

# Grappling with Gravure

Moving Flexible Packaging to the Next Level

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**H**igher shelf impact, stronger customer engagement, greater flexibility, significant cost savings and rapid-fire connectivity: Flexo, a process long thought second to gravure in terms of quality, is transforming the way packaging players and brand owners think of sustainability and efficiency. It is now a dominant force in high-quality flexible packaging printing.

Dynamic and ever-changing, the consumer world is presenting significant challenges to brand owners:

- How do they get brand colors right?
- How can the supply chain be made faster and leaner?
- How can they enact frequent changes, keep attracting consumer attention, stay sustainable and reduce costs?

All these challenges are transferred to their partners—graphic suppliers and packaging converters.

Flexo printers need to go beyond expressing mere curiosity at the latest fads and embrace dynamic change that will drive consistency as well as efficiency and lead to real sustainability, coupled with real profit improvements for both brand owners and converters. It is vital that a flexible packaging printer step beyond existing technologies to ensure it delivers quality, consistency and predictability amid continually evolving demands.

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FTA member Roberts Mart, in Leeds, UK, lives by that statement. Not too long ago, it was faced with a significant printing challenge to increase quality and sought collaboration among its team of suppliers. Together, this consortium dissected jobs, capitalized on collective vision and passion, and formulated a new and integrated approach to meeting brand expectations.

Now commercialized, the robust and comprehensive overhaul of flexo printing optimizes ink delivery and image consistency by linking superior color separations, differentiated screening and patented plate patterning. Combined with specially designed anilox rolls, it produces outstanding, vibrant and consistent prints, thereby empowering the flexographic converter to print in ultra-high definition at maximum press speeds and stay within a standard 4-color ink pallet.



## OPTIMIZED INK DELIVERY & IMAGE CONSISTENCY

- ✓ Superior Color Separations
- ✓ Differentiated Screening
- ✓ Patented Plate Patterning

Pacificolor and Reproflex3 prepress technicians analyze Project Blue's impact on the Mars ' Milky Way Hot Chocolate flexible pouch at Pacificolor's Minneapolis, MN location. Enhanced definition is the objective. All photos courtesy Pacificolor

## Enhancing Graphic Effects



A comparison of results achieved with conventional high definition print (above) and Project Blue (below) utilizing the design for Milky Way Magic Stars hot chocolate.



Based on superior quality achieved and impressive financial savings reported, the technique caught on and spread throughout Europe, then to Asia, Africa and the Middle East. It is now taking hold in North America. Dubbed "Project Blue," this next-generation flexible printing process is making waves worldwide.

## A CASE STUDY

Here is how the Roberts Mart story unfolded. Mars, a supplier of candy and hot chocolate, required short packaging runs of its new Milky Way cocoa beverage flavor. Shorter run lengths for gravure printers



were not ideal, as the cost per pack was too high and the long lead times associated with gravure prevented the project from meeting in-market schedules.

The company tasked Roberts Mart with helping to deliver the solution by using conventional flexography and converting the many complex aspects of gravure into a flexo print format for the initial run. It proved a tall order.

To suit a standard flexo HD solution, Roberts Mart's pack design had to include complex color separations and image manipulations in order to reproduce the original design intent. Many of the design elements had to be converted into a format that was flexo-friendly, resulting in compromises that muddled the offering. Ultimately, the flexo version turned out to be sub-standard. Further issues arose when the designs were run for more than 10,000-ft. and the images began to fill in and gain up, a common problem in traditional flexo printing.

The printer was left to manage a process that was not stable, producing huge inconsistencies over multiple printruns. The seven colors involved in the job—CMYK, spot blue, spot red and white—were left with a hard edge, where the vignette dropped to zero percent, 150 lpi did not provide the necessary definition for the image to “pop,” resulting in a flat look. Additionally, the minimum dot running through the cup made the image gain up, affecting clarity.

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Roberts Mart turned to Reproflex 3 along with Sandon Global to develop a new, ultra-HD approach. Together, a specification was designed and agreed upon. It saw the creation of a platform, delivering quality, efficiencies and most importantly, sustainability. After an initial fingerprint and scatter proof, it was apparent this platform would deliver the desired print quality. Project Blue was born.

Key areas of improvement attributed to the practical and precise approach included:

- **350 LPI printing, unparalleled high-density image reproduction:** Enhanced ink transfer control with decreased ink requirements, the finest in image reproduction screening up to 350 lpi and small reversed text reproduction
- **Smooth vignettes with 100 percent tonal range:** Soft fades easily matched to other print process capabilities, such as offset and gravure, delivering repeatable and sustainable dot structure
- **4-color fixed pallet expanded gamut (EG) printing:** Utilizing a unique patented plate surface cell pattern together with a unique anilox cell format for optimized ink transfer. Built on the stable Kodak NX imaging platform, Project Blue delivers approximately 80 percent of the Pantone color library from CMYK
- **Combination and long printruns—without compromising brand:** Reducing dot gain from traditional plates of up to 43 per-



Fruit Bowl Yogurt Flakes, printed with Project Blue and its hybrid screening platform, depicts enhanced dot patterns, flat solid colors and sharper text edges than conventional HD flexo print. This package is 5-color: CMYK plus white.

cent, to a maximum 13 percent, affords stability and consistency of brand color. Utilizing a fixed color pallet allows for combining several small printruns into a combination larger volume print-run without compromising color fidelity

- **12 percent ink savings:** Ink imposition technology and customized anilox rollers allow for smaller halftone details, and pick and transfer less ink, which provides up to 12 percent ink savings over printing in conventional AM screenings. Ink reduction means better recyclability, a smaller carbon footprint, and more green money for the printer

Back to the Milky Way prepress production process. From native design files, separations were accurately regenerated. With the new high solid density, instead of seven colors, plus a complex white separation, the team delivered the full design in 4-color process, plus white. The design intent and PMS colors were accurately reproduced.

With the low dot gain, team members achieved soft edges, where the background dropped to zero percent. It had 350 lpi definition, so the image looked ultra-sharp. There were no spot colors in the background (meaning no trap lines), and the 100 percent tonal range

gave it a clean, beautiful white cup image. Most importantly, the Mars brand team was happy with the results. Shortly thereafter, the Milky Way design won a Gold Award from the EFIA (European Flexo Industry Awards) for Technical Innovation in Flexo and Best Use of Flexo for Brands.

William Roberts, managing director at Roberts Mart, said, "At Roberts Mart, we are constantly pushing the boundaries of the flexo print process. We take pride in investing in a best-in-class tool kit, together with investment in people. Working with Reproflex 3 and Sandon Global is very much an extension of that philosophy. Flexo has come a long way in the past 40 years. We're creating a great future for the sustainability of the flexographic print process."

Today, Project Blue provides the structure and integrated approach first crafted on the Milky Way hot chocolate pouch. Through collaboration and shared passion and vision, partners have produced more than 1,500 commercial designs. Will your company accept the challenge to dramatically improve print quality and production efficiency?

## THE COLLABORATORS

Reproflex 3 has exclusively partnered with Pacificolor to introduce Project Blue to the US, Canada and Latin American markets. In making that announcement, Andrew Hewitson of Reproflex 3 says, "We share the same vision for delivering quality and added value. Each of us has forged a reputation as a trusted business partner and problem solver."

Sandon Global's Stuart Mitchell adds, "We have perfected this technology, taking a partnership approach and successfully implementing across Europe, the Middle East and India. We are extremely proud to be working to introduce Project Blue to the North, Central and South American markets."

Pacificolor Owner Tim Hirsch comments, "Project Blue will change the face of flexographic printing here in America and we are excited to be exclusive partners expanding this technology. An innovation to improve existing technologies is something we all strive for. If we are not continually moving forward, we will not be able to address the future needs of our flexo packaging world."

Reproflex 3 is a global flexo solution agency and industry pioneer. It is part of the team responsible for creating and patenting Project Blue, an innovation in flexo plate technology. With the largest "independent" Kodak NX consumption in the UK and UAE, and having prepressed more than 100,000 flexo designs globally in the past 22 years, Reproflex 3 provides services to clients in 16+ countries across Europe, the Middle East and Asia. The company has implemented 12,000+ packaging projects necessitating 50,000+ plates each year since its inception. With proven, forward-thinking technology, Reproflex 3 provides its brand partners with significant savings and efficient supply chains for sustainable packaging. To learn more, visit [www.reproflex3.com](http://www.reproflex3.com).

Sandon Global is the co-founder of Project Blue and an award-winning manufacturer of laser-engraved rolls and cylinders used in the flexographic, gravure, lithographic and metal decoration print industries. Distributed in more than 50 countries worldwide, its innovative products and technical expertise garner industry accolades and a loyal customer base. Dedicated staff work side-by-side with a global network of agents and distributors to improve laser engravings, led by a solution-focused approach. Sandon Global customers benefit from a range of ancillary products, including sleeve covers, volume measuring equipment and sleeve storage. To learn more, visit [www.sandonglobal.com](http://www.sandonglobal.com).

Pacificolor, established in 1996, is a leading supplier of prepress services in both the flexo and offset print industries that services clients across the US from its state-of-the-art facilities in Utah, Colorado and Minnesota. The company houses top-end infrastructure for prepress, color management and plate making, providing solutions for the narrow, mid, wide web and corrugated industries, along with offset commercial print. Pacificolor is a Kodak Flexcel NX Certified Provider and an authorized dealer of packaging equipment, software and consumables for brands like Epson, GMG Solutions, Colex and Hybrid Software Solutions. To learn more, visit [www.pacificolor.com](http://www.pacificolor.com).

