


## CONTENT

6 COMMITTED TO A CLEAR CUT BALL'S CUT/4CARBON CAMPAIGN
12 CARLA CUTS CARBS COACHING BENEFITS THE CARBON FOOTPRINT
16 METAL MATTERS
WREXHAM IS 50TH LOCAL AUTHORITY PARTNER IN UK
20 BETTER PRACTICE, BETTER PRODUCT IMPROVEMENT ACROSS THE ALUMINUM VALUE CHAIN
24 FOR THE THIRD TIME IN A ROW
BALL NAMED INDUSTRY LEADER ON DOW JONES INDICES
28 THE CIRCULAR FUTURE
SHAPING A SUSTAINABLE SOLUTION
34 THE HYDRO PARTNERSHIP
IT'S ALL ABOUT ALUMINUM
40 TAKE ME TO THE THEATRE
RECAN FUND AWARDED "BEST NONPROFIT CAMPAIGN"
42 CRAVING FOR CANSCRAFT BREWS ENTER THE GERMAN MARKET
48 CAN STYLE BE SUSTAINABLE?A LOOK INTO THE FASHION INDUSTRY
52 EVERY SUCCESS STARTS WITH AN IDEA HOW BALL EMPLOYEES MAKE A DIFFERENCE
56 THIS GRASS IS "GREENER" HEIDER DRUCK SUSTAINABILITY PRACTICES
58 SHARING OUR EXPERTISE
WHY WE RELY ON CUSTOMER TECHNICAL SERVICE
62 WE SPEAK YOUR LANGUAGE
THIS CAN COURIER IS A SPECIAL ONE

Welcome to the 2015 sustainability issue of Can Courier. Here at Ball, sustainability is in our company DNA, a part of who we are going back more than 135 years. Since then, the world around us has changed, though our core values have not. In my 40 years with the company, I am proud to say that our commitment to sustainability has never been stronger.

This issue of Can Courier gives voice to our sustainability efforts. We also understand the key role our industry partners play in these efforts. Participating in several multi-stakeholder programs allows us and others to bundle resources and expertise to develop effective, innovative and sustainable solutions. One example, is the development of the Metal Recycles Forever Symbol. Working alongside other industry leaders as board members of Metal Packaging Europe, we developed this mark for metal packaging, to encourage a change of consumer behavior around the permanency of metal and the value with which recycling brings to the topic of environmental responsibility.

At Ball, we believe passionately that a sustainable business model can help tackle environmental challenges, while driving performance and innovation and in turn - stimulate economic growth and development. As we move forward, we will continue to balance our activities because we understand that through sustainability practices, we can create long-term shared value that can benefit our stakeholders, our company and the communities where we live.

We hope this issue of Can Courier provides you with a better look inside Ball's commitment to a sustainable future.

## COLIN GILLIS

PRESIDENT, BALL PACKAGING EUROPE

At Ball, we recognize that in order to preserve global resources, businesses need to play an active role. Sustainability is not a simple talking point - it permeates everything we do - with transformation taking place across our entire value chain. We understand that while we remain grounded in our values, true sustainability is a work in progress, continually taking into account the short- and long-term value to our stakeholders and society. We are up for the challenge, but know we can't do it alone.

Partnerships with like-minded customers and suppliers are important to our sustainability efforts. That's why, inside this issue of Can Courier, you will learn more about the sustainability efforts of Hydro, one of our strategic aluminum suppliers. You'll read about innovative thinking and actions that are helping provide a sustainability framework for Ball and other industry leaders. We have also included a special section on our Cut/4 CArboN initiative. We're nearly half-way through this 2020 commitment to reduce our product-related greenhouse gas emissions by 25 percent - which feeds straight into our customers' own climate protection targets. At Ball, sustainability is at the heart of what we do, and our partners play an important role in furthering our overall mission.

## THOMAS HAENSCH

VICE PRESIDENT SALES, MARKETING \& INNOVATION, BALL EUROPE GMBH

Did you know that the beverage can is the most recycled beverage container in the world?

Made of metal, a permanent material, cans are 100 percent recyclable and can be recycled infinitely with no loss of quality. When you look at the lifecycle of metal packaging it comes full circle, as once the can reaches the consumer and it is collected and then recycled, the metal can be used over and over again in new products.

One school of thought broadens this concept, providing a more viable and sustainable option for future resource security. The Circular Economy model, which you'll read about in this issue of Can Courier, is an approach that focuses on redesigning and rethinking how we use and reuse resources. It's a closed loop model, where valuable resources make their way across the entire product lifecycle, and are continually reused or recycled and transformed with the ultimate goal of zero waste throughout the process. While the principles of this approach are not new to Ball, it provides a new framework for how we think about sustainability throughout our value chain and how we engage with our stakeholders. The Circular Economy provides us with a great opportunity to enhance consumer awareness of the advantages of metal packaging and promote positive change through our sustainability efforts.

## BJÖRN KULMANN

DIRECTOR SUSTAINABILITY, BALL CORPORATION


When one tugs at a single thing in nature, he finds it attached to the rest of the world.

## COMMITTED TO A CLEAR CUT

BALL'S CUT/4CARBON TARGET
at BaLL, WE WORK HARD TO FOCUS ON WHAT MATTERS MOST TO OUR STAKEHOLDERS. AND SUSTAINABILITY IS ONE OF THOSE THINGS

THAT MATTERS: TO OUR CUSTOMERS, EMPLOYEES, SHAREHOLDERS, BUSINESS PARTNERS, SUPPLIERS, REGULATORY AUTHORITIES AND OTHERS, AND TO THE COMMUNITIES WHERE WE LIVE AND WORK.
THAT'S WHY OUR CUT/4CARBON CAMPAIGN AIMS NOT ONLY TO REDUCE OUR OWN CO2 FOOTPRINT, BUT ALSO THE CARBON EMISSIONS along the whole value chain.


PERCENT - THE ULTIMATE TARGET FOR 2020


We believe that by balancing our economic, environmental and social impacts in our decision making and activities, we can create long-term shared value for our company, our stakeholders and society. That's why we take a systematic approach to sustainability, focusing on six corporate sustainability priorities:

## CORPORATE SUSTAINABILITY PRIORITIES

## INNOVATION

OPERATIONS
RECYCLING
SUPPLY CHAIN
TALENT MANAGEMENT
COMMUNITY

Improve the environmental performance of our products. Enhance safety and minimize environmental impact. Keep resources in the loop and protect the climate. Facilitate sustainable practices throughout our value chain.
Help our employees thrive and grow.
Give back locally.

## INNOVATION

Improving manufacturing processes, reducing material input while keeping optimal product performance, and improving the functionality and appeal of our cans, show how successful product and process innovations create economic and environmental value for our company, customers and consumers. Our B-Can, for example, represents our efforts to "engineer out the unnecessary," creating a next generation can that performs like a standard can, while using approximately five percent less material. Overall, our weight optimization efforts in our European beverage can operations resulted in more than 6,800 metric tons of metal saved when comparing 2014 with 2010, saving approximately 30,511 metric tons of greenhouse gas emissions.

## OPERATIONS

In our plants, we focus on six operational priorities, key to achieving our sustainability goals and reducing Ball's environmental footprint: electricity, natural gas, water, waste, volatile organic compounds and safety. Two-year performance goals for each "Big 6" metric help drive measurable progress and energy efficiency improvements that
contribute to our Cut/4 CArboN program.


Our Cut/4CArboN campaign combines aspects of four of these priorities, with the ultimate target for 2020 of cutting the carbon footprint of our most common beverage can formats by one-fourth. This target includes our controllable efforts, and those successes realized in collaboration with industry partners all along the value chain.

# "SINCE ITS INTRODUCTION, THE WEIGHT OF THE 2-PIECE BEVERAGE CAN HAS BEEN OPTIMIZED SIGNIFICANTLY VIA END DIAMETER REDUCTION AND BASE PROFILE DEVELOPMENT. THE LOGICAL NEXT STEP WAS TAILORING CONTAINER PERFORMANCE TO FIELD REQUIREMENTS. AS A RESULT, THE B-CAN WAS BORN. A TRUE EXAMPLE OF SUSTAINABLE PRODUCT EVOLUTION, THIS EFFORT TOOK THE COMMITMENT OF OUR ENTIRE SUPPLY CHAIN. AS WE CONTINUE TO EVOLVE, OUR GOAL IS TO DEVELOP NEW PROCESS AND PRODUCT INNOVATIONS THAT HELP OUR COMPANY AND OUR CUSTOMERS CONSERVE RESOURCES." 

PIM VAN DAM, MANAGER PRIMARY MATERIALS \& PROCESSES, BALL PACKAGING EUROPE

## ENERGY

## (electricity, natural gas)

We focus on machinery, equipment, heating, cooling, heat recovery and lighting to reduce our energy consumption and greenhouse gas emissions, while monitoring overall consumption through an energy information system. We share best practices, ensure proactive maintenance and seek out daily operational efficiency gains, such as replacing fans, motors or optimizing air pressure and vacuum use. A global investment of US\$ 18.8 million in energy efficiency measures in 2013-2014 has helped us reduce our global energy use by five percent since 2012.

## RECYCLING

Metals are permanent materials, a resource that can be used again and again in various applications. Recycling metal requires approximately 20 times less energy than primary metal production, reducing greenhouse gas emissions significantly. This is why recycling plays an important role in Ball's Cut/4 CArboN target, and why we invest in local recycling programs (e.g., curbside), industry recovery efforts and our recovery initiatives that we run on our own (e.g., recan fund in Serbia).

Working with industry partners, we strive to enhance packaging collection and recycling across the globe. In addition to recycling efforts within our own facilities, we support curbside recycling programs in coordination with MetalMatters in the UK (see page 16) and The Recycling Partnership in the U.S.; programs to encourage recycling at work and in public venues such as Every Can Counts in nine European countries; creative programs that seek to educate at sporting events or reach out to our youngest consumers about the value of recycling at schools or the theatre, such as Recal in Poland, Recan in Serbia (see page 40), The Great American Can Roundup in the U.S., and Escola Ativa in South America.

## NUMBER OF PLANTS WITH COMPREHENSIVE energy nformation SISIIEMS AT YEAR-END 2014: 18 <br> 

## SUPPLY CHAIN

We practice strategic and responsible sourcing. Over the past several decades, we've developed stable and proven relationships with the majority of our strategic suppliers. Crucial to building sustainable supply chains, these longlasting partnerships enable us to discuss our sustainabil-ity-related expectations with suppliers and to collaborate successfully on new technologies, product innovations and recycling programs. Ball's involvement in the Aluminium Stewardship Initiative (page 20) provides a formal arena in which we address supply chain issues in a group forum.

In 2013, we introduced our global Responsible Sourcing Framework to regularly assess the sustainability performance of our major suppliers, and support our efforts to:

- utilize lean supply chains
- create shared value and reduce risk
- build sourcing solutions in line with stakeholder expectations
- enhance the sustainability profile of our products

An example of this Framework in action is our relationship with supplier Novelis, a global aluminum recycler. Novelis' recent US\$250 million investment in improvements to its Nachterstedt, Germany recycling facility, makes it the largest and one of the most sophisticated aluminum recycling centers in the world.

We regularly undergo third party assessments of our sustainability management, performance and goals, thus ensuring that we are staying on track. Most recently, the Dow Jones Sustainability Indices named Ball the industry leader for container and packaging companies for the third consecutive year. Our commitment has been acknowledged by membership confirmation on the FTSE4Good Index every

## METAL CANS ARE 100\% AND INFINITEEY RECYCLABLE

## 

year since 2009. Additionally, Ball has been included in the MSCI Global Sustainability Indexes, the STOXX Global ESG Leader Indices and the Euronext Vigeo US 50 Index.

Ball Packaging Europe proudly participates in the EcoVadis platform. In April 2015, EcoVadis once again awarded Ball a gold rating, ranking among the top one percent of the 150 suppliers assessed within the same industry.

$$
\frac{\text { "TRAVELLING TO OUR BEVERAGE CAN PLANTS ON FOUR CONTINENTS }}{\frac{\text { PROVIDES GREAT OPPORTUNITIES TO IDENTIFY AND SHARE }}{\text { BEST PRACTICES ON OPERATIONAL EXCELLENCE. }}}
$$ MOST IMPORTANTLY, I AM EXCITED TO SEE EMPLOYEES IN EVERY PLANT HIGHLY ENGAGED AND EAGER TO CONTINUE HELPING MAKE THEIR PLANTS AND OUR PRODUCTS MORE SUSTAINABLE. OUR INTERNAL HOOVER SUSTAINABILITY AWARD IS JUST ONE WAY WE RECOGNIZE THE PROGRESS OUR PLANTS MAKE EACH YEAR. BECAUSE OF OUR EMPLOYEES' DEDICATION, I AM CONFIDENT THAT WE WILL ACHIEVE OUR NEW CUT/4 CARBON TARGET, WHICH - BY THE WAY-ALSO POSITIONS US VERY WELL WHEN WORKING WITH OUR CUSTOMERS ON SUSTAINABILITY OPPORTUNITIES."

SCOTT MORRISON,


## CARLA CUTS CARBS... CARBON FOOTPRINT, that IS

## $\star$

## COACHING BENEFITS THE TEAM

A TEAM STRIVING TO ACHIEVE A NEW PERSONAL BEST WITHOUT A COACH IS MISSING A KEY INGREDIENT FOR SUCCESS - SOMEONE TO MOTIVATE, EDUCATE, AND PROVIDE OBJECTIVE FEEDBACK ON PERFORMANCE. WITH A SIMILAR GOAL IN MIND, BALL RECENTLY ENLISTED THE HELP OF CARLA, THE CARBON CUTTING COACH, TO ASSIST WITH ATTAINING ITS CUT/4 CARBON TARGET. BALL UNVEILED THE CARLA CUTS CARBS INITIATIVE IN NOVEMBER 2014 AT THE BRAUBEVIALE TRADE FAIR FOR PRODUCTION AND MARKETING OF DRINKS IN NUREMBERG, GERMANY TO HIGHLIGHT SUCCESSES MADE IN PURSUIT OF THE 2020 TARGET:
TO REDUCE THE CARBON FOOTPRINT OF ITS BEVERAGE CANS BY 25 PERCENT.

A THEORETIC SWITCH OF EUROPEAN PRODUCTION OF 33 CL AND 50 CL STANDARD ALUMINUM BEVERAGE CANS TO THE
$\frac{\text { B-CAN REPRESENTS YEARLY }}{\text { SAVINGS OF } 19.000 \text { TONS OF }}$
ALUMINUM - EQUIVALENT TO APPROXIMATELY 100 JUMBO JETS.
O


In support of Ball's carbon cutting efforts, Carla has created the Carbon Chronicles
(found at http://www.carlacutscarbs.com)
as her means to track the overall progress made in the areas of innovation, operations, recycling and overall supply chain. Although Carla is a fictional Ball employee, her persona and chronicle entries help to "humanize" the topic of sustainability with visuals that bring the data and activities to life. Not only does Carla make technical improvements more understandable, but her chronicles provide a new level of transparency regarding progress made towards the Cut/4 CArboN target, and also allow Ball the opportunity to engage and highlight its partners' progress and importance to the campaign.

## WHAT DOES CARLA WRITE ABOUT?

The Chronicles are not meant to be an exhaustive list of all improvements made to date, but to provide relevant examples of the types of activities in which Ball and its partners are engaged. To demonstrate where progress has been made over the past five years, Carla includes examples from each of the Cut/4 CArboN focus areas.

## OPERATIONS

Carla's Chronicles include energy demand improvements such as the 2010 installation of a heat recovery system at the Braunschweig, Germany facility which saves $250,000 \mathrm{kWh}$ of energy, and the 2014 installation of new lighting in the Weissenthurm, Germany plant which helps save $294,000 \mathrm{kWh}$ of electricity. She also chronicles improvements to our energy supply side through investments in renewable energy, such as the plan to install three wind turbines which will generate approximately 20 percent of the Findlay, Ohio plant's overall electricity needs.

## INNOVATION

Innovative ideas for can weight optimization are chronicled in 2011 with the reduction in weight of the Handy Can by 1.7 percent, and in 2013 with the launch of the B-can, a next generation can that performs like a standard can, but uses five percent less metal.

## SUPPLY CHAIN

Ball's 2013 decision to join the Aluminum Stewardship Initiative (see page 20) is chronicled by Carla, along with the Bierne, France facility's 2011 switch to jumbo trucks resulting in a transport decrease to nearby customers by over $1,000 \mathrm{~km}$ per year.

## RECYCLING

Although only a small portion of all the various beverage can recycling programs supported by Ball are recorded by Carla, recognition is given in 2012 to Chaque Cannette Compte's (Every Can Counts) 200 events held that year to increase consumer awareness around the benefits of recycling. And in 2014, Carla congratulates Ball employees for recycling 88,473 pounds of aluminum cans, raising nearly US \$ 58,000 for local charities during the Great American Can Roundup Industry Challenge.

## CARLA'S CONCLUSIONS

Carla is anxiously awaiting for 2015 to come to a close so that she can evaluate progress toward the 2020 target. 2015 marks the campaign's half-way point with data available sometime in 2016. Ball's Cut/4CArboN progress report for 2014 will be available soon. Initial findings across all four focus areas are encouraging: aluminum beverage can recycling rates in the U.S. and Europe have improved since 2010 and Ball's global beverage can business has improved energy efficiency by 8.4 percent from 2010 to 2014. During the same time period, decreasing metal use in our European can operations by 6,879 metric tons through weight reduction saved approximately 30,511 metric tons of greenhouse gas emissions.

We have set a challenging goal for ourselves, which will need continued effort and focus, but we feel we are up to the challenge! Check in with Carla periodically as she chronicles and helps us cross the 2020 finish line.


To celebrate the launch of the 50th MetalMatters campaign, Ball Packaging Europe,
a MetalMatters funding partner, invited Wrexham councillors and students from a local primary school to its Wrexham facility to experience the aluminum can manufacturing process first hand. The Wrexham plant produces around seven million cans per week, and each one can be recycled and back on the shelf as a new can in just eight weeks.


# METAL MATTERS: NoW EVEN MORE IN WREXHAM, UK 

WREXHAM IS THE 50TH LOCAL AUTHORITY IN THE UK TO PARTNER WITH METALMATTERS, LAUNCHING A RECYCLING CAMPAIGN TO INFORM CITIZENS ABOUT WHAT AND HOW TO RECYCLE, AND WHAT HAPPENS TO metal packaging during the recycling process.

## DO YOU KNOW WHAT TO DO WITH YOUR:

- Drink cans
- Food tins
- Pet food tins
- Empty aerosols
- Wrapping foil and foil trays
- Sweet and biscuit tins
- Metal bottle tops and jar lids



## THE CITIZENS OF WREXHAM, UK DO! RECYCLE THEM, OF COURSE!

Funded and developed by the metal packaging manufacturing industry, and managed by the Aluminium Packaging Recycling Organisation (Alupro), MetalMatters, in cooperation with local authorities throughout the UK, now reaches more than three million residents with their recycling messages. The Wrexham campaign is the fourth campaign in Wales, and like the other three, is run in partnership with Waste Awareness Wales. Wrexham is also home to a Ball production facility that employs 215 employees.

The UK's Department for Environment, Food and Rural Affairs (Defra) concluded that if behavior change is to be achieved, communication is the key. This finding was seconded by the Serco report, Investigating The Impact of Recycling Incentive Schemes, which indicated that people are more likely to be encouraged to recycle by marketing communications than incentives (reference: nine percent and five percent respectivelyl. The Wrexham MetalMatters campaign aims to do just that! Launched in early 2015, it will reach more than 58,000 households through two direct household leaflet distributions, online advertising, social media posts, posters in public buildings, and information roadshows at local supermarkets.

## "PARTNERSHIPS REALLY ARE THE KEY TO DELIVERING

 SERVICES WHILE CUTTING COSTS.
## METALMATTERS CAN HELP LOCAL AUTHORITIES

 DELIVER PROFESSIONAL COMMUNICATIONS
## CAMPAIGNS, BOLSTERING RECYCLING RATES

## AND DELIVERING EXCELLENT VALUE FOR MONEY."

## "EVERY CAN RECYCLED SAVES ENOUGH ENERGY TO

## RUN A TV FOR THREE HOURS,

## SO A SMALL ACTION LIKE PUTTING YOUR EMPTY BEAN

TIN IN THE RECYCLING BAG,

## BOX OR BIN CAN MAKE A BIG DIFFERENCE."

CLLR DAVID BITHELL,
LEAD MEMBER FOR THE ENVIRONMENT AND PUBLIC PROTECTION

As the largest industry-funded recycling campaign in the UK, MetalMatters' programs are effective! In fact, overall metal packaging recycling has increased by around 18 percent. And according to MetalMatters, a successful program in Wrexham could result in a savings of around 4,100 tons of carbon dioxide - the equivalent to taking more than 1,000 cars off local streets for a year - if all of the metal packaging items used in Wrexham are recycled each year.

Industry-funded communication campaigns couldn't come at a better time. A recent report by the Chartered Institution of Waste Management and the consultancy firm Ricardo AEA documents the struggles that local authorities are facing with cuts to their waste budgets. The report warns that recycling rates could start falling because of these cuts. However, with reduced waste disposal costs and the additional metal packaging collected for recycling, each MetalMatters campaign delivers an excellent return on investment, paying for itself within a matter of months and making it a desirable opportunity for cash-strapped local authorities. A recent 2015 Alupro report reveals an initial 27 pence average campaign cost per household, which is quickly returned after programs have been rolled out.


## BETTER PRACTICE PREDTECT

AS GLOBAL DEMAND FOR ALUMINUM CONTINUES TO INCREASE, A GROWING

GROUP OF ALUMINUM INDUSTRY STAKEHOLDERS HAVE JOINED TOGETHER IN THE ALUMINIUM STEWARDSHIP INITIATIVE TO IMPROVE SUSTAINABILITY ACROSS THE ALUMINUM VALUE CHAIN. AND THESE STEWARDS HAVE A VISION.




This vision is to demonstrate social and environmental responsibility and build stakeholder confidence in aluminum products. It's about business too. The group understands the importance of transparency - providing credible and verifiable information about sustainable business practices and products throughout the aluminum value chain.

Following several years of discussions concerning sustainability challenges, opportunities and needs, this group loriginating as the Aluminum Stewardship Initiative (ASI), an ad hoc group providing memberships, committees and standards) was incorporated as a non-profit, public company limited by guarantee in Australia in June 2015. Open to any organization with a stake in the aluminum value chain, ASI recently modified its membership structure to include full and associate membership classifications. Both types of members contribute to the ASI work program and support broad standards adoption, but full members have more voting rights within the organization. Ball Corporation is an active full member with ASI.

## SETTING THE STANDARD

A Standards Setting Group (SSG), composed of member organization representatives, oversees the process of compiling a set of performance standards to cover business, environmental and social activities of the aluminum industry. The International Union for Conservation of Nature served as coordinator of the standard setting process until the recent incorporation of ASI. These standards are applicable all along the aluminum value chain, from bauxite extraction and aluminum smelting, to the production of commercial and consumer goods, to the recycling of preand post-consumer aluminum scrap. In December 2014, ASI released SSG-approved Performance Standards, that focus on the following sustainability issues.

## MEASURING PERFORMANCE

Adherence to these standards will be overseen by a third-party certification system, once an appropriate governance handbook, complaints mechanism, assurance model and chain of custody mechanism have been approved. Newly appointed ASI Executive Director, Dr. Fiona Solomon, recently reported in Aluminium International Today that stakeholder consultations and pilot testing will continue through 2015 and 2016, with an aim to launch the full ASI certification system in 2017. Several end users, including Nespresso, have indicated their intent to purchase certified aluminum once it is available.


## NEXT STEPS

What's in the future? Next steps for ASI include developing the third party certification program, further developing the Chain-of-Custody (CoC) Standard for the flow of ASIcompliant aluminum, and finalizing performance indicators. The CoC will allow for product specific claims and enable suppliers to demonstrate that they have systems in place to responsibly source aluminum. The ASI CoC mechanism will provide assurance that at each stage in the aluminium value chain, materials from ASI compliant facilities are managed and/or mixed under controlled procedures with eligible sources, and that non-eligible sources are identified and eliminated from the supply chain.

## THINKING LONG-TERM AT BALL

Crucial to building sustainable supply chains, is the ability to discuss sustainability-related expectations with suppliers and to collaborate successfully on new technologies, product innovations and recycling programs. This is precisely the reason Ball joined the Aluminum Stewardship Initiative in 2013. Our commitment to managing and evolving our sustainability vision is woven into Drive for 10, Ball's strategy for long-term success.
"The ASI Performance Standard will enable us, and our industry partners, to demonstrate responsibility and provide independent, credible and verifiable proof of progressive environmental,
social and governance performance.
It is expected that certification of compliance can apply at both the company and the product level,'

BJÖRN KULMANN,
DIRECTOR
SUSTAINABILITY,
BALL CORPORATION

## BUSINESS INTEGRITY POLICY AND MANAGEMENT TRANSPARENCY MATERIAL STEWARDSHIP GREENHOUSE GAS EMISSIONS EMISSIONS, EFFLUENTS AND WASTE WATER BIODIVERSITY HUMAN RIGHTS LABOR RIGHTS OCCUPATIONAL HEALTH AND SAFETY

# BALL RECOGNIZED FOR SUSTAINABILITY EFFORTS 

FOR THE THIRD YEAR IN A ROW, BALL CORPORATION HAS BEEN NAMED THE INDUSTRY LEADER FOR CONTAINER AND PACKAGING COMPANIES ON THE 2015 DOW JONES WORLD AND NORTH AMERICA SUSTAINABILITY INDICES!

For more than a decade, Dow Jones has tracked the performance of sustainability-driven companies regionally and worldwide, providing reliable, objective benchmarks for asset managers with sustainability portfolios. That is why today, Dow Jones Sustainability Indices are regarded by many as the world's most significant ranking of corporate sustainability performance. Selection is based on an analysis of financially material Environmental, Social, and Governance factors. The Dow Jones World Index tracks the performance of the top 10 percent of the 2,500 largest companies on the S\&P Global Broad Market Index ${ }^{\text {SM }}$ that lead the field in terms of sustainability, while the North America Index tracks the performance of the top 20 percent of the 600 largest Canadian and U.S. companies.

## menser of

Dow Jones
Sustainability Indices
In Collaboration with RobecoSAM


## HOW IT WORKS

S\&P Dow Jones Indices and RobecoSAM, an investment specialist focused on sustainability investing, invited more than 3,400 companies to respond to approximately 100 questions on economic, environmental and social issues with a focus on industryspecific criteria that have a material impact on companies' ability to generate long-term value. This analysis is complemented by an additional examination of media coverage, stakeholder commentaries and other publicly available sources.

> WE SAT DOWN WITH BJÖRN KULMANN, DIRECTOR OF SUSTAINABILITY TO FIND OUT A LITTLE MORE ABOUT WHAT BALL IS DOING TO CONTINUE TO EVOLVE THE COMPANY'S SUSTAINABILITY EFFORTS:

## How does Ball decide where to focus its sustainability efforts?

We continuously look for opportunities to incorporate sustainable practices throughout our entire company and value chain. We think long-term and encourage innovative ideas and new thinking from our employees, our suppliers and industry partners. It's a team effort and part of our company culture. That's because we all understand that through sustainability practices, we can create shared value, benefiting our stakeholders, our company and the communities where we live and work for many years to come.

## Can you provide some examples of innovative practices?

One example of innovative sustainability practices at Ball include a new iteration of the revolutionary ReAl technology, which allows us to provide aluminum aerosol cans to customers that weigh 15 percent less than a standard aluminum aerosol container. Cut/4 CArboN, our 2020 target to cut the carbon footprint of our beverage cans by one-fourth, is another example of how long-term thinking can produce sustainable results that benefit just about everyone. You can read more about it on page 6 .

## How did Ball score?

Ball earned industry-leading scores in the environmental and social dimensions and scored particularly well on criteria integral to its Drive for 10 vision, such as operational health and safety, operational eco-efficiency, product stewardship and stakeholder engagement. We increased our overall score from 2014 by three points.

FOR MORE INFORMATION ON THIRD PARTY REVIEWS OF BALL'S SUSTAINABILITY MANAGEMENT, PERFORMANCE AND GOALS, VISIT OUR EXTERNAL ASSESSMENT PAGE ON WWW.BALL.COM

## THE CIRCULAR ECONOMY

# SHAPING A SUSTAINABLE SOLUTION 

RIGHT NOW, THERE ARE MORE THAN SEVEN BILLION PEOPLE ON EARTH - WITH THE UNITED NATIONS PREDICTING THAT THE GLOBAL POPULATION WILL HIT 9.7 BILLION BY 2050. SOME 795 MILLION PEOPLE IN THE WORLD DO NOT HAVE ENOUGH FOOD TO LEAD A HEALTHY ACTIVE LIFE.
THAT'S ABOUT ONE IN NINE OF US. JUST HOW MANY PEOPLE THE EARTH CAN SUPPORT USING OUR CURRENT "TAKE, MAKE AND DISPOSE" APPROACH IS A QUESTION THAT IS BECOMING MORE AND MORE IMPORTANT AS THE USE OF OUR NATURAL RESOURCES KEEPS BOOMING.


One aspect of a broader solution that is rapidly gaining traction with governments and industry is the Circular Economy, which offers a more viable and sustainable option for future resource security. This approach focuses on redesigning and rethinking how we use and reuse resources. It is often described as restorative and regenerative by intention and design, working toward efficiencies; the eradication of waste and toxic chemicals and reliance on renewable energy. It's a closed loop model, where valuable resources make their way across the entire product life cycle, and are continually reused or recycled and transformed with the ultimate goal of zero waste throughout the process.

It's not a new concept. Thoughts and ideas surrounding the finite supply of natural resources and how to meet future demand have been around for a while, but have recently gained momentum due to high level inclusion on public and private agendas such as the Circular Economy Package in the July 2014 European Commission waste agenda and in World Economic Forum meetings, reports and special projects.

Another driving force behind the momentum is the Ellen MacArthur Foundation, one of the most eminent supporters of the Circular Economy approach. Established in 2010 to inspire a generation to rethink, redesign and build a positive future, the Ellen MacArthur Foundation works to accelerate the transition to a circular economy by focusing on the following three areas:

## EDUCATION inspiring a generation <br> to re-think the future <br> BUSINESS <br> catalyzing business innovation <br> ANALYSIS providing insight to develop approaches and capture value

## ELLEN MACARTHUR FROM CIRCLING THE globe to the CIRCULAR ECONOMY

In 2005 Ellen MacArthur, a British citizen, set off on her journey to become the fastest solo sailor to circle the globe. Everything she needed, she carried with her - and it had to fit on her boat. She came back accomplishing her achievement. She also came back with new insight into the way the world works, as a place of interlocking cycles and finite resources.

On her boat, a 75-foot trimaran, the decisions she made about the resources she used had an effect on the amount of resources she had available for the next day and days after. She translated that realization to the world in which we live, and our global economy, that is also dependent upon finite resources. Ellen spent the next four years speaking to experts from all over the world to understand the goal for how we manage our finite resources on a global scale, and in 2010 established the Foundation.

## Today, the circular approach is gaining traction. According to the Ellen MacArthur Foundation website (www.ellenmacarthurfoundation.org), there are eight global trends driving the transition to a circular economy:

1. Resource constraints: The costs of making things are becoming unpredictable and expensive
2. Increasing demand: We'll have to make more things to fulfill greater future consumer demand - even though it is becoming more expensive to make
3. Employment: The growing desire within industrialized economies to 're-invent' manufacturing models to create resilient domestic employment
4. A new generation of consumers: Access is more important and there is less concern about owning things than using them - driving new business models
5. Shift in socio-demographics: Increase in urbanization is leading to reduced costs of collection
6. Emerging technologies are connecting more people: We can keep track of precious raw materials as they move across global supply chains
7. Investment opportunities are being redefined: Companies that are more resilient to material price shocks and risks will stand a better chance of investment than those who are not
8. Legislation: Carbon, energy and waste regulations are becoming increasingly common

## THE CIRCULAR ECONOMY 100 BUSINESS INNOVATION

The Ellen MacArthur Foundation also places an emphasis on the real-world relevance of its activities, with the idea that business innovation is key. The Foundation works with its Global Partners (Cisco, Philips, Renault, Kingfisher and Unilever) to address major challenges in accelerating the transition to the circular economy.

In February 2013, the Foundation created the world's first dedicated circular economy innovation program. The Circular Economy 100 comprises a group of industry leading corporations, emerging innovators and regions. The program provides a unique forum for businesses to build circular capabilities, address common barriers to progress and pilot circular practices in a collaborative environment. According to its website, the Foundation provides three levels of support:

- Creating a mechanism for collective problem solving
- Building a library of best practice guidance to help businesses fast track success
- Providing a scalable mechanism for building circular economy capabilities within businesses

Circular Economy 100 members presently include the Foundation global partners, as well as many other companies such as Coca-Cola, SABMiller, Unilever and Novelis four Ball industry partners.

For more information on the Ellen MacArthur Foundation, visit www.ellenmacarthurfoundation.org.

## LOOKING AT BALL THROUGH THE CIRCULAR LENS

At Ball, with our eyes toward the future, we are also taking a closer look at everything we do, within the context of a Circular Economy. We're fortunate that by nature, metal can be recycled again and again without loss of quality. This provides us with a strong foundation for integrating the circular economy model into the full life cycle of our products.

The circular model involves new ways of thinking about and using resources. And metal cans lend themselves to this approach because they are produced using abundant and recycled materials. Because the earth's crust consists of approximately eight percent aluminum, it is the third most common element. Steel is made from iron-ore, limestone and coking coal, three very common natural resources. Iron is the fourth most plentiful element.

Another aspect of the Circular Economy is about taking discarded products and recovering resources to be used again. Approximately 60 percent of all aluminum cans are recycled globally. And according to the European Aluminum Association, the overall recycling rate for aluminum beverage cans in Europe increased to 70 percent in 2012 and is expected to reach 75 percent by the end of 2015 . The result is that the metal of more than 27.5 billion cans remains in the European circular economy and is available again for the production of new aluminum products.

Extending the life of a product is key to the circular model. And, because metals are 100 percent and infinitely recyclable, they can be reused over and over in various applications to become new products. In fact, nearly 75 percent of all aluminum and 80 to 90 percent of all steel ever produced is still in use today. Because the recycling infrastructure is well established, a recycled aluminum package can be back on the store shelf in as little as 60 days.


# THE HYDRO PARTNERSHIP - 

 IT'SALLABOUT ALUMINUM

# AT BALL, WE WORK HARD TO PRACTICE STRATEGIC AND RESPONSIBLE SOURCING ALL ACROSS OUR SUPPLY CHAIN. OVER THE PAST SEVERAL DECADES, WE'VE DEVELOPED STABLE AND PROVEN RELATIONSHIPS WITH THE MAJORITY OF OUR STRATEGIC SUPPLIERS. <br> CRUCIAL TO BUILDING SUSTAINABLE SUPPLY CHAINS, THESE LONG-LASTING PARTNERSHIPS ENABLE US TO DISCUSS OUR SUSTAINABILITY-RELATED EXPECTATIONS WITH SUPPLIERS AND TO COLLABORATE SUCCESSFULLY ON NEW TECHNOLOGIES, PRODUCT INNOVATIONS AND RECYCLING PROGRAMS. 



Hydro is a global aluminum company and supplier to Ball. Their business activities touch on many stages along the aluminum value chain - from bauxite, alumina and energy generation, to the production of primary aluminum and rolled products, as well as recycling.

Hydro's mission is to create a more viable society by developing natural resources and products in innovative and efficient ways. To Hydro, this means operating based on a set of principles that are good for society and for business, and measuring sustainability progress based on set performance areas that are integrated into their overall performance. Hydro has been listed on the Dow Jones Sustainability Indices since 1999 when the index family was launched.

## THE HYDRO-BALL PARTNERSHIP

Together with Ball, Hydro is working to support aluminum packaging recycling initiatives throughout Europe, with an understanding that beverage can recycling is a genuine contribution to climate protection and resource efficiency.


Aluminium foundry alloys are produced as continuous cast or mold-cast ingots for cast products.


These efforts include teaming up with beverage, food and aerosol producers and other stakeholders to develop specific activities aimed at optimizing infrastructure and raising public awareness about the importance of recycling. One example of Hydro's activities is the RECAL Foundation in Poland, of which Ball is a founding member. RECAL successfully promotes environmental awareness by educating the public, especially young people, on the importance of recycling. Along with Ball, Hydro is also a member of the Aluminum Stewardship Initiative, a multi-stakeholder platform dedicated to fostering responsible resource management of aluminum through the entire value chain.

## ALUMINUM <br> IS SUSTAINABLE BY NATURE

- MOST METALS, INCLUDING ALUMINUM, ARE PERMANENT MATERIALS AND 100 PERCENT RECYCLABLE
- ALUMINUM IS A MULTIFUNCTIONAL, DURABLE AND LIGHT MATERIAL
- THE PROPERTIES OF ALUMINUM ENABLE ENERGY SAVINGS IN MANY APPLICATIONS
- RECYCLING REQUIRES ONLY 5 PERCENT OF THE ENERGY NECESSARY TO MAKE PRIMARY ALUMINUM
- APPROXIMATELY 75 PERCENT OF ALL ALUMINUM EVER PRODUCED IS STILL IN USE TODAY


## HYDRO'S EFFORTS TO REDUCE THE ALUMINUM CARBON FOOTPRINT

While Hydro is committed to improve sustainability performance at all levels, energy efficiency in their production process is an important part of the company's ongoing efforts to reduce costs and $\mathrm{CO}_{2}$ emissions. Over the last 25 years, Hydro has reduced direct emissions of their smelters by 75 percent. On average, Hydro's consolidated smelters consumed 13.84 kWh of electricity per kilogram (kg) of primary aluminum produced in 2014. Their new HAL4e technology has achieved an energy consumption level of 12.5 kWh per kg aluminum. And at their pilot plant in Karmøy, Norway, Hydro is testing this technology at industrial scale.

## HYDRO'S LONG- AND SHORT-TERM CLIMATE STRATEGY

Hydro's climate strategy is an integral part of their overall business strategy. It includes reducing the environmental impact of operations and enabling their customers to do the same. Climate strategy measures include:


- Using viable energy sources
- Reducing energy consumption and emissions in production
- Reducing overall $\mathrm{CO}_{2}$ emissions and energy consumption via use of Hydro products
- Increasing aluminum recycling

Hydro works closely with customers like Ball to develop products that save energy and reduce emissions. Using less material while maintaining product functionality is one key element. Another element is aluminum recycling. Looking to take a stronger position in aluminum recycling, Hydro aims to recycle 250,000 mt post-consumer scrap by 2020. The company has been investing 45 million euros in a new used beverage can recycling line to improve their metal cost position and carbon footprint.

Hydro's ambition is to be climate neutral by 2020 through the reduction of direct and indirect emissions, increasing recycling and delivering more aluminum to markets and products that contribute to $\mathrm{CO}_{2}$ savings.


Hydro's collaborative research project in Brazil aims to restore and protect biodiversity. With their bauxite mine in Paragominas in Pará, Brazil, Hydro has set a goal to balance the opening of mining areas with reforested areas by 2017 and has a long-term aspiration of no net loss of biodiversity.

When Hydro acquired the bauxite mine in Paragominas in 2011, the company understood their responsibility. Although only a small part of the area planned for mining was pristine forest when Hydro became involved, the goal is to return the already altered areas back to a better condition than before Hydro's arrival. One of the actions to meet these goals - to establish a research program on biodiversity and climate change - is now starting to materialize. The first research project is related to overall biodiversity, soil quality, biomass in soils and vegetation and reforestation test fields.

## TAKE ME TO THEATRE

# LEARNING AND HAVING FUN? THE RECYCLING THEATRE, INITIATED BY BALL'S RECAN FUND IN BELGRADE, SERBIA, SHOWS WHY IT WAS NAMED THE BEST 2014 NONPROFIT CAMPAIGN 

Through an engaging and educational theatre program geared towards Serbia's youngsters and their parents, Ball's Recan fund put the media spotlight on recycling - in February, taking home the Belgrade-based City Magazine's Best Nonprofit Campaign Award for 2014. Garnering the most votes in the magazine's reader's choice awards, the "Limenkica ulaznica/Pozoriste koje reciklira" (Aluminum Can Ticket/Recycling Theatre) program took first place in a field of several competing nonprofit campaigns.

## SIX SEASONS AND GOING STRONG!

Beginning in the fall of 2009, the Serbian Recan Fund has worked with the Belgrade Children's "Pozoriste Carapa" (Sock Theatre) to bring this program to 56 municipalities, entertaining a total of 51,850 children and their parents. The entire project is based on the principle that children learn good habits through fun and games.

In lieu of a paid ticket, the Recycling Theatre requires pre-school and school-aged children to bring five empty, used cans for entry. At some performances and locations, children will receive a book if they bring an additional ten used cans to recycle. Children are encouraged to come early to watch short educational films about recycling and to meet the project mascot, a silver aluminum can-colored space man named Li-menom - who shows them how to recycle their cans in a crusher box. Recent performances have included the plays, As the Tree and Flower Save the World, Pippi Longstocking, The Little Match Girl and Three Little Pigs.

## RECAN SERBIA

Young people are the target audience for many Recan Fund recycling awareness activities, as coordinators believe that children are eager to adopt good habits, and are instrumental in motivating their family members to do the same. For example, the child tugging on his/her parent's sleeve to gather the necessary cans for recycling at the theatre provides an opportunity for adults to focus on the value of can recycling and actually provides the first action that can start a new habit!

In addition to the Recycling Theatre, the Recan Fund "Can by Can" program provides information to schools about the valuable resource metal, prepares teaching materials about beverage can recycling, and arranges educational
workshops, competitions and school can collection campaigns. The program also provides recycling opportunities to interested offices, restaurants and fitness clubs through the delivery of free recycling boxes, bags and educational leaflets, and in some cases, free pick-up and removal.

## RECYCLING CAN MAKE A DIFFERENCE

Focusing more on public recycling over the past decade, the Serbian government believes that recycling and the recycling industry is on the rise. In fact, according to official data, the industry even recorded growth during the global economic crisis.

The Can by Can recycling program in Serbian schools continues to grow. Starting with 20 schools in 2006, it's now operational in more than 200! The program is also in place at 35 offices, 25 restaurants and 10 fitness clubs - demonstrating increasing interest in recycling programs across a broad spectrum of institutions.

As for the recycling theatre, the numbers help tell this success story. Since its first performance, a total of 157,035 cans have been collected, including 42,800 cans in 2014 alone!


The sail of the "Boat in the wind" sculpture in the Supernatural Park in Belgrade is filled with cans transformed into small wind mills.

CRAFT BREWERS PREFER THE CAN TO PROTECT THE SENSITIVE INGREDIENTS OF THEIR SPECIALTY BEERS. WITH BEVERAGE CANS (RE-) CONQUERING THE MARKET, ALSO INDIVIDUAL CRAFT BREWS ARE MORE AND MORE MAKING THEIR WAY TO THE GERMAN CUSTOMER.

## A CRAVING FOR CANS



Home to Oktoberfest, the most celebrated beer festival in the world, and touting a rich, centuries-long beer tradition, you might think of Germany as a trend-setter in all things beer. But actually, German brewers and beer drinkers are just beginning to embrace the craft brews and breweries that began in the UK and U.S. in the 1970s and 80s, and have become increasingly popular among beer drinkers. The inspiration for craft brewing appears to have come full circle, with Americans getting their thirst for a more varied, "tasty" non-pilsner style lager from family connections or trips to Europe, and Europeans now taking back inspiration for replicating the American style craft beer that they have sampled at beer competitions, festivals, or on visits to the U.S.

## WHY DID IT TAKE SO LONG?

You might notice that German beer labels always carry the inscription "Gebraut nach dem deutschen Reinheitsgebot" or "Gebraut nach dem Bayerischen Reinheitsgebot von 1516" (brewed according to the German Purity Law or the Bavarian Purity Law of 1516). This "beer purity" law was a ducal decree issued on April 23, 1516, and has dominated the brewing scene for centuries by limiting beer ingredients to water, barley and hops. Defining beer this conservatively can minimize the creativity and individuality that is instrumental in creating craft beers.

## ARE GERMANY'S BEER DRINKERS READY FOR CHANGE?

Over the past 20 years or so, standard domestic beer sales have been on the decline. In fact, according to Destatis, the Federal Statistical Office of Germany, in 2013 German breweries sold two percent less beer than in 2012, the seventh consecutive drop in as many years. Sales of stronger beers such as IPAs (Indian pale ales) or Bavarian Marzen pale lager have risen by as much as 30 percent, suggesting that the new beer drinking culture may be pledging its allegiance to craft beers. Discussing the German beer palate in a March 2015 interview in The Local, Sylvia Kopp, certified beer sommelier and director of the Berlin Beer Academy, believes that "German beer drinkers are ready for more and brewers are responding."

## MEET FRITZ WÜLFING - CRAFT BREWER

Among noted German craft brewers is Fritz Wülfing, an engineer from Bonn who turned his hobby for brewing beer at home into a successful business. Although relatively new to the global craft brew market, Wülfing is leading German and European craft brewers towards the practice of using the aluminum can as a container of choice for their specialty ales. He debuted his Fritzale IPA in a BPE aluminum can in 2013 at the Nuremberg MicroBrew Symposium, and - after a name change - two of his Ale Mania brand beers appeared at the April 2014 World Beer Cup in Denver, Colorado in signature BPE cans. Back in Germany, Wülfing frequently hosts craft beer tastings, at which he serves beers from cans.

## EMBRACING THE CAN

Following in the footsteps of many American craft breweries, Wülfing has embraced the can. "The can is particularly well suited for my Ale Mania beers," says Wülfing. "It is the only packaging that protects the product completely from light and oxygen, thereby ensuring the delicate flavors of the hops are preserved and the beer tastes very intense and fresh." While Fritz understands the benefits that cans bring to the growing craft beer industry, many beer-drinking Germans are a bit slower to let go of some of their long-held ideas that cans can't compete.

## CAN BENEFITS

Many brewers note that the can keeps flavor and contents more stable than glass due to its aluminum-on-aluminum seal which keeps out oxygen, and its ability to block out all light which can break down light-sensitive compounds in hops and cause a foul odor and/or taste, leaving the beer "skunked." Cans are lightweight, can be shipped and stored more efficiently, and are less likely to break. Cans are easy to recycle and the metal recycles forever without any loss in quality. A recent study by the Swiss Consultancy Carbotech with an expert group from the metal packaging sector backs this up, affirming that aluminum and steel fulfill the "permanent material" criteria, and can be infinitely recycled bringing savings in material resources. With such characteristics it's no wonder the beverage can is the most recycled drinks package in the world!

## CAN CRAFT BEER IN A CAN CATCH ON?

If the U.S. craft beer market serves as any indicator of what to expect elsewhere, the can will catch on. The number of U.S. craft brewers selling beer in cans has grown 2,665 percent from 20 craft brewers selling it in 2005 - the year Oskar Blues won best Pale Ale - to 533 craft brewers offering 2,062 craft beers in cans in September 2015, according to the craftcans.com database.

Perhaps similar to screw top wine bottles, all it takes is some exposure and education along with the help of restaurants, pubs and other venues serving beer to eliminate long-held German taboos about beer in a can. It is helpful to have people like Donald Burke, manager at "The Bird" American Steakhouse \& Bar Berlin promoting the case on their menus. "Cans are better," says Burke in his Brew Berlin Blog. "They are airtight and keep your beer safe and tasting fresh whilst also being light and durable. In the case of craft beer specifically, cans add a whole layer of protection from light damage. Regardless of the style of the place - if I see craft in a can then that's what I am ordering.'

With unbeatable barrier protection, cans guarantee craft beer taste integrity, protecting the specialty ingredients of the hops and flavors from both oxygen and light, keeping the carbonation level constant and allowing rapid chilling - similar to a small, portable brewery vessel. Consumers love that they can easily be toted anywhere, even in a backpack while mountain biking, without fear of breaking. Another advantage for small breweries is that images and text can be printed on the entire surface of the beverage can, offering a 360-degree brand billboard to catch the consumer's eye!


CANS CAN MAKE A DIFFERENCE

$-7$
of all aluminum and more than $80 \%$ of all steel ever produced is still in use today

## FASHION NEWS

## CAMBODIA

In an effort to pursue zero waste, Cambodian designer tonlé's products are handmade from high-quality remnant fabrics that would have ended up in landfills. The company even developed its own system of making recycled paper for its hang tags. Using tiny scraps of fabric, used office and patternmaking paper, and natural glue, they manage to utilize all production waste and make a unique hang tag.

## ITALY

Italian eco-bag and accessory designer, Luisa Leonardi Scomazzoni, was traveling in Brazil when she became inspired by the aluminum can. Today, her successful company Dalaleo (www.dalaleo.it) creates bags and accessories out of aluminum pull tabs from recycled cans. But that's not all. Production takes place in a Brazilian favela (slum), helping to bring jobs and economic opportunity to the 40+ mothers who work there.

## USA

Artist and environmental educator Nancy Judd of Recycle Runway (www. recyclerunway.com I creates couture fashion from trash as an innovative way to provide education about conservation. One of her creations, the Aluminum Drop dress, was commissioned by Novelis, a Ball industry partner, and features hand-cut teardrops and circles from aluminum cans. Judd's inspiration? Recycling aluminum saves 95 percent of the energy needed to produce aluminum from bauxite ore.


## CAN STYLE BE SUSTAINABLE?

## A LOOK INTO THE TEXTILE AND APPAREL INDUSTRY

FOR MORE AND MORE PEOPLE, WHAT THEY WEAR DEPENDS ON WHERE IT'S MADE, HOW IT'S MADE AND WHAT IT'S MADE FROM, RATHER THAN JUST WHAT IT LOOKS LIKE.

THAT'S WHY TEXTILE MANUFACTURERS AND FASHION DESIGNERS ARE MAKING ENVIRONMENTAL AND SOCIAL CONSIDERATIONS A PART OF THEIR EVERYDAY BUSINESS AND DESIGN PLANS.


This "CAN-BY-CAN" dress was designed by Tatjana Tatalovic (TATA Fashion) who used about 200 cans.

Whether it's a small, local apparel store, a fashion house specializing in haute couture, or a global fast-fashion retailer, the desire to remain relevant exists, and the means to do so is increasingly reliant on a sustainability blueprint.

Utilizing organic fibers, energy and water reduction, natural dyes, wind-powered factories, up-cycled and/or recycled designs and more, forward-thinking designers and manufacturers - big and small, are striving to make ecologically and socially sustainable improvements. And these changes can have a huge impact globally in an industry that, according to Lucy Siegle in her book To Die For, sews one-and-a-half billion pairs of blue jeans and cotton trousers in Bangladesh, alone, every year.

## WHY THE NEED TO THINK SUSTAINABLY IN FASHION?

Fashion is continually changing, and that's part of the sustainability challenge. With each style change, the consumer buys more. In their 2014 article, Designing Want from
Waste, One Percent for the Planet found that today, we consume about 60 percent more clothing than we did 10 years ago. And, with increased consumption, comes increased waste.

A mountain of textile waste is growing, fed by fabric waste from factory floors and clothing waste from consumers' closets. One reason for this, as pointed out in a 2013 Guardian roundtable debate, is the "disconnect" between shoppers and the origins of the clothing they buy. Even if consumers walk into a store with the intention of doing the right thing, it all falls away when it comes to the latest fashions and the status that comes with wearing the latest styles.

And there's more. Across the globe, approximately 15 percent of fabric intended for clothing ends up on the cutting room floor. In Hong Kong, alone, people consign an average 95,550 tons of textiles to landfills every year, or roughly 11,250 garments every hour, according to the Chinese territory's Environmental Protection Department.

Ifit's notwaste, thenit'sthechemicaland physical damage to our planet that concerns many. According to the Pesticide Action Network North America, increasing demand for raw materials brings with it increased use of pesticides (conventional cotton accounts for 25 percent of all pesticides used worldwide each year) and other toxic chemicals, in addition to increased water and energy use, and carbon emissions. In 2014, Sustainable Brands found that the global production of polyester filament and cotton fiber was approximately 65 million tons, with demand expected to grow to 90 million tons by 2020 .

## BETTER INPUTS = BETTER OUTPUTS

Designers are viewing traditional raw materials in a new light - fibers that can be healthier for the customer and the earth - and seeing raw material in items previously considered trash (up-cycling). Many advertise the organic cotton, natural dyes, recycled plastics and other recycled materials used in their garments.

From handbags made from old boat sails or aluminum ring pulls, scarves made from old sweaters, to shirts and dresses made from remnants of the cutting room floor, upcycling has provided creative fashion uses for textiles and trash that previously ended up in landfills. A new denim line created by Pharrell Williams, G-Star and Bionic Yarn, even helps clean up the oceans, using yarn spun out of cotton and shredded plastic sieved from marine litter.

## REDUCING WASTE: EXTRA CREDIT FOR RECYCLING

To help close the recycling loop, several larger retailers have launched in-store recycling programs for customers, who bring in their used clothing in exchange for discounts on future purchases. Retailers including Puma, H\&M and American Eagle Outfitters are partnering with I:CO, a Swiss reuse and recycling firm, which assists with the sorting of donations for re-wear, reuse, recycling or energy generation. Of the textiles received, I:CO estimates that 40-60 percent are resold worldwide, 5-10 percent are turned into other products like wash cloths, and 30-40 percent are turned into textile fibers or used as insulating materials. The remaining 1-3 percent that can't be used for anything else, is used to produce energy.

## INDUSTRY STANDARDS

Textile industry stakeholders are educating themselves about best sustainability practices in the industry and how their practices compare. Similar to the Aluminum Stewardship Initiative's efforts to compile a standard for governance, environmental and social performance of the aluminum industry, the Sustainable Apparel Coalition (SAC) launched its Higg Index in 2012 to address inefficiencies, resolve damaging practices, and achieve environmental and social transparency across the textile value chain. Dedicated to sustainable production, SAC is comprised of leaders in the apparel industry, non-governmental organizations, academia and other industry stakeholders.

A CHANGE IN THINKING AND TECHNOLOGY CAN HELP DRIVE SUSTAINABILITY
Much of what designers and fast fashion manufacturers do is in response to customer actions. Therefore, an overall change in the customer's relationship with shopping and the way they view clothing, is needed for widespread adoption of sustainable practices along the textile value chain. That's why education is so important. Similar to changing behaviors surrounding curbside recycling, education and communication are paramount. In-store recycling drop-offs, informative clothing tags and even company practices like clothing rentals and second-hand market sales are helping educate consumers about the importance of sustainability when it comes to what they wear.

Additionally, apparel companies still need better, cheaper technologies in order to close the recycling loop by turning old fibers into new. Several companies are working to do just this by developing methods to separate and extract polyester and cotton from blended fiber clothing, as well as separate dyes and other particles from fibers. From these cleaned fibers they will spin new fabrics... and complete the supply chain circle.


The dress was first presented at the exhibition "Zip me up with Tape". The main intention of this exhibition was to show that used beverage cans can be valuable secondary raw materials.

## EVERY SUCCESS <br> STARTS

## WITH

## AN IDEA

AT BALL, WE'RE ALWAYS LOOKING FOR NEW IDEAS ON HOW TO LESSEN OUR ENVIRONMENTAL FOOTPRINT AND FOCUS ON OUR SUSTAINABILITY PRIORITIES. WHILE WE LOOK FOR IDEAS IN MANY PLACES, WE KNOW THAT ONE OF THE BEST PLACES TO FIND INNOVATION AND BEST PRACTICES IS RIGHT HERE AT HOME. BELOW, WE'VE HIGHLIGHTED JUST A FEW EXAMPLES OF HOW BALL EMPLOYEES ARE COMING UP WITH IDEAS AND TRULY MAKING A DIFFERENCE - ALL AROUND THE WORLD!


## Helping transform recycling in U.S. communities

In the U.S., according to The Aluminum Association, nearly US\$1 billion worth of aluminum cans are thrown away each year. And, although cans have the highest recycling rates of all packaging materials -67 percent for aluminum beverage cans and 70 percent for steel cans - more can be done to save resources, energy, and money. It's a challenging task since recycling systems are set up differently in each city or county. Regulations, infrastructure, sorting techniques, consumer education and many other factors can vary by region.

## ONE GREAT IDEA!

To address these challenges, in 2014, several industry players and trade associations formed "The Recycling Partnership," with the goal to transform the U.S. curbside recycling system through grants and technical assistance. The partnership seeds partner dollars to unlock larger public investments in community recycling programs. Björn Kulmann, director sustainability at Ball, suggested that the company, along with some of Ball's global customers and suppliers, join the organization and in June 2014, The Ball Foundation committed as a funding partner.

A grant was made in January 2015 to Columbia, South Carolina to modernize the city's residential recycling program. The new program supplies 34,000 households with 96-gallon carts, technical assistance, recycling education and outreach. Over the next 10 years, Columbia's improved recycling efforts are expected to produce a savings of 236 million gallons of water ( 893 million liters), 1.2 million MMBtus ( 352 million kWh) of energy and 100,000 metric tons of greenhouse gas emissions.

The organization has rolled out more than 150,000 recycling carts on the streets over an 18 -month period. In addition to the carts, over 430,000 households have received a host of educational materials about the importance of recycling.

## Sparking efficiency when it comes to electricity

In 2008, Ball facilities in Garin and San Luis, Argentina implemented management systems according to IS014001 (environmental) and OHSAS18001 (health and safety), and established safety and sustainability committees that ultimately sparked an even greater commitment to sustainability. After decreasing electricity usage and required maintenance through mercury lamp replacement and LED lighting installation projects, the sustainability committees wanted to do even more to accelerate their efforts.

## ONE GREAT IDEA!

In 2014, the sustainability committees from each plant reached out to their electric maintenance teams to brainstorm ideas. Together, they reviewed potential and ongoing energy projects and identified and prioritized areas with the greatest energy efficiency impact. Rising to the top were air compressors, the highest energy consumers at both plants.

The two teams came together to instill simple behavioral changes at each plant, such as asking employees to report whistling sounds when working around air compressors to help detect leaks. In addition, teams changed air valves, repaired old piping and installed gauges to further increase energy efficiency. In San Luis, once the air leaks were fixed, the team realized that instead of two compressors, all machines could run seamlessly with one. In addition, they replaced old devices that were using air inefficiently and installed new sensors in each line to track efficiency - $24 / 7$.

Since the two teams came together with one great idea, absolute electricity consumption at the two facilities has decreased by more than 21 percent. The San Luis facility improved compressor performance, which is working at 85 percent of maximum load, with the expectation to decrease to 75 percent for even more savings.

## 1 Jim Becker (Millwright Supervisor), Todd O'Dell (Millwright), Pat Rabine (Millwright), and Bob Nelson (Engineering Manager) <br> 2 Metal beverage facility in Ft. Worth, Texas: Representatives from the plant recycling team. From left to right: Dan Tennison, Brian Dombrowski, Chuck Wolfe, Dalton Jaus, and Javier Rodriguez

3 Kathleen Pitre, Vice President of Corporate Affairs, had the "One Great Idea" to join IMPACT 2030, and, in late 2014, Ball became a collaborating partner. Ball joins other corporations like UPS, Google and IBM.

4 Global Talent and Organizational Development Management Team
5 San Luis, Argentina: Gustavo Mercado, Brian Ruzsel, Juan Gigeroa, Javier Santana and Ruben Solis

6 Team from the beverage can plant in Hassloch, Germany
7 IMPACT2030 announcement at International Volunteer Day, December 2014


ALTHOUGH PAPER HAS BEEN MADE FROM NON-WOOD MATERIALS FOR THOUSANDS OF YEARS (THINK PAPYRUS IN ANCIENT EGYPT OR SILK OR COTTON FABRIC IN CHINA) IT'S ONLY TODAY THAT WE'RE TAKING A STEP BACK AND LOOKING AT NON-TREE-BASED ALTERNATIVES FOR MAKING PAPER.


## HEIDER DRUCK SUSTAINABILITY PRACTICES

Why? Because according to the U.N. Food and Agriculture Organization, 397.6 million tons of paper and paperboard were produced worldwide in 2013, the latest year for which global data are available.

Each day, according to the World Nature Organization, more than 200 square kilometers of forest disappear around the world due to deforestation. 35 percent of the harvested trees become paper. Cutting down forests to produce paper not only eliminates vital ecosystems, it also contributes to global warming. Half of the world's carbon, a greenhouse gas, is stored in forests. And while growing paper recycling efforts help reduce energy use and pollution, the global demand for paper is continuing to increase.

## IT'S ABOUT SUSTAINABILITY

If you're holding a physical copy of this magazine, feel the texture of the paper on the cover. After years of development and patenting, our Can Courier sustainability issue printer Heider Druck, offers its customers an industrial paper, where as much as 60 percent of the wood pulp normally used to make paper has been replaced by grass. Currently available for digital printing only, the cover of this magazine is made in large part, from grass clippings taken from fields in Germany.

## GRASS PULP BENEFITS

According to Heider Druck, the amount of woodland cleared can be drastically reduced for grass paper, since the raw material comes from fast-growing, renewable grass. The grass pulp comes from German sources, most of which are located less than 50 km away from the paper factories. And there's more! Processing grass pulp creates only one quarter of $\mathrm{CO}_{2}$ emissions, compared to wood-based pulp. In fact, Heider Druck believes that grass pulp has the potential to become the third most important raw material for global paper production alongside wood pulp and recycled paper.

## FOCUSING ON WHAT MATTERS

At Ball we work hard to focus on what matters most to our stakeholders, and sustainbility is one of those things that matters. This corporate commitment is woven in our long-term strategy and stretches across our entire value chain. That's why, whether we're talking about our manufacturing processes or the printing of this publication, our goal is to work with vendors and suppliers who share this same commitment.
"At Heider Druck, we're committed to sustainability and the responsible handling of precious resources."

HANS-MARTIN HEIDER, SENIOR DIRECTOR


## HEIDER DRUCK SUSTAINABILITY EFFORTS INCLUDE:

- Educating customers on sustainable printing practices and working to steer them in an eco-friendly direction
- FSC® ${ }^{\circledR}$ and PEFC ${ }^{\text {TM }}$ certifications, demonstrating support of ecologically, economically and socially sustainable forest management
- Since 2007, using inks containing vegetable oil as binders, reducing the energy necessary for recycling and facilitating the biodegrading of the ink
- Membership in the Printing and Media Industries Federation's climate protection model, enabling customers to offset $\mathrm{CO}_{2}$ emissions created during production by investing in certified renewable energy projects
- Eco-friendly printing technology, including the emissions-reducing "coldset" process for high-circulation web offset printing and the KBA Rapida la machine with emission limits far below EC directives) for sheet-fed offset printing



$$
\begin{aligned}
& \text { DRIVING } \\
& \text { SUSTANABILITY } \\
& \text { BY SHARING }
\end{aligned}
$$



# AT BALL, WE UNDERSTAND THAT TRUE SUSTAINABILITY AND INITIATIVES LIKE OUR CUT/4 CARBON PROGRAM CAN ONLY HAPPEN THOUGH COLLABORATION WITH OUR CUSTOMERS, SUPPLIERS AND INDUSTRY PARTNERS. THIS IS ONE OF THE REASONS WHY WE RELY ON OUR CUSTOMER TECHNICAL SERVICE (CTS) TEAM. 

We approach sustainability through a "big picture" lens - with our commitment woven throughout everything we do, stretching across our entire value chain. Made up of 22 experts, the CTS team works with customers, suppliers and even internal Ball teams in more than 50 countries to optimize processes and create operational efficiencies. When new can formats are introduced, members of the CTS team provide extensive support to make sure everything goes smoothly. They're brought in to audit equipment effectiveness in filling plants and to come up with solutions for cost-saving improvements. They look at quality control, help solve delivery issues, provide training, and work to develop new ways of optimizing line efficiency and reducing our customers' overall operating costs.

In many cases, line efficiency optimization and process improvements can lead to cost savings in the form of decreased water usage, less electricity and energy used and decreased $\mathrm{CO}_{2}$ emissions. We've highlighted just a few examples of how the CTS team drives sustainability:


CDL end: During the changeover to the CDL can end, the CTS team played a significant role in working with beverage producers and filling companies to ensure the process was smoothly implemented with minimal operational disruption.


B-Can: When the B-Can was introduced, members of the CTS team provided extensive support, helping to ensure a seamless adaptation to existing filling lines and enabling significant improvements in terms of sustainable progress.


Container loading: When reviewing container loading efficiency for a customer, a member of the CTS team came up with an idea to reduce the height of the wooden can pallet, increasing the amount of cans per container and maximizing their container pay load.


Seamers and fillers: CTS works together with the equipment suppliers to improve oxygen levels and/or reduce $\mathrm{CO}_{2}$ consumption in cans.


Ball's test canning line is able to simulate production conditions as realistically as possible.


# THIS ISSUE <br> OF CAN COURIER IS AVAILABLE IN ADDITIONAL LANGUAGES. 

TURN THE PAGE TO
FIND OUT HOW YOU CAN DOWNLOAD AND VIEW THE ENTIRE CONTENTS OF THIS MAGAZINE IN GERMAN, DUTCH, FRENCH, SERBIAN AND POLISH.


## DEUTSCH

WIR WISSEN, DASS NACHHALTIGKEIT IHNEN WICHTIG IST. FÜR UNS IST SIE EBEN-
FALLS VON GROSSER BEDEUTUNG. IM EINKLANG MIT DEM THEMA DIESER ,ECO EDITION" DES CAN COURIER HABEN WIR UNS ENTSCHIEDEN, AUCH BEI

## DER PRODUKTION ETWAS ANDERS ZU MACHEN.

Während der Einband aus Graspapier und der Innenteil aus Recycling-Papier besteht, gehen wir dieses Mal einen Schritt weiter - und retten gleich einige Bäume. Statt zahlreiche Exemplare in weiteren fünf Sprachen zu drucken, bekommen Sie den gesamten Inhalt dieser Can Courier-Ausgabe in Ihrer Sprache als E-Book!

Available in German, French, Polish, Dutch and Serbian, our special language Can Courier e-Book editions are right at your fingertips!


Mit einem Klick steht der Can Courier als E-Book auf Deutsch, Niederländisch, Französisch, Serbisch und Polnisch zur Verfügung. Die Artikel sehen ein wenig anders aus als in der gedruckten Version, die Texte sind jedoch identisch - von der ersten bis zur letzten Seite. Scannen Sie den QR-Code mit Ihrem Tablet oder Smartphone oder gehen Sie auf www.ball-europe.com/CanCourier.htm.
Dort können Sie das ganze Magazin herunterladen oder gleich online lesen.


#### Abstract

FRANÇAIS NOUS SAVONS QUE LE DÉVELOPPEMENT DURABLE EST IMPORTANT POUR VOUS. IL EST IMPORTANT POUR NOUS AUSSI. EN ACCORD AVEC LE THĖME DE CETTE ÉDITION ECO DE CAN COURIER, NOUS AVONS DÉCIDÉ DE FAIRE QUELQUE CHOSE D'UN PEU DIFFÉRENT.


Alors que nous avons utilisé du papier d'herbe pour notre couverture et du papier recyclé pour l'intérieur, nous voulions faire encore plus, et sauver quelques arbres par la même occasion. Voilà pourquoi, au lieu d'imprimer de nombreux exemplaires en cinq langues supplémentaires, nous vous livrons la totalité du contenu de ce numéro de Courrier Can sous forme d'E-book!

Disponibles en allemand, néerlandais, français, serbe et polonais, nos éditions E-book de Can Courier en chaque langue se trouvent juste à la portée de vos doigts! Et même s'ils ont peut-être l'air juste un peu différent de la version imprimée, tous les articles et informations sont exactement les mêmes: d'une couverture à l'autre. Scannez le code QR ou rendezvous sur www.ball-europe.com/ CanCourier.htm depuis votre tablette, smartphone ou ordinateur, et cliquez sur la bannière Can Courier en haut de la page. De là, vous pouvez visualiser, télécharger et profiter de la publication au complet.

POLSKI<br>WIEMY, JAK WAŻNY JEST DLA CIEBIE ZRÓWNOWAŻONY ROZWÓJ. MY RÓWNIEŻ PRZYWIAZUJEMY DO NIEGO DUŻA WAGĘ. INSPIRUJACC SIE TEMATEM NINIEJSZEGO WYDANIA EKOLOGICZNEGO

## MAGAZYNU CAN COURIER, POSTANOWILIŚMY TYM RAZEM PÓJŚĆ NIECO INNA DROGA.

Nie wystarczyło nam, że okładka jest wykonana z papieru wyprodukowanego z trawy, a reszta magazynu z makulatury. Chcieliśmy zrobić jeszcze więcej, by w catym procesie ochronić kilka drzew. Dlatego zamiast drukować liczne egzemplarze w pięciu dodatkowych wersjach językowych, udostępniamy całą treść niniejszego wydania Can Courier w postaci e-booka!

Nasze specjalne wydania Can Courier w formacie e-booka są dostępne w języku niemieckim, holenderskim, francuskim, serbskim i polskim wystarczy jedno kliknięcie! Być może wrażenia są nieco inne, niż w przypadku wersji papierowej, ale wszystkie artykuty i informacje są dokładnie te same od deski do deski. Zeskanuj kod QR lub przejdź na stronę www.ball-

## europe.com/CanCourier.htm

korzystając z tabletu, smartfonu lub komputera i kliknij baner Can Courier na górze strony. Stamtąd można wyświetlić i pobrać całe wydanie, a następnie cieszyć się lekturą!

NEDERLANDS
WE WETEN DAT DUURZAAMHEID BELANGRIJK VOOR U IS. HET IS OOK BELANGRIJK VOOR ONS. IN OVEREENSTEMMING MET HET THEMA VAN DEZE ECO EDITION VAN CAN COURIER HEBBEN WE GEKOZEN VOOR EEN IETS ANDERE AANPAK.

Hoewel we al graspapier gebruikten voor de cover en gerecycleerd papier voor de binnenkant, wilden we nog een stapje verder gaan - en een aantal bomen redden in het proces. Dat is de reden waarom wij de gehele inhoud van deze uitgave van Can

Courier als e-Book uitgeven, in plaats van een groot aantal exemplaren in vijf extra talen af te drukken!

Onze speciale Can Courier e-Bookedities zijn nu binnen handbereik en beschikbaar in het Duits, Nederlands, Frans, Servisch en Pools! En hoewel ze er misschien net een beetje anders uitzien dan de gedrukte versie, zijn alle artikelen en informatie exact hetzelfde - van kaft tot kaft. Scan de QR-Code of bezoek www.ball-europe. com/CanCourier.htm vanaf uw tablet, smartphone of computer, en klik op de Can Courier banner aan de bovenkant van de pagina. Vanuit het e-Book kunt u van de volledige publicatie genieten en deze bekijken en downloaden.

SRPSKI
ZNAMO KOLIKO VAM JE VAŽNA ODRŽIVOST. ONA JE VAŽNA I NAMA. DRŽEĆI SE TEME OVOG EKO IZDANJA CAN COURIER-A, ODLUČILI SMO DA URADIMO NEŠTO MALO DRUGAČIJE.

Dok smo za korice upotrebili papir od trave, a za unutrašnjost reciklirani papir, želeli smo da uradimo još više - i sačuvamo nešto stabala u ovom procesu. Iz tog razloga, umesto štampanja velikog broja primeraka na pet dodatnih jezika, celi sadržaj ovog izdanja Can Courier-a vam donosimo kao e-Knjigu!

Dostupna na nemačkom, holandskom, francuskom, srpskom i poljskom, naša specijalna izdanja e-Knjige Can Courier su vam na dohvat ruke! A iako izdanja mogu izgledati pomalo drugačija od štampane verzije, svi članci i informacije su potpuno isti - od korica do korica. Skenirajte QR čitačem ili posetite www.ball-europe. com/CanCourier.htm sa svog tableta, smart telefona ili računara i kliknite na baner Can Courier na vrhu stranice. Kad ste tamo, možete da vidite, preuzmete i uživate u celoj publikaciji.

## IMPRINT

## CAN COURIER

Published by<br>Ball Packaging Europe, Public Relations<br>Georg-von-Boeselager-Straße 25<br>53117 Bonn, Germany<br>Telefon: +49 22850 216-0<br>Fax: +49 22850 216-900<br>Executive Editor<br>Anneliese Bertelsmeier<br>Copywriting<br>MarketNow! Partners, Inc.,<br>Centennial, Colorado, U.S

## Realization

Q-HAUS31
Langenberg, Germany

## Printing

Heider Druck GmbH
Bergisch Gladbach, Germany

## Photos

André Walther, Christophe Le Petit, Ellen MacArthur Foundation, Fotolia, Getty Images, Hydro (Rune Erdal, Helge Hansen, Jo Michael, Kimm Saatvedt, Snøhetta/MIR), Metal Matters, Véronique Paul, Recan, Joachim Schmitz, Rolf Schwertner, Ana Maria Steg, stoffers \& steinicke, Supernatural

## Cover

Joachim Schmitz

## Heider Druck GmbH is a committed supporter of ecological,

 economic and socially sustainable forest management.Cover: $300 \mathrm{~g} / \mathrm{m}^{2}$ grass paper made from natural fibres without chemical additives Content: $120 \mathrm{~g} / \mathrm{m}^{2}$ wood-free white offset "Maxi Offset"
Paper from sustainable, responsibly managed sources was used to print this brochure



