## INVESTOR PRESENTATION



TOMRA SYSTEMS ASA 18 February 2016 © TOMRA



### THE WORLD POPULATION AND STANDARD OF LIVING IS INCREASING DRAMATICALLY





### WORLD RESOURCES ARE UNDER UNPRECEDENTED PRESSURE





### RESOURCE PRODUCTIVITY MUST INCREASE TO ENSURE SUSTAINABLE DEVELOPMENT



## THE DAWN OF THE RESOURCE REVOLUTION

### **THE CHALLENGE:**

## THE OPPORTUNITY:

**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

Making A work h worth living for our children!

## \$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

SOURCE: McKinsey



## TOMRA creates sensor-based solutions for optimal resource productivity





## LEADING THE RESOURCE REVOLUTION



## FROM PURPOSE INTO PROFITS AND PROFITS INTO PROGRESS, TOMRA IS **TRANSFORMING** WHAT IT MEANS TO BE RESOURCEFUL.

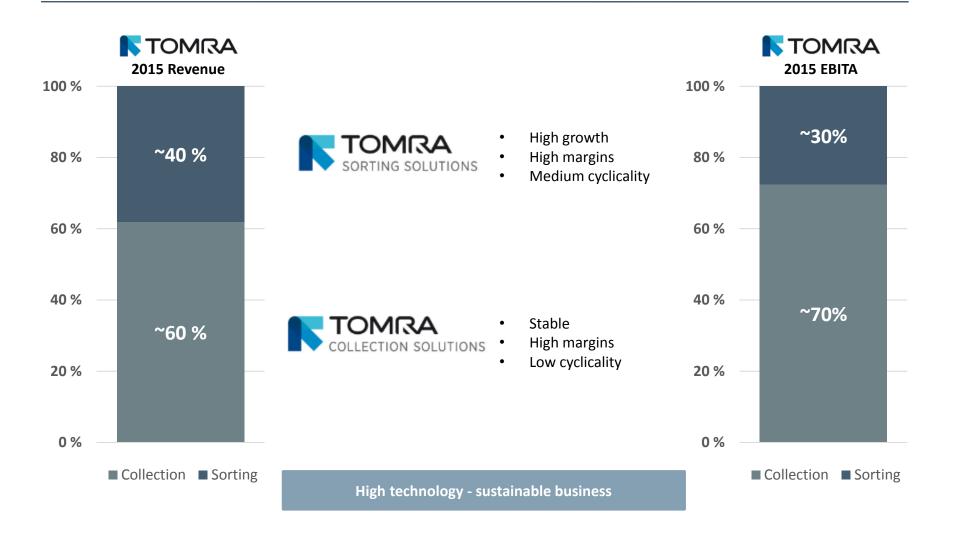


- Our solutions, in use around the globe, helped keep up to 24 millions of tons of CO<sub>2</sub> from being released into the atmosphere in 2014
- 35 bn used beverage containers are captured every year through our reverse vending machines
- Our steam peelers process 15
   million tons of potatoes per year
   with a 1% yield improvement
   over other alternatives
- 715,000 tons of metal are recovered every year by our metalrecycling machines

## TOMRA IN SHORT

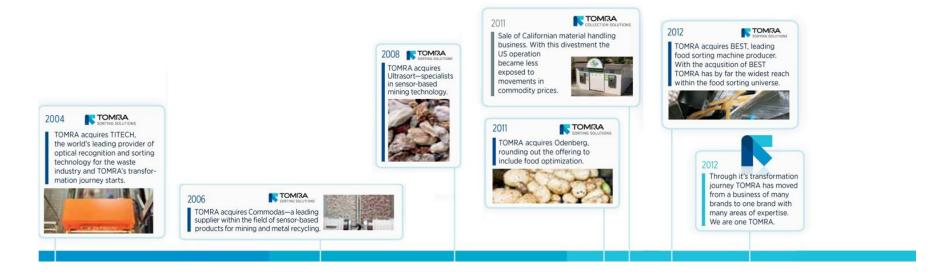


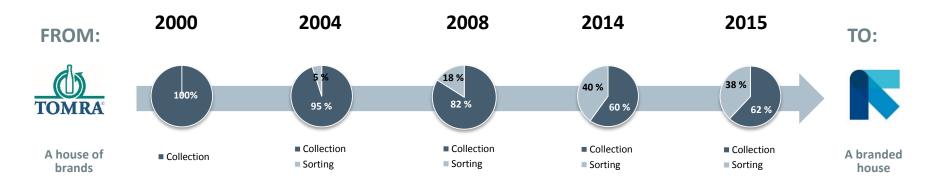
## CREATING VALUE THROUGH TWO STRONG BUSINESS AREAS





## THE TOMRA TRANSFORMATION JOURNEY





## TOMRA WORLDWIDE





## TOMRA'S TWO BUSINESS AREAS



Customers Market share

525
Food growers, packers and processors
~25%

#### RECYCLING

Share of '15 sales	~12%
Employees	165
Customers	Material recovery facilities, scrap dealers, metal shredder operators
Market share	~50-60%

# MINING Share of '15 sales ~3% Employees 60 Customers Mining companies Market share ~40-60%

	TOMRA SORTING GROUP FUNCTIONS
Employees	140



#### REVERSE VENDING

~45%

1,285

Grocery retailers

~75%

#### MATERIAL RECOVERY

~15% 445 Grocery retailers and beverage manufacturers

#### ~60% in USA (markets served)





## TOMRA INSTALLED BASE





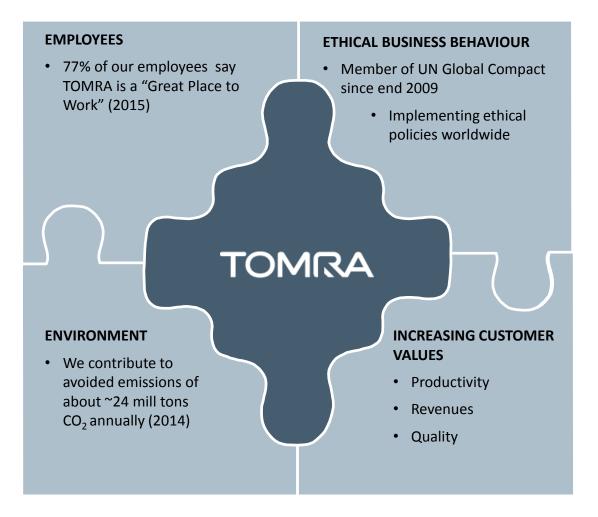


REVERSE VENDING		RECYC	RECYCLING		MINING	
Nordic	~15,200	Europe	~2,600	Europe	~10	Europe
Germany	~28,400	US / Canada	~700	US / Canada	~20	US/Canada
Other Europe	~14,000	Asia	~350	Australia	~15	Asia/Oceania
North America	~15,500	Other	~650	South Africa	~25	South America
Rest of the world	~2,700			Other	~15	Middle East/ Africa
TOTAL	~75,800	TOTAL	~4,300	TOTAL	~85	TOTAL

#### Not including machines sold on OEM agreements



## USING THE POWER OF BUSINESS TO DO GOOD





## TOMRA IN DEPTH



## **TOMRA Collection Solutions**



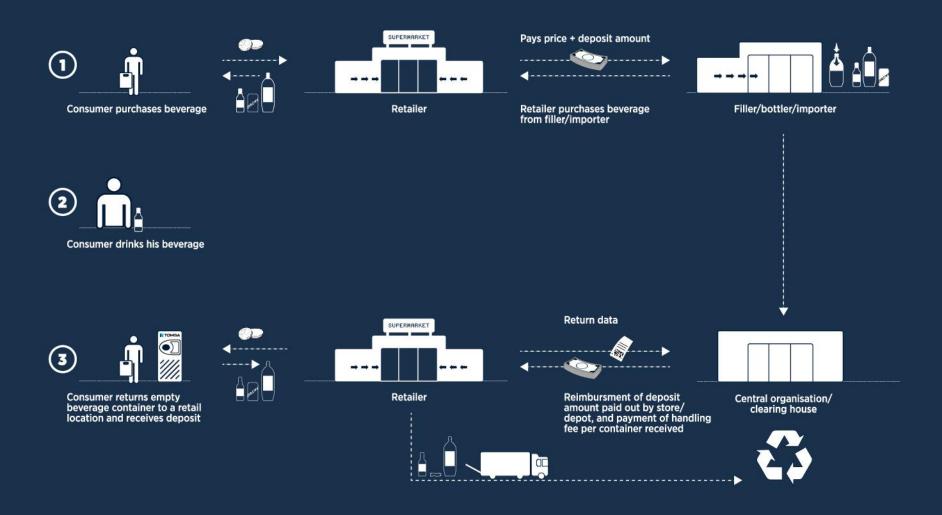


### **REVERSE VENDING ADVANTAGES**



**TOMRA** 

### RECYCLING OF BEVERAGE PACKAGING IN A DEPOSIT SYSTEM



## **ELEMENTS OF A MODERN REVERSE VENDING SYSTEM**



#### **Data administration**

TOMRA

## THE USED BEVERAGE CONTAINER RECYCLING VALUE CHAIN

#### Generic used beverage container (UBC) recycling value chain



#### **RVM-based UBC recycling value chain**



## 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 has been successful
  - Several machines already installed in core markets
  - Key product for replacement sale in e.g. Germany
- 2014 installations: ~1,200 machines
- 2015 installations: ~4,000 machines

TOMRA is setting the standard for reverse vending for the next decade







## A COMPLETE TRANSFORMATION OF THE PRODUCT PORTFOLIO IN PROGRESS

#### 2012 Portfolio

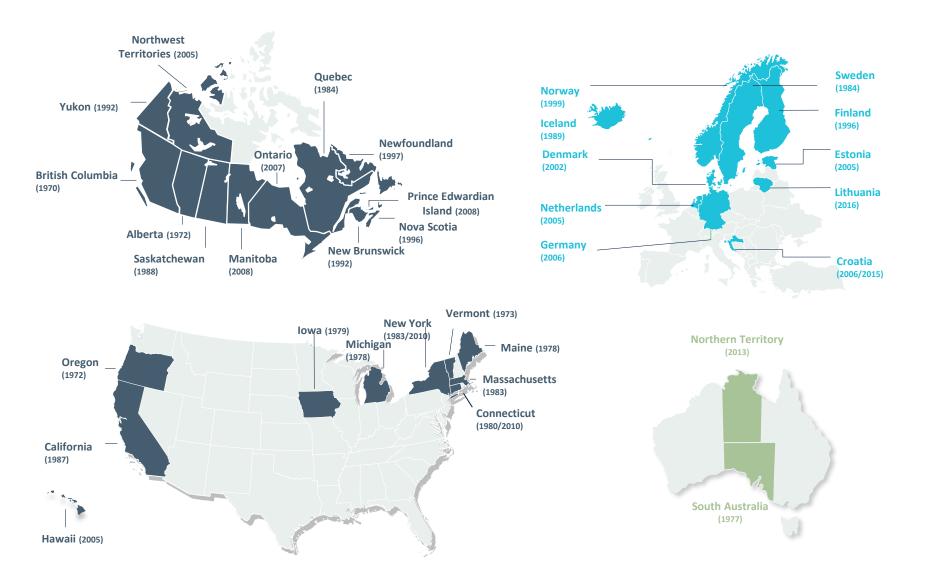


#### 2015/2016 Portfolio



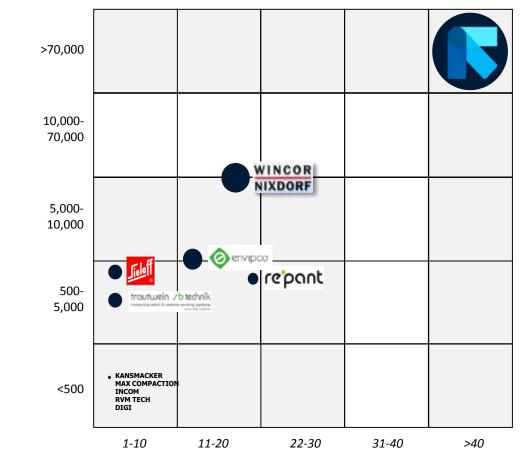


## CURRENT DEPOSIT MARKETS





## COMPETITIVE LANDSCAPE\*



Number of RVS markets

Annual revenue from RVS sales

Source: TOMRA estimates and analysis \* Estimates

# of installed RVS



**Defend and nurture core** deposit market business **Ensure continued relevance** 2 of deposit systems **Embrace new business** models **Expand scope of business** 

- Increase differentiation towards competition
- Further reduce the cost of reverse vending systems
- Increase scope of existing deposit markets
- Assist in developing new deposit markets

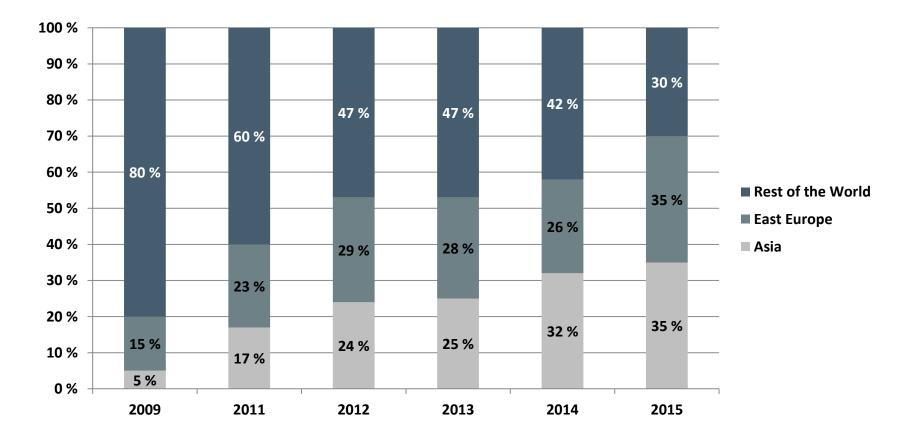
- Capture new volume by entering new segments
- Create new revenue streams from Software/IT

Target new material streams



## SOURCING TURNAROUND COMPLETED

#### COGS distribution by region (sourcing)



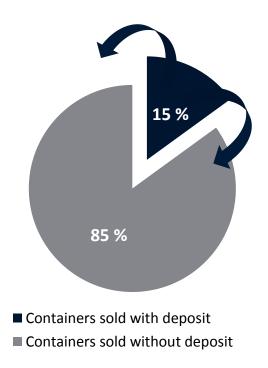
Source: TOMRA analysis



## ENSURE CONTINUED RELEVANCE OF AUTOMATED DEPOSIT SYSTEMS

## Handling method for deposit containers Percent of total 40 % 60 % Handled with RVS Handled manually

#### Share of containers sold with deposit Percent of total

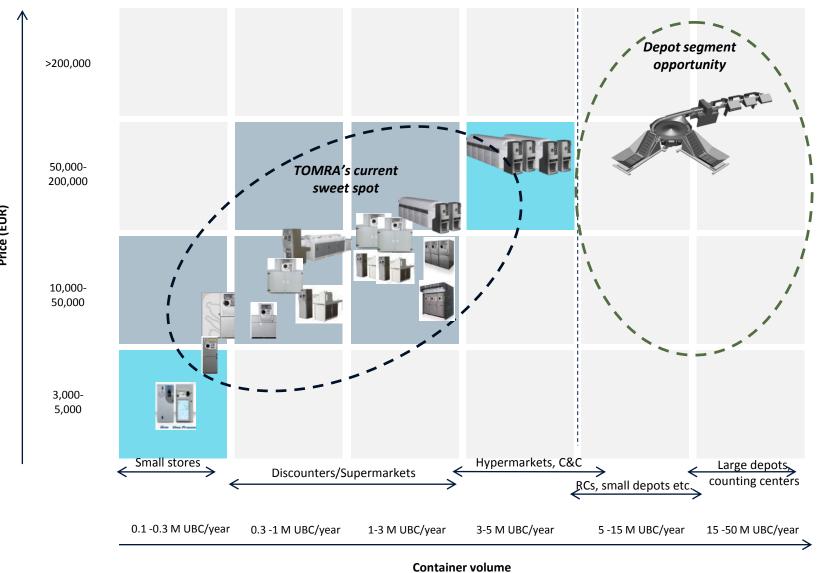


Source: TOMRA analysis

ILLUSTRATIVE



## **ENTER NEW SEGMENTS**



Price (EUR)

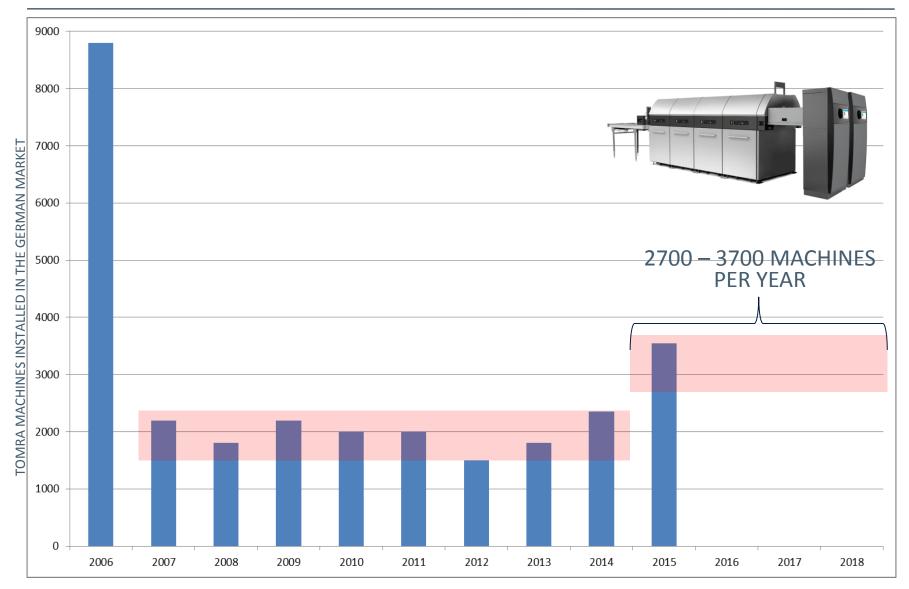
## CREATE NEW REVENUE STREAMS FROM SW/IT



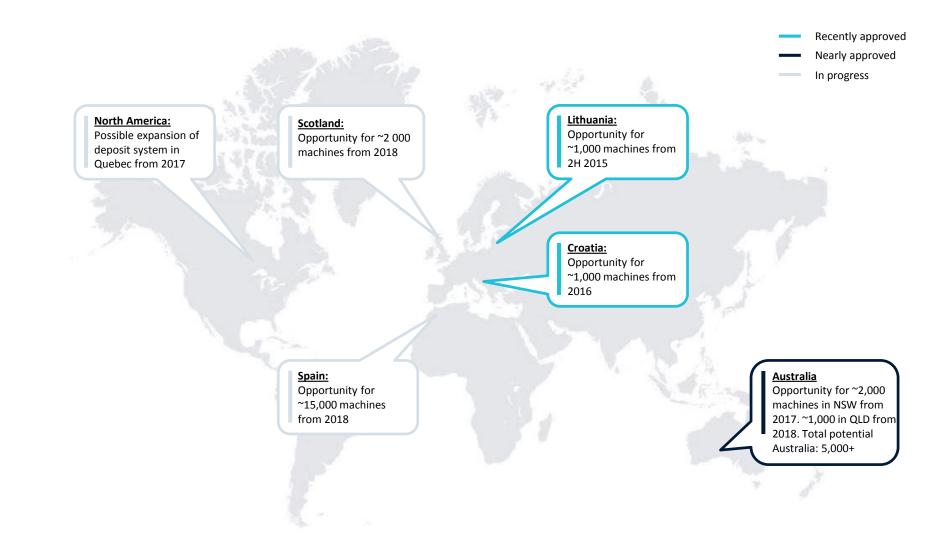
#### Integrating hardware and software into attractive and engaging combos



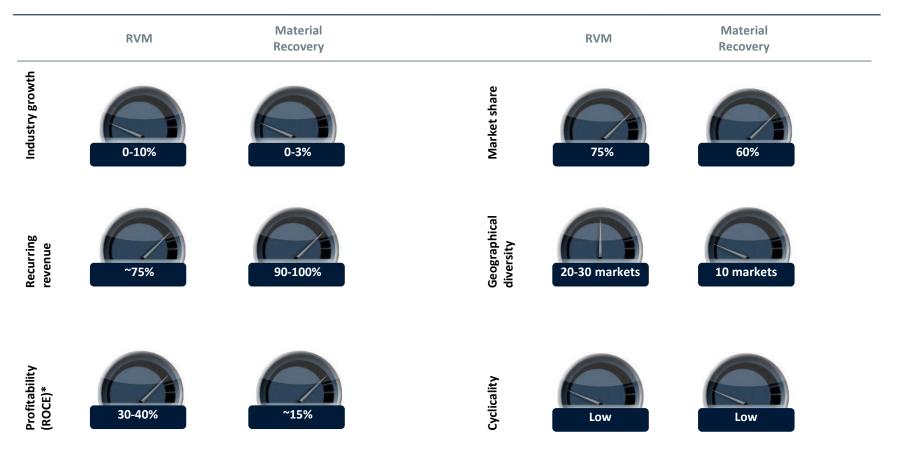
## **GERMANY REPLACEMENT UPDATE**



## POTENTIAL NEW DEPOSIT MARKETS



### COLLECTION SOLUTIONS – FINANCIAL DASHBOARD



#### **TARGETS 2013 - 2018**

Yearly growth 4 – 8%

EBITA-margin 18% – 23%



## **TOMRA Sorting Solutions**

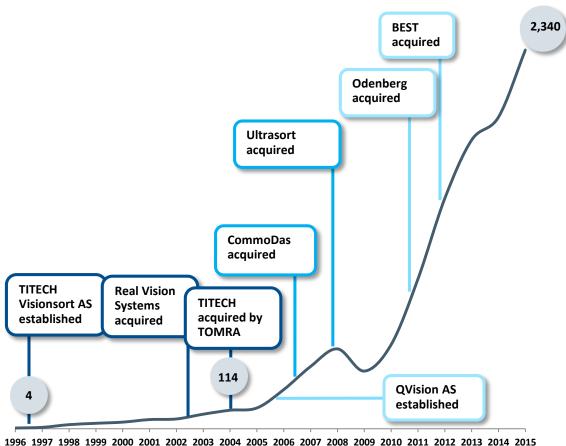






## STRONG REVENUE GROWTH SINCE INCEPTION IN 1996

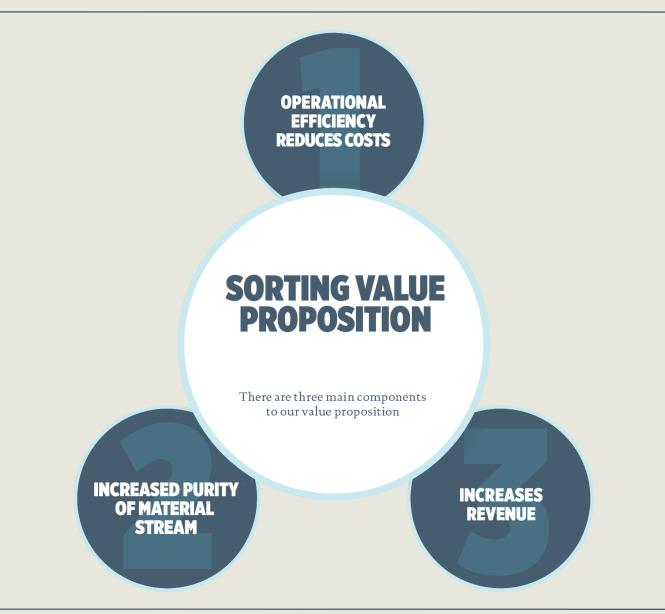
#### **Revenue development and key milestones** MNOK



#### Total revenue growth (organic plus inorganic) CAGR of ~32% per year from 2004-2015

- Average annual organic growth for the same period was ~21%
- Technology base and segment/application knowledge expanded both through acquisitions and inhouse ventures

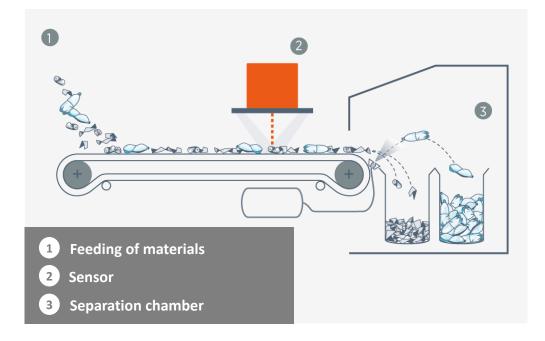
## SORTING VALUE PROPOSITION



**TOMRA** 

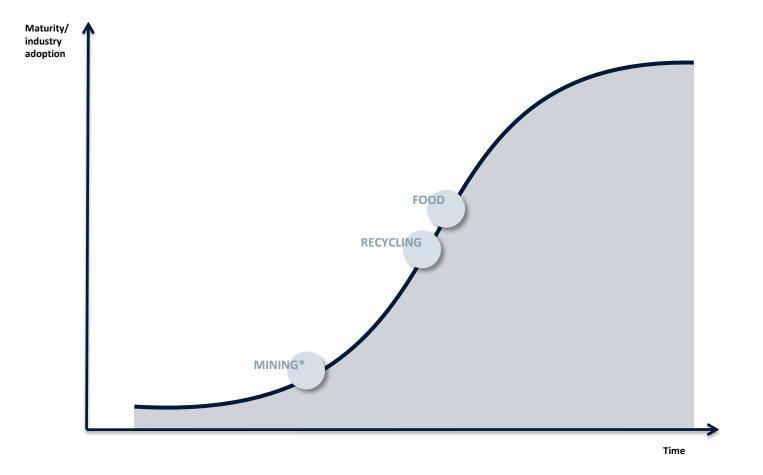
## HOW DOES SENSOR BASED SEPARATION WORK?

- 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

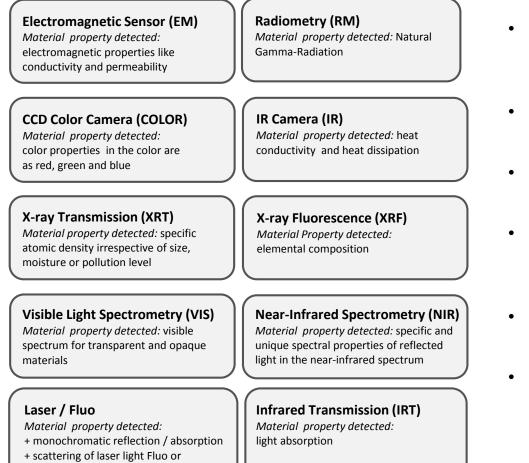


\* In certain mining sub-segments, such as industrial minerals and diamonds, sensor-based sorting is a more mature technology.



# CUTTING-EDGE TECHNOLOGY DRIVEN BY SIGNIFICANT INVESTMENTS IN R&D...

#### **SENSOR PORTFOLIO**



- In-house R&D department with more than 20% of all employees
- 8% of revenue invested in R&D
- Developing own sensors
- Using own software and data processing tools
- Ownership of **80 patents**
- Partnership with leading R&D institutions: SINTEF, CTR, Fraunhofer ILT; universities like RWTH, Aachen and Brussels



bio-luminescence, Super K

# ...TO DEVELOP PRODUCTS SERVING A WIDE RANGE OF DETECTION PARAMETERS



**Color** Removal of discolorations in monoand 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

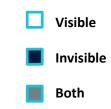


#### X-RAY Analysis

Analysis of objects based on their density and shape



**Detox** Removal of produce contaminated with aflatoxin





## A COMMON SENSOR BASED TECHNOLOGY PORTFOLIO

	[m]
Gamma-	<b>10</b> <sup>-12</sup>
radiation	<b>10</b> <sup>-11</sup>
	<b>10</b> <sup>-10</sup>
X-ray	<b>10</b> -9
	<b>10</b> <sup>-8</sup>
Ultraviolett (UV)	<b>10</b> <sup>-7</sup>
Visible light (VIS)	<b>10</b> <sup>-6</sup>
	<u>    10<sup>-5</sup> </u>
Near Infrared (NIR)	10 <sup>-4</sup>
Infrared (IR)	<b>10</b> <sup>-3</sup>
	10 <sup>-2</sup>
Microwaves	<b>10</b> -1
	101
	10 <sup>1</sup>
Radio waves	10 <sup>2</sup>
Alternating current	10 <sup>3</sup>
(AC)	<b>10</b> <sup>4</sup>

Sensor/ Technology	Material Property	Segment
RM (Radiometric)	Natural Gamma Radiation	Mining
XRT (X-ray transmission) Low Energy X-ray	Atomic Density	Recycling, Mining, Food
XRF	X ray fluorescence (Elemental Spectroscopy)	Recycling, Mining
COLOR (CCD Color Camera)	Reflection, Absorption, Transmission	Recycling, Mining, Food
Laser attenuation and PM (Photometric)	Monochromatic Reflection / Absorption of Laser Light Scattering analysis of Laser Light	Mining, Food
NIR / MIR (Near/Medium Infrared Spectrometry)	Reflection, Absorption (Molecular Spectroscopy)	Recycling, Mining, Food
LIBS	Laser induced breakdown spectroscopy	Recycling, Mining
EM (Electro- Magnetic sensor)	Conductivity, permeability	Recycling, Mining, Food

## CROSS UTILIZING 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**

#### 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

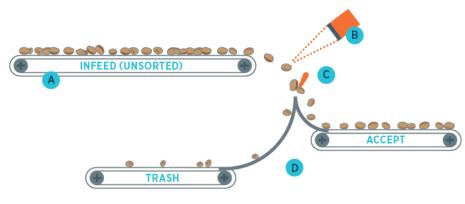


## SORTING UNWASHED POTATOES: WORKING PRINCIPLE

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
- Intelligent finger ejectors
- D Gentle handling convey chutes (optional)



#### DEFECTS & BLEMISHES REPORTING

Rot

Stones

Golf Ball



#### 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

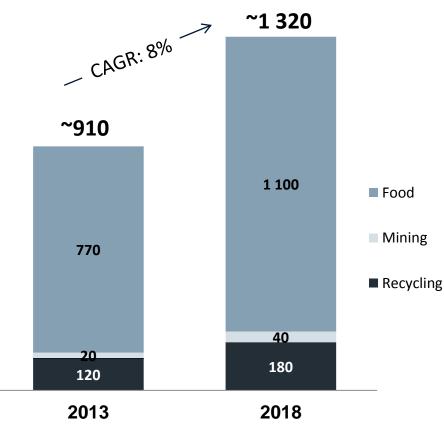
- The Field Potato Sorter is ODENBERG's first venture into the **unwashed potato market**
- The machine uses unique near **infra-red technology** to remove soil clods, stones and rotten potatoes, in addition to the foreign material commonly found in fields such as golf balls, plastics, wood etc
- The 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



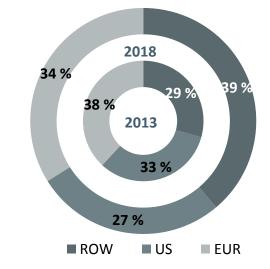
Source: TOMRA estimates and analysis

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

#### **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"

## Expected development in geographical revenue contribution



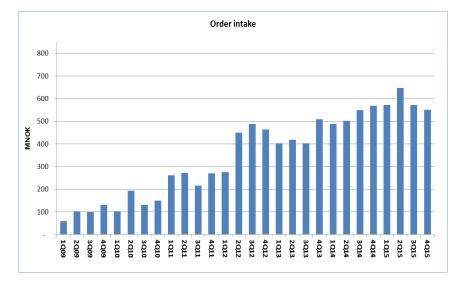
TOMRA

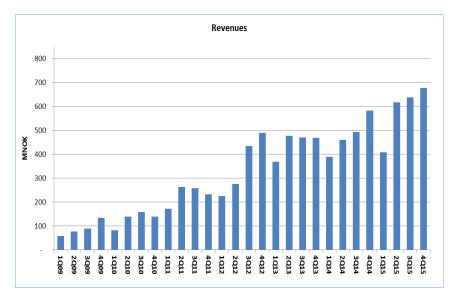
## SORTING SOLUTIONS: OUR STRATEGY

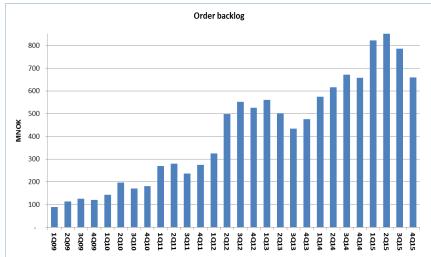
	Food	Recycling	Mining		
	More than doubling of en	nerging markets revenue (but North Am of business in 2018)	erica and Europe still 60%		
1 Revenue growth of 10-15% over the period	New applications representing 25% of revenue in 2018	15 M€ growth in <b>new segments</b>	Significant <b>expansion of sales</b> network		
	New segments representing 10% of revenue in 2018	50% growth in service revenue	Succeed in <b>high volume</b> segments		
	Grow with existing customers and double service revenue				
Extend	Common s	sorting platform for all new product dev	elopments		
2 technology	Cross-utilization of sensor portfolio, e.g. NIR/BSI in food and laser in mining				
leadership	Extend current leadership in core NIR and laser technologies, and develop new cutting edge sensors				
	Design changes, e	economies of scale and purchasing power	er to lower COGS		
3 Improve operational	Consolidation of manufac	cturing and sourcing; increased sourcing	from low cost countries		
efficiency	Streamlining of organiz	ation and processes to take out synergies	es across business units		
	Target to <b>grow</b>	profits at several percentage points fast	er than revenue		



## BACKLOG DEVELOPMENT AND MOMENTUM





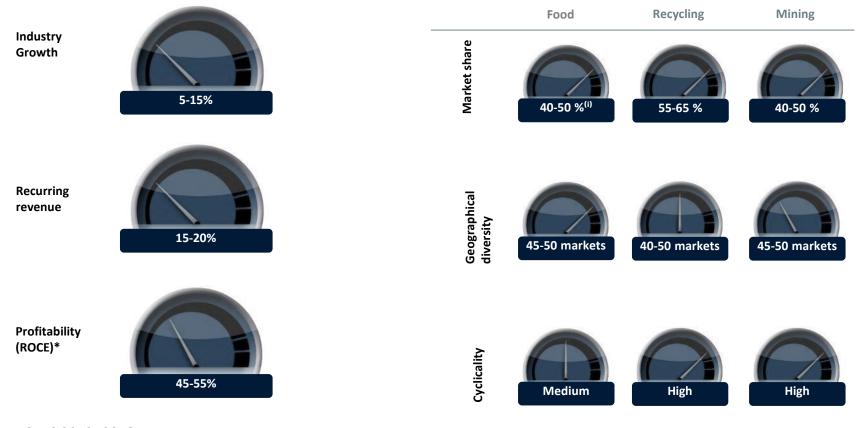


- TSS delivered all time high revenues in 4Q15 (677 MNOK, up from 583 MNOK in 4Q14)
- The order intake in 4Q15 was 551 MNOK in the quarter (compared to 568 MNOK last year)
- As a consequence of the high number of orders delivered in 4Q15, the order backlog at the end of the quarter ended at 659 MNOK, up from 657 MNOK at the end of 4Q14, but down 8% currency adjusted
- Estimated backlog conversion ratio in 1Q16: 70%-75%\*

\* Based upon current production and delivery plans, the revenues in 1Q16 are estimated to be approximately 70-75% of order backlog at the end of 4Q15.



## FINANCIAL DASHBOARD – SORTING SOLUTIONS



#### 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%



# YELD INTORS USAGE



## GROWTH IN GLOBAL FOOD DEMAND WILL SPUR INVESTMENTS IN AUTOMATION



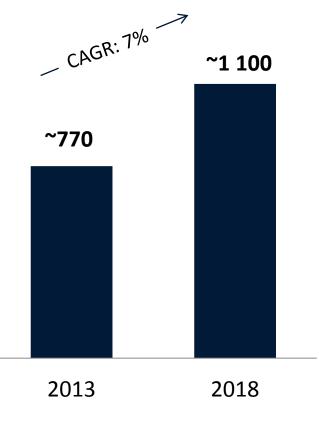
#### **Drivers and trends**

- 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

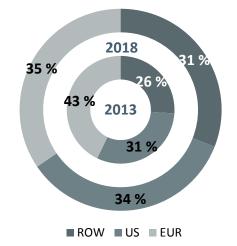


\* Market sizes shown include peeling, meat/process analytics, virgin materials and tobacco.

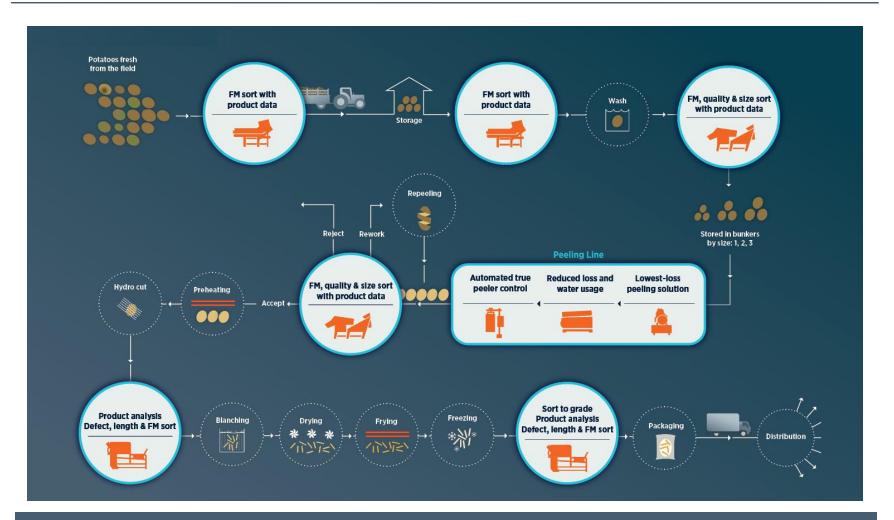
#### Market growth

- 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



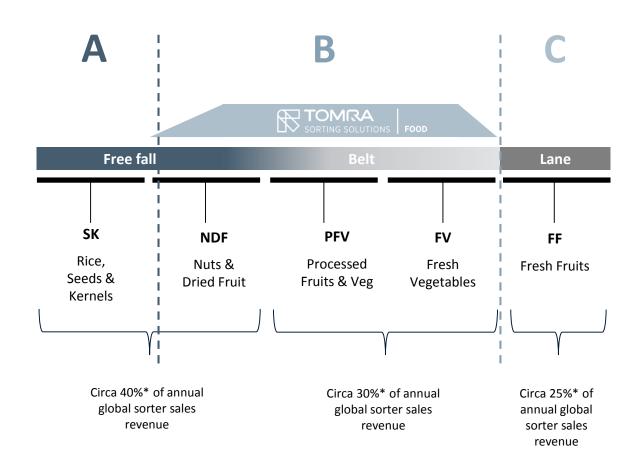
# WE ARE UNIQUELY POSITIONED TO SERVE THE ENTIRE VALUE CHAIN WITH OUR PRODUCT PLATFORM



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



# TOMRA HAS THE BROADEST FOOTPRINT WITHIN THE FOOD SORTING UNIVERSE

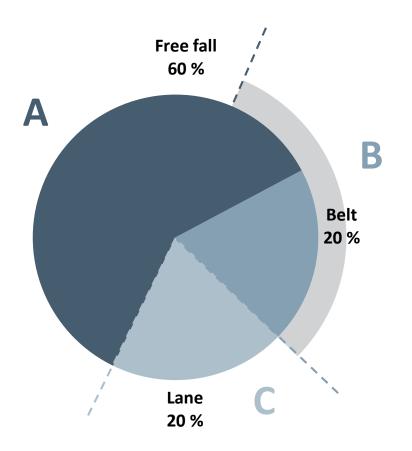


\* TOMRA estimates

Circa 5% of annual global sorter sales revenue comes from other segments, like confectionary



## THREE WAYS OF SORTING WITHIN THE FOOD SEGMENT



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

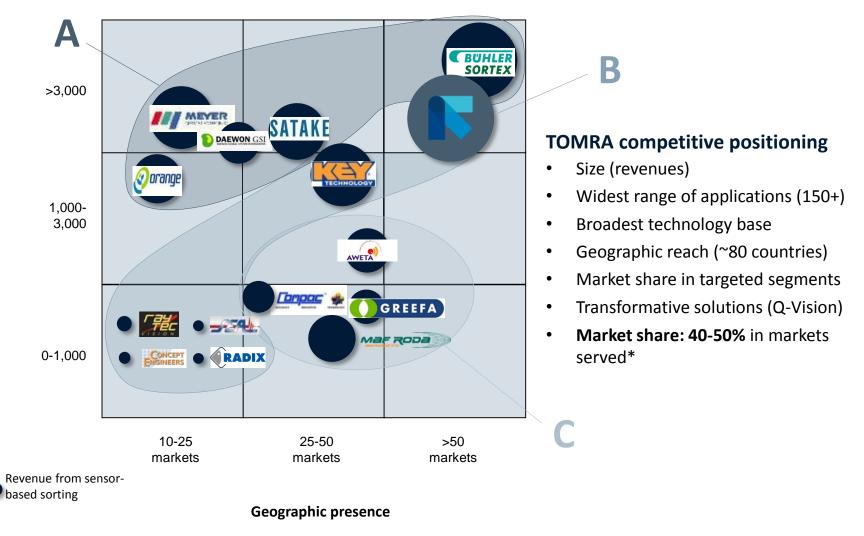
Belt	
Application	Prepared /preserved veg. and fruit
Companies	<b>Best</b> , Key, <b>Odenberg</b> , Raytec
Sensor tech.	Several (complex)

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

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

TOMRA

## FOOD COMPETITIVE LANDSCAPE



Source: TOMRA estimates and analysis

\* Total Food sorting (also including rice and lane sorting): 12-15%

# of installed machines

# OUR BROAD COVERAGE AND TECHNOLOGY BASE IS SETTING US APART

	DRIED FRUIT	NUTS	FRESH CUT	FRUIT	VEGETABLES	MEAT	POTATOES	SEAFOOD
FOOD	<ul> <li>Apricots</li> <li>Craisins</li> <li>Figs</li> <li>Prunes</li> <li>Raisins</li> </ul>	<ul> <li>Almonds</li> <li>Cashews</li> <li>Hazelnuts</li> <li>Macadamias</li> <li>Peanuts</li> <li>Pecans</li> <li>Pistachios</li> <li>Seeds</li> <li>Walnuts</li> </ul>	<ul> <li>Baby leaves</li> <li>Iceberg lettuce</li> <li>Spinach</li> <li>Spring mix</li> </ul>	<ul> <li>Apples</li> <li>Blackberries</li> <li>Blueberries</li> <li>Cherries</li> <li>Citrus</li> <li>Cranberries</li> <li>Peaches &amp; pears</li> <li>Raspberries</li> <li>Strawberries</li> <li>Tomatoes</li> </ul>	<ul> <li>Beans</li> <li>Beet</li> <li>Broccoli</li> <li>Carrots</li> <li>Corn</li> <li>Cucumbers</li> <li>IQF</li> <li>vegetables</li> <li>Jalapenos/ Peppers</li> <li>Onions</li> <li>Peas</li> <li>Pickles</li> </ul>	<ul> <li>Bacon bits</li> <li>Beef</li> <li>IQF meat</li> <li>Pork</li> <li>Pork rind</li> </ul>	<ul> <li>Washed</li> <li>French fries</li> <li>Unpeeled</li> <li>Peeled</li> <li>Potato chips</li> <li>Specialty products</li> <li>Sweet</li> </ul>	<ul> <li>Mussels</li> <li>Scallops</li> <li>Shrimps</li> </ul>
SENSOR TECHNOLOGY	LASER NIR VIS X-RAY	LASER CAMERA X-RAY	LASER CAMERA	LASER CAMERA NIR VIS	LASER CAMERA NIR VIS	LASER CAMERA NIR	LASER CAMERA NIR VIS	LASER CAMERA NIR VIS X-RAY



## **OUR CUSTOMERS**



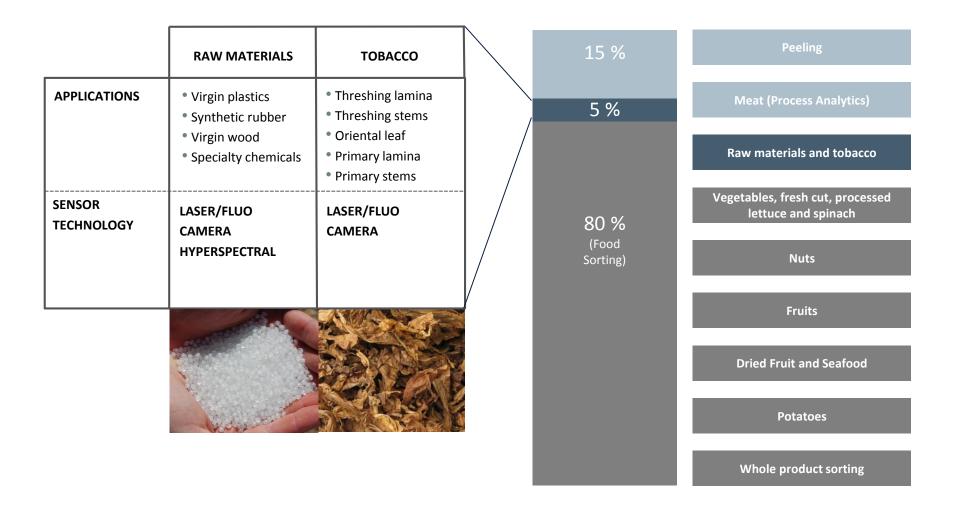
## We are active in five continents and 80 markets

- 6 of the 10 largest, global food companies are our customers
- We have ~2,000 customers globally

#### **TSS Food provides sorting solutions for:**

- **Growers:** Harvester mounted tomato, onion and garlic sorters
  - ~5% of our customers
- Packers: Sorting of many different types of fruit and vegetables by color, size, shape, defect, blemish, damage or foreign objects
  - ~30% of our customers
- **Processors:** Sorting of processed potatoes (French fries, chips), fruits and vegetables
  - ~65% of our customers

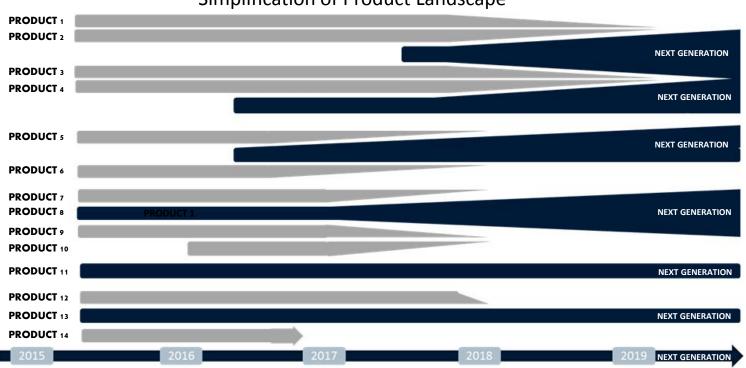
## SPECIALTY PRODUCTS APPLICATIONS





## REDUCING COMPLEXITY: MERGING PLATFORMS FOR OUR NEXT GENERATION MACHINES

#### **High-Level Product Roadmap FOOD (Illustrative)**



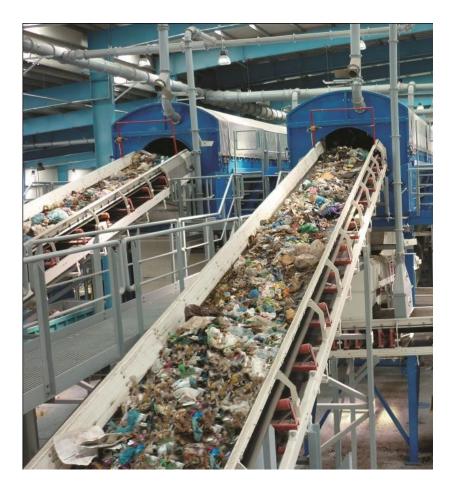
#### Simplification of Product Landscape

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

# ONCE INTO S AND AGAN



## 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













## LEGISLATIVE FRAMEWORK - PROMOTING RECYCLING

	Description	Target	
Packaging Directive	<ul> <li>Rules on the production, marketing, use, recycling and refilling of containers of liquids for human consumption and on the disposal of used containers</li> <li>2014 review included new targets</li> <li>2015 revision includes lightweight plastic carrier bags</li> </ul>	<ul> <li>Recycling and reuse of municipal waste: 70% by 2030</li> <li>Recycling and reuse of packaging waste: 80% by 2030</li> <li>Phasing out landfilling by 2025 of recyclable waste in non hazardous landfills</li> </ul>	
Waste Electrical and Electronic Equipment (WEEE) Directive	<ul> <li>Collection, recycling and recovery targets for all types of electrical goods</li> <li>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</li> </ul>	• The overall aim is for the EU to recycle at least 85% of electrical and electronics waste equipment by 2016	HEAL AND ELECTROPIC SUPPORT
Landfill Directive	<ul> <li>The objective of the Directive is to prevent or reduce as far as possible negative effects on the environment</li> <li>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.</li> </ul>	<ul> <li>Amount of biodegradable municipal waste reduced to 50% in 2009 and to 35% in 2016 (compared to 1995 levels)</li> </ul>	
End of Life Vehicle (ELV) Directive	<ul> <li>Aims at reduction of waste arising from end-of-life vehicles</li> <li>The scope of the directive is limited to passenger cars and light commercial vehicles</li> </ul>	<ul> <li>Reuse and recycling: 85%</li> <li>Reuse and recovery: 95%</li> </ul>	

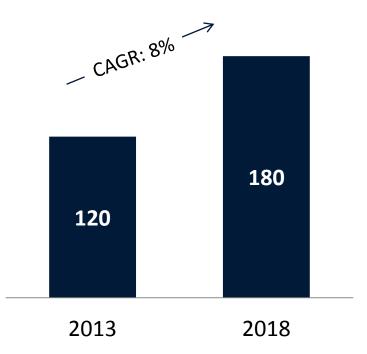
Source: www.ec.europa.eu, www.Eurometrec.org, wastemanagementworld.com,



## 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**



	HOUSEHOLD WASTE	PACKAGING	C & D	AUTOMOBILE SHREDDER	ELECTRONIC SCRAP
MATERIAL	<ul> <li>Hard plastics</li> <li>Plastic film</li> <li>Mixed paper</li> <li>RDF</li> <li>Metals</li> <li>Organics/ Biomass</li> </ul>	<ul> <li>Plastics</li> <li>Plastic film</li> <li>Cardboard</li> <li>Mixed paper</li> <li>Deinking paper</li> <li>Metal</li> </ul>	<ul> <li>Inert material</li> <li>Plastic film</li> <li>Metals</li> <li>Wood</li> <li>Paper &amp; Cardboard</li> <li>Plastics</li> </ul>	<ul> <li>NF metal</li> <li>Stainless steel</li> <li>Copper cables</li> <li>Copper</li> <li>Brass</li> <li>Aluminum</li> <li>Meatball sorting</li> </ul>	<ul> <li>Printed circuit boards</li> <li>Non-ferrous metal concentrates</li> <li>Cables</li> <li>Copper</li> <li>Brass</li> <li>Stainless steel</li> <li>Meatball sorting</li> </ul>
SENSOR TECHNOLOGY	NIR VIS XRT	NIR VIS EM	NIR VIS XRT EM	NIR VIS XRT EM COLOR XRF	XRT EM NIR COLOR XRF



Mixed paper

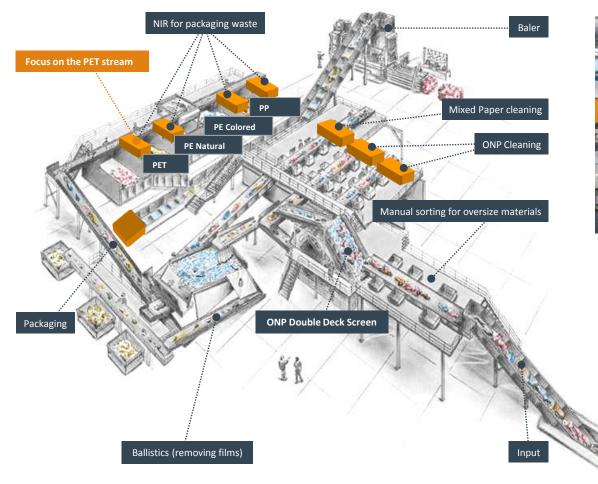
PE/PP flakes

Cleaned wood

Brass

**Copper Wire** 

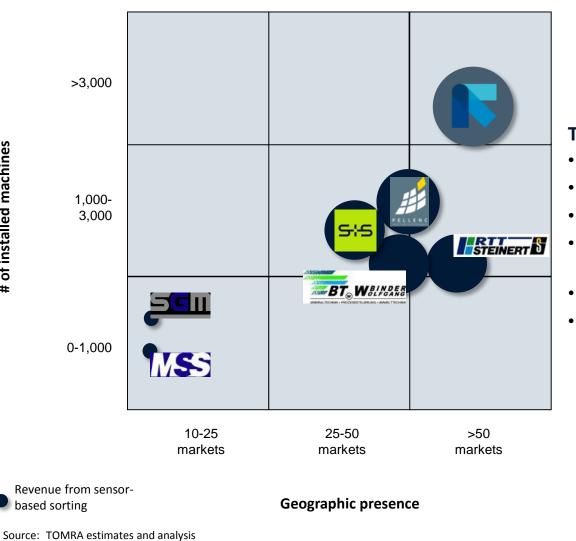
## AUTOMATED WITH TOMRA SORTING UNITS





Sorting of Municipal Solid Waste, Cyprus

## **RECYCLING COMPETITIVE LANDSCAPE**



#### **TOMRA** competitive positioning

- Largest installed base ٠
- **Highest revenues** ٠
- Broadest technology platform ٠
  - Highest number of applications and markets served
- Leading brand ٠
- Market share: 55-65% ٠



# SOURCE INTORS RESOURCE



## GLOBAL DRIVERS FOR THE MINING SEGMENT



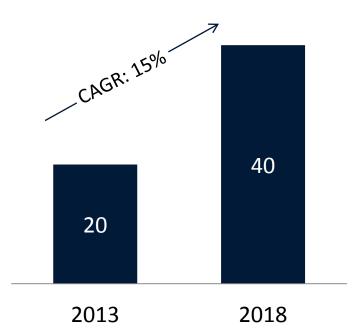
- Energy costs and water stress are major drivers
- **Demand of all commodities** is expected to grow with increased population and urbanization in the drivers seat
- Increasing labor costs in emerging world drive adoption of automatic sorting technologies
- Mining companies capex impact the investment 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 is has declined 2013 and 2014
- 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



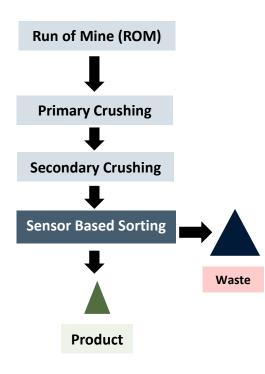
## MINING: APPLICATIONS AND SENSOR TECHNOLOGY



	INDUSTRIAL MINERALS	BASE & Fe METALS	FUEL/ ENERGY	PRECIOUS METALS	DIAMONDS & GEMS	METAL SLAG
COMMODITY	Calcite	•Copper	• Coal	• Gold	• Diamonds	Stainless steel
COMMODITY	Quarts	• Zinc	• Uranium	• Platinum	• Tanzanite	• Copper
	• Feldspar	• Nickel			Colored	• Chrome
	<ul> <li>Magnesite</li> </ul>	• Tungsten			gemstones	
	• Talcum	• Iron				
	• Dolomite	<ul> <li>Manganese</li> </ul>				
	• Salt	• Chromite				
SENSOR TECHNOLOGY	COLOR XRT	XRT COLOR	XRT RM	XRT COLOR	COLOR XRT	XRT XRF
	NIR	EM		XRF	XRF	EM
	XRF	NIR		NIR	NIR	
	Calcite	Copper	Coal	Gold	Diamonds	Ferro Silica Slag

## THE CONCEPT OF SENSOR-BASED SORTING IN MINING

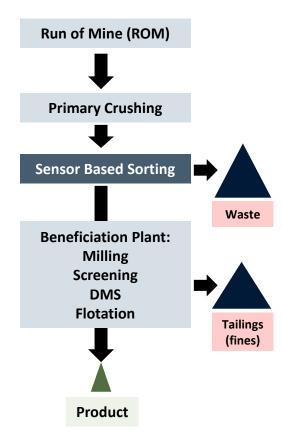
#### Mining process: Industrial minerals





- 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

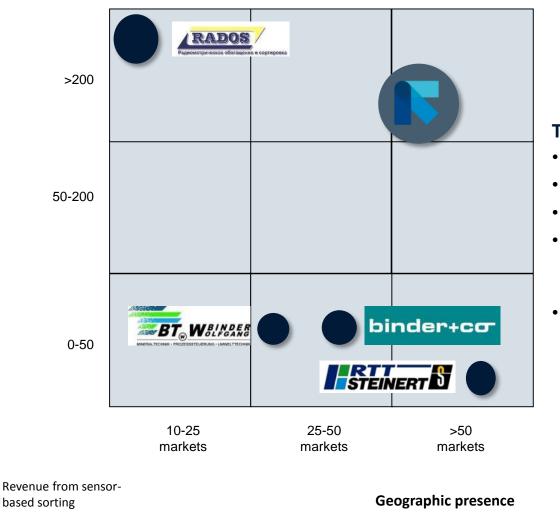
#### Mining process: Metal mining



**Potential new segment** 

**Current segment** 

## MINING COMPETITIVE LANDSCAPE



#### **TOMRA** competitive positioning

- Wide geographical coverage
- Broadest technology platform
- Leading brand
  - Pioneering in developing high volume sorter in corporation with Rio Tinto
- Market share: 40-50%

Source: TOMRA estimates and analysis



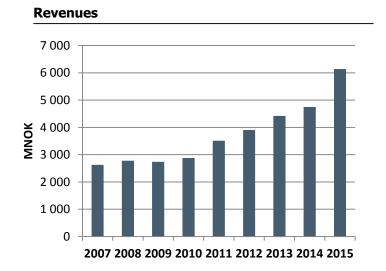
# of installed machines

## **Historical financial performance**

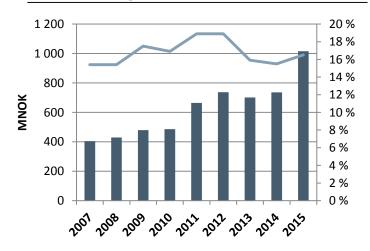




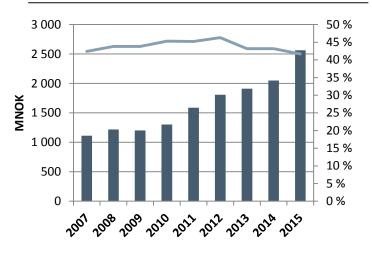
## **KEY FINANCIALS DEVELOPMENT**



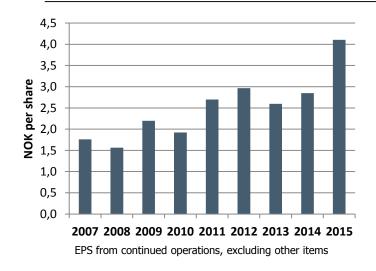
**EBITA** and margin



#### **Gross Contribution and margin**

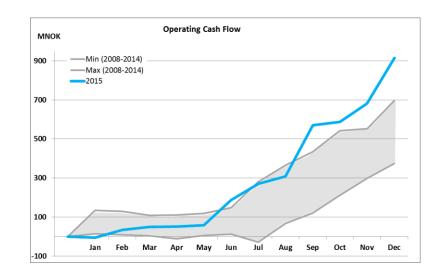


#### Earnings per share



## **FINANCIAL HIGHLIGHTS** BALANCE SHEET, CASH FLOW AND CAPITAL STRUCTURE

Amounts in NOK million	31 Dec 2015	31 Dec 2014
ASSETS	7,317	6,625
Intangible non-current assets	2,891	2,623
Tangible non-current assets	837	683
• Financial non-current assets	316	307
Inventory	1,209	913
Receivables	1,751	1,537
Cash and cash equivalents	313	436
Assets held for sale	-	126
LIABILITIES AND EQUITY	7,317	6,625
• Equity	3,945	3,244
Minority interest	160	115
Interest bearing liabilities	1,206	1,649
Non-interest bearing liabilities	2,006	1,593
Liabilities held for sale	-	24



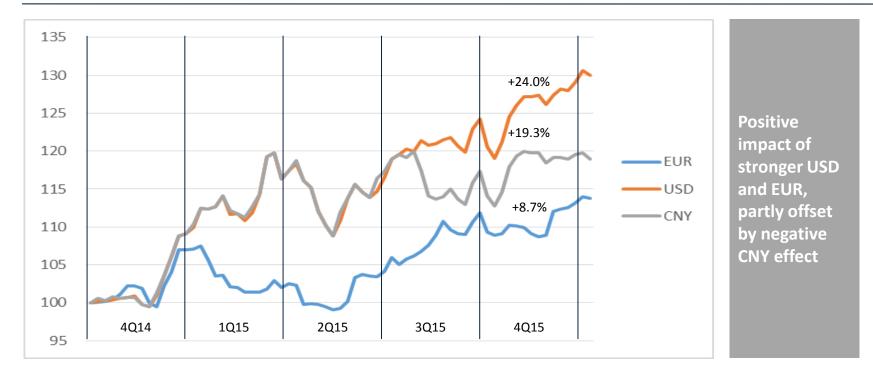
#### **Ordinary cashflow from operations**

• 343 MNOK (312 MNOK in 4Q 2014)

#### Solidity

- 54% equity
- NIBD/EBITDA = 0.7x (Rolling 12 months)
- Board propose dividend of NOK 1.75 (NOK 1.45 last year)

## CURRENCY



#### **Revenues and expenses per currency;**



	EUR*	USD	NOK	SEK	OTHER	TOTAL
Revenues	45 %	30 %	5 %	10 %	10 %	100 %
Expenses	45 %	25 %	10 %	10 %	<sup>10 %</sup> K	100 %
EBITA	45%	50 %	- 15 %	10 %	10 %	100 %
* EUR includes DKK Mainly CNY					inly CNY	



## **CURRENCY EXPOSURE**

#### Revenues and expenses per currency;

#### NOTE: Rounded figures

	EUR*	USD	ΝΟΚ	SEK	OTHER	TOTAL
Revenues	45 %	30 %	5 %	10 %	10 %	100 %
Expenses	45 %	25 %	10 %	10 %	10 %	100 %
EBITA	45%	50 %	- 15 %	10 %	10 %	100 %

\* EUR includes DKK

#### 10% change in NOK towards other currencies will impact;

	Revenues	Expenses	EBITA
EUR*	4.5%	4.5%	4.5%
USD	3.0%	2.5%	5.0%
SEK	1.0%	1.0%	1.0%
OTHER	1.0%	1.0%	1.0%
ALL	9.5%	9.0%	11.5%

\* EUR includes DKK

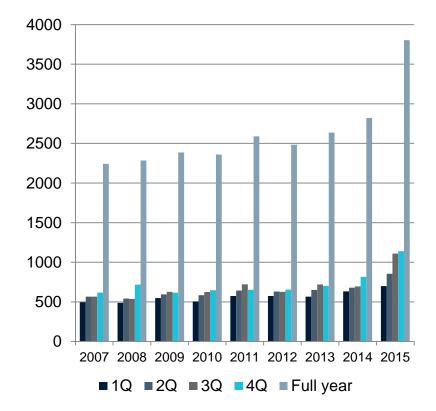
#### **HEDGING POLICY**

- 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

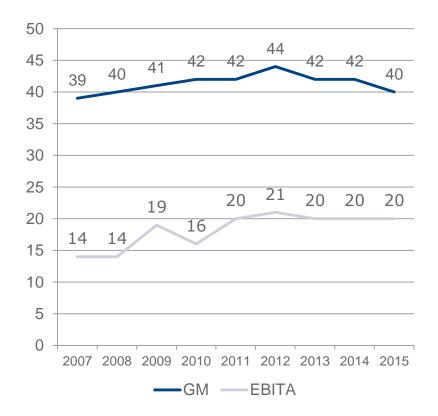


## COLLECTION SOLUTIONS – SEGMENT FINANCIALS

Revenue development NOK million

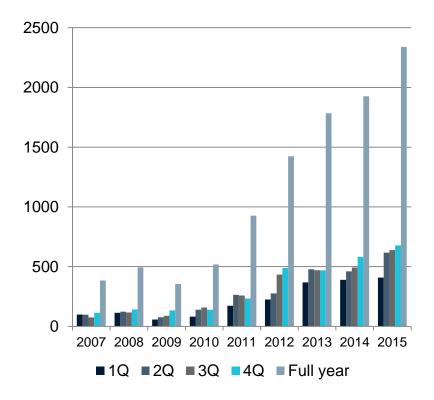


#### **Gross and EBITA margin development** Percent



## SORTING SOLUTIONS – SEGMENT FINANCIALS

#### Revenue development NOK million



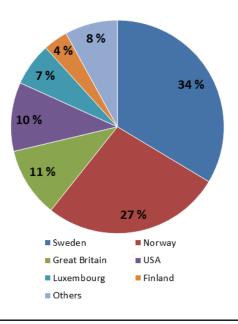
#### **Gross and EBITA margin development** Percent



## TOMRA SHAREHOLDER STRUCTURE

Top 10 shareholders as of 06 January 2016								
1	Investment AB Latour	36 560 000	24.7%					
2	Folketrygdfondet	12 152 055	8.2%					
3	Skandinaviska Enskilda (Client Account)	9 338 329	6.3%	(NOM)				
4	Nordea Nordic Small	2 995 407	2.0%					
5	The Bank of New York BNY Mellon	2 849 428	1.9%	(NOM)				
6	Clearstream Banking	2 793 293	1,9%	(NOM)				
7	J.P. Morgan Chase (NORDEA Treaty Account)	2 684 049	1.8%	(NOM)				
8	ODIN Norge	2 246 781	1.5%					
9	Goldman Sachs & Co	2 102 056	1.4%	(NOM)				
8	JP Morgan Luxembourg NORDEA	1 863 135	1.1%	(NOM)				
	Sum Top 10	75 360 653	50.9%					
Other shareholders		72 659 425	49.1%					
	TOTAL (5,875 shareholders)	148 020 078	100.0%					

Shareholders by country



Source: VPS

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