INVESTOR PRESENTATION

We live in an age with the highest level of consumption our planet has ever seen

TOMRA

Using more resources than ever before. More than our planet can continue to sustain.

TOMRA is well-positioned towards megatrends

1 Solutions for optimal resource productivity

Circular Economy

Future of Food

2 Leading market position – fit for growth

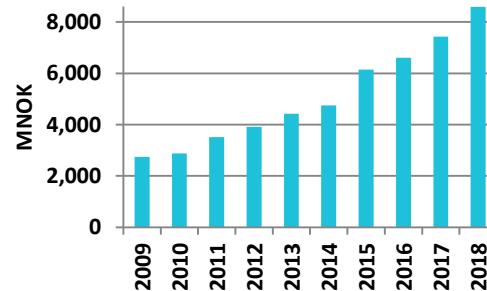Collection Solutions **#1**

Food Sorting **#1**

Recycling Sorting **#1**

Mining Sorting **#1**

3 Pioneer in application of sensor-based technology

4 Strong, people minded performance culture

Revenues

MNOK

8,000

6,000

4,000

2,000

0

2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

Great Place To Work®

European Business Awards®

TOMRA

DID YOU KNOW?

- By 2025 **solid waste generation** will **increase by 70%** compared to 2010 levels

- **32%** of all plastic packaging made **ends up in nature** every year

- **20%** of plastic packaging could be **profitably re-used** and **50%** could be **profitably recycled** if designed for after use systems

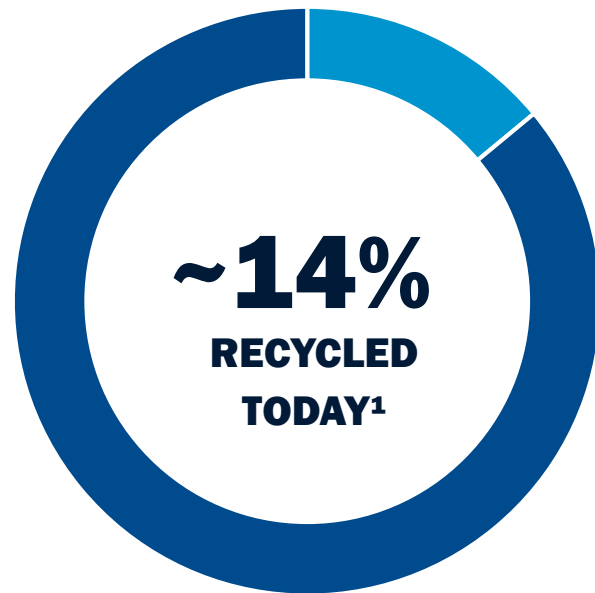- Continuing current practices there will be **more plastic than fish** in the ocean by 2050

Only 2% of the planet's annual plastic packaging production is reused for the same/similar products
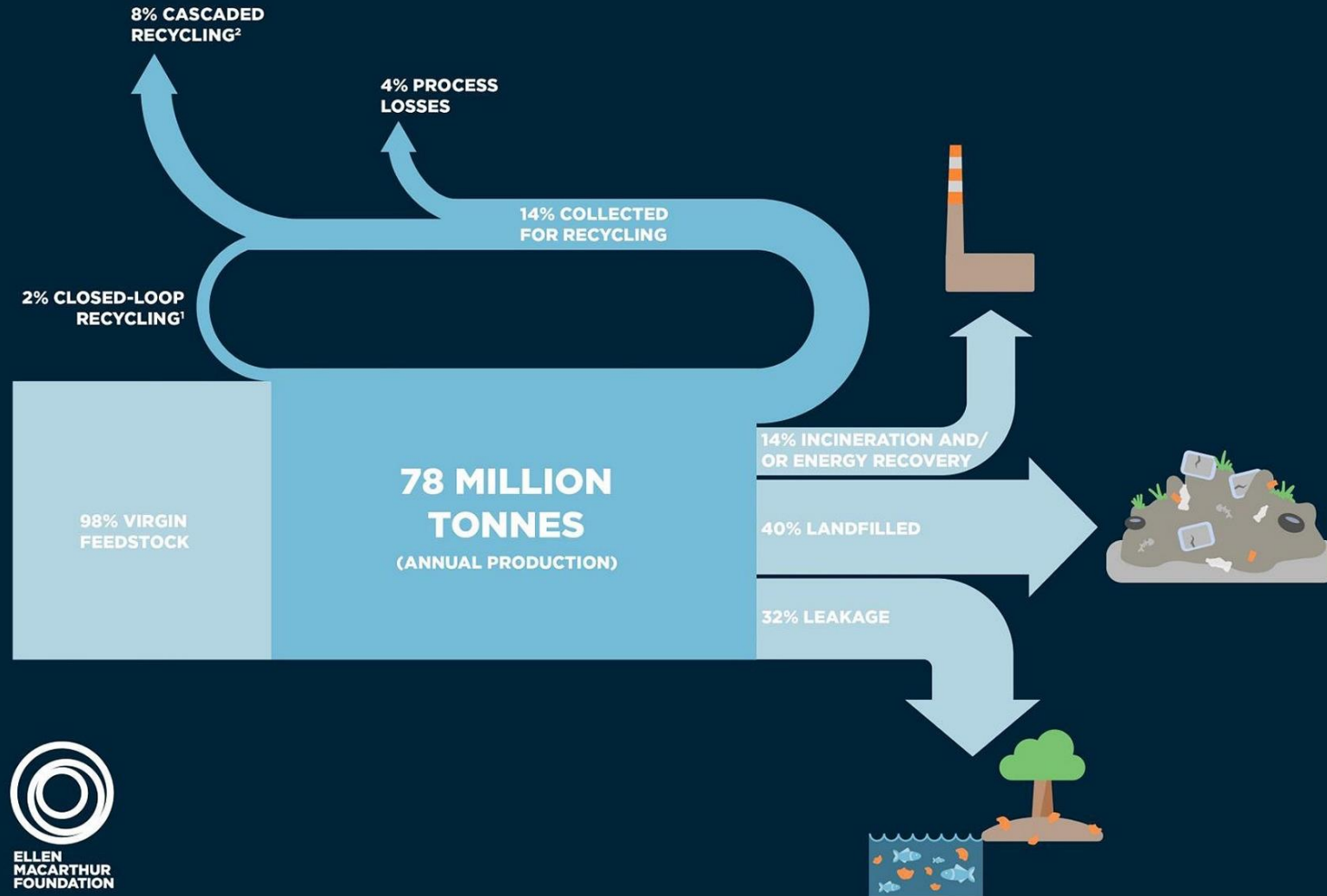
Significant untapped potential to reuse good materials

PLASTIC PACKAGING

~14%
RECYCLED
TODAY[1]

VALUE PROPOSITION*

$ 50–80 BN

Total volume of plastic packaging is 78 mln tonne annually whereof ~14% is currently recycled, meaning ~67 mln tonne lost. With a volume yield of 72% and a weighted average price of 1,100–1,600 USD/t, the total value proposition is in the range of USD 50-80 bn. Please note that this is a conservative estimate based on a narrow definition of total annual plastic packaging volume. Applying a wider definition can increase the value proposition up to USD 170-190 bn.

STEEL

~70-90%
RECYCLED
TODAY[1]

VALUE PROPOSITION*

$ 70–150 BN

Worldwide steel production is currently about 1,600 mln tonne annually. 70-90% recycling means ~1,100-1,450 mln tonne recycled and 160-480 mln tonne lost. Assuming ~90% yield in process with market price of ~500 USD/t equals USD 70-220 bn, so conservative range USD 70-150 bn
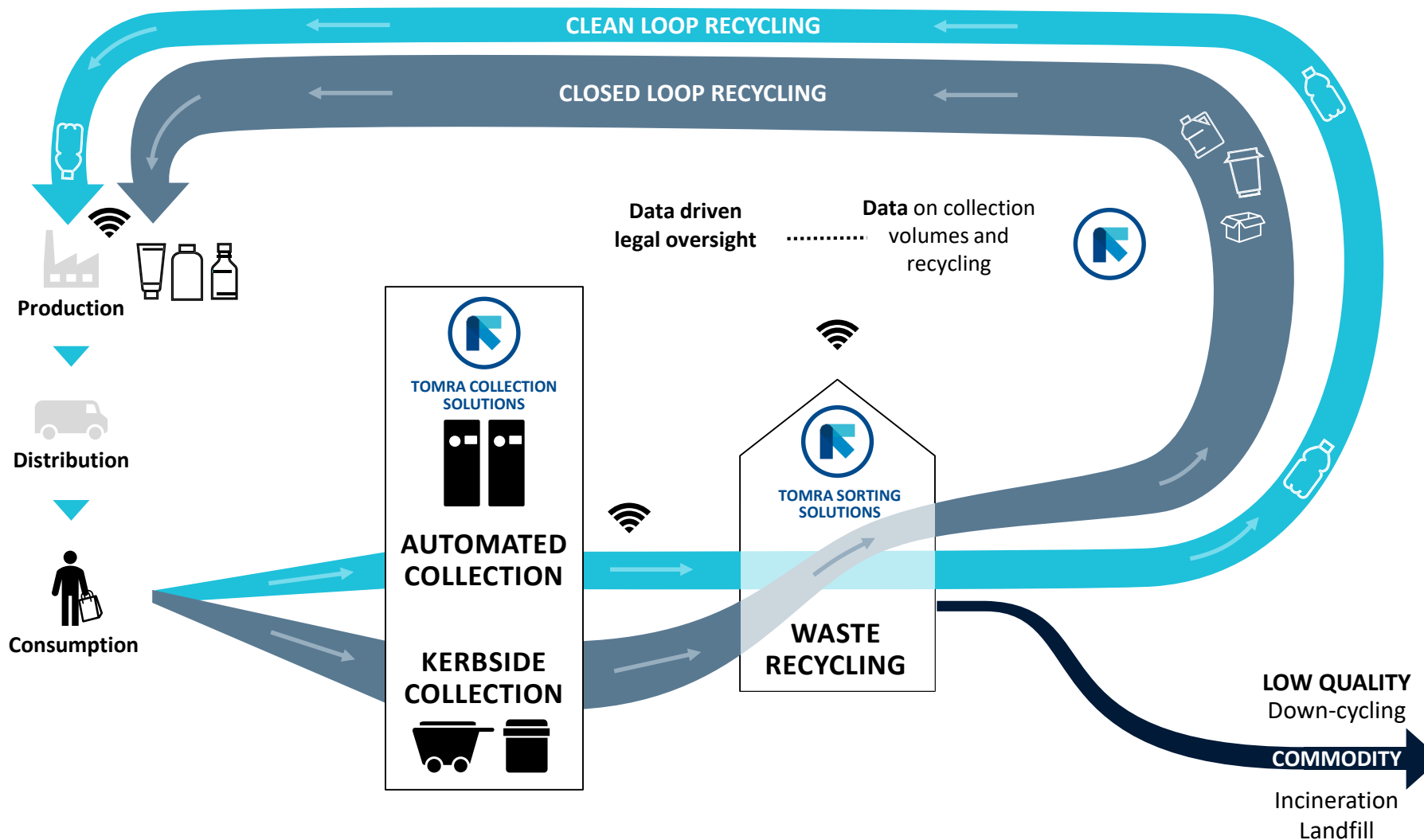
PAPER

~50-60%
RECYCLED
TODAY[1]

VALUE PROPOSITION*

$ 30–40 BN

~80 % of produced paper is potentially recyclable, ~400 mln tonne annually x 80% = 320 mln t/a potentially recyclable paper in the market. Today, ~58 % or 230 mln t/a are recycled, means 90 mln tonnes are lost. If this is recovered and goes into the paper recycling process there will be between 10-30% fibre loss, assuming on average 20%. The value of newsprint paper is ~400-600 USD/t, let´s assume 500 USD/t = ~90 mln t/a x 80% x 500 USD/t = USD36 bn

Circular economy – redefining value creation

CLEAN LOOP RECYCLING

CLOSED LOOP RECYCLING

Production

Distribution

Consumption

Data driven legal oversight

Data on collection volumes and recycling

TOMRA COLLECTION SOLUTIONS

AUTOMATED COLLECTION

KERBSIDE COLLECTION

TOMRA SORTING SOLUTIONS

WASTE RECYCLING

LOW QUALITY
Down-cycling

COMMODITY

Incineration
Landfill

Business case for plastics

Value increase

2.5-7x

€1400 per ton
Clear PP/PE
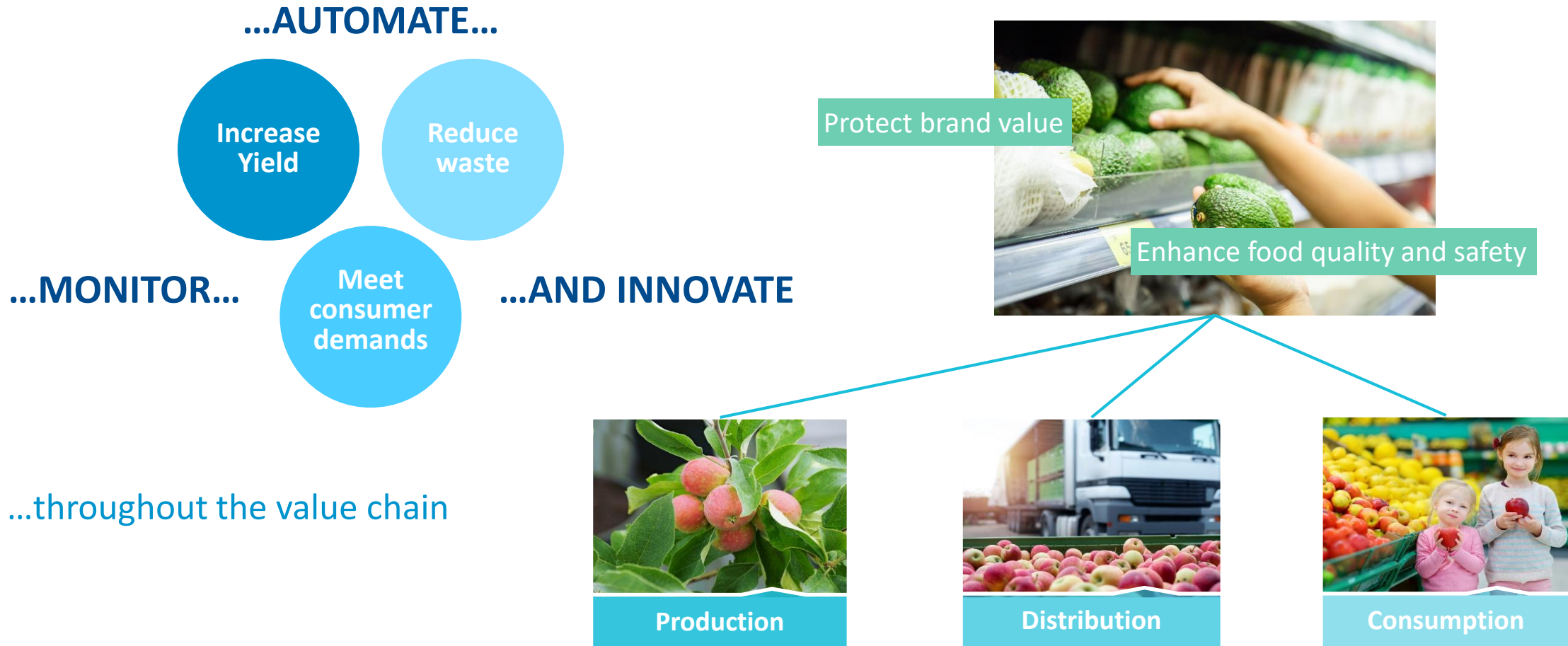
€1000 per ton
Clear PET

€500 per ton
Mixed PET

€200 per ton
Mixed Plastic

TOMRA

DID YOU KNOW?
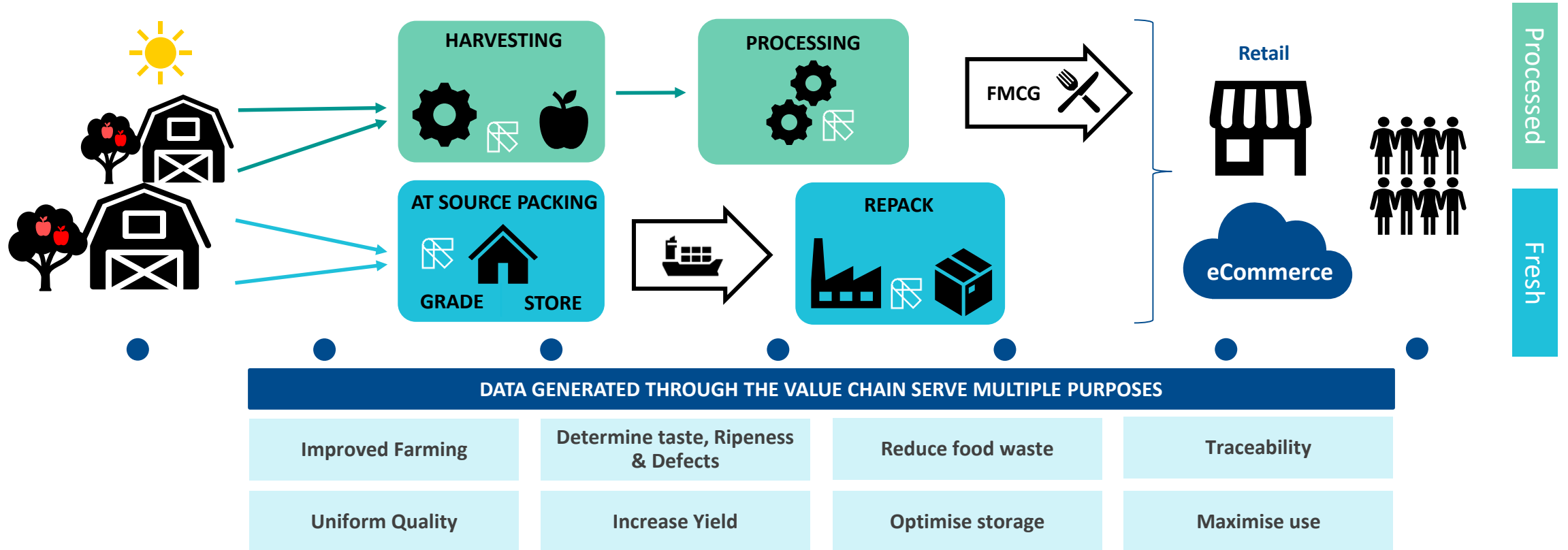
- By 2050, a global population of **9.8 billion will require 70%** more food than is consumed today

- We are currently **wasting 33% of global food production**

- **The food industry accounts for around 10% of global GDP**

- **Agriculture** accounts for **20% of global greenhouse gas emissions**

New ways of feeding a fast-growing DEMANDING population…

To ensure an efficient food production there is an increased need to…

…AUTOMATE…

Increase Yield

Reduce waste

…MONITOR…

Meet consumer demands

…AND INNOVATE

Protect brand value

Enhance food quality and safety

…throughout the value chain

Production

Distribution

Consumption

TOMRA

TOMRA to play a difference in the FUTURE OF FOOD production

HARVESTING

PROCESSING

FMCG

AT SOURCE PACKING

GRADE   STORE

REPACK

Retail

eCommerce

Processed

Fresh

DATA GENERATED THROUGH THE VALUE CHAIN SERVE MULTIPLE PURPOSES

Improved Farming	Determine taste, Ripeness & Defects	Reduce food waste	Traceability
Uniform Quality	Increase Yield	Optimise storage	Maximise use

Some of the biggest global challenges are TOMRA's business opportunities

From purpose into profits and profits into progress, TOMRA is **transforming** what it means to be resourceful


- Our solutions, in use around the globe, helped keep ~**17 millions of tons of CO_2** from being released into the atmosphere in 2019

- **More than 40 bn used beverage containers are captured every year** through our reverse vending machines

- Our steam peelers process ~**15 million tons of potatoes per year with a 1% yield improvement** over other alternatives

- **~715,000 tons of metal are recovered** every year by our metal-recycling machines

At TOMRA, our company vision is Leading the Resource Revolution

It is our belief that businesses have the power, responsibility, and vested interest to help manage our planet's precious resources—today and tomorrow.

TOMRA AT A GLANCE

Publicly listed on Oslo Stock Exchange (OSEBX: TOM)
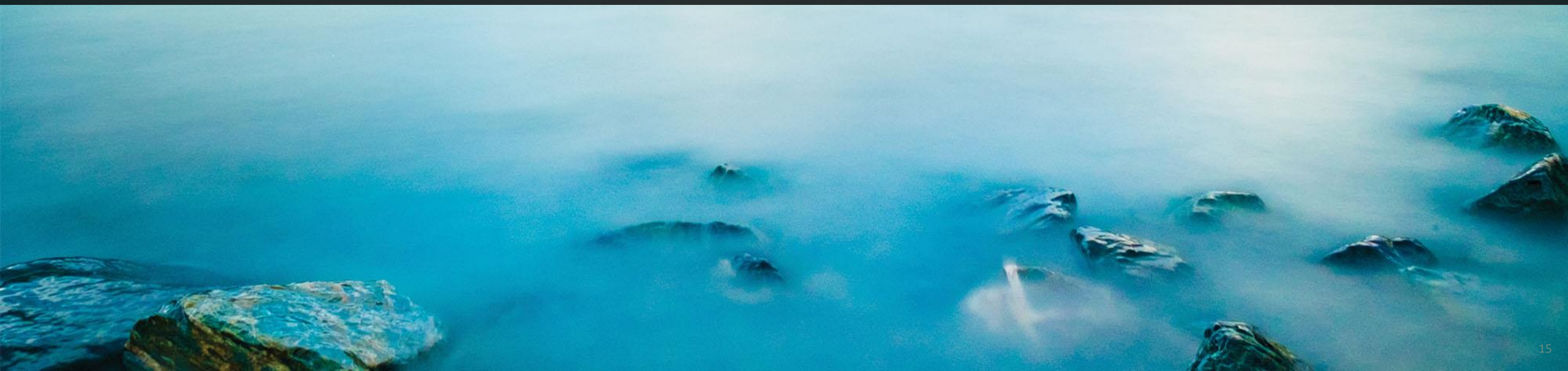
4500+ EMPLOYEES GLOBALLY

9.3 BILLION NOK REVENUES IN 2019

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TOMRA SORTING SOLUTIONS

TOMRA COLLECTION SOLUTIONS

FOOD RECYCLING MINING

REVERSE VENDING MATERIAL RECOVERY
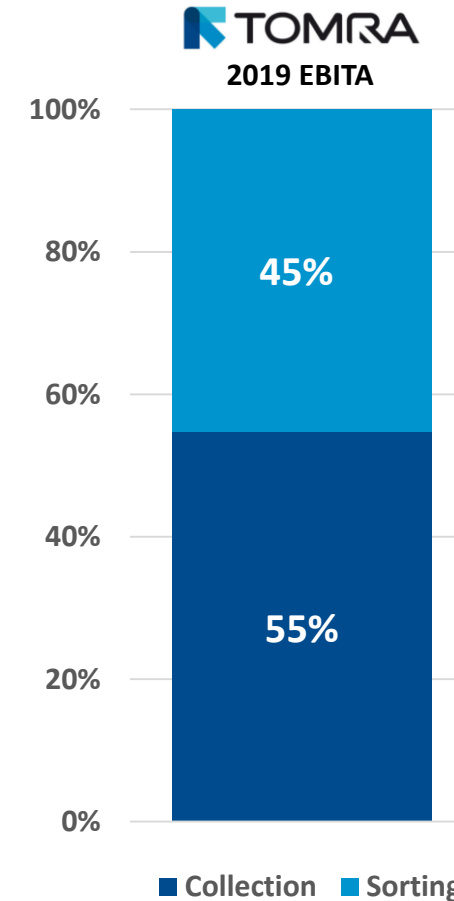
Creating value through two strong business areas
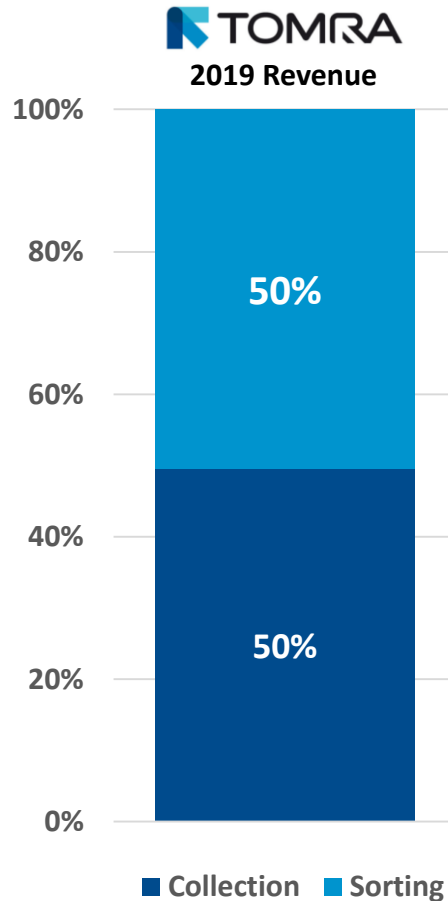
2019 Revenue

- Sorting: 50%
- Collection: 50%

Legend: Collection, Sorting

TOMRA SORTING SOLUTIONS
- High growth
- High margins
- Medium cyclicality

Technology leadership - sustainable business

TOMRA COLLECTION SOLUTIONS
- Stable
- High margins
- Low cyclicality

2019 EBITA

- Sorting: 45%
- Collection: 55%

Legend: Collection, Sorting

The TOMRA transformation journey

2004
TOMRA scquires TITECH, the world's leading provider of optical recognition and sorting technology for the waste industri and TOMRA's transformation journey starts.

2005
TOMRA acquires Orwak Group, a leading provider of compaction for a variety of materials.

2006
TOMRA acquires Commodas - a leading supplier within the field of sensor-based products for mining and metal recycling.

2008
TOMRA acquires Ultrasort - specialists in sensor-based mining technology.

2011
Sale of Californian material handling business. With the divestment the US operation became less exposed to movements in commodity prices.

2011
TOMRA acquires Odenberg, rounding out the offering to include food optimization.

2012
TOMRA acquires BEST, leading food sorting machine producer. With the acquisition of BEST, TOMRA has by far the widest reach within the food sorting universe.

2014
Divestment of Orwak. Further portfolio focus on sensor-based technology.

2016
Through its transformation journey TOMRA has moved from a business of many brands to one brand with many areas of expertise. We are one TOMRA.

2016
TOMRA expands into lane sorting, acquiring New Zealand based Compac, confirming TOMRA's position as the leading provider of sorting technology into the food industry.

2018
TOMRA compliments its food sorting portfolio with the acquisition of BBC Technologies, a leading provider of precision grading systems for blueberries and other small fruits.

FROM:

TOMRA
Helping the world recycle

2000
100%
- Collection

2004
5%
95%
- Collection
- Sorting

2008
18 %
82 %
- Collection
- Sorting

2012
40 %
60 %
- Collection
- Sorting

2019
50 %   50 %
- Collection
- Sorting

TO:

LEADING THE RESOURCE REVOLUTION

TOMRA's two business areas

TOMRA SORTING SOLUTIONS

TOMRA COLLECTION SOLUTIONS

FOOD

Share of '19 sales	~32%
Employees	1,445
Customers	Food growers, packers and processors
Market share	Bulk: ~25% Lane: ~25%

REVERSE VENDING

	~39%
	1,905
	Grocery retailers
	Over 70%

RECYCLING

Share of '19 sales	~16%
Employees	260
Customers	Material recovery facilities, scrap dealers, metal shredder operators
Market share	~55-60%

MATERIAL RECOVERY

	~11%
	590
	Grocery retailers and beverage manufacturers
	~60% in USA (markets served)

MINING

Share of '19 sales	~2%
Employees	80
Customers	Mining companies
Market share	~40-50%

TOMRA SORTING GROUP FUNCTIONS & SHARED STAFF

Employees	250

Installed base worldwide

TOMRA — COLLECTION SOLUTIONS

TOMRA — SORTING SOLUTIONS

REVERSE VENDING	
Nordic	~15,100
Germany	~29,500
Other Europe	~15,000
North America	~16,900
Rest of the world	~7,600
TOTAL	**~84,100**

RECYCLING		MINING		FOOD BULK		FOOD LANE	
EMEA	~4,500	Europe	~20	EMEA	~3,400	EMEA	~1,580
Americas	~990	US / Canada	~46	Americas	~3,025	Americas	~1,220
Asia	~940	Australia	~10	APAC	~780	APAC	~950
Other	~30	South Africa	~46				
		Other	~41				
TOTAL ~6,460		**TOTAL ~163**		**TOTAL ~7,205**		**TOTAL ~3,750**	

Food Lane includes Compac and BBC

TOMRA

Strengthen presence in China

Established in China since **2010**
3 business streams active in China
2 wholly own subsidiary
2 joint ventures
3 test centers
2 assembly workshop
300 employees

Beijing:
- Joint venture

Qingdao:
- Service hub

Kunshan:
- Sorter production
- Test center
- R&D center
- Supply hub (Compac)

Hangzhou:
- Service hub

Xiamen:
- China headquarters
- R&D center
- Test centers
- Sub-assembly workshop
- Joint venture
- Global supply hub

Taiwan:
- Service hub

Lanzhou:
- Service hub

Chengdu:
- Service hub

Kunming:
- Service hub

TOMRA COLLECTION SOLUTIONS

DID YOU KNOW?

- **1 million** **plastic bottles are bought around the world every minute**

- **Less than half** **of all purchased plastic bottles are collected for recycling**

- **More than 40bn** **beverage containers are captured by TOMRA** **every year…**

- **…representing only** **less than 3%** **of all beverage containers sold in 2018**

But the tides are shifting. There's a desire for change...

Consumer demand for responsible plastic use options

Legislative push for new plastic waste strategies

Market pull from large brand owners and beverage companies

An overview of current deposit markets*

Canada:
- Northwest Territories (2005)
- Yukon (1992)
- British Columbia (1970)
- Quebec (1984)
- Newfoundland (1997)
- Ontario (2007)
- Prince Edwardian Island (2008)
- Nova Scotia (1996)
- New Brunswick (1992)
- Manitoba (2008)
- Saskatchewan (1988)
- Alberta (1972)

Europe:
- Norway (1999)
- Sweden (1984)
- Iceland (1989)
- Finland (1996)
- Denmark (2002)
- Estonia (2005)
- Netherlands (2005)
- Lithuania (2016)
- Germany (2006)
- Croatia (2006/2015)

USA:
- Oregon (1972)
- California (1987)
- Hawaii (2005)
- Iowa (1979)
- Michigan (1978)
- New York (1983/2010)
- Vermont (1973)
- Maine (1978)
- Massachusetts (1983)
- Connecticut (1980/2010)

Australia:
- Northern Territory (2013)
- Queensland (Nov 2018)
- New South Wales (Dec 2017)
- South Australia (1977)

* In addition, some markets have refillable deposit systems such as: Austria, Belgium, Chile, Czech Republic, France, Hungary, Poland and South Korea

TOMRA

25

Upcoming deposit markets on the move

Scotland:
Commitment to a Container Deposit Scheme announced in party program

North America:
Possible expansion of existing deposit systems

England:
Announced plans for a deposit scheme to reduce plastic pollution. Ongoing consultation

EU Single-Use Plastic Directive:
Targets on recycled content and collection target for plastic bottles. Deposit scheme mentioned as a mean to reach those targets.

Australia:
NSW introduced deposit from December 2017
QLD introduced deposit from November 2018

Western Australia plans to introduce in 2020

— Recently approved
— In progress

10 most common plastic objects found on European beaches

Drink bottles
Food containers
Bags
Crisp packets/ sweet wrappers
Cigarette butts
Cups & lids
Balloons and balloon sticks
Cutlery, straws & stirrers
Cotton buds
Sanitary applications

Single-use plastic items represent
50% of marine litter

Source: Based on JRC report

#PlasticsStrategy

European Commission

EU enforcing its leadership role on environment

Targeting the most littered plastic items

Some products to be banned, others less used

Separate measures for plastic drinks bottles

Collection target for plastic bottles**:**
- 77% by 2025
- 90% by 2029

Recycled content in product design:
- 25% by 2025 in PET bottles
- 30% by 2030 in all plastic bottles

10 most common plastic objects found on European beaches

Drink bottles

Cigarette butts

Food containers

Cups & lids

Balloons and balloon sticks

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European Commission
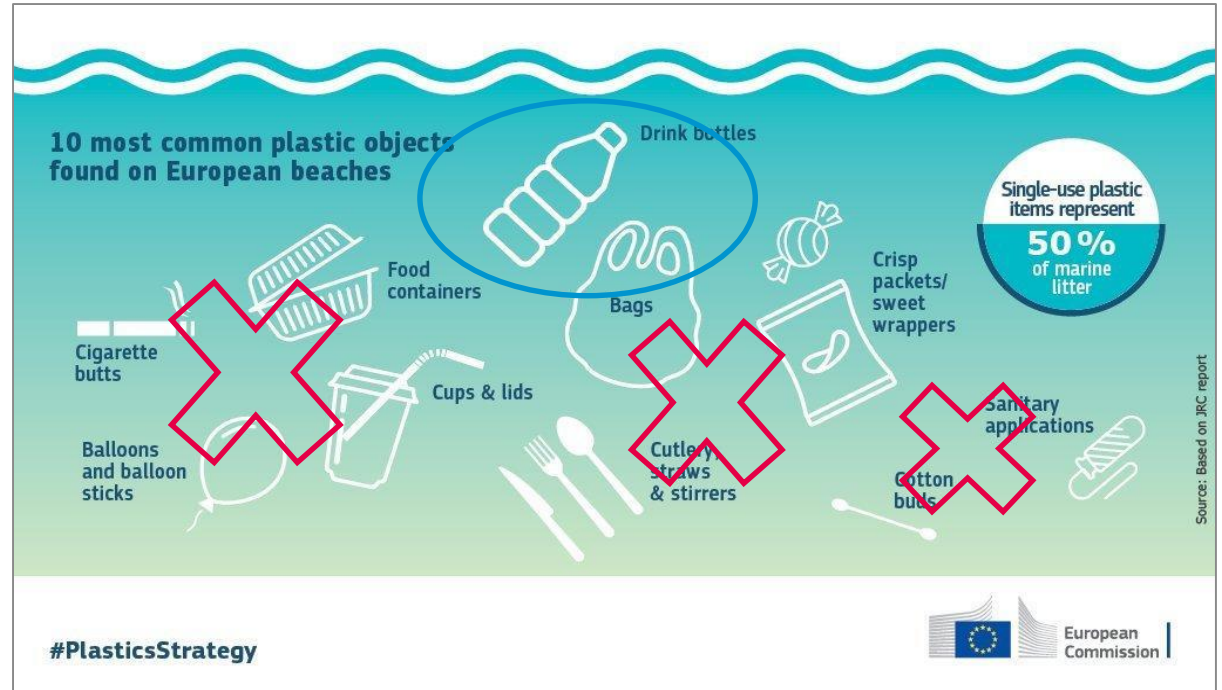
Extended producer responsibility

Collaboration across plastics value chain

TOMRA

A proven solution to achieve high return rates

- Return rate and deposit value* for various container deposit schemes

Legend: ■ Return rate (light blue) ■ Deposit value in EUR (dark blue)

Country	Return rate	Deposit value
Germany	98%	0.25
Netherlands	95%	0.25
Norway	92%	0.21-0.31
Finland	92%	0.1-0.4
Michigan (US)	92%	0.09
Lithuania	92%	0.1
Massachusetts (US)	66%	0.05
UK	No deposit 43%	
France	No deposit ~40%	

Return rates in Lithuania

- 34% — Prior to container deposit scheme
- 74% — End of year 1
- 92% — End of year 2
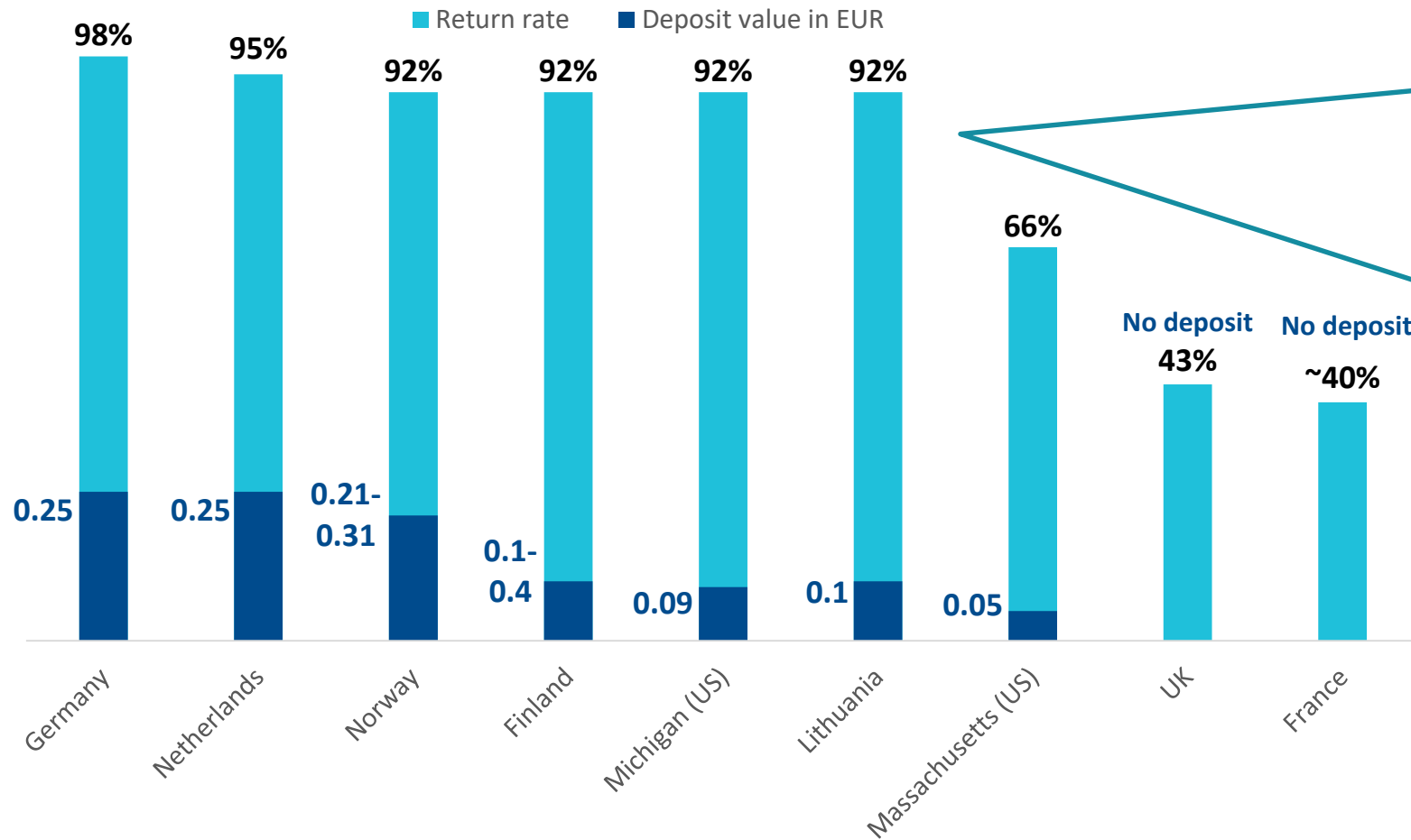
*Deposit values converted to EUR for comparison purpose
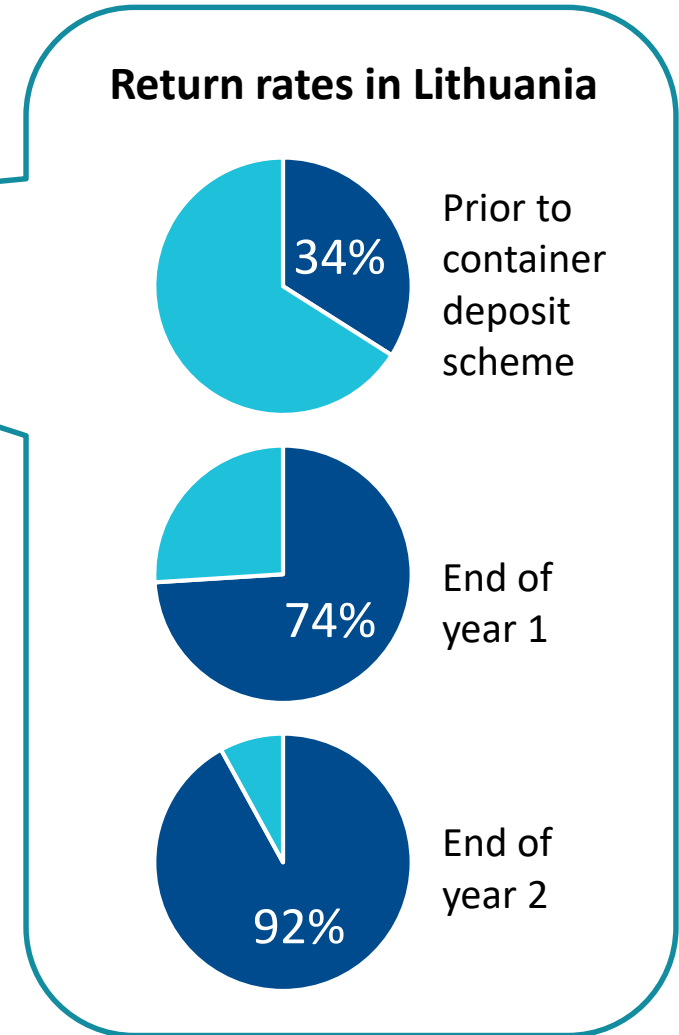
Designing a deposit scheme – lengthy process from idea to law

Many stakeholders around the table

- NGOs
- Beverage industry
- Central government
- Technology providers
- Waste management companies
- Retail industry
- Packaging industry
- Consumers
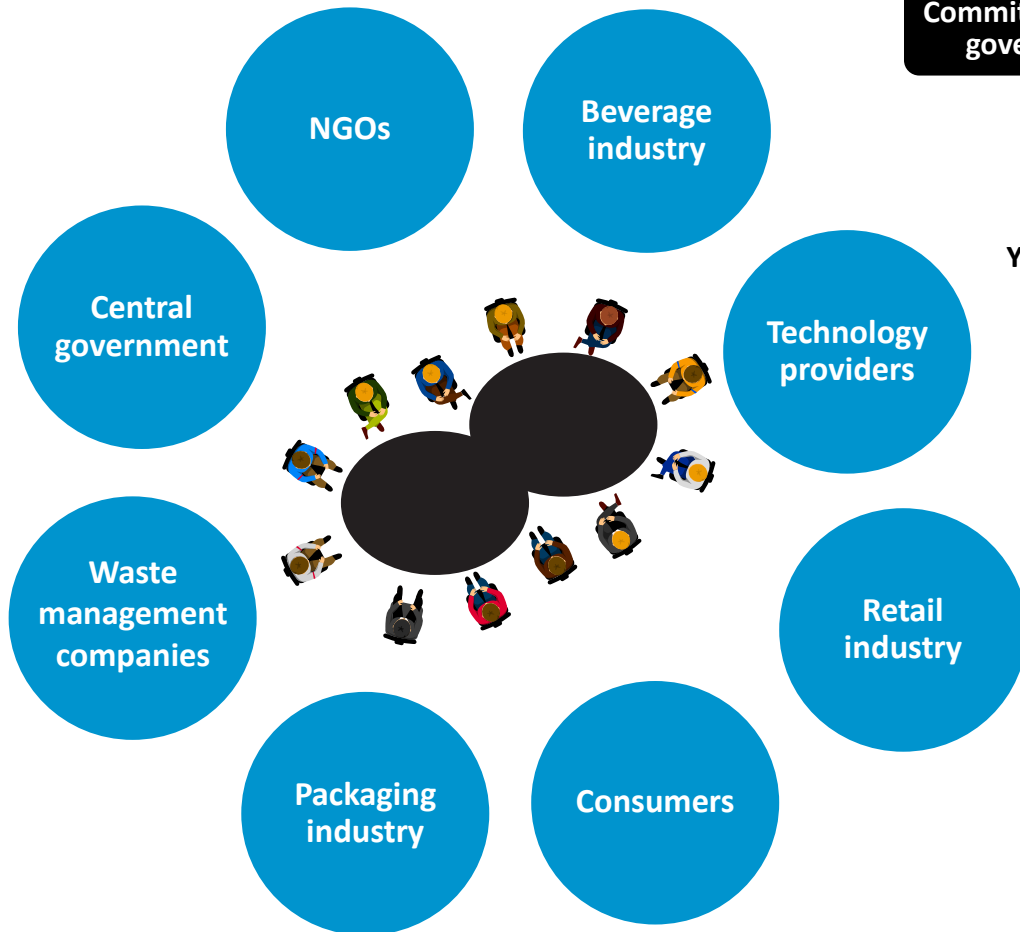
Illustrative legislation process

Commitment from government → **Consultation period** → **Draft regulation** → **Final regulation**

Year 0 .... Year x
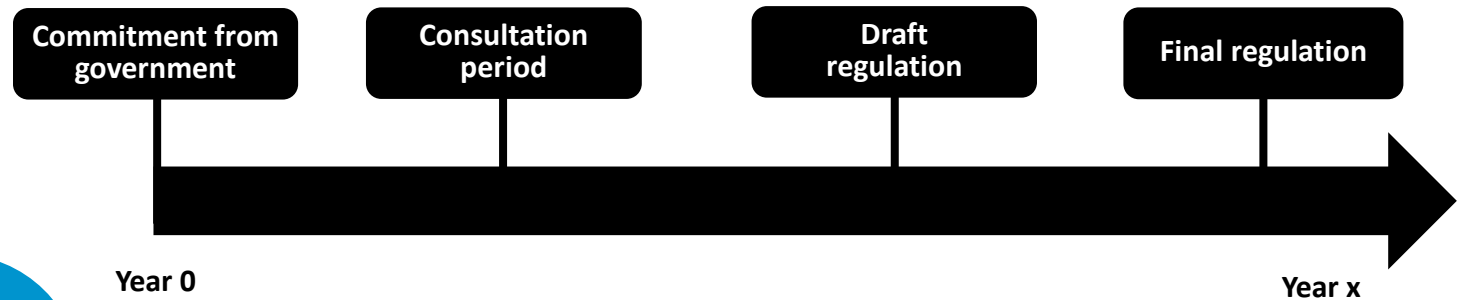
Many questions to address:

- Types of material and product included
- Measurement of success and effectiveness
- Deposit value
- Participants and their role
- Financing of the scheme
- Deployment of infrastructure and logistics
- Fraud prevention
- System regulation and monitoring

Elements of a modern reverse vending system

User communication

Sorting & processing
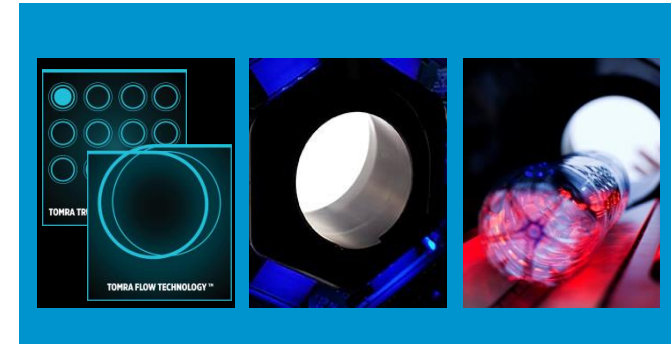
Recognition system
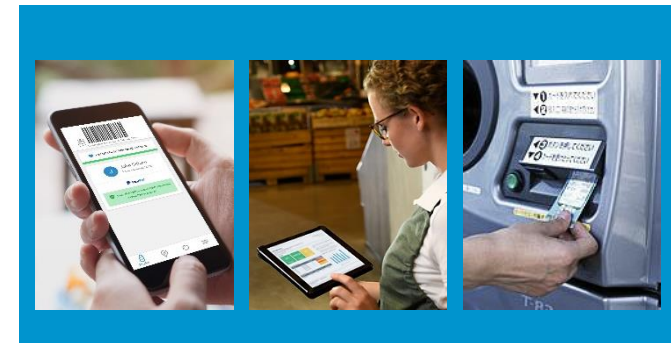
Data administration

Key market and consumer trends drive structural changes…

CONSUMER TRENDS	RETAILER TRENDS	MATERIAL TRENDS	STAKEHOLDER TRENDS

Bag drop solutions, reverse logistics from e-commerce

Bigger chains but smaller stores, self-service

Biodegradable bottles

Beverage producers more proactive to set the scene

...reflected in shifting business models and stakeholders

Financing

Retail

Location

Other

Sales & Service model

- Upfront revenue
- Profitable service concept
- Proven track record
- Low risk

Retailer purchases and takes the ownership of the RVM and TOMRA provides services

Throughput model

- High recurring Revenue
- Swift roll-out
- Aligned interests
- Utilize financial strength

TOMRA owns and operates the RVM and receives a fee per container handled by the RVM

TOMRA

Main differences between the two business models

Illustrative cash flow profiles per machine
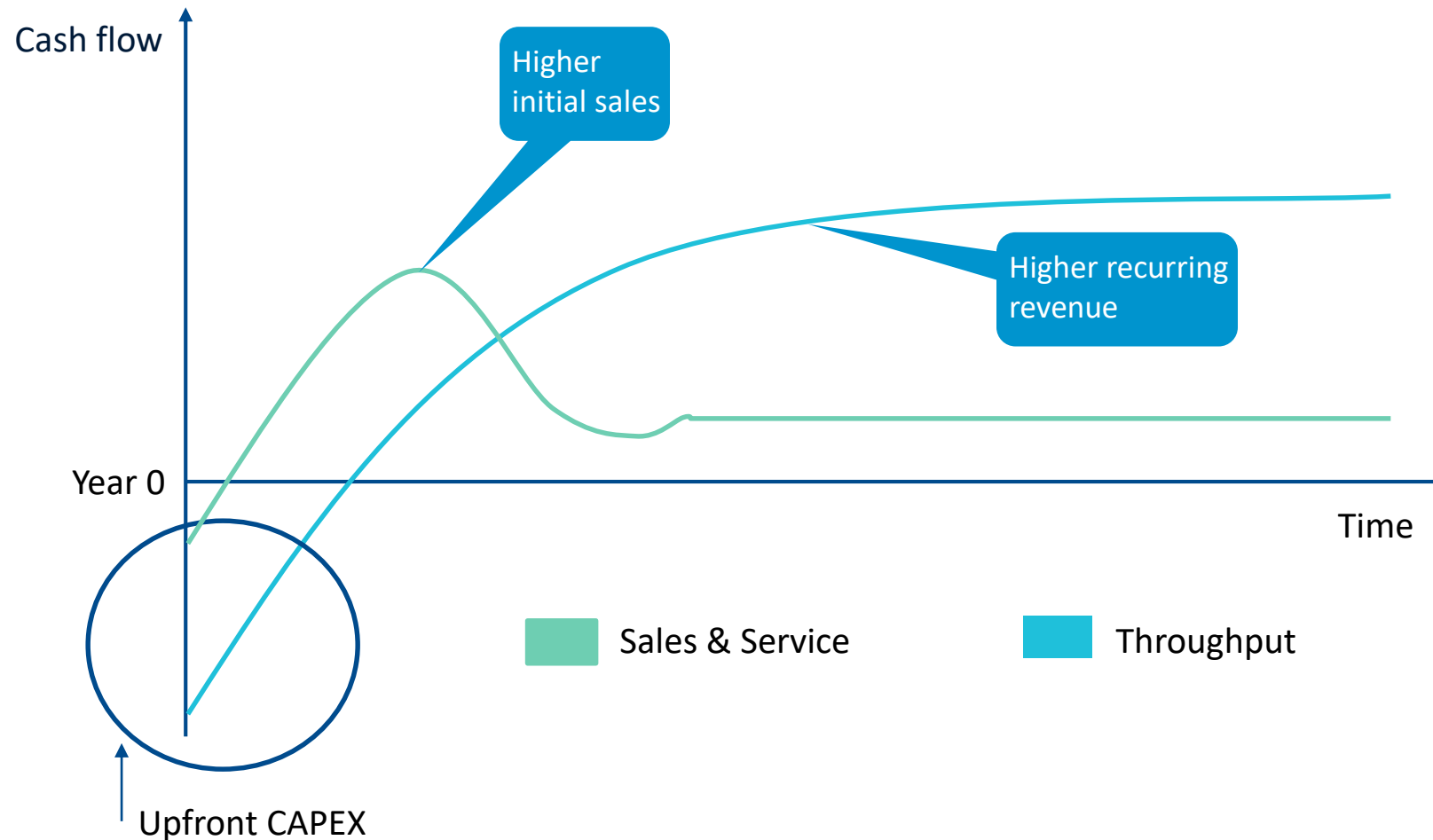
- **Typically fewer machines per capita in throughput markets**

- **Higher CAPEX needs in a throughput model but normally also higher NPV**

- **Uncertainties around timing and design of each new container deposit scheme can have significant impact on the cash flow profile**

Undisputed market leader within reverse vending technology

# of installed RVMs (y-axis)

- >80,000
- 10,000–80,000
- 5,000–10,000
- 500–5,000
- <500

Number of RVM markets (x-axis)

- 1–10
- 11–20
- 21–30
- 31–40
- >40

Diebold Nixdorf

Sielaff

envipco

RVM

trautwein sb technik

● Annual revenue from RVM sales

DIGITAL INNOVATION

PROVEN TECHNOLOGY

UNBEATABLE SERVICE
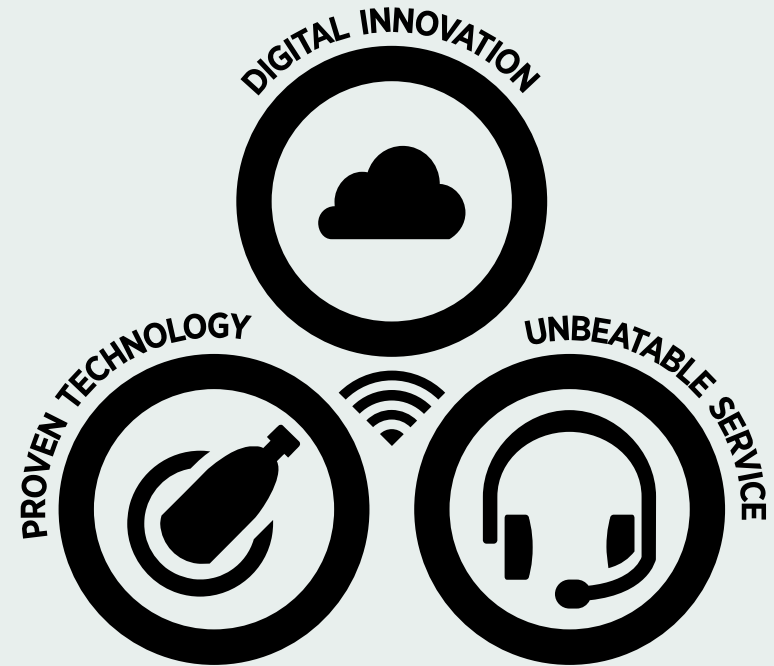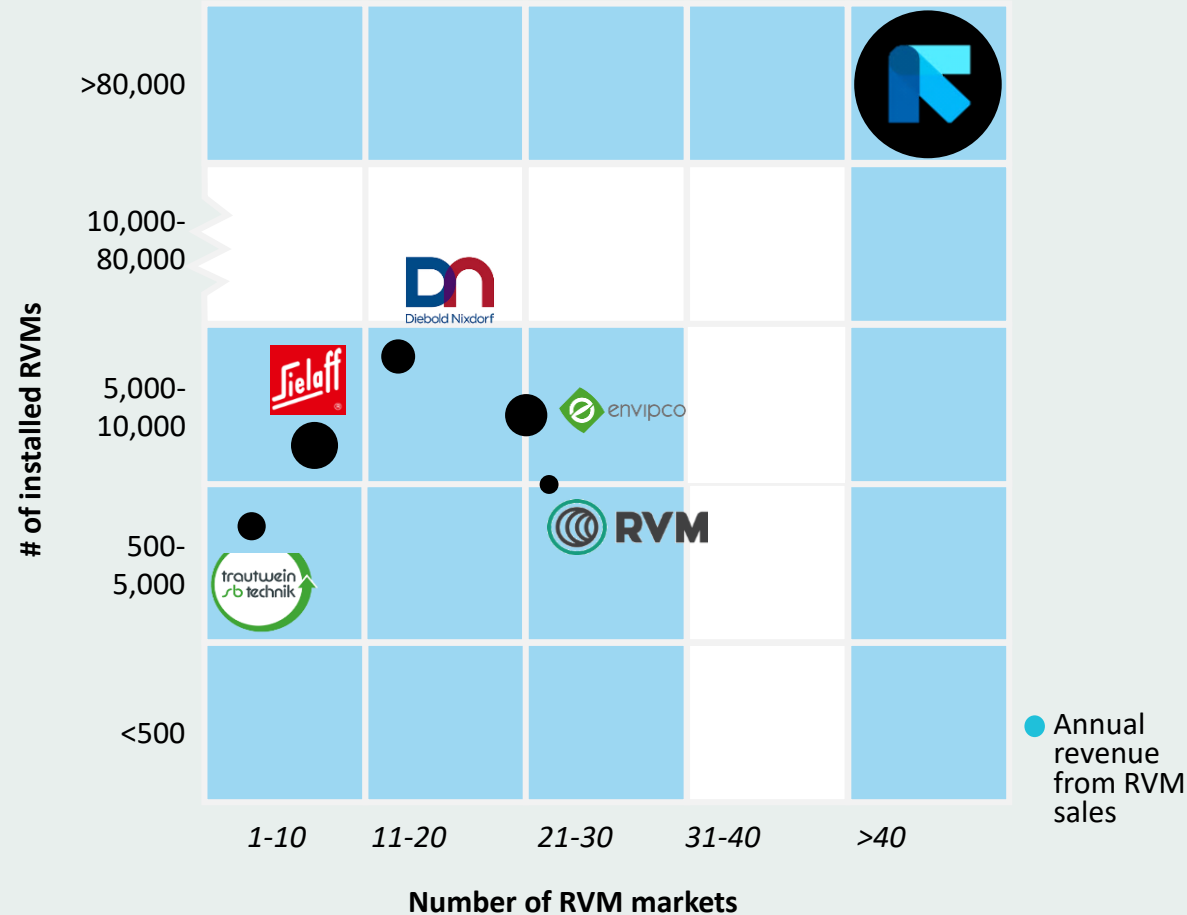
The smarter TOMRA system.

TOMRA

Moving from a reverse vending machine provider to a global frontrunner within clean loop recycling

Today

Reverse Vending Machine and service supplier

Technology innovator and leader

Niche leader

Knowledge growth

Market / Industry knowledge growth

Profitable clean loop recycling

CLEAN LOOP RECYCLING

Future

Business partner supporting customers' core processes

Market driven thought leader

Circular economy shaper

TOMRA
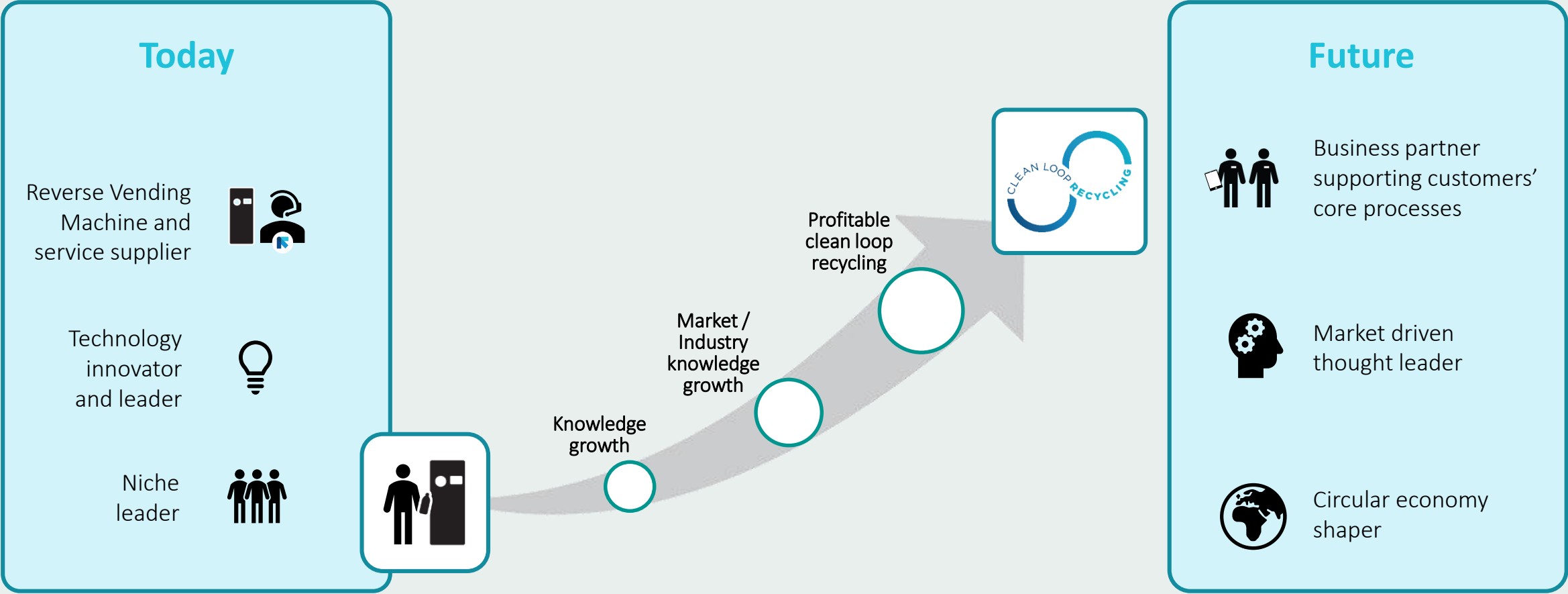
Strong competitive advantages and growth focus

Product and
service
leadership

People
to support the
growth

Production
capacity and
supply chain

Strong
brand
awareness

Efficient
new market
entry

Financial strength to
support throughput
business models

BASE MARKETS

GEOGRAPHICAL EXPANSION

Flexibility and scalability to enable new business models and new market entry
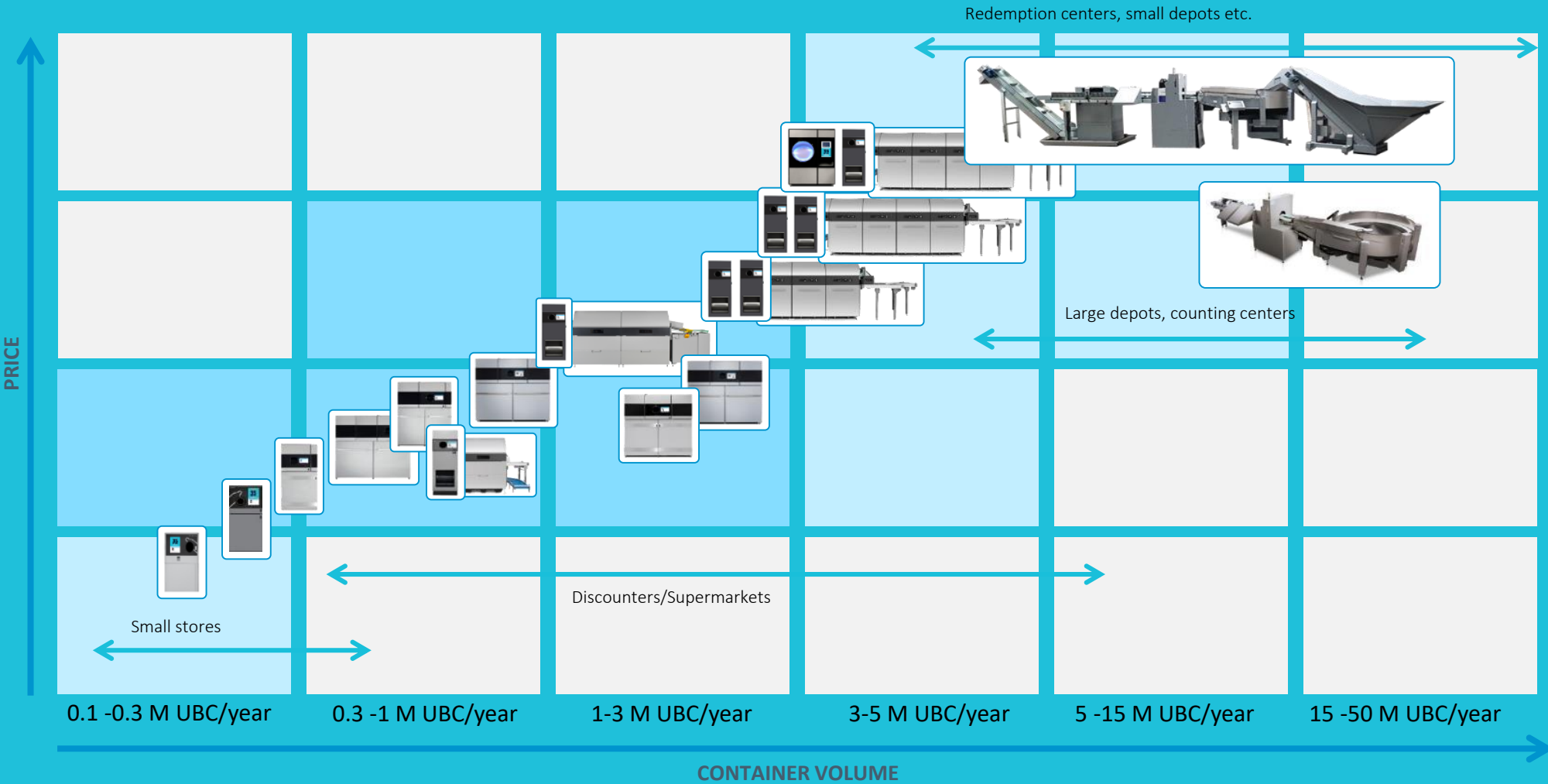
Redemption centers, small depots etc.

Large depots, counting centers

Discounters/Supermarkets

Small stores

PRICE

| 0.1 -0.3 M UBC/year | 0.3 -1 M UBC/year | 1-3 M UBC/year | 3-5 M UBC/year | 5 -15 M UBC/year | 15 -50 M UBC/year |

CONTAINER VOLUME

TOMRA Productivity Gain

Consumer Engagement

Best guest experience

API/Data System Integration

Retail Productivity Gain

IOT PLATFORM

Engage consumers to drive volume in throughput markets

Deliver a convenient and engaging recycling experience for consumers that increase the participation and drive volume through our installations.

Partner with relevant players

Facilitate and educate

Modernize and enhance the consumer journey

Share stories and inspire change

Drive community engagement
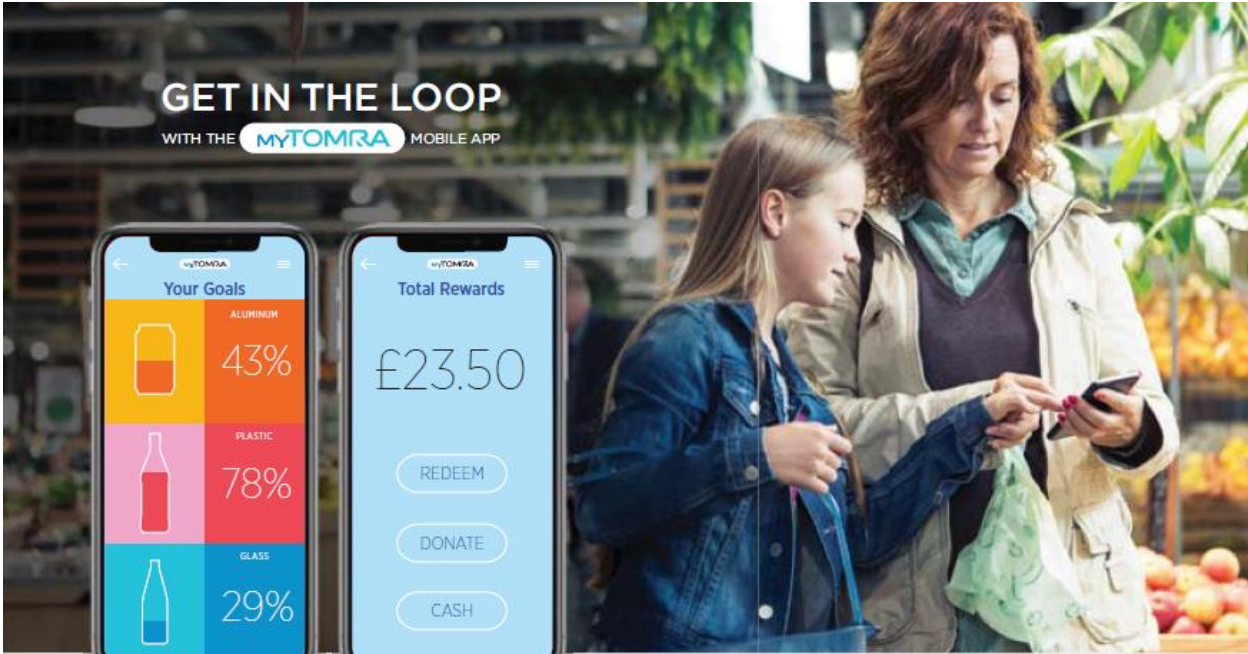
A dynamic organization catered for growth

Products and services	FROM	Machine centric	TO		Holistic solution partner
People	FROM	Basic activities	TO		People development
Production and supply chain	FROM	Supplemented by third parties	TO		Scalable with third parties
TOMRA Brand	FROM	B2B RVM Supplier	TO		B2H Thought leader Business Partner
Process and New market entry	FROM	HQ / Regions	TO		New Markets
Financials	FROM	Sales & Services	TO		Recurring revenues

RVM – Reverse Vending Machine   B2H – Business to Human   B2B – Business to Business

TOMRA SORTING SOLUTIONS

Strong revenue growth since inception in 1996

Revenue development and key milestones
MNOK

BBC acquired

Compac acquired

4,713

Odenberg acquired

BEST acquired

Ultrasort acquired

CommoDas acquired

Real Vision Systems acquired

TITECH acquired by TOMRA

TITECH Visionsort AS established

4

114

1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
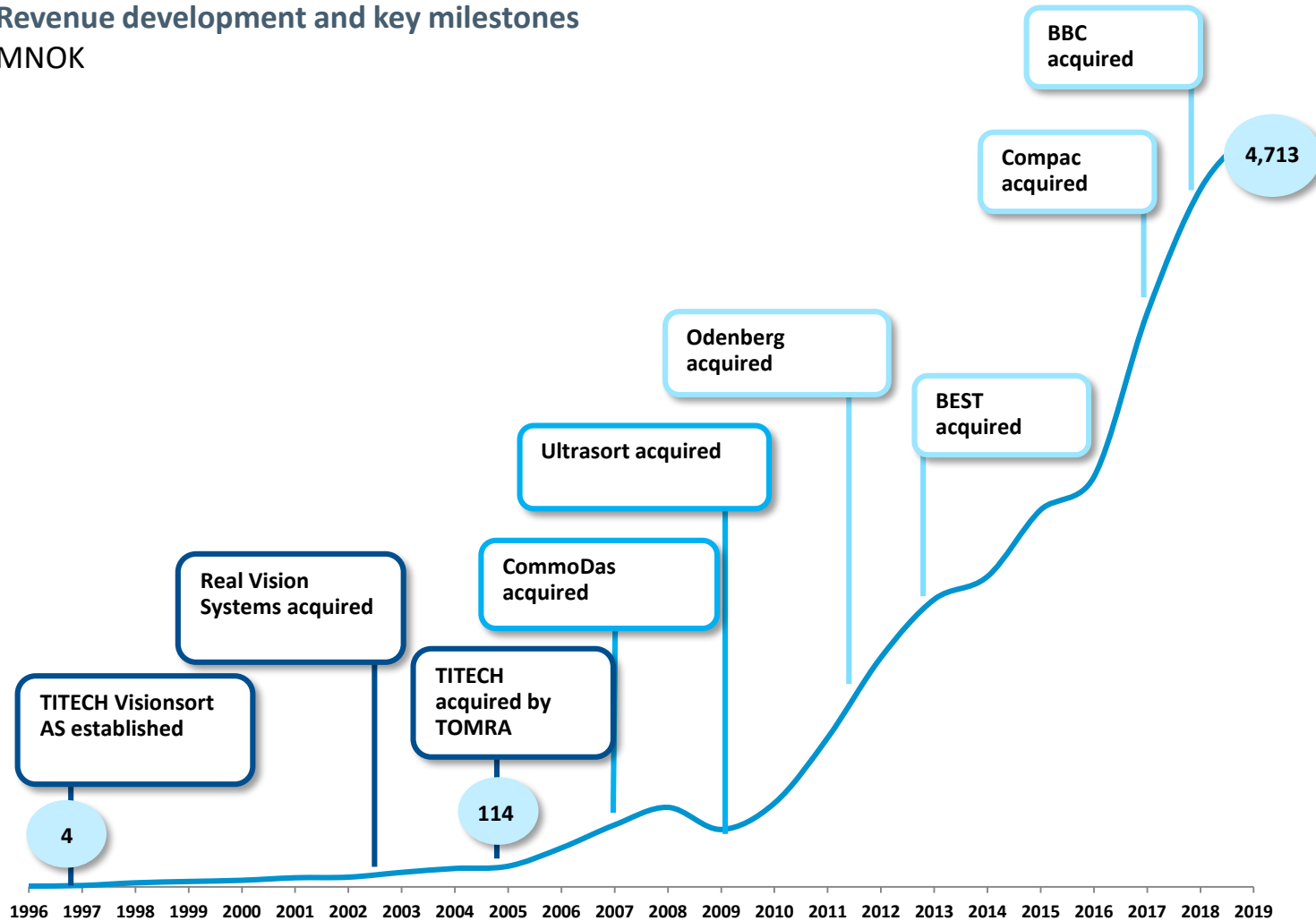
- Total revenue growth (organic plus inorganic) CAGR of ~28% per year from 2004-2019

  - Average annual organic growth for the same period was ~16%

- Technology base and segment/application knowledge expanded both through acquisitions and in-house ventures

How does sensor-based separation work?

Feeding of
unsorted material

High-tech sensors to **identify objects**

Automated sorting process using
different sensors for different sorting tasks

Precise ejection by ultra fast
air jets
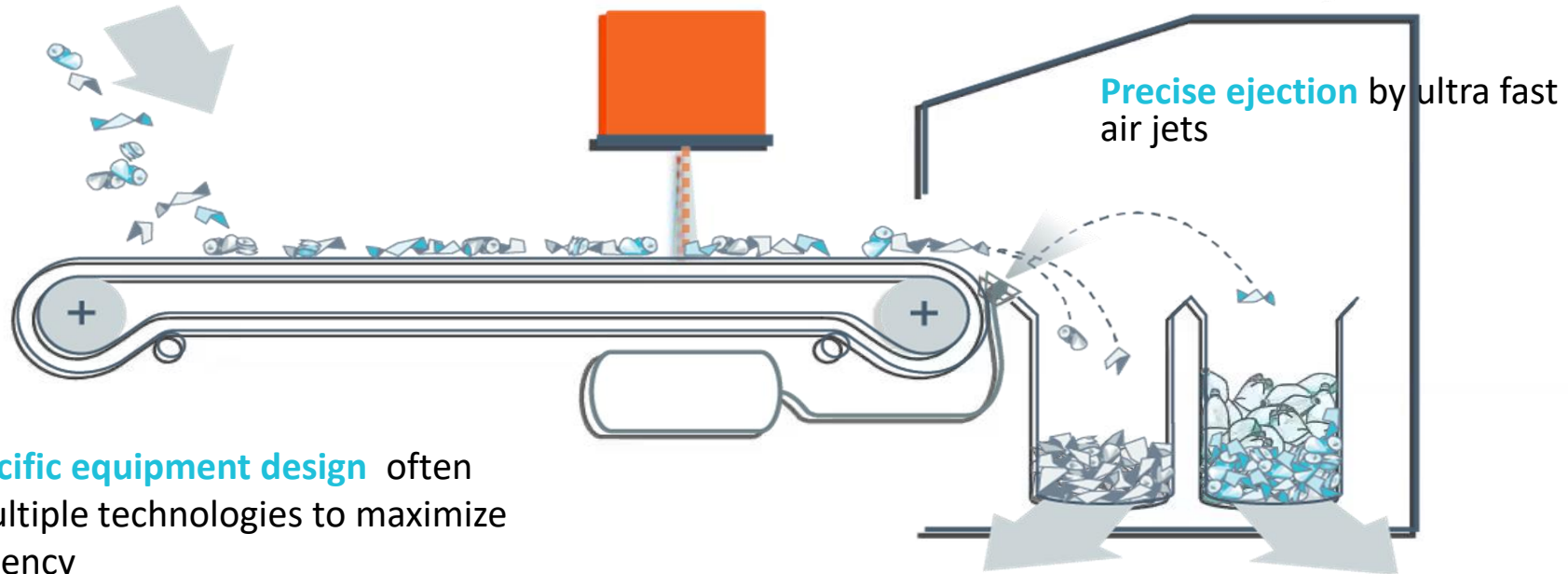
Product specific equipment design often
including multiple technologies to maximize
sorting efficiency

High-speed processing of information
(material, shape, size, color, defect, damage
and location of objects)

A common sensor-based technology portfolio
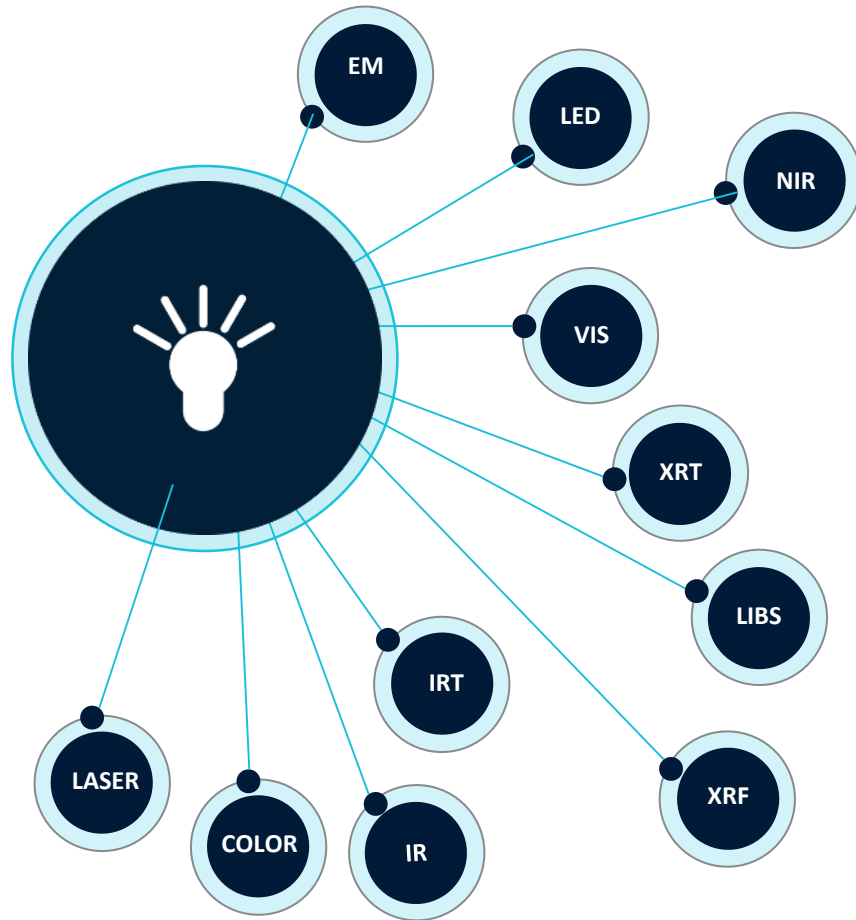
	RECYCLING	MINING	FOOD
ELECTROMAGNETIC SENSOR (EM) Electro-magnetic properties like conductivity and permeability	X	X	X
LED SPECTOMETRY (LED) Color and spectral properties based on multiple LED light sources in very high optical resolution	X	X	X
NEAR-INFRARED SPECTROSCOPY (NIR) Specific and unique spectral properties of reflected light in the near-infrared spectrum	X	X	X
VISIBLE LIGHT SPECTROMETRY (VIS) Specific and unique spectral propertiesof reflected light in the visible spectrum	X	X	X
X-RAY TRANSMISSION (XRT) Atomic density irrespective of surface properties and thickness	X	X	X
LASER INDUCED BREAKDOWN SPECTROSCOPY (LIBS) Elemental composition	X		
X-RAY FLUORESCENCE (XRF) Elemental composition	X	X	
INFRARED TRANSMISSION (IRT) Density and shape properties by light absorption			X
IR CAMERA (IR) Heat conductivity and heat dissipation			X
COLOR CAMERA (COLOR) Color properties measured in very high optical resolution	X	X	X
LASER REFLECTION/FLUORESCENCE (LASER) Structural, elemental and biological properties by reflection, absorption and fluorescence of laser light	X	X	X

TOMRA

Our products are detecting a wide range of parameters

Color
Removal of discolorations in mono- and mixed-color material

Blemishes
Objects with spots or other (small) blemishes are removed

Defects
Removal of visible and invisible small and substantial defects

Structure
Removal of soft, molded or rotten food

Density
Detection of density differences

Damage
Broken, split and damaged objects are detected and removed
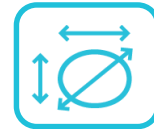
Shape & Size
Sort on length, width, diameter, area, broken-piece recognition, …

Biometric Characteristics
Sort based on water content and removal of micotoxyn contaminations

Foreign Material
Removal of foreign material in a material stream, e.g. insects, worms, snails or plastics in food applications

Fluo
Based on the chlorophyll level present in produce defects are removed

X-RAY
Analysis of objects based on their density and shape

Detox
Removal of produce contaminated with aflatoxin

☐ **Visible**   ☐ **Invisible**   ☐ **Both**

OPERATIONAL EFFICIENCY REDUCES COSTS

SORTING VALUE PROPOSITION

There are three main components to our value proposition

INCREASED PURITY OF MATERIAL STREAM

INCREASES REVENUE

TOMRA

Adoption of sensor-based sorting at different maturity levels

Maturity/industry adoption

FOOD

RECYCLING

MINING*

Time
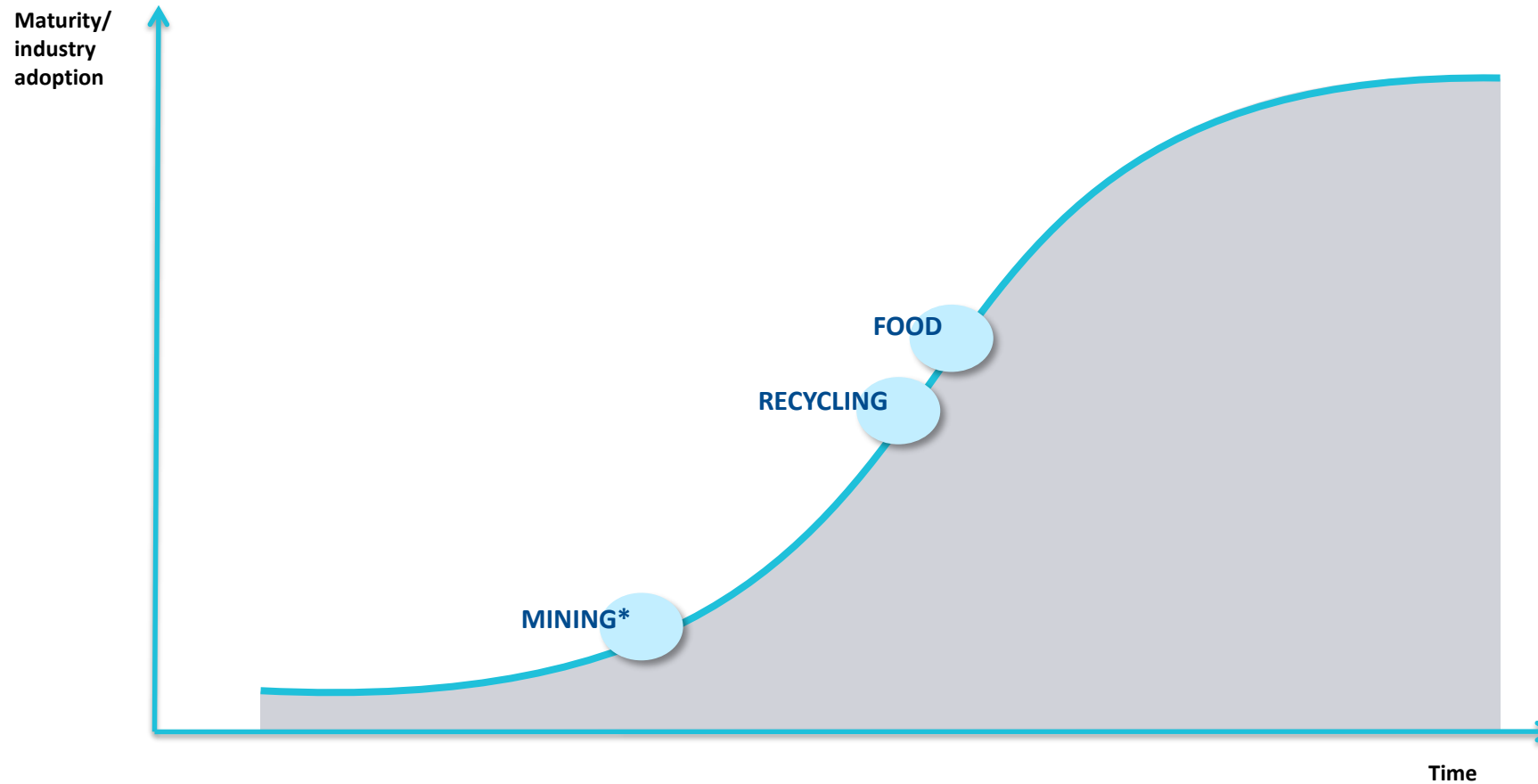
* In certain mining sub-segments, such as industrial minerals and diamonds, sensor-based sorting is a more mature technology

Examples of cross utilization of our sensor technologies

TITECH NIR + ODENBERG platform

Field Potato Sorter
- The NIR technology allows efficient removal of rocks, dirt and rotten potatoes before the potatoes are stored

- The solution opens up sorting of unwashed potatoes in a way that previously was not possible

BEST LASER + TOMRA mining platform

PRO Laser Duo
- The LASER technology allows detection of quartz of all colors. This opens for sorting of quartz itself, and gold bearing quartz mineralization

- The solution is unique in the market and further underlines our technological leadership

TITECH NIR + BEST LASER

Nimbus BSI
- An NIR sensor has been added to the NIMBUS machine platform

- The new machine increases our competitiveness in the nuts segment

Several more projects on combining technologies into new products in the pipeline

Entering new markets through Mid-market strategy

Creating competitive offering to fast growing mid-market

Food channel sorter

Recycling Flake Sorter

1 **High End Market**
TOMRA firm positioning

2 **Mid Market**
Enter with new products

3 **Low End Market**
Not to play
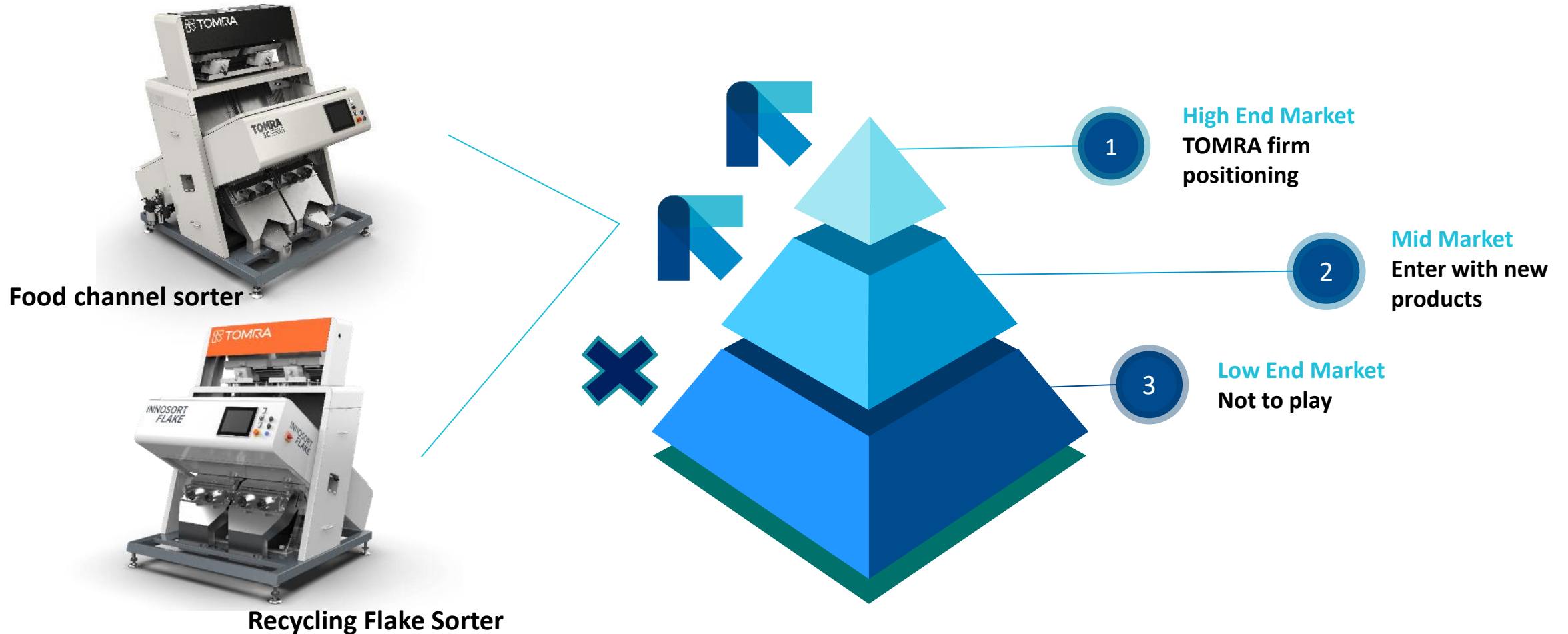
TOMRA

Development in order intake and order backlog

Order intake
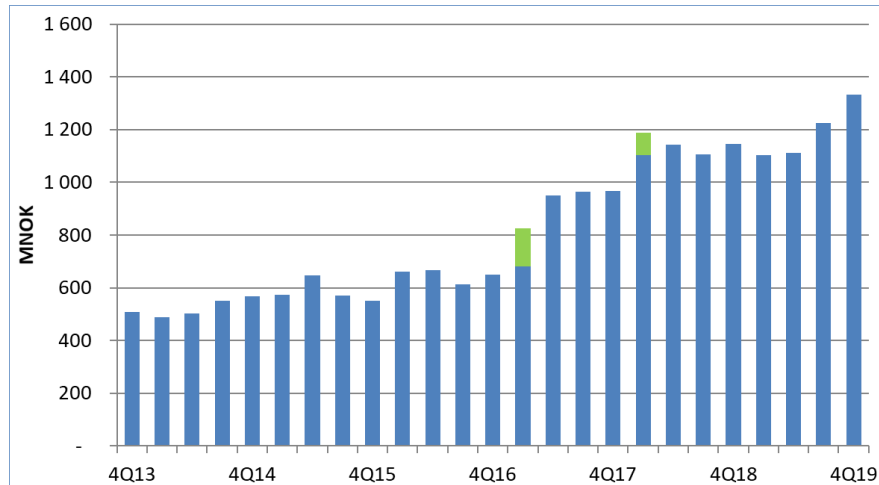
Order backlog
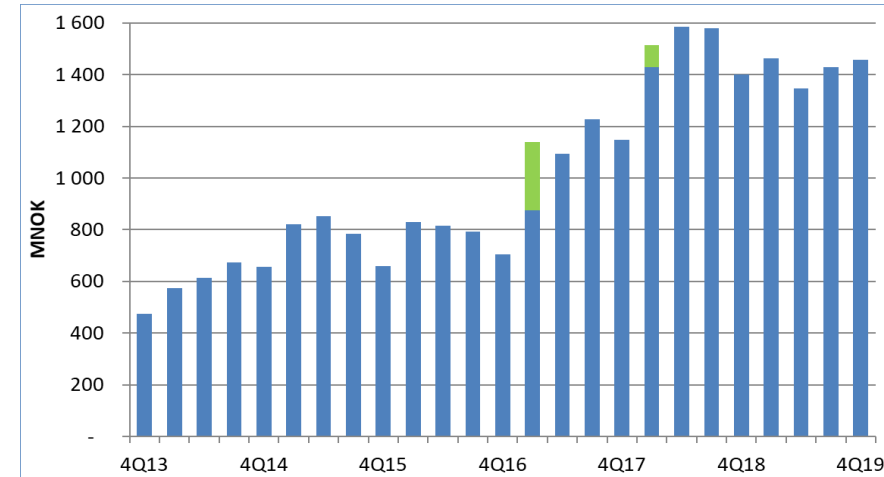
Revenues
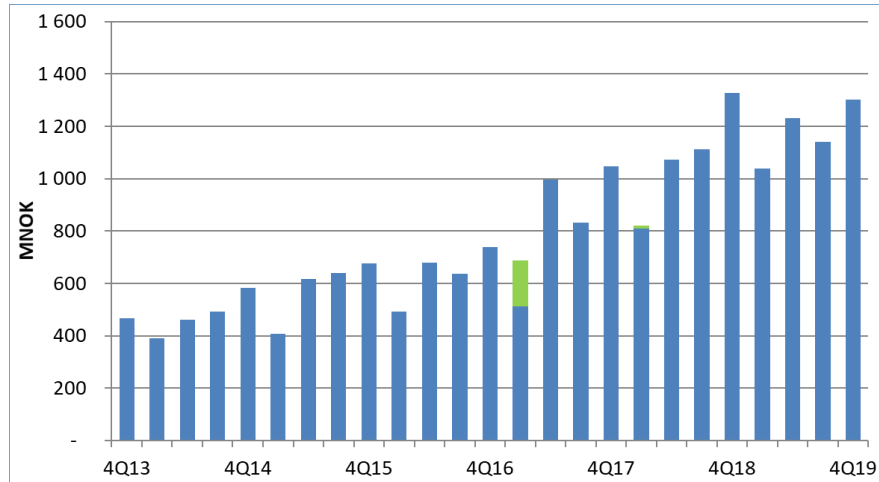
- **TOMRA Sorting Solutions (TSS):**
  - Revenues of 1,304 MNOK, down from 1,326 MNOK last year
  - All time high order intake of 1,332 MNOK in the quarter, compared to 1,146 MNOK last year
  - Order backlog of 1,458 MNOK at the end of 4Q19, up from 1,399 MNOK at the end of 4Q18
- **Estimated backlog conversion ratio in 1Q20: 75-80%**

■ Organic ■ Inorganic

TOMRA

FOOD FOR THOUGHT

- By 2050 we will be close to **10bn** people

- We will need more food in the next 40 years than **all the harvests in history combined**

- But **farmland is constant** – at best

- The food you eat will have **travelled more than you have**

TOMRA SORTING SOLUTIONS | **FOOD**

Automation continues on a strong growth trajectory

From…

To…

Robotics become cheaper, more advanced and user-friendly

Higher labor cost and labor shortages

Ensure quality and safety

Improve efficiency
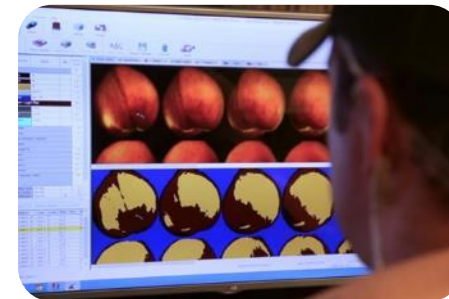
Leverage data insight

Market growth expectations – food

CAGR 6-8%

2019   2022
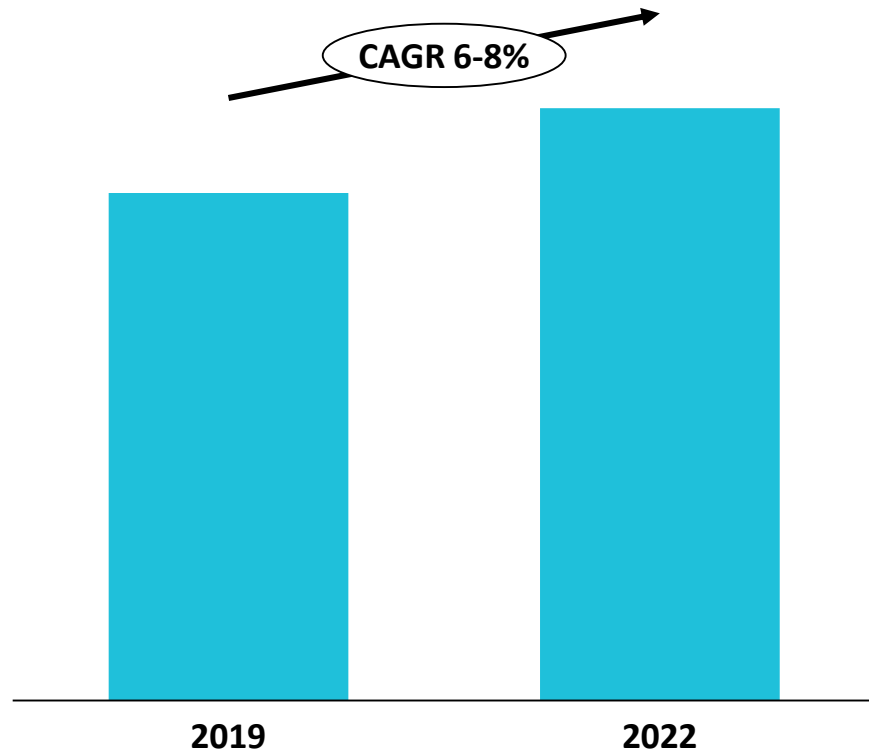
MARKET DEFINITION FOOD

Sensor-based sorting and grading equipment
- Including color sorting
- Excluding peripheral equipment and turn-key solutions

Fresh and processed segment

AFFECTING FACTORS

Weather conditions	**Raw material pricing**
Manual labor availability and cost	**Urbanization and living standards**
Global trade agreements and tariffs	**Geopolitical and other global events**

Three ways of sorting within the Food segment

Free fall (Channel / Chute)	
Application	Seeds, rice, grains
Sensor tech.	Camera (simple)
Revenue share*	Approx. 60%

Belt	
Application	Prepared /preserved veg. and fruit
Sensor tech.	Several (complex)
Revenue share	Approx. 20%

Lane	
Application	Fresh produce
Sensor tech.	Several (medium)
Revenue share	Approx. 20%

Chute or Channel sorter

1. Infeed shaker or hopper (unsorted)
2. BSI module
3. Lasers
4. Precise air guns
5. Accept/ reject

On belt inspection

1. Infeed belt (unsorted)
2. Cameras
3. Lasers
4. Precise air guns
5. Accept/ reject

Lane grading

1. Acumulation Conveyor
2. Singulation Conveyor
3. Acceleration Conveyor
4. Roller Rotation Units
5. Pulsed LEDs and Cameras
6. Air Jets
7. Specified Grade
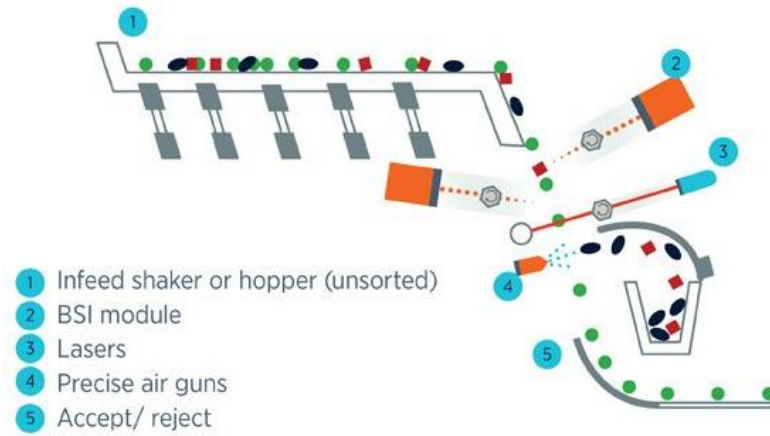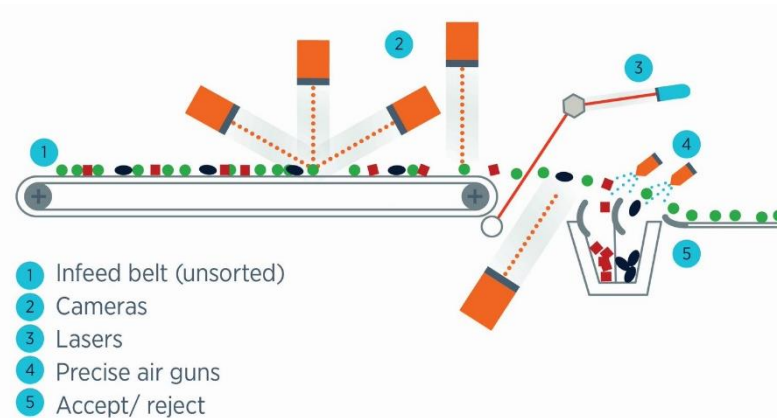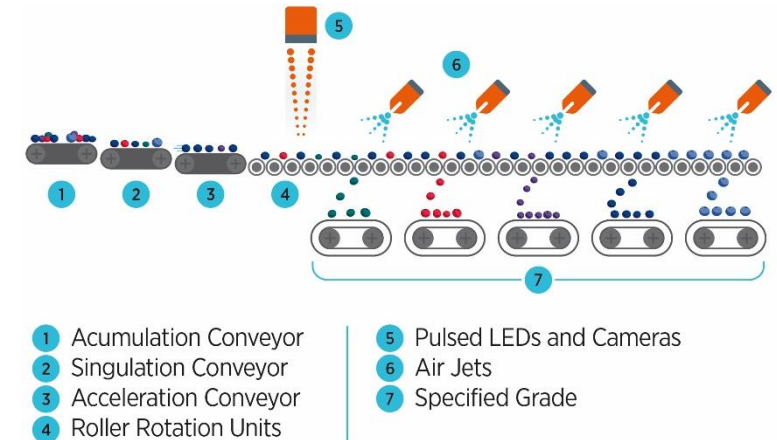
TOMRA has established the broadest footprint within food sorting

TOMRA SORTING SOLUTIONS | FOOD

| Free fall | Belt | | | Lane |

SK
Rice, Seeds &
Kernels

NDF
Nuts &
Dried Fruit

PFV
Processed Fruits,
Veg & Potatoes

Fresh
Fruit, Vegetables
& Potatoes

CHANNEL | **CHUTE** | **BELT** | **AIR** | **LANE/MULTI-DROP**

BBC TECHNOLOGIES   compac

BULK SORTING

SINGULATED SORTING
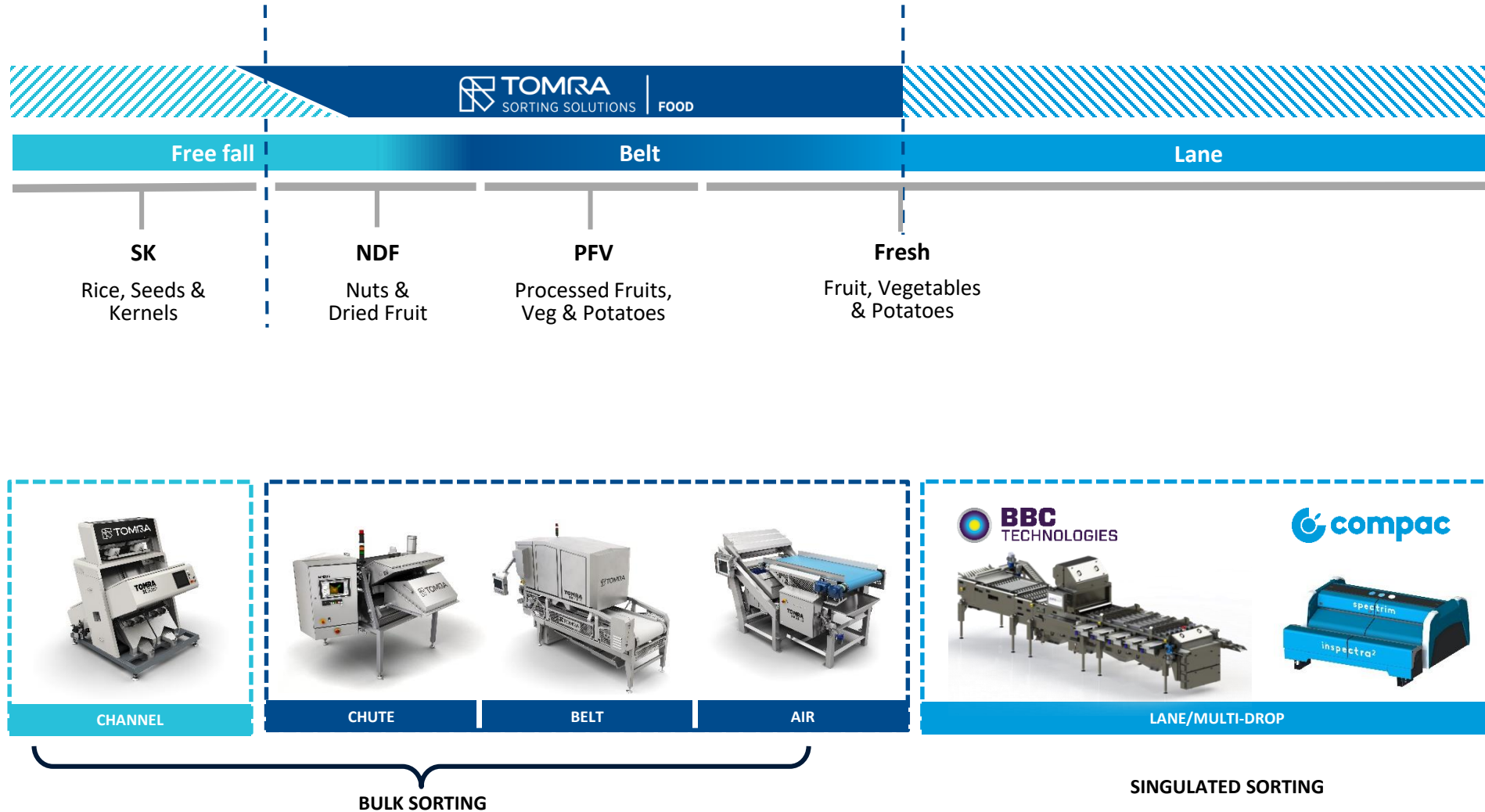
Food competitive landscape

Freefall

Belt

Lane

# of installed machines
- >3,000
- 1,000-3,000
- 0-1,000

Geographic presence
- 10-25 markets
- 25-50 markets
- >50 markets

Revenue from sensor-based sorting and related peripherals
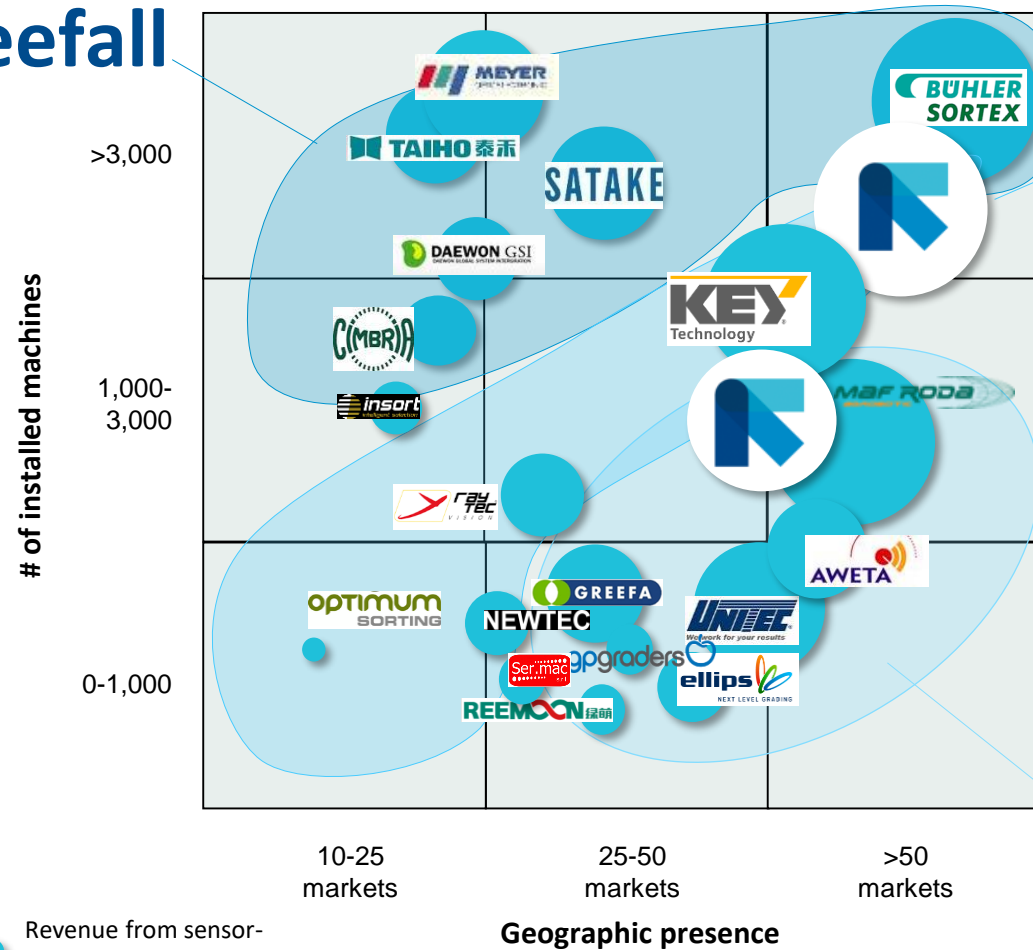
TOMRA competitive positioning

- Size (revenues)
- Widest range of applications (150+)
- Broadest technology base
- Geographic reach (~80 countries)

Source: TOMRA estimates and analysis

Food: applications and sensor technology

POTATOES

Chips, French fries, peeled, specialty products, sweet potatoes, unpeeled, washed

LASER, CAMERA, BSI, PULSED LED

VEGETABLES
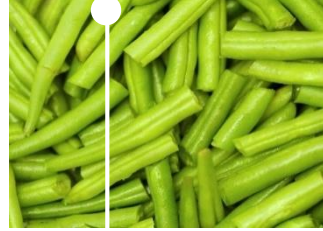
Beans, beets, broccoli, carrots, corn, cucumbers, industrial spinach, IQF vegetables, jalapenos/peppers, onions, peas, pickles

LASER, CAMERA, BSI, PULSED LED

NUTS

Almonds, cashews, hazelnuts, macadamias, peanuts, pecans, pistachios, walnuts

LASER, CAMERA, X-RAY

DRIED FRUIT

Apricots, cranberries, dates, figs, prunes, raisins

LASER, CAMERA, BSI, X-RAY

SEEDS & GRAINS

Barley, coffee, corn, dry beans, lentils, oat, pulses, pumpkin, sunflower and watermelon seeds, wheat

LASER, CAMERA, BSI, X-RAY

FRUIT

Apples, blackberries, blueberries, cherries, cranberries, peaches & pears, raspberries, strawberries, tomatoes

LASER, CAMERA, BSI, PULSED LED

FRESH CUT

Baby leaves, iceberg lettuce, spinach, spring mix

LASER, CAMERA

SEAFOOD

Mussels, scallops, seaweed, shrimps, tuna, pet food

LASER, CAMERA, BSI, X-RAY, INTERACTANCE SPECTROSCOPY

MEAT

Bacon bits, beef, chicken breasts, hot dogs, IQF meat, pork, pork rind, sausages, pet food

LASER, CAMERA, BSI, INTERACTANCE SPECTROSCOPY

GUMMIES

LASER, CAMERA

TOBACCO

LASER, CAMERA

TOMRA

Creating value in various parts of the food process
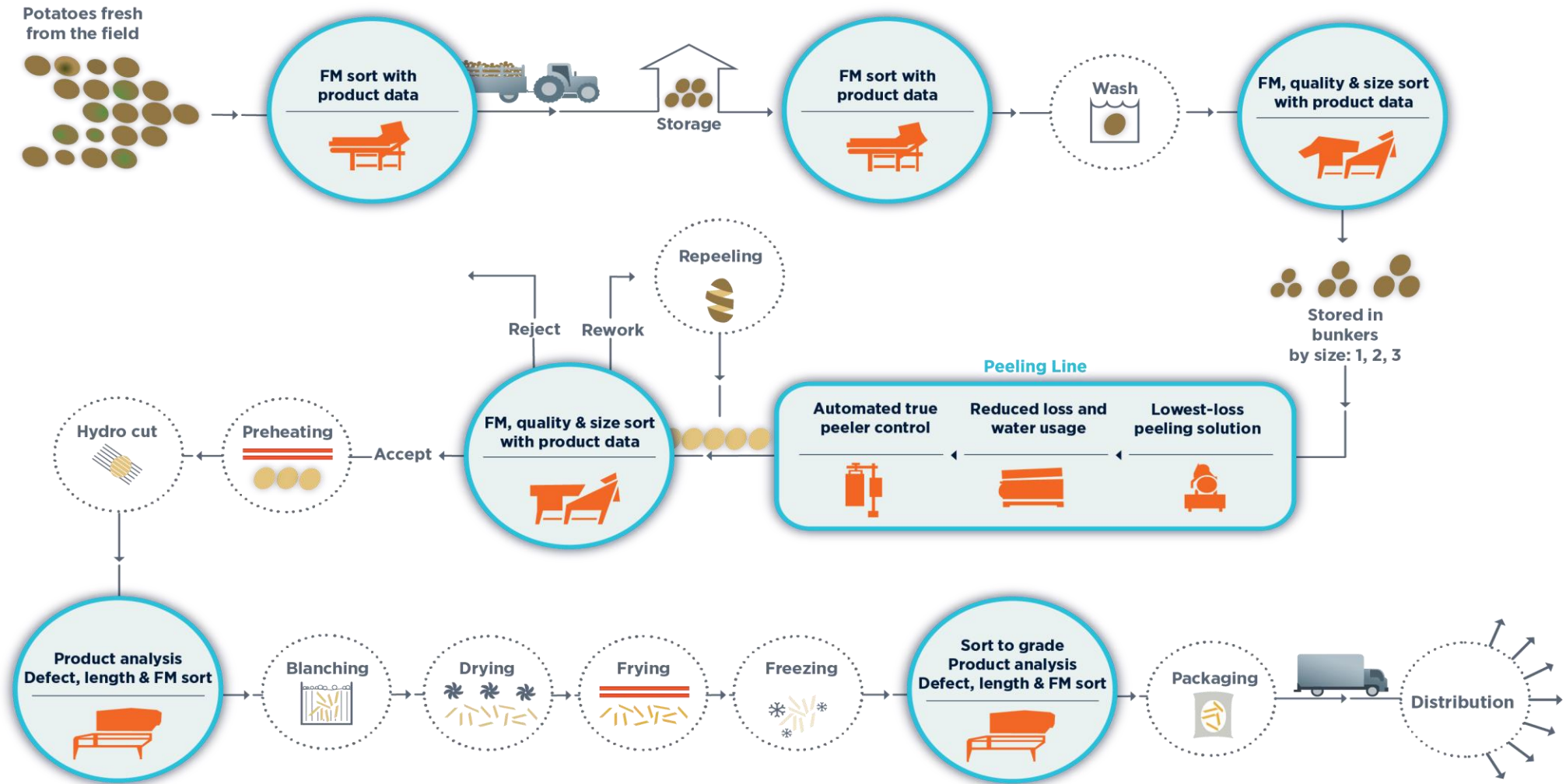
Our food sorting customers

New sensor technologies will unlock new opportunities...

SPECTROSCOPY **3**

2 FULL COLOUR IMAGING

TOMOGRAPHY **4**

1 MONOCHROME IMAGING
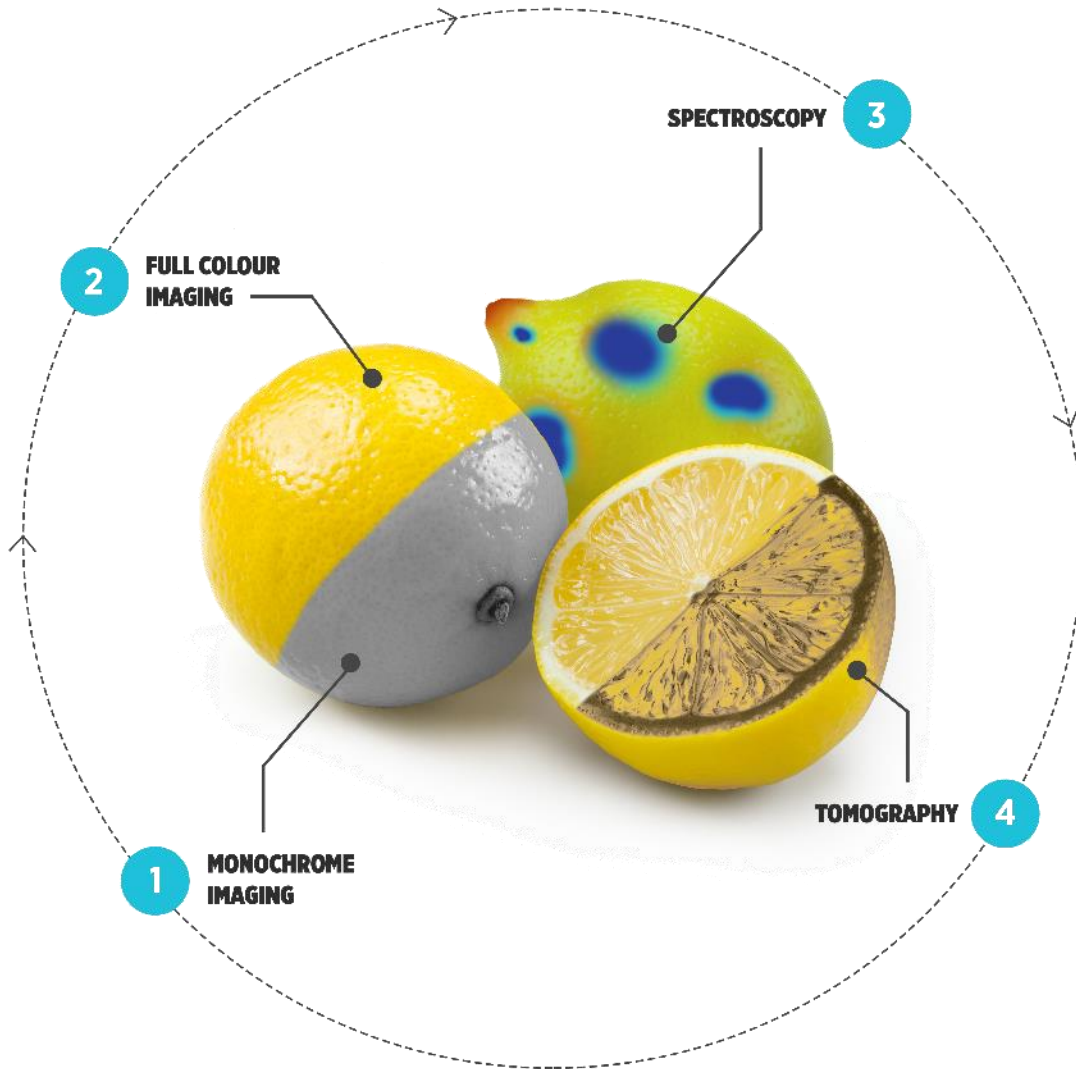
- **From** measuring visual appearance...

... to measuring

Internal defects

Taste

Shelf life / Freshness

Food hazards

TOMRA

RESOURCES ARE FINITE

- **Today:** we are paying to get rid of our waste through landfill fees and incineration

- We are wasting perfectly good materials that can be reused

- **Tomorrow:** The Circular Economy is a driver for change

- Creating **value out of waste**

- That is what the **Circular Economy** is all about

TOMRA SORTING SOLUTIONS | **RECYCLING**

The circular economy drives a legislative push...

Continued ambitious EU regulations and recycling targets: Attract capital and drives investments

"A common EU target for recycling 70% of packaging waste by 2030"

The Strategy also highlights the need for specific measures, possibly a legislative instrument, to reduce the impact of single-use plastics, particularly in our seas and oceans

- **From Green Fence to National Sword:** Short-term demand for recycling solutions in waste exporting countries

- **Limits the import of contaminated recyclable commodities and increases inspections of recyclable commodity imports**
- **Purity level set to 99.5%**

TOMRA

...promoting recycling

Description

Targets and measures

2018 CIRCULAR ECONOMY PACKAGE

Waste Framework Directive

- Rules on how waste should be managed in the EU. It provides general principles for doing so, such as the Waste Hierarchy, Polluter Pays Principle and Extended Producer Responsibility.

Packaging and Packaging Waste Directive

- Rules on the production, marketing, use, recycling and refilling of containers of liquids for human consumption and on the disposal of used containers

- 2015 revision includes lightweight plastic carrier bags

Waste Electrical and Electronic Equipment (WEEE) Directive

- Collection, recycling and recovery targets for all types of electrical goods
- 10 categories: Large household appliances, Small household appliances, IT and telco equipment, Consumer equipment, Lighting equipment, Electrical and electronic tools, Toys, Leisure and sports equipment, Medical devices, Monitoring and control instruments, Automatic dispensers

Landfill Directive

- The objective of the Directive is to prevent or reduce as far as possible negative effects on the environment from the landfilling of waste

- In particular: impact on surface water, groundwater, soil, air, and on human health by introducing stringent technical requirements for waste and landfills.

End of Life Vehicle (ELV) Directive

- Aims at reduction of waste arising from end-of-life vehicles

- The scope of the directive is limited to passenger cars and light commercial vehicles

---

- A common EU target for recycling 60% of municipal waste by 2030

- A common EU target for recycling 70% of all packaging waste by 2030

- A common EU target for recycling 55% of all plastics by 2030

- A binding landfill target to reduce landfill to maximum of 10% of municipal waste by 2030

- Minimum requirements are established for extended producer responsibility schemes

- Simplified and improved definitions and harmonized calculation methods for recycling rates

- Concrete measures to promote re-use and stimulate industrial symbiosis

- Economic incentives for producers to put greener products on the market and support recovery and recycling schemes

TOMRA

…and a market pull

100% reusable, recyclable or compostable **plastic packaging by 2025**

Follow their lead — NEW PLASTICS ECONOMY

Unilever, evian, ecover, Walmart, amcor, M&S EST. 1884, WERNER & MERTZ, L'ORÉAL, MARS incorporated, PEPSICO, The Coca-Cola Company

Large companies committing to use recycled raw materials = increased demand for recycled offtake

Recycling: market growth expectations

MARKET DEFINITION RECYLING

Sensor-based sorting equipment
- Excluding cullet glass sorting
- Excluding peripheral equipment and turn-key solutions

AFFECTING FACTORS

Tightening regulation	Access to capital
Consumer awareness	Commodity price fluctuations
Political instability (emerging markets)	Emerging countries ban

CAGR 10-12%

MEUR

~200 — 2019

~280 — 2022
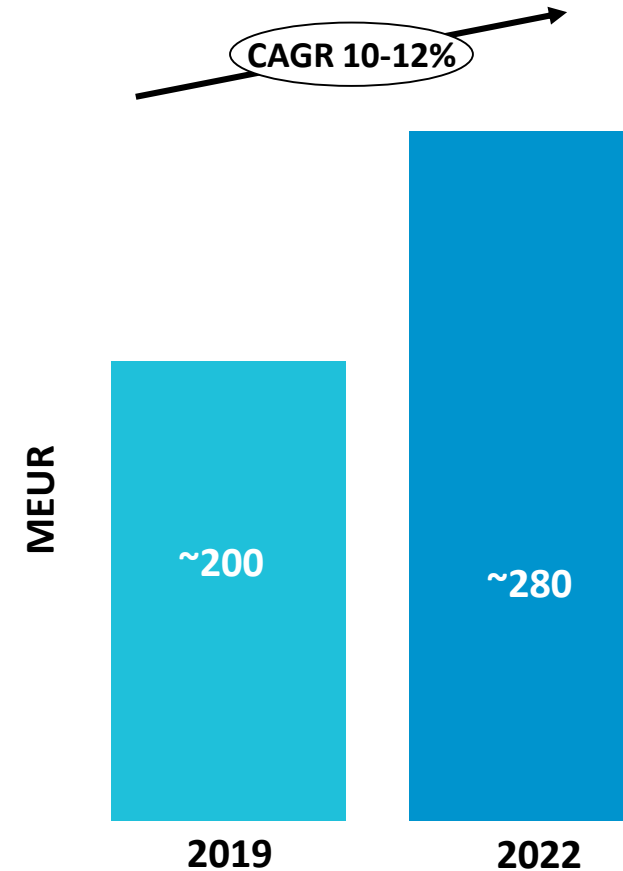
TOMRA

Recycling: competitive landscape
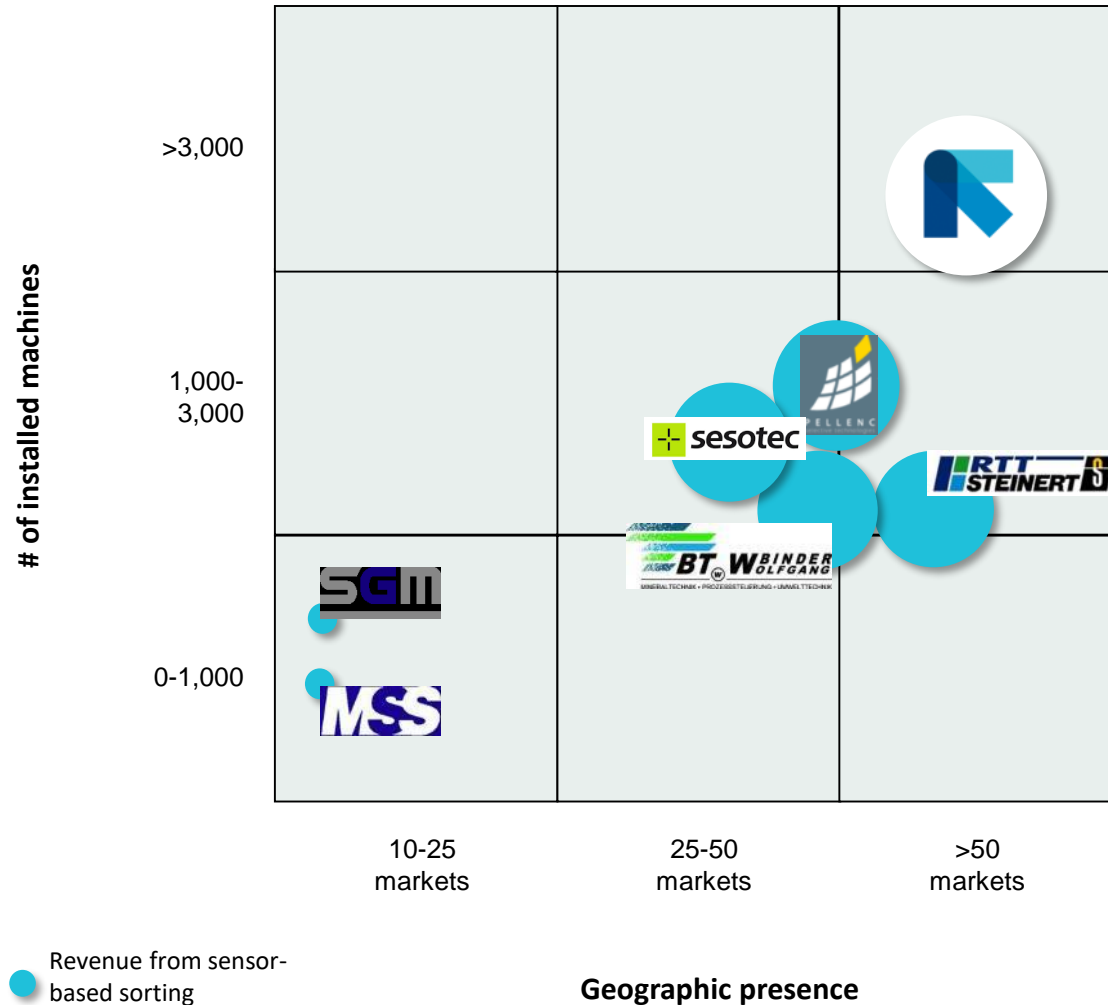
TOMRA competitive positioning

- Largest installed base
- Highest revenues
- Broadest technology platform on WR
- Highest number of applications and markets served
- Leading brand
- **Market share: 55-60%**

Recycling: applications and sensor technology

MUNICIPAL SOLID WASTE

Hard plastics, plastic film,
mixed paper, RDF,
metals,
organics/biomass

NIR, VIS, XRT, LASER

PACKAGING

Plastics, plastic film,
cardboard, mixed paper,
deinking paper, metal

NIR, VIS, EM

UPGRADING PLASTICS

PET, PE, PP, flakes

NIR, VIS, EM

POST-SHREDDER

NF metal, stainless steel,
copper cables, copper,
brass,
aluminum

**NIR, VIS, XRT, XRF, EM,
COLOR**

ELECTRONIC SCRAP

Printed circuit boards,
non-ferrous metal
concentrates,
cables, copper, brass,
stainless steel

**XRT, XRF, EM, NIR,
COLOR**

PAPER

Deinking, cardboard,
carton

NIR, VIS, EM

Automation with TOMRA Sorting units

NIR for packaging waste

Baler

Focus on the PET stream

PP

PE Colored

Mixed Paper cleaning

PE Natural

ONP Cleaning

PET

Manual sorting for oversize materials

Packaging

ONP Double Deck Screen

Ballistics (removing films)

Input
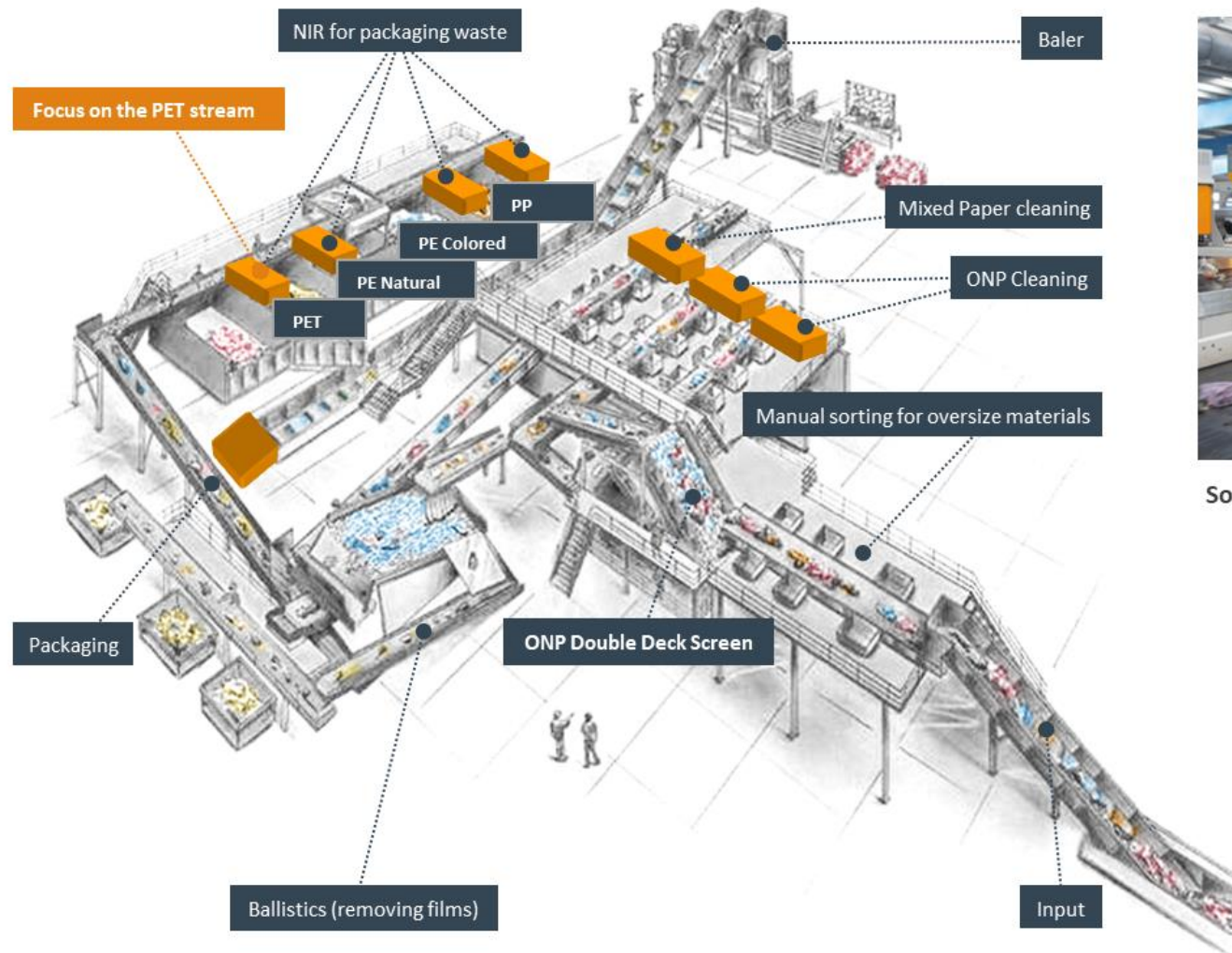
Sorting of Municipal Solid Waste, Cyprus

Industrializing the process for recycled plastic

SUCCESS FACTORS

- **Sufficient demand** for the recycled material
- Output to be of **high quality** and **stable quantity** in order to replace virgin material
- **Political leadership** that sets targets and monitors
- **Access to capital** and willingness to invest
- **Collaboration with multiple partners on commercialization**

Reverse vending

Sorting

Sorting **Washing Extrusion**

KRONES
NDA

WASTE

Collection

♻ WASTE SORTING PLANTS
🔥 INCINERATION
🗑 LANDFILL

Reprocessing

RPC
Integra
NDA

Virgin plastics
NDA

Consumer

Data

NEW PRODUCT

Retail/e-commerce
NDA

Consumer goods
Henkel
NDA

Packaging/converter
greiner packaging
mondi
NDA

TOMRA
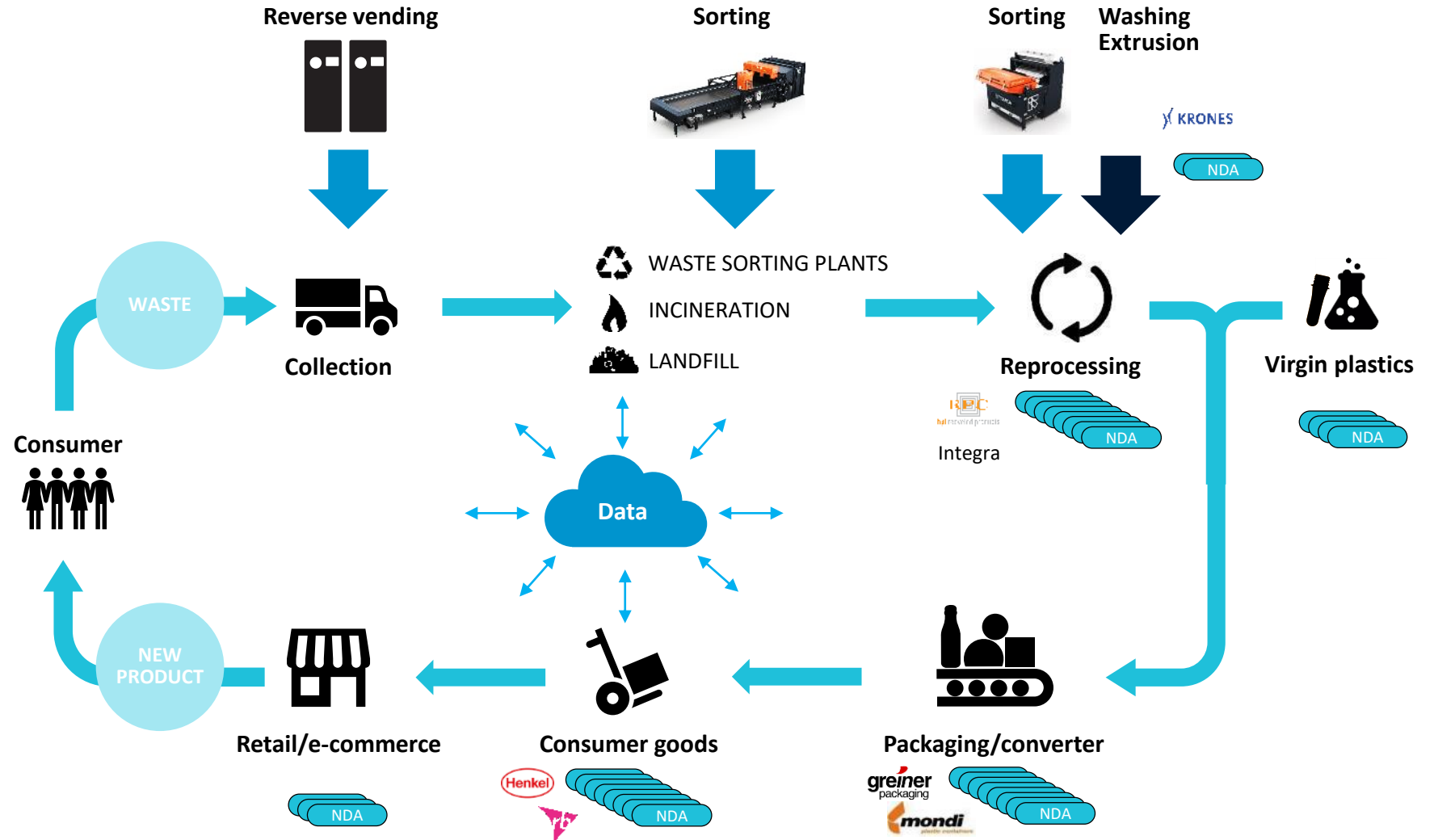
INTELLIGENT MINE

- **Mining** is an old industry. But chances are that it will it **look very different** in 10 years time

- Energy intensity and water stress are major drivers...

- **...for disruptive technology forces to reshape the industry**

- Commodity prices and capex impact the investment sentiment

TOMRA
SORTING SOLUTIONS | MINING

Mining: market growth expectations

Total annual market size

CAGR 15%

MEUR

2019: 65
2022: 100
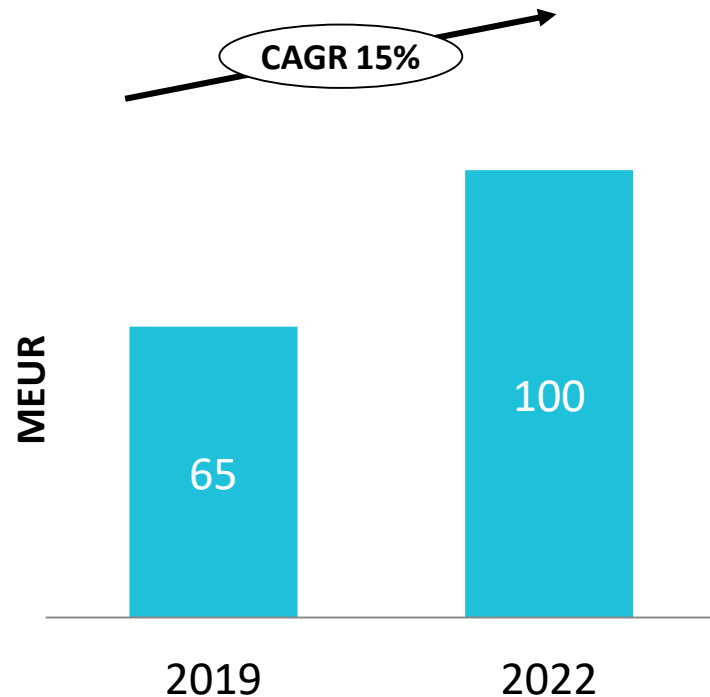
Sensor-based sorting equipment
- is still a technology to be accepted
- Growth is conditional on new applications and technologies being developed

AFFECTING FACTORS

Political climate	Access to capital
Cost drivers	Commodity price fluctuations

TOMRA

Mining: applications and sensor technology

INDUSTRIAL MINERALS

Phosphate-silica removal, lime-stone-silica removal, quartz up-grade, MgO_2-silica removal, fluorite pre-conc., talc pre-conc., lithium pre-conc., barite pre-conc.,

COLOR, XRT, **NIR**

DIAMONDS

Kimberlite-waste removal, diamond ROM conc., diamonds final recovery, emeralds ROM conc., rubies ROM conc.

COLOR, XRT, **NIR**
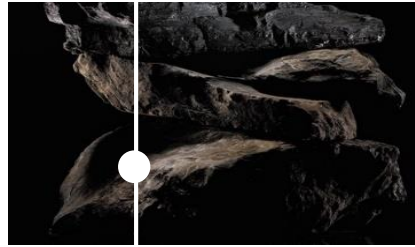
FERROUS METALS

Iron ore grading, hematite pre-conc., manganese pre-conc., chromite pre-conc.

XRT, EM, **NIR**

NON-FERROUS METALS

Copper, zinc, gold, nickel, tungsten, silver, platinum group metals

XRT, COLOR, EM, NIR

FUEL

Coal waste dumps

XRT
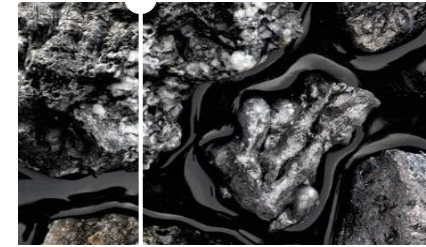
SLAG

Stainless steel slag, ferro silica slag, ferro chrome slag

XRT, **EM**

TOMRA

The concept of sensor-based sorting in mining

Mining process:
Industrial minerals

```
Run of Mine (ROM)
        ↓
Primary Crushing
        ↓
Secondary Crushing
        ↓
Sensor Based Sorting  →  ▲ Waste
        ↓
     ▲ Product
```

Mining process:
Metal mining
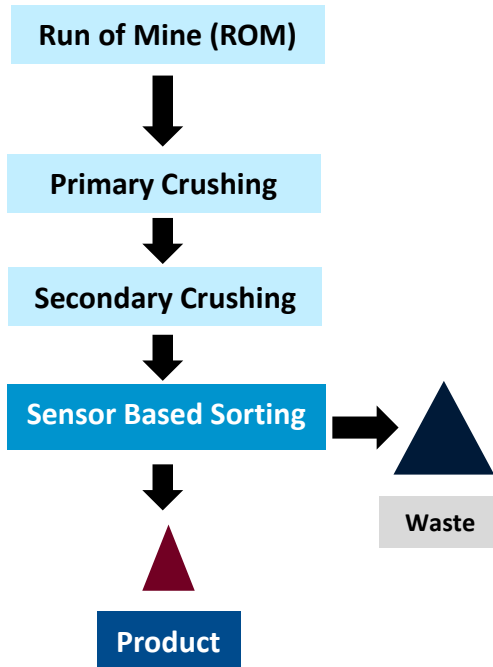
```
Run of Mine (ROM)
        ↓
Primary Crushing
        ↓
Sensor Based Sorting  →  ▲ Waste
        ↓
Beneficiation Plant:
Milling
Screening      →  ▲ Tailings (fines)
DMS
Flotation
        ↓
     ▲ Product
```

- 15% to 50% of the ROM can be rejected in an early stage of the process (application dependent)
- These low grade waste rocks don't need to be transported, crushed, grinded or further treated

Current segment
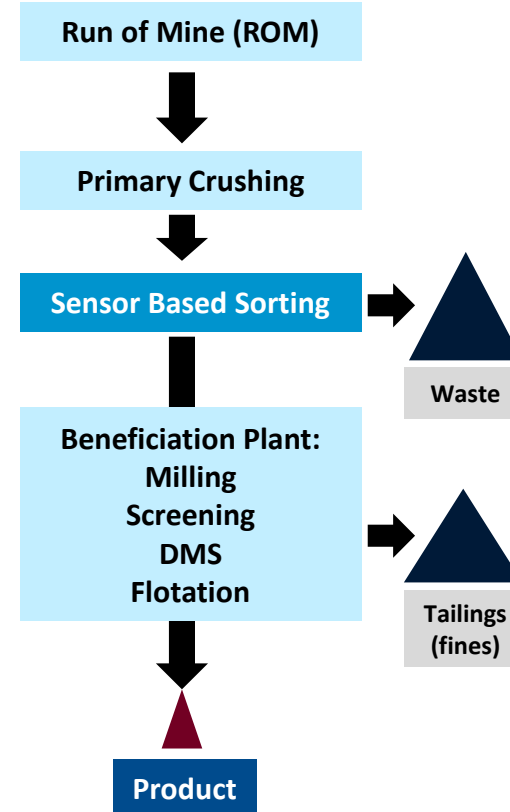
Potential new segment

Mining: competitive landscape
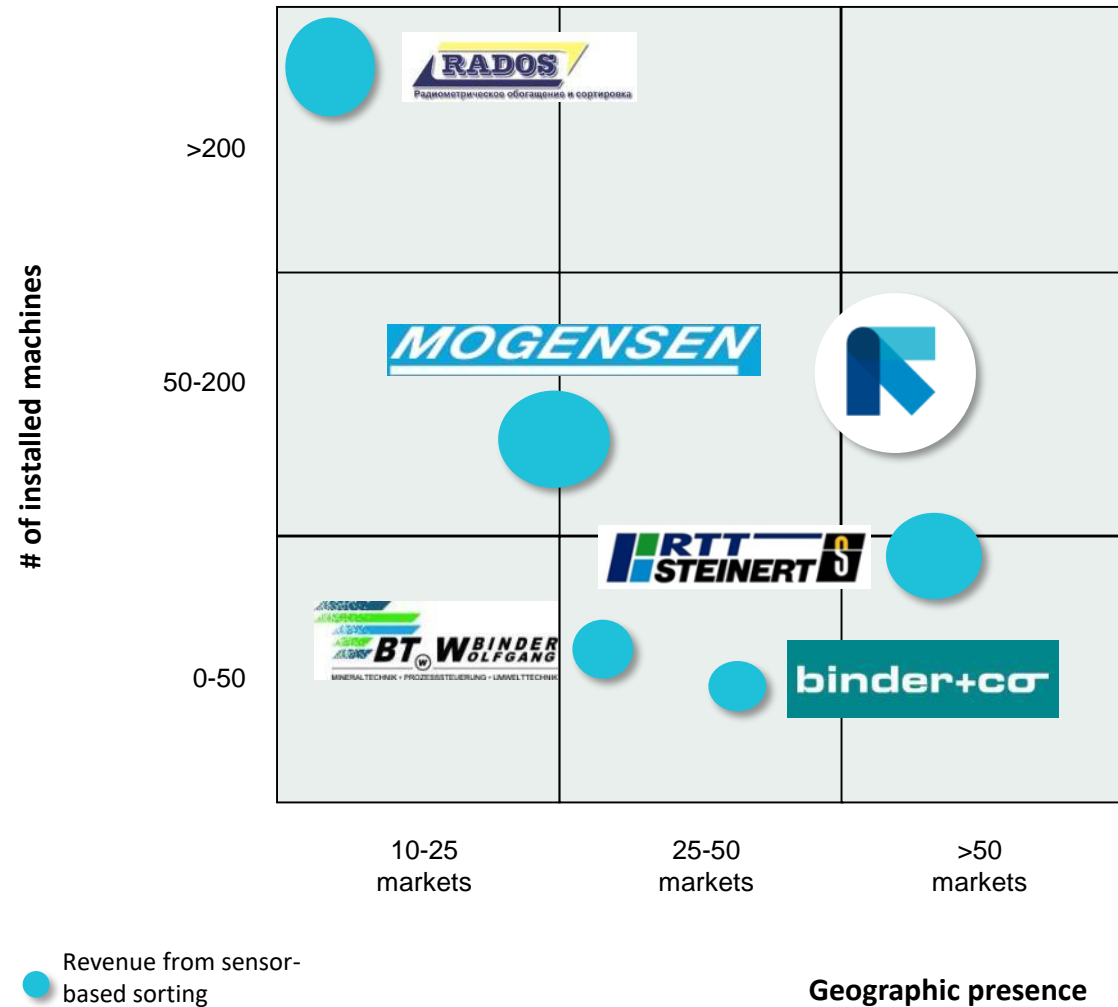
TOMRA competitive positioning

- Wide geographical coverage
- Broadest technology platform
- Leading brand
- **Market share: 40-50%**

HISTORICAL GROUP FINANCIALS AND TARGETS

Group financials development – solid track record

Revenues
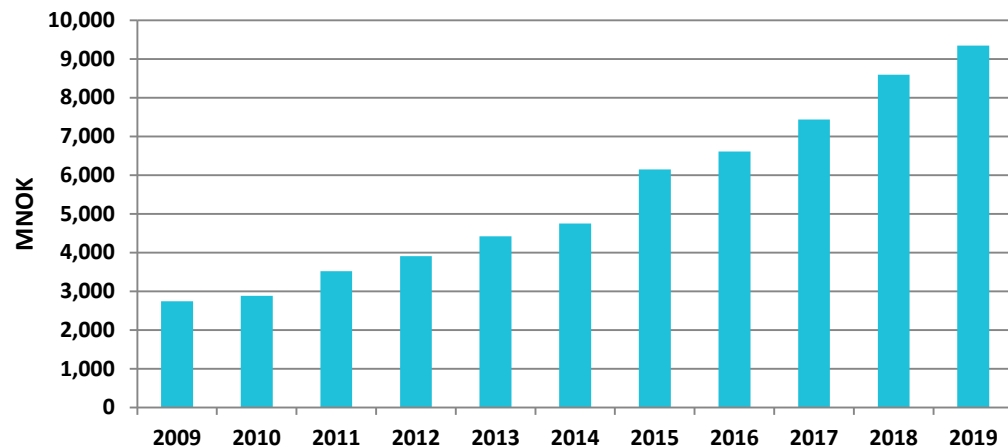
Gross contribution and margin
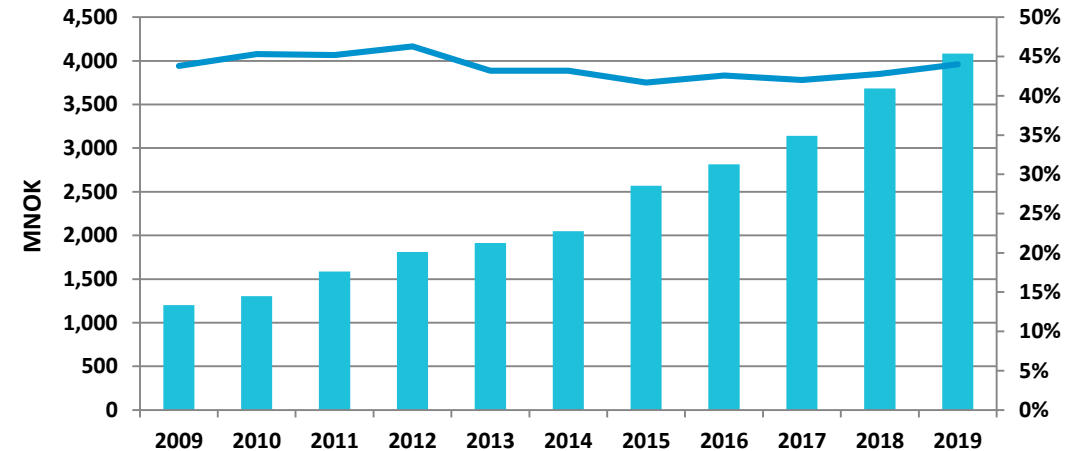
EBITA and margin

Earnings per share

Does not include discontinued operations (California divested 2011 and Orwak divested 2014), except for EPS

TOMRA
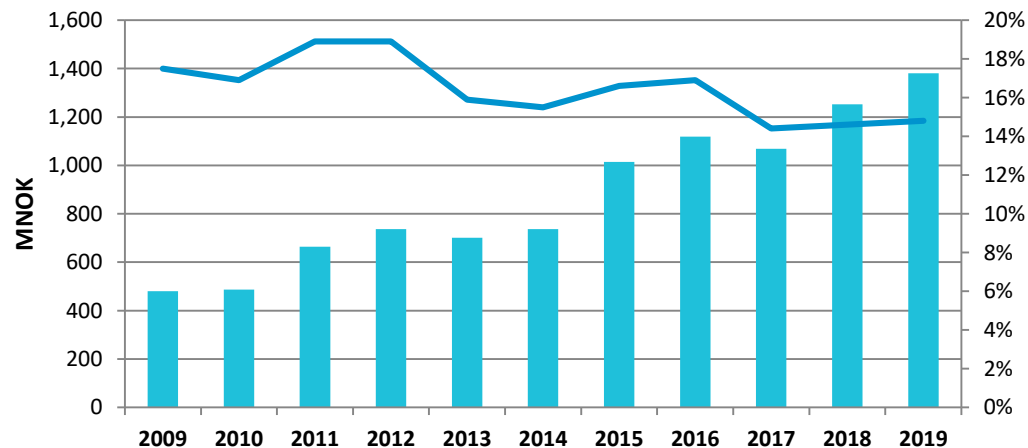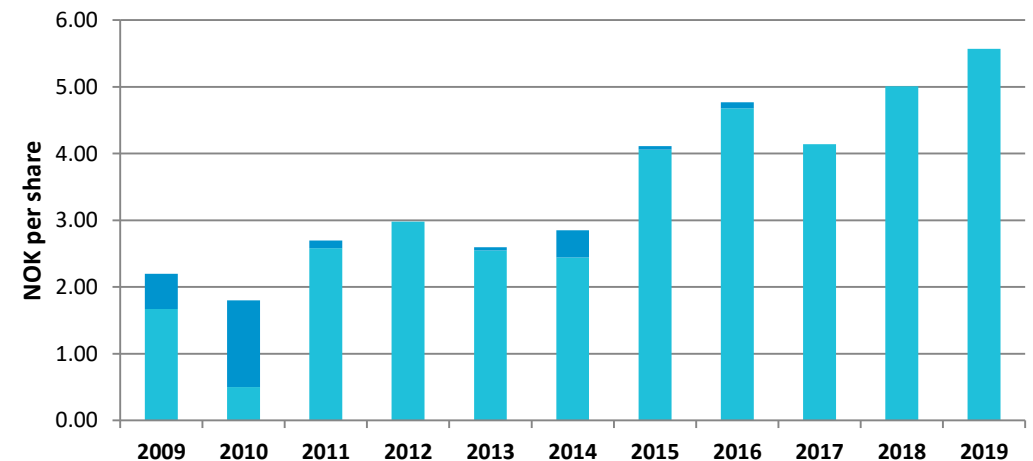
Group financial targets 2018-2023 – our ambitions affirmed

Revenue growth

>10% CAGR on average

EBITA-margin

Towards **>18%**

Dividend payout

40-60% of EPS

Capital Structure

Maintain investment grade profile

ROCE new projects

>20%
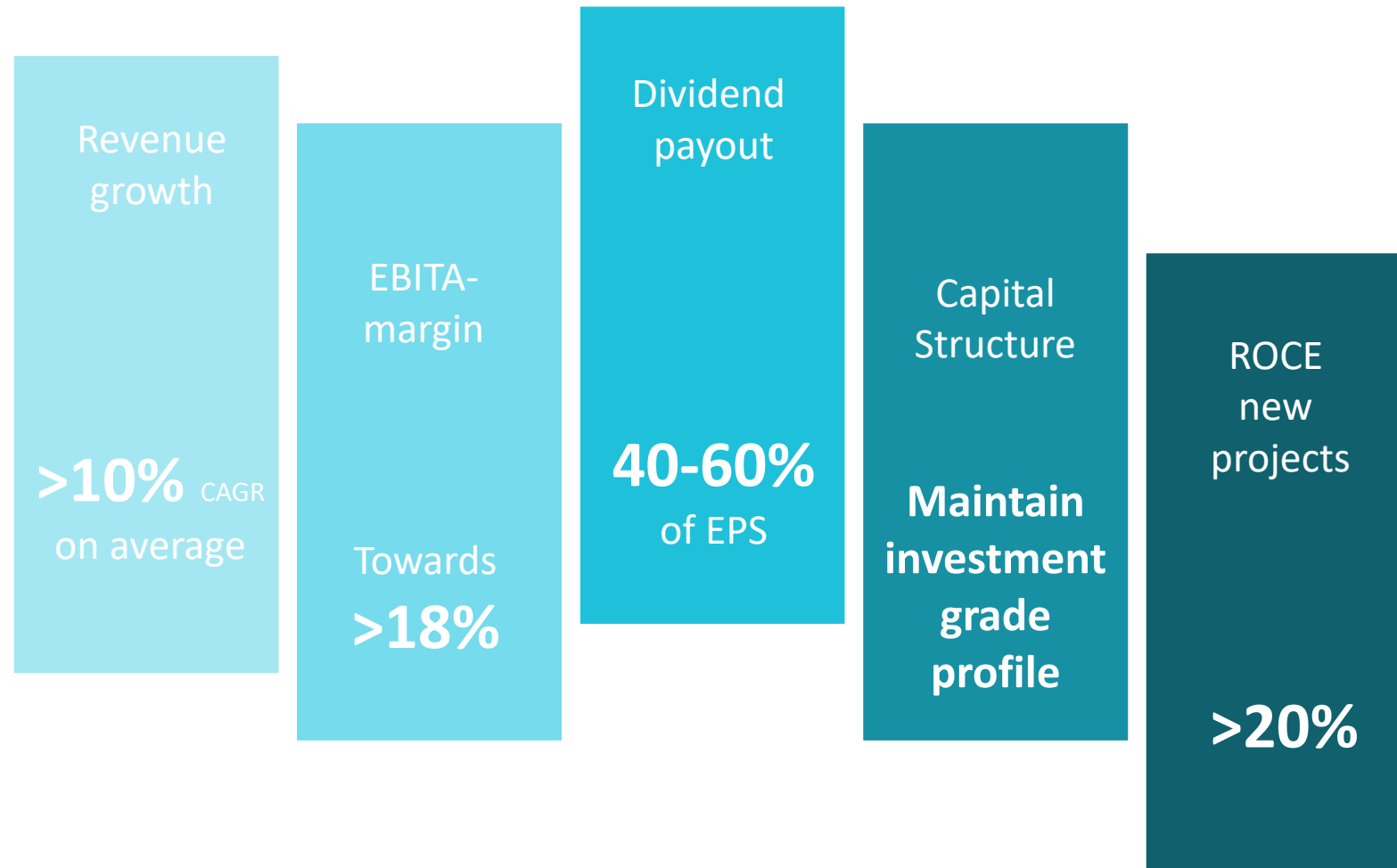
Financial highlights | Balance sheet and cash flow

Amounts in NOK million	With IFRS 16	Without IFRS 16	
	31 Dec 2019	31 Dec 2019	31 Dec 2018
ASSETS	**10,868**	**9,815**	**9,595**
Intangible non-current assets	3,788	3,788	3,821
Tangible non-current assets	2,330	1,293	1,276
Financial non-current assets	406	406	340
Inventory	1,596	1,596	1,447
Receivables	2,288	2,288	2,314
Cash and cash equivalents	460	460	397
LIABILITIES AND EQUITY	**10,868**	**9,815**	**9,595**
Equity	5,076	5,125	5,077
Minority interest	170	170	159
Interest-bearing liabilities	2,982	1,880	1,524
Non interest-bearing liabilities	2,640	2,640	2,835

Operating cash flow

- Min (2008-2018) excluding IFRS 16
- Max (2008-2018) excluding IFRS 16
- 2019 excluding IFRS 16
- 2019 including IFRS 16
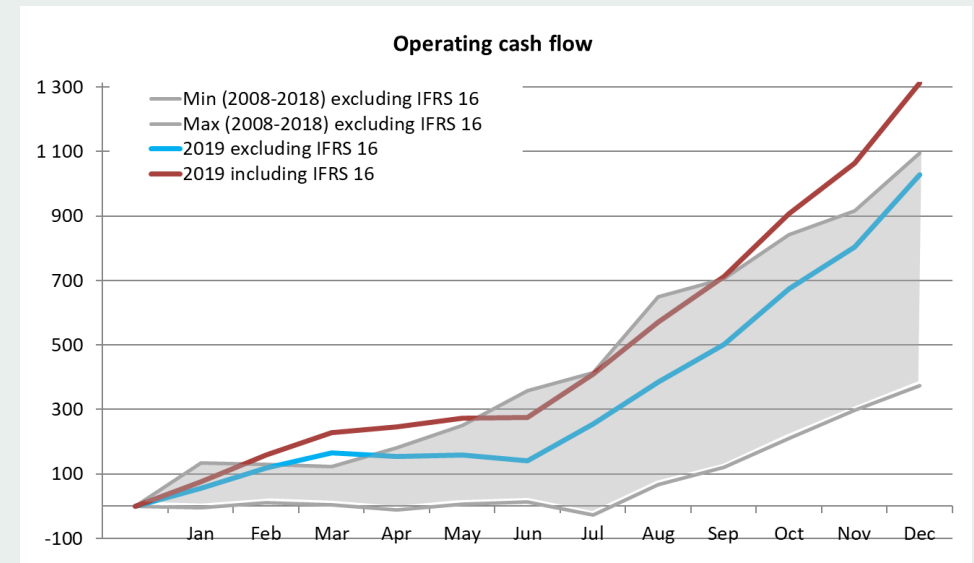
Ordinary cashflow from operations

- 600 MNOK in fourth quarter (346 MNOK in fourth quarter 2018)
  - Positive effect from IFRS 16 of 72 MNOK
- 1,313 MNOK full year 2019 (1,025 MNOK full year 2018)
  - Positive effect from IFRS 16 of 272 MNOK

Solidity

- 48% equity (54% ex. IFRS 16)
- NIBD/EBITDA = 0.8x (Rolling 12 months), ex IFRS 16 effects

TOMRA

Currency risk and hedging policy

EUR — USD

+7.9*%

+4.7*%

4Q18 | 1Q19 | 2Q19 | 3Q19 | 4Q19

*Average rate 4Q19 vs 4Q18
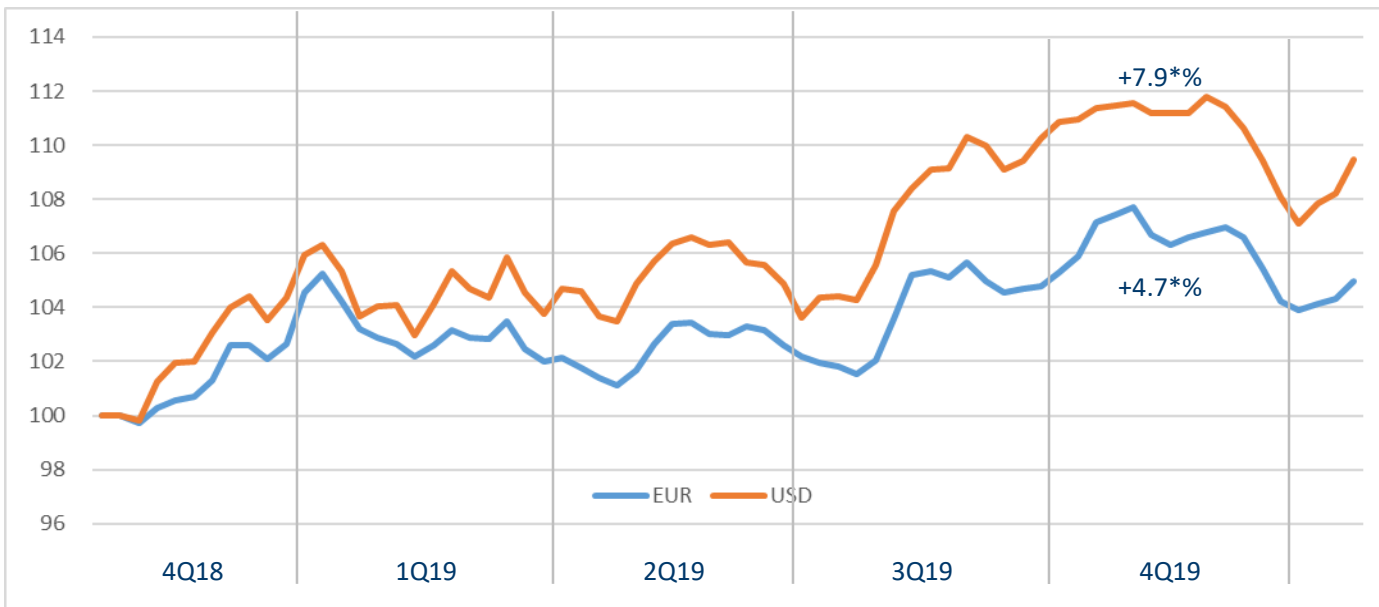
Positive impact from stronger USD vs EUR

10% change in NOK towards other currencies will impact:

	Revenues	Expenses	EBITA
EUR*	4.5%	4.0%	7.0%
USD	3.5%	2.5%	8.0%
OTHER**	2.0%	3.0%	-4.0%
ALL	**10.0%**	**9.5%**	**11.0%**

Revenues and expenses per currency:

	EUR*	USD	NOK	OTHER**	TOTAL
Revenues	45 %	35 %	0 %	20 %	100 %
Expenses	40 %	25 %	5 %	30 %	100 %

Assets and liabilities per currency:

	EUR*	USD	NOK	OTHER**	TOTAL
Assets	50 %	15 %	15 %	20 %	100 %
Liabilities	60 %	10 %	20 %	10 %	100 %

* EUR includes DKK   ** Most important: AUD, NZD, RMB, CAD, SEK, GBP and JPY   NOTE: Estimated and rounded figures

HEDGING POLICY

CASHFLOW AND P/L

- TOMRA can hedge up to one year of future predicted cash flows. Gains and losses on these hedges are recorded at the finance line, not influencing EBITA

B/S

- TOMRA only hedges B/S items where exchange rate fluctuations could have P/L impact. Gains and losses on B/S hedging are recorded in accordance with IAS 21 and will normally not have P/L impact

TOMRA

Collection solutions – segment financials

Revenues
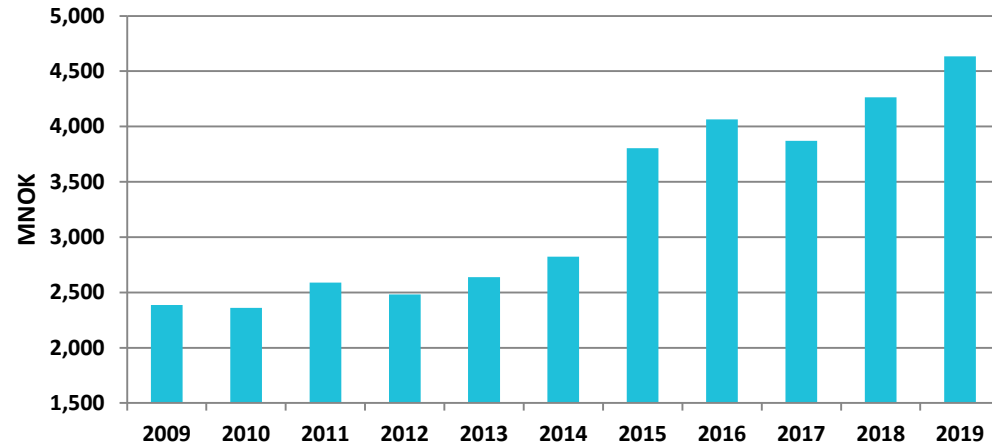
Gross contribution and margin
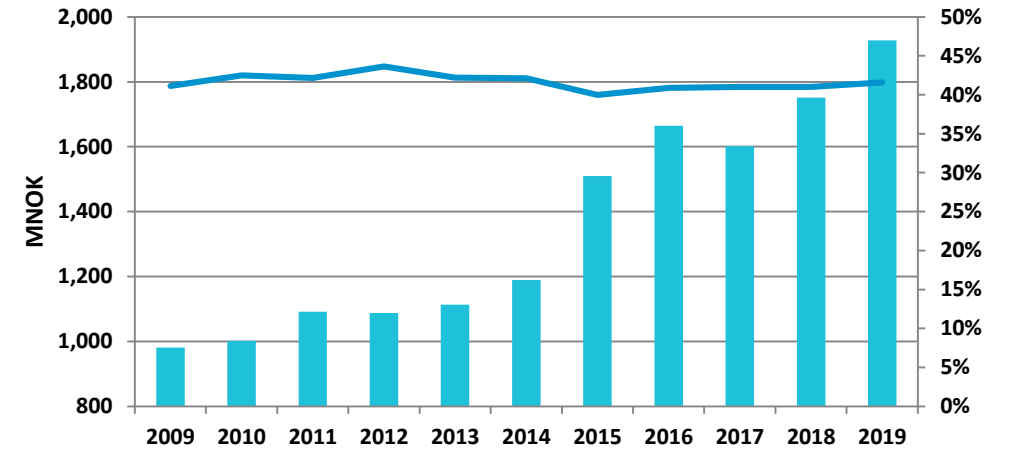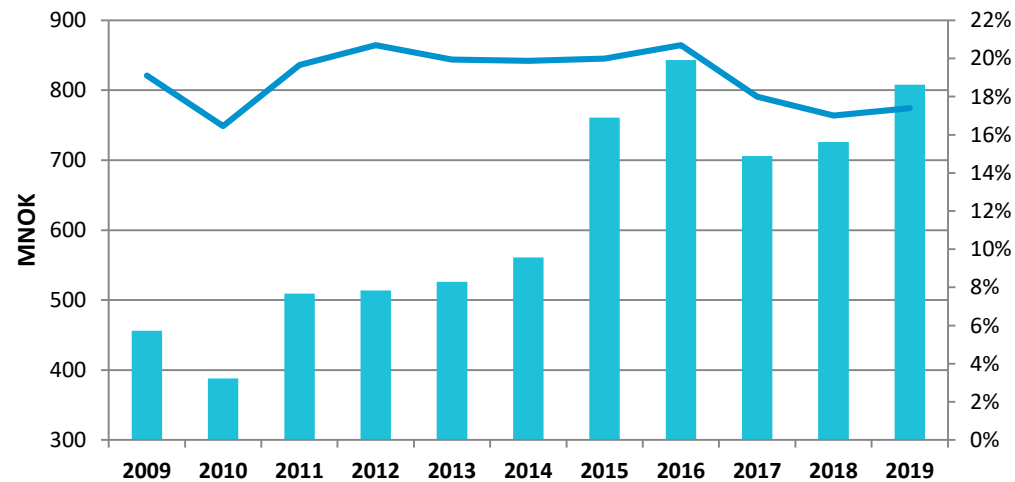
EBITA and margin

TOMRA machines installed in the German market

2700 – 3700 MACHINES PER YEAR

TOMRA

Sorting solutions – segment financials
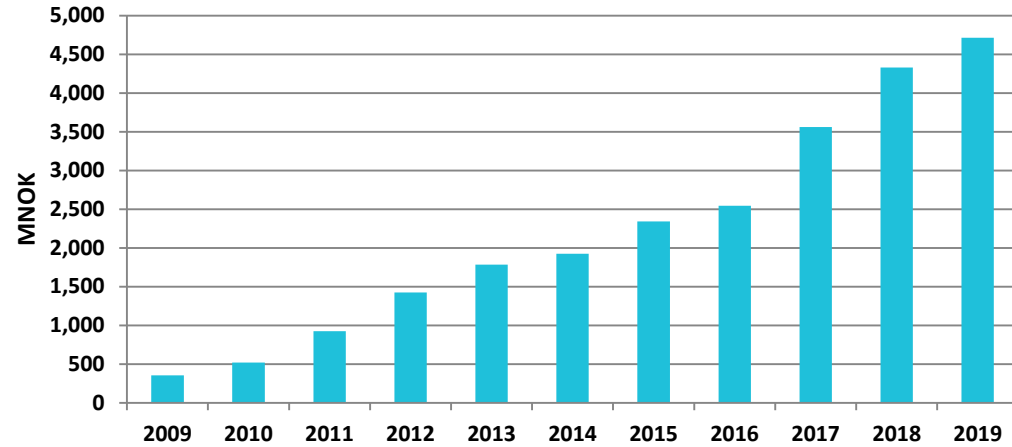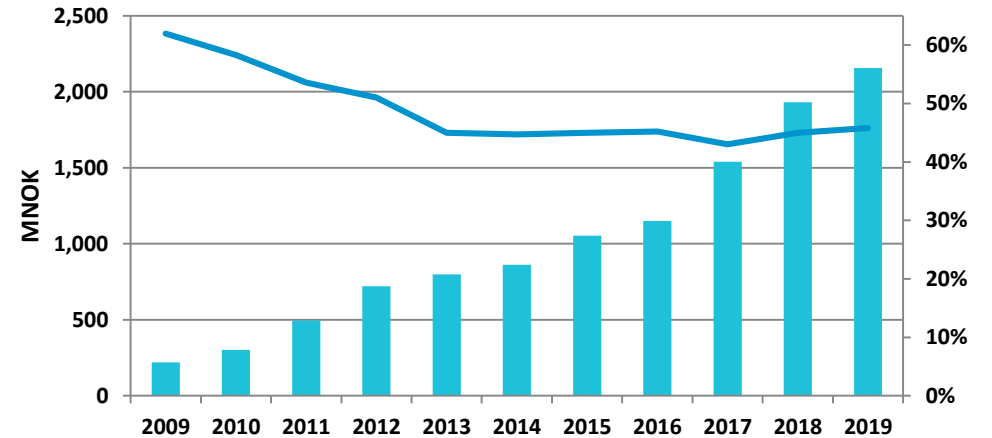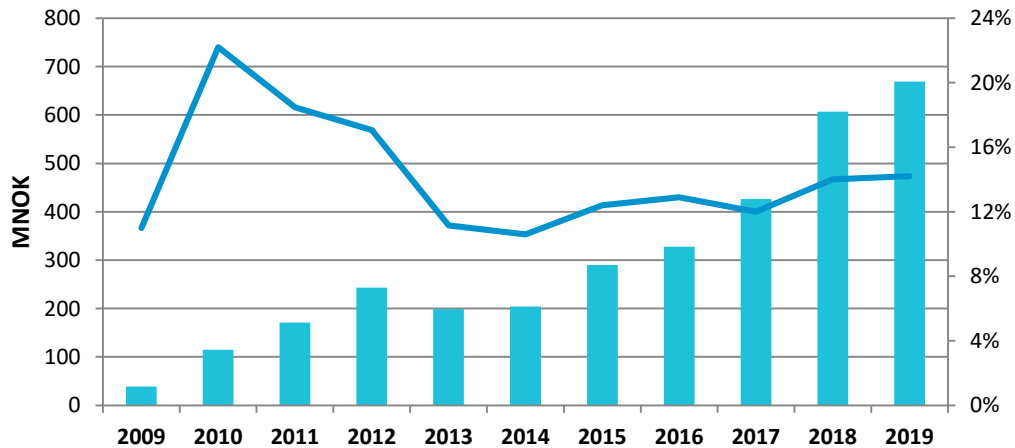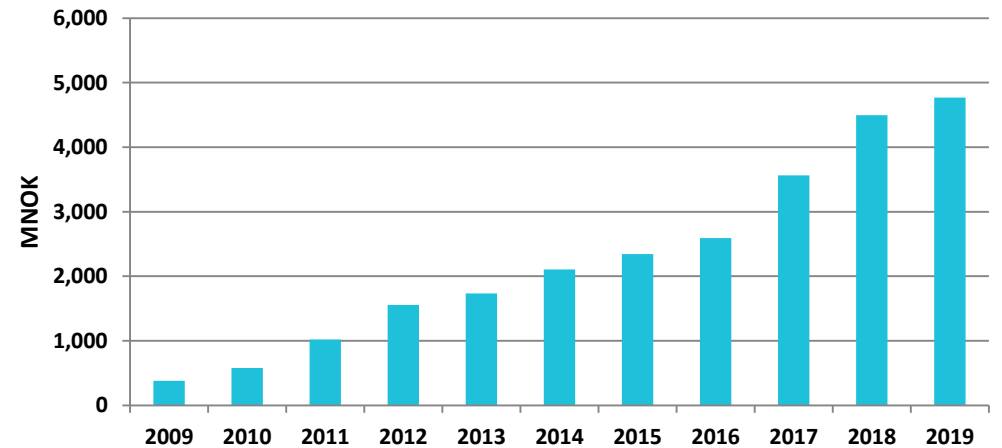
Shareholder structure

Top 10 shareholders as of 02 January 2020

1	Investment AB Latour	39 000 000	26,3 %
2	Folketrygdfondet	11 642 913	5,9 %
3	The Bank of New York Mellon	7 863 046	5,3 % (NOM)
4	Clearstream Banking	5 584 324	4.1 % (NOM)
5	State Street Bank	4 788 326	3.7 % (NOM)
6	JPMorgan Luxembourg S.A.	1 823 316	1.6 % (NOM)
7	JPMorgan Chase Bank	1 804 031	1.6 % (NOM)
8	JPMorgan Chase Bank	1 705 002	1.2 % (NOM)
9	JPMorgan Chase Bank	1 598 542	1.1 % (NOM)
10	DANSKE INVEST NORSKE INSTIT. II.	1 262 196	1.1 %
	Sum Top 10	76 773 904	51.9%
	Other shareholders	71 246 174	48.1%
	TOTAL (8,791 shareholders)	148 020 078	100.0%

Shareholders by country

Legend:
- Sweden 31%
- Norway 19%
- United Kingdom 14%
- United States 9%
- Luxembourg 7%
- Belgium 7%
- Others 13%