

# Webinar highlights why flexo is more than just an alternative

Packaging MEA editor Ben Daniel reports on the highlights of its recent webinar “Flexo: More Than Just an Alternative”, as the process is fast becoming the industry standard

**F**lexible packaging printing and converting has been in the spotlight as cost, quality and sustainability are pressing demands from brand owners and jobs shift from traditional long runs to multiple SKUs and shorter runs.

For more than a decade we have been hearing about improvements in flexo platemaking, anilox, printing technology,

inks, coatings, substrates and many other elements that have pushed flexo as a strong competitor to the proven rotogravure process.

This webinar was attended by more than 250 industry professionals comprising brand owners and flexible packaging printers in MEA.



**Ben Daniel,**  
Editor of Packaging MEA,  
moderated with a brief presentation on  
Packaging Industry: Global & Regional Trends.



**Romeo Bandini,**  
iPack General Manager,  
took us through his experience and thoughts on  
why flexo is a technology to be reckoned with.

## Some key facts and figures 2015-2020:

MENA packaging market:

**52\$B**

\$41billion to \$52 billion

**5%**

CAGR

Global packaging market

**4%**

CAGR

## Key trends and drivers in MENA

- Higher economic activity
- Growing population
- Development of retail infrastructure
- Increased investment in food production and processing
- Significant investments in new flexible packaging converting capacity
- Increased availability of locally produced and competitively priced base substrates
- Food represents the largest end-use sector for packaging products.

## Why is flexo in the spotlight?

Market Value and Growth: Flexography Print Market-2019  
Global flexo printing market

**\$164bn**

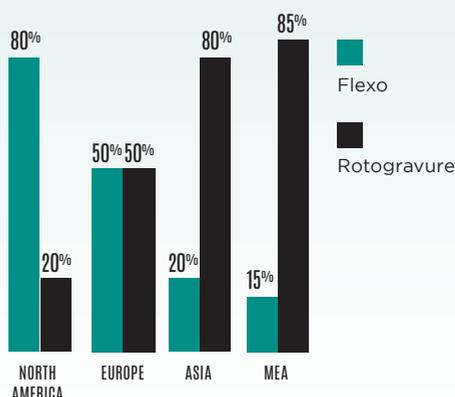
(Pre-Covid scenario)

Expected CAGR

**2.6%**

2020-2025

## The flexo vs Rotogravure worldwide share



The webinar offered hands-on experience from two important regional converters – iPack Abu Dhabi and Hotpack Dubai. iPack is the first privately owned producer of aseptic packaging material in the UAE. The factory produces aseptic packaging for a range of products such as milk, juices, cheese, tomato paste and others. It strives to provide aseptic packaging at international standards to customers across MENA and other markets.

## iPack Abu Dhabi: Facts and figures

- Groundbreaking February 2016
- Construction completed July 2017
- Production started August 2017
- 1st exhibition (Gulfood Manufacturing) November 2017
- IMS & BRC certifications April and May 2018
- One billion packs December 2018

“We have adopted the latest automation for everything and when it came to printing, we had no busy discussion – we went straight to flexo,” Mr Bandini said. “From inception, we had a vision to introduce flexo

with extended colour gamut (ECC) seven-colour printing, so Esko’s Equinox has proved a winning bet. We have improved our print quality and been more flexible, so were able to reduce cost as well.

“Everything came together well. We have implemented the latest technologies successfully. This is why, just one year after we started, we were participating at Gulfood 2017, in April and May 2018 we managed to get all Integrated Management (IMS) and British Retail Consortium (BRC) certifications, and by the end of 2018 we had already sold more than one billion packs. We doubled that number in 2019.

“In spite of the pandemic we almost tripled our volumes from 2017. We have a history of growth and have just invested in a new printing press – another CI flexo which is a bit more powerful and a bit faster.

“Now, I would like to highlight some points about our factory. Our warehouse and logistics is completely driven by Automated Guided Vehicles (AGV) where the entire system is integrated. It is optimised for two inline flexo presses directly connected and integrated to the warehouse. Everything is managed electronically. Our entire workflow is driven through an integrated system.”



**Dharmesh Zavery,**  
General Manager, Hotpack Packaging, Dubai, explained his experience with flexible packaging print and in particular the growing influence of CI flexo.

A leading manufacturer of disposable food packaging, Hotpack Global has an annual group turnover of AED950million. The company converts and fulfils paper-based, wooden, plastic, hygiene and protection, aluminium as well as foam-based substrates and packaging products besides customised products such as retail, shelf and biodegradable products. Sectors include restaurants and cafes, hospitals, logistics and event management, industrial and consumer packaged goods, hotels and resorts, supermarkets and ecommerce.

The highlight of Mr Zavery's presentation was the packaging converters' perspective. He explained the factors that matter most and how flexo answers the challenges while printing on flexible substrates.

- Suitable for desired portfolio – ability to handle paper, films, board and alu foil
- Ease of operation – user-friendly and easy to find trained manpower
- Ability to handle both short and long runs

- Economical
- Global investment and continued advancement
- Best solution for sustainable printing on PE and paper
- Print quality – debatable

He also depicted the Consumer trends supporting flexo technology

**Key factors to consider today:**

1. Speed to market: Where market demands are uncertain, produce what could be sold, with shelf-ready packaging in quick time.
  2. More choice: The consumer today needs greater choice and sustainability, an organic look, safe and hygienic products, and ecommerce and home delivery options.
  3. Product life cycle: Long-run jobs have become series of short runs, making flexo more commercially viable.
- Mr Zavery also highlighted flexo's potential cost savings as compared to gravure printing.

**40%** There is a 40% saving on plate and storage costs.

**67%** The slower-drying solvents used in flexo allow for almost 67% savings.

**40%** Flexo's ink pick-up means 40% savings in ink deposition

**15%** Press makeready and the faster turnaround time in flexo amounts to almost 15% savings



**Stefano Paiano,**  
Regional Sales Director, Koenig & Bauer Flexotecnica, "Why should brand owners and flexible packaging printers and converters consider CI flexo over rotogravure? I'd like to mention three reasons:

After taking a closer look at some of the benefits of flexo print process from a generic business and technology stand point, let's take a deeper dive into the technologies – in this case, Koenig & Bauer- Flexotecnica.

**Flexibility:** "Our CI press prints on different types of substrate, including flexible packaging for plastic films and paper-based substrates with varying thicknesses, starting from 12 microns. Our CI press can also offer print-converting for a wide portfolio of products including flexible packaging print for food, snacks, beverage, paper and plastic bags, paper cups, trays, gift paper, wallpaper, plastic wrap, non-woven, and so on.

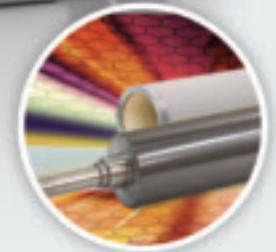
**Productivity and efficiency:** "Our presses facilitate faster makeready, less wastage and minimum downtime for job changeover. With auto-cleaning system, our CI press takes less than four minutes to a job

changeover and, in many cases, the customer needs also to switch the machine from solvent to water or from water-based inks, which is a very easy process as well.

**Sustainability:** "Koenig & Bauer is improving the sustainability elements in its flexo technology by developing strong cooperation with many partners and suppliers, by adopting value-based new technologies and processes that makes recyclable and biodegradable plastic packaging print and converting possible.

"Our sustainability focus is also towards improving a continuous lightweighting of material to achieve the same performance with fewer materials.

"Finally, we are pushing in the market the use of barrier protection coating by some downstream installed inline and also pushing the use of water-based inks and coatings instead of solvent and UV-based inks."





**Tito Lopriore,**  
Anilox Quality & Customer Support,  
Praxair Surface Technologies,  
a Linde Company, Italy

“Anilox is a common method used during the printing process where a measured amount of ink is supplied to a flexo print plate.

“Anilox rolls are the hard steel or aluminum cylinders coated with an industrial ceramic. The surface of the rolls is laser-engraved with very tiny dips, forming cells. The engraving pattern will affect the Anilox efficiency and therefore it is very important to choose the pattern and cell shape that will provide the best results. During printing, the rolls are coated in a measured amount of ink that is then rolled over the raised portion of the flexo plate.

“When it comes to Praxair, we focus on more than just the performance and durability of the coating. We take extensive measures to ensure our Anilox rolls are mechanically sound and our engravings are exact. We manufacture each roll to meet OEM requirements and your unique specifications. We coat

each one with our exclusive ceramic coating made of 99%-pure chrome oxide for optimal porosity, bond strength and density. Our ceramic coating maintains an average hardness of 1300 Vickers and can be ground and polished to maximise surface integrity and service life.

“Finally, the laser engravings on our Anilox rolls produce the proper cell volume and structure essential for accurate colour reproduction and consistent ink release. Our microscopic laser pattern engravings are specific to your print application and can range from eight lines per inch to high-resolution patterns of 1,300 lines per inch.

“We also manufacture a line of anilox sleeves that are lightweight, easy to handle and require less storage space than those of our competitors. Each Anilox sleeve is engineered to provide optimal shock absorption, ultimately improving press performance and delivering better corrosion protection.”



**Sante Conselvan,**  
Area Sales Director, Asia /  
ME & Africa,  
Gama International

“Founded in 2012, Gama International is based in Milan and operates worldwide. Services include pre-sales analysis, solution design, sales, installation, training and maintenance, with customers in the packaging, labels, newspapers and commercial printing markets and to manufacturers as OEM.

“We have advanced technology for ink control and a correction system covering the entire range of solvent-based, water-based, UV and EB curing inks. As for the control of ink facilitating savings in ink metering and thus being sustainable, we have a vibration-torsion measurement technology which has a host of advantages including improved quality and print speed, fast makeready, friendly human interface, reduced solvent/amine/antifoam/ink, nearly zero maintenance, press integration, the use of less materials and power. As for automation, our systems are Industry 4.0-compliant.

“As for sustainability, our close cooperation with ink suppliers and press suppliers complements the common goal and closes the loop.”



**Claudia Benelli,**  
General Manager,  
Ferrarini & Benelli, Italy

Ferrarini & Benelli, based in Romanengo, Cremona, Italy, has been designing and manufacturing surface treatment systems since 1965. Over the course of 55 years, the company has helped customers to enhance inks and adhesive bonding to plastic surfaces.

“The main purpose of surface treatment systems is to increase the surface energy and adhesion properties of different substrates – plastic films, foil, paper, laminates, metallised films amongst others – which are not very receptive to bonding with other materials, such as printing inks, adhesives or coatings. A suitable surface treatment is very important as more and more brand owners and manufacturers strive to offer their customers more innovative, sustainable and cost-effective solutions to respond to the needs of the market.

“We keep abreast of materials development by working closely with the major inter-

national manufacturers of extrusion and flexible packaging processing equipment”.

“Our Corona surface treatment system for flexible packaging increases the adhesion of inks, adhesives, lacquers and other coatings used in the processing of flexible packaging. We have developed specific treatment systems for both the flexo and rotogravure printing to improve the bonding of ink with and without solvent, and with water-based, UV and EB systems. In flexo printing especially, print quality is essential: our Corona treatment systems on printing lines help to drastically cut waste and inefficiency”.

The use of solvent-free or water-based inks requires higher surface tensions compared to solvent-based inks. These higher surface tensions can be achieved thanks to a correct Corona treatment sizing. The primary effect of Corona treatment is to

activate the surface of the film – that is, to increase the surface energy measured in dyne per centimetre, allowing the ink to remain firmly anchored when dried.

“The key parameters to take into account before treatment are type of material to be treated, printing width, speed, type of electrodes required to optimise the printing process, power and also Dyne/cm rate”.

“In order to achieve the best possible result, we analyse all these parameters and determine which solution works best according to the specific requirements of each customer. Our systems are extremely flexible: they can be installed on any type of flexo line and can be adapted to the desired working speed automatically. Through our systems, customers obtain great print quality, avoid producing waste material and reduce their impact on the environment.”



**Paolo De Grandis,**  
Director, Grafikontrol,  
Italy

Grafikontrol provides a 360° TQC through its specialised systems for packaging print and converting equipment that includes flexo, gravure, offset and digital as well as film extrusion.

Mr De Grandis told us more.

“We believe in what we call the 360° Quality Concept, or TQC-360, where products, applications, services and processes are driven by our inspection, viewing, measuring, tracking and register control systems across various types of packaging and printing equipment/machinery.

“Our core business has been press controls and web inspection for all processes. As we look at the wide gamut of packaging and printing process, different production processes may produce various defects, be it printing, lamination, editing, slitting or doctoring.

“A few examples of some our our Quality Controls Systems would be 100% print inspection, statistical area camera, in-line spec-

trophotometer, 100% inspection on lamination, 100% inspection on blown film extrusion, and defect tracking from printing to slitting.

“Let’s take a look at the life of a roll. A printed and laminated roll ready for the cutting phase contains the defects of the previous production processes. There could be print defects, process defects, lamination defects or substrate defects. Our control and inspection systems help identify and address these defects, thereby avoiding quality and rejection issues. To further increase our TQC, our systems are Industry 4.0-compliant, improving quality and efficiency. For example, within a flexible packaging production process, all the processes such as extrusion, prepress, printing, lamination, quality control, slitting and doctoring are integrated to give a perfect HMI (human machine interface).

“Our systems help flexo achieve the best results and is a sustainable solution as it helps prevent mistakes that could run into tonnes of waste material.”



**Vikram Fotedar,**  
Packaging MEA Technology Editor,  
Final Takeaways

1. Flexo is no pushover.
2. The factory of the future will look quite different from traditional print houses in terms of technology and automation.
3. Flexo as a technology is more flexible, productive, efficient and sustainable.
4. iPack’s introduction of flexo with ECG Equinox seven-colour printing was a clear winner because it reduced the amount of inks. Besides this, they improved the print quality and eventually became more flexible and reduced costs.
5. Another highlight from iPack was the Automated Guided Vehicles (AMV) material handling system that has streamlined the shop floor.
6. iPack has been a forerunner in the aseptic carton business by adopting flexo over more accepted inline technology, and today is reaping the benefits.
7. The millennial mindset is all about short attention spans and fleeting ideas and this translates into packaging having smaller run lengths and shorter product lifecycles, which ties in well with flexo’s ease of operation.
8. Another very insightful point from Hotpack was about the cost savings when moving from cylinders to plates, on solvents and the lower ink pickup.
9. Anilox underscored the importance of the supplier-printer partnership. There is a proliferation of choices in Anilox with different cell depths, geometries, angles, materials, and so on. It is important to make the right choice depending on the ink system used
10. Gama International explained the adverse impact of variability in Flexo ink pH, temperature and viscosity on print performance.
11. Ferrari and Benelli presented the relationship between substrate surface energy and wettability. This is very important because if you can’t wet the substrate, you cannot print.
12. Finally, Grafikontrol summarised TQC-360, where products, applications, services and processes are driven by our inspection, viewing, measuring, tracking and register control systems.

## THE REGIONAL PLATFORM THAT CONNECTS

- BRAND OWNERS
- PROCESSORS
- CONVERTERS
- MANUFACTURERS
- SUPPLIERS
- Polymers for packaging
- Blown & Cast film extrusion technologies
- Injection moulding technologies
- Blow moulding technologies
- Thermoforming technologies
- Colourants, additives & masterbatches
- Barriers and coatings
- Moulds and tooling
- Flexible packaging
- Rigid packaging
- Labelling technologies
- Form, fill & seal machinery