

# ASPI NEWS

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### Association of Suppliers to the Paper Industry Headquarters

15 Technology Parkway South,  
Peachtree Corners, GA 30092

Phone: +1 770-209-7521  
Fax: +1 770-209-7581

Email: [info@aspinet.org](mailto:info@aspinet.org)  
Website: [www.aspinet.org](http://www.aspinet.org)

## WestRock Hosts 2016 Fall Customer Alignment Meeting

Every fall, the ASPI Customer Alignment meeting is hosted by a leading pulp, paper, or packaging company. WestRock Company will host the ASPI 2016 Fall Customer Alignment meeting **November 16-18, 2016** in Peachtree Corners, GA. The Hilton Atlanta Northeast will be the host hotel.



The members-only meeting provides attendees the chance to network with their customers' senior executives. Attendees will have the chance to learn more about the 2015 merger between RockTenn and MeadWestvaco that formed WestRock, hear about trends in the packaging industry, and gain insight into effective leadership from a customer point of view.

### Joining forces

It was late in 2014 when the formal announcement came that RockTenn Company and MeadWestvaco Corporation had entered into a definitive combination agreement to create a new company that would be a leading global provider of consumer and corrugated packaging.

The new company officially began operations on July 1, 2015, and is headquartered in Norcross,

Ga. WestRock has over 39,000 team members and more than 250 manufacturing facilities, design centers, research labs and sales offices around the world. The company provides a comprehensive array of paper and packaging solutions in consumer and corrugated markets (see sidebar).

### Supplier relationships

Steve Voorhees, WestRock chief executive officer and recipient of ASPI's 2016 Customer of the Year Award, took time to thank the supplier community during his keynote presentation accepting the award at the ASPI 2016 Spring Meeting.

"We make more than 40 million of these a day," Voorhees said, holding up a small corrugated box. "To make money at it, we need to do it very efficiently. It's made out of paper, and the quality of that paper makes

*(continued on page 2)*

## WestRock Hosts

(continued from page 1)

a huge difference—which means that all of you in the room, and your companies, make a huge difference.”

WestRock values strong supplier relationships as vital to the company’s success. As Voorhees explained to ASPI members last spring, “a company that provides high-quality products and services; partners with WestRock to identify and deliver long-term value; offers productivity solutions to improve operational effectiveness; is an innovation partner focused on commercial excellence; and understands our business objectives and values—for WestRock, that is a valued supplier.”

The company employs a comprehensive set of standards for suppliers called the WestRock Principles of Conduct. These principles are WestRock’s global sourcing guidelines and the foundation of the supplier approval

process, which includes review and verification of the relevant information they request from their suppliers. The company expects suppliers to adhere to the highest standards of business conduct, labor rights, quality and service.

Yet the goal is not merely compliance; as the company states on its website, “we pursue relationships.” WestRock holds itself to the same high standards; the company employs rigorous policies and procedures to make sure that its products and practices meet or exceed all relevant external standards for quality and safety, and meet its own standards for integrity and excellence.

### Fall Meeting

As a world-leading paper and packaging company with a strong culture of supplier partnerships, WestRock is the perfect host for the ASPI 2016 Fall meeting. The program

will focus on strategic directives and will have discussions that go beyond day-to-day issues, providing a better understanding of broader customer issues and priorities.

The event kicks off on Wednesday evening with a welcome reception and dinner, giving new ASPI members a chance to meet their fellow executives in a relaxed setting. Thursday and Friday information sessions will feature presentations from WestRock personnel who will share information about their company’s policies, governance and recent business activities (see sidebar.) Past Customer Alignment meetings provide an unparalleled opportunity for ASPI members to gain insight into a customer’s business and industry.

To learn more, or to register for the 2016 Fall Customer Alignment meeting hosted by WestRock, visit [www.aspinet.org](http://www.aspinet.org). ♦

## 2016 Fall Meeting Program

### Wednesday, November 16

Meeting reception and Welcome Dinner  
*Keynote Speaker - Tom Stigers, WestRock*

### Thursday, November 17

Welcome and Introductions: *Keith Kemp/Tom Stigers*  
 Analyst Presentation: *Scott Gaffner, Barclays*  
 Overview of WestRock:  
*Presentations featuring WestRock executives*  
 Partnering with WestRock – Suppliers’ Role

### Afternoon Sessions:

- Sustainability & Advocacy
- WestRock Culture & Workforce Planning
- Breaking into the Millennial Mind

### Friday, November 18

Procurement Manager Panel Discussion  
*Moderator Kevin Hudson*

### BREAK-OUT SESSIONS

- Capital Investment
- Chemicals/Materials
- MRO/Services

Technical Resource Group / Innovation

*There is still time to register to attend the ASPI Fall Meeting! For more details, visit <http://www.aspinet.org/16-fallprogram>. ♦*

# Foam in Papermaking:

## Improved resource efficiency, new product opportunities

By Erkki Hellén, Vtt Technical Research Centre

Can existing paper and board machines be designed to make over 15% lighter products from less valuable raw materials? Can mills use less-refined pulps with excellent formation, improve dewatering and reduce chemical consumption? Can papermakers activate web surfaces with highly viscous liquids, and simultaneously provide new product launches? Some recent R&D results show that this may become a reality through the introduction of foam in papermaking.

Foam forming technology introduces new, exciting opportunities for fiber-based products. It enables production of very high-porosity structures, which can be used in light weighting, or to develop totally new fiber-based products. Using foam forming, it is also possible to remarkably reduce production costs and simultaneously improve properties of current products. Compared to traditional water forming technology, forming consistency may be increased substantially with foam. Foam forming also widens the raw material choice.

### Increased efficiency, lighter weights

The current trend of lean processes emphasizes the efficient use of all resources, including water, raw materials and energy. Resource efficiency has become an issue with water forming of webs, where production consistency is uneconomically low due to the inherent flocculation tendency of wood fibers.

Foam forming technology addresses these challenges by adding large amounts of air into the furnish fibre suspension. This prevents fibre flocculation, reduces water usage dramatically and enables much higher forming consistency.



*VTT's pilot-scale research environment for fiber products makes it possible to demonstrate new process and product ideas like foam forming technology.*

Foam forming also enables production of very porous products with controlled porosity. Traditionally, the possibilities to control sheet porosity are quite limited and typically the sheet is rather dense. The bubble size distribution of foam is controllable, which opens up a way to control the structure of the final product.

### The potential of biomaterials

Foam forming offers a way to use various raw materials from nanoscale particles to long fibers. The foamed structures have excellent formation, even when made from long fibers, and the formation is practically independent of fiber properties. Together with excellent dewatering properties, this widens remarkably the raw material choice for fiber products.

Experimental facilities at different scales have been developed at VTT Technical Research Centre, a leading research organization with a national mandate in Finland. The smallest test devices are hand sheet foam formers with which sheets from A4-size to 500x500 mm<sup>2</sup> can be generated.

VTT's largest foam environment is a pilot-scale research platform for fiber processes. It offers cost-efficient prototyping of new processes and product ideas. It enables fast experimenting and has advanced measurement systems. It also enables studies of foam process and products at production speeds up to 1000m/min. Further development is possible at Valmet's pilot facility in Jyväskylä, Finland.

Several companies are already actively developing the technology towards industrial scale. For example, VTT is leading a project including the following 20 industrial partners from Finland, North America, Europe and Asia: Albany International, BillerudKorsnäs, Domtar Paper Company LLC, International Paper Company, Irving Paper Limited, Kemira, Kimberly-Clark Corporation, Kuraray Europe,

*(continued on page 4)*

## Foam in Papermaking

(continued from page 3)

Lenzing Aktiengesellschaft, Metsä Board, Moorim SP, Pixact, Sappi, Smurfit Kappa Group, Sofidel S.P.A., Stora Enso, Sulzer Pumps Finland, UPM-Kymmene, Valmet and Wetend Technologies. Recently, Metsä Board announced that it has started live testing of foam forming on a production scale at its Kyro mill in Finland.

In summary, foam forming:

- requires significantly less raw materials, water and energy than conventional paper and board manufacturing,
- enables exploitation of unprecedented raw material combinations
- offers a sustainable solution to manufacture e.g. hygiene products, insulation materials, filters and other added value

products made from biobased, long fibres,

- could lead to a new manufacturing platform for fibre-based products, and
- offers possibilities for both large companies and SMEs to create novel value chains.

We at VTT believe that foam forming will be the future technology for several fiber products and invite companies to develop this fascinating technology together with us. ♦

*Erkki Hellén is key account manager for VTT Technical Research Centre of Finland Ltd. Reach him at [erkki.hellen@vtt.fi](mailto:erkki.hellen@vtt.fi), and find news on forest related R&D at [www.vtt.fi/foresttech](http://www.vtt.fi/foresttech). The funding from European Regional Development Fund, TEKES and several companies is greatly acknowledged.*



*An example of a foamed fiber furnish in the pilot scale foam generator tank.*

# Comparing the North American and European Pulp and Paper Industry

By Urban Lundberg, Senior Consultant, Fisher International

There are some commonly held opinions about the differences between the pulp and paper Industry in North America and the pulp and paper industry in Europe. Some may say that the industry in North America is more dynamic and better positioned for the future, and that changes are too slow in Europe; others believe European producers are more focused on technology rather than profits. But are these statements relevant? Are there actual facts confirming these opinions?

Taking into consideration that North America consists of the United States and Canada, and including all of Russia and Turkey as part of Europe for the purposes of this discussion (*see Map*), we'll delve into some basic comparisons to start understanding these so-called "differences." As an economic region,

North America is more homogenous than Europe, which consists of a mix of highly developed and less developed countries. And, while the total population in Europe is almost twice that of North America, total paper production is only about 20% greater in Europe (*Figure 1*).

Other aspects that are important to consider in this differentiation are the region's structure and ownership, market consolidation and capacity change, technology and investments, cost, sustainability, and long-term competitiveness (viability).



## Comparing Pulp and Paper Industry

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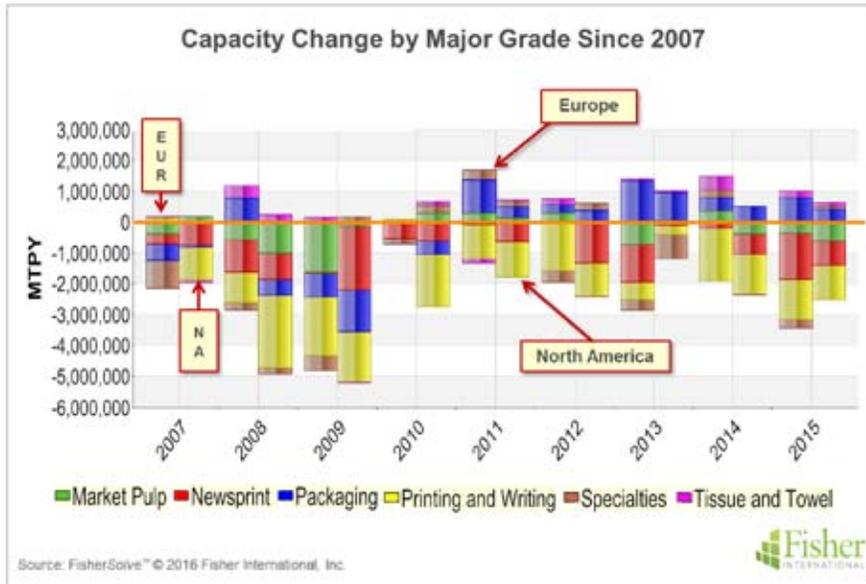


Figure 2

### Market Consolidation and Capacity Change

Since 2007, capacity decline has been bigger in North America both in actual numbers (20.3 million MT decline in North America versus 13.9 million MT in Europe) and as a percentage of CAGR (-1.96% in North America versus -1.09% in Europe), as shown in year-over-year side-by-side comparisons for each major grade within the two regions (*Figure 2*). Focusing on Printing and Writing, we see significant and sustained decline in North America starting in 2007 with Europe following suit in 2008 but in smaller measures—until 2012, when Europe finally overtakes North America.

We can see a similar trend in Newsprint declines with North America suffering major capacity loss in 2009 while capacity remained basically flat in Europe only to plummet in 2013 and subsequent years. (Through the year 2012, North America suffered major decreases and

by 2013 Europe followed suit.)

Today, the European paper industry relies more heavily on declining grades than North America. *Figure 3* shows that publication papers, coated and uncoated freesheet, and groundwood and mechanical grades continue to be quite important in Europe.

Over the past decade, North

America has closed a much higher share of its sites: 573 sites (or 38%) closed in North America, versus 527 sites (or 22%) in Europe (*Figure 4*), indicating a dramatic difference in the willingness to close down sites between the two regions.

Europe is highly fragmented. Not only are the number of sites in Europe higher, but there are more corporations in operation there for all major grades, and the average size of the European corporations is smaller. Using Linerboard as an example, *Figure 5* illustrates the difference in consolidation between the two regions, with the top four firms in Europe having only 32% of the market share and a 506 HHI (Herfindahl-Hirschman Index, which measure market concentration), while in North America the top four firms have a 79% of the market share and a 2,167 HHI. Another indication of the highly fragmented market is that a quarter of all of European capacity is held by companies with less than 1% market share.

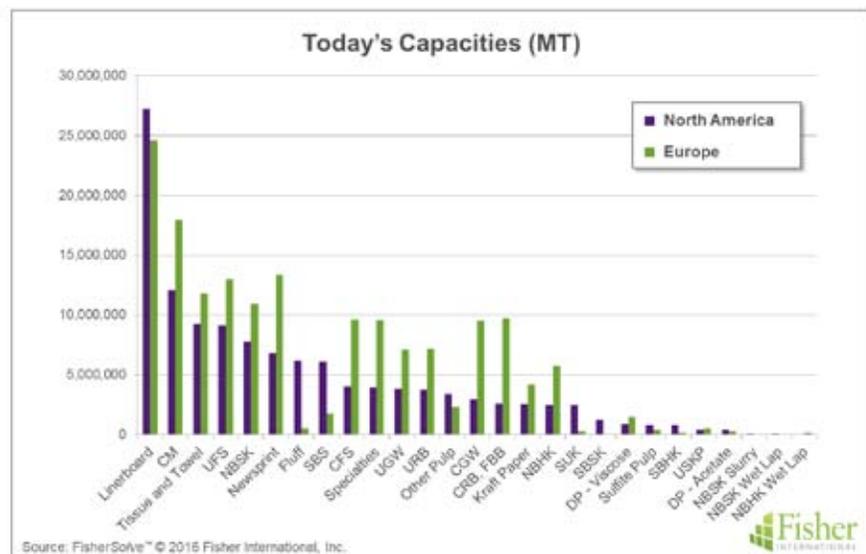


Figure 3

## Comparing Pulp and Paper Industry

(continued from page 6)



Figure 4

Some of the reasons why there has been more structural change in North America include the fact that the digital revolution and, as a consequence, the sharply declining market demand for Printing and Writing and Newsprint grades was initiated in North America. By comparison to North America's more homogenous market, it is harder to drive structural change in Europe with its multitude of countries and cultures and with so many European companies operating in only one or two countries. The pulp and paper industry in North America, with its more public ownership and private equity engagement, inclines toward change in a way that the European industry, with its higher share of private and often small family-owned companies, simply cannot.

### Technology and Investments

Europe has built more new capacity (in terms of production as well as number of machines) recently

than North America. As *Figure 6* shows, since the year 2000 there has been five times the amount of capacity added in Europe compared to North America.

A review of technical ages also shows that Europe consistently invested more in rebuilds and new machines than North America. Does this mean that Europe has more modern

equipment? Yes, often it does. But you can't take that as a rule. Looking at Tissue in *Figure 7* for instance, North America has more advanced-technology tissue machines (TAD or similar). In North America this type of technology represents about a quarter of all installed tissue machines, while Europe has only a handful.

These advanced tissue machines produce sheets with improved thickness and absorbency at a very low basis weight, meaning they use a lot less fiber. The downside is that they consume more energy; with higher energy prices in Europe, the cost of installing more of these advanced machines has been prohibitive. Over time, there has been a buildup of consumer preferences in North America for the quality of tissue produced on advanced machines.

Another trend evidenced by the data in FisherSolve™ is the reality that European producers are more likely to shut down machines that were recently rebuilt. *Figure 8* shows that about 35% of the machines shut down in

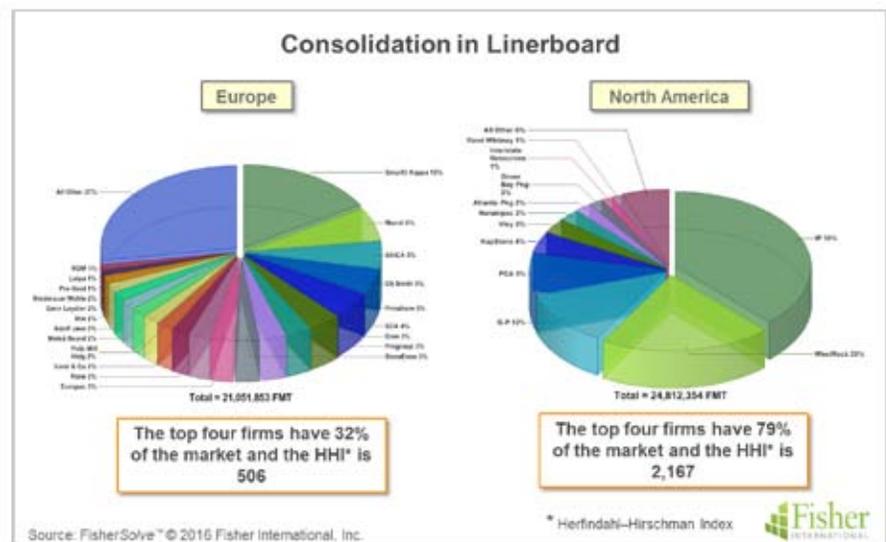


Figure 5

## Comparing Pulp and Paper Industry *(continued from page 7)*

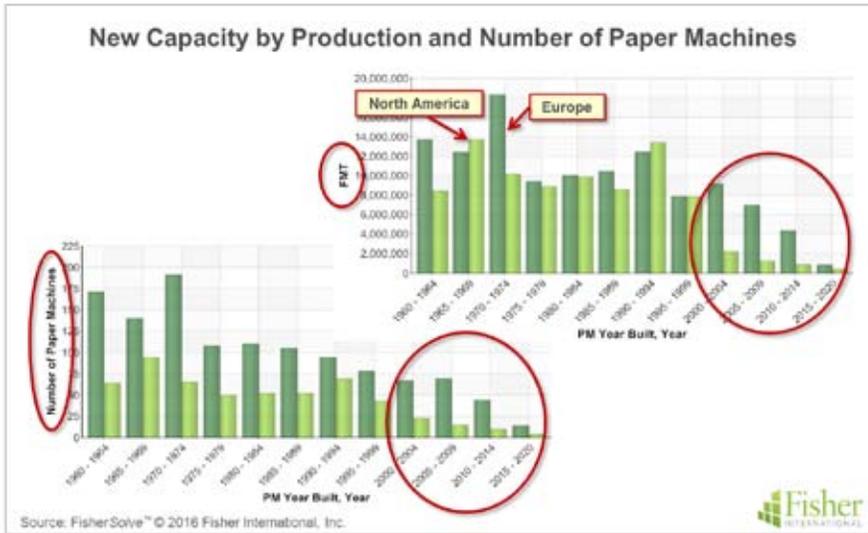


Figure 6

the cost of fiber and pulp in North America is 39% of the total cost share as opposed to 47% in Europe. In North America, there is higher integration in Printing and Writing than there is in Europe, with a lot of mills making at least part of the pulp needed, which results in the smaller cost share for fiber and pulp. On the other hand, labor costs are higher in North America than in Europe due to high wage and salary levels (16% and 10% respectively). Energy costs are slightly higher in Europe.

### Long term competitiveness (Viability)

FisherSolve's™ Viability Benchmark module, which measures a machine's risk based on factors such as tons per inch trim, technical age, size, manufacturing competitiveness, internal company risk, grade risk, cost, and capital, shows that viability depends on more factors than just cost.

Europe and North America have strengths in different grades. The European strength is in Newsprint and Printing and Writing grades—

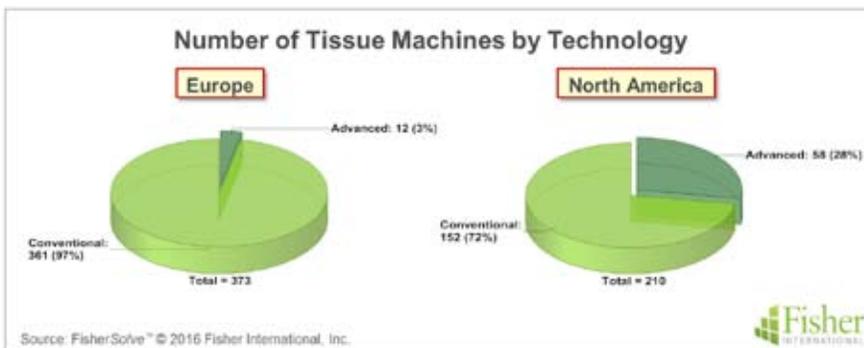


Figure 7

Europe had been rebuilt in the prior 10 years—a clear sign of overinvestment by the European companies.

### Cost

Europe has higher manufacturing cash cost for all major grades. Of course, exchange rate fluctuations will impact the cost curve, and will also impact the trade flows of pulp and paper. European producers export substantially more than their North American counterparts, and not only to neighboring European countries but to overseas destinations as well.

Breaking down the cost components with Printing and Writing as an example (Figure 9),

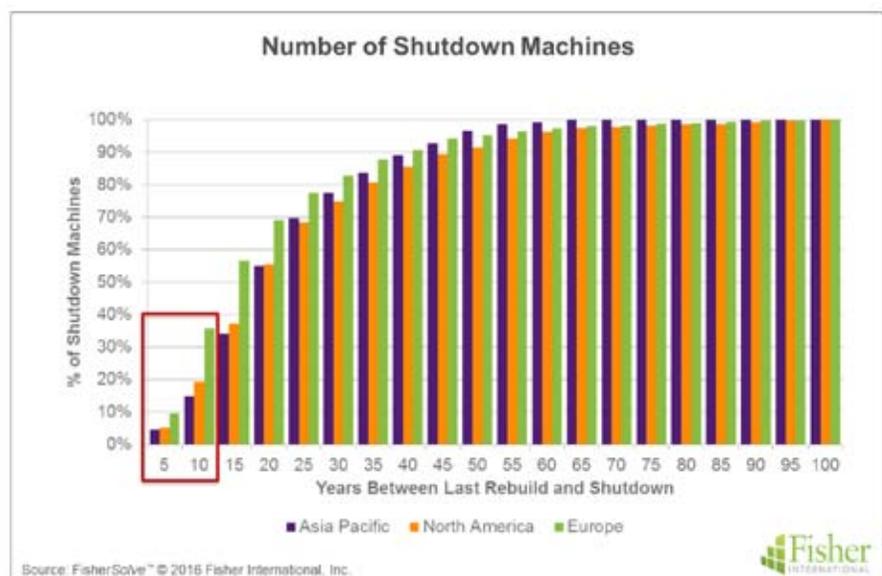


Figure 8

## Comparing Pulp and Paper Industry

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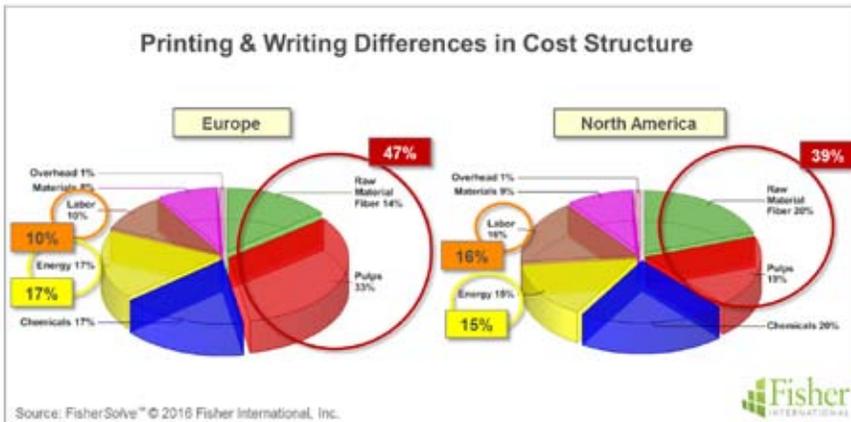


Figure 9

generating electricity which is not surprising given that the average cost for electricity in Europe is about 30% higher than North America.

On the issue of water, North America uses 2-3 times more water to produce a ton of paper than Europe. European mills invest more in technology and best practices to reduce water usage since water is viewed as a scarce and valuable resource (Figure 12).

which, interestingly enough, are the grades that are in decline. North America's strength is in Packaging, Specialties, and Tissue and Towel, which are grades with a more positive future outlook. However, Europe has a competitive technical age advantage across all grades.

Another very important factor to consider when looking at competitiveness or viability is, of course, the size of the asset. Figure 10 plots both the technical age and the size of the machine, ranked by risk for two grades. As we can see, many of the big and new Printing and Writing sites are in Europe, with most of the North American sites being old. In comparison, North American Packaging sites are bigger and older than European sites.

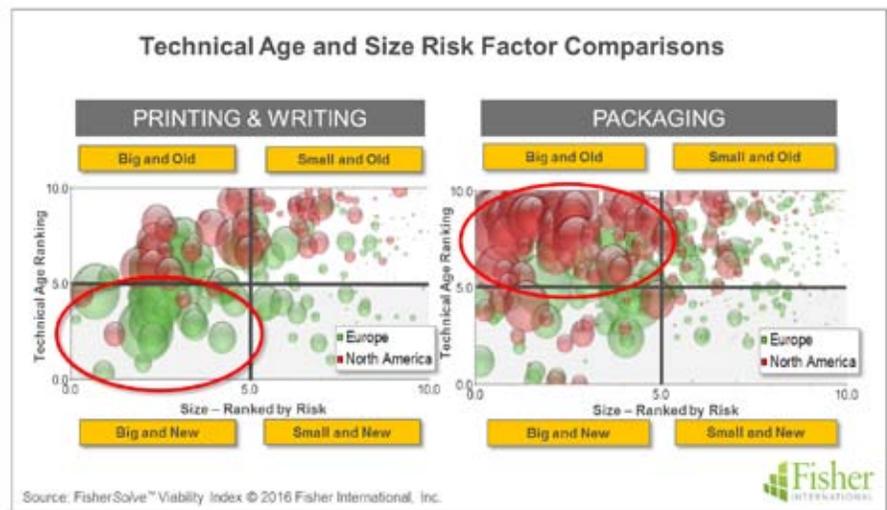


Figure 10

### Sustainability and Energy

GHG emissions of European mills are lower than their North American counterparts, attributable mainly to low emissions from purchased electricity in the European Union versus greater reliance on coal for producing electricity in the United States (Figure 11). European mills tend to be more self-sufficient in

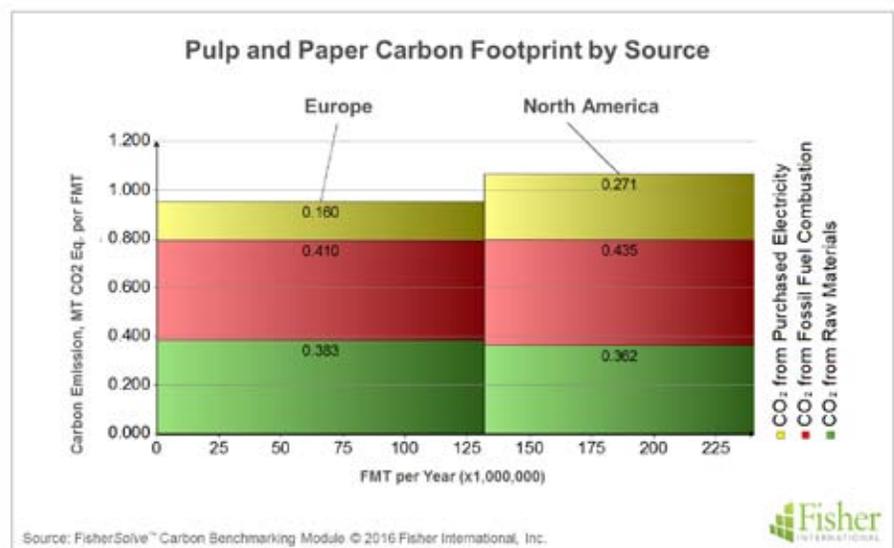


Figure 11

## Comparing Pulp and Paper Industry

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In summary, the data show that North America is well-consolidated in most grades, and its public ownership and PE engagement have actively driven structural change. Highly aged assets in need of renewals will

likely result in increased investments, both in rebuilds and new lines. A relatively low sustainability profile in the areas of energy, water, and carbon emissions can potentially pose a long-term threat.

Europe is highly fragmented with a large number of corporations and sites. Private ownership, in many cases family ownership, has likely been an impediment for stronger consolidation. Its assets are generally of low technical age and well-invested, indicating that the future focus needs to be on consolidation efforts. A relatively good sustainability position can potentially develop into a competitive advantage. ♦

*Urban Lundberg can be reached at [ulundberg@fisheri.com](mailto:ulundberg@fisheri.com). Data and graphs in this article were drawn from FisherSolve™ [www.fisheri.com](http://www.fisheri.com). This article is based on a Fisher Webinar delivered earlier this year.*

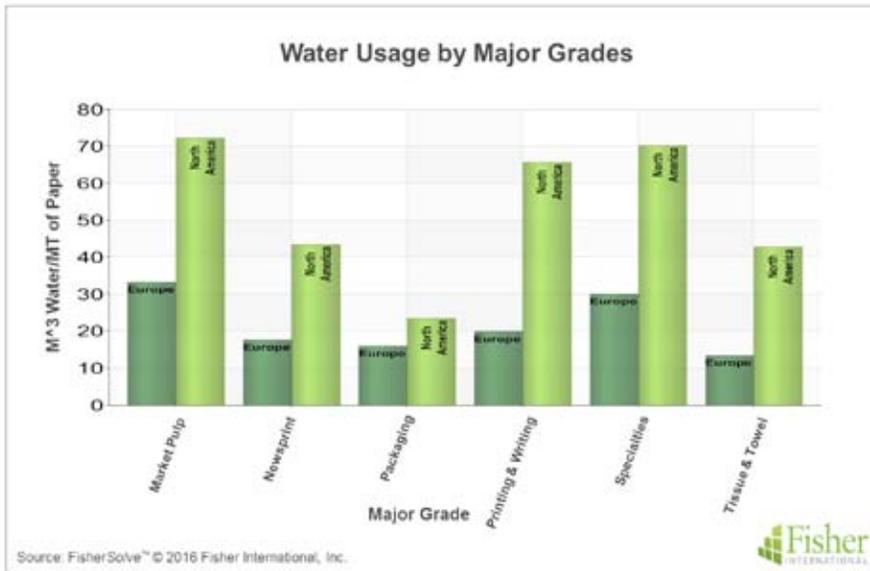


Figure 12

## Spring Meeting set for Sarasota

The 2017 ASPI Spring meeting will be held February 22-24, 2017 in Sarasota, Florida. The host venue will be the Ritz-Carlton hotel in Sarasota.

Located on Florida’s southwest coast, Sarasota is a city with a storied history and a vibrant arts and culture scene. Spanish explorers first set foot in the area in the early sixteenth century; the area became a US territory in 1819, and a state in 1845. Sarasota is home to many beautiful historic sites and cultural institutions, including The John and Mable Ringling Museum of Art, which is Florida’s official state art museum. Sarasota’s warm, coastal

climate makes it a tourist destination known for its sandy beaches, golf courses, and architecture.

The Ritz Carlton Sarasota offers visitors a host of activities and amenities. The hotel itself is located near the city center of Sarasota, and features 266 guest rooms with private balconies, as well as a full-service spa. Hotel guests may also access The Beach Club on Lido Key, an exclusive oasis of beachfront services located approximately three



miles from the main hotel. The Golf Club features an 18-hole Tom Fazio-designed championship golf course located approximately 16

## Comparing Pulp and Paper Industry

(continued from page 10)

miles from the hotel. Dining options include Jack Dusty, a coastal seafood restaurant that also emphasizes craft brews and specialty cocktails; the Terrace Café, which overlooks the hotel's Healing Garden; and the Beach Club Grill and Golf Club Grille. With an experienced staff and a complete range of business services, the Ritz Carlton offers a professional environment and complete technical support for the ASPI Spring Meeting program.

Spring Meeting attendees will receive special rates on room reservations—mention the ASPI

meeting when booking your room. Please join your fellow ASPI members for another stellar Spring Meeting experience in February, 2017!

### **ASPI Spring Meeting 2017: Preliminary Schedule**

*Wednesday – February 22, 2017*

6:00 PM – Welcome Reception and Dinner

*Thursday – February 23, 2017*

8:00 AM – 11:30 AM –  
Presentations: President's  
Welcome, ASPI 2017  
Award Recipients,  
Customer Speaker

11:30 AM – 12:30 PM – Lunch  
1:00 PM – 5:00 PM – Afternoon  
Activities

5:00 PM – Reception and Dinner

*Friday – February 24, 2017*

8:00 AM – 11:30 AM –  
Presentations: Sessions,  
Customer Speaker

11:30 AM – Meeting Adjourns ♦

## NEW MEMBERS

### Meet Strategy First Ltd. Oy

**P**ulp and paper manufacturers seeking advice on an investment, divestment, or financing; technical and operational due diligence in M&A projects; developing a mill profit and productivity improvement program; or insights and analysis on industry trends can look to ASPI's newest member company: Strategy First Ltd. Oy, headquartered in Helsinki, Finland.

Strategy First is a strategic advisory and consulting firm providing services to investors, owners, and suppliers in paper and forest products industries worldwide. Strategy First serves a variety of clients in paper, packaging, pulp, and supplier industries, including raw materials, chemicals, machinery, renewable energy, engineering, and process automation.

Company founder and CEO Asko Hyttinen formed Strategy First in 2010. Before that, he enjoyed a career spanning



*“The paper industry is facing continued challenges in mature markets and needs to adapt to change.”*

30 years and held leadership positions in mill management and capital projects in Finland, Germany and Canada. He earned his Master of Science in Paper Technology from the Helsinki University of Technology and an MBA from the University of Jyväskylä in Finland. He has also served on the TAPPI Board of Directors and was named a TAPPI Fellow in 2008. Hyttinen consults internationally by advising and helping industrial companies, private equity firms and investment banks in choosing their competitive strategies throughout all phases in

the investment cycle.

“The paper industry is facing continued challenges in mature markets and needs to adapt to change,” Hyttinen notes on the company website. “At the same time, these challenges create good business opportunities in industry consolidation, restructuring, operations improvement, streamlining of product portfolios, asset conversions, and new product innovation.”

ASPI welcomes Strategy First as its newest member. To find out more about the company, visit [strategyfirst.net](http://strategyfirst.net). ♦

# ASPI Board of Directors

## Class of 2017

**Tony Fandetti**  
Vice President – Sales  
Sulzer Pumps Solutions Inc.  
Tony.fandetti@sulzer.com

**Rod Young**  
Chief Economic Advisor  
RISI  
ryoung@risi.com

**Marcus Pillion, ASPI Vice President**  
CEO  
TriTec  
mpillion@tritecseal.com

## Class of 2018

**Carl Luhrmann, ASPI Secretary**  
Senior Vice President  
Andritz Inc.  
carl.luhrmann@andritz.com

**David Withers**  
President  
Coldwater Group Inc.  
d.withers@coldwatergroup.com

**Ray Edmondson**  
Business Development Manager  
Yates  
redmondson@wgyates.com

## Class of 2019

**Keith Kemp, ASPI President**  
VP Paperchine Sales - Americas  
AstenJohnson  
keith.kemp@astenjohnson.com

**Lynn Townsend-White**  
President and Chief Executive Officer  
Western Polymer Corporation  
Ltownsend-white@westernpolymer.com

**Mike Gray, ASPI Past President**  
Area VP  
Valmet  
mike.gray@valmet.com

**Carl Howe**  
Vice President Sales  
Kadant Paperline  
carl.howe@kadant.com

**Bob Harrison, ASPI Emeritus Director**  
Principal  
RHarrison Inc.  
Rharrisoninc@aol.com

## ASPI Staff Key Contacts

**Eric Fletty**  
ASPI Executive Director  
Office: 770-209-7535  
Cell: 404-569-5520  
efletty@aspinet.org

**Grayson Lutz**  
Director of Member  
Relations  
Office: 770-209-7215  
Cell: 678-471-5838  
glutz@aspinet.org

**Marilyn Jeans**  
ASPI Meeting Planner  
Office: 770-209-7296  
Cell: 404-580-7923  
mjjeans@aspinet.com

**Deepa George**  
ASPI Member Services  
Coordinator  
Office: 770.209.7257  
Cell: 678-492-7457  
dgeorge@aspinet.org