTOSE FREE BUSINESS**



**Valio**  
**eila®**  
EXPERTISE IN  
LACTOSE FREE DAIRY

# WORLD'S LEADING EXPERTISE AND SOLUTIONS IN LACTOSE FREE

**110**

YEARS  
OF DAIRY  
INNOVATIONS



NOBEL PRIZE

**1978**

VALIO WAS THE FIRST  
IN THE WORLD  
TO DEVELOP AND LAUNCH  
LOW LACTOSE MILK POWDER  
IN 1978

**IN EARLY  
80's**

LOW LACTOSE PRODUCTS  
BECAME MAINSTREAM  
IN FINLAND

**2001**

THE FIRST DAIRY  
COMPANY IN THE  
WORLD TO  
INTRODUCE  
LACTOSE FREE MILK

**OVER  
100**

WORLD'S LARGEST  
RANGE OF LACTOSE  
FREE DAIRY  
PRODUCTS

**IN OVER  
15 YEARS**

VALIO HAS GROWN LACTOSE FREE  
DAIRY INTO A SIGNIFICANT  
BUSINESS INTERNATIONALLY,  
AND VALIO IS THE CATEGORY  
LEADER IN FINLAND AND SWEDEN



EXPERTISE IN  
LACTOSE FREE DAIRY

TECHNOLOGY LICENSING  
FOR DAIRY COMPANIES



# 2020

## CONSUMER FOOD TRENDS

### LACTOSE-FREE GROWTH DRIVERS:

**CONSUMER'S DIGESTIVE  
CHALLENGES ALONGSIDE ...**

**THE TECHNOLOGICAL  
INNOVATIONS ENABLING...**

**THE BEST TASTING  
LACTOSE-FREE DAIRY FOR  
EVERYONE TO ENJOY**

**BY NEW NUTRITION BUSINESS  
11/12 2019**

**NEED TO FEEL THE BENEFIT!**

**PERSONALISATION**

**LACTOSE FREE**

**A2**

**PLANT BASED**

**GLUTEN & GRAIN FREE**

**PROBIOTICS AND FERMENTATION**

**FOD MAP**

**REDUCE, REPLACE, ELIMINATE  
NATURAL SUGARS  
SUGAR FOR ENERGY  
HONEST INDULGENCE  
SUGAR PLUS;  
BENEFIT BUNDLES**

**SUGAR**

**DIGESTIVE  
WELLNESS**

**HEALTH AND WELLBEING**

**NATURALLY FUNCTIONAL**

**SNACKIFICATION**

**FRAGMENTATION**

**SUSTAINABILITY**

**PROVENANCE  
&  
AUTHENTICITY**

**TRANSPARENCY  
FREE-FROM  
CLEAN LABEL  
SMALL SCALE  
POSITIVE  
PROCESSING  
PROTECTING  
UNIQUENESS  
SOURCE&SCIENCE**

**PROTEIN**

**NATURAL HEALTH HALO  
WEIGHT MANAGEMENT  
ALL PROTEIN SOURCES  
GROWING  
QUALITY OF PROTEIN**

**FOOD AND  
MOOD**

**STRESS RELEASE  
SLEEP AIDS  
DEPRESSION MANAGEMENT  
GUT FRIENDLY  
FIBRE & GOOD CARBS  
HEALTHY FATS**



# 70%

OF THE WORLD'S POPULATION  
IS LACTOSE INTOLERANT\*

STILL LOT OF UNTAPPED  
BUSINESS POTENTIAL

Lactose avoiders look for  
equal access to all food

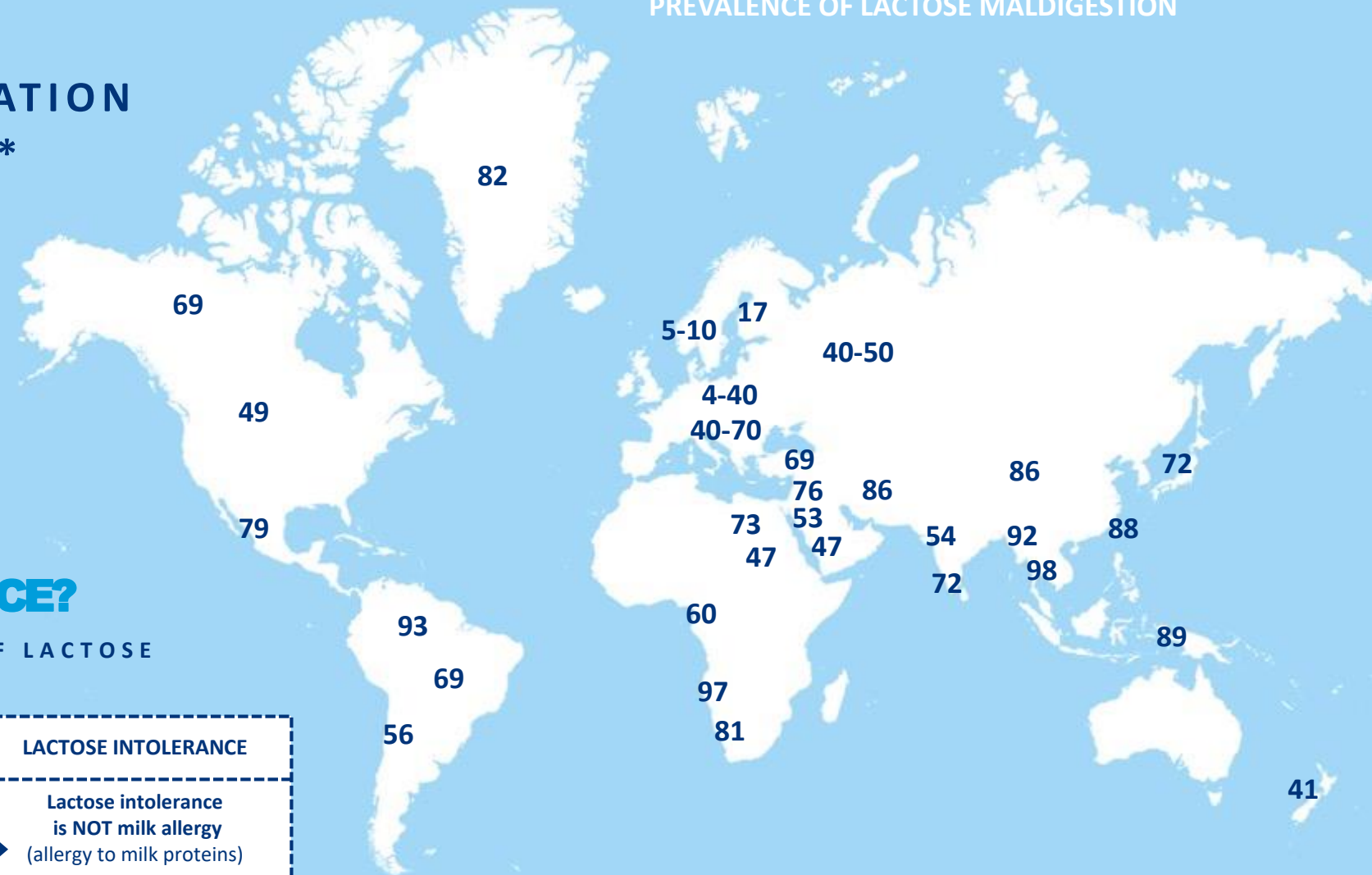
## WHAT IS LACTOSE INTOLERANCE?

### SYMPTOMS CAUSED BY MALDIGESTION OF LACTOSE

Lactose is the carbohydrate (sugar) of milk

HYPOLACTASIA	LACTOSE MALDIGESTION	LACTOSE INTOLERANCE
Deficiency of lactase enzyme (lactase enzyme splits lactose in the intestine)	People who are lactose maldigesters have difficulty digesting lactose  LACTOSE MALDIGESTION CAN LEAD TO LACTOSE INTOLERANCE	Lactose intolerance is NOT milk allergy (allergy to milk proteins)

### PREVALENCE OF LACTOSE MALDIGESTION



\*EFSA Panel on Dietetic Products Nutrition and Allergies (NDA)  
ESFA Journal 2010;8(9):1777-

# LACTOSE FREE / KEY MARKET HIGHLIGHTS AND FORECAST

LACTOSE  
*free* DAIRY &  
BABY FOOD

MARKET GROWTH  
2019–2024

**+49%**

2019  
MARKET SIZE

**€8.08**

Billion

> 8% CAGR  
2024  
MARKET SIZE

**€12.06**

Billion

## KEY MARKET DRIVERS

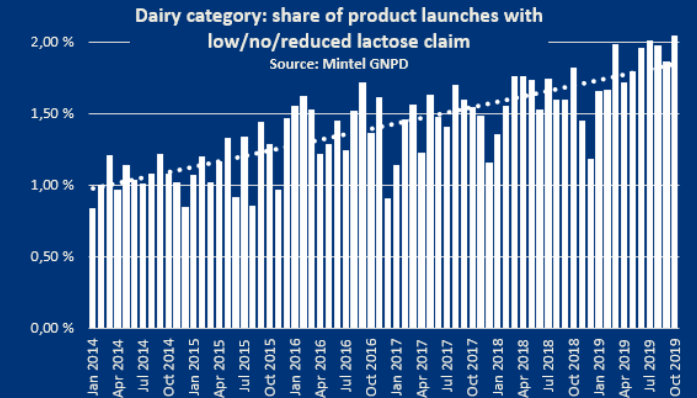
- Rising knowledge of diets' effect to digestive wellness
- Rising knowledge of lactose intolerance and benefits of lactose free products
- Lactose free products with good taste and texture; convincing the consumer

## KEY CUSTOMER SEGMENTS

- Lactose intolerants; globally >70% of adult population
- Consumers with sensitive stomachs
- Consumers seeking convenience by choosing products that suit all

## KEY MARKET CHALLENGES

- Awareness about lactose intolerance and benefits of lactose free diet
- Revealing and communicating relevant benefits to consumer



## FORECAST

Still a lot of untapped potential:

→ Lactose intolerance over 80% in China and Eastern Africa

## GROWTH DRIVERS:

- **Benefit bundles** connecting lactose free to other key trends; protein, sugar, organic, convenience, indulgence etc
- **Expansion to other categories:** additional growth from categories still underdeveloped in lactose free, such as ice-cream, milk chocolate, bakery, special nutrition

Source:

Euromonitor International, Free from lactose dairy + Free from lactose baby food (dairy categories: cheese, milk, yoghurt, other dairy), retail value € y-o-y ex rates, 2019-2024

Mintel GNPD, dairy categories with lactose free claim 2014 vs. 10/2019



# ADD VALUE TO YOUR PORTFOLIO WITH VALIO FOOD SOLUTIONS COMBINED WITH LACTOSE FREE

## NUTRITION SOLUTIONS

### HIGH PROTEIN

- ✓ Protein enriched products
- ✓ Tailored protein composition

### SUGAR REDUCTION

- ✓ Lower carbohydrate level; 30-45% lower than in regular SMP
- ✓ Similar sweet taste with less added sugar

### TAILORED NUTRITION

- ✓ Vitamin and mineral enrichment
- ✓ Tailored nutrition for specific needs

## HEALTH AND WELLNESS SOLUTIONS

### DIGESTIVE COMFORT

- ✓ Lactose free or reduced lactose
- ✓ Minerals supporting digestion

### NATURALLY HEALTHY

- ✓ Natural milk minerals+vitamins
- ✓ High quality milk protein
- ✓ Essential aminoacids
- ✓ MFGM and phospholipids

### CLEAN LABEL /LESS ALLERGENS

- ✓ Less E-codes
- ✓ Gluten or egg free

### HEALTHY INDULGENCE AND CONVENIENCE

## SENSORY SOLUTIONS

### OPTIMISED TASTE TASTE PROFILING

- ✓ Taste profiling from fresh to sweet and savoury
- ✓ Taste enhancement
- ✓ Better for you options without compromise in taste or texture
- ✓ Good tasting milk protein, no off tastes or change in organoleptic properties

### OPTIMISED TEXTURE

- ✓ Optimised mouthfeel
- ✓ No graininess/sandiness in high protein products
- ✓ Good texture without syneresis
- ✓ Longer shelf life

## PROCESS SOLUTIONS

### OPTIMISED PROCESS

- ✓ Stable and high quality ingredients
- ✓ Wide product range
- ✓ Good wettability and solubility
- ✓ Smaller dosage for similar protein level

### PROCESS AND TECHNOLOGY SUPPORT

- ✓ Pioneer expertise in production and development of lactose free ingredients
- ✓ Support in technology and process



## VALIO EILA® LACTOSE FREE AND LOW LACTOSE MILK POWDERS

# APPLICATIONS IN

- DAIRY PRODUCTS
- DRINK POWDERS
- CONFECTIONERY
- ICE CREAM
- BAKERY PRODUCTS
- DESSERTS
- READY MEALS
- SPECIAL NUTRITION; SPORT, AGEING
- INFANT FORMULAS



VALIO EILA®  
LACTOSE FREE  
MILK POWDERS  
OPEN UP NEW  
OPPORTUNITIES  
FOR THE FOOD  
INDUSTRY



# VALIO INGREDIENTS FOR LACTOSE FREE APPLICATIONS

## VALIO EILA® PRO LACTOSE FREE MILK POWDERS



### Skimmed milk powder (SMP)

instant and non-instant quality

### Semi-skimmed milk powder (Semi-SMP)

instant quality

### Whole milk powder (WMP)

instant and non-instant quality

Higher protein level, fresh milky taste

Easy to increase protein level with good tasting, high quality milk proteins



## VALIO EILA® SWEET LACTOSE FREE MILK POWDER



### Skimmed milk powder (SMP)

non-instant quality

### Whole milk powder (WMP)

non-instant quality

Regular protein and carbohydrate level, sweet milky taste

Sweeter taste without increasing energy level



## VALIO EILA® LOW LACTOSE MILK POWDER



### Skimmed milk powder (SMP)

non-instant quality

Regular protein and carbohydrate level, sweet milky taste

Sweeter taste without increasing energy level





# THANK YOU!

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