



**„Red Ocean“ or „Blue Ocean“ –
what is the right strategy
in digital printing?**



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„Red Ocean“ or „Blue Ocean“ – what is the right strategy in digital printing?

In recent years, digital printing is something that has been the subject of many a heated debate when it comes to the decoration of packaging, particularly containers.

The advantages of this kind of decoration speak for themselves:

- Ultra-fast changeover of print images
- Also suitable for batch size down to only 1 item
- Incremental numbering
- Photorealistic pictures
- No prepress
- Etc.

On the other hand, the cost of digital printing, which is today still significant, remains an issue for large production.

Based on this it is debated whether digital printing can be used to support the existing business model of relatively large production lots or whether it can only be used as a basis for developing a new business model to address only small production lots.

One answer to this could be provided by the Blue Ocean concept by W. Chan Kim and Renée Mauborgne – an approach which was developed at the INSEAD Business School. Using an empirical study, carried out at 100 leading companies over a period of 15 years, it could be shown that this concept led to new market sub-segments, previously untapped and for which there is no competition (source: Wikipedia 2018)

Why was it called „Blue Ocean“? Well, Blue Oceans is the name given to markets or sectors that have virtually no competition. So if you are in such a market, you are unlikely to meet any



Red Ocean Strategy

Competition in the existing market
Fighting the competition
Using the existing demand
Direct correlation between use and costs
Organizing the whole system of corporate activities to suit the strategic decision for differentiation or low costs



Blue Ocean Strategy

Creation of new markets
Dodging the competition
Creating new demands
Ignoring the direct correlation between use and costs
Organizing the whole system of corporate activities to suit differentiation and low costs

Blue Ocean/Red Ocean: Differences between the two markets (source: Wikipedia 2018)


competitors. On the other side there are the Red Ocean markets which are saturated and thus subject to intense competition offering.

(source: Wikipedia 2018)

Alongside technical innovations, the Blue Ocean Strategy also comprises the reconsidering of the whole portfolio as well as the definition of the new market and buyer. (source: Wikipedia 2018)

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The Blue Ocean concept is based on the idea that successful companies should look for their own innovative paths to thus elude the competition. Innovation should give them access to new mar-



Back to the digital printing technology and its use in the packaging industry: The application of this concept could be understood as follows:

A. Red Ocean Strategy:

- I will stick to my existing business model in the existing market with my existing customers.
- With digital printing, I can secure myself advantages over the competition in terms of flexibility and costs with small batch sizes.
- The aim is to enlarge market share in the existing market.

B. Blue Ocean Strategy:

- Create a new business model with the aim of evaluating and serving new markets and thus new customers.
- As there is virtually no competition in these newly defined markets, the relation of price to value will be perceived differently.
- Goal: growth in new markets.

Of course implementing a Blue Ocean strategy is easier said than done. One has to address a lot of uncertainties and risks. This path requires careful strategy and execution to lead to the desired success. There are however numerous cases of this approach with digital printing that led to admirable success: giveaways, brochures, posters, merchandising, etc. New markets have been developed here not only as B2B but also as B2C.

It is often difficult to leave a traditional path to success to try a „Blue Ocean“ strategy but it might well be inevitable that it is what you will have to do to surf on future opportunities!

„Big cups to quench great thirst“: DigiCup – now with a printing height of up to 210 mm

When you are looking for ultra-fast decoration changeover, photorealistic pictures and complete printing incl. the edge of the cup, and productivity has to be efficient too, DigiCup is the answer.



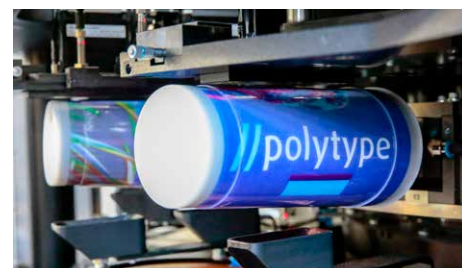
Customers using the machine in the three main regions America, Europe and Asia, have recognized their benefits. Particularly in markets in which fast delivery and high decoration quality of richly decorated cups are required, DigiCup is the best solution.

The outstanding printing results on medium-sized cups are very popular. Which is how the idea to decorate really large cups with DigiCup came about. Really large cups are cups with a volume of 64oz (1.89 l). And //polytype took up the challenge. Based on the existing DigiCup, modifications were made to be able to print cups with an edge diameter of up to 120mm and a height of 240mm. It was not only the transfer that was adapted here but also the printing height. With DigiCup L, it is now possible to apply a tall decoration of up to 210mm on the cup while re-

taining the concept of decoration. This means that using three ink jet heads a white undercoat can be applied which is then dried. Then the four basic colors (CMYK) are printed, also each with three ink jet heads. The glossy photorealistic pictures on these large cups are thus a genuine eye-catcher.

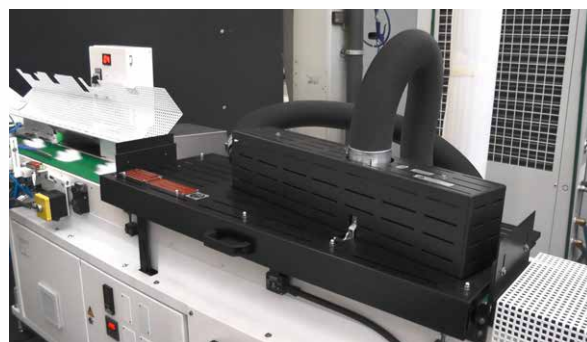
And the productivity results are also good. The DigiCup L is designed to process cups at a mechanical speed of up to 250 cups/min and decorates the cups described here at a speed of up to 80 pieces/min. This means that large cups can be decorated with colorful pictures efficiently and flexibly (print image changeover).

DigiCup is the way to serve the event market with excellently decorated cups – now also with „big cups to quench great thirst“.



The renaissance of the lid printing machine – DDM 160

Reinventing yourself to create new benefits is a challenge that not only applies to companies but also to individual products. This is probably how best to describe the situation of the lid printing machine DDM 160 from //polytype.



The main task of the DDM 160 is to print lids with dry-offset at speeds of up to 500 or even 600 pieces/minute and up to eight colors. In some areas, however, decorating lids in this way has been replaced by other technologies. So although the DDM 160 is a very productive and flexible solution, it has had a difficult time of it over recent years.

It was plastic containers of pet food that ultimately caused some packaging manufacturers to once again focus on the DDM 160. The task at hand appears simple at first glance: Two-piece, 35mm high plastic containers were to be printed with a black text. The printing of the base had to be precise and clearly legible.

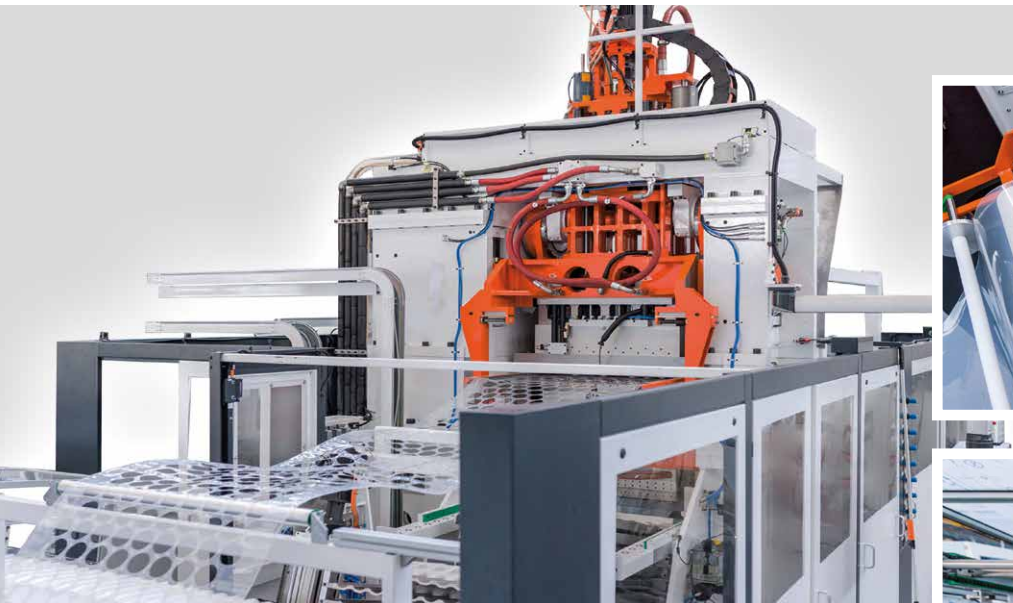
The challenge here is that the plastic containers have to be decorated very quickly and the printing of the text should ideally cost virtually nothing.

The DDM 160 from //polytype is the ideal solution for this requirement. It prints plastic containers ultra reliably at a speed of up to 450 pieces/minute. Thanks to the automatic feeding and removal, the machine can be operated with a minimal number of staff. Setting up the print image is also fast and simple. By setting up the inking units with foresight, a language change can be anticipated, enabling virtually continuous production.

The DDM 160, which has been completely revised in terms of controls, is thus the perfect solution for cost-sensitive decoration of plastic containers. And not only for this form of packaging but also, as was the case to date, for sprayed and deep-drawn lids.

2013-2018: Half a decade of //polytype OMV

Exactly 5 years ago on August 19th, Wifag-Polytype Holding added OMV Machinery, a thermoforming company headquartered in Verona, Italy, to its portfolio. Half a decade later, the company is fulfilling expectations and has become an important part of Polytype's Plastic Division.



Turnover has grown, new customers have been reached and new products have been developed.

But what makes OMV special, one may wonder?

As a thermoforming equipment supplier, it is certainly not the biggest, nor is it the most known. While its products cover the full range of in-mould trimming solutions, it does not offer all types of thermoforming equipment.

OMV's uniqueness lies in being a small, focused technology company.

Yes they do just "in mould trimming" today, but that they do mighty well: and it's not just about thermoforming. The company engineers and manufactures

extrusion lines and moulds too, allowing them to offer fully automated inline systems.

Looking backwards, there are two initiatives in particular which have proven decisive to the success of this acquisition: the investment in a development "Tech Center" in Verona and the decision of developing the latest OMV machine, "RM77 Revolver".

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RM 77



Adding the “shape” element to pure “decoration” was a key factor in the decision to expand the product range into thermoforming. But as our customers know, shape is not made by the machine: it’s made in the mould.

When Polytype took over, OMV had already plenty of know-how, expertise, and a record of development of many products (especially, but not only, in food packaging) in its 50+ years of history.

Mould design expertise was, and still is, the “cherry in the cake” of OMV’s know-how.

But while the existing customers knew that well, it was much more difficult to communicate this to new prospects. The solution: dedicate part of the plant to a permanent pilot line, where any thermoformable object and resin can be tested and optimized in short runs.

And so it was that in 2016 a small-size, but fully equipped inline system, capable of both extrusion and thermoforming was started in Verona and has been serving many developments in the industry since then.

Now, this was not an absolute “première”: an OMV pilot line had been available for several years in the US. The novelty in the approach was to locate the test equipment in the same building where design and mould manufacturing took place.

Such vicinity is a key element in delivering value: it allows quick feedback and correction, so that most changes in an insert can be made and tested within 24 hours. This makes it possible for customers to fully develop their product and “walk out” with samples ready for qualification runs within days from testing the initial version, as opposed to weeks.

On top of that, OMV can track and simulate in its pilot line the conditions of industrial production in its larger machines, so to ensure that parts out of the production OMV inline system will be the same as those produced in the test runs.

OMV’s “Revolver” thermoforming system lands in America

The approval of the RM77 project was Polytype’s first operative decision as shareholder. Earlier this year, Polytype//OMV announced the sale of two RM77 “REVOLVER” inline systems to a company in the United States.

The customer, whose name cannot be disclosed at this time, is a preferred supplier of blue chips food companies in the US. He has chosen OMV’s new systems over its competitors for its unique advantages:

- High speed of production: large quantities of pieces targeted would have needed more than 2 systems by any other competitor
- Extra cooling time in the mould
- Small footprint on the production floor

(The following is quoted from Angie DeRosa’s article in “Plastics in Packaging Magazine”)

Those who attended the K show in 2016 may have gotten a glimpse of this [...] thermoforming system, a prototype model with a 51-cavity revolving mold that was producing polypropylene cups. That patented molding system was designed to compete against tilting technologies..

Officials descended on [NPE Show in] Orlando with the intention to showcase the production version and sharing the news that it now has sold two of the machines to a customer in the United States.

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The "RM" means "revolving mold," and the tools for the machines are made of three semi-molds: a female and two males, which are placed on the same vertical axis. The female half operates at a full cycle speed while the two male halves complete their cycles every two cycles of the female half. The formed material remains in the cavity for an additional cycle, according to the company. This improves part quality. Having two cavity sets allows for an increase in production speed. Featuring a single delivery point, OMV also had integrated a simple stacking and part handling system into the new machine.

give you the most efficient machine, because the forming and cooling all happen with a closed mold."

The machine exists thanks to an important step forward in the torque motor systems, Staffoni said. "Torque motors are not new, but of that size they were incredibly expensive until recently. It was the progress in the torque motors and the mass production of the same that enabled us to make such a machine."

The first inline system was sold in 2016 to FLO SpA in Italy.



Mr. Tazio Zerbini, COO FLO

The biggest benefit to the converter is that "we are at the same time forming and extracting the parts, so the only open mold time is just the time to revolve," Antonio Staffoni [CEO of OMV] said. "This revolving movement, thanks to the torque system and the special tricks that we did, is extremely fast and provides a lot of closed mold time in the cycle. [...] Closed mold time in the cycle is something like 30% higher than any other machine. That translates directly into productivity efficiency.

Theoretically, if you could always keep the mold closed and just open for a moment and close again, that would

Mr. Tazio Zerbini of FLO SpA, says:

"We are extremely satisfied with RM77. Over months of non-stop use, it has proven enormously productive and extremely reliable.

An authentic breakthrough by OMV, that brings PP-thermoforming to new levels of achievement: this machine will force all converters to consider it for current projects and future investments."

New quality standards for the finishing of cups

Directly engraved elastomer printing forms offer an alternative to the photopolymer plates that are normally used. The PremiumSetter S1000 is an exceptionally productive engraving system for metal-based dry offset printing plates. A 1290 x 1060 mm raw plate can accommodate up to 14 color separations of a conventional cup and can be imaged ready for printing in less than 1.5 hours.

The PremiumSetter is equipped with a clamping bar cylinder and loading table, which make handling easy and efficient.

Besides the production quality features, printing plates engraved using the PremiumSetter deliver unprecedented reproduction quality. The spot quality of the high-energy fiber laser enables the reproduction of screen rulings finer than 50 l/cm and minimal

line thicknesses. The three-dimensional shaping of the screen dots and the use of undercuts minimize the otherwise high dot gain in dry offset printing.

Elastomer in general is extremely durable and particularly resistant to UV inks. Any thickness of elastomer printing plate can be selected, which means that all dry offset presses on the market can be catered to.

Users can see the advanced print quality for themselves by requesting a no-obligation test print.

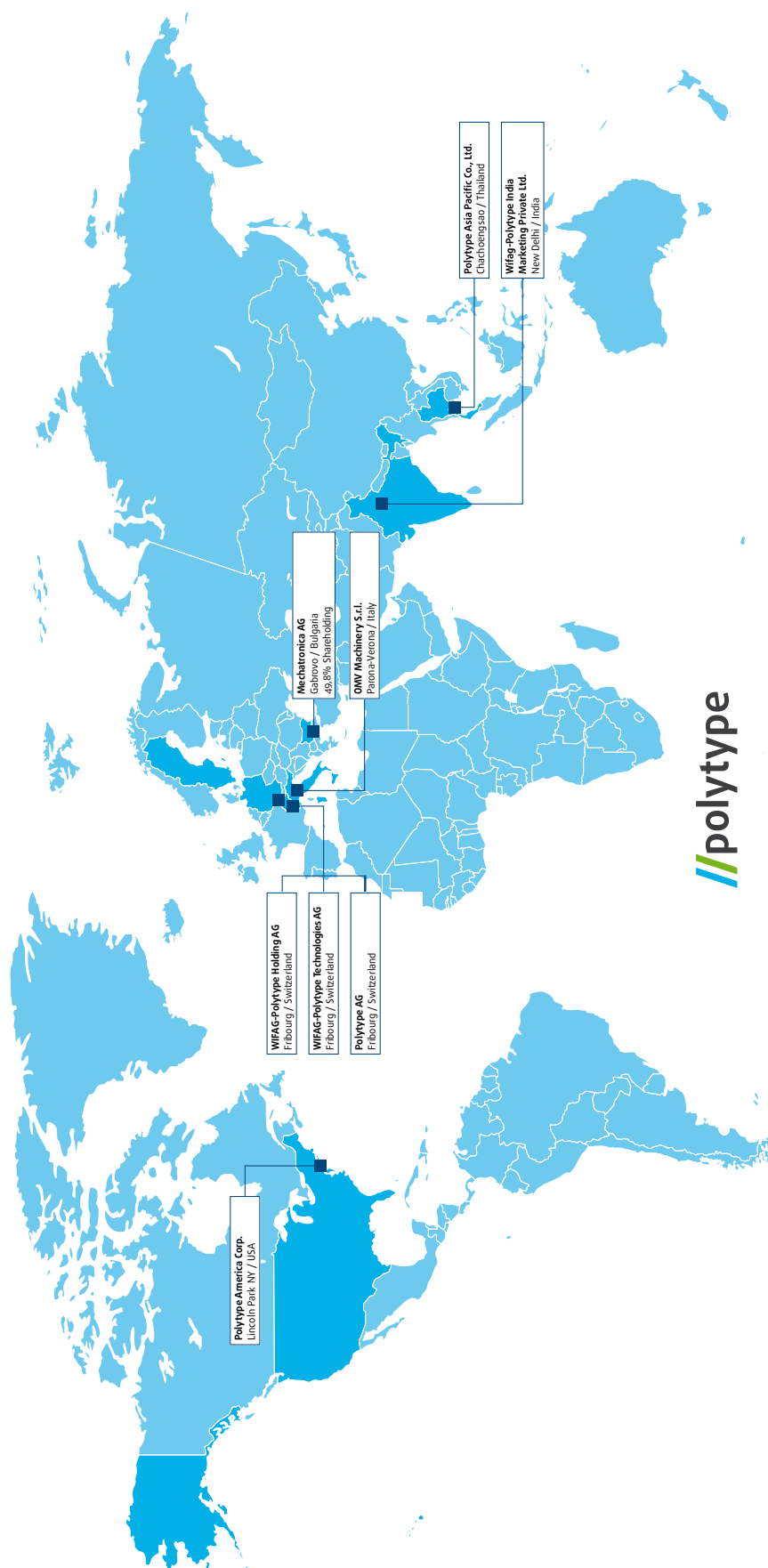
Further information is available at <https://www.hell-gravure-systems.com>



Elastomer printing forms deliver unprecedented reproduction quality.



The PremiumSetter S1000 offers simplified plate handling as well as highest productivity.



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