

INVESTOR PRESENTATION



THE DAWN OF THE RESOURCE REVOLUTION

THE CHALLENGE:

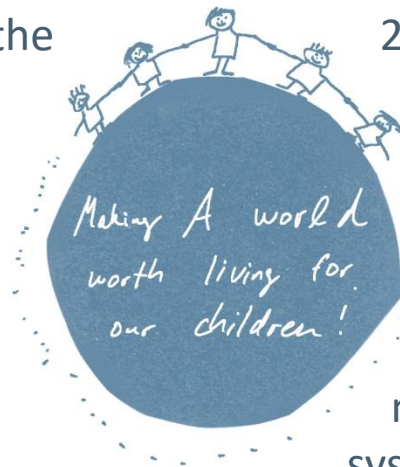
3 billion more middle-class consumers expected to be in the global economy by 2030

Up to **\$1.1 trillion** spent annually on resource subsidies

THE OPPORTUNITY:

\$2.9 trillion of savings in 2030 from capturing the resource productivity potential

At least \$1 trillion more investment in the resource system needed each year to meet future resource demands





THE WORLD POPULATION AND STANDARD OF LIVING IS INCREASING DRAMATICALLY

WORLD RESOURCES ARE UNDER UNPRECEDENTED PRESSURE



RESOURCE PRODUCTIVITY MUST INCREASE TO ENSURE SUSTAINABLE DEVELOPMENT

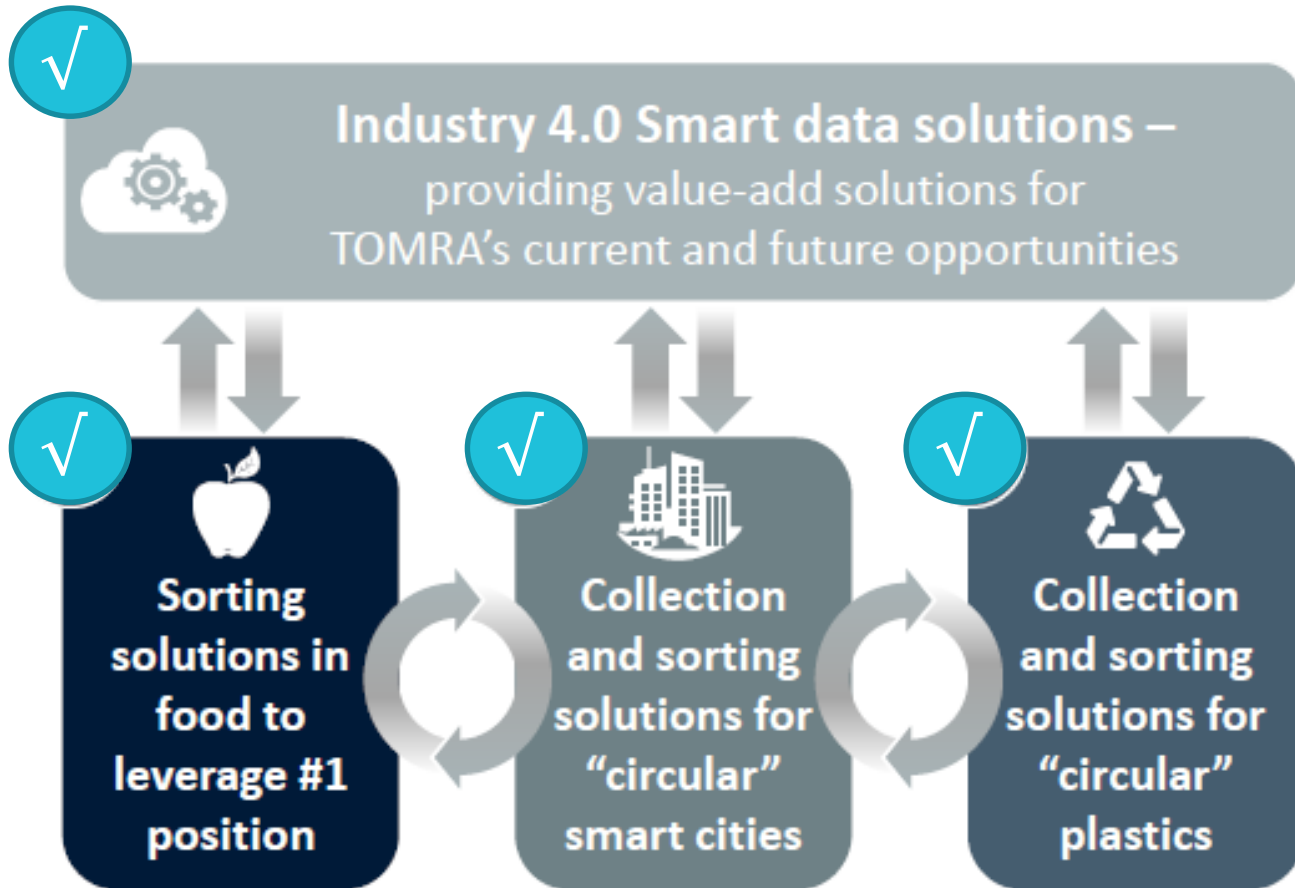
TOMRA creates sensor-based solutions for optimal resource productivity



OUR BIGGEST GLOBAL CHALLENGES ARE ALSO BUSINESS OPPORTUNITIES



TOMRA: POSITIONED TOWARDS MEGATRENDS



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 **~25 millions of tons of CO₂** from being released into the atmosphere in 2017
- **~35 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

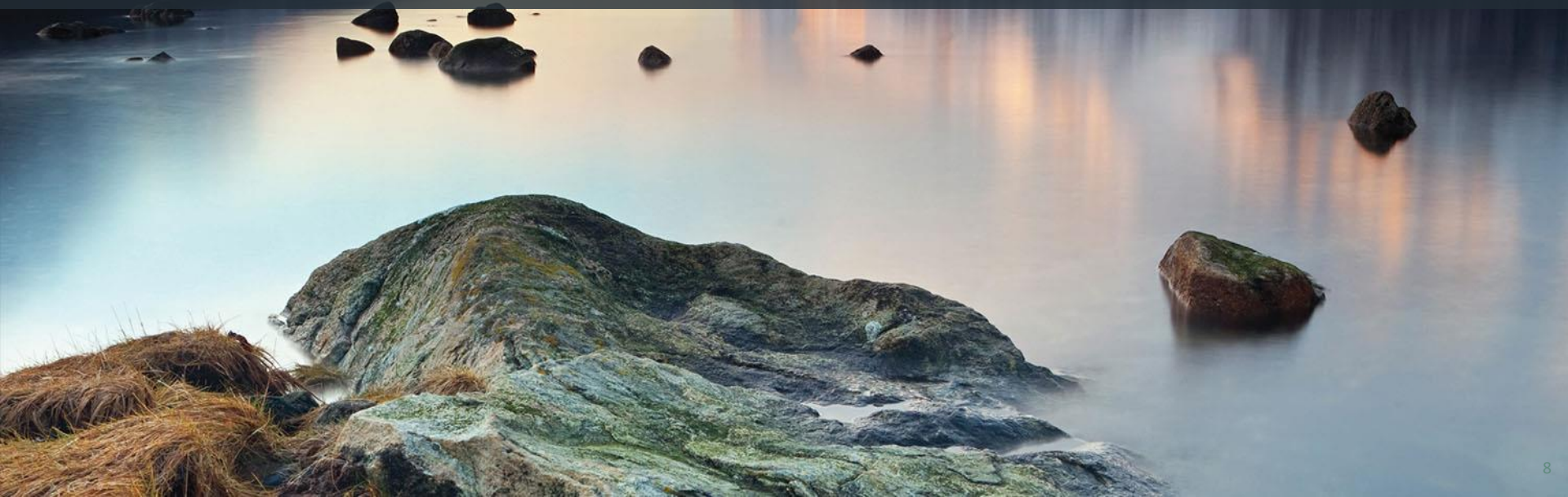


LEADING THE RESOURCE REVOLUTION

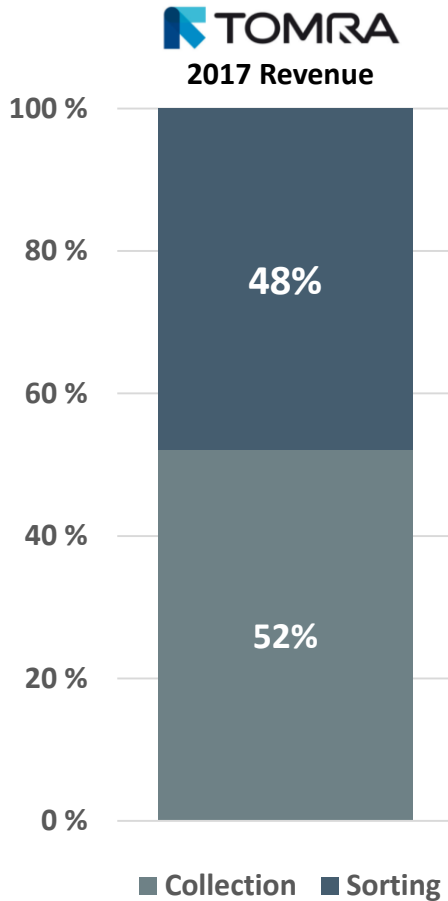




TOMRA IN SHORT



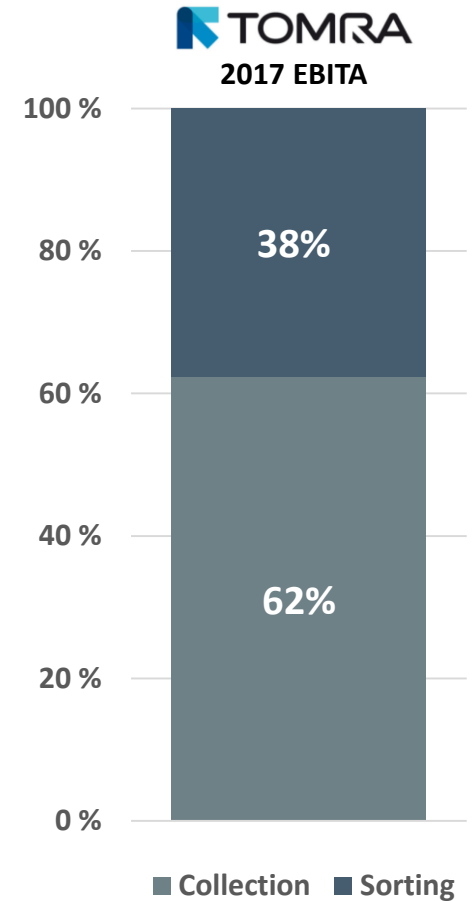
CREATING VALUE THROUGH TWO STRONG BUSINESS AREAS*



- High growth
- High margins
- Medium cyclicality

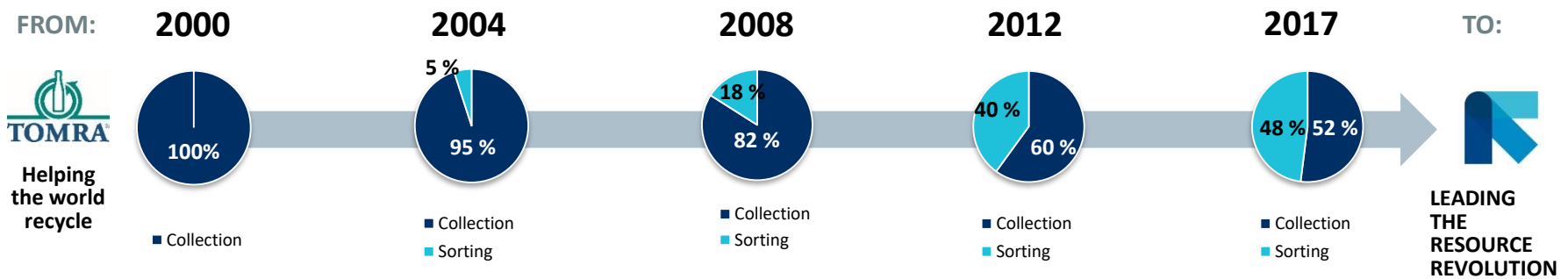


- Stable
- High margins
- Low cyclicality



High technology - sustainable business

THE TOMRA TRANSFORMATION JOURNEY



TOMRA WORLDWIDE



TOMRA'S TWO BUSINESS AREAS



FOOD

Share of '17 sales	~33%
Employees	1,110
Customers	Food growers, packers and processors
Market share	Bulk: ~25% Lane: ~25%

RECYCLING

Share of '17 sales	~12%
Employees	185
Customers	Material recovery facilities, scrap dealers, metal shredder operators
Market share	~55-65%

MINING

Share of '17 sales	~3%
Employees	60
Customers	Mining companies
Market share	~40-60%

TOMRA SORTING GROUP FUNCTIONS & SHARED STAFF

Employees	140
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REVERSE VENDING

Share of '17 sales	~38%
Employees	1,375
Customers	Grocery retailers
Market share	~75%

MATERIAL RECOVERY

Share of '17 sales	~14%
Employees	550
Customers	Grocery retailers and beverage manufacturers
Market share	~60% in USA (markets served)



TOMRA INSTALLED BASE



REVERSE VENDING

Nordic	~15,100
Germany	~30,000
Other Europe	~14,600
North America	~16,000
Rest of the world	~6,300

TOTAL ~82,000



RECYCLING

EMEA	~3,850
Americas	~800
Asia	~700
Other	~20

TOTAL ~5,370

MINING

Europe	~20
US / Canada	~35
Australia	~5
South Africa	~40
Other	~40

TOTAL ~140

FOOD BULK

EMEA	~3,100
Americas	~2,850
Asia	~600

TOTAL ~6,550

FOOD LANE

EMEA	~435
Americas	~690
APAC	~555

TOTAL ~1,680

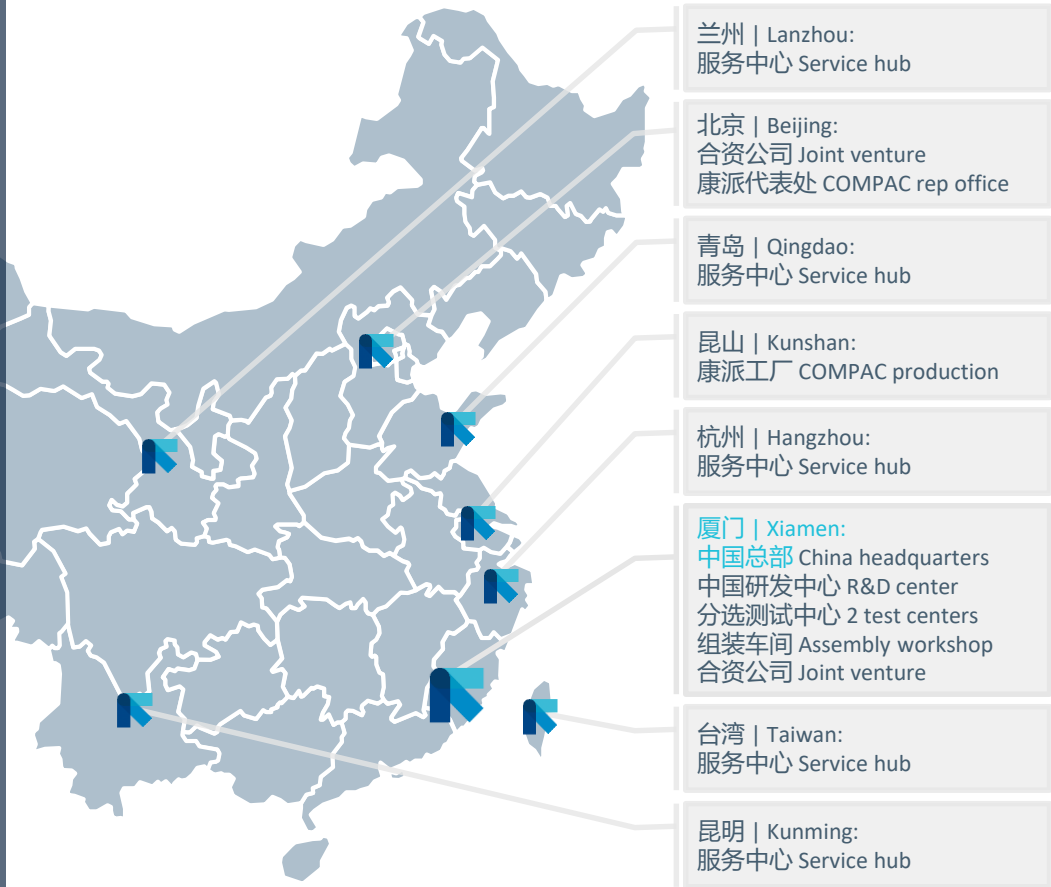
Not including machines sold on OEM agreements

EXPANDING IN CHINA SINCE 2010

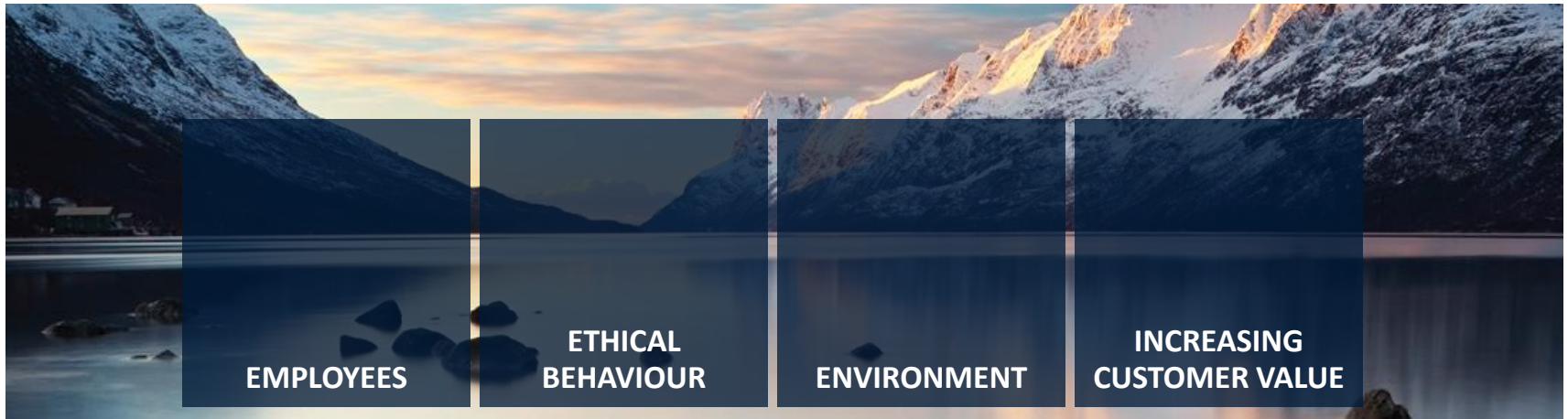
TOMRA IN CHINA 陶朗在中国

2010年进入中国市场
3大业务已进驻中国市场
2个外商独资全资子公司
2个合资公司
2个测试中心
2个组装车间
150名员工

Established in China since 2010
3 business streams active in China
2 wholly-owned subsidiaries
2 joint ventures
2 test centers
2 assembly workshops
150 employees



USING THE POWER OF BUSINESS TO DO GOOD



EMPLOYEES

78% of our employees say TOMRA is a “Great Place to Work” (2017)

ETHICAL BEHAVIOUR

Member of UN Global Compact since end 2009
Implementing ethical policies worldwide

ENVIRONMENT

We contribute to avoided emissions of about ~25 mill tons CO₂ annually (2017)

INCREASING CUSTOMER VALUE

Productivity
Revenues
Quality

TOMRA'S CR PROGRAMME 2016 – 2020

8 DECENT WORK AND ECONOMIC GROWTH



Decent work and economic growth – SDG 8

TOMRA will promote sustained, inclusive and sustainable economic growth and decent work for all

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Industry, Innovation and infrastructure - SDG 9

TOMRA will contribute to building infrastructure by supporting sustainable use of natural resources and fostering sustainable innovation in the industry

11 SUSTAINABLE CITIES AND COMMUNITIES



Sustainable cities and communities – SDG 11

TOMRA will contribute to making cities and communities more sustainable by delivering sorting and recycling solutions that ensure safe handling of waste and other material streams

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

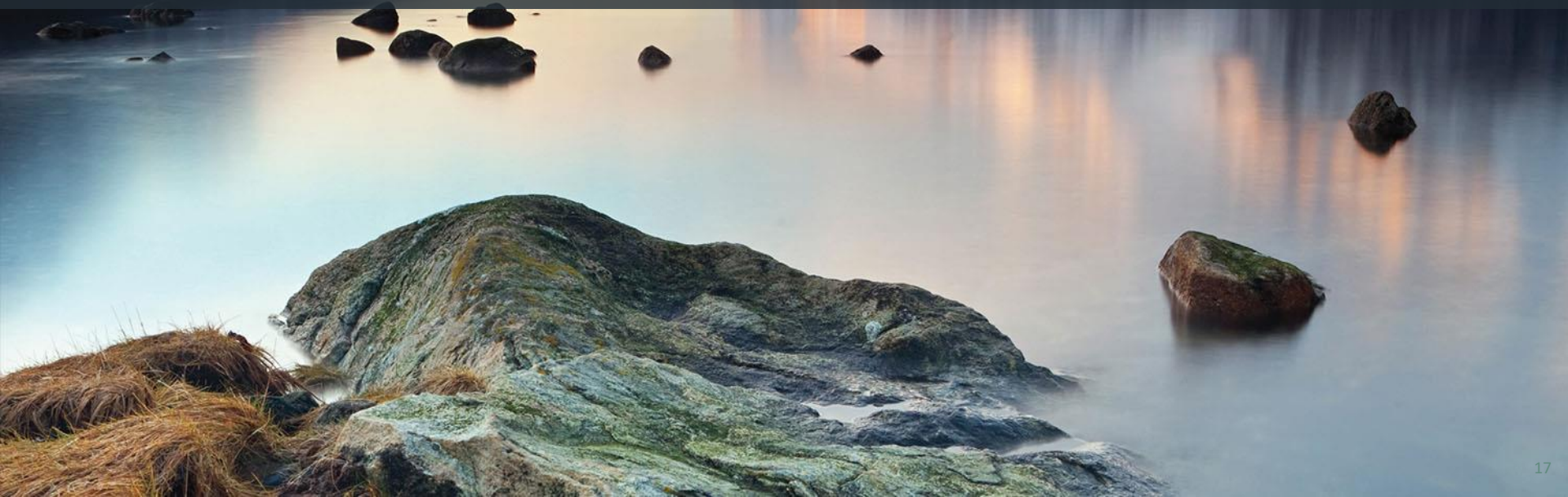


Responsible consumption and production – SDG 12

TOMRA will contribute to ensuring sustainable consumption and production patterns



TOMRA IN DEPTH

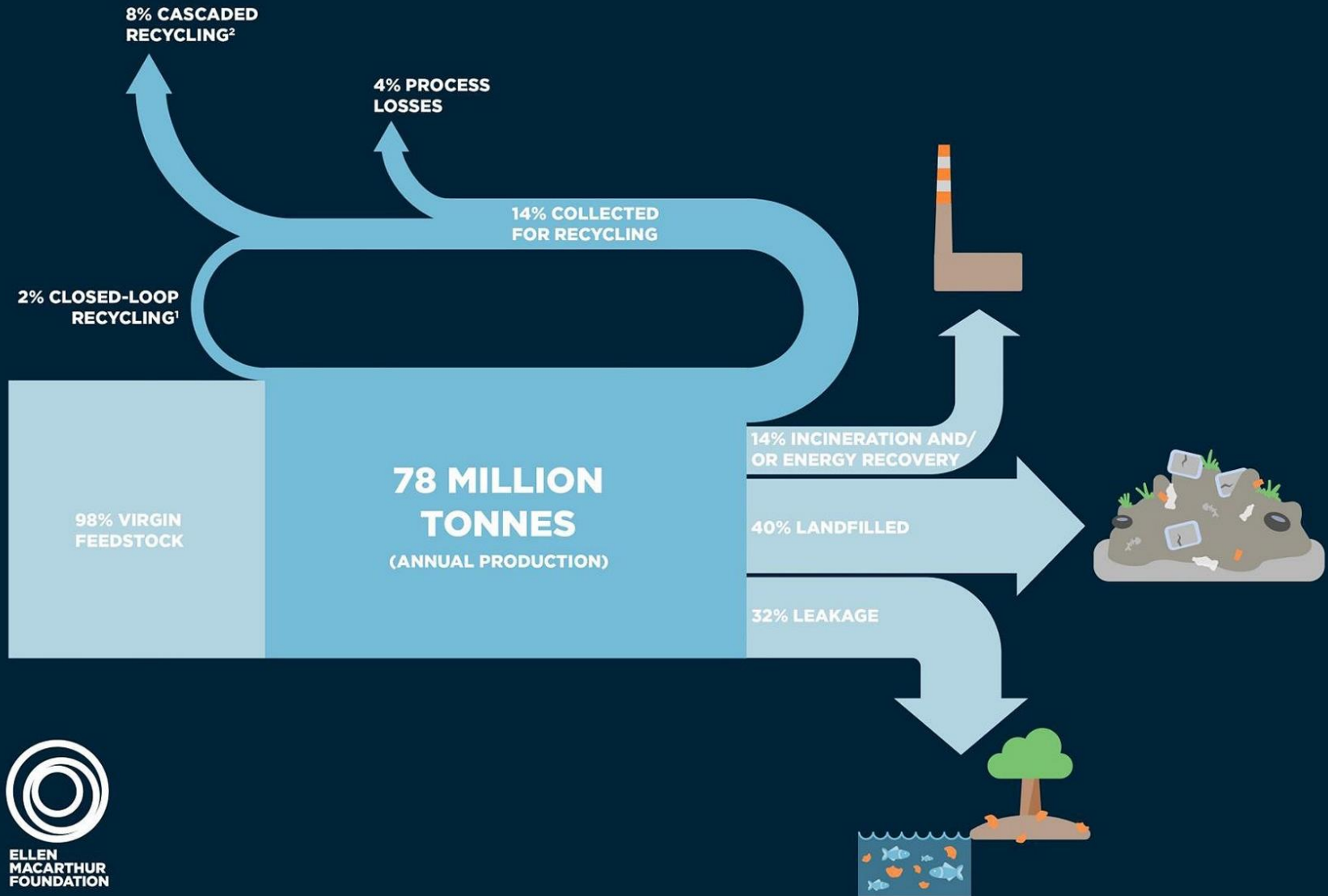


TOMRA Collection Solutions

**RETURNS
INTO
VALUE**

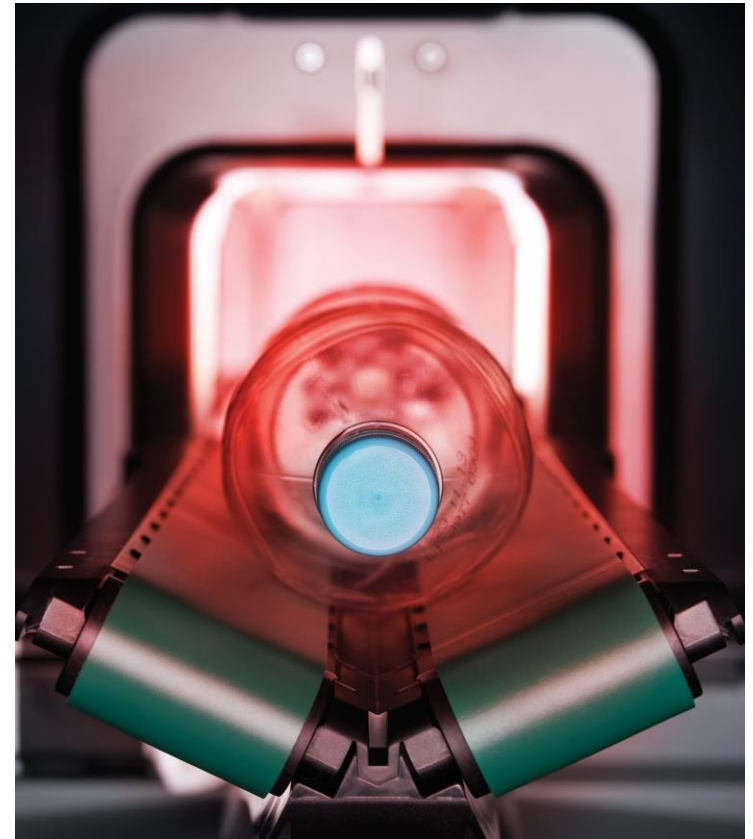
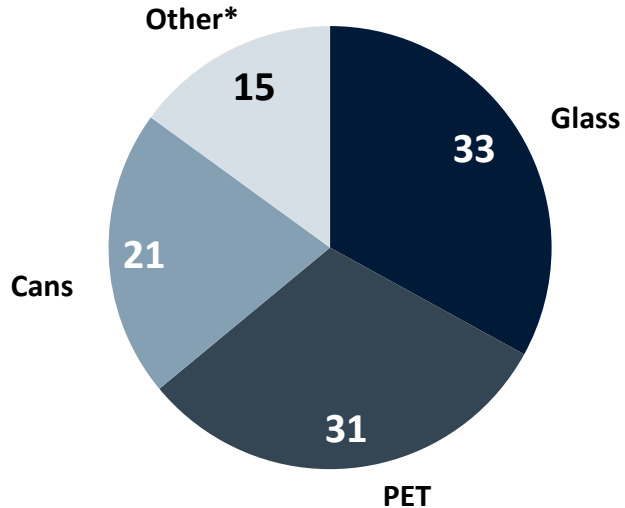


ONLY 2% OF THE ANNUAL PLASTIC PRODUCTION IS REUSED FOR SAME/SIMILAR PURPOSE APPLICATION



THE BEVERAGE PACKAGING MARKET CONTINUES TO GROW

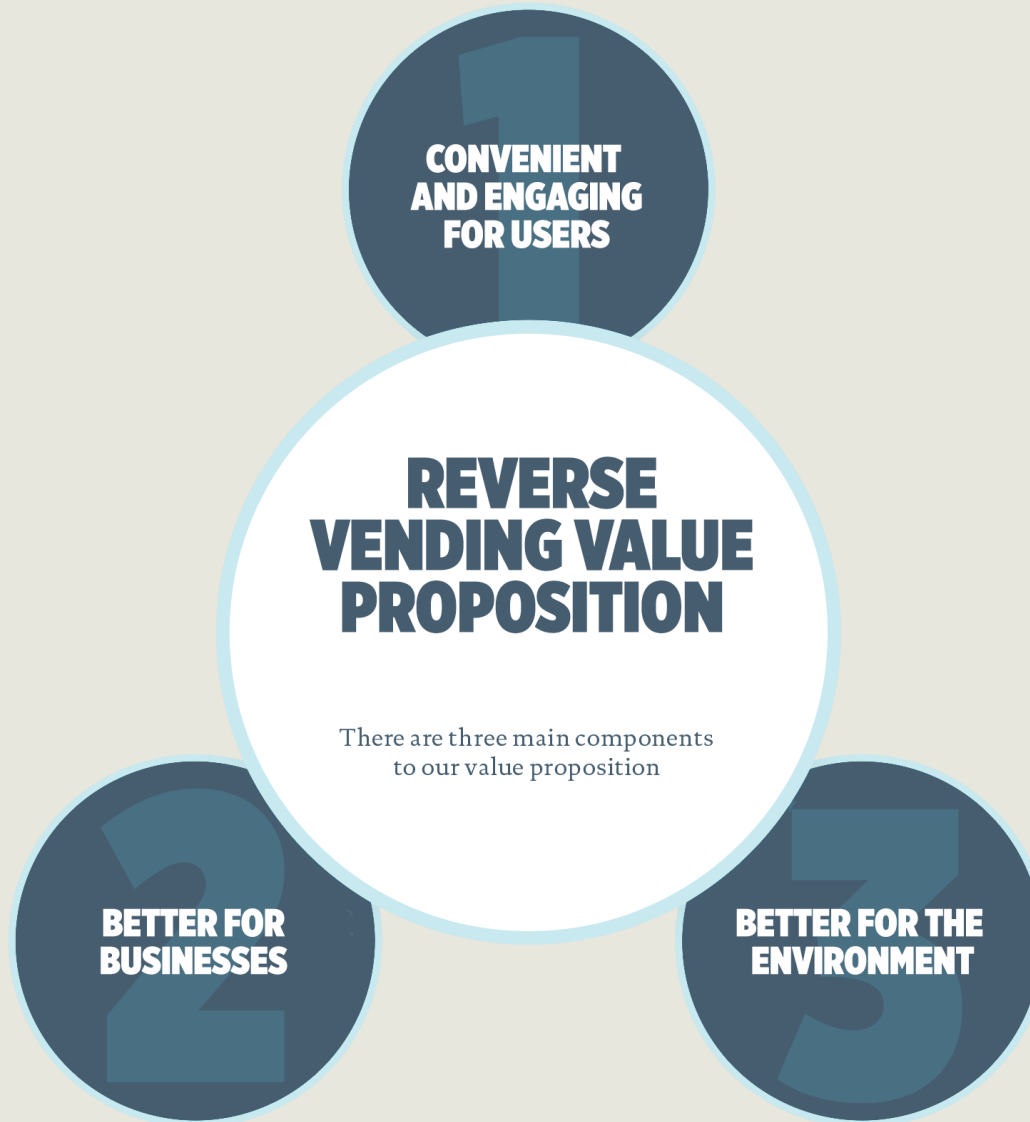
In 2015 the Global beverage packaging mix counted ~1.6 trillion units (3% growth vs. 2014)



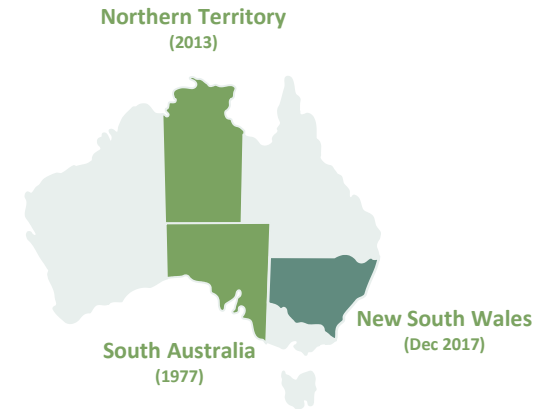
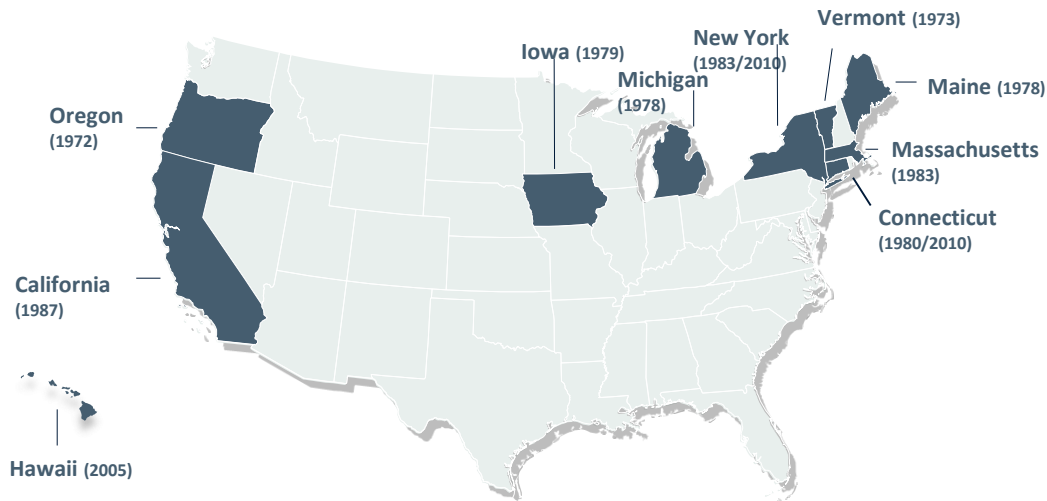
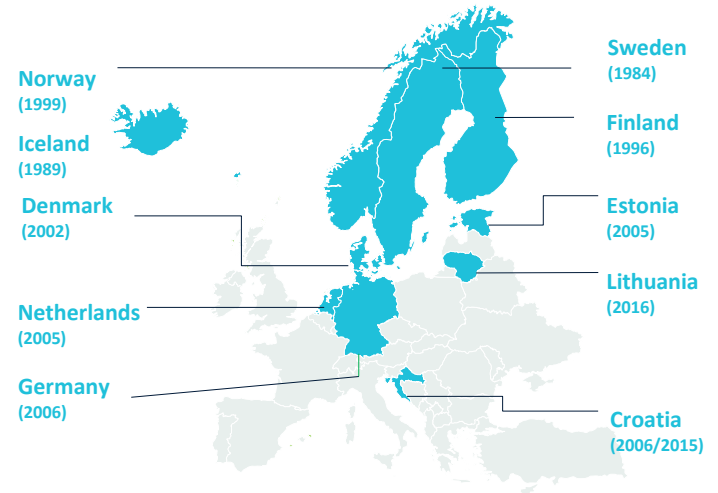
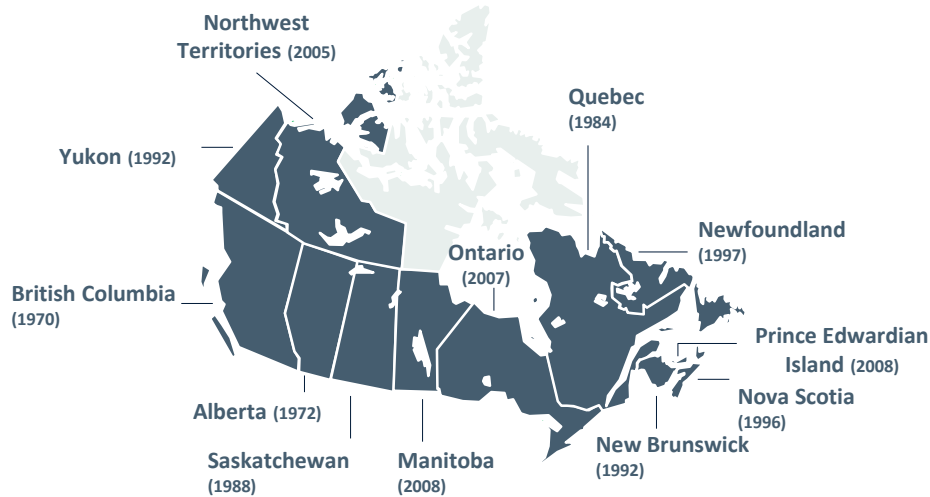
TOMRA collect approximately 35bn containers annually - this represents only 2.2% of all beverage containers

*Cartons, pouches, sachets etc. Source: REXAM Annual report 2015

REVERSE VENDING ADVANTAGES



CURRENT DEPOSIT MARKETS*



* In addition, TOMRA has some activity in markets with refillable deposit systems like: Austria, Belgium, Chile, Czech Republic, France, Hungary, Poland and South Korea

THE USED BEVERAGE CONTAINER RECYCLING VALUE CHAIN

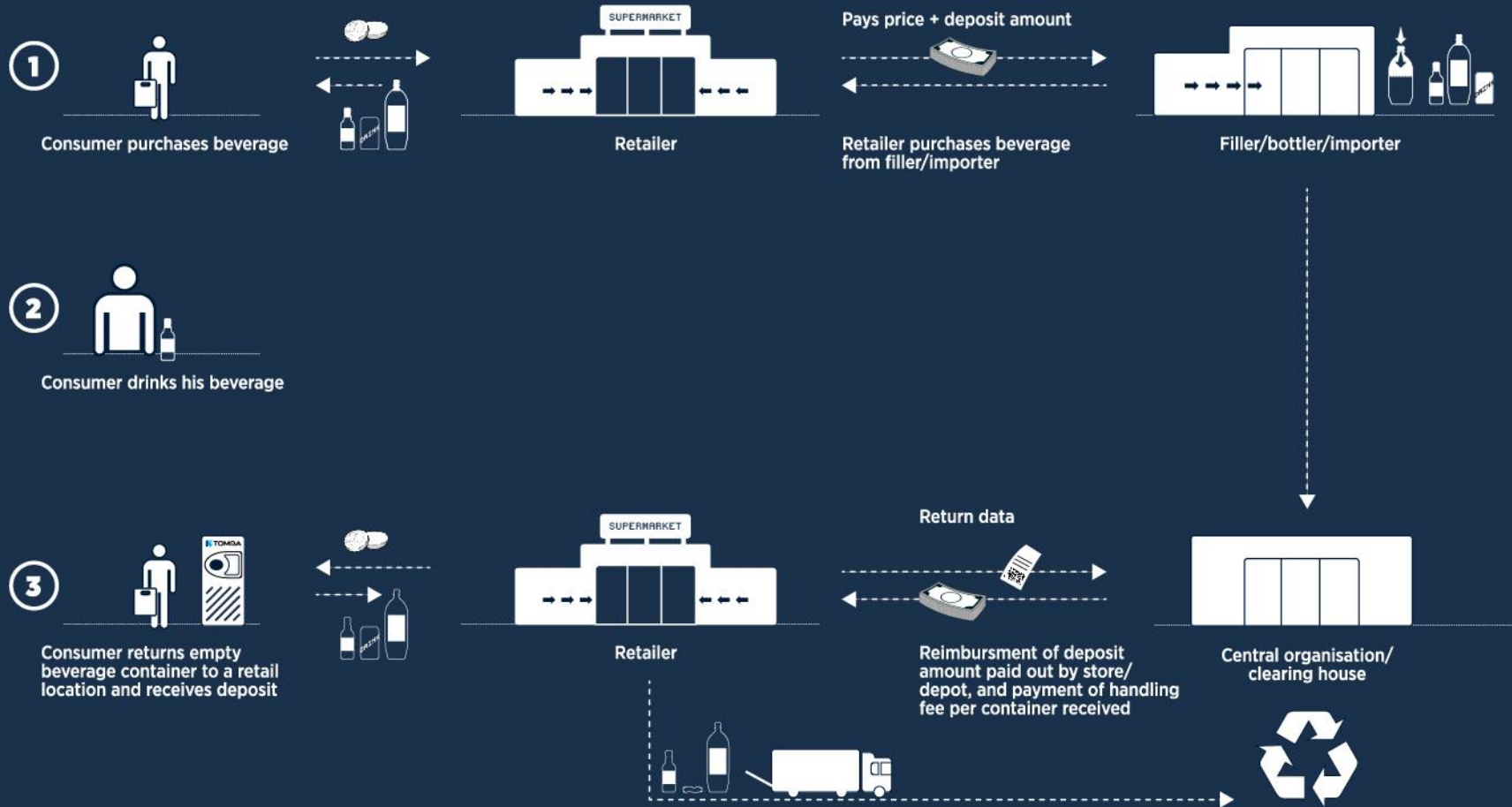
Generic used beverage container (UBC) recycling value chain



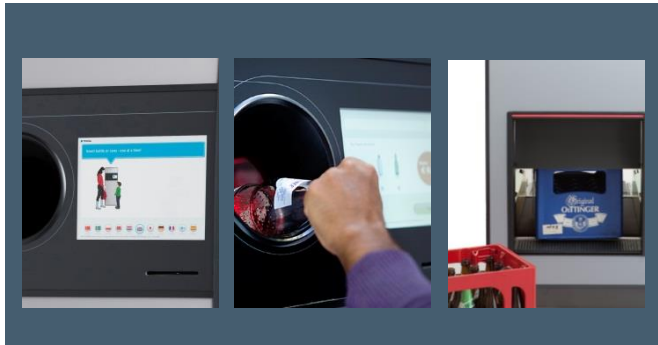
RVM-based UBC recycling value chain



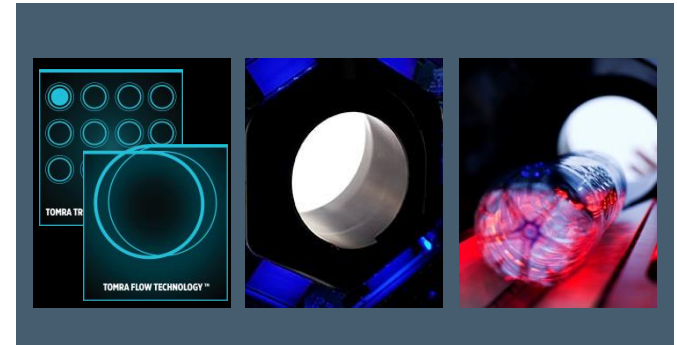
RECYCLING OF BEVERAGE PACKAGING IN A DEPOSIT SYSTEM



ELEMENTS OF A MODERN REVERSE VENDING SYSTEM



User communication



Recognition system



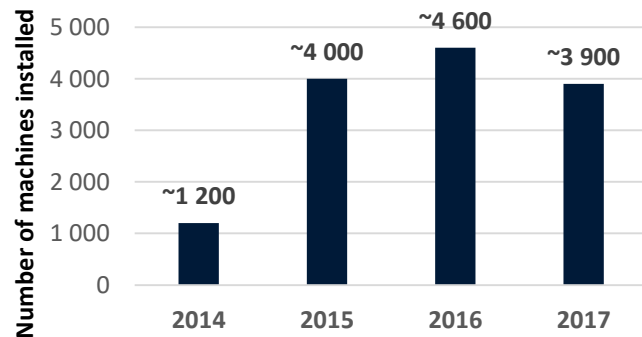
Sorting & processing



Data administration

T-9: THE FIRST OF A NEW GENERATION OF MACHINES

- In fourth quarter 2013, TOMRA presented the first machine of the **new generation** of machines to come
- T-9 features the first **360 degree recognition** system applied in an RVM and a completely new industrial design
- The machine is **faster, cleaner** and **takes all** types of beverage containers
- **The launch was successful**
 - Large number of machines installed in core markets
 - Key product for replacement sale in e.g. Germany



A COMPLETE TRANSFORMATION OF THE PRODUCT PORTFOLIO

2012 Portfolio



2017 Portfolio: Flow technology



WIDE RANGE OF SOLUTIONS SUITABLE FOR DIFFERENT TYPES OF MARKETS AND APPLICATIONS

To set up an **optimal reverse vending system**, a number of factors need to be taken into consideration:



- Weekly container return **volume** and container **mix**



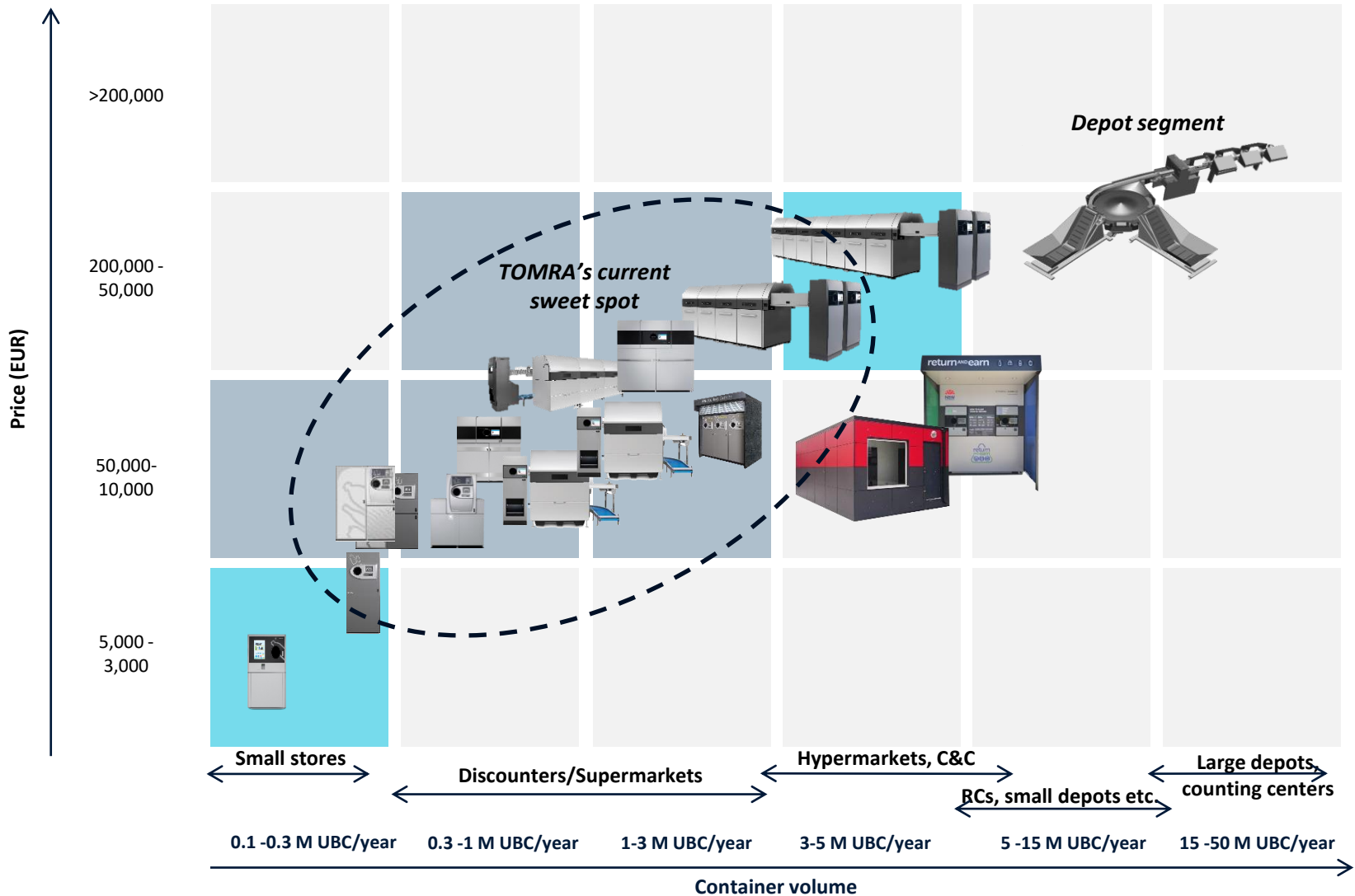
- **Logistics/bin handling**



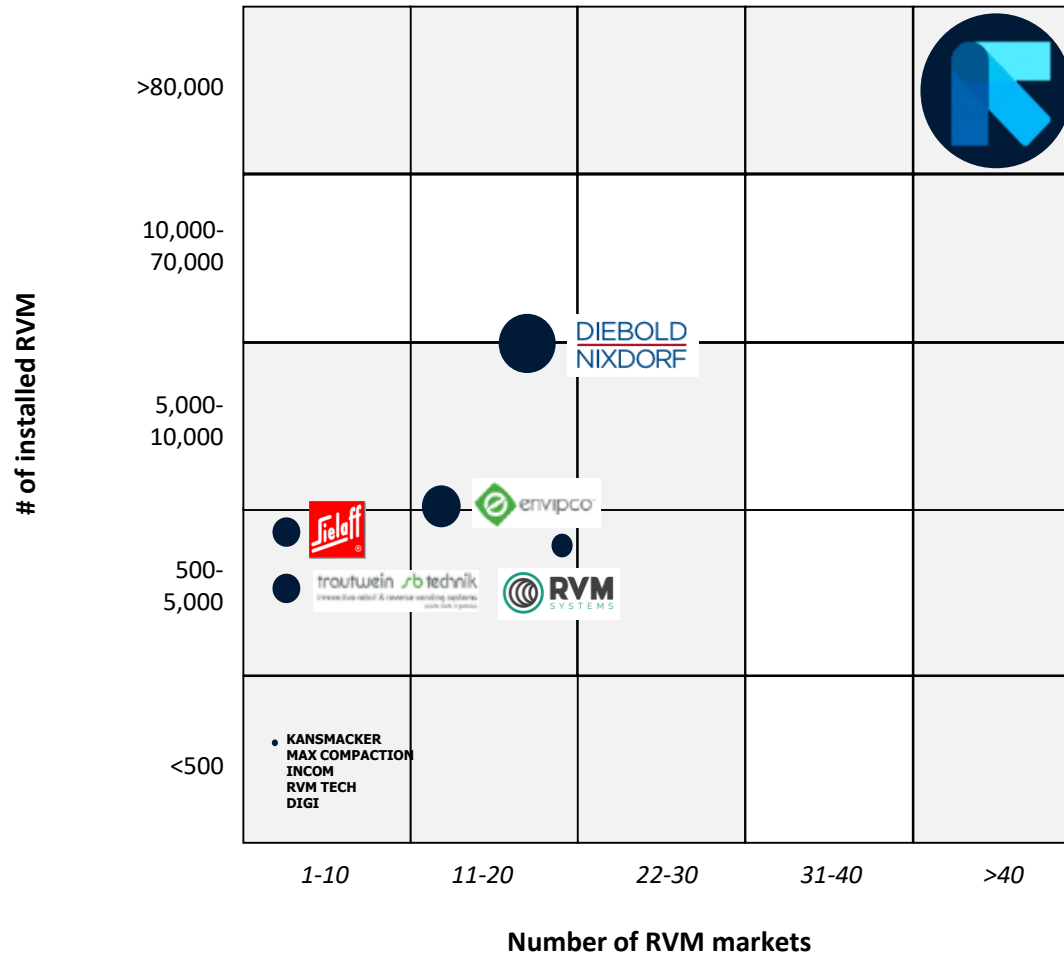
- **Available space**

TOMRA offers a complete solution ranging from the smallest store to the industrial segment

PORTFOLIO OVERVIEW: CONTINUED EXPANSION INTO HIGH VOLUME BULK COLLECTION



COMPETITIVE LANDSCAPE



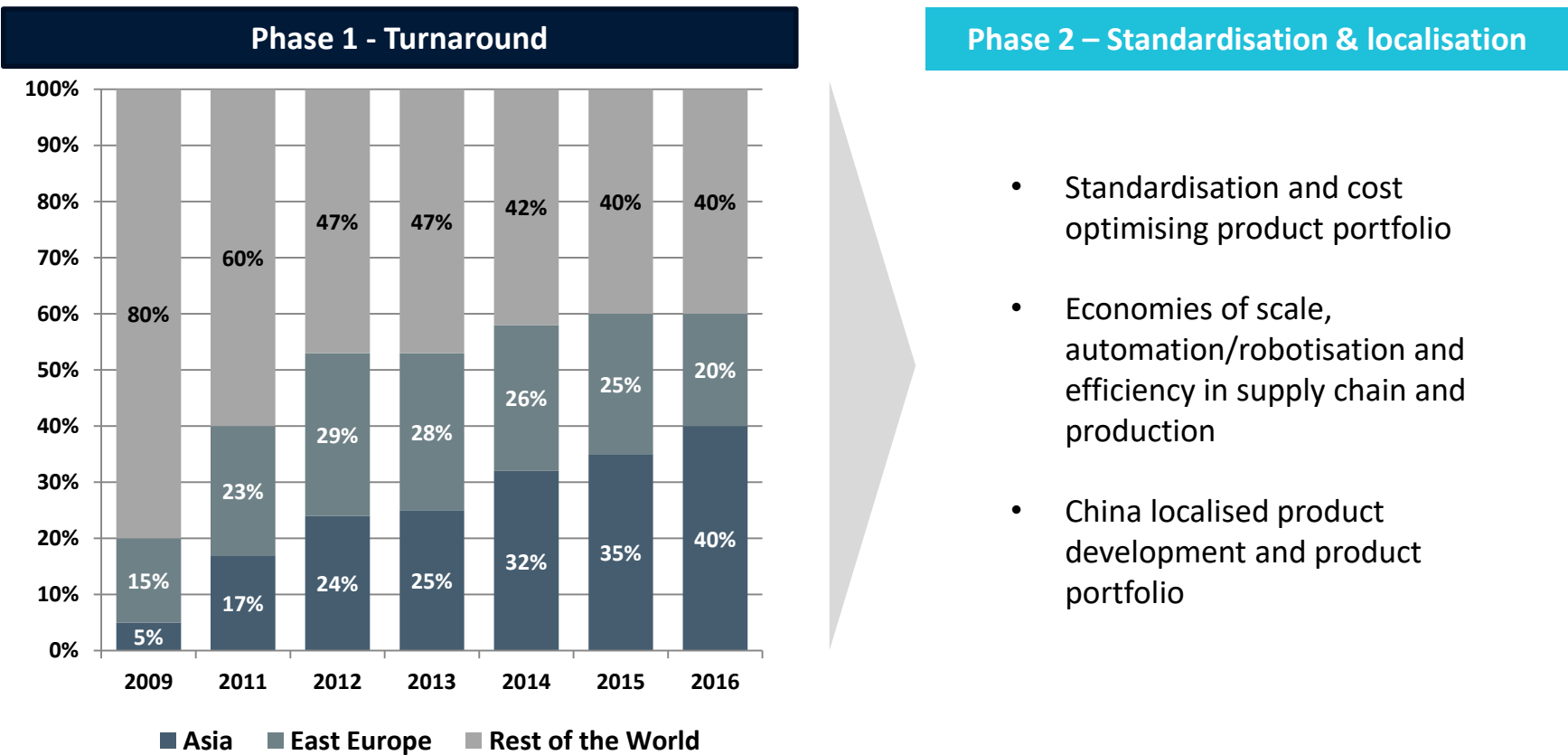
● Annual revenue from RVM sales

Source: TOMRA estimates and analysis

THE SOURCING STRATEGY IS AN ENABLER FOR CONTINUED COST CONTROL

COGS distribution by region (sourcing)

Percent of total

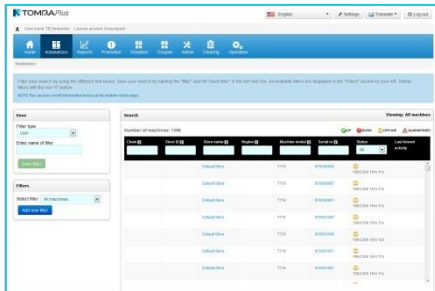
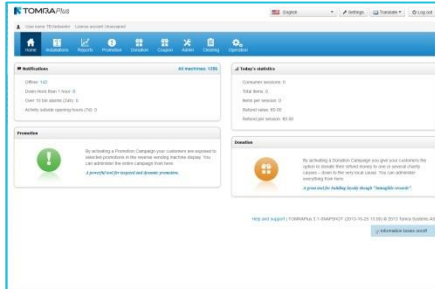


Cost effective product design, optimized supply chain and China localised product development will enable cost control

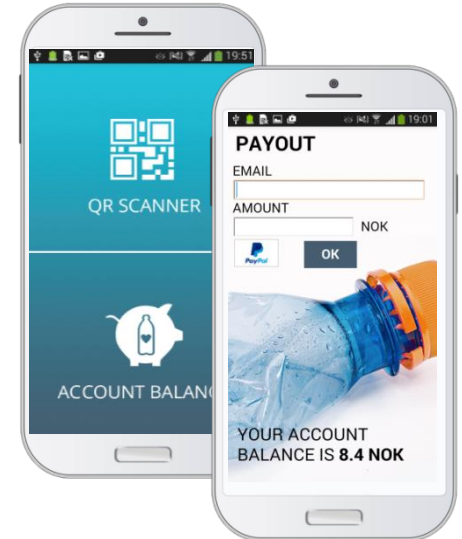
Source: TOMRA analysis

CREATING NEW REVENUE STREAMS FROM SW/IT

TOMRAPlus



TOMRA ReAct/PANTO



IN-STORE MARKETING



Transform reverse vending machines into customer dialogue tools.

RECEIPT CONTROL



Validate and devalue deposit refund receipts in real-time through POS.

RVM INSIGHT & ANALYSIS



Operational metrics, performance monitoring, fleet management, business intelligence and analysis.

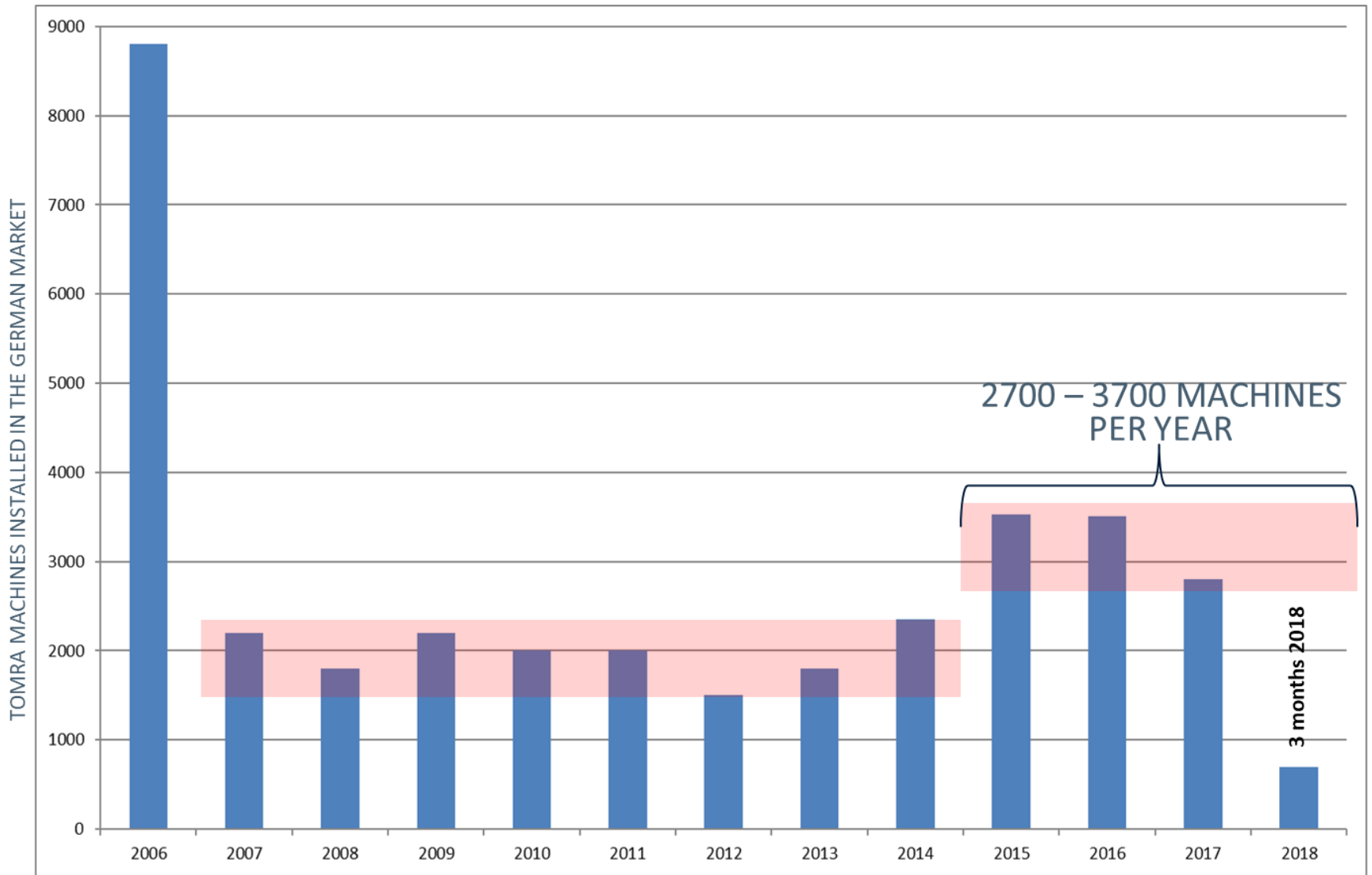
CONSUMER ENGAGEMENT



Innovative solutions for customer loyalty and engagement with customer identification.

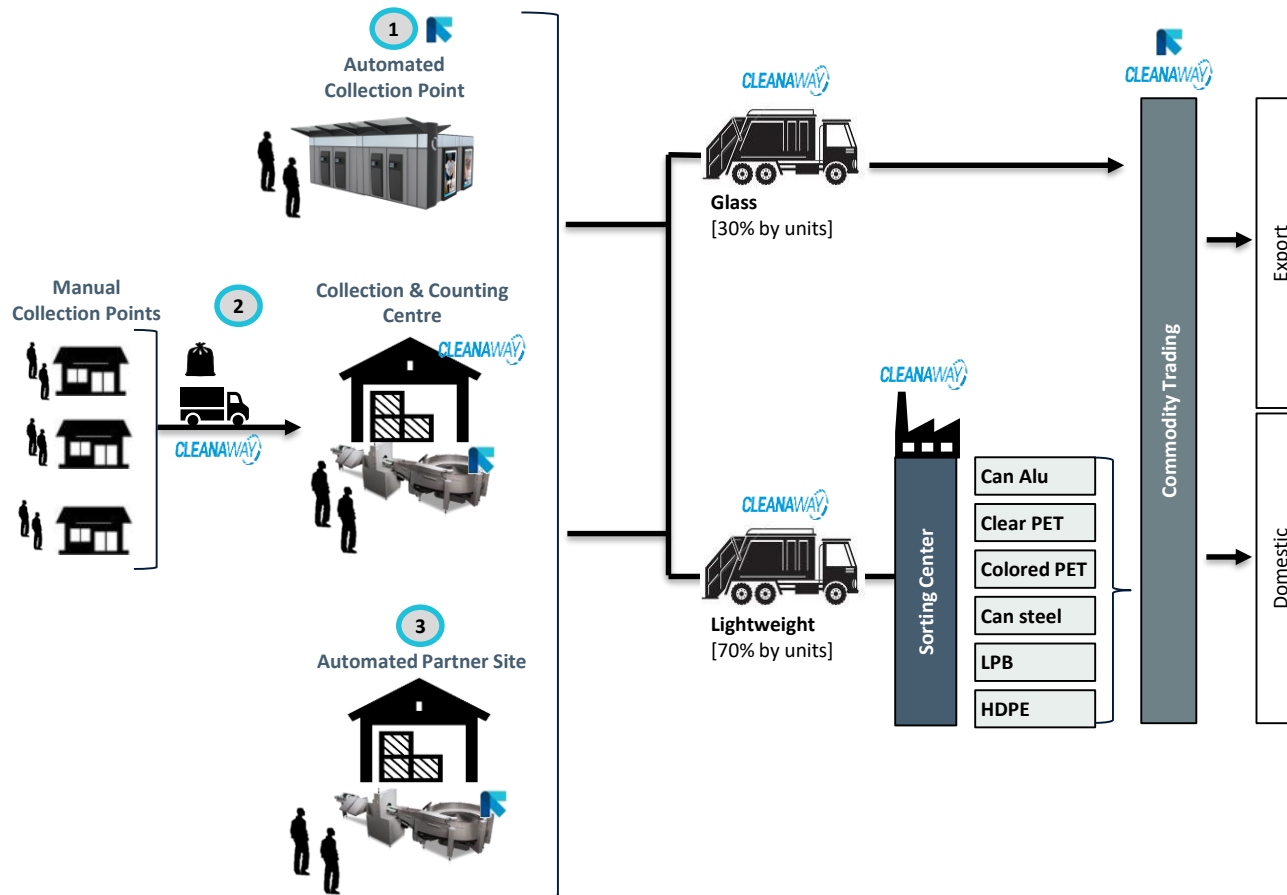
Integrating hardware and software into attractive and engaging combos

GERMANY REPLACEMENT UPDATE



NEW SOUTH WALES CONCEPT ILLUSTRATION: MATERIAL FLOW

The JV will operate the **Collection & Counting Center** as well as the **Commodity Trading** together



Cleanaway brings the experience in logistics, material handling, commodity exposure and trading

POTENTIAL NEW DEPOSIT MARKETS

— Recently approved
— In progress



COLLECTION SOLUTIONS – FINANCIAL DASHBOARD



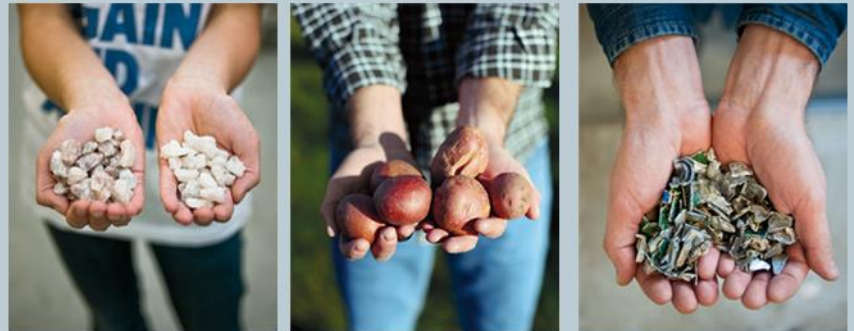
TARGETS 2013 -2018

Yearly growth 4 – 8%

EBITA-margin 18% – 23%

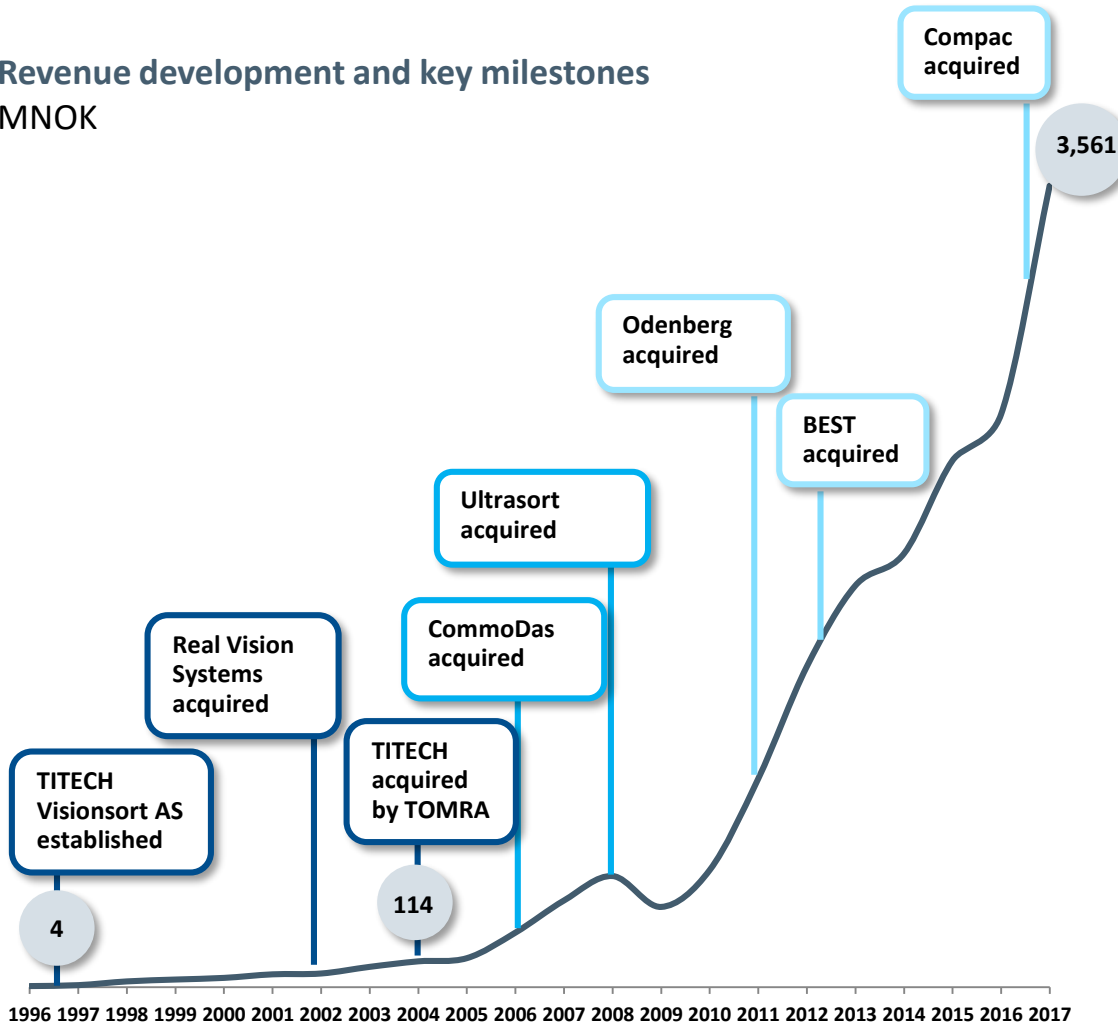
TOMRA Sorting Solutions

**WASTE
INTO
VALUE**



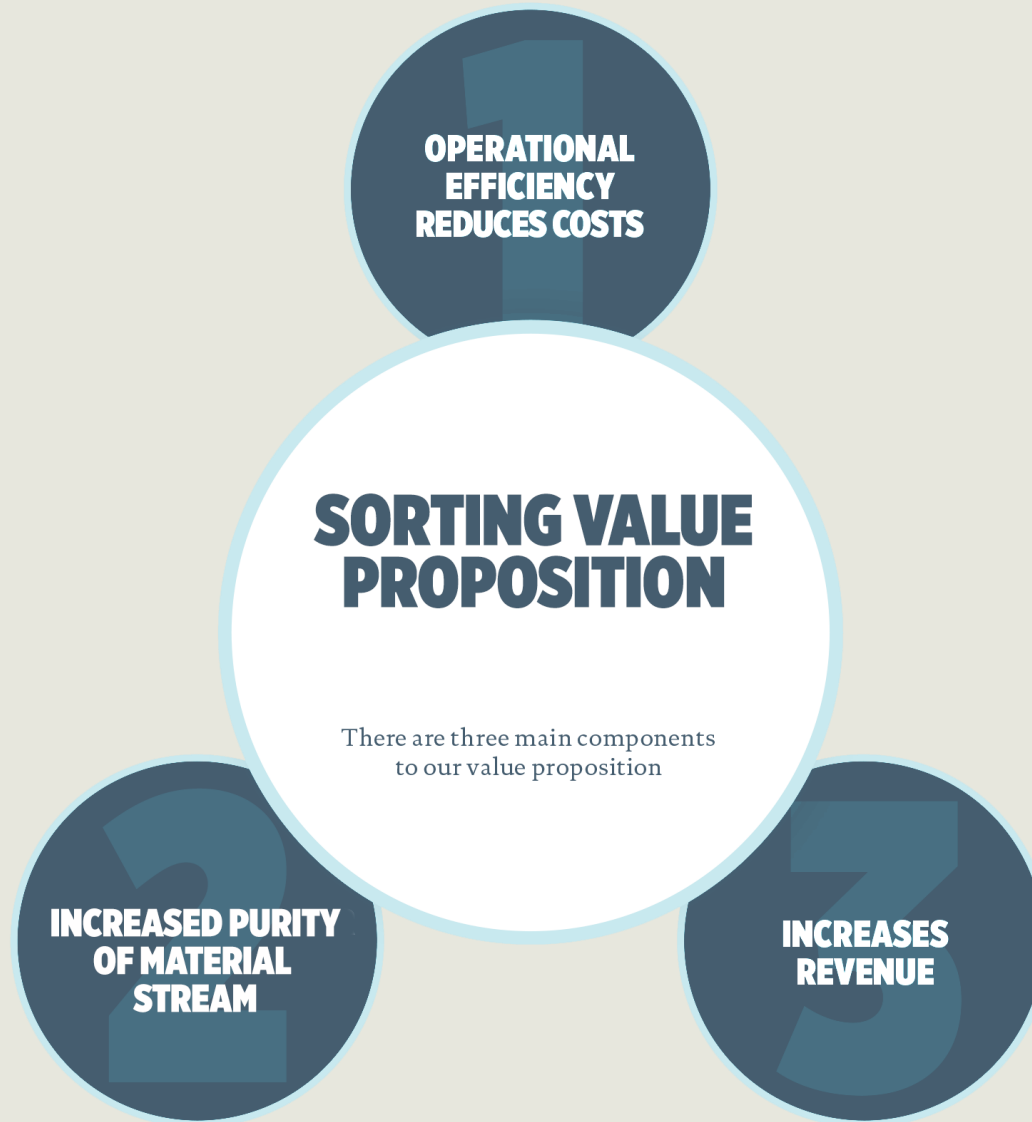
STRONG REVENUE GROWTH SINCE INCEPTION IN 1996

Revenue development and key milestones MNOK



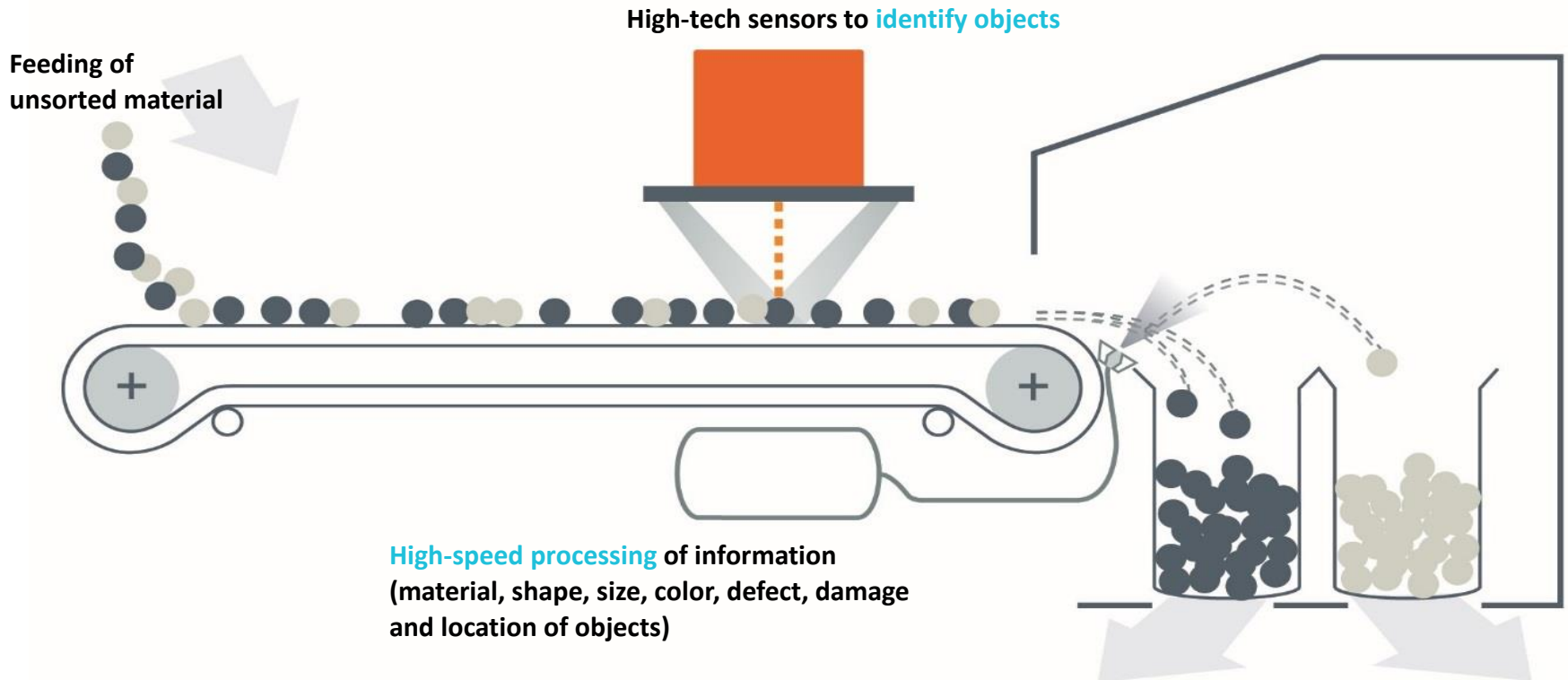
- Total revenue growth (organic plus inorganic) CAGR of ~30% per year from 2004-2017
 - Average annual organic growth for the same period was ~17%
- Technology base and segment/application knowledge expanded both through acquisitions and in-house ventures

SORTING VALUE PROPOSITION

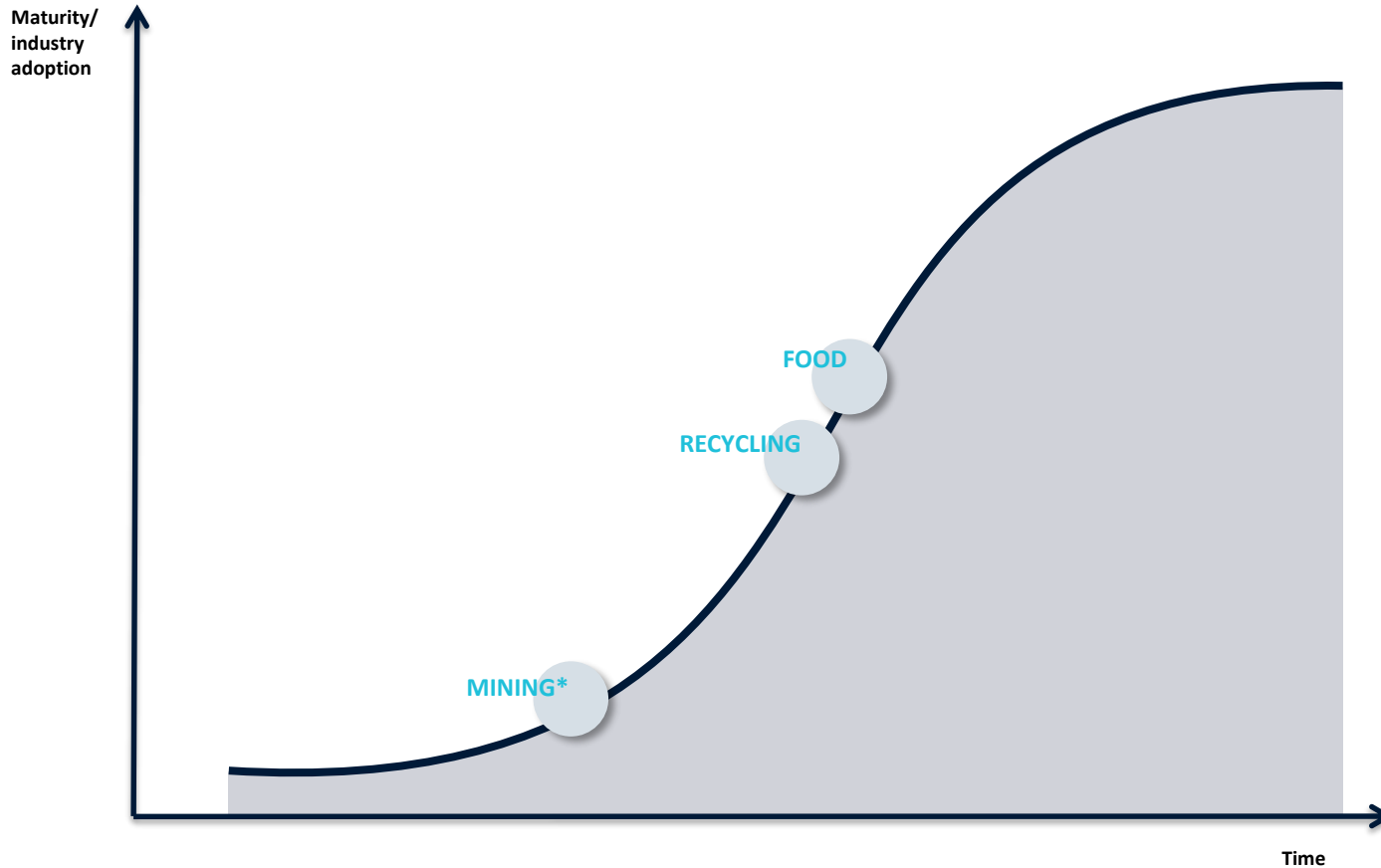


HOW DOES SENSOR BASED SEPARATION WORK?

- High-tech sensors to **identify objects**
- **High speed processing** of information (material, shape, size, color, defect, damage and location of objects)
- **Precise sorting** by air jets or mechanical fingers
- Product **specific equipment design** often including multiple technologies to maximize sorting efficiency

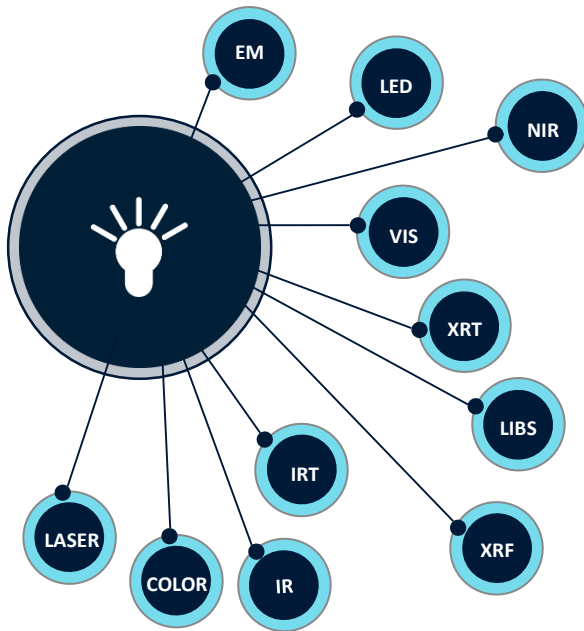













ADOPTION OF SENSOR-BASED SORTING AT DIFFERENT MATURITY LEVELS



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

A COMMON SENSOR BASED TECHNOLOGY PORTFOLIO



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

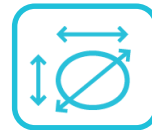
	RECYCLING	MINING	FOOD
ELECTROMAGNETIC SENSOR (EM)	X	X	X
LED SPECTOMETRY (LED)	X	X	X
NEAR-INFRARED SPECTROSCOPY (NIR)	X	X	X
VISIBLE LIGHT SPECTROMETRY (VIS)	X	X	X
X-RAY TRANSMISSION (XRT)	X	X	X
LASER INDUCED BREAKDOWN SPECTROSCOPY (LIBS)	X		
X-RAY FLUORESCENCE (XRF)	X	X	
INFRARED TRANSMISSION (IRT)			X
IR CAMERA (IR)			X
COLOR CAMERA (COLOR)	X	X	X
LASER REFLECTION/FLUORESCENCE (LASER)	X	X	X

OUR PRODUCTS IS SERVING A WIDE RANGE OF DETECTION PARAMETERS



Color

Removal of discolorations in mono- and mixed-color material



Shape & Size

Sort on length, width, diameter, area, broken-piece recognition, ...



Blemishes

Objects with spots or other (small) blemishes are removed



Biometric Characteristics

Sort based on water content and removal of micotoxyn contaminations



Defects

Removal of visible and invisible small and substantial defects



Foreign Material

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



Structure

Removal of soft, molded or rotten food



Fluo

Based on the chlorophyll level present in produce defects are removed



Density

Detection of density differences



X-RAY

Analysis of objects based on their density and shape



Damage

Broken, split and damaged objects are detected and removed



Detox

Removal of produce contaminated with aflatoxin

 Visible

 Invisible

 Both

EXAMPLES OF CROSS UTILIZATION OF OUR PORTFOLIO 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

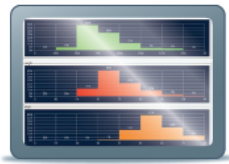
Nimbuss BSI

- An NIR sensor has been added to the NIMBUS machine platform
- The new machine increases our competitiveness in the nuts segment

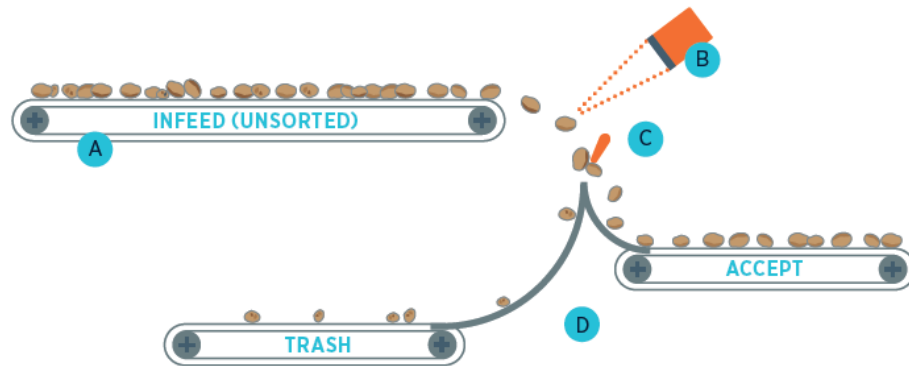
Several more projects on combining technologies into new products in the pipeline

SORTING UNWASHED POTATOES: WORKING PRINCIPLE

The product is spread uniformly onto the infeed belt and will be scanned by cameras in the different inspection zones. A few milliseconds later one type of material will be rejected by intelligent finger ejectors, positioned at the end of the conveyor belt, while the good products continue their way along the sorting line.



- A** Infeed (unsorted)
- B** Full width NIR and Color Vision sensors
- C** Intelligent finger ejectors
- D** Gentle handling conveyer chutes (optional)



DEFECTS & BLEMISHES



Dirt Clod



Rot



Stones



Golf Ball

REPORTING

Reports can be generated with the following data:

Product Data

- + Average Length & Width mm(ins)
- + Length and Width distribution (size bins) mm(ins)
- + Total potato count #
- + Total reject count #
- + Stone, soil clod, rot, other %

Sorter Operation Data

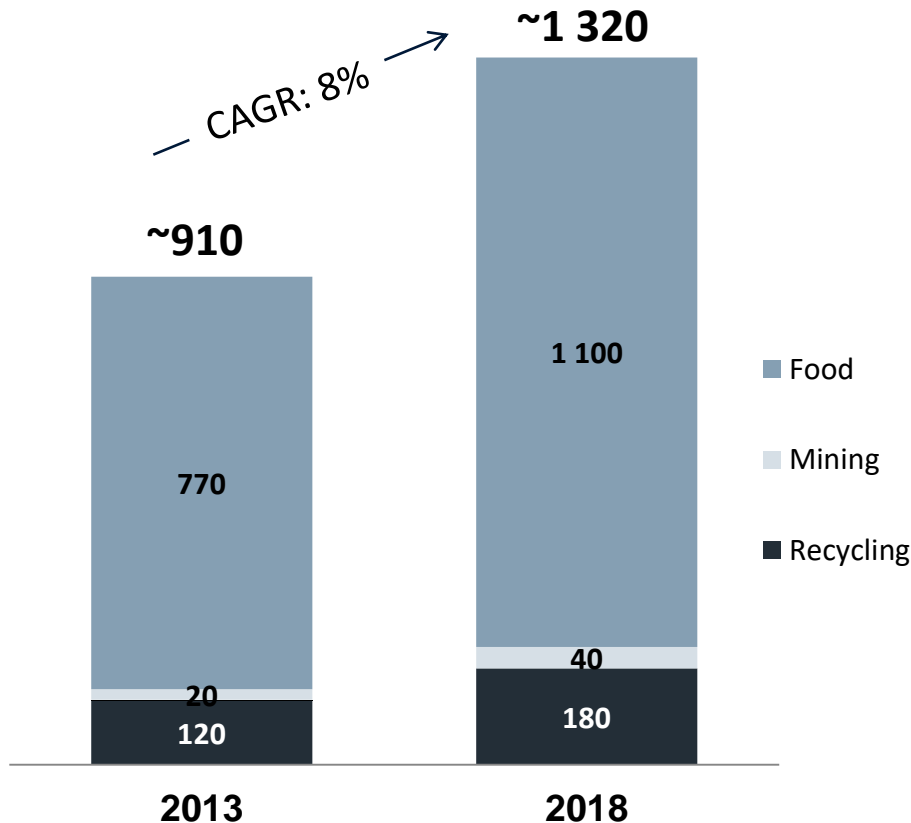
- + Belt speed, average belt fill %
- + Object counts/second
- + Program running

- The Field Potato Sorter is ODENBERG's first venture into the **unwashed potato market**
- The machine uses unique near **infra-red technology** to remove soil clods, stones and rotten potatoes, in addition to the foreign material commonly found in fields such as golf balls, plastics, wood etc
- The FPS sorter should be used after a soil remover and is designed to fit existing grading equipment or be used as a standalone unit and can operate on harvested potato crop before and after storage
- The system also provides online potato size data for logging, plus sorter operating information

MARKET SIZE AND POTENTIAL

Total annual market size

EUR million



Market growth

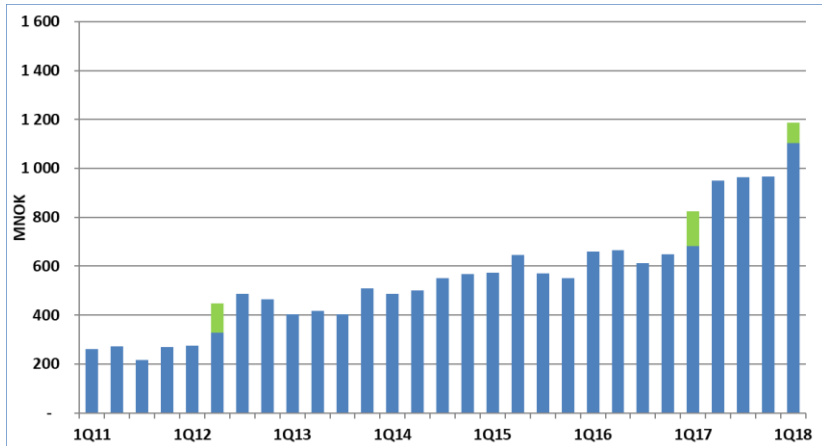
- Market expected to grow at rate of around 7-9% per year
- A large part of growth from unlocking of dormant potential – only possible by developing new applications and technologies
- Some growth in “old world”, but faster growth in “new world”

Source: TOMRA estimates and analysis

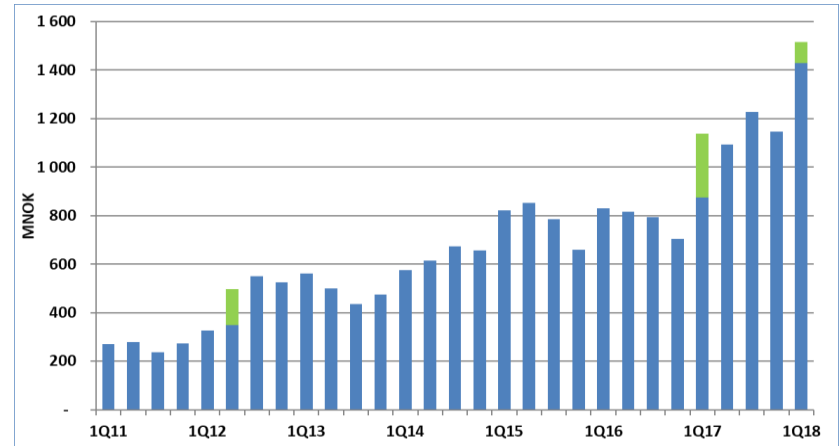
* Market size for food includes peeling, meat/process analytics, virgin materials and tobacco.

BACKLOG DEVELOPMENT AND MOMENTUM

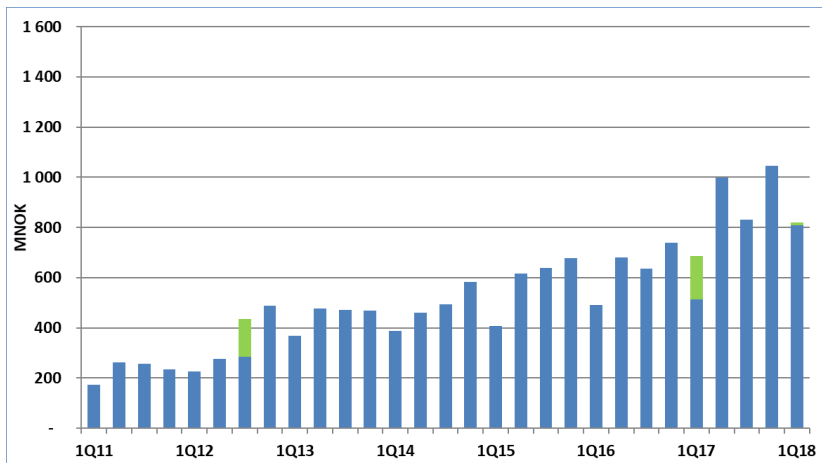
ORDER INTAKE



ORDER BACKLOG



REVENUES



- Tomra Sorting Solutions (TSS):
 - Delivered all time high order intake of 1,188 MNOK in the quarter, compared to 826 MNOK same quarter last year
 - Revenues came in at 820 MNOK (up from 687 MNOK in 1Q17)
 - With an all time high order intake, and somewhat limited number of orders taken to P/L, the quarter ends with an all time high order backlog of 1,515 MNOK
- Estimated backlog conversion ratio in 2Q18: 70%*

■ Organic ■ Inorganic

FINANCIAL DASHBOARD – SORTING SOLUTIONS

Industry
Growth



Recurring
revenue



Profitability
(ROCE)*



Food

Recycling

Mining

Market share



Geographical
diversity



Cyclicality



TARGETS 2013 -2018

Yearly organic growth 10-15%

Geographical expansion

EBITA-margin 18-23%

(i) In markets served. Total food sorting (incl. rice and lane sorting*) 12-15%



YIELD INTO USAGE

GROWTH IN GLOBAL FOOD DEMAND WILL SPUR INVESTMENTS IN AUTOMATION



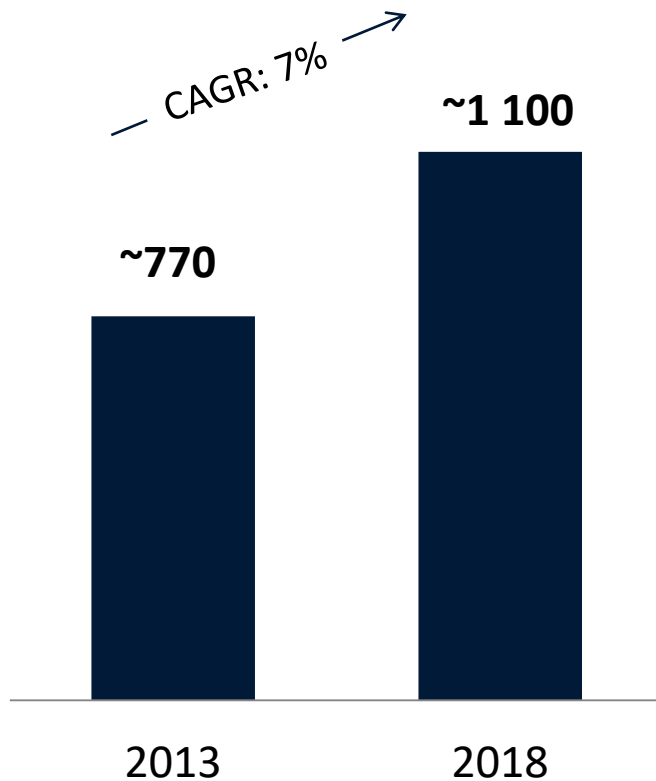
Drivers and trends

- **Increasing food consumption in emerging markets**, more mid-class consumers
- Industry focus on **increased productivity** and **reducing costs** through automation & quality control
- **Higher quality demands** from the consumers
- **Stricter regulations** from governments concerning **food safety , health & traceability**
- Shift towards packaged **convenience food and fast food**
- **Risk of claims & recalls**
 - Social media snowball effect (Twitter, Facebook, etc.)
- Globalization of brands and sourcing set up
- Scarcity & expense of (seasonal) **manual labor**
- Consolidation in the retail and processing sectors
- Adoption of technology in emerging markets

MARKET SIZE FOOD SORTING*

Total annual market size

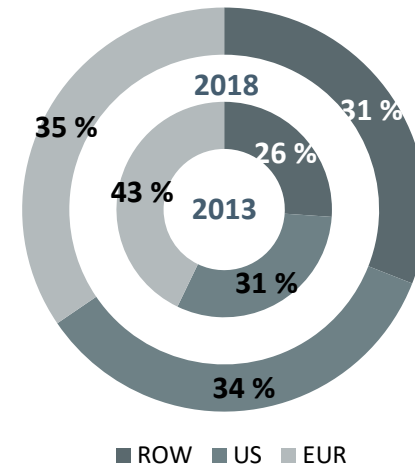
EUR million



Market growth

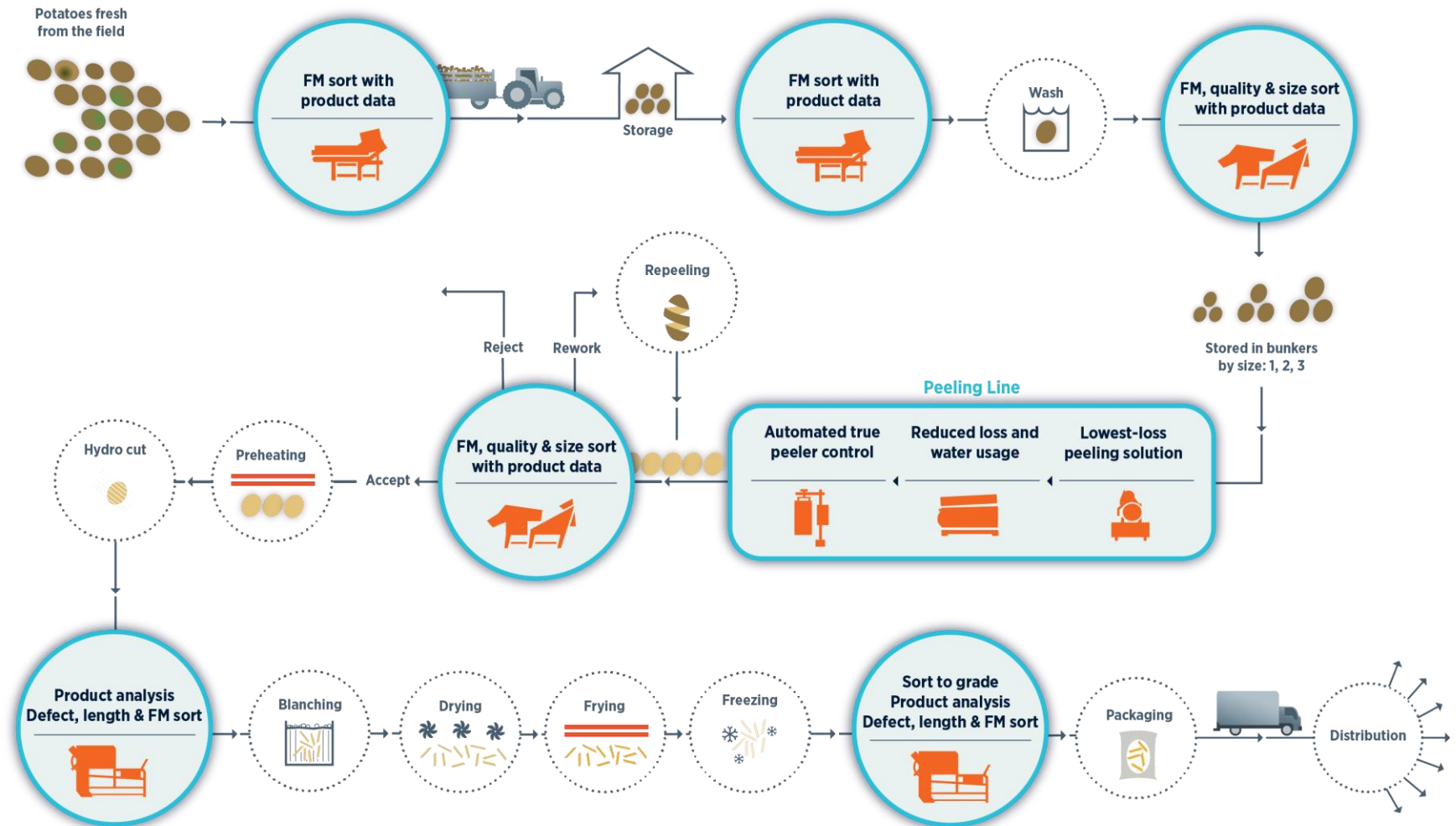
- Total market for food sorting growing around 6-8% per year
- Approximately a third of total growth is dormant potential
 - only unlocked by development of new applications and technologies
- New world share grows but the two old world champions (Europe & Americas) remain strong

Expected development in geographical revenue contribution



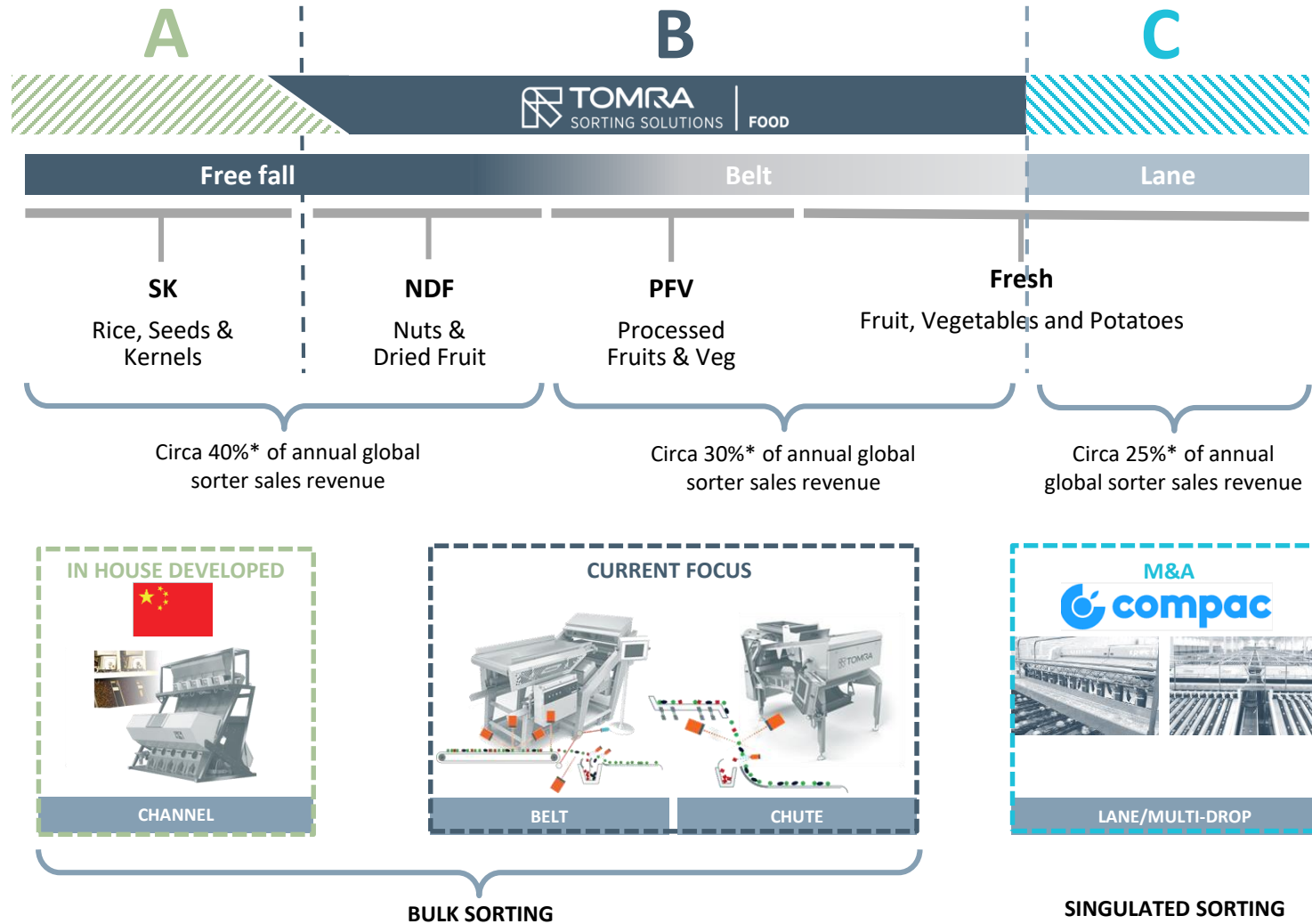
* Market sizes shown include peeling, meat/process analytics, virgin materials and tobacco.

WE ARE UNIQUELY POSITIONED TO SERVE THE ENTIRE VALUE CHAIN WITH OUR PRODUCT PLATFORM

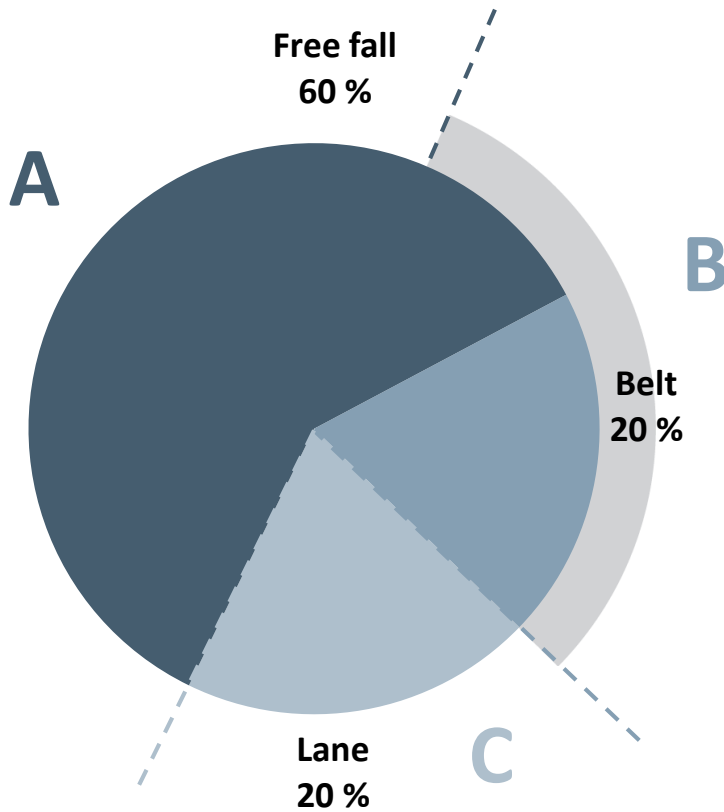


Sales of potato-related products account for about 25% of the sales in food bulk sorting

TOMRA HAS ESTABLISHED THE BROADEST FOOTPRINT WITHIN FOOD SORTING



THREE WAYS OF SORTING WITHIN THE FOOD SEGMENT



Free fall (Channel / Chute)	
Application	Seeds, rice, grains
Companies	Buhler, Key, Best , Satake, Daewon, Hefei, Orange
Sensor tech.	Camera (simple)

Belt	
Application	Prepared /preserved veg. and fruit
Companies	Best , Key, Odenberg , Raytec
Sensor tech.	Several (complex)

Lane	
Application	Fresh produce
Companies	MAF, Aweta, Greefa, Compac
Sensor tech.	Several (medium)

Note: Piechart showing estimated total revenue within the food sorting segment

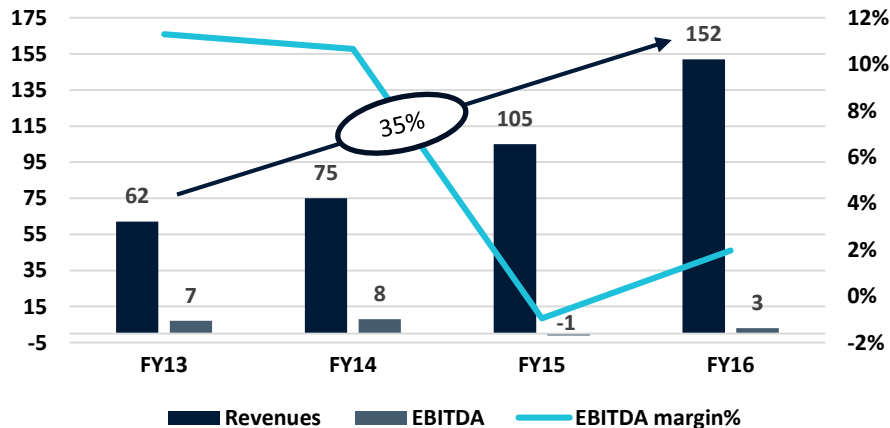
Introduction

- Compac is a New Zealand-based provider of post-harvest solutions and services to the global fresh produce industry
- Founded in 1984 by Hamish Kennedy with HQ in Auckland NZ and has around 500 employees
- Compac has a leading position within sorting of apples, kiwifruit, cherries, citrus, stonefruit, avocados and tomatoes
- The company designs, manufactures, sells and services packhouse automation systems that sort produce based on their weight, size, shape, colour, surface blemishes and internal quality
- Fruit handling equipment singulates fruits into lanes, in-feeds (wash and wax), inspects, sorts/grades and partly packages

Spectrim: Compac's latest sorter

- The sorter was launched in 2015
- Represents an unmatched capability of external defect detection and an advanced 3D imaging and modelling
- For sorting of apples, citrus, stone fruit and kiwi fruit
- Uniform lighting that minimizes shadows and reflections
- Sensors and cameras generate up to 500 images of every piece of produce, creating an accurate 3D model of each fruit
- Three different wavelengths that can be configured to target specific defects: color, blemishes, bruising

Key Financials (NZDm)¹



The natural add-on to Compac

- TOMRA acquired BBC Technologies 26th February 2018
- BBC Technologies is headquartered in Hamilton, New Zealand and is a leading provider of precision grading systems for blueberries and other small fruits
- 145 employees across locations in New Zealand, Chile, Europe and USA
- The company complements TOMRA's own fruit inspection and grading technology portfolio. It also adds an innovative unique quality tracking system: www.freshtracker.com
- The majority of BBC Technologies sales have been in the blueberry segment, but the company also offers solutions for cherries, cherry tomatoes and other small soft fruits
- BBC is a market leader with the new platform (KATO)
- Berries are a very attractive segment, as they represent high value, but are very delicate to handle

Deal details:

- Purchase price of 363 MNOK / 64 MNZD, free of cash and interest-bearing debt.
- Closing 1 March 2018
- Acquisition settled in cash, financed through existing drawing rights
- FY17: 36 MNZD in revenues / 8 MNZD EBIT

Confirming our leading position in Food

Attractive
Market

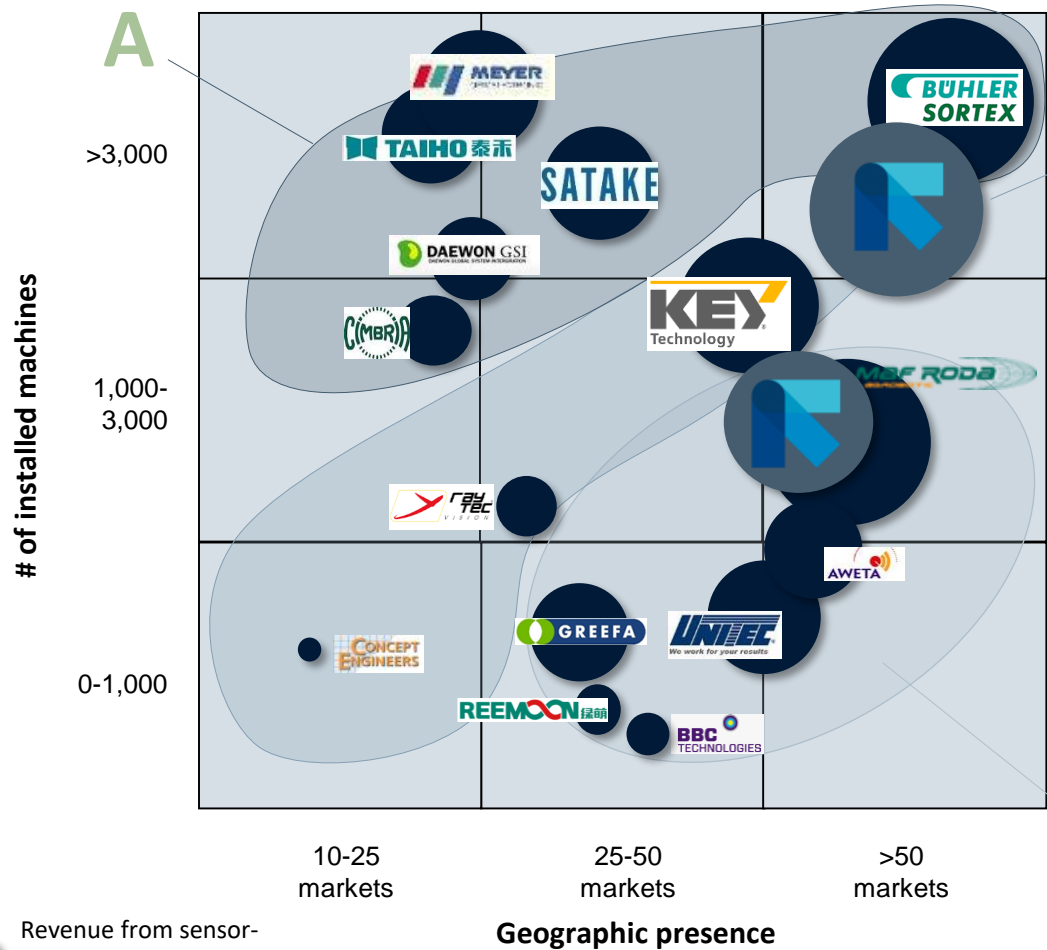
Complimentary
geographical
footprint

Application fit
expansion

The BBC Technology in Operation



FOOD COMPETITIVE LANDSCAPE



B

TOMRA competitive positioning

- Size (revenues)
- Widest range of applications (150+)
- Broadest technology base
- Geographic reach (~80 countries)
- Market share in targeted segments
- Bulk Sorting market share*: 25%
- Lane Sorting market share*: 25%

C

Source: TOMRA estimates and analysis *Optical Sorting

OUR BROAD COVERAGE AND TECHNOLOGY BASE IS SETTING US APART IN BULK SORTING

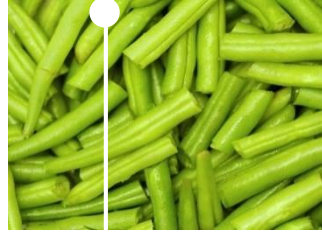
POTATOES



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



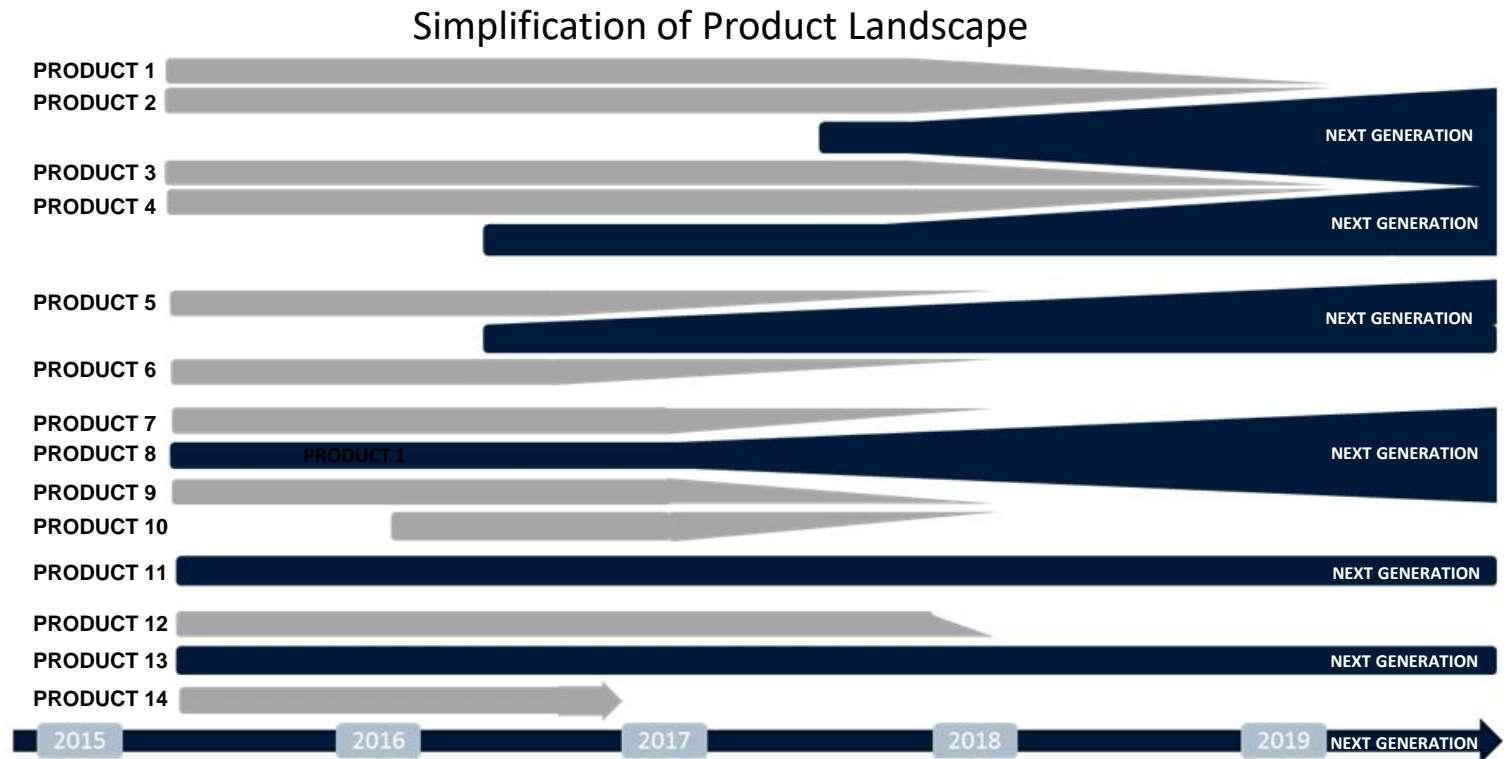
LASER, CAMERA

OUR FOOD CUSTOMERS



REDUCING COMPLEXITY: MERGING PLATFORMS FOR OUR NEXT GENERATION MACHINES

High-Level Product Roadmap FOOD (Illustrative)



14 platforms today will be reduced to 6 platforms over the next five years



**ONCE
INTO 
AGAIN
AND AGAIN**

GLOBAL DRIVERS FOR THE RECYCLING SEGMENT



Drivers and trends

- **Consumption and industry production level increase**
- Favorable changes in **regulatory framework** (DSD, WEEE, ELV, etc)
- **Commodity price levels and fluctuation**
- **Access to financing**
- **Demand** for recycled **raw materials**
- Increasing **labor costs** in emerging world drive adoption of automatic sorting technologies
- Some countries in Western Europe partly saturated
- Pre-sorted (plastics) still door opener in new markets
- Municipal Solid Waste (MSW) important in emerging countries
- More aggressive pricing from competitors affect market

ONLY A FRACTION OF THE WASTE VOLUME IS HANDLED BY SENSOR BASED SORTING

Sensor based sorting is competing with different technologies

Landfill



Incineration



Separate Collection



Scavengers







Hand Sorting



LEGISLATIVE FRAMEWORK - PROMOTING RECYCLING



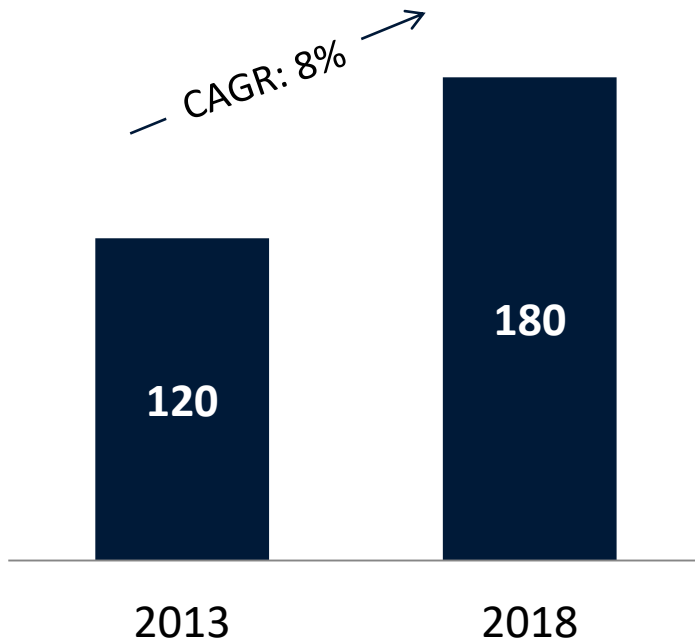
	Description	Target	
Packaging Directive	<ul style="list-style-type: none"> Rules on the production, marketing, use, recycling and refilling of containers of liquids for human consumption and on the disposal of used containers 2014 review included new targets 2015 revision includes lightweight plastic carrier bags 	<ul style="list-style-type: none"> Recycling and reuse of municipal waste: 70% by 2030 Recycling and reuse of packaging waste: 80% by 2030 Phasing out landfilling by 2025 of recyclable waste in non hazardous landfills 	
Waste Electrical and Electronic Equipment (WEEE) Directive	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> The overall aim is for the EU to recycle at least 85% of electrical and electronics waste equipment by 2016 	
Landfill Directive	<ul style="list-style-type: none"> The objective of the Directive is to prevent or reduce as far as possible negative effects on the environment In particular: surface water, groundwater, soil, air, and on human health from the landfilling of waste by introducing stringent technical requirements for waste and landfills. 	<ul style="list-style-type: none"> Amount of biodegradable municipal waste reduced to 50% in 2009 and to 35% in 2016 (compared to 1995 levels) 	
End of Life Vehicle (ELV) Directive	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Reuse and recycling: 85% Reuse and recovery: 95% 	

Source: www.ec.europa.eu, www.Eurometrec.org, wastemanagementworld.com,

MARKET SIZE RECYCLING

Total annual market size

EUR million



Market growth

- Market expected to grow at around 7-9% per year, lower than previous expectations due to economic slowdown
- Demand in old world flattening, while new markets expected to drive growth
- Existing segments will serve as a base, whilst the majority of growth will come from:
 - New geographies
 - New applications
 - New products

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

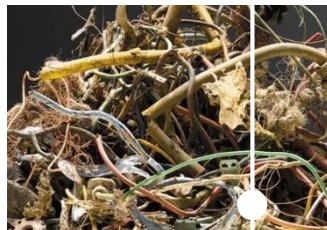
UPGRADING PLASTICS



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

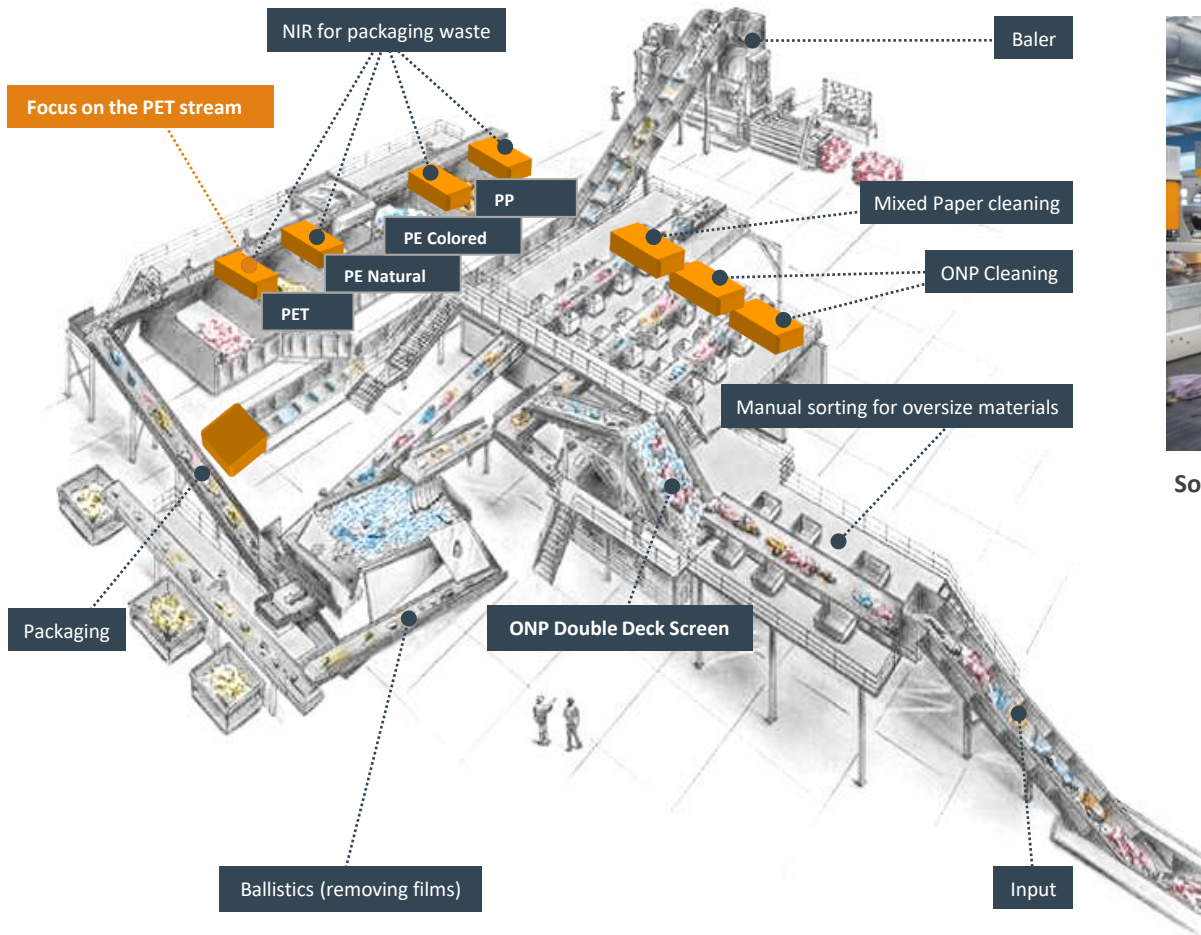
PAPER



Deinking, cardboard, carton

NIR, VIS, EM

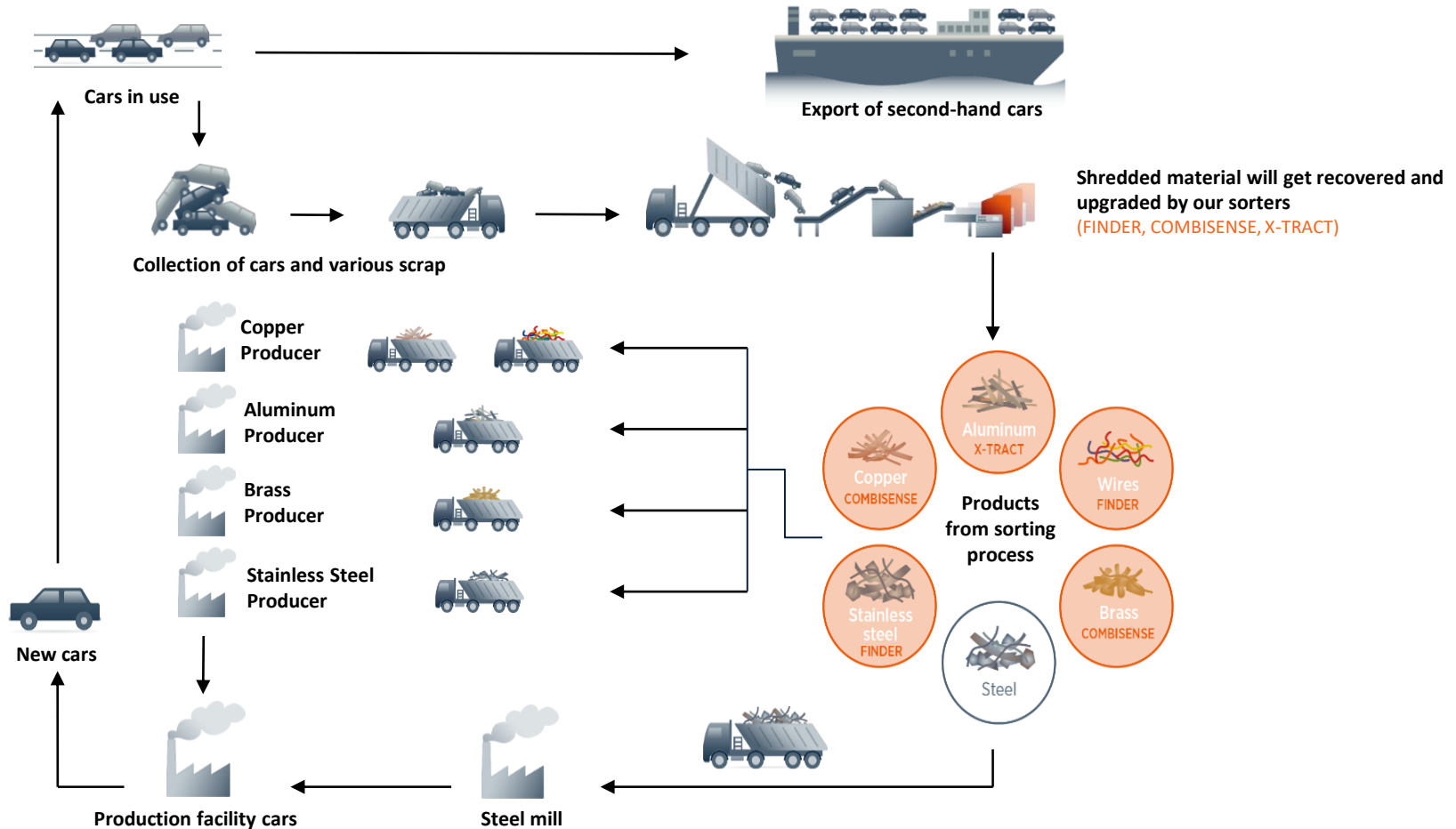
AUTOMATED WITH TOMRA SORTING UNITS



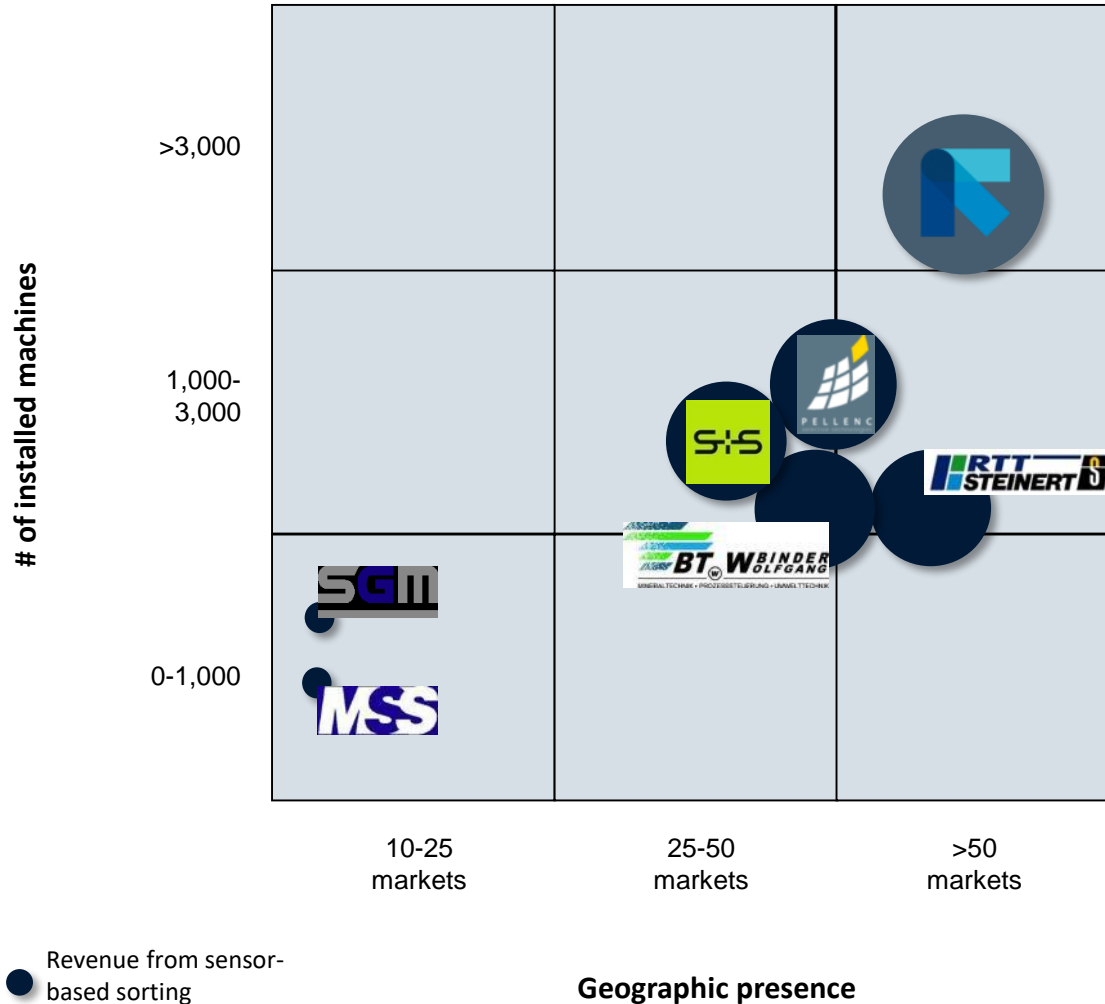
Sorting of Municipal Solid Waste, Cyprus

SENSOR-BASED TECHNOLOGY CREATES VALUE IN VARIOUS PARTS OF A RECYCLING PROCESS

Life cycle of Steel from End-of-life vehicles



RECYCLING COMPETITIVE LANDSCAPE



TOMRA competitive positioning

- Largest installed base
- Highest revenues
- Broadest technology platform
- Highest number of applications and markets served
- Leading brand
- **Market share: 55-65%**

Source: TOMRA estimates and analysis



SOURCE INTO RESOURCE

GLOBAL DRIVERS FOR THE MINING SEGMENT

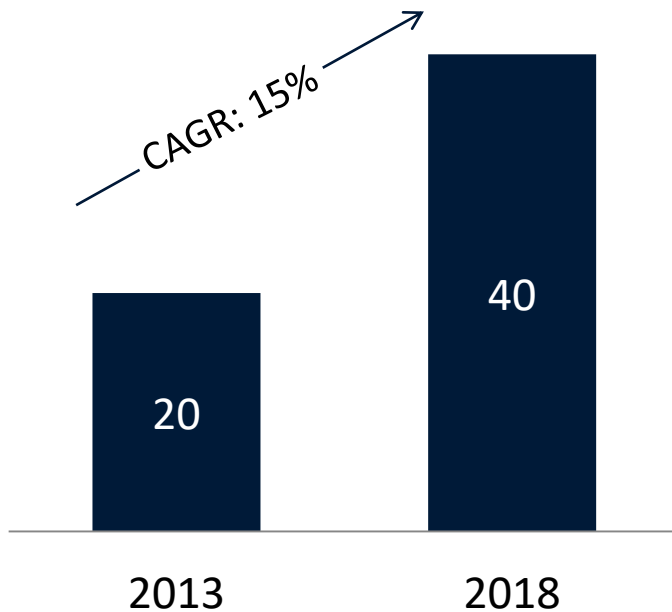


- **Energy costs** and **water stress** are major drivers
- **Demand of all commodities** is expected to grow with increased population and urbanization in the drivers seat
- **Increasing labor costs** in emerging world drive adoption of automatic sorting technologies
- **Mining companies capex** impact the investment sentiment
- Sensor based sorting is considered to be a future solution
 - Hardest competition comes from alternative well proven technologies

MARKET SIZE MINING

Total annual market size

EUR million



Market growth

- Capex has declined recent years
- Sensor based machines sales expected to grow at around 15% per year
 - Growth is however conditional on new applications and technologies being developed
- Sensor based sorting is still a technology to be accepted and growth in this niche has been limited in recent years

MINING: APPLICATIONS AND SENSOR TECHNOLOGY

INDUSTRIAL MINERALS



Calcite, quartz, feldspar, magnesite, talc, dolomite, limestone, rock salt, phosphates, potash

COLOR, XRT, NIR

DIAMONDS



Diamonds, emeralds, rubies, sapphires, tanzanite

COLOR, XRT, NIR

FERROUS METALS



Iron, manganese, chromite

XRT, EM, NIR

NON-FERROUS METALS



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

XRT, COLOR, EM, NIR

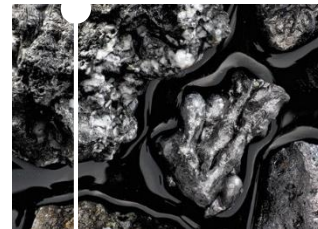
FUEL



Coal, oil shale

XRT

SLAG

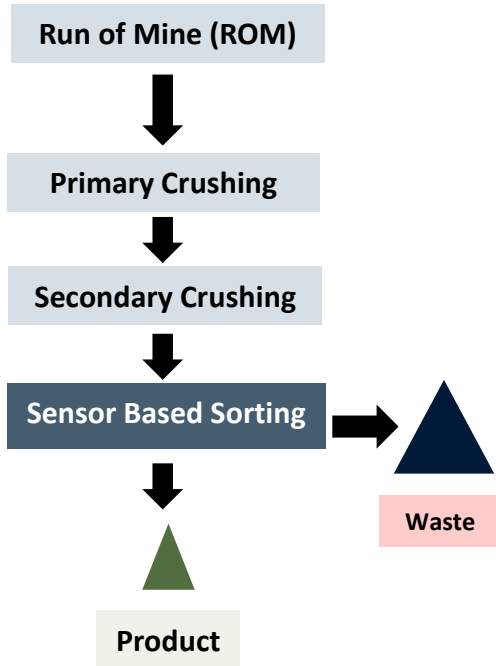


Stainless steel slag, carbon steel slag, ferro silica slag, ferro chrome slag, non-ferrous slag

XRT, EM

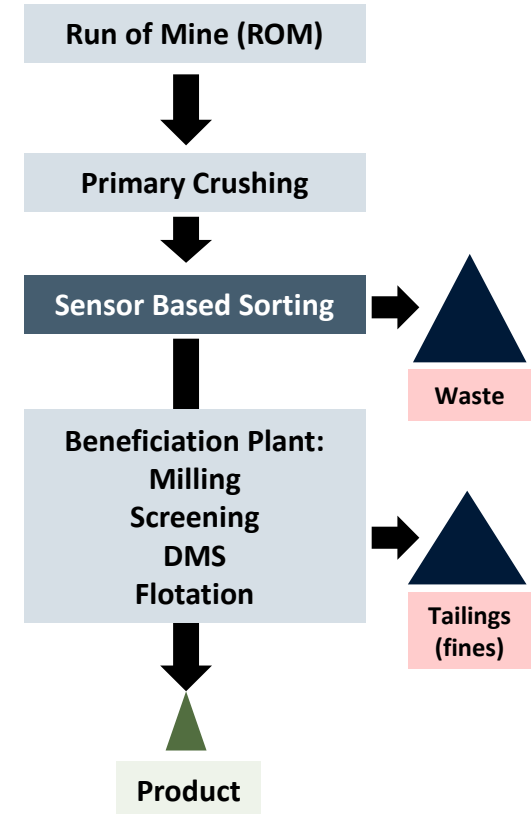
THE CONCEPT OF SENSOR-BASED SORTING IN MINING

Mining process: Industrial minerals



- 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

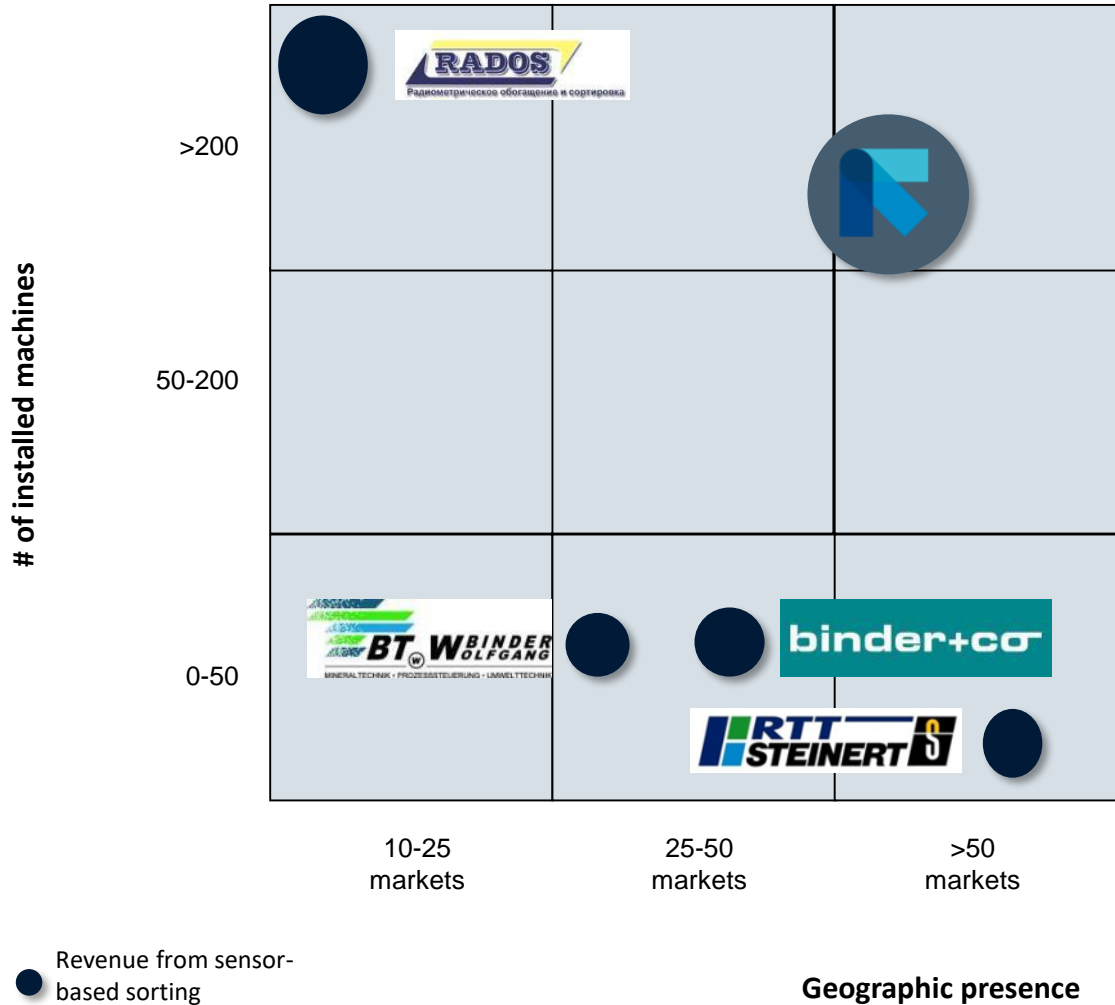
Mining process: Metal mining



Current segment

Potential new segment

MINING COMPETITIVE LANDSCAPE



TOMRA competitive positioning

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

● Revenue from sensor-based sorting

Geographic presence

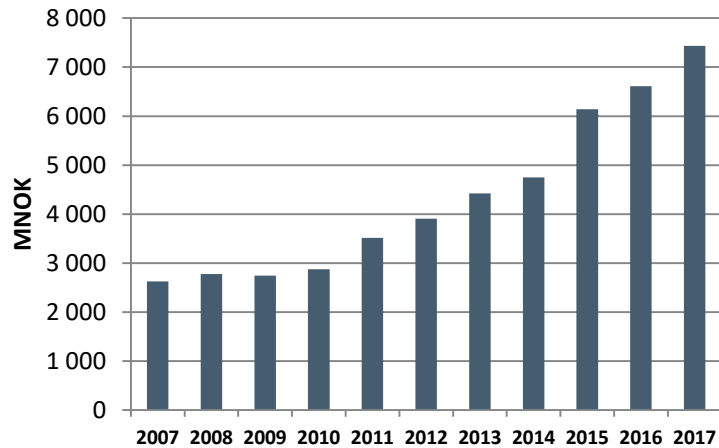
Source: TOMRA estimates and analysis

Historical financial performance

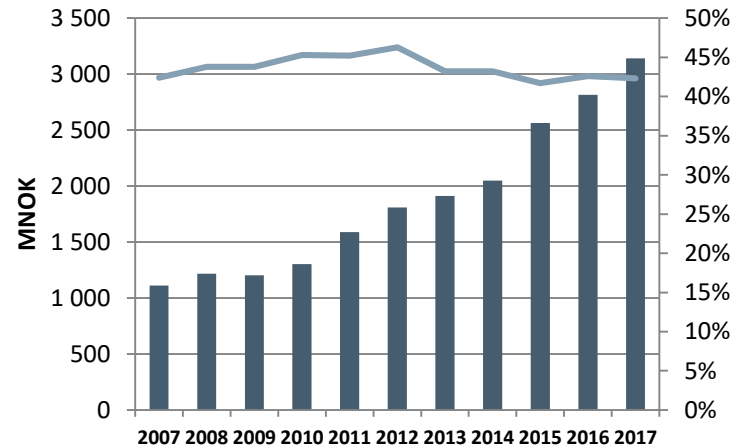


KEY FINANCIALS DEVELOPMENT

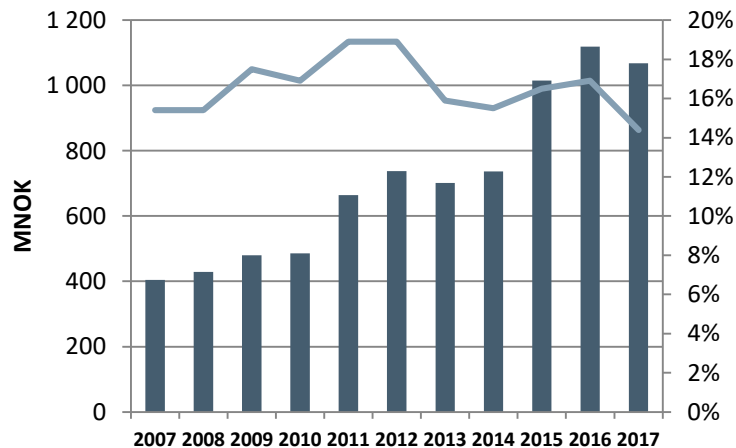
Revenues



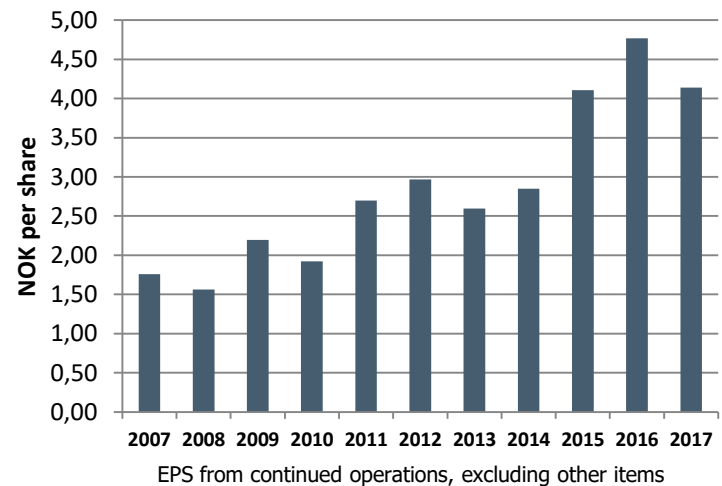
Gross Contribution and margin



EBITA and margin



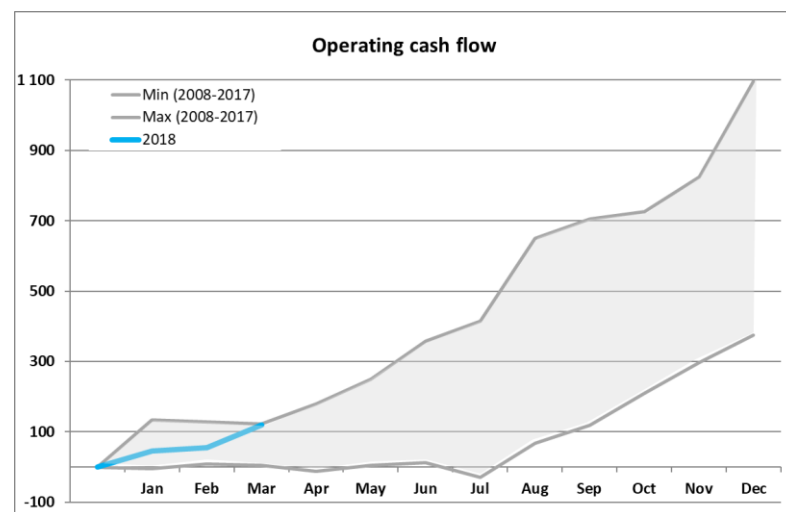
Earnings per share



FINANCIAL HIGHLIGHTS

BALANCE SHEET, CASH FLOW AND CAPITAL STRUCTURE

<i>Amounts in NOK million</i>	31 March 2018	31 March 2017	31 Dec 2017
ASSETS	8,808	7,927	8,437
• Intangible non-current assets	3,673	3,177	3,412
• Tangible non-current assets	996	856	998
• Financial non-current assets	350	349	349
• Inventory	1,276	1,211	1,197
• Receivables	1,917	1,808	1,887
• Cash and cash equivalents	596	526	594
LIABILITIES AND EQUITY	8,808	7,927	8,437
• Equity	4,493	4,301	4,594
• Minority interest	143	184	143
• Interest bearing liabilities	1,668	1,174	1,280
• Non-interest bearing liabilities	2,504	2,268	2,420



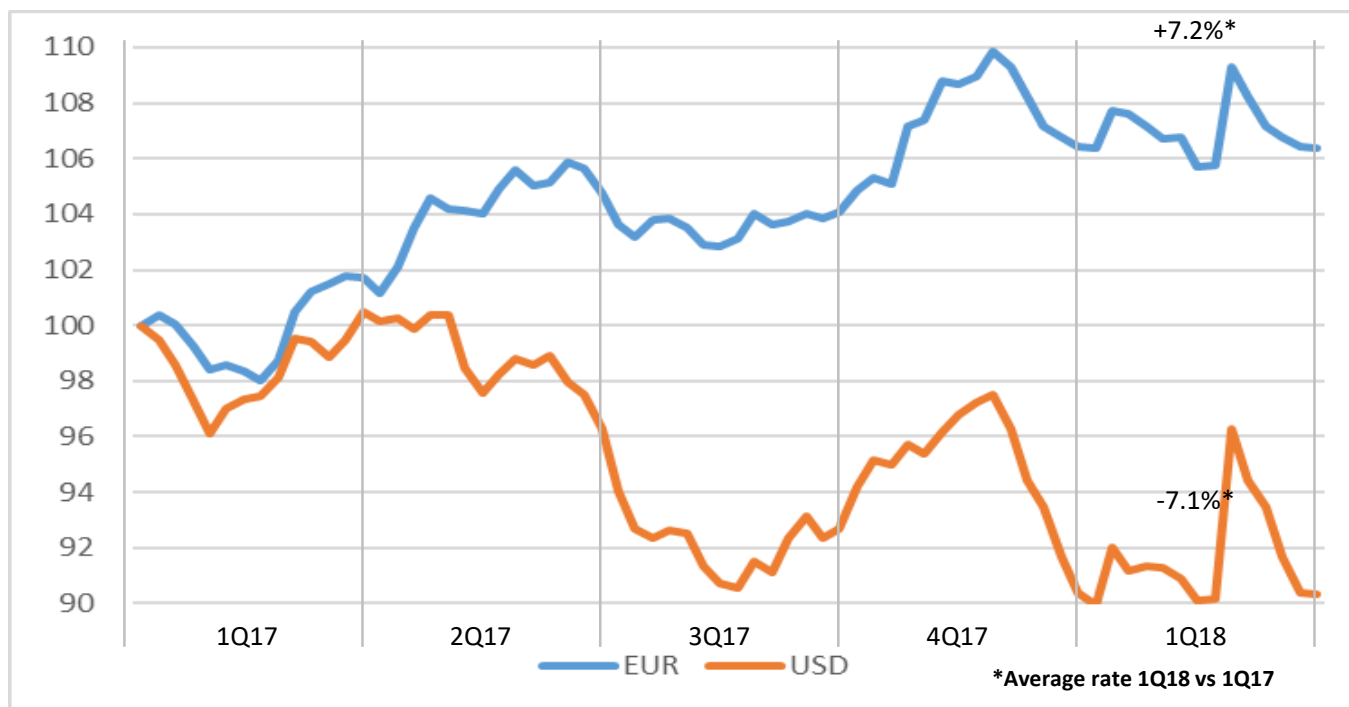
Cashflow

- From operations: 120 MNOK (122 MNOK in 1Q 2017)
- From investments: -502 MNOK (-490 MNOK in 1Q2017)

Solidity

- 53% equity
- NIBD/EBITDA = 0.8x (Rolling 12 months)
- Dividend of NOK 2.35 (NOK 2.10 last year) – due 8 May 2018

CURRENCY



TCS:
Positive impact from stronger EUR, partly offset by a weaker USD.

TSS:
Negatively impacted by weak USD vs EUR and NZD.

Revenues and expenses per currency;

NOTE: Rounded figures

	EUR*	USD	NOK	NZD	OTHER	TOTAL
Revenues	45 %	45 %	0 %	0 %	10 %	100 %
Expenses	40 %	30 %	5 %	5 %	20 %	100 %
EBITA	50 %	100 %	- 20 %	- 20 %	-10 %	100 %

* EUR includes DKK

CURRENCY EXPOSURE

Revenues and expenses per currency;

NOTE: Rounded figures

	EUR*	USD	NOK	NZD	OTHER	TOTAL
Revenues	45 %	45 %	0 %	0 %	10 %	100 %
Expenses	40 %	30 %	5 %	5 %	20 %	100 %
EBITA	50 %	100 %	- 20 %	- 20 %	-10 %	100 %

* EUR includes DKK

10% change in NOK towards other currencies will impact;

	Revenues	Expenses	EBITA
EUR*	4.5%	4.0%	5.0%
USD	4.5%	3.0%	10.0%
NZD	0.0%	0.5%	-2.0%
OTHER	1.0%	2.0%	-1.0%
ALL	10.0%	9.5%	12.0%

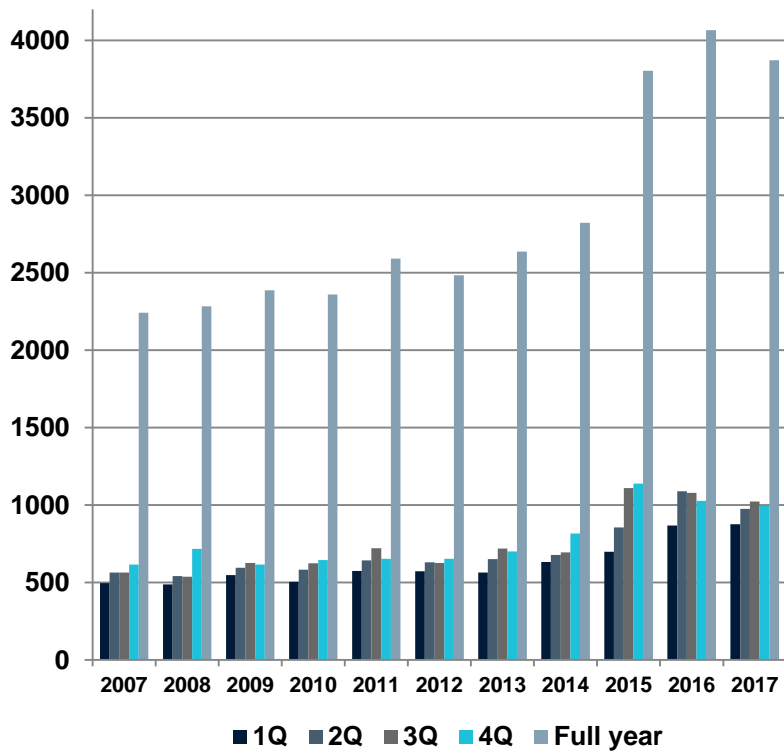
* EUR includes DKK

HEDGING POLICY

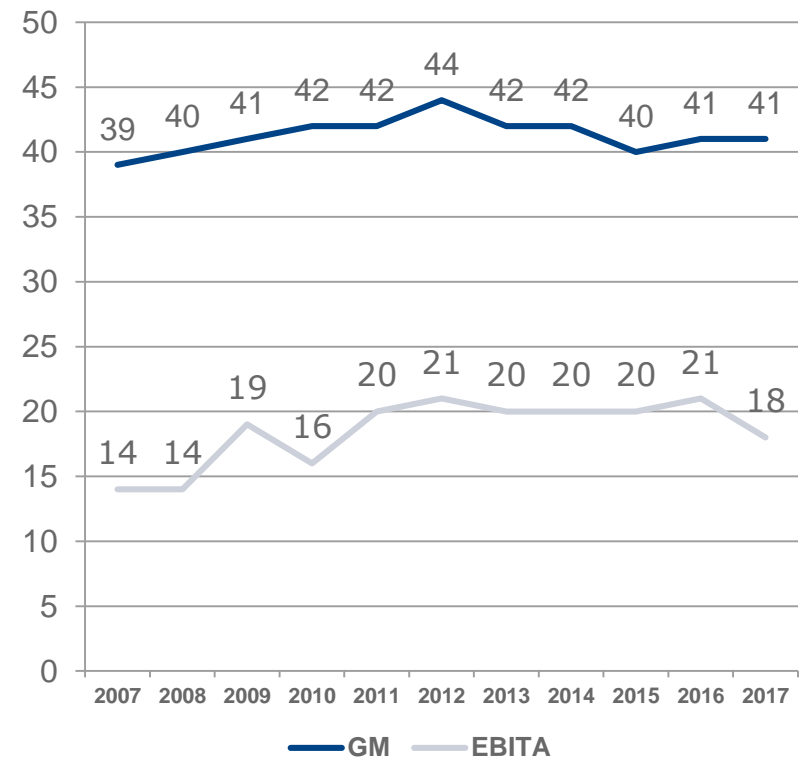
- TOMRA hedges B/S items that will have P/L impact on currency fluctuations
- TOMRA can hedge up to one year of future predicted cash flows. Gains and losses on these hedges are recorded in the finance line, not influencing EBITA

COLLECTION SOLUTIONS – SEGMENT FINANCIALS

Revenue development
NOK million

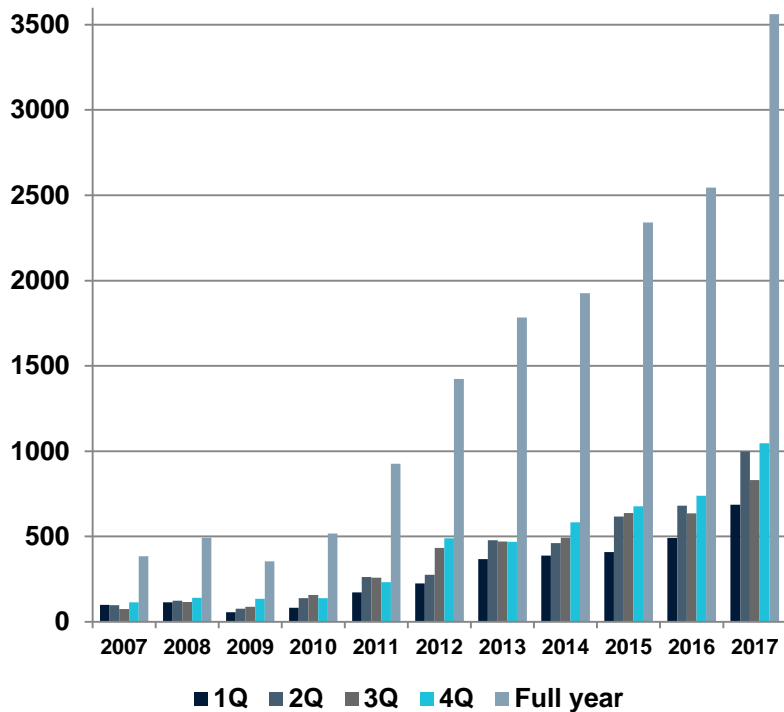


Gross and EBITA margin development
Percent

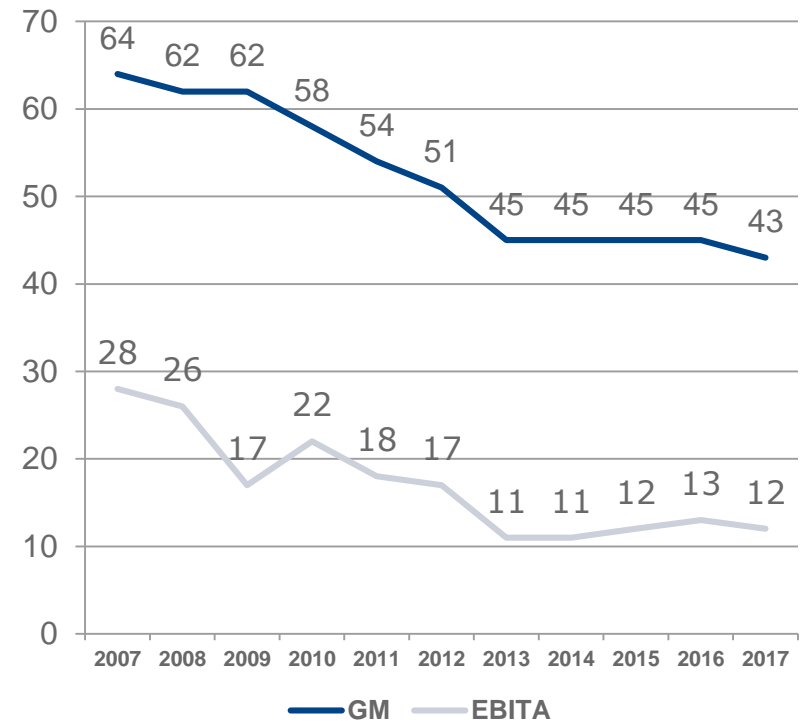


SORTING SOLUTIONS – SEGMENT FINANCIALS

Revenue development
NOK million



Gross and EBITA margin development
Percent



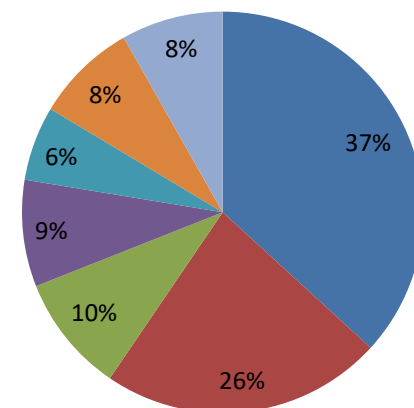
TOMRA SHAREHOLDER STRUCTURE

Top 10 shareholders as of 04th of January 2018

1	Investment AB Latour	39 000 000	26.3%
2	Folketrygdfondet	8 679 393	5.9%
3	The Bank of New York BNYM, Stichting Dep	7 845 000	5.3% (NOM)
4	Goldman Sachs & Co	4 298 374	2.9%
5	Skandinaviska Enskilda SEB AS, UCITS V	3 361 769	2.3% (NOM)
6	Clearstream Banking	2 585 774	1.7% (NOM)
7	Danske Invest Norske C/O Danske Capital A	2 195 030	1.5%
8	Nordea Nordic Small	2 149 276	1.5%
9	ODIN Norge	2 040 771	1.4%
10	BNP Paribas Securities	1 995 070	1.3% (NOM)
Sum Top 10		74 150 457	50.5%
Other shareholders		73 869 621	49.9%
TOTAL (5,781 shareholders)		148 020 078	100.0%

Source: VPS

Shareholders by country



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