

INVESTING IN CELLULOSE 2017

Post event Summary

Cel|C^o
Cellulose Consulting

Dear Participants,

Thank you for attending the 7th annual edition of the CelCo conference, Investing in Cellulose, and making it our most successful year to date. This year we welcomed more attendees than ever, over 30% of whom were joining us for the first time and we thank you all for your feedback on the day. Using this information we will strive to continue providing more downstream presentations on cellulose applications as well as ensuring longer networking opportunities and extended breaks. We will endeavor to once again include presentations to help us 'Think Outside the Box' and trust they will be as well received and thought-provoking as the those delivered by Google and Professor Andrea Boltho in 2017. The high attendance and positive feedback received for the reinstated Sunday evening Cocktail Reception means we are delighted to include this again in our 2018 program.

The past year witnessed many industry consolidations or change of hands both upstream and downstream and made our 2017 event quite 'electrifying'. Based on latest industry capacity increase announcements, 2018 could be a year to focus on viscose upstream and downstream. Feel free to get in touch and let me know your thoughts on this.

In order to best meet your information needs, CelCo is publishing a twice a year actual and forecast market reports on the DWP industry; if you would like to receive latest market reports and trends, published March 31st 2018, including volume & pricing forecast till 2020 by market segments, please email to ensure you are included.

If you want to keep in touch more closely with the worldwide cellulose industry upstream and downstream developments you may want to subscribe to the CelCo mobile phone app or to the monthly "Cellulose Newsletter", edited jointly by CFF and CelCo.

Details of this and all our consulting services can be provided by emailing info@celco.com.

We wish you belated Happy New Year for 2018 and look forward to seeing you on **Monday, November 5th 2018** in London to talk again about the new threats and opportunities for our industry.



Christian Chavassieu

CONFERENCE SUMMARY

CelCo summarized Key World trends of the DWP market in 2017 as follows:

- (1) No major market DWP capacity expansions in 2017-2018, resulting in a global capacity utilization of 90% in 2017.
- (2) All but the acetate markets have recovered from a poor 2015/2016 environment and are seeing demand growth. Global DWP pricing strengthening with pricing variations across segments.
- (3) 2017 paper pulp pricing and demand strength limiting swing toward DWP.
- (4) Confirmation of a DWP price differential between softwood and hardwood pulps.
- (5) Continued decline of CLP usage in China.
- (6) Multiple industry consolidation upstream and downstream across all cellulose market segments.

China DWP and VSF trends were summarized by **CCF Group** as follows:

- (1) Environmental protection still exerts big impact on supply & demand.
- (2) Modified pulp output reduced significantly after paper pulp price soared.
- (3) After paper pulp hiked, almost 400kt/year of DWP swung back to paper pulp.
- (4) China textile industry will remain mid-low growth rate.

Andritz summarized the current technological state of the DWP mills as follows:

- (1) Dissolving pulp production has been earlier based on sulfite cooking process, but prehydrolysis kraft cooking process has replaced it during the recent years.
- (2) Continuous cooking technology can be used to produce both grades (paper grade or dissolving pulp) with the same fiber line.
- (3) Existing paper grade continuous cooking plants can easily be modified for dissolving pulping.
- (4) Possible synergies with hemicellulose based products through prehydrolysate refining will lead to potential economic benefits.

RayonierAM summarized the benefits of the combined businesses of RYAM and Tembec as follows:

- (1) Combination of two best-in-class organizations with complementary product lines
- (2) Diversified and attractive product portfolio.
- (3) Expanded global presence.
- (4) Compelling synergies drive incremental value.

Austrocel explored investment options in the DWP market: Paper pulp mill conversion, Greenfield DWP Mill Development or Acquisition of Existing DWP Producers.

The **Swedish Fashion Council** described the project Catwalk during the coming up London Fashion Week in September 2018. With 10 emerging designers interpreting the forest, two outfits per designer, only viscose fabric and twenty outfits on the runway.

Adrialis summarized the sustainability initiative conclusions started by CelCo early 2017: On certification, the group decided unanimously that everyone will keep their own Forest certification such as FSC, PEFC, SFI and not follow GreenpeaceCanopy for a single certification only. On deforestation, the group *was willing to consider* publishing a common Sustainable Forest Management pledge (as defined by the FAO) addressed to their customers that NONE of it's members are currently or, in the future, engaged in any form of deforestation. However, the majority of the participants said they needed to have more internal discussions and clarify their own strategy.

HEADLINES

**Representatives from
25 countries**

**29% of attendees with Sales
& Marketing Roles**

**19% of attendees with
Purchasing Roles**

**18% of attendees
with G.M. Roles**

10 Speakers

**Over 200 pages of
presentations**

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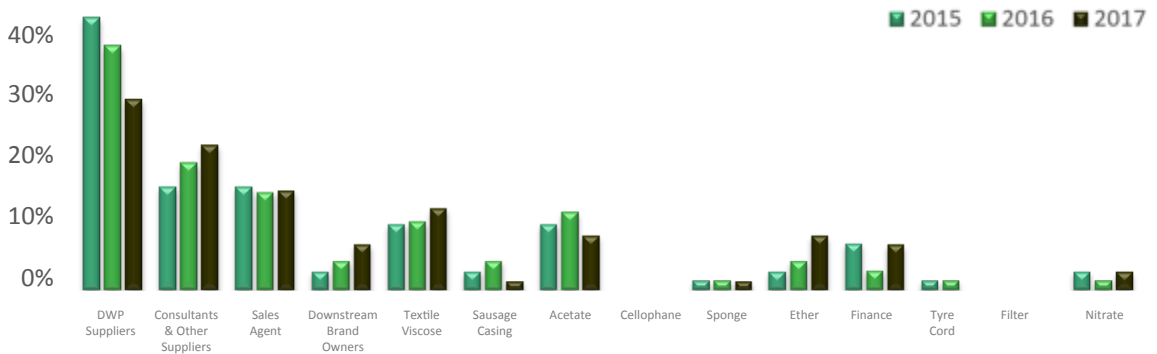
RAYONIER
Advanced Materials

2017 AGENDA

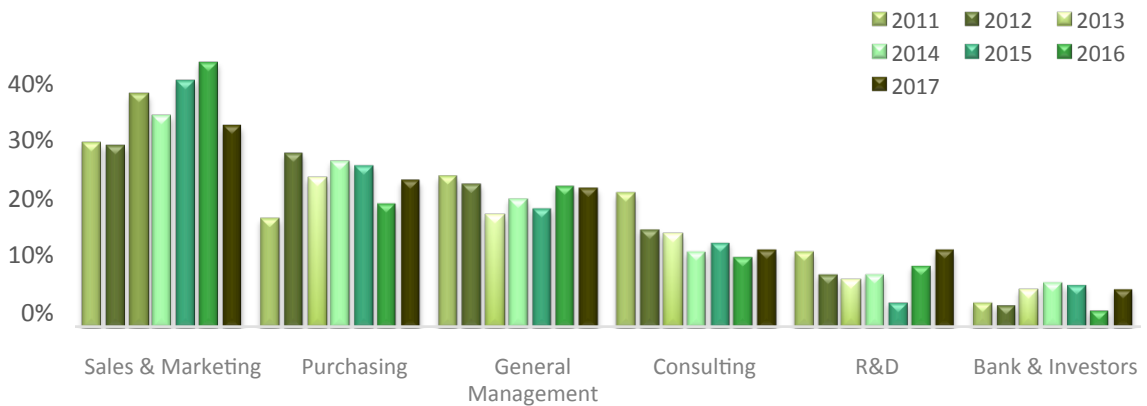
- **ECONOMIC OUTLOOK; THINGS LOOK GOOD JUST NOW, BUT WILL THIS LAST?**
- **UPDATE ON WORLD DWP AND SUPPLY & DEMAND**
- **CHINA VSF, DWP AND CLP SUPPLY & DEMAND AND OUTLOOK**
- **UPDATE FROM ANDRITZ ON PAPER PULP MILL CONVERSION TO DWP – HISTORY & OUTLOOK**
- **UPDATE ON THE RAYONIER A.M. ACQUISITION OF TEMBEC**
- **A JOURNEY FROM SUSTAINABLE BIOMASS TO END PRODUCTS**
 - **SUSTAINABLE FASHION**
- **UPDATE ON THE CELLULOSE SUSTAINABILITY INITIATIVE**
- **INVESTMENT CONSIDERATIONS WHEN BUYING, CONVERTING OR BUILDING DWP MILLS**
- **GOOGLE'S VISION OF THE WORLD 20 YEARS FROM NOW**

SUMMARY OF PARTICIPANTS

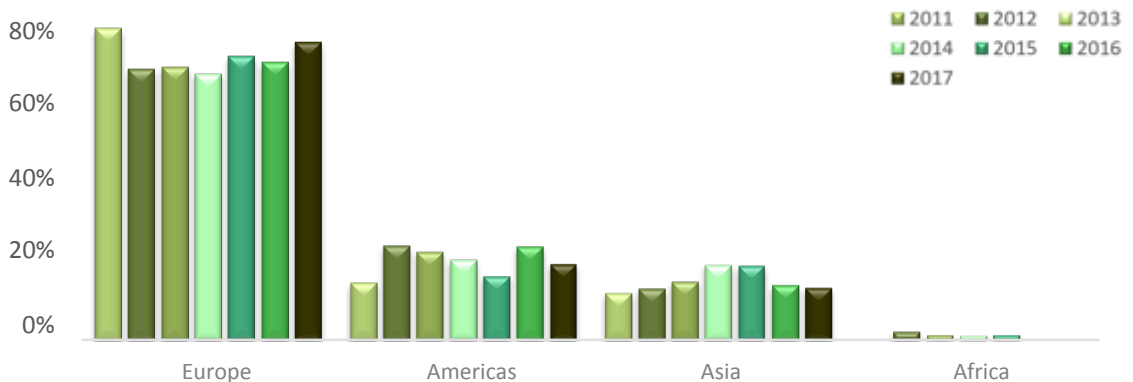
Participation by Market Segment



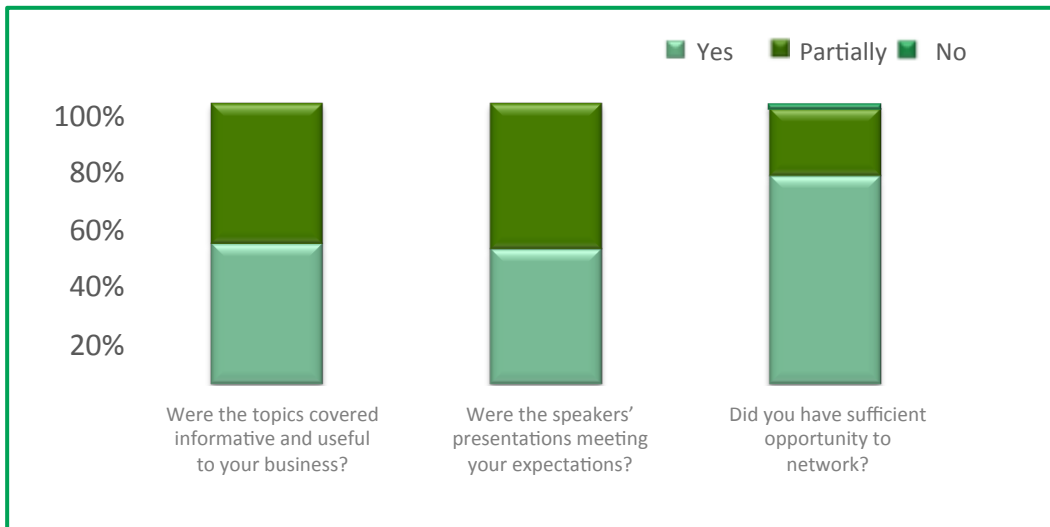
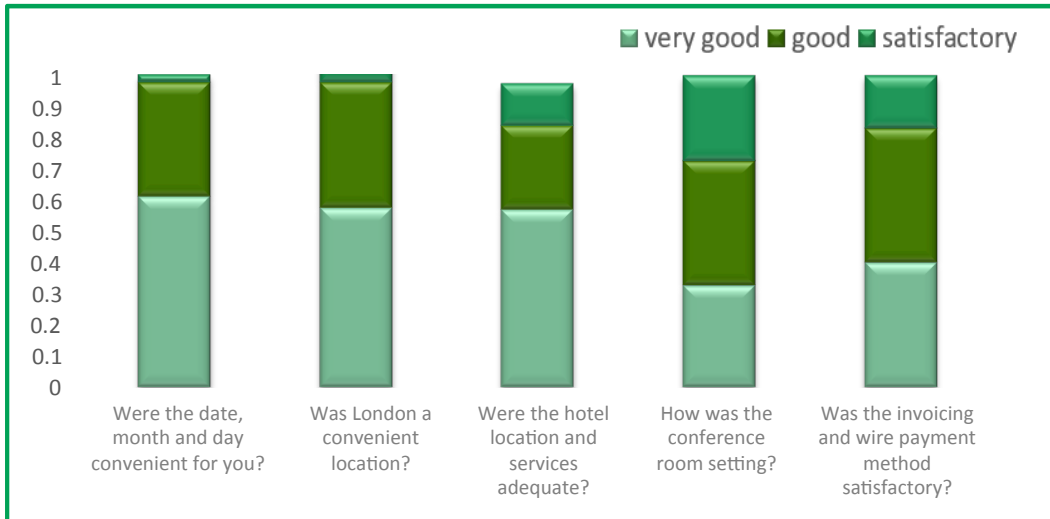
Participation by Function



Participation by Geography



CONFERENCE FEEDBACK



SAVE THE DATE

**INVESTING IN
CELLULOSE 2018**

Monday, November 5th 2018

**The Royal Horseguards Hotel
& One Whitehall Place, London**

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