



SPECIAL EDITION

Overview of the FEFCO Technical Seminar



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 28-30 October 2015

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Angelika Christ
FEFCO Secretary General

The "WOW!" factor.

WOW! That was the comment I heard most from participants. Wow! What a spectacular event. Wow! We love it here at the Technical Seminar in Barcelona.

This success is born of many fathers (and mothers): namely the FEFCO Production Committee orchestrated by Chairman Marc Van Damme, which put together a programme that even on the last day attracted enough people to fill the room. And believe me, such a programme does not happen by itself. Speakers and slides need checking, speeches need choreographing and breaks planned so that exhibitors also say Wow! Many hours and brains came together to achieve this.

We had great speakers and the spotlight presentations went well. For the first time they all kept to the 7 minute limit. My turn to say "Wow!"

The Exhibitors said it too – their feedback was overwhelmingly positive, despite some quieter voices requesting more time for the visitors to spend in the exhibition. But many came back saying "it was worth every minute and every cent we spent". What else can you ask for?

To have the corrugated supply chain united in a beautiful place like Barcelona more than compensated for the endless hours spent by the organizational team back in the office. Lead by Nathalie Schneegans they improved registration systems, badges, answered intelligent and less intelligent questions and organised everything.

A 20% increase compared to the Copenhagen event is a great reward. "Probably the best European Event" as one exhibitor noted in the survey. WOW!

I would like to express my gratitude to everybody involved, starting with the FEFCO President, the members of the Committees and workgroups, the FEFCO team, our corrugated members and finally our suppliers who made these days happen in such a positive spirit.

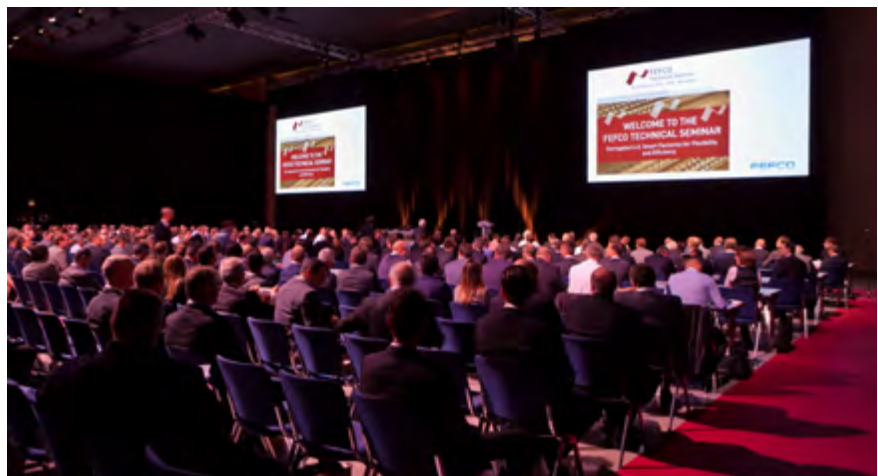
It's a hard act to follow but you can be sure that we are committed to meet this challenge so that the Technical Seminar 2017 is an even greater success!

FEFCO scores in Barcelona

A new record of 958 representatives of the Corrugated Board Industry gathered in Barcelona on October 28-30 with their business partners for FEFCO's Technical Seminar to showcase opportunities offered by the latest smart technologies.

The event recorded a new high interest in the corrugated sector (+ 23% compared to 2013) and amongst the exhibitors with 110 stands and 76 exhibitors on hand.

FEFCO hosted the seminar to examine how the so-called "industry 4.0" will change the corrugated packaging sector. Participants looked at how technologies like the cloud, big data, the internet of things, and intelligent automation will raise industry quality, reduce waste, and speed up production. Delegates were able to follow, connect and interact during the event through a special FEFCO mobile app.





FEFCO Technical Seminar at a glance

- 958 delegates
- 45 countries
- 76 exhibitors
- 110 stands
- 2.5 days of intense work and networking
- 17 conference speakers
- 47 spotlights in 6 sessions over 2 days
- 6 Awards
- A dedicated event mobile App used



Roberto Villaquiran - FEFCO President

In his President's Address, FEFCO President Roberto Villaquiran urged the corrugated industry and its partners to think about how new technologies could help create better, more sustainable products, at a lower cost. "Our production and processes will aim at highest quality as we serve our customers and respond to their demand for zero defects. We and our suppliers need to focus on a safe environment for our employees, for

"This latest FEFCO seminar has been the best in recent years. There were many customers and the organisation and location were excellent with hotels just across the street."

A conference delegate



Marc Van Damme - Chairman of the FEFCO Production Committee

the benefit of all. We must believe in our strengths if we are to win the battle," he said. "However, we cannot manage our future without suppliers that understand and support a need for change. Let's use Corrugated 4.0 to step up our technology base so that we can meet the challenges of today and tomorrow."

Roberto Villaquiran, who is also the European CEO of Smurfit Kappa, said that the corrugated industry's quality failure rate – which is currently more than 2000 PPM (Parts per million), or in line with the typical manufacturing company – is a long way from, say, the trendsetters in the car and airline industry. "We are far from where we should be in quality. "Until we get under 500 PPM, we will not be seen seriously," he said.

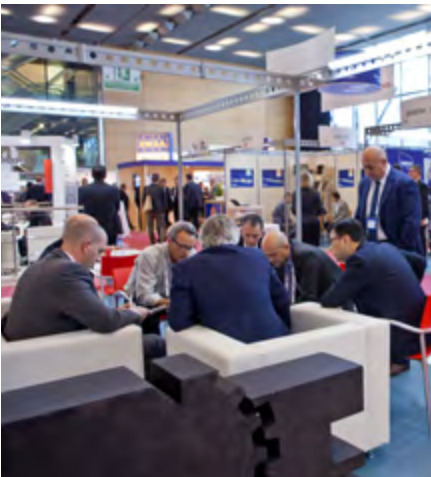
Roberto Villaquiran encouraged the corrugated industry and its partners to



Members of the Production Committee: Michael Frey, Bernd Dilger, Klaus Lücke

think about how new technologies could help create better products, at a lower cost. For example, he pointed to research showing how the average shopping trip involves 17 minutes walking through the store and just three minutes is selecting – and he suggested the industry could use that information to design and arrange shelves and packaging to attract more interest in products. "I fundamentally believe that with shelf-ready packaging, we have the opportunity to give our customers value," he said.

Many companies have already demonstrated ingenious, new ways of embracing the 4.0 technologies to improve their production processes. The seminar heard from selected producers on how they are meeting the new challenges, and from associated partners on what they expect from the industry.



Members of the Production Committee: Luis Martín, Johann Grünwald

The programme included a variety of issues, including:

- how to organize smart factories in a flexible and efficient way
- what customers want from the corrugated industry
- how real-time data can improve productivity, quality and energy efficiency in Industry 4.0
- how business value can be found in supply chain data

From within the industry, there were discussions on how to ensure smoother surfaces to improve printing, and how to build lighter, stronger and more environmentally-friendly boxes. Other sessions looked at how technology could help improve safety, reduce waste, improve quality control, and help manage one of the most persistent challenges for producers, moisture.

The Barcelona seminar showed how intelligent machines and processes, new detection systems, digital printing, and

precision engineering can help re-shape the industry to become more flexible, innovative, sustainable, cost-efficient and safe.



Frank Miletzky

Frank Miletzky of the research institute Papiertechnische Stiftung (PTS) told the audience that more and more areas of industry would become smart over the next few years.

"The core of 4.0 are the cyber physical systems," he said. This means extremely

"Thank you to all the FEFCO staff for organising a very good show and for attracting such large numbers of people who clearly remained engaged throughout the conference."

Richard Coward, Rigid UK

complex embedded systems of production, logistics, engineering and management processes, and interacting means of data collecting sensors and physical actors.



Christoph Merle

Christoph Merle, from food giant Migros-Industry, gave a customer's view on the corrugated industry, saying that he expected the sector to be 100% sustainable by 2040.

"Our partners have to improve their agility. We need flexible partners. And we need better integration with our supply chain," he said. "We feel industry 4.0 will affect our industry in a tremendous way. And it is a prerequisite for us to stay in the business."



Peter Flieher

Peter Flieher from business consultants T.CON said ever-demanding customer requirements meant that the industry needed to be supported by different new technologies.

"This requires real-time data," he said. "You should know what is going on in the mill. You need immediate answers on how much energy is being consumed. The evolution is changing the industry."



Stefan Bauer

Stefan Bauer, from Witron said that Industry 4.0 would have a profound change on business, as more and more things become smart, using technologies like the cloud and big

data. "The core of 4.0 are the cyber physical systems," he said. "We will have an interactive, self-controlling system for production." One of the most engaging debates concerned digital printing, and what this means for the industry. There were many examples of how it has already changed markets, how it will add value and – eventually – volume, and whether its adaptability meant it was more than what one speaker called "just another way of putting the cheese on the pizza."



Anita Teleman

Anita Teleman from Innventia underlined how in 4.0, high quality printing would be indispensable. "A microsmooth surface gives a better printing result," she said.

"Surface roughness is important to measure. If there is a crater deeper than five micrometers there will be no ink transfer."



Ian Chalmers

Ian Chalmers from Korutest looked at how to manage box strength with the help of his MD Torsional Stiffness – Chalmers DST. "The packaging supplier now has to provide

lighter, stronger and more environmentally-friendly boxes," he said. "Like a railway bridge, the strength of a board depends on torsional stiffness – this is the most important rigidity property."



Walter De Smedt

Walter De Smedt, Smurfit Kappa speculated on the new challenges in adapting to industry 4.0. "Corrugated products are genius products. But after one hundred years of

having corrugated boards in our lives, it is time to improve them," he said, pointing out that despite its long experience, the industry still had to ask deep questions about why it is not delivering better products – and he challenged the corrugated industry suppliers to build better machines.



Ralf Schiffmann

Ralf Schiffmann from Göpfert explained how the difference between the industry 3.0 and 4.0 is from fixed automation to intelligent automation.

"Workstations are automatically connected. The internet of things connects everything automatically. Everything will be in a place of

performance just in time. There is even automatic loading of trucks by robots," he said, adding that one key advantage is to shift from preventative maintenance to predictive maintenance. "The key to understanding this is to imagine what your machine would say if it could talk to you."



Wolfram Verwüster

Wolfram Verwüster from Durst Group described how digital had already changed industrial markets, reducing production times and costs. "It's just transferring data from A to B," he said.

However, the high quality offered by the new technologies made it especially interesting. "Cost cannot be the only reason to invest in digital," he said.

"Highly rated in terms of the quality of the delegates..., mainly decision makers in their business. Excellent programs conducted by Mark Van Damme and an event we will participate in for many years to come."

Stephens Glyn Pamarco

"Very targeted audience. in regular trade shows we get a lot of people that are not in our target."

Luis Christophe HP



Jakob Bovin

Jakob Bovin from BOBST looked at how digital printing would impact processes. He said the key benefits lay in more effective production, the opportunity for new

products, shorter times to market, and streamlined production. The challenges, however, were in selling the idea of value against volume, building digital pre-press capabilities, and the organizational and production impact. "You need to identify

potential new products and services that are not possible with analogue technologies," he said.



Alexander Cartellieri

Alexander Cartellieri from Conprinta looked at Preprint 4.0 and analysed the differences in digital production compared to analog. His conclusion was that Preprint 4.0

could save millions for any production plant, not least because – unlike analog – it would be very easy to do small orders.



Ronen Zioni

Ronen Zioni from HP asked what it would take to go digital. "The big opportunity lies in high-speed, high-quality printing," he said. With digital expected to grow 49% between now

and 2019, he asked whether any other industry could boast so much growth. He pointed to how Amazon had decorated boxes with images of the minions, from



A Spotlight - Minna Kantsila Metsä Board



Members of the Production Committee: José Herrando, Timm Ramcke

the movie, 'Minions'. "It is about faster turnaround time, less waste, lower risk," he said.

There were important discussions on safety, which is always essential in an industry where there are fast, mechanical production lines, with heavy and sharp equipment.



Stefan Buchner

Stefan Buchner from Smurfit Kappa explained his idea of 'Safety 4.0', which means looking at every aspect of the production process to see how to make it safer. "We have clear

principles when it comes to safety," he said, pointing to new rules involving measures as varied as uniforms and safety boots, a Safety Machine Folder, rules on factory floor, protection, markings, and training. He was also able to demonstrate that these prevention measures are showing excellent results.



Lars Engel

Lars Engel from BHS Corrugated explained how automated corrugators would work in a 4.0 environment. "Corrugated 4.0 is all about preventing human errors and

reducing complexities. In the future, it should be possible to run a corrugator

with three people or less," he said. He predicted that the entire added value chain would be interconnected to the internet of things. "So personnel reduction, precise quality and quantity, no bottlenecks, high speed. It is a clear paradigm change."



Jari Almi

Jari Almi from Valmet outlined opportunities for quality control systems on corrugators, in particular sensor technologies. "More sensors give detailed

online information from the process," he said. "High-speed actuator can respond on heat and moisture."



Marek Motylewski

Marek Motylewski from Mondi explained the science behind moisture's role in corrugator Production. "Maintaining proper

moisture content is essential for quality and performance," he said, saying that it had to be between 7.5 to 9.0% according to the paper type. The challenge is such that even the change of season modifies the humidity and thus the moisture content in the production. "My dream is to have a fantastic control system," he said.



Safety Handbook

As **Stefan Buchner** concluded in his speech "What Safety 4.0 means", the information and data regarding safety is available and up to us to implement!

Considering that safety is of the highest priority for FEFCO members, it was agreed to broadly disseminate this excellent example of safety culture within the industry.

The 44 page booklet gathers all safety issues corresponding to all Smurfit Kappa safety policies as well as topics from their safety intranet website.

A special FEFCO English edition of the Smurfit Kappa Corrugated Division Germany "Safety booklet" was already shared with all the Technical Seminar participants in Barcelona. The pdf file of the booklet was available for download in the Event mobile application and is now also available to all members on the FEFCO website (go to www.fefco.org/technical-documents/documents-overview). The booklet comes along with a DVD with 10 professionally made safety videos illustrating the 10 most hazardous situations. The videos are without speech in order to be used in every country. Those films showing case studies will also be available to FEFCO members in the next few weeks.

The FEFCO Production Committee

A deserved success for the members of the FEFCO Production Committee who have been working hard to put together the best technical seminar ever. Special thanks to Marc Van Damme and his outstanding team work and leadership. Names, from left to right: **Michael Frey** - Rondo Ganahl, **Julian Pachniewski** - VDW, **Timm Ramcke** - Kunert Wellpappe, **Klaus Lüke** - Klingele, **Marc Van Damme** - VPK Packaging and Production Committee Chairman, **José Herrando** - SAICA, **Luis Martín** - International Paper, **Johann Grünwald** - Smurfit Kappa Corrugated Central Europe, **Bernd Dilger** - DS Smith Packaging Switzerland, **Angelika Christ**, FEFCO Secretary General.



Gold Box Sponsor



Silver Box Sponsor

Awards



Olof Ronquist, EMBA Machinery



Wolfram Verwüster, Durst Group



Astrid Odeberg Glasenapp,
Innventia



Ralf Schiffmann and
Markus Haupt, Göpfert



Stefan Buchner, Smurfit Kappa

During the closing ceremony of the three day event the FEFCO Production Committee, the competent authority in FEFCO, awarded prizes in four categories: **Best Innovation, Most Inspired New FEFCO Sympathiser Member, Health & Safety and Best Presentation.**

FEFCO Secretary General Angelika Christ handed out the awards to the six winning companies and thanked them for their valuable contribution and their energy in developing new products and services that will make the corrugated industry more efficient.

- The most prestigious FEFCO prize was for **Best Innovation**, for which there were gold, silver and bronze awards.

Gold Award

Jakob Bovin, **BOBST Mex**, for his presentation "The Digital Print Revolution". Speaking without notes, Jakob Bovin charmed the audience with his explanation of the forthcoming digital printing revolution and how it would impact converting processes. As underlined by BOBST in its announcement "With this prize, the FEFCO jury recognized the radical capabilities of this new press technology. BOBST revealed to delegates the design and further technical specifications of the press, which is currently being beta tested at two European corrugated box plants".



Jakob Bovin, BOBST Mex and Emilio Corti, BOBST

Silver Award

Olof Ronquist from **EMBA Machinery** for his presentation "The Perfect Box". EMBA new technology is offering improved feeding, Non-Crush Converting™, Liquid Creaser™, providing less cracking and

better folding. All these combined give the perfect box! Who does not dream of the perfect box?

Bronze Award

Wolfram Verwüster, **Durst Group**, for his presentation "Durst Water Technology – Corrugated Digital Printing Machine" presenting water-based inks that move away from UV and generate truly green print results.

- **Most Inspired new FEFCO member:** Astrid Odeberg Glasenapp from **Innventia** won the prize for her presentation "Leading in corrugated board research" and for their positive contribution in research for the industry. It is very important for FEFCO to get new members and this year we have an increased number compared to 2013. This brings fresh blood and new ideas within the industry.
- **Best Presentation:** Once again, this award was won by **Göpfert** company: Ralf Schiffmann and Markus Haupt

collected the award for their presentation, "WellenWerk journal - News from Göpfert". If it goes on like this FEFCO might have to rename this award the Schiffman prize!

Health and Safety: This special prize was awarded to Stefan Buchner from **Smurfit Kappa**, Germany not for a spotlight but to honour his outstanding speech "Safety 4.0, Our Goal, Our Inspiration" that will help the industry improve its safety performances. We hope that this prize will inspire and encourage


all suppliers to further develop safety related service or equipment in the future and that one of them will be the winner of the Health & Safety Award in 2017.

"Very targeted audience. in regular trade shows we get a lot of people that are not in our target"

Luis Christophe HP

"Very highly focused, usually other seminars are oriented in a much broader way. This is very positive."

Jan De Roeck, Esko Graphics



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