

# **AB LATOUR, CAPITAL MARKETS DAY 21 MAY 2012**

**Stefan Ranstrand  
President/CEO  
Tomra Systems ASA**

TOMRA was founded on an innovation in 1972 that began with design, manufacturing and sale of reverse vending machines (RVMs) for automated collection of used beverage containers

Today, TOMRA creates sensor-based solutions for optimal resource productivity – helping our customers to increase their financial results and reduce their environmental impact

TOMRA is active in more than 50 markets worldwide and had total revenue of ~3.7 billion NOK in 2011

TOMRA has over 1,800 employees and is publicly listed on the Oslo Stock Exchange



The TOMRA Group continues to innovate and provide cutting-edge solutions for optimal resource productivity within two main business areas:

**Collection Solutions** (reverse vending, material recovery and compaction)

**Sorting Solutions** (recycling, mining and food processing industries)

A high-resolution satellite image of Earth from space, showing the Middle East, North Africa, and parts of Europe and Asia. The image is centered on the Persian Gulf region, with the Arabian Peninsula, the Red Sea, and the Mediterranean Sea visible. The landmasses are shown in shades of brown and tan, while the oceans are a deep blue. White clouds are scattered across the scene, particularly over the oceans and parts of the landmasses. The Earth's curvature is clearly visible against the black background of space.

“A TINY BLUE AND GREEN OASIS OF LIFE IN  
A COLD UNIVERSE.” – DAVID SUZUKI





THE WORLD POPULATION AND STANDARD  
OF LIVING IS INCREASING DRAMATICALLY







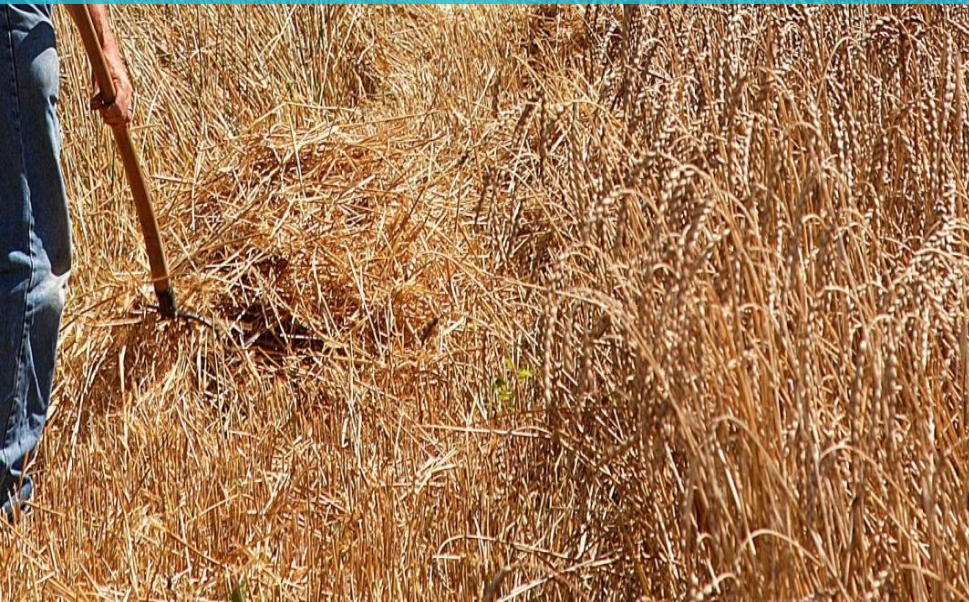
WORLD RESOURCES ARE UNDER  
UNPRECEDENTED PRESSURE







RESOURCE PRODUCTIVITY MUST INCREASE  
TO ENSURE SUSTAINABLE DEVELOPMENT

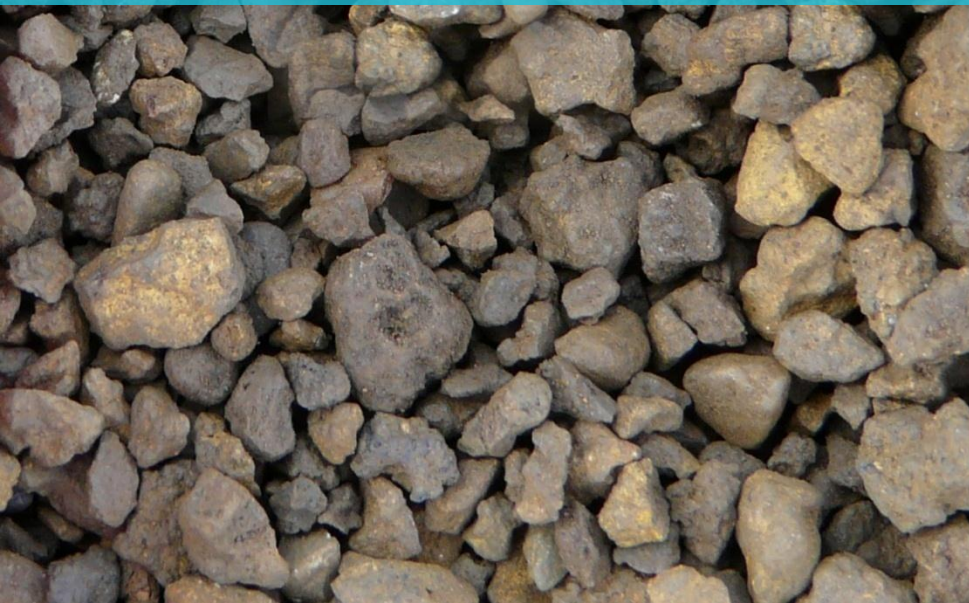




At TOMRA we have always thought this way.  
From inventing the world's first reverse vending  
machine in 1972 to providing the most  
innovative sensor-based sorting systems today.



TOMRA IS TRANSFORMING HOW  
WE OBTAIN OUR RESOURCES...



Our sorters can reduce water consumption  
with 3-4 cubic meters per ton ore

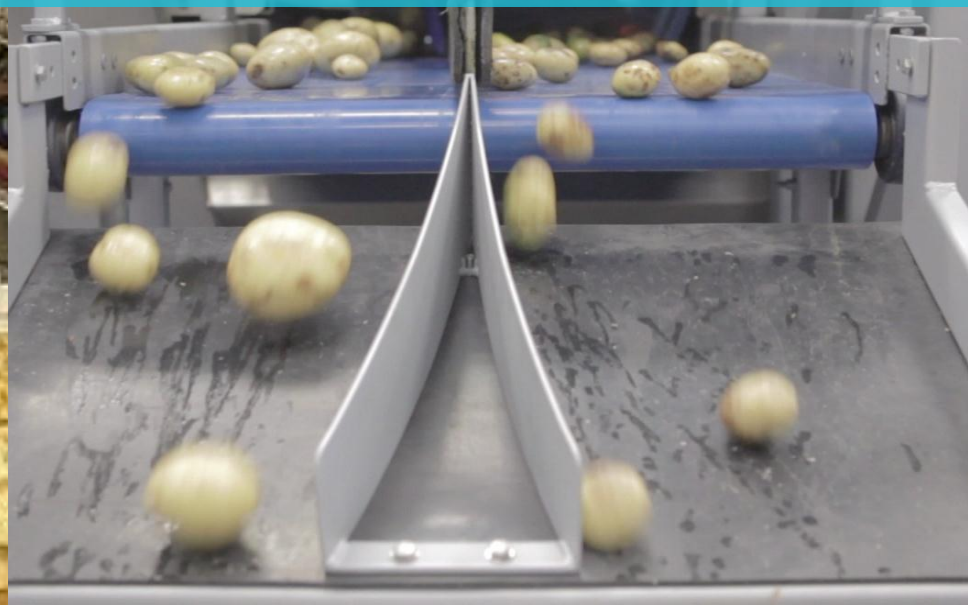
Our sorters can reduce energy consumption  
in mining by 15%

Our sorters can increase recovery of valuable  
minerals by up to 25%





TOMRA IS TRANSFORMING HOW  
WE USE OUR RESOURCES...



Our optical sorters can analyze 25 tons of product per hour, maximizing yield and recovery while reducing waste, energy, and chemical use

We recover 5% - 10% of the produce, through higher yields and better utilization, reducing pressure on the food chain

That's approximately 25,000 trucks per year in potatoes alone





TOMRA IS TRANSFORMING HOW  
WE REUSE OUR RESOURCES...



30 billion used beverage containers are every year captured by our reverse vending machines

Our optical waste sorter can analyze and sort a football stadium covered with waste in less than 15 minutes

715,000 tons of metal is recovered every year by our metal recycling machines

Our vertical balers enable daily savings of ~20,000 transport movements, 160,000 liters of fuel and up to 50% of customers' waste handling costs



**Obtaining**

# TOMRA CREATES SENSOR-BASED SOLUTIONS FOR OPTIMAL RESOURCE PRODUCTIVITY

**Reusing**

**Using**

Today we see more opportunities for optimal resource productivity than ever before



RETURNS INTO VALUE...







WASTE INTO WEALTH...







YIELD INTO USAGE...







SOURCE INTO RESOURCE...

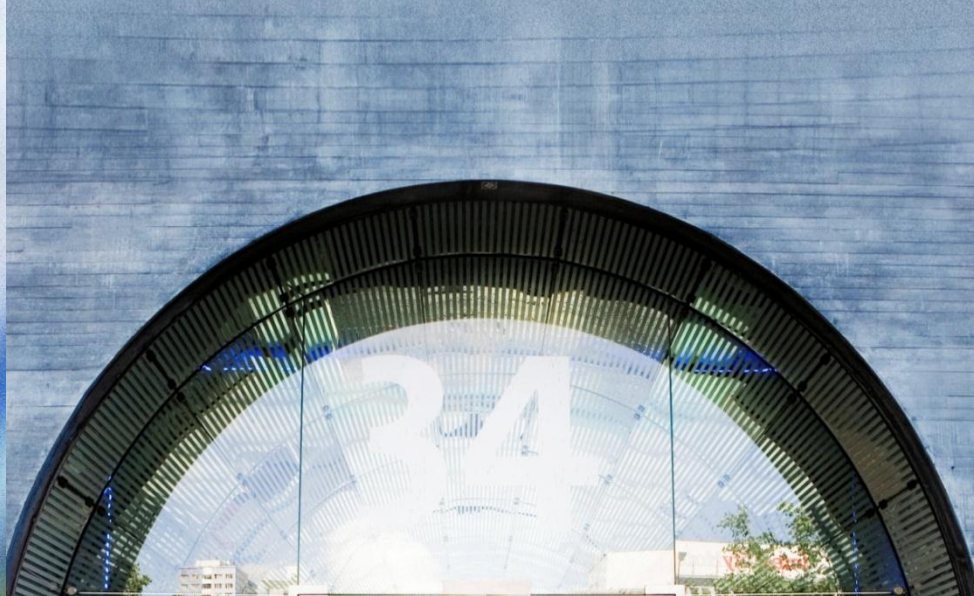




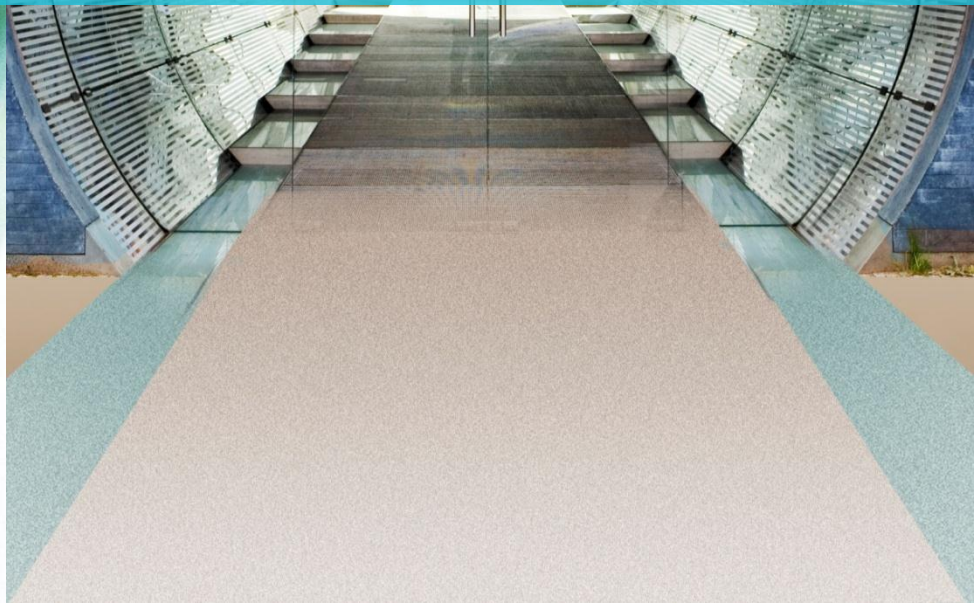


PURPOSE INTO PROFITS...





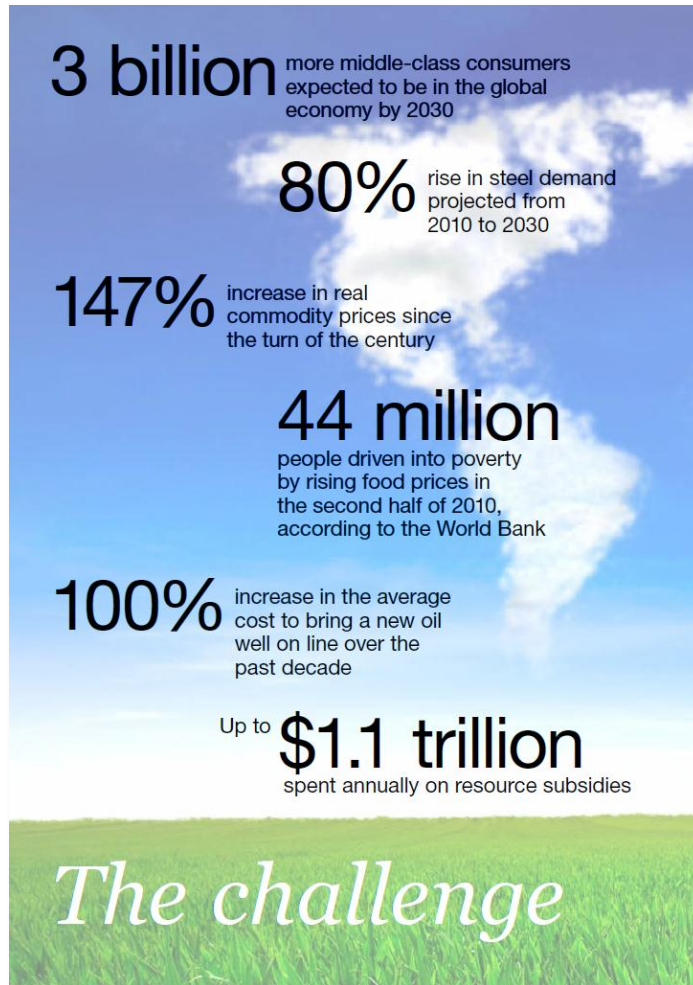
PROFITS INTO PROGRESS...



TOMRA invests 8% of its yearly revenue in R&D, to progress and create solutions to move past the false choice between the earth and the economy



# RESOURCE REVOLUTION: MEETING THE WORLD'S ENERGY, MATERIALS, FOOD AND WATER NEEDS



SOURCE: McKinsey



# This is the dawn of the resource revolution



**TOMRA is leading it**



# TOMRA IN SHORT

# TOMRA'S TWO BUSINESS AREAS



	<b>TOMRA</b> Reverse Vending Machines	<b>TITECH</b> Recycling
<b>Key activities</b>	Sale and service of solutions for automated collection of used beverage containers with deposit in retail stores	High speed identifying, sorting and processing of information: material, shape, size, color, defect, damage and location of objects
<b>Share of '11 sales</b>	~55%	~13%
<b>Employees</b>	960	175
<b>Customers</b>	Grocery retailers	Material recovery facilities, scrap dealers, metal shredder operators
<b>Market share</b>	~65%	~50-60%

	<b>ORWAK</b> Compaction	<b>commodas ultrasort</b> Mining
<b>Key activities</b>	The world's largest manufacturer of vertical balers	The leading provider of sensor-based sorting systems for the mining industry
<b>Share of '11 sales</b>	~5%	~4%
<b>Employees</b>	75	50
<b>Customers</b>	Retail, manufacturing industry, restaurant, catering & hotel, warehouse & distribution	Mining companies
<b>Market share</b>	~25%	~40-60%

	<b>TOMRA</b> Material Recovery	<b>ODENBERG</b> Food
<b>Key activities</b>	Pick-up, transportation and processing of used beverage containers and operation of a network of collection sites in USA	Optical sorting and processing solutions for food
<b>Share of '11 sales</b>	~15%	~8%, acquired in 2011
<b>Employees</b>	400	175
<b>Customers</b>	Grocery retailers and beverage manufacturers	Food growers, packers and processors
<b>Market share</b>	~80%	~10%

# INSTALLED BASE

## TOMRA Collection Solutions



**TOMRA**

### INSTALLED UNITS

Nordic	~15,000
Germany	~23,000
Other Europe	~12,000
Japan	~500
North America	~15,000
South America	~1000

**TOTAL ~67,000**

**ORWAK**

### INSTALLED UNITS

Nordic	~16,000
UK	~17,000
Other Europe	~26,000
Asia/Oceania	~4,000
North America	~4,000
Middle East/Africa	~500

**TOTAL ~67,500**

## TOMRA Sorting Solutions



**TITECH**

### INSTALLED UNITS

Europe	1850
Asia	220
US / Canada	500
Other	380

**TOTAL 2,950**

**commodas  
ultrasort**

### INSTALLED UNITS

Europe	63
US / Canada	33
Australia	11
South Africa	39
Other	24

**TOTAL 170**

**ODENBERG**

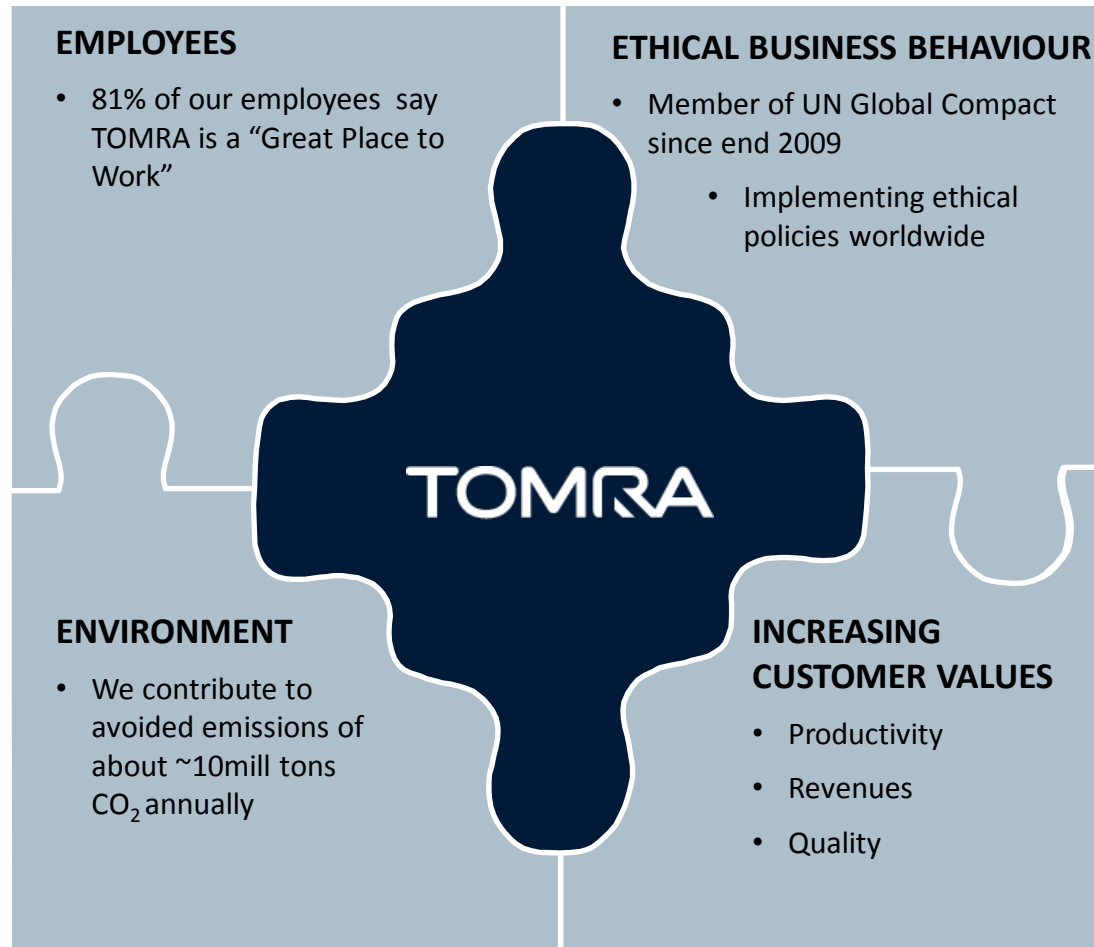
### INSTALLED UNITS

Europe	~1,150
US/Canada	~1,350
Asia	~120
Other	~100

**TOTAL ~2,720**

# USING THE POWER OF BUSINESS TO DO GOOD

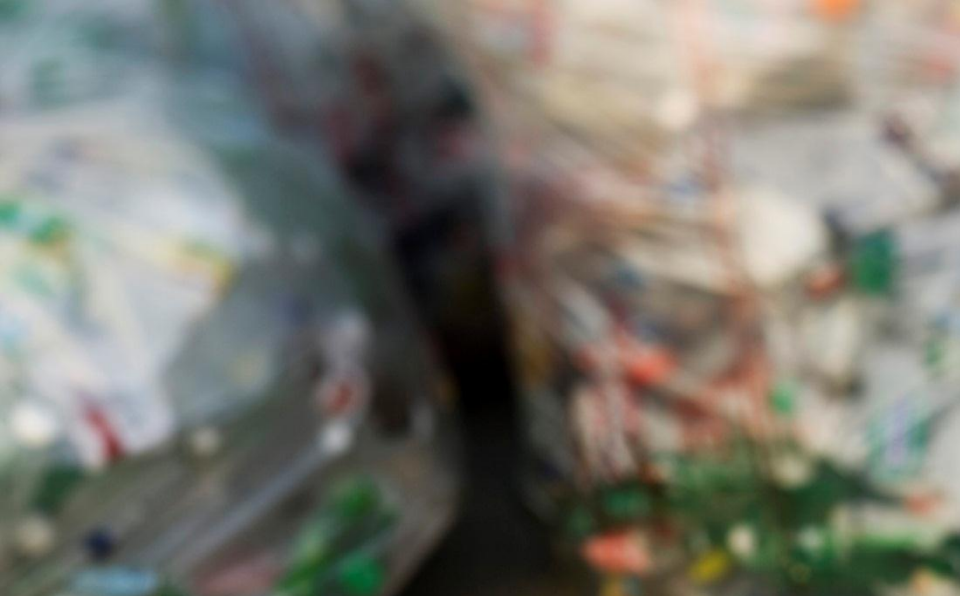
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# TOMRA IN DEPTH







# TOMRA REVERSE VENDING – TRANSFORMING BEHAVIOR

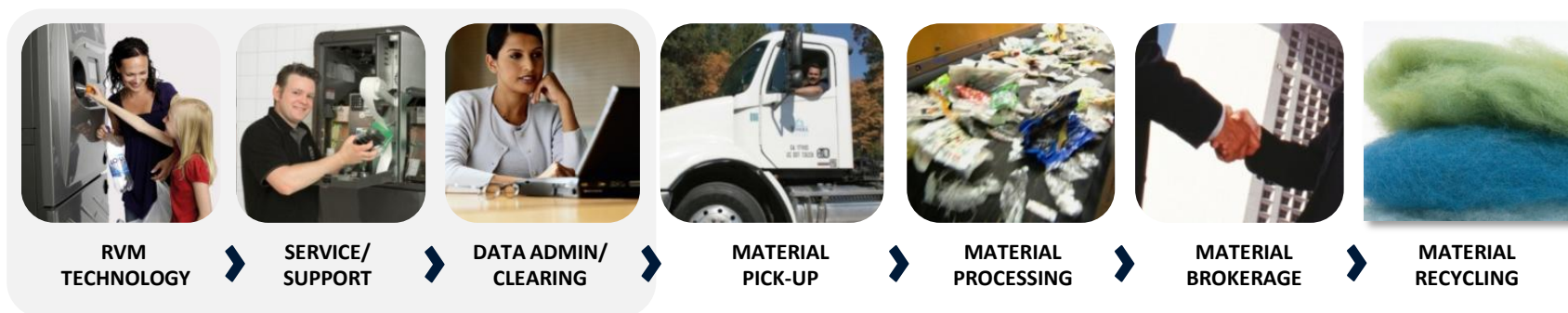


# THE USED BEVERAGE CONTAINER RECYCLING VALUE CHAIN

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



## RVM-based UBC recycling value chain





# RVM PRODUCT PORTFOLIO



## TOMRA RECOGNITION TECHNOLOGY

TOMRA's reverse vending machines are equipped with TOMRA's unique patented container recognition technology, **Sure Return™**. This technology provides continuous video surveillance of inserted items, ensuring correct deposit refunds, the best protection against fraud, and the market's fastest return process for your customers.

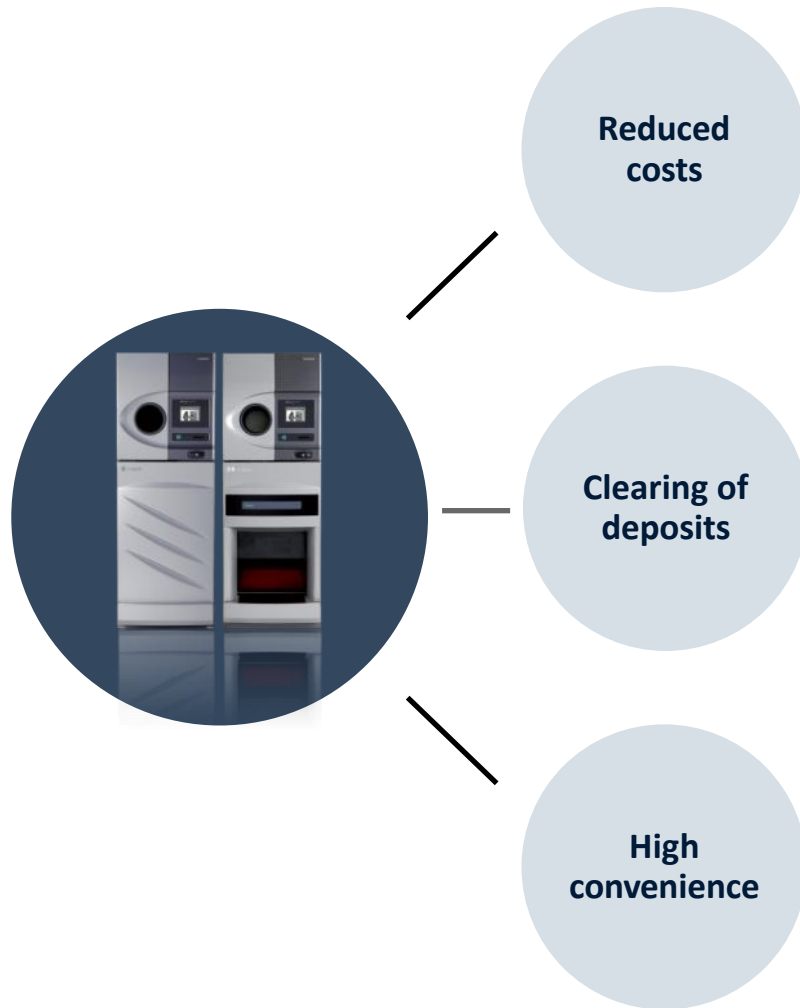


T-820 is in addition equipped with **True Vision™** crate recognition technology offering premium recognition and classification performance, even in the most complex markets. This patented high quality optical system also offers the best fraud protection and the fastest user interface available.



# VALUE PROPOSITION

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- RVMs reduce need for manual labor and will typically have a payback period of 12-18 months for medium sized stores
- Improved logistics and handling
- RVMs keep track of all deposit transactions – in Germany alone the total transaction volume has an annual value in excess of ~4 bn EUR
- RVMs have several fraud detection features to prevent paying out deposit on non-eligible containers
- RVMs make it convenient and easy for consumers to return their empty containers
- RVMs are clean and efficient and ensure correct redemption of containers

# MARKET SEGMENTS AND BUSINESS MODELS

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1

## **Mandatory (non-refillable) deposit markets**

- Non-refillables account for 75% of all containers sold and are popular due to simplified distribution/manufacturing and consumer marketing aspects
- Some markets have MANDATORY deposit systems to ensure proper collection of containers
- RVMs are used to make these systems more effective and efficient

2

## **Voluntary (refillable) deposit markets**

- Refillable containers account for ~25% of all containers sold and have traditionally been used by local and regional breweries outside NA
- Refillable containers are typically part of a VOLUNTARY deposit system to incentivize consumers to return containers for reuse
- RVMs are used to make this system more effective and efficient

3

## **Other incentive-based markets (non-deposit)**

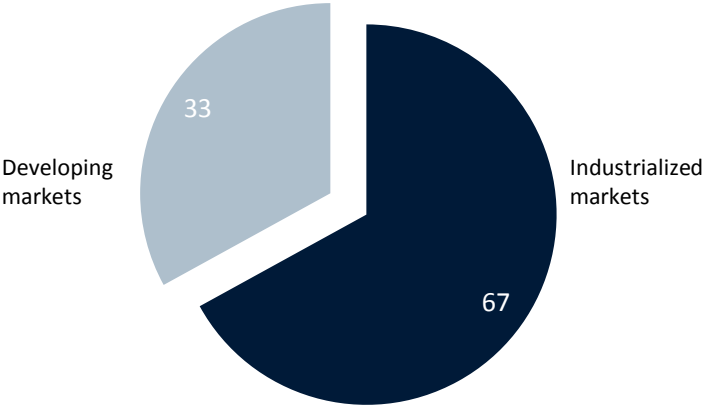
- In markets without deposit there might still be a need to organize collection of empty containers, either to support overall recycling targets/ambitions or to demonstrate corporate social responsibility
- Although the rationale for using RVMs varies from market to market, RVMs can in general be used to facilitate the collection process

# MARKET SIZE AND POTENTIAL

INDICATIVE

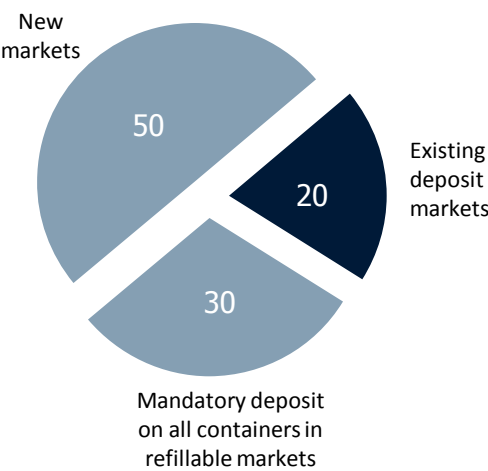
## Total theoretical market

100% = ~750,000 RVMs



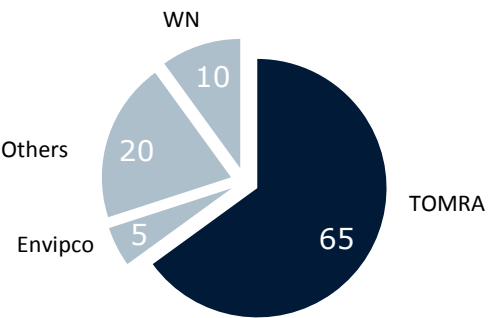
## Potential available market

100% = ~500,000 RVMs



## Developed market

100% = ~100,000 RVMs

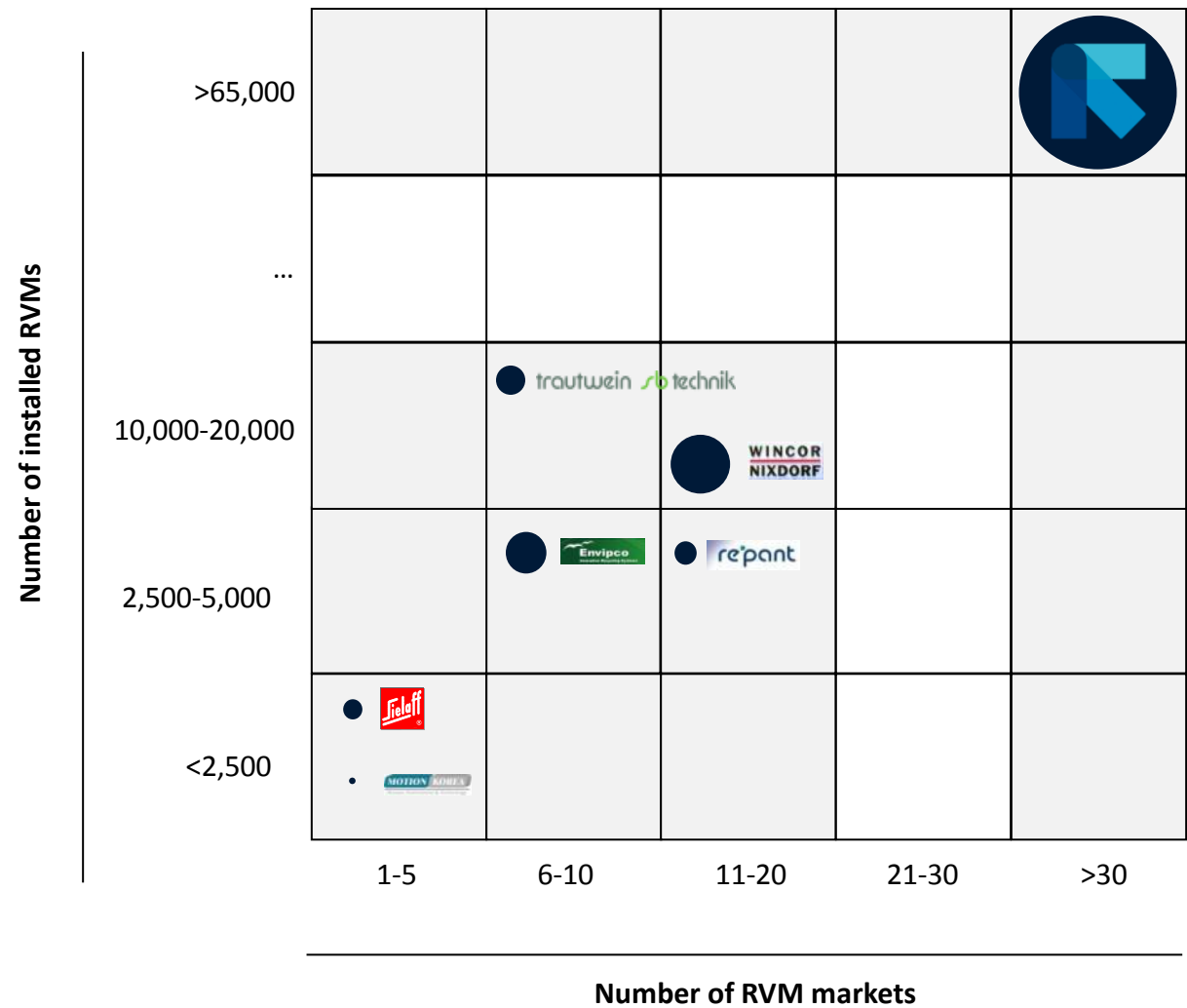


Source: TOMRA analysis

# COMPETITIVE LANDSCAPE

INDICATIVE

● Annual revenue from RVM



Source: TOMRA analysis

# OUR STRATEGY

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## Protect and defend existing business

- Cost leadership
- Increased differentiation

## Spur growth in existing markets

- Accelerated machine replacement
- Incremental revenue streams on installed base
- New segments/channels

## Succeed in new markets

- New deposit markets
- Viable non-deposit business models

# COST LEADERSHIP

**Overall ambition to reduce COGS on new RVMs by 40% from 2010 to 2015**

- 20% by aggressive sourcing and production strategy
- 15% by technology and design for low cost manufacturing
- 5% by other means (volume increase, automation, quality)

## Design for low cost manufacturing

Further standardization of modules and machines	➔	<i>Economies of scale</i>
Improve design and allow late customization	➔	<i>Avoid reduced flexibility</i>
Increase use of tooling – plastics, sheet metal, covers	➔	<i>More effective production</i>
Redesign parts/modules that are non-TOMRA spec	➔	<i>Better sourcing</i>
Reduce number of parts	➔	<i>Reduced complexity</i>

## Low cost sourcing/production in China

### PHASE 1

- Establish a local sourcing network
- Source components in China (cables, electronics, motors, cabinets) for deliveries to assembly plants
- Build up know-how and staff

### PHASE 2

- Start sub-assembly / module production for deliveries to plants

### PHASE 3

- Production of high volume modules and products

# INNOVATION LEADERSHIP – 2011 LAUNCHES

## MultiPac



### Taking uptime to new levels

- Redundancy to secure maximum **uptime**
- Intuitive and easy to operate and to clean
- Space efficient multi machine installations

## T-820 Touch



### Setting new standards in usability for owner, user and operator

- Intuitive and fast to use
- Multiple languages
- Run promotion in screen; chain/store can customize and also sell the space (video/audio/picture)
- Multiple donation receivers; split sum possibility

## TOMRAPlus



### A new management tool for proactive maintenance and administration of your reverse vending system

- A direct link to all reverse vending installations for store owners and chains
- Get a running overview and possibility for management of entire fleet of installations
- Utilize the reverse vending system as a marketing tool by uploading campaigns

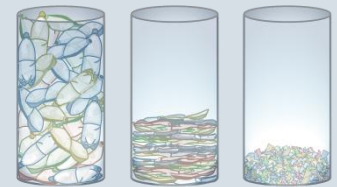
## UNO Promo



### Turning the RVM into a promotional vehicle

- A tool for building new revenue streams
- Ideal for building CSR image and new marketing alliances
- Cross brand couponing and advertising in screen
- Personalized loyalty building activities via card reader

## Flake



### Boosting operational uptime and logistical efficiency

- More capacity, greater cost savings, and better for the environment!
- Less time spent on bin emptying means more time for core business
- Less bin changes - greater machine uptime
- More space with reduced volume



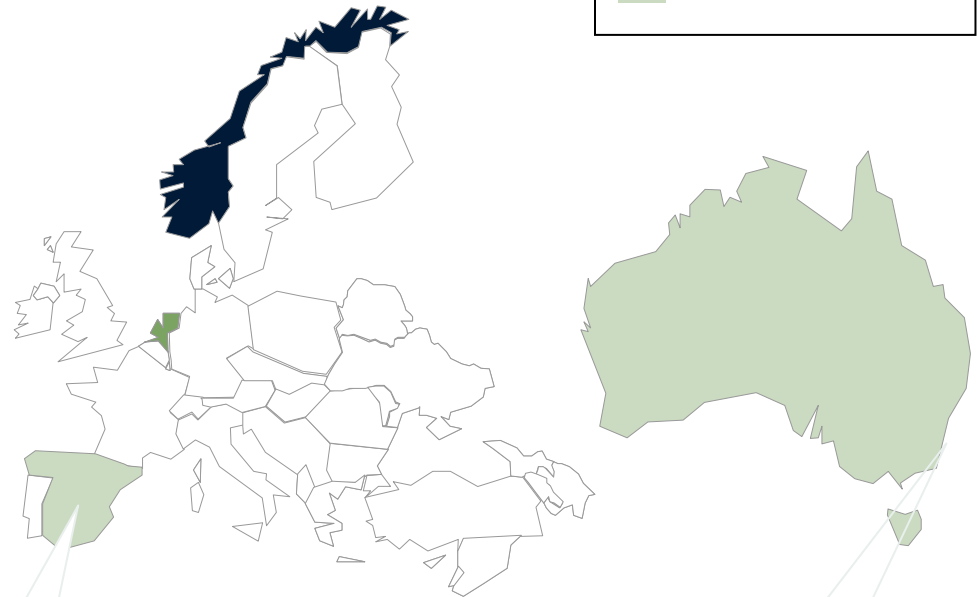
# MARKET DEVELOPMENT

## North America

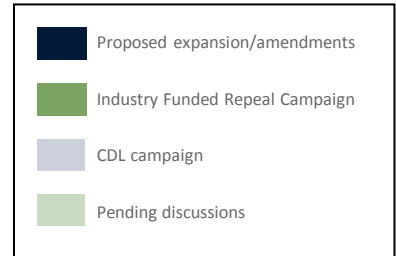


Spain:  
15,000-20,000 RVMs  
fully penetrated

## Europe/Other



Australia:  
4,000-5,000 RVMs fully  
penetrated

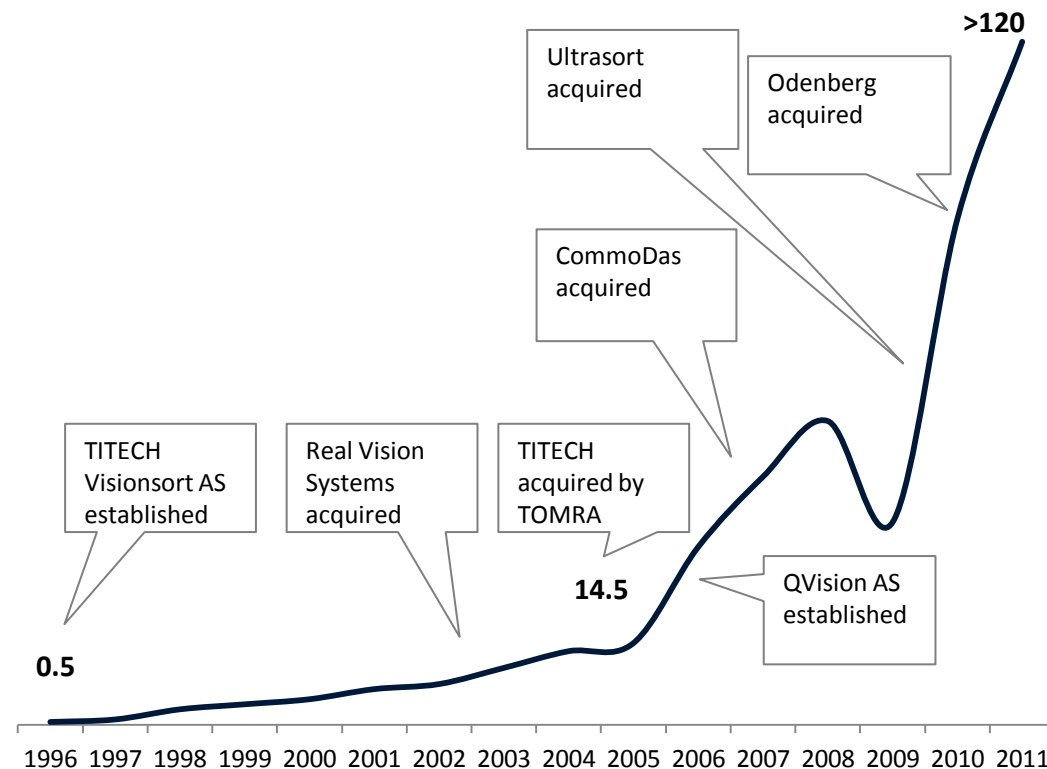




# STRONG REVENUE GROWTH SINCE INCEPTION IN 1996

## Revenue development and key milestones

EUR million

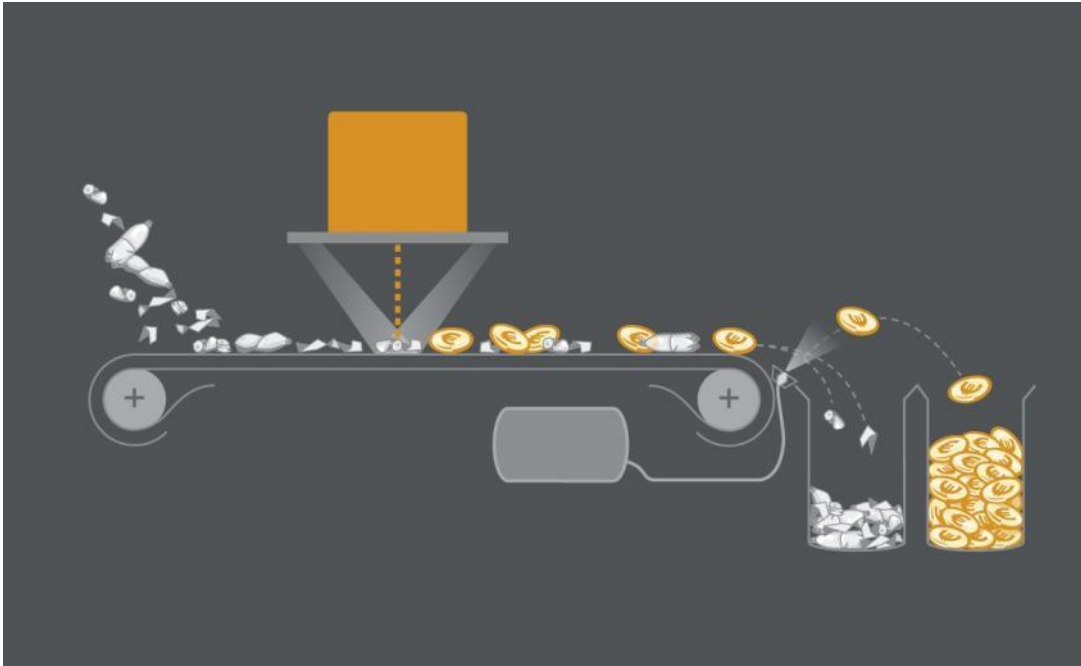


- Revenue growth, organic plus inorganic, of ~35% per year from 2004-11
- Technology base and segment/application knowledge expanded both through acquisitions and in-house ventures
- Growth driven by:
  - Price increases in food, commodities & landfill costs
  - Favorable changes in regulatory framework (DSD, WEEE, ELV, etc)
  - Strong sales and service network
  - Technology leadership
  - Higher quality and food safety demands



# OUR CORE TECHNOLOGY: THE EYES AND BRAINS OF SORTING AND PROCESSING

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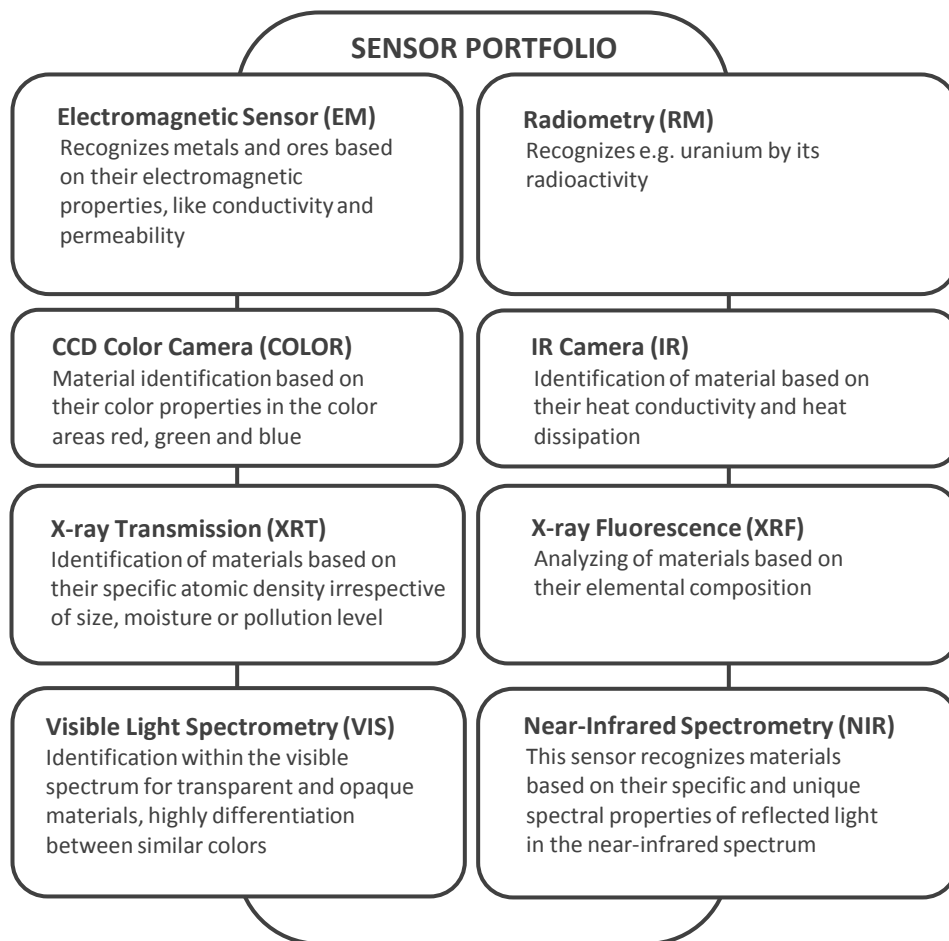


- High-tech sensors are utilized to **identify objects** on a conveyor belt
- **High speed processing** of information: material, shape, size, color, defect, damage and location of objects
- **Precise sorting** by air jets or mechanical fingers

# A COMMON SENSOR BASED TECHNOLOGY PORTFOLIO

	[m]	Sensor/ Technology	Material Property	Segment
Gamma-radiation	$10^{-12}$	RM (Radiometric)	Natural Gamma Radiation	Mining
	$10^{-11}$	XRT (X-ray transmission)	Atomic Density	Recycling, Mining, Food
X-ray	$10^{-10}$			
	$10^{-9}$	XRF	X ray fluorescence (Elemental Spectroscopy)	Recycling, Mining
Ultraviolet (UV)	$10^{-8}$			
Visible light (VIS)	$10^{-7}$	COLOR (CCD Color Camera)	Reflection, Absorption, Transmission	Recycling, Mining, Food
	$10^{-6}$			
Near Infrared (NIR)	$10^{-5}$	PM (Photometric)	Monochromatic Reflection /Absorption of Laser Light	Mining
	$10^{-4}$			
Infrarot (IR)	$10^{-3}$	NIR / MIR (Near/Medium Infrared Spectrometry)	Reflection, Absorption (Molecular Spectroscopy)	Recycling, Mining, Food
Microwaves	$10^{-2}$			
	$10^{-1}$	LIBS	Laser induced breakdown spectroscopy	Recycling, Mining
Radio waves	$10^1$			
	$10^2$	EM (Electro-Magnetic sensor)	Conductivity, permeability	Recycling, Mining, Food
Alternating current (AC)	$10^3$			
	$10^4$			

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






- In-house R & D department with more than 70 people
- Partnership with leading R&D institutions: SINTEF, CTR, Fraunhofer ILT
- 8% of revenue invested in R&D
- 10 test centers worldwide



Test center in Koblenz, Germany

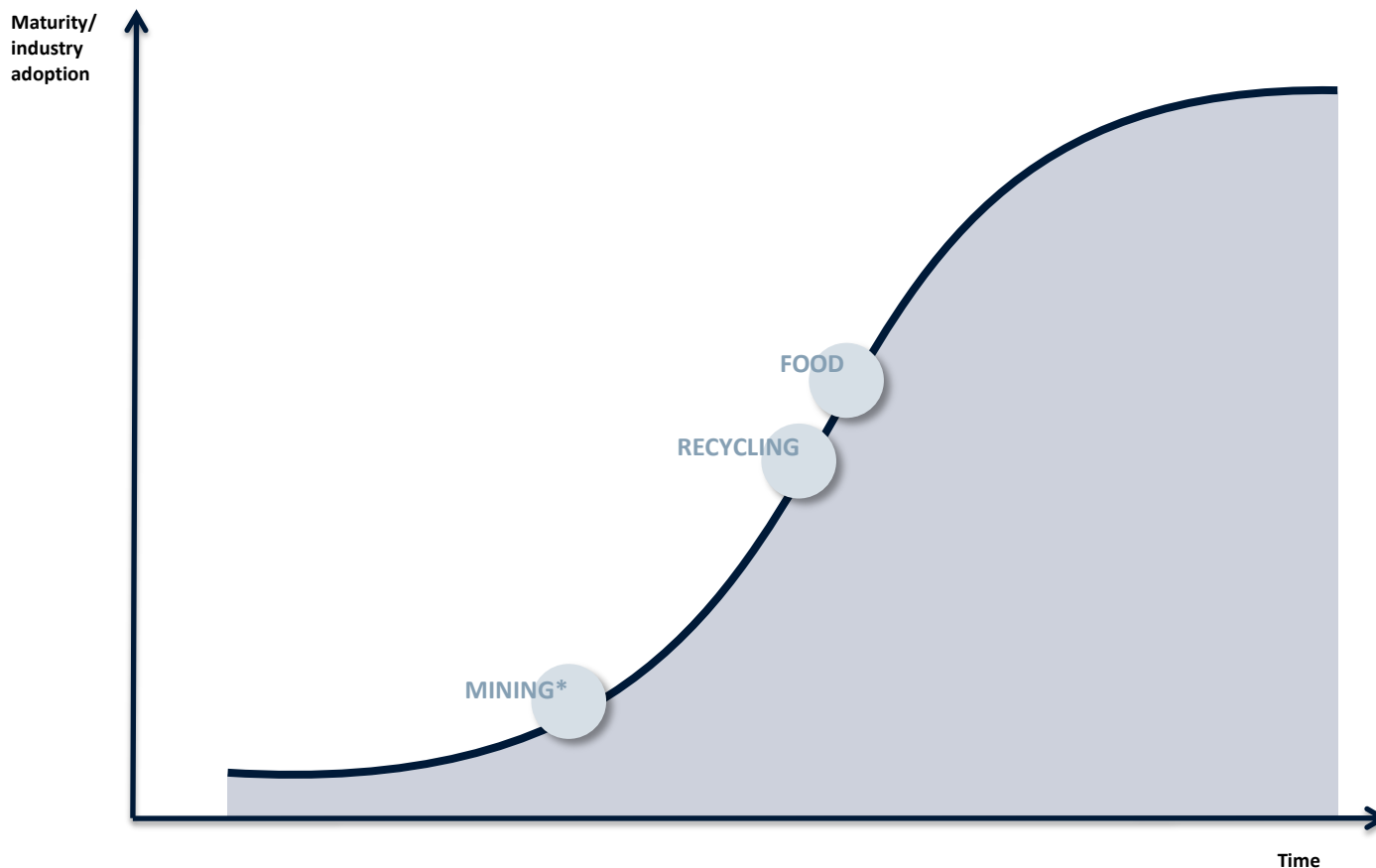


# WHY SENSOR-BASED SORTING?

	 <b>TOMRA</b> SORTING SOLUTIONS   <b>RECYCLING</b>	 <b>TOMRA</b> SORTING SOLUTIONS   <b>MINING</b>	 <b>TOMRA</b> SORTING SOLUTIONS   <b>FOOD</b>
<b>INCREASE REVENUES</b>	<ul style="list-style-type: none"> <li>• Increase purity of sellable materials</li> <li>• Increase recovery rate</li> <li>• Increase capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Increase recovery of valuable metals, minerals, diamonds and gems from ores</li> <li>• New technology give access to old dumps</li> </ul>	<ul style="list-style-type: none"> <li>• Increase yield</li> <li>• Increase throughput</li> </ul>
<b>REDUCE COSTS</b>	<ul style="list-style-type: none"> <li>• Reduce labor requirements</li> <li>• Lower operating and service costs</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce energy consumption</li> <li>• Reduce water consumption</li> <li>• Less wear and tear</li> <li>• Less rocks needs crushing</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce labor requirements</li> <li>• Lower operating and service costs</li> <li>• Reduce waste</li> </ul>
<b>OTHER BENEFITS</b>	<ul style="list-style-type: none"> <li>• Consistent quality of output streams</li> <li>• Increase flexibility of production line</li> <li>• Monitor material composition</li> </ul>	<ul style="list-style-type: none"> <li>• Less environmental impact</li> <li>• Reduce carbon footprint</li> <li>• Easier permitting</li> </ul>	<ul style="list-style-type: none"> <li>• Food safety</li> <li>• Increased and consistent quality and safety</li> <li>• Increased flexibility of production line</li> <li>• Production reporting and analysis</li> </ul>

# ADOPTION OF SENSOR-BASED SORTING AT DIFFERENT MATURITY LEVELS

INDICATIVE



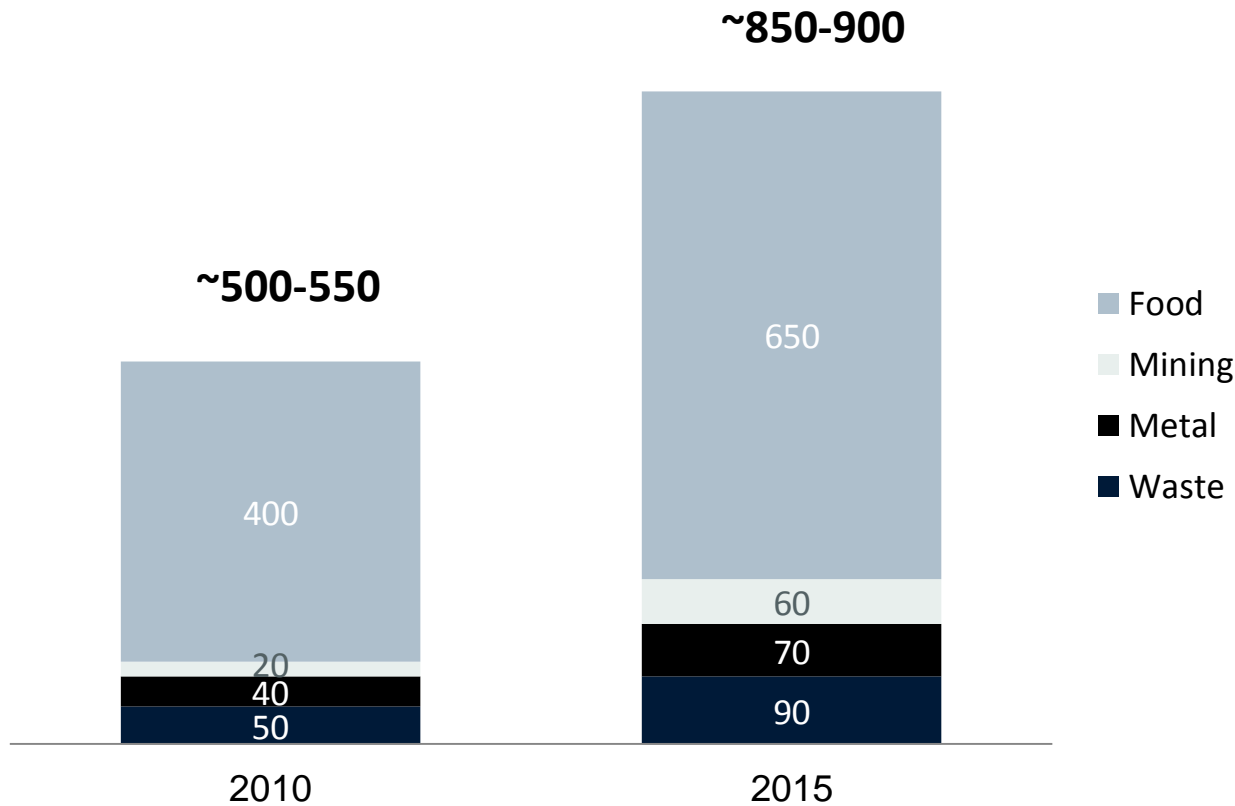
\* In certain mining sub-segments, such as industrial minerals and diamonds, sensor-based sorting is a more mature technology.

# MARKET SIZE AND POTENTIAL

ESTIMATES

## Total annual market size for different sensor-based sorting segments

EUR million



Source: TOMRA analysis



# OUR STRATEGY

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## Maintain technology leadership position

- Continue to invest heavily in R&D
- Bring new and enabling technology to the market
- Further develop web of partners

## Expand geographically

- Aggressively target promising regions and markets
- Leverage market presence across entire portfolio

## Cost leadership

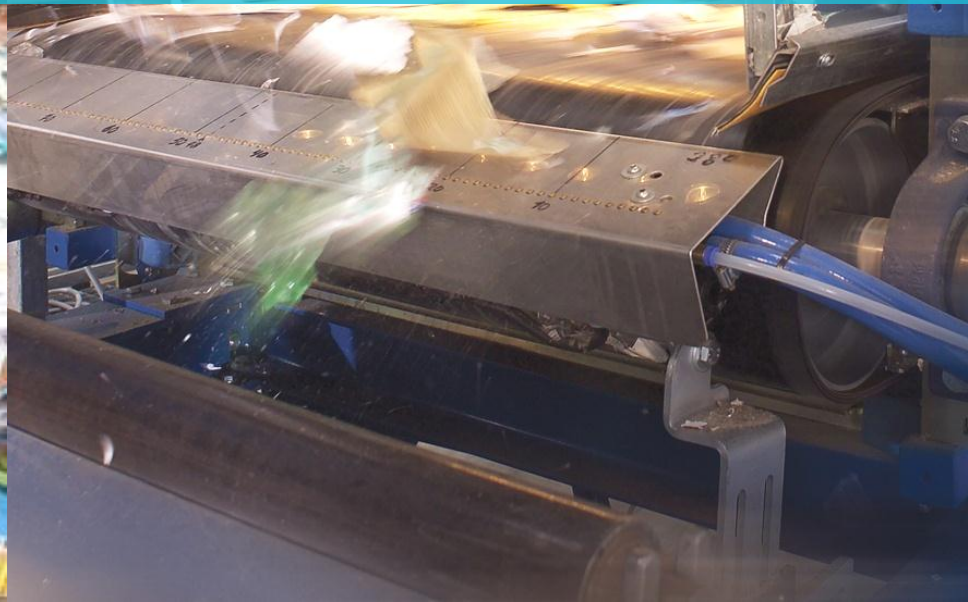
- Utilize our market leader position to maximize economies of scale effect
- Effective sourcing in combination with product friendly R&D

## Use M&A to consolidate market and enter new business streams

- New verticals/business streams in sensor-based sorting
- Increase footprint and scale through consolidation



# TOMRA SORTING RECYCLING - TRANSFORMING EFFICIENCY AND QUALITY



# RECYCLING: APPLICATIONS AND SENSOR TECHNOLOGY



	HOUSEHOLD WASTE	PACKAGING	C & D	AUTOMOBILE SHREDDER	ELECTRONIC SCRAP
MATERIAL	<ul style="list-style-type: none"> <li>• Hard plastics</li> <li>• Plastic film</li> <li>• Mixed paper</li> <li>• RDF</li> <li>• Metals</li> <li>• Organics/ Biomass</li> </ul>	<ul style="list-style-type: none"> <li>• Plastics</li> <li>• Plastic film</li> <li>• Cardboard</li> <li>• Mixed paper</li> <li>• Deinking paper</li> <li>• Metal</li> </ul>	<ul style="list-style-type: none"> <li>• Inert material</li> <li>• Plastic film</li> <li>• Metals</li> <li>• Wood</li> <li>• Paper &amp; Cardboard</li> <li>• Plastics</li> </ul>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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



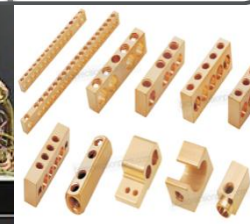
PE/PP flakes



Cleaned wood



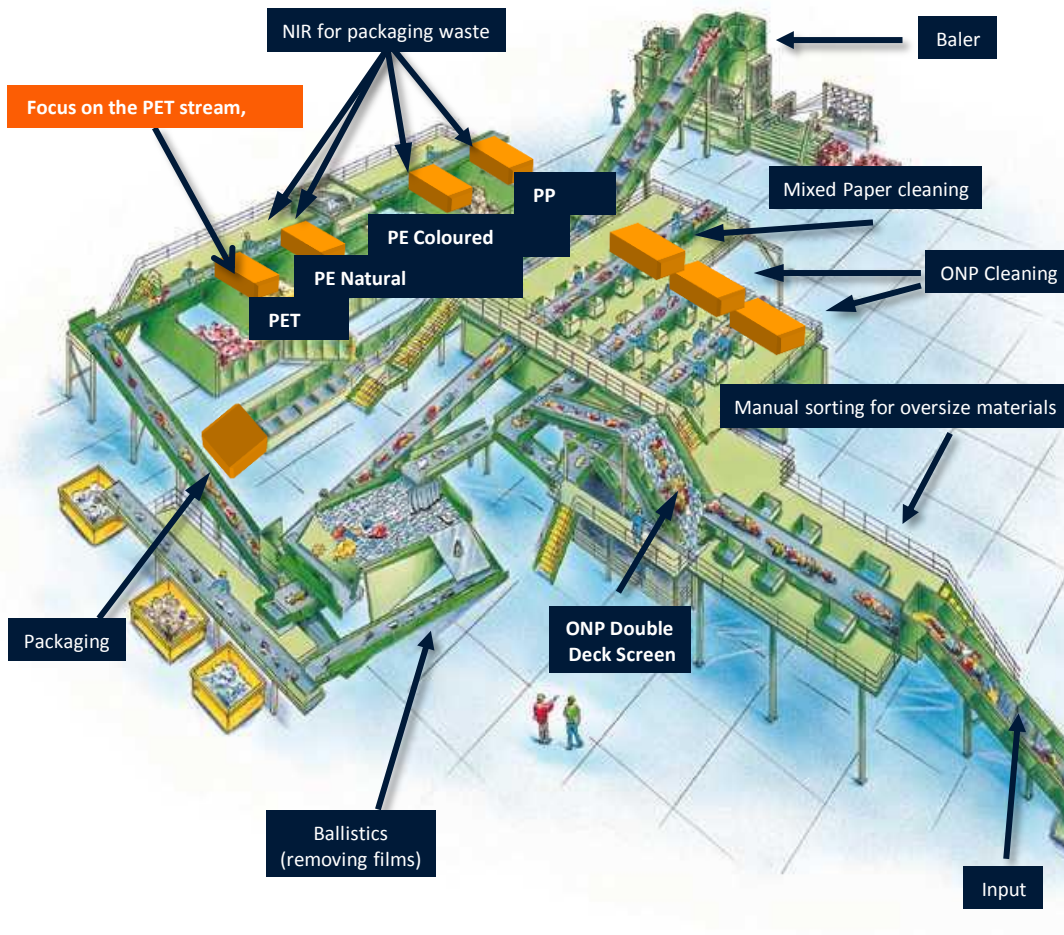
Copper Wire



Brass

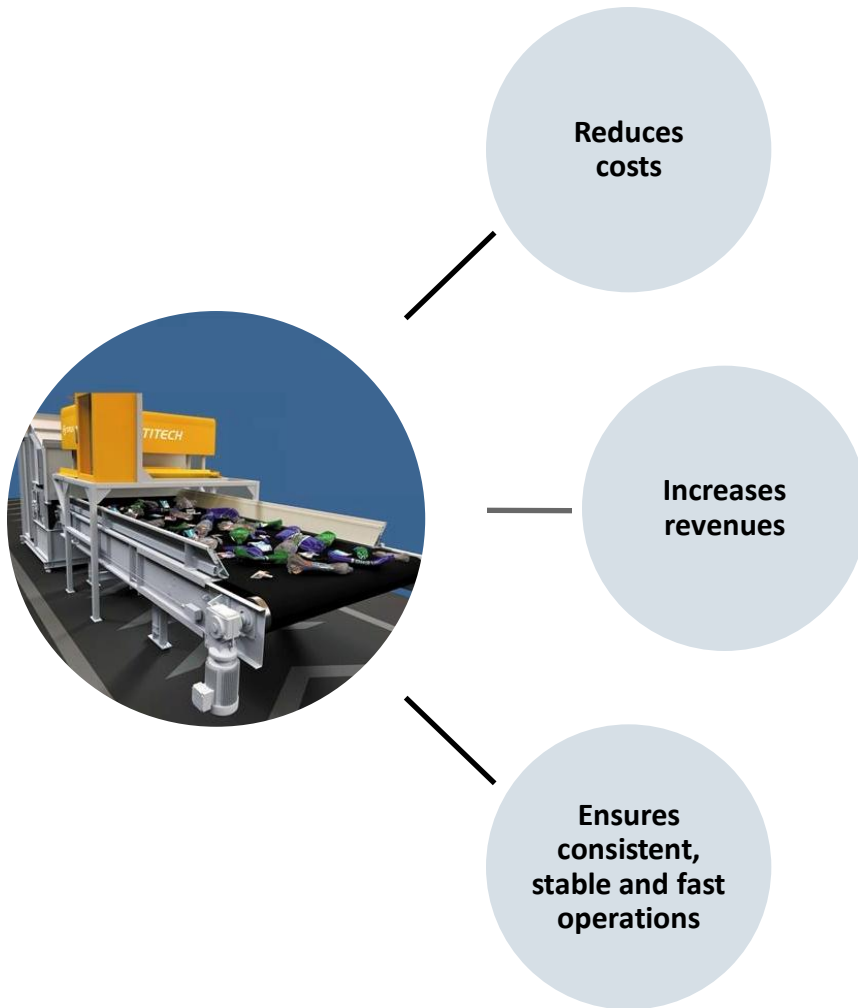


# AUTOMATED WITH TOMRA SORTING UNITS



Sorting of Municipal Solid Waste, Cyprus

# VALUE PROPOSITION FOR PET SORTING



- Reduces person-hours by up to 75 %
- Low operating and maintenance costs and reduced space requirements
- Avoids high turnover of personnel
- High precision (over 99% purity –ready for BtB processes)
- Easy to adapt to changing needs and sorting tasks
- Sorting of up to 10 tons per hour
- MTBF >7,000 hours, i.e., two years of two-shift operations
- Reduced accidents and less strain on staff
- Constant quality and performance
- Some sorting tasks impossible/difficult for manual sorters

# MARKET SEGMENTS IN RECYCLING

## Waste recycling



Packaging  
Sorting



Paper Sorting



Commercial &  
Industrial Waste  
Sorting



Mixed Municipal  
Solid Waste  
Sorting



Construction &  
demolition Waste  
Sorting



Refuse  
Derived Fuel



Single Stream  
Recycling



Pre-sorted  
Material Sorting

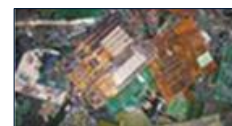
## Metal recycling



End of Life  
Vehicles  
Scrap Sorting



Ash  
Sorting



Electronic  
Scrap Sorting



Wire  
Recovery



Non-Ferrous  
Metals Sorting

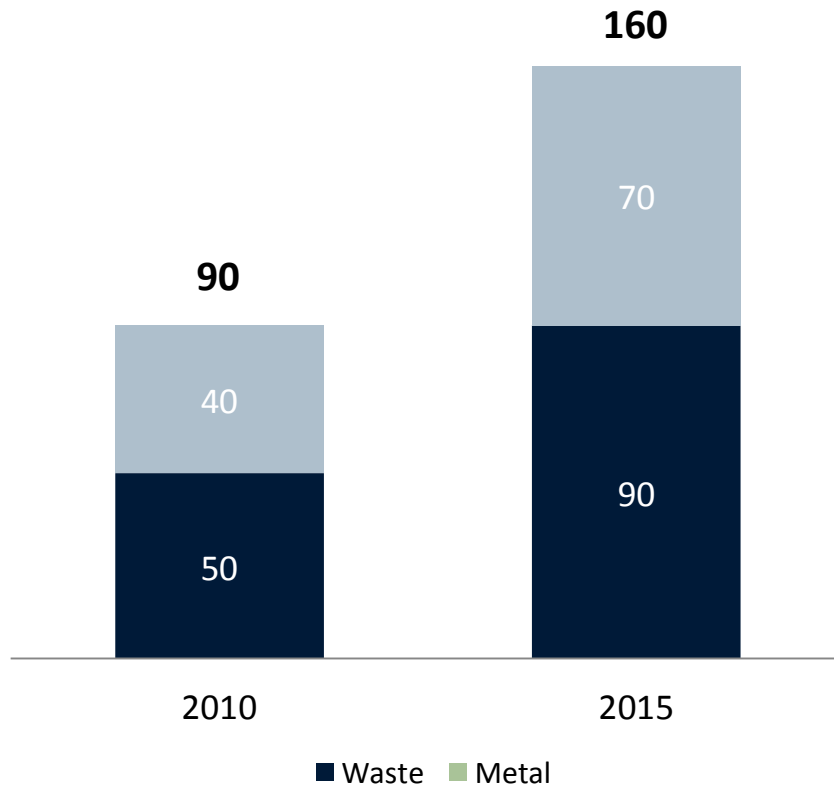


# MARKET SIZE AND POTENTIAL

ESTIMATES

## Total annual market size

EUR million



## Growth potential

- Market expected to grow at an annual rate of 10-15% overall
- TITECH expects to maintain its overall market share

## Drivers

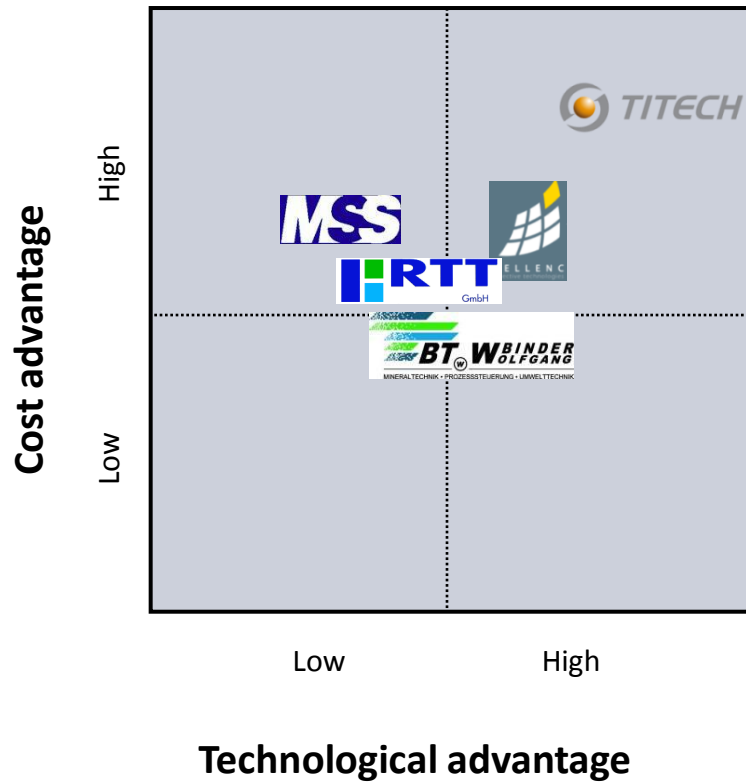
- Increased demand for raw material
- Higher labor costs
- Higher commodity prices
- Legislation (landfills, ELV, WEEE etc.)
- Adoption of technology in new markets (Asia, Latin America, Eastern Europe)
- New applications such as flake sorting

Source: TOMRA analysis

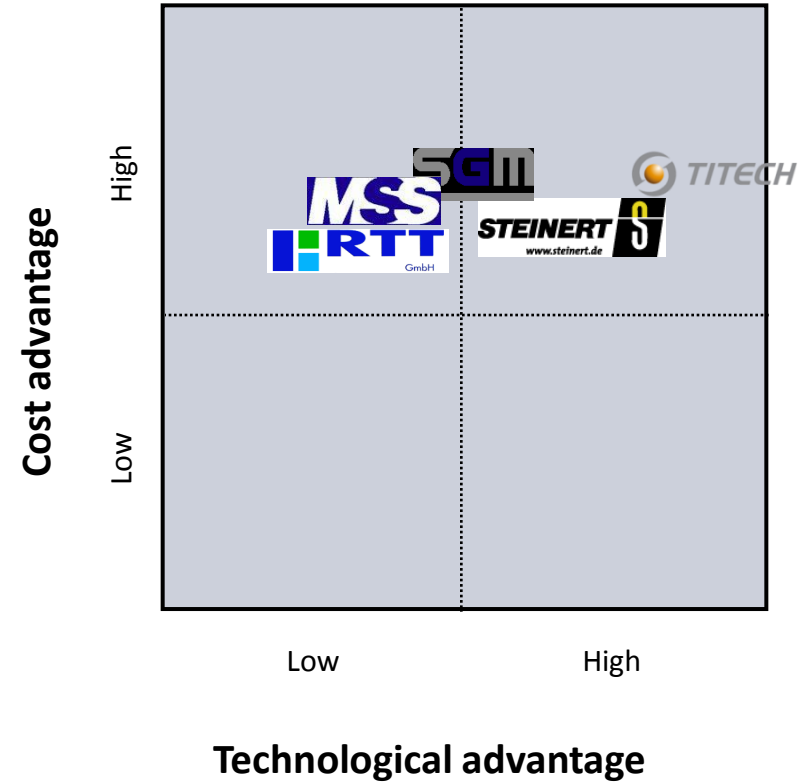
# COMPETITIVE LANDSCAPE

INDICATIVE

## Waste recycling

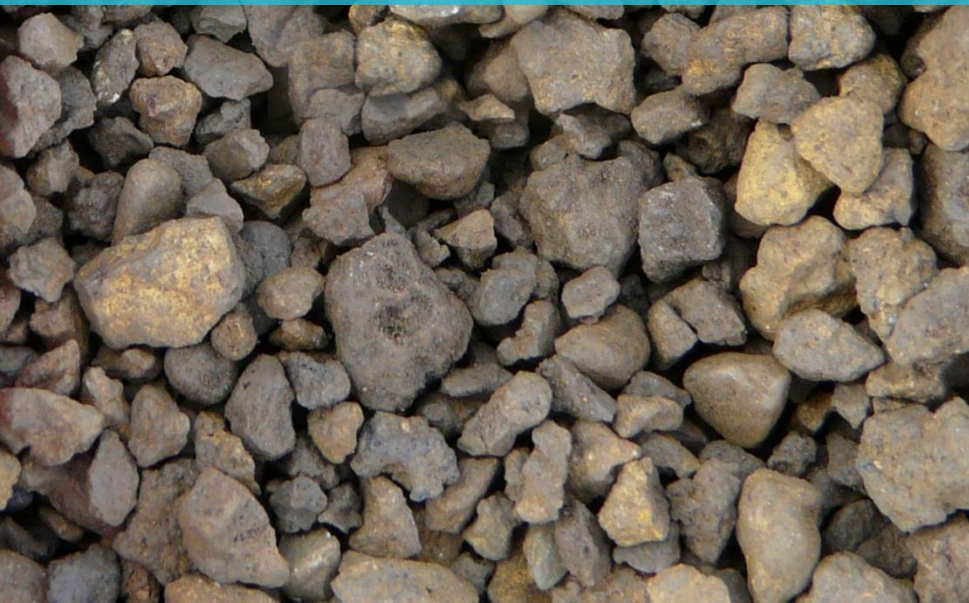


## Metal recycling





# TOMRA SORTING MINING – FINDING MINDFUL SOLUTIONS





# MINING: APPLICATIONS AND SENSOR TECHNOLOGY



	INDUSTRIAL MINERALS	BASE & Fe METALS	FUEL/ ENERGY	PRECIOUS METALS	DIAMONDS & GEMS	METAL SLAG
COMMODITY	<ul style="list-style-type: none"> <li>• Calcite</li> <li>• Quarts</li> <li>• Feldspar</li> <li>• Magnesite</li> <li>• Talcum</li> <li>• Dolomite</li> <li>• Salt</li> </ul>	<ul style="list-style-type: none"> <li>• Copper</li> <li>• Zinc</li> <li>• Nickel</li> <li>• Tungsten</li> <li>• Iron</li> <li>• Manganese</li> <li>• Chromite</li> </ul>	<ul style="list-style-type: none"> <li>• Coal</li> <li>• Uranium</li> </ul>	<ul style="list-style-type: none"> <li>• Gold</li> <li>• Platinum</li> </ul>	<ul style="list-style-type: none"> <li>• Diamonds</li> <li>• Tanzanite</li> <li>• Colored gemstones</li> </ul>	<ul style="list-style-type: none"> <li>• Stainless steel</li> <li>• Copper</li> <li>• Chrome</li> </ul>
SENSOR TECHNOLOGY	COLOR XRT NIR XRF	XRT COLOR EM NIR	XRT RM	XRT COLOR XRF NIR	COLOR XRT XRF NIR	XRT XRF EM



Calcite

Copper

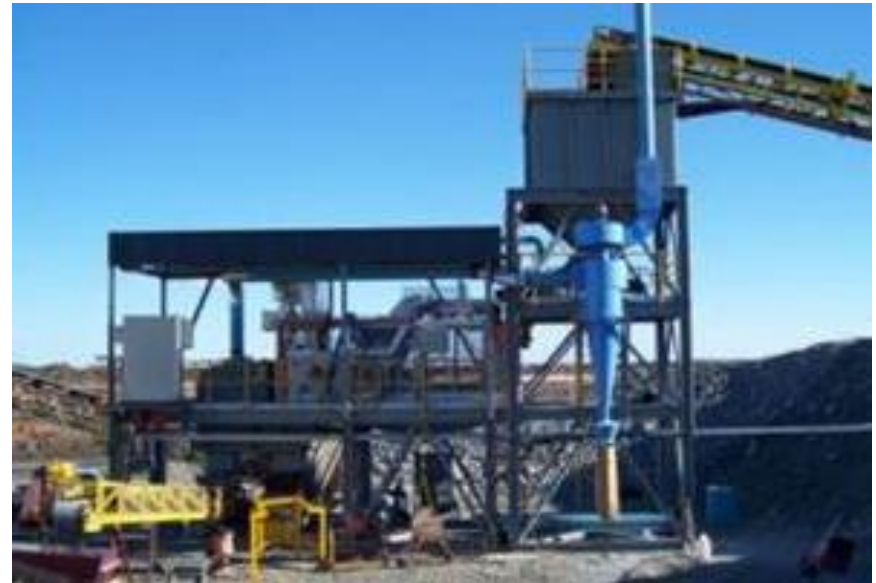
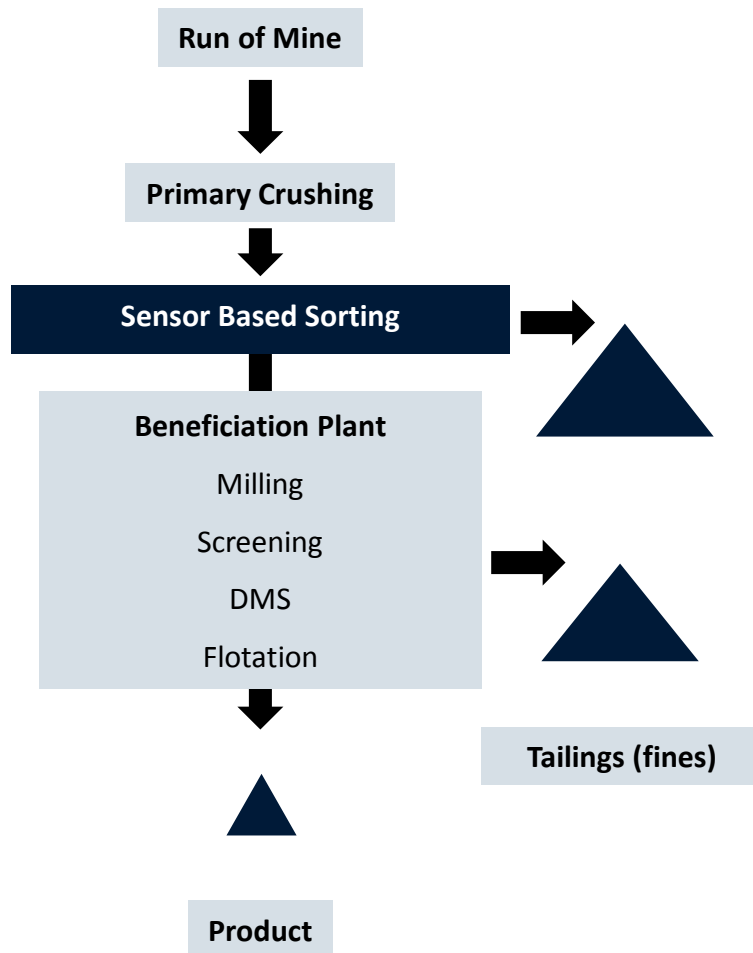
Coal

Gold

Diamonds

Ferro Silica Slag

# THE CONCEPT OF SENSOR-BASED SORTING IN MINING



## Facts (estimated)

- 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 crushed, grinded and further treated

# VALUE PROPOSITION

---

**Increased  
access to  
resources**

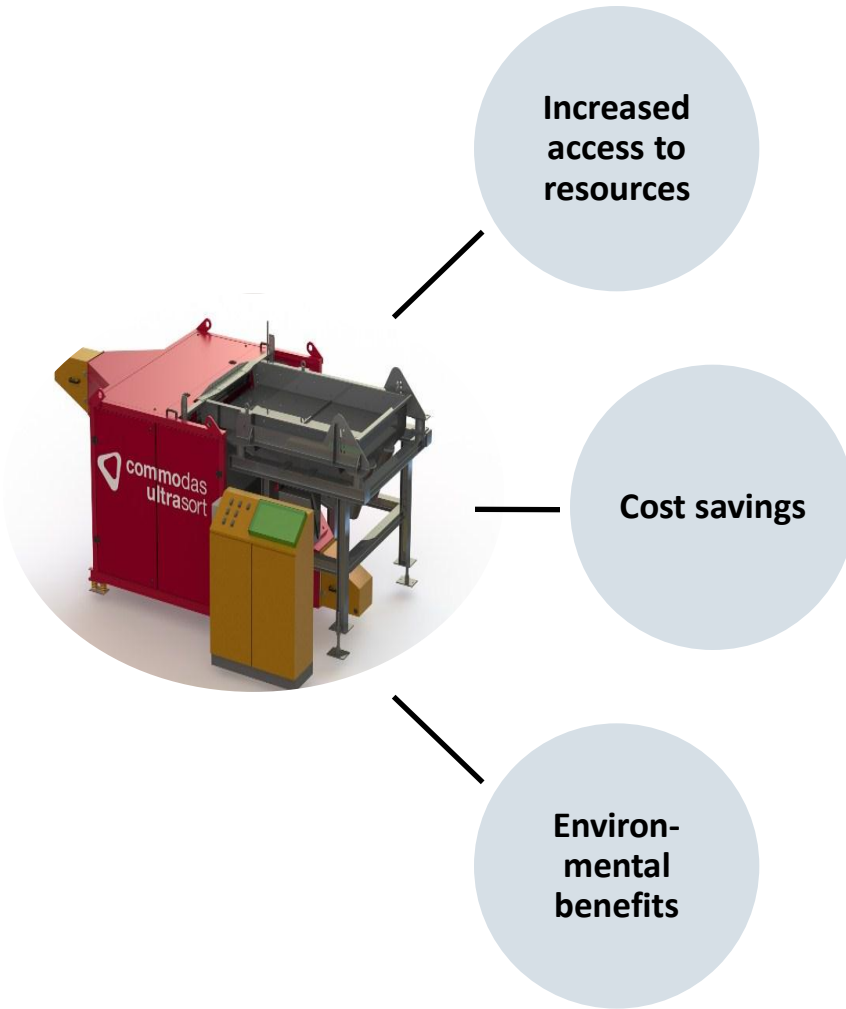
- Lower head grade can be processed
- Better utilization of existing deposits
- Old dumps turn into resources

**Cost savings**

- Significant capacity increase of the traditional beneficiation plant
- Energy costs savings
- Less wear and tear and chemicals costs

**Environ-  
mental  
benefits**

- Better carbon footprint
- Reduction of acid mine drainage
- Less pollution



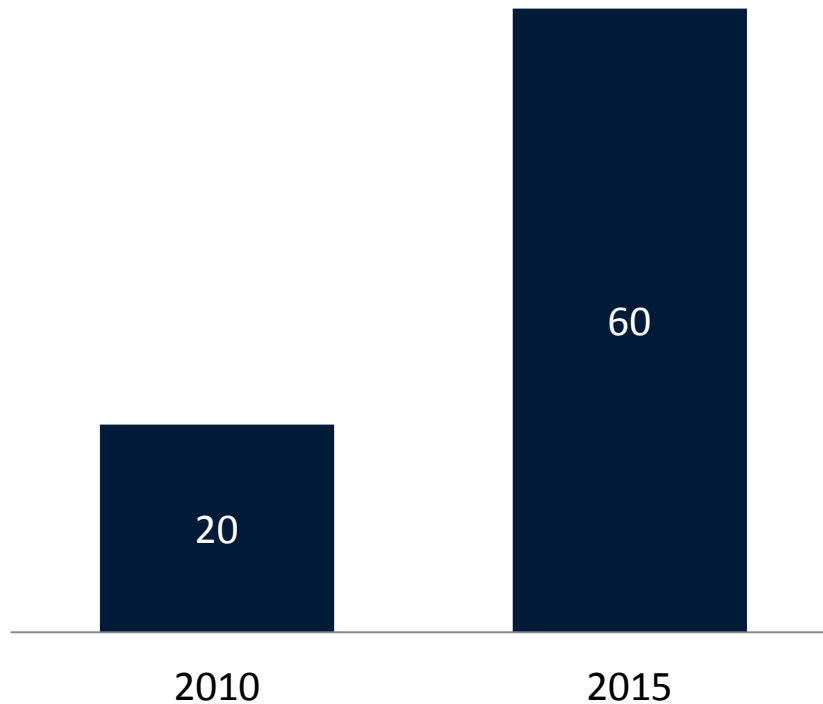


# MARKET SIZE AND POTENTIAL

ESTIMATES

## Total annual market size

EUR million



## Growth Potential

- Market expected to grow at an annual rate of around 20-30% overall
- Commodas Ultrasort expects to maintain its overall market share

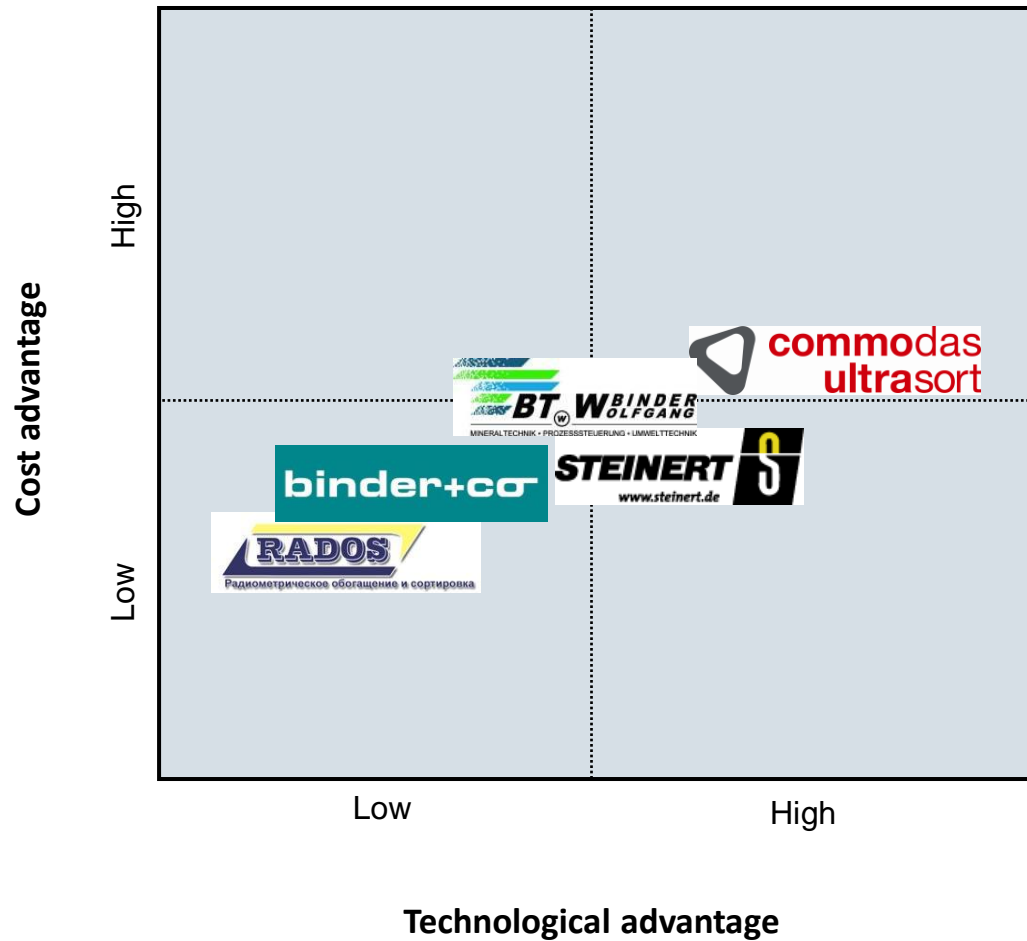
## Drivers

- Increasing demand for commodities from emerging markets
- Increased pressure on costs but high/increasing energy and water costs

Source: TOMRA analysis

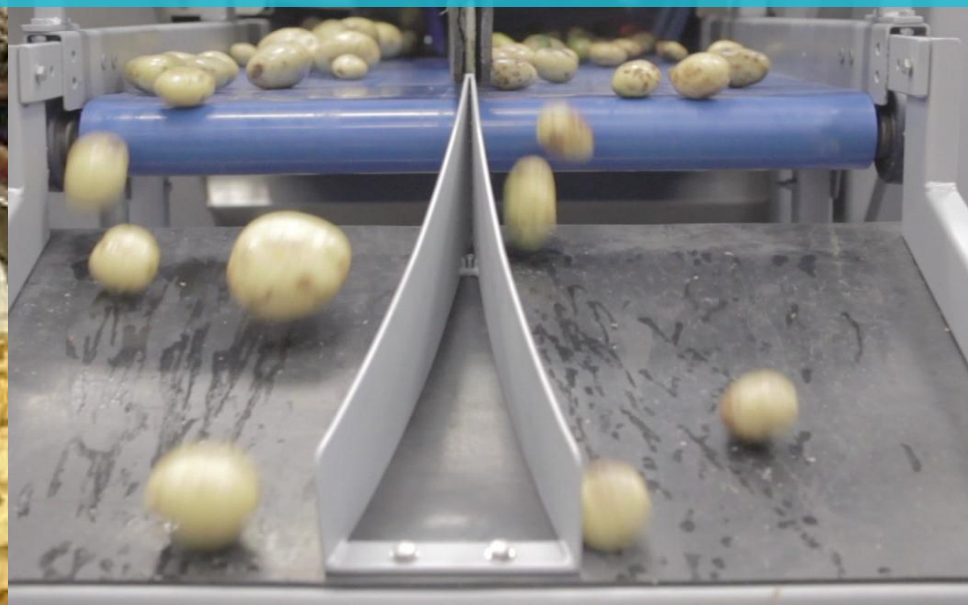
# COMPETITIVE LANDSCAPE

INDICATIVE





## TOMRA SORTING FOOD – SECURING QUALITY, EFFICIENCY, AND PRODUCTIVITY



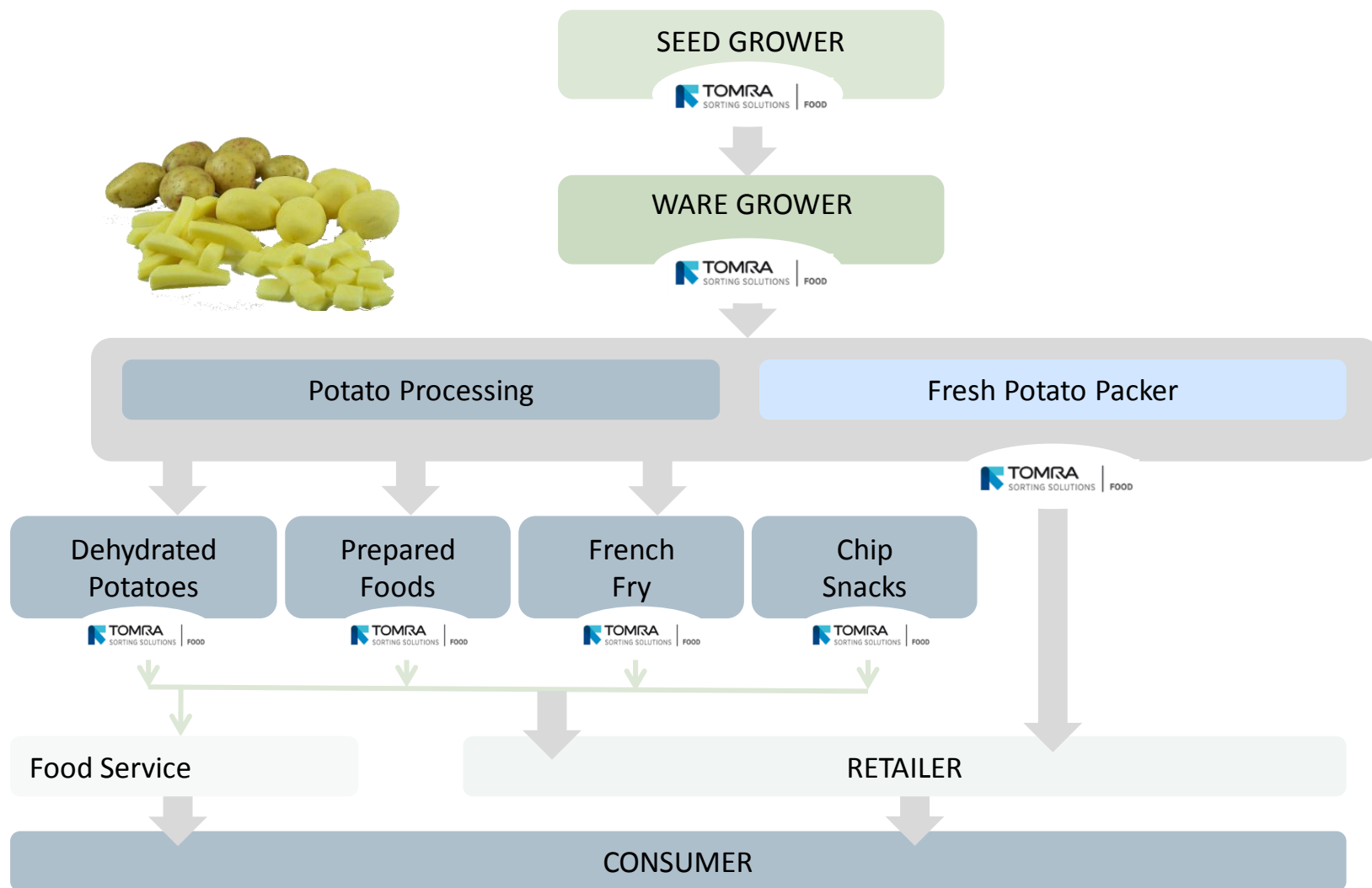


# FOOD: APPLICATIONS AND SENSOR TECHNOLOGY

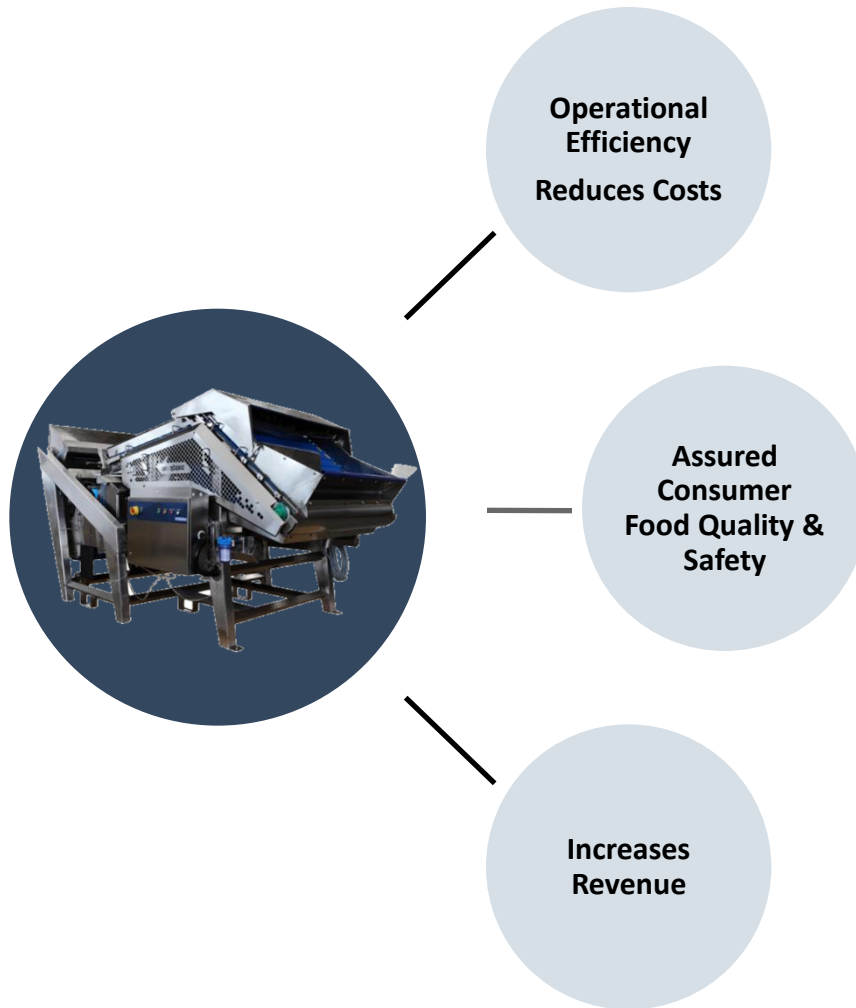
	POTATO	FRUIT	VEGETABLE	MEAT/SEAFOOD
FOOD	<ul style="list-style-type: none"> <li>• Whole</li> <li>• Field</li> <li>• Seed</li> <li>• Table/ware</li> <li>• Sweet</li> <li>• Processed</li> <li>• Peeled</li> </ul>	<ul style="list-style-type: none"> <li>• Tomato</li> <li>• Citrus</li> <li>• Dried fruits</li> <li>• Nuts</li> <li>• Peach &amp; pear</li> </ul>	<ul style="list-style-type: none"> <li>• Beet</li> <li>• Corn</li> <li>• Carrot</li> <li>• Green bean</li> <li>• Jalapenos/Pepper</li> <li>• Onion</li> <li>• Pickles</li> <li>• Cucumbers</li> </ul>	<ul style="list-style-type: none"> <li>• Beef</li> <li>• Pork</li> <li>• Seafood</li> </ul>
SENSOR TECHNOLOGY	NIR VIS	NIR VIS	NIR VIS	NIR VIS



# CASE STUDY: POTATO SUPPLY CHAIN – TOP 5 CROP

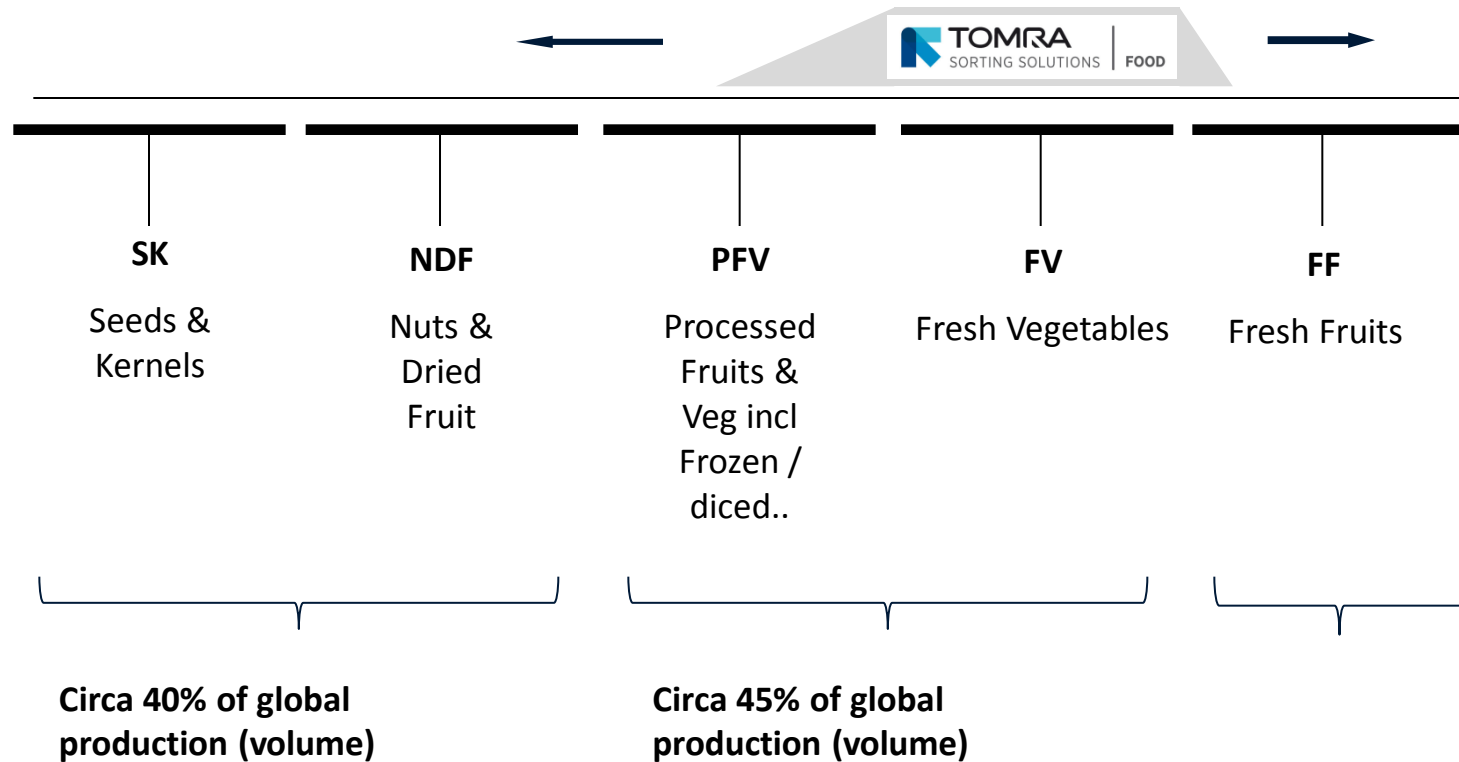


# VALUE PROPOSITION



- Up to 100% reduction on manual labor alternative
- Productivity Increase ~ 20%
- In many cases sorting cannot be completed manually due to product size or defect types
- Yield improvement > 1.5%
- Protects customers reputations. Automated control helps protect against 'undesirables' or 'harmful' items entering the food chain. Mitigates against the 'cost' and damage of failure, recalls, etc
- Legislation for food quality becoming more and more demanding with full traceability
- High precision and multiple sort grades (by size & quality) maximizes raw product utilization and product sales value
- Easy to achieve customer requirements regardless of incoming product quality.
- Analyses the crop quality, size and line efficiency as it sorts. Provides real time data to customers to become more productive (effective real time control), maximizing yield and select/monitor suppliers.

# THE FOOD SORTING UNIVERSE



Source: TOMRA analysis

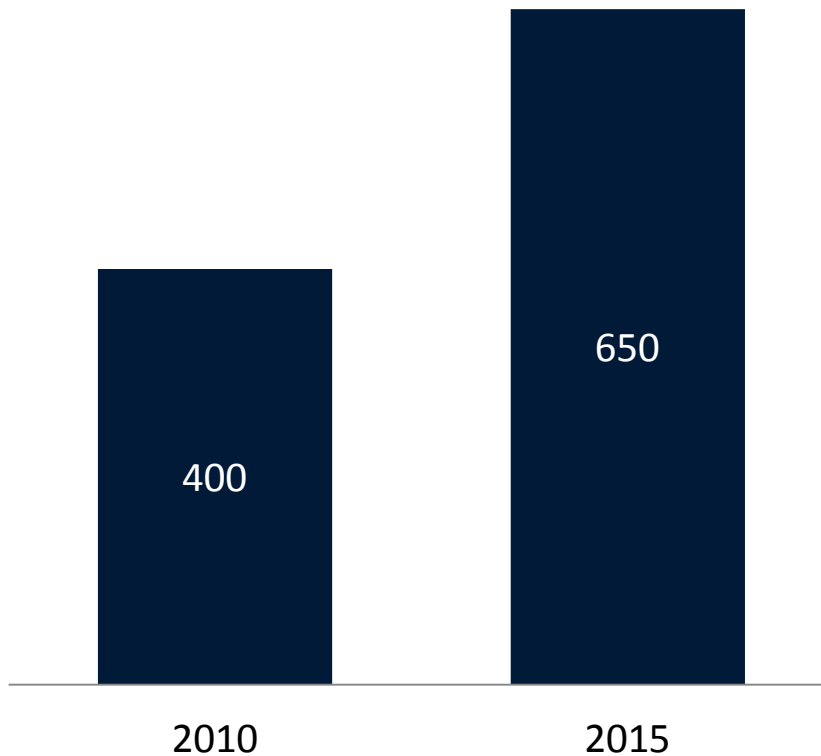


# MARKET SIZE AND POTENTIAL

ESTIMATES

## Total annual market size

EUR million



## Growth potential

- Market expected to grow at an annual rate of 6-10% overall

## Drivers

- More sophisticated and demanding consumers with more disposable income and changing eating habits
- Consolidation in the retail and processing sectors
  - Improving yield and quality
  - Reducing labor costs
- Globalization & increasing export
  - Verifiable quality & safety processes
  - Traceability Requirements

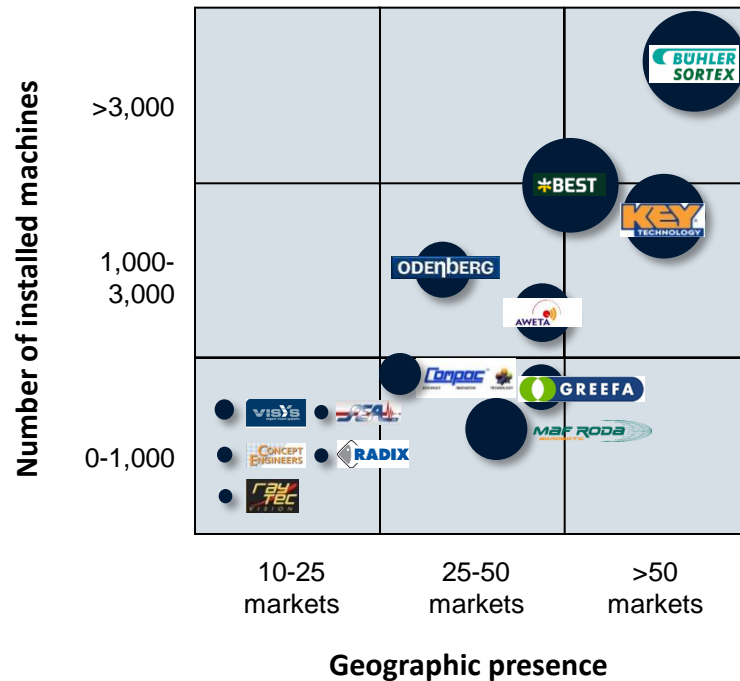
Source: TOMRA analysis

# COMPETITIVE LANDSCAPE

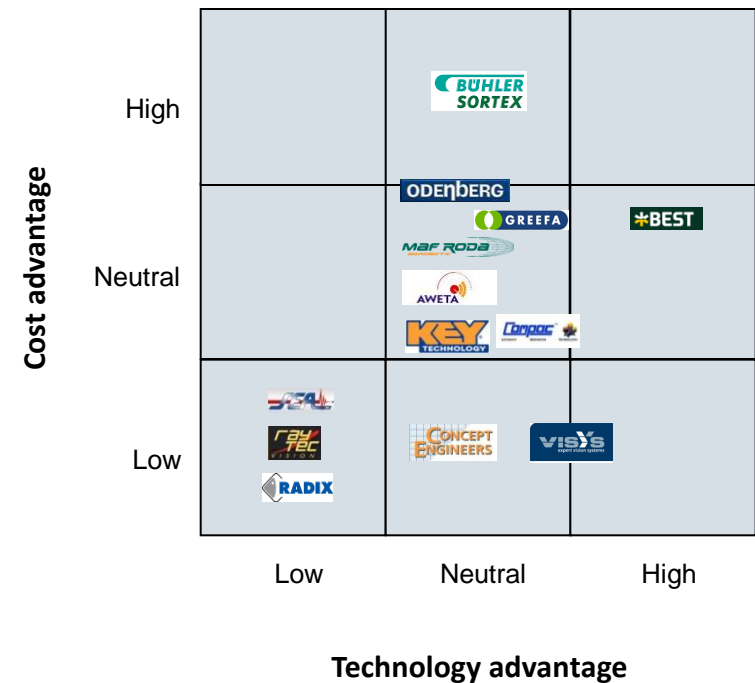
INDICATIVE

● Revenue from sensor-based sorting

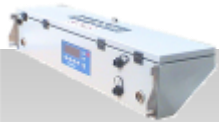
## Size and presence



## Competitive advantages



# PRODUCT INNOVATION INCREASE MARKETREACH



**NFM**  
Color Sorter  
Field Sorter



**Alpha**  
Color & Defect  
*Process Spec*



**New Titan II**  
High Capacity  
Quality Sort - *Color, Defect & Safety.*



**New Halo**  
High Resolution Sort  
For whole fruits and vegetables –*Color, Defect, Size, Shape & Safety*

**New Iris II**  
High Resolution Sort  
Small Produce *Color, Defect, Size, Shape & Safety*

**Sentinel**  
Gross Sort – *Major Color, Defect & Safety*

2011 Releases

Price & Functionality

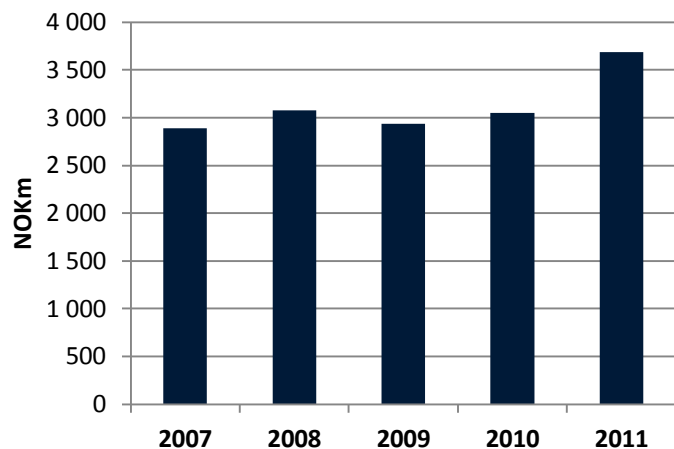
# Financial performance and targets



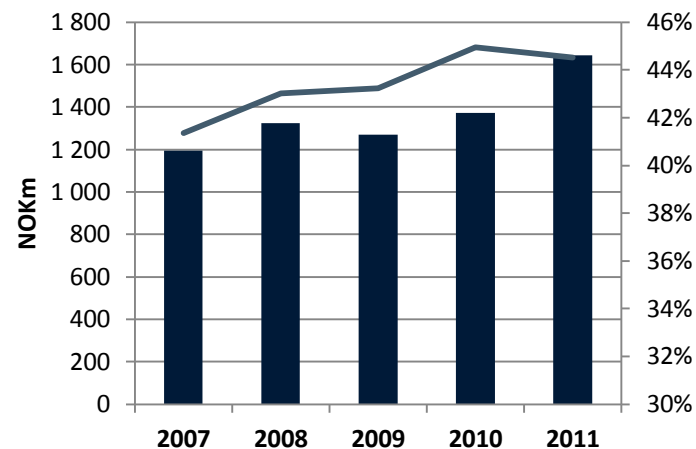


# KEY FINANCIALS DEVELOPMENT

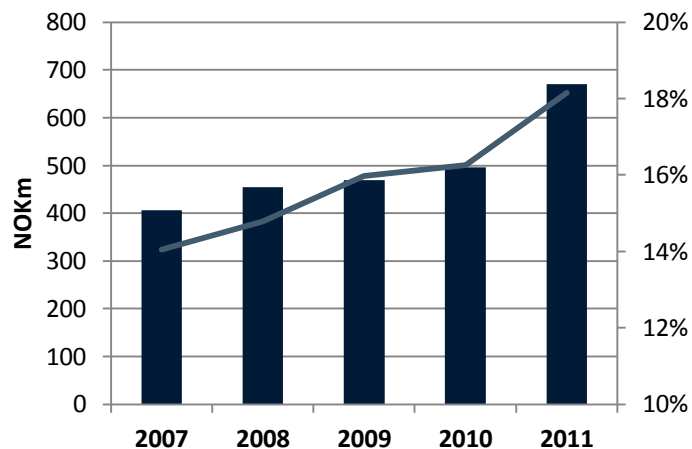
## Revenues



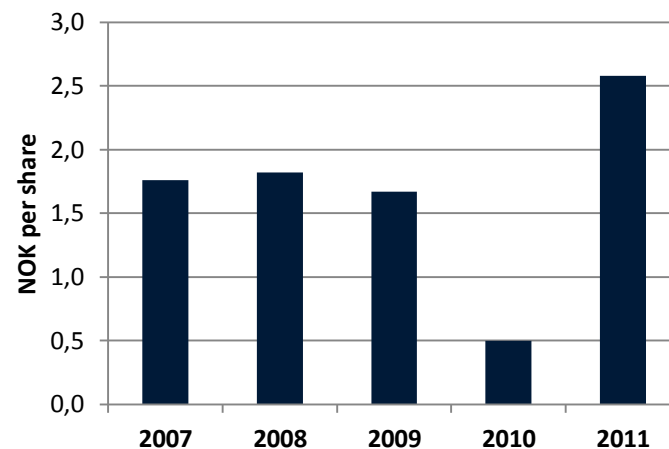
## Gross Contribution and margin



## EBITA and margin



## Earnings per share



# FINANCIAL HIGHLIGHTS

## BALANCE SHEET, CASH FLOW AND CAPITAL STRUCTURE

<i>Amounts in NOK million</i>	<b>31 Mar 2012</b>	<b>31 Mar 2011</b>	<b>31 Dec 2011</b>
<b>ASSETS</b>	3,953	3,831	3,999
• Intangible assets	1408	1394	1,391
• Tangible non-current assets	475	545	527
• Financial non-current assets	263	228	264
• Inventory	645	614	627
• Receivables	946	941	1,012
• Cash and cash equivalents	216	109	178
<b>LIABILITIES AND EQUITY</b>	3,953	3,831	3,999
• Equity	2,139	1,833	2,141
• Interest bearing liabilities	740	957	741
• Non-interest bearing liabilities	1,074	1,041	1,117

### Cash flow from operations

- 25 MNOK in 1Q 2012 versus 40 MNOK in 1Q 2011

### Cashflow from investments

- 18 MNOK in 1Q2012 versus minus 455 MNOK in 1Q 2011
- 1Q2012 was positively influenced by a 58 MNOK installment from the sale of Tomra Pacific
- 1Q2011 was negatively influenced by the acquisition of Odenberg with 407 MNOK

### Solidity

- 54% equity
- NIBD/EBITDA = 0.6 (Rolling 12 months)

# CURRENCY EXPOSURE

## Revenues and expenses per currency;

NOTE: Rounded figures

	EUR*	USD	NOK	SEK	OTHER	TOTAL
Revenues	50 %	30 %	5 %	10 %	5 %	100 %
Expenses	40 %	25 %	20 %	10 %	5 %	100 %
EBITA	95%	50 %	- 60 %	10 %	5 %	100 %

\* EUR includes DKK

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

	Revenues	Expenses	EBITA
EUR*	5.0%	4.0%	9.5%
USD	3.0%	2.5%	5.0%
SEK	1.0%	1.0%	1.0%
OTHER	0.5%	0.5%	0.5%
ALL	9.5%	8.0%	16.0%

\* EUR includes DKK

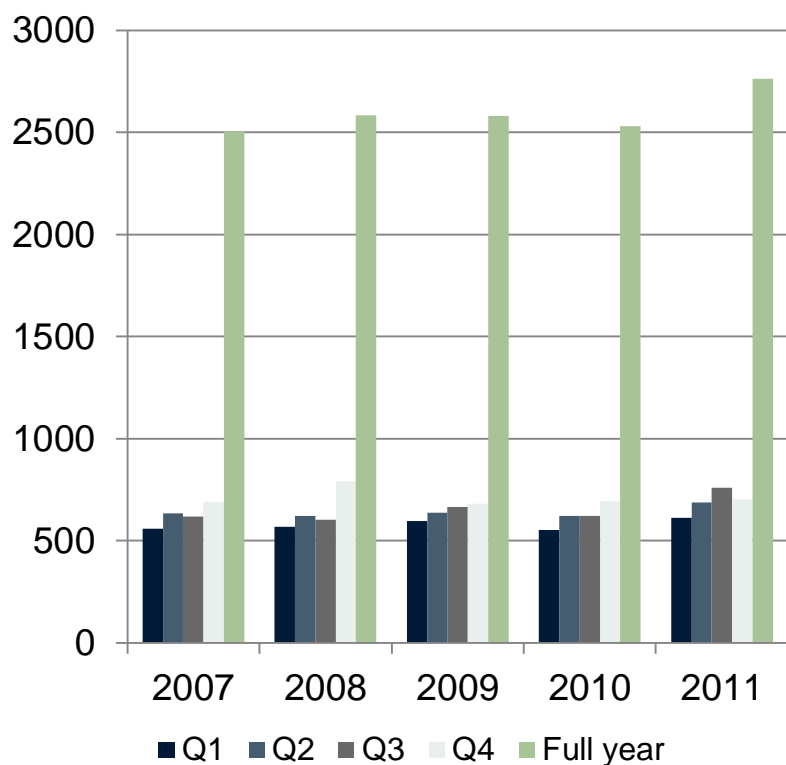
## HEDGING POLICY

- 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

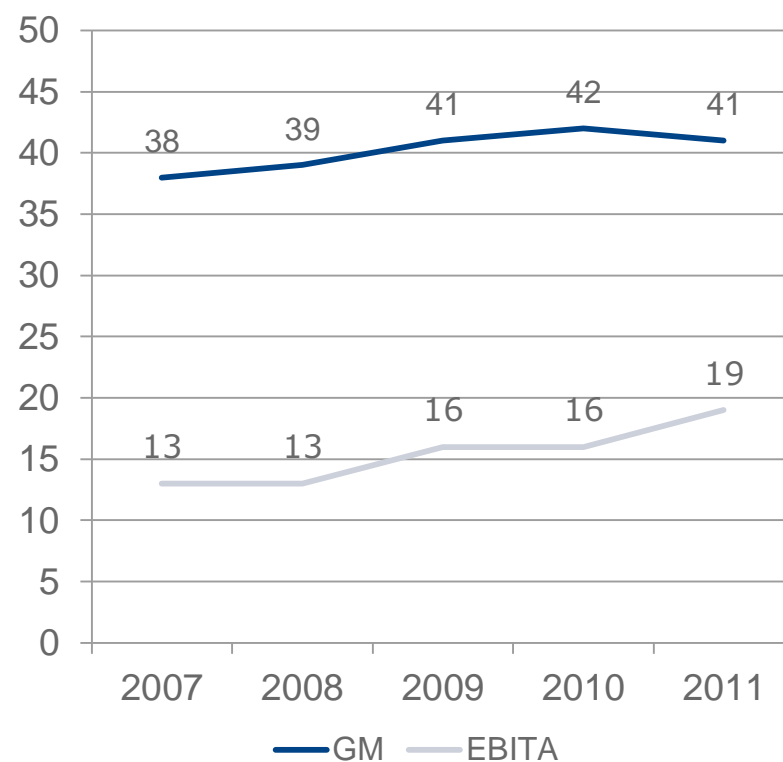
## Revenue development

NOK million



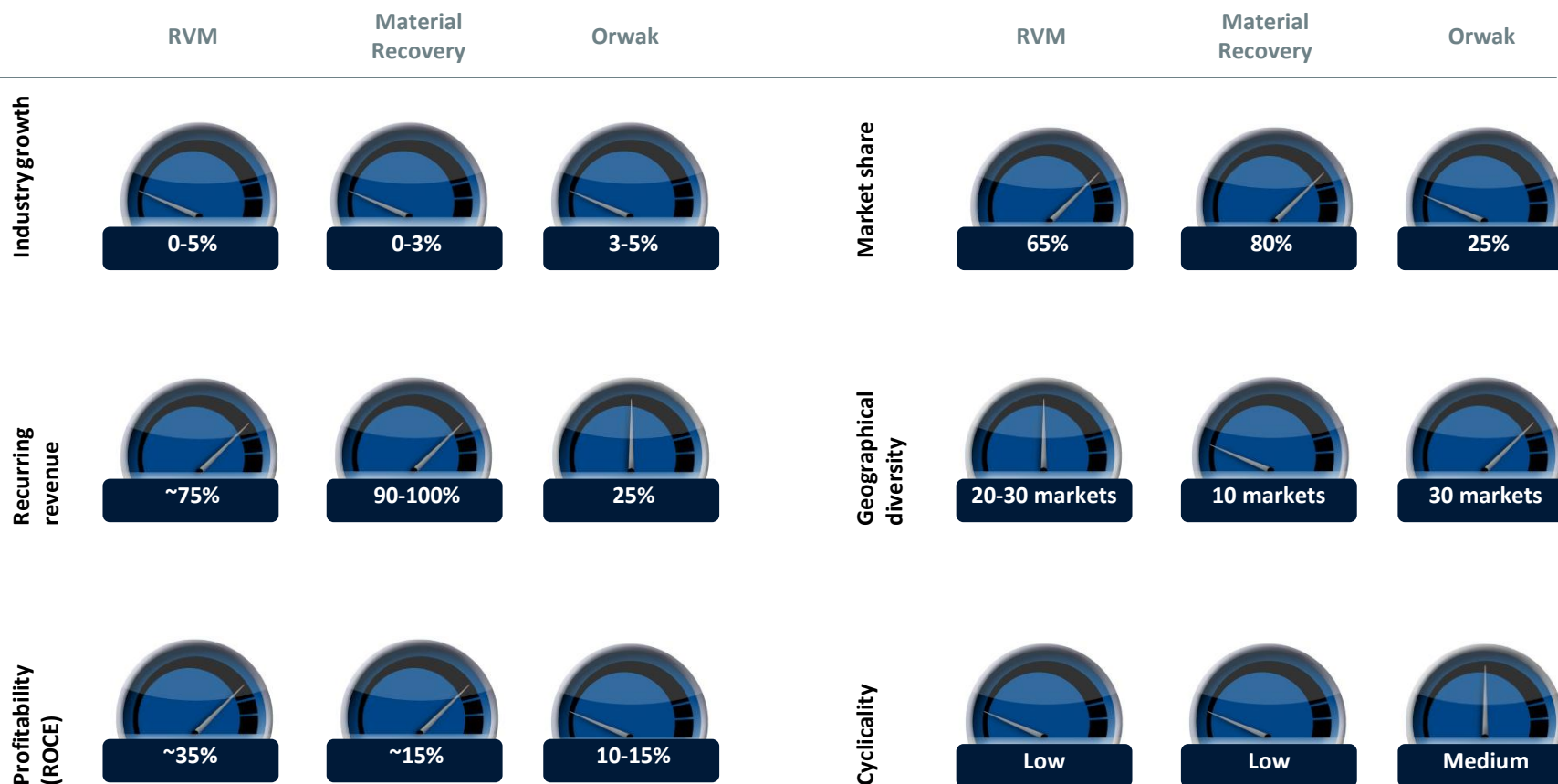
## Gross and EBITA margin development

Percent





# COLLECTION SOLUTIONS – FINANCIAL DASHBOARD



## TARGETS 2010 -2015

Yearly growth 4 – 8%

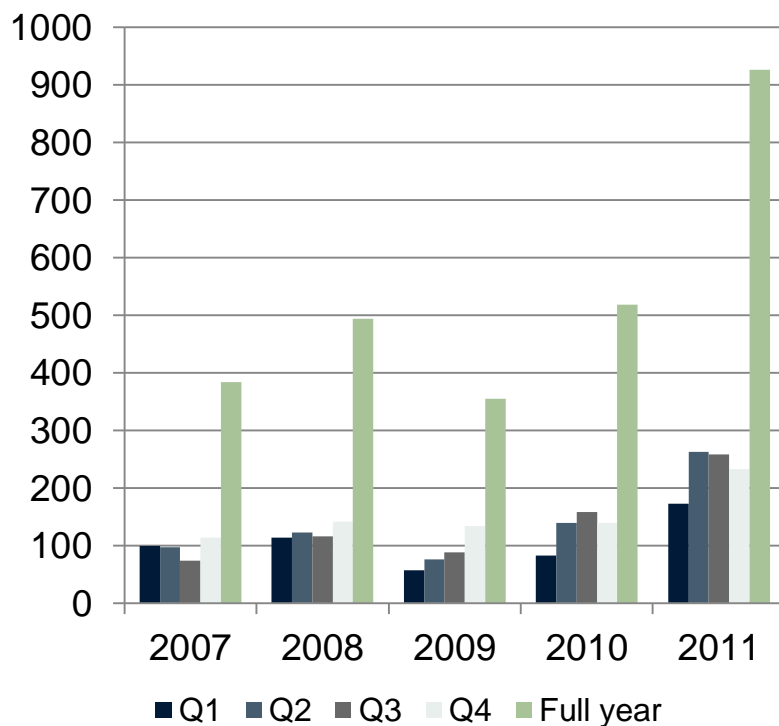
40% reduced COGS on new RVM machines from 2010 to 2015

EBITA-margin 17%-22%

# SORTING SOLUTIONS – SEGMENT FINANCIALS

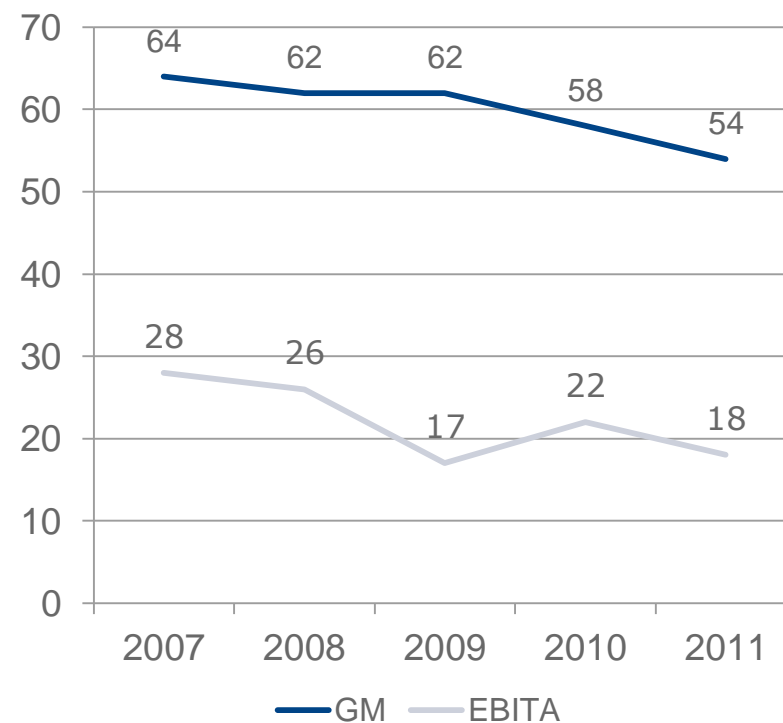
## Revenue development

NOK million



## Gross and EBITA margin development

Percent



# FINANCIAL DASHBOARD – SORTING SOLUTIONS

Industry growth



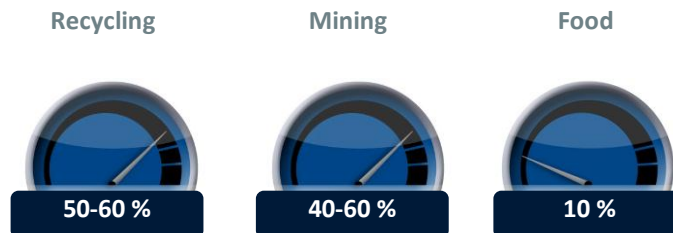
Recurring revenue



Profitability (ROCE)



Market share



Geographical diversity



Cyclicality



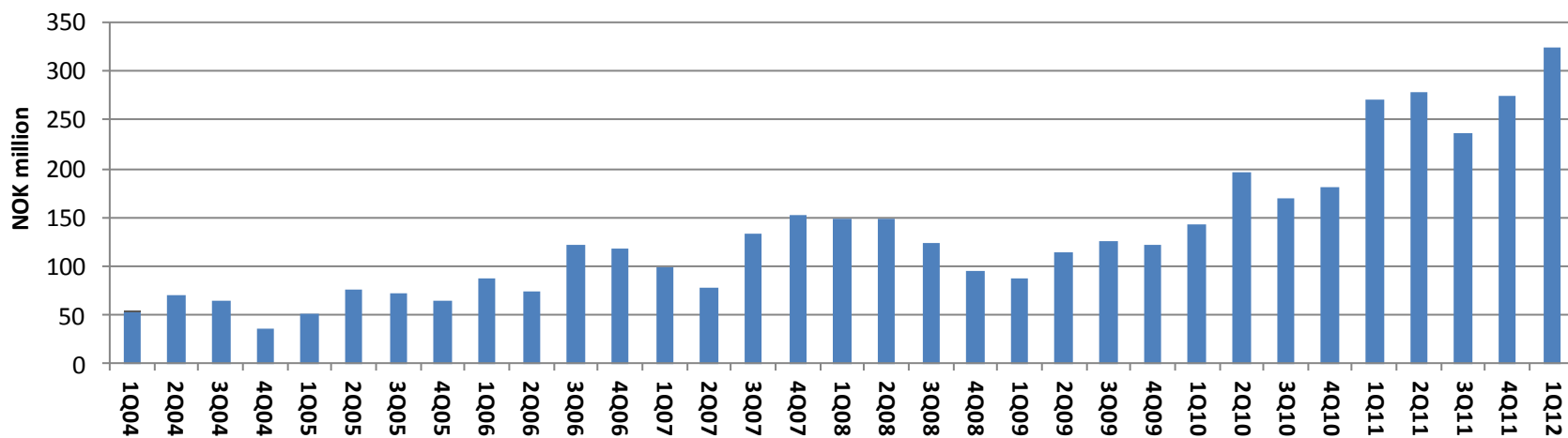
## TARGETS 2010 -2015

Yearly organic growth 15%

Acquisitions on top

EBITA-margin 20-25%

# ORDER BACKLOG





# Appendices





# TOMRA MATERIAL RECOVERY – TRANSFORMING EFFICIENCY



# TOMRA'S INTEGRATED VALUE CHAIN IN NORTH AMERICA



In the US, offering an integrated solution to the customer is required in order to sell RVM technology

# MID-WEST, EAST COAST & QUEBEC OPERATIONS

In addition to RVM sales/service, TOMRA is also involved in:

- **Logistics management:**  
Pick-up and transportation of collected containers
- **Material processing:** Sorting, cleaning, shredding/flaking/ crushing and baling materials into recyclable fractions
- **Material marketing/trading:** Sale and trading of processed materials on behalf of industry, which owns the collected materials

Bottlers pay a fee to TOMRA linked to volume of containers picked-up, processed and marketed



- ~560 MNOK in revenues in 2011
- Own transportation network in some states, outsourced to 3rd parties in other states
- Processing of UBCs in own facilities plus outsourced facilities
- Annual volumes processed (pounds):
  - Alu 130+ mill.
  - Glass 500+ mill.
  - Plastic 130+ mill





TOMRA COMPACTION  
– SMALL SPACES CREATE BIG SOLUTIONS



# VALUE CHAIN IN THE BUSINESS STREAM COMPACTION

**SORTING AND  
COMPACTION  
AT SOURCE**



**PICK-UP:  
BALES AND  
BRIQUETTES**



**TO RECYCLING  
STATION OR  
RECYCLING PLANT**



**MATERIAL  
RECYCLING**





# COMPACTION: THE CONCEPT

## The problem



The amount of waste is increasing continuously as well as the demands to take care of it:

- Cardboard
- Shredded paper
- Plastic foil
- PET bottles
- Metal cans
- Steel straps
- Semi-dry waste
- Rejects
- ...and a lot more

## The method

Powerful compaction at source!



## The solution



## The result

Clean fractions of highly compacted recyclable material

Less transport **More money**  
 Less disposal **More income**  
 Less handling **More efficiency**  
 Less clutter **More space**  
 Less risk **More security**  
 Less time **More productivity**  
 Less mess **More hygiene**  
 Less trouble **More satisfaction**  
 Less energy **More savings**  
 Less pollution **More cleanliness**

# MARKET SEGMENTS

The four main market segments:



**FOOD RETAIL**



**NON-FOOD RETAIL**

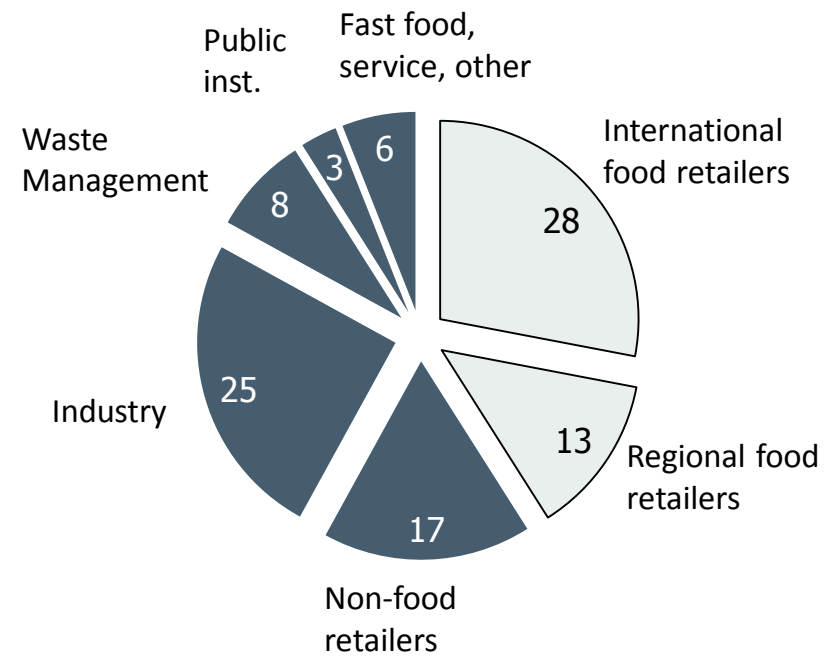


**MANUFACTURING  
INDUSTRY**



**HOTELS AND  
RESTAURANTS**

Revenue breakdown on customer segments:





# UNITY INTO GROWTH

**TOMRA** - taking a bigger role in the  
resource revolution

# **1ST QUARTER 2012 RESULTS ANNOUNCEMENT**

# HIGHLIGHTS FROM THE QUARTER INCLUDE\*

---

- **Revenues of 836 MNOK** (784 MNOK in first quarter 2011)
  - 8% growth in local currencies
    - Strong growth in Sorting Solutions
    - Stable performance in Collection Solutions
- **Gross margin 47%**, up from 45% in first quarter 2011
- **EBITA of 133 MNOK** (118 MNOK in first quarter 2011)
  - 17% growth in EBITA in local currencies
- **EBITA margin of 16%**, up from 15% in first quarter 2011
- **Cashflow from operations** of 25 MNOK (40 MNOK in first quarter 2011)
- **All time high order backlog of 325 MNOK** in Sorting Solutions (270 MNOK in first quarter 2011)
- **Strategic R&D partnership with Rio Tinto**

\* Results exclude the divested unit, Tomra Pacific

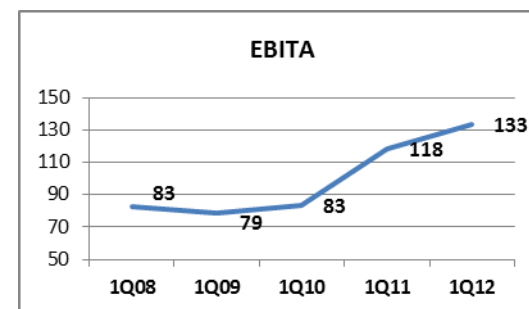
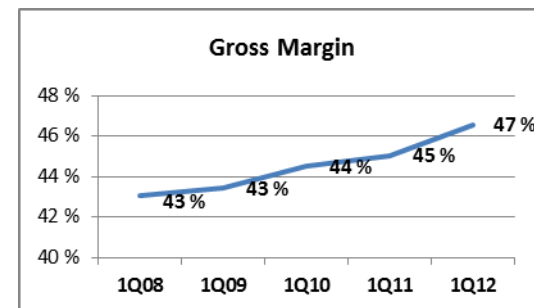
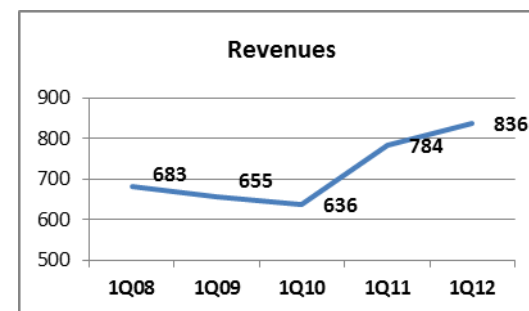
# FINANCIAL HIGHLIGHTS - PROFIT AND LOSS STATEMENT (CONTINUING OPERATIONS)\*

	1 <sup>st</sup> Quarter		
<i>Amounts in NOK million</i>	<b>2012</b>	<b>2011</b>	<b>11 Adj**</b>
<b>Revenues</b>	836	784	771
• Collection Solutions	611	612	601
• Sorting Solutions	225	172	170
<b>Gross contribution</b>	389	353	346
<b>Gross margin</b>	47%	45%	45%
<b>Operating expenses</b>	256	235	232
<b>EBITA</b>	133	118	114
<b>Operating margin</b>	16%	15%	15%

\* Excluding the divested unit, Tomra Pacific

\*\*2011 actual restated at 2012 exchange rates, estimated

## 2008-2012 (1Q)





# FINANCIAL HIGHLIGHTS

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- 1Q2011 was negatively influenced by the acquisition of Odenberg with 407 MNOK

### Solidity

- 54% equity
- NIBD/EBITDA = 0.6 (Rolling 12 months)

# TOMRA Collection Solutions



# HIGHLIGHTS COLLECTION SOLUTIONS

## Overall

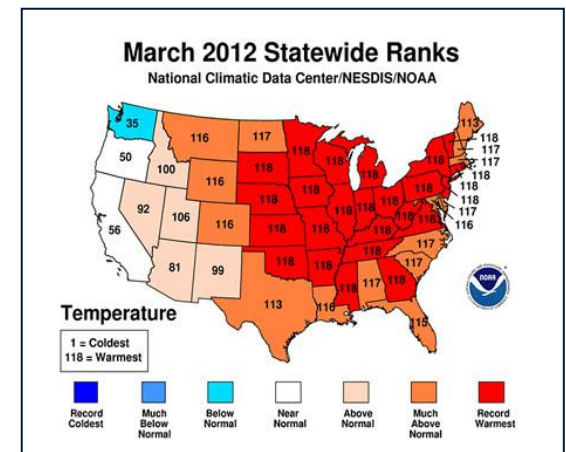
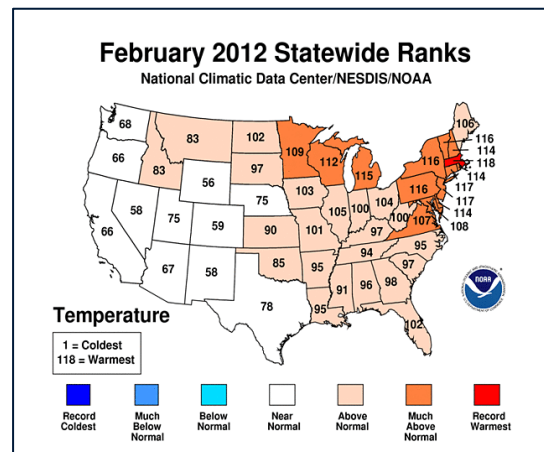
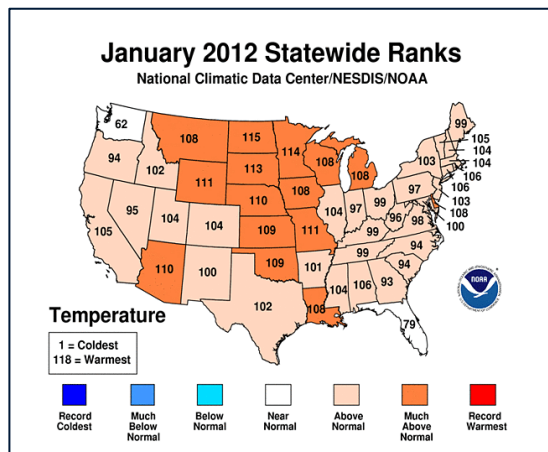
- Revenues up 2% measured in local currencies
- Gross margin was 43%, up from 42% in the same quarter last year
- EBITA increased from 97 MNOK to 105 MNOK due to improved margin

## Europe

- Somewhat lower new machine placements, stable service revenues

## US

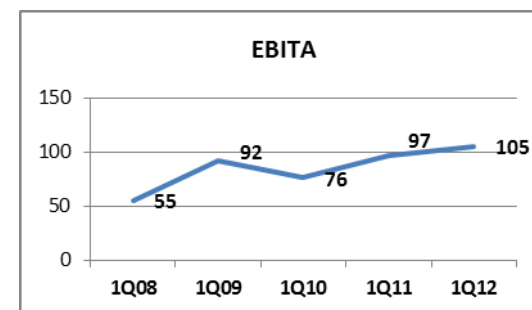
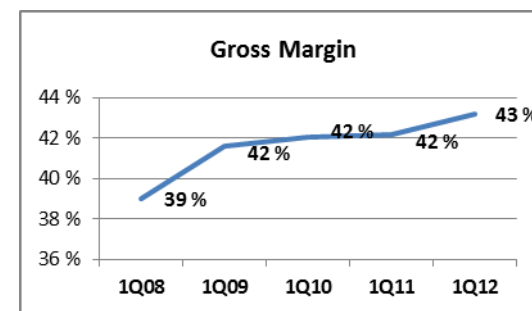
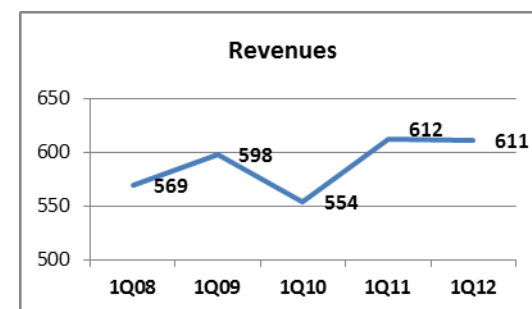
- Higher drinking consumption due to exceptionally warm weather in the first quarter
  - Positive impact on both Material recovery volumes, as well as throughput volumes on operational lease machines



# COLLECTION SOLUTIONS FINANCIALS

	1 <sup>st</sup> Quarter		
<i>Amounts in NOK million</i>	<b>2012</b>	<b>2011</b>	<b>11 Adj*</b>
<b>Revenues</b>	611	612	601
• Nordic	134	141	
• Central Europe & UK	224	244	
• Rest of Europe	3	4	
• US East/Canada	244	214	
• Rest of the world	6	9	
<b>Gross contribution in %</b>	264 43%	258 42%	252 42%
<b>Operating expenses</b>	159	161	159
<b>EBITA in %</b>	105 17%	97 16%	93 15%

## 2008-2012 (1Q)



\* 2011 actual restated at 2012 exchange rates, estimated



# TOMRA Sorting Solutions



# HIGHLIGHTS SORTING SOLUTIONS

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## First quarter 2012

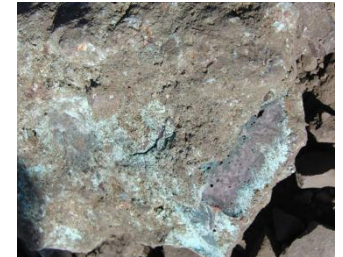
- Revenues up 30% organically, in local currencies
- Gross margin increased from 55% in first quarter 2011 to 56% in first quarter 2012
- EBITA up from 25 MNOK in first quarter 2011 to 33 MNOK in first quarter 2012 due to higher activity
- Order backlog of 325 MNOK, compared to NOK 274 MNOK at the end of fourth quarter 2011
- Continued positive momentum within the sorting segment, particularly high activity within recycling
- TOMRA and Rio Tinto form strategic R&D partnership to develop new sorting systems through CommodasUltrasort

# STRATEGIC R&D COOPERATION

- TOMRA Sorting Solutions' mining branch **CommodasUltrasort** and leading international mining group **Rio Tinto** have agreed to form a **strategic partnership** with the aim to **develop commercial scale sorting systems for upgrading bulk minerals**
- **Currently there are no solutions** in the market that fulfil Rio Tinto's specifications for a required platform
- A **dedicated R&D** program will therefore be initiated by the two partners to develop an adequate solution
- **This work will include scaling up Rio Tinto's iron ore and copper sorting technologies IronX(TM) and NuWave(TM)** - which convert potentially waste rock into a commercially valuable resource - to have each machine capable of sorting 1,000 tonnes of rock an hour
- TOMRA Sorting Solutions has **previously been a key supplier** to both IronX(TM) and NuWave(TM)
- **The standard TOMRA sorting product range will not be affected by the program**



Iron: IronX(TM)

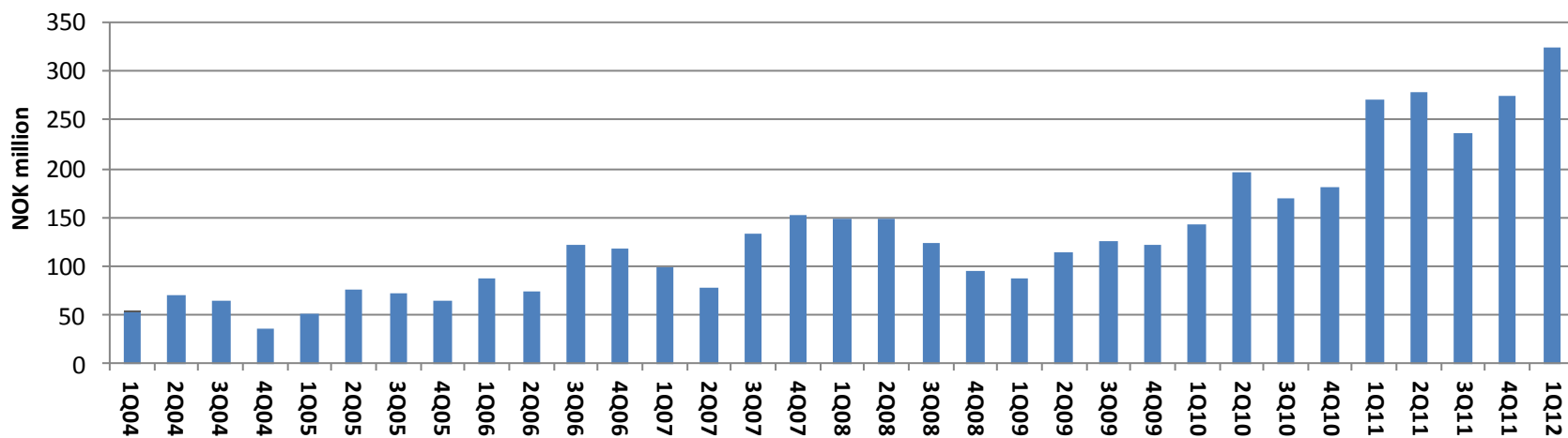


Copper: NuWave(TM)

**Rio Tinto**



# ORDER BACKLOG

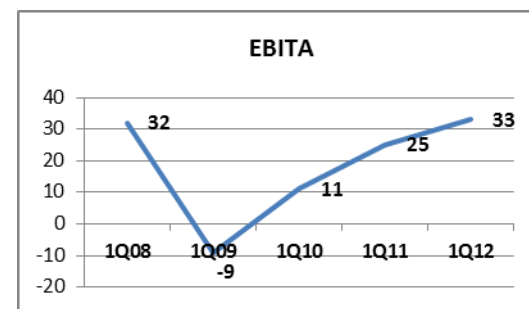
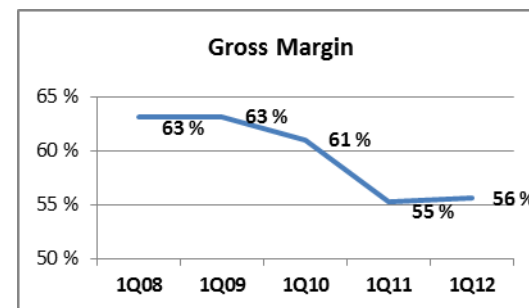
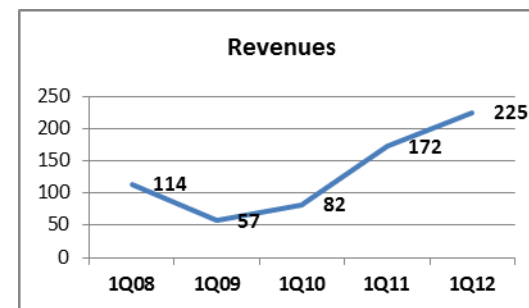




# SORTING SOLUTIONS FINANCIALS

	1st Quarter		
<i>Amounts in NOK million</i>	<b>2012</b>	<b>2011</b>	<b>11 Adj*</b>
<b>Revenues</b>	225	172	170
• Nordic	2	-	
• Central Europe & UK	76	71	
• Rest of Europe	27	17	
• North America	87	53	
• Rest of World	33	31	
<b>Gross contribution</b>	125	95	94
<b>in %</b>	56%	55%	55%
<b>Operating expenses</b>	92	70	69
<b>EBITA</b>	33	25	25
<b>in %</b>	15%	15%	15%

## 2008-2012 (1Q)



\* 2011 actual restated at 2012 exchange rates, estimated

# Outlook and shareholder structure



# OUTLOOK 2012

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## **Collection Solutions:**

- In Collection Solutions, TOMRA expects that 2012 will have an activity level similar to 2011
- Lower sales in the Netherlands are assumed to be offset by higher activity in the other markets

## **Sorting Solutions:**

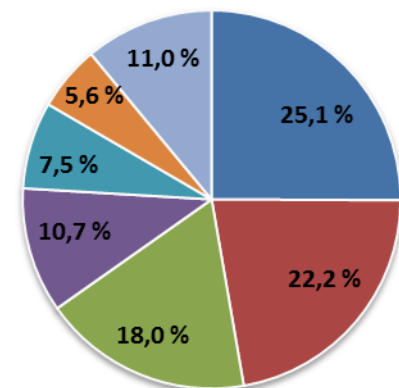
- In Sorting Solutions, TOMRA is currently experiencing a positive momentum
- Activity is consequently assumed to increase in 2012, compared to 2011, although quarterly development is likely to fluctuate due to little recurring business in the segment
- However, overall performance is however linked to macro drivers, particularly commodity prices. A significant drop in commodity prices will have a negative impact on the outlook

# TOMRA SHAREHOLDER STRUCTURE

## Top 10 shareholders pr. 10. April 2012

1	Investment AB Latour	23 000 000	15,5 %	
2	Folketrygdfondet	14 321 663	9,7 %	
3	The Northern Trust C Treaty account	14 080 358	9,5 %	(NOM)
4	Skandinaviska Enskil A/C Finnish Resident	4 599 593	3,1 %	(NOM)
5	State Street Bank AN A/C Client Omnibus	3 406 125	2,3 %	(NOM)
6	Bank of New York MEL S/A Mellon (ADR)	3 191 589	2,2 %	(NOM)
7	The Hermes Focus Fund C/O The Northern	3 023 900	2,0 %	
8	Clearstream Banking	2 765 192	1,9 %	(NOM)
9	JP Morgan Chase Bank Nordea Treaty Acc	2 706 221	1,8 %	(NOM)
10	JP Morgan Chase Bank European Resident	2 417 168	1,6 %	(NOM)
<b>Sum Top 10</b>		<b>68 388 420</b>	<b>46,2%</b>	
<b>Other shareholders</b>		<b>79 631 658</b>	<b>53.8%</b>	
<b>TOTAL (6,858 shareholders)</b>		<b>148 020 078</b>	<b>100%</b>	

## Shareholders by nationality



**Total foreign ownership: 74.9%**



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