TOMRA INVESTOR PRESENTATION



TOMRA SYSTEMS ASA 17th of October 2013 © TOMRA



2013 CAPITAL MARKETS DAY

REGISTRATION: CMD@TOMRA.COM

TOMRA TRANSFORMS

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



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 A 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



TOMRA IN SHORT

THE TOMRA TRANSFORMATION JOURNEY







CREATING VALUE THROUGH TWO STRONG BUSINESS AREAS



Two strong areas for value creation

High growth

High margins

Medium cyclicality

Source: Rounded proforma revenue figures after BEST acquisition



TOMRA'S TWO BUSINESS AREAS



	REVERSE VENDING	
Share of '12 sales*	~43%	
Employees	960	
Customers	Grocery retailers	
Market share	~65%	

	COMPACTION		
Share of '12 sales*	~4%		
Employees	75		
Customers	Retail, manufacturing industry, restaurant, catering & hotel, warehouse & distribution		
Market share	~15-20% in active markets		

	MATERIAL RECOVERY	
Share of '12 sales*	~13%	
Employees	400	
Customers	Grocery retailers and beverage manufacturers	
Market share	~60% in USA (markets served)	



RECYCLING
~13%
190
Material recovery facilities, scrap dealers, metal shredder operators
~50-60%

MINING
~3%
50
Mining companies
~40-60%

FOOD
~24%
560
Food growers, packers and processors
~25%

* Based on 2012 proforma numbers (including BEST for the full year)



TOMRA INSTALLED BASE





REVERSE VEI	NDING	СОМРАСТІ	ON	RECYCL	ING	MINING	6	FOOD	
Nordic Germany Other Europe Japan North America	~15,300 ~24,400 ~12,500 ~650 ~17,000	Nordic UK Other Europe Asia/Oceania North America	~16,500 ~17,500 ~28,200 ~4,100 ~4,200	Europe US / Canada Asia Other	~2,180 ~620 ~270 ~400	Europe US / Canada Australia South Africa Other	~70 ~35 ~20 ~50 ~25	Europe US/Canada Asia/Oceania South America Middle East/	~3,265 ~2,580 ~450 ~190 ~515
South America	~1,050	Middle East/Africa	~500					Africa	
TOTAL	~70,900	TOTAL	~71,000	TOTAL	~3,470	TOTAL	~200	TOTAL	~7,000

Numbers per year end 2012



USING THE POWER OF BUSINESS TO DO GOOD





TOMRA IN DEPTH

TOMRA Collection Solutions









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 VisionTM** 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.





RVM VALUE PROPOSITION



- RVMs reduce need for manual labour 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

COMPETITIVE LANDSCAPE





Number of RVM markets

Source: TOMRA estimates and analysis



COST LEADER AMBITION

Ambition: Reduce COGS on new RVMs by <u>40%</u> from 2010 to 2015



Project on track: Halfway in time & halfway in cost reduction

23

RECENT TOMRA INNOVATIONS





PRESENT AND PROSPECTIVE DEPOSIT SCHEMES

Canada



running deposit system

advanced discussion

Initial discussions

Europe

Scotland

Czech Republic

Montenegro

Spain

Serbia

Lithuania Latvia

THE BOTTLE RECYCLE LOOP

NON-DEPOSIT SYSTEM





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%



27

TOMRA Sorting Solutions







STRONG REVENUE GROWTH SINCE INCEPTION IN 1996



OUR CORE TECHNOLOGY: THE EYES AND BRAIN OF SORTING AND PROCESSING

- High-tech sensors to identify objects on a transport system
- **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









A COMMON SENSOR BASED TECHNOLOGY PORTFOLIO

Gamma- radiation X-ray	10 ⁻¹² 10 ⁻¹¹ 10 ⁻¹⁰ 10 ⁻⁹ 10 ⁻⁸
Ultraviolett (UV) Visible light (VIS) Near Infrared (NIR) Infrarot (IR) Microwaves	10 ⁻⁷ 10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³ 10 ⁻² 10 ⁻¹
Radio waves Alternating current (AC)	10 ¹ 10 ² 10 ³ 10 ⁴

[m]

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



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



- In-house R & D department with more than 305 people
- Partnership with leading R&D institutions: SINTEF, CTR, Fraunhofer ILT; universities like RWTH and Brussels
- 8% of revenue invested in R&D
- 15 test centers worldwide



Test center in Koblenz, Germany



WHY SENSOR-BASED SORTING?

	SORTING SOLUTIONS RECYCLING	SORTING SOLUTIONS MINING	SORTING SOLUTIONS FOOD
INCREASE REVENUES	 Increase purity of sellable materials Increase recovery rate Increase capacity 	 Increase recovery of valuable metals, minerals, diamonds and gems from ores New technology give access to old dumps 	Increase yieldIncrease throughput
REDUCE COSTS	 Reduce labor requirements Lower operating and service costs 	 Reduce energy consumption Reduce water consumption Less wear and tear Less rocks needs crushing 	 Reduce labor requirements Lower operating and service costs Reduce waste
OTHER BENEFITS	 Consistent quality of output streams Increase flexibility of production line Monitor material composition 	 Less environmental impact Reduce carbon footprint Easier permitting 	 Food safety Increased and consistent quality and safety Increased flexibility of production line Production reporting and analysis

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.



MARKET SIZE AND POTENTIAL

Total annual market size for different sensor-based sorting segments

EUR million





TOMRA SORTING: OUR STRATEGY



- Aggressively target promising regions and markets
- Leverage market presence across entire portfolio
- Continue to invest heavily in R&D
- Bring new and enabling technology to the market
- Further develop web of partners
- Utilize our market leader position to maximize economies of scale effect
- Effective sourcing in combination with product friendly R&D
- New verticals/business streams in sensor-based sorting
- Increase footprint and scale through consolidation
- *Now added through latest acquisition of BEST*



TOMRA SORTING: GEOGRAPHICAL EXPANSION





- Expansion into food through acquisitions brought a strong North American presence
- ROW is the focus for geographical expansion going forward in order to capture the growth in new markets

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TOMRA SORTING: ORDER BACKLOG DEVELOPMENT



■ Other TSS ■ US french fries plant



FINANCIAL DASHBOARD – SORTING SOLUTIONS



Yearly organic growth 10-15%

Geographical expansion

EBITA-margin 18-23%



39



TOMRA SORTING FOOD – SECURING QUALITY, EFFICIENCY, AND PRODUCTIVITY



SYNERGIES IN THE FOOD DIVISION



BEST and ODENBERG – True complimentary companies



FROM FARM TO FORK: SOLUTIONS THROUGHOUT THE VALUE CHAIN



Providing access to data points throughout the value chain



AFTER ACQUIRING BEST TOMRA HAS A BROAD FOOTPRINT WITHIN THE FOOD SORTING UNIVERSE



* TOMRA estimates



THREE WAYS OF SORTING WITHIN THE FOOD SEGMENT



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

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

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

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



FOOD MARKET POSITIONING – SIZE AND PRESENCE



Source: TOMRA estimates and analysis



FOOD: APPLICATIONS AND SENSOR TECHNOLOGY

		ΡΟΤΑΤΟ	FRUIT	VEGETABLE	MEAT/SEAFOOD
SORTING SOLUTIONS FOOD	FOOD	 Whole Field Seed Table/ware Sweet Processed Peeled 	 Tomato Citrus Dried fruits Nuts Peach & pear 	 Beet Corn Carrot Green bean Jalapenos/ Pepper Onion Pickles Cucumbers 	 Beef Pork Seafood
	SENSOR TECHNOLOGY	NIR VIS	NIR VIS	NIR VIS	NIR VIS
	<u> </u>	A			

	DRIED FRUIT	NUTS	FRESH CUT	FRUIT	VEGETABLES	ΡΟΤΑΤΟ	SEAFOOD
FOOD	 Apricots Raisins Figs Prunes Craisins 	 Almonds Cashews Hazelnuts Macademias Peanuts Pecans Pistachios Seeds Walnuts 	 Iceberg Mixed salad Leaves Spinach Spring Mix 	 Apples Apricots Blackberries Blueberries Cherries Cranberries Pineapple Raspberries Strawberries 	 Peas Beans Broccoli Carrots Corn Garlic Mixed vegetables 	 Chips Flakes French fries 	 Scallops Mussels Shrimp
SENSOR TECHNOLOGY	LASER X-RAY	LASER X-RAY	LASER CAMERA	LASER CAMERA	CAMERA LASER / FLUO	LASER CAMERA	LASER CAMERA X-RAY
	CARDA C	JANKA (A PAP		Store 2



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



TOMRA SORTING RECYCLING -TRANSFORMING EFFICIENCY AND QUALITY



() TITECH

RECYCLING: APPLICATIONS AND SENSOR TECHNOLOGY



	HOUSEHOLD WASTE	PACKAGING	C & D	AUTOMOBILE SHREDDER	ELECTRONIC SCRAP
MATERIAL	 Hard plastics Plastic film Mixed paper RDF Metals Organics/ Biomass 	 Plastics Plastic film Cardboard Mixed paper Deinking paper Metal 	 Inert material Plastic film Metals Wood Paper & Cardboard Plastics 	 NF metal Stainless steel Copper cables Copper Brass Aluminum Meatball sorting 	 Printed circuit boards Non-ferrous metal concentrates Cables Copper Brass Stainless steel Meatball sorting
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



Source: TOMRA analysis





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	• Calcite	•Copper	• Coal	• Gold	• Diamonds	• Stainless steel
	Quarts	• Zinc	• Uranium	• Platinum	• Tanzanite	• Copper
	• Feldspar	• Nickel			Colored	Chrome
	 Magnesite 	Tungsten			gemstones	
	• Talcum	• Iron				
	• Dolomite	Manganese				
	• Salt	Chromite				
SENSOR	COLOR	XRT	XRT	XRT	COLOR	XRT
TECHNOLOGY	XRT	COLOR	RM	COLOR	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





Key observations:

- 15% to 50% of the ROM can be rejected in an early stage of the process (application dependent)
- These low grade waste rocks do not need to be crushed, grinded and further treated



Technological advantage

Source: TOMRA analysis



Historical financial performance





KEY FINANCIALS DEVELOPMENT



Revenues

EBITA and margin



Gross Contribution and margin



Earnings per share



TOMRA

FINANCIAL HIGHLIGHTS BALANCE SHEET, CASH FLOW AND CAPITAL STRUCTURE

Amounts in NOK million	31 Sept 2013	31 Sept 2012	31 Dec 2012
ASSETS	5,724	5,346	5,159
Intangible non-current assets	2,451	2,328	2,295
• Tangible non-current assets	591	551	563
• Financial non-current assets	262	272	257
• Inventory	902	826	789
Receivables	1,371	1,273	1,078
Cash and cash equivalents	147	96	177
LIABILITIES AND EQUITY	5,724	5,346	5,159
• Equity	2,573	2,117	2,283
Minority interest	84	80	74
• Interest bearing liabilities	1,654	1,641	1,551
Non-interest bearing liabilities	1,413	1,508	1,251



Ordinary cashflow from operations

• 202 MNOK (181 MNOK in 3Q 2012)

Cashflow from investments

58 MNOK (46 MNOK 3Q 2012)

Solidity

- 46% equity
- NIBD/EBITDA = 1.7 (Rolling 12 months)
- Dividend of 185 MNOK (1.25 NOK per share) paid out in May 2013

CURRENCY EXPOSURE

Revenues and expenses per currency;

NOTE: Rounded figures

	EUR*	USD	NOK	SEK	OTHER	TOTAL
Revenues	50 %	30 %	5 %	10 %	5 %	100 %
Expenses	45 %	25 %	15 %	10 %	5 %	100 %
EBITA	80%	60 %	- 55 %	10 %	5 %	100 %

* EUR includes DKK

10% change in NOK towards other currencies will impact;

	Revenues	Expenses	EBITA
EUR*	5.0%	4.5%	8.0%
USD	3.0%	2.5%	6.0%
SEK	1.0%	1.0%	1.0%
OTHER	0.5%	0.5%	0.5%
ALL	9.5%	8.5%	15.5%

* 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



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







Key facts:

- 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

Material Recovery: An enabler and support segment to our North American reverse vending operation



TOMRA COMPACTION – SMALL SPACES CREATE BIG SOLUTIONS



VALUE CHAIN IN THE BUSINESS STREAM COMPACTION





COMPACTION: THE CONCEPT



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MARKET SEGMENTS

The four main market segments:

Revenue breakdown on customer segments:





UNITY INTO GROWTH

TOMRA - taking a bigger role in the resource revolution

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