

# drupa Essentials of Print



The print & packaging industry is a living world and once every four years, it is important for all its stakeholders to meet and share for a better future. At drupa, we promise you inspiration, innovation, knowledge sharing and networking. Each visitor will have his own places to go and must-see hotspots. On the way to this event, we release the “drupa essentials”, a series of articles from designers, brands owners, printers, converters, journalists and influencers. These articles will offer visitors an understanding of the print & packaging world that is transforming rapidly under the umbrella of digitalization, automation and sustainability. So, enjoy the reading and give free rein to your instinct and curiosity under the adage “to each his own drupa”.

**We are happy to provide you with this expert article and we would be pleased if you publish it.**

**Be inspired!** \_\_\_\_\_

**Your drupa Team**

## **Ralf Schlözer: Inkjet, the great enabler!**



**VITA**

**Ralf Schlözer**

Ralf Schlözer is a technology analyst for the printing industry based in Germany. He is supporting technology providers in exploring new market opportunities and tailoring their offerings for the best market impact. He is the European editor of WhatTheyThink.com and regular contributor for Inkjet Insight and other printing publications.

You can reach Ralf under [LinkedIn](#) and directly at [ralf@digitalprintexpert.de](mailto:ralf@digitalprintexpert.de)

**drupa Essentials of Print** March 2024

**drupa  
content  
contributor**



## Ralf Schlözer: Inkjet, the great enabler!

Our lives are changing and so are the prints we order and produce. Inkjet is unique not only in the breadth of print applications addressed, but also in the range of devices, from inexpensive entry-level solutions to high-end, lights-out production lines. This can take away the risk of moving into new print applications and allows exploring new opportunities for print.

There are now more than eight billion people on this planet. We can travel and exchange data and information around the globe. Our habits and our communication have changed. It is no surprise that print is changing as well. While some traditional print applications are fading away, others are remarkably resilient, while new application areas keep popping up.

Printing companies are adapting to this trend and are adding additional print applications as brands are looking for new ways to promote, publishers to distribute content and consumers to embellish their living. Demand can come from all kinds of customer groups, especially for small runs and quick turnaround times. Nowadays, a web presence makes it easy to showcase and promote new products, with recommendation algorithms - it will be AI in the future - aiming at upselling or presenting additional products.

One challenge remains: these new applications need to be produced first. Sometimes a partnership with another print service supplier is the best option. In other cases, keeping production capacity in-house makes more sense to be quick, flexible, and retain more of the value-adding processes. Especially equipment that can be used for a variety of applications or that offers a low investment point can be helpful to take advantage of new opportunities.

As a print technology analyst, I am still surprised to find inkjet at the heart of so many possibilities. Inkjet helped to democratize the printing equipment market, as a supplier can choose and combine inkjet heads, inks, drying, and substrate support from a wide array of providers. There are more than 20 inkjet head manufacturers and a much larger number of inkjet ink manufacturers active in the industry. Substrate transport can be sourced from many companies, and even old printing or finishing equipment can be repurposed. Furthermore, there are inherent technological advantages in inkjet: it is a true non-impact process and can, at least

theoretically, print on a wide range of substrates and shapes.

Accordingly, solutions differ a lot and diverse markets are being addressed. Label printing has seen a great boom in recent years with more than 40 inkjet label press models on offer today. Corrugated gained traction next, with about a dozen single pass presses on offer currently. Folding carton and flexible packaging printing solutions have been slower to emerge, but several inkjet press models have recently entered or are about to launch in these markets. Printing on metal, either beverage cans or sheet metal, is growing as well. In all segments, full-blown production inkjet devices start to rival the productivity of conventional presses, although at price points rivalling high-end presses as well.

There are lower-priced alternatives however that allow printing on labels, cans, or pouches starting at low five-figure investments. Scanning head large format printers can be a cost-efficient alternative for flat packaging materials, also starting at similar low investment amounts. Although productivity is low and often limitations in materials and quality exist, it is worth inquiring about the market opportunities that could be addressed. An alternative for exploring new opportunities are inkjet presses that allow branching out into additional applications like the B2 inkjet presses from Fujifilm, Konica Minolta, or Komori and the B1 presses from Landa. With a wide range of substrates and weights possible, customers are using these presses for a variety of applications.

Sometimes the strength of inkjet lies in processes after the main packaging or commercial print has been performed. Unique effects can be created by layering clear inkjet ink to create raised, tactile surfaces. Duplo, MGI, Scodix and Steinemann offer solutions for embellishing sheets. Koenig & Bauer Kammann expanded this to texture printing on spherical containers.

Beyond commercial and packaging print plenty of additional markets exist, often under the radar of the commercial printing industry. Decorative prints on flooring, panels, ceramics, glass, and many other surfaces are being addressed by inkjet. Even full wallpaper factories exist that can turn custom designs into completely prepared rolls of wallpaper. Home decoration experienced a boom during the pandemic and with expanding technical possibilities

more surfaces can and will be decorated. Also, in textiles and garment printing inkjet is enjoying a rapid uptake. From soft signage to interior textiles to fabrics for fashion or printing on complete pieces of garment – opportunities are manifold, and solutions exist for all application areas. Again, low priced entry models offer a low-risk entry for small volumes, while high-end production lines are tackling industrial production needs.

Not all substrates are flat however but inkjet solutions exist for printing on three-dimensional objects. Roland DG and Mutoh recently showcased new printers to print on smaller objects and merchandise. The Monster Jet from Azonprinter can even print on objects up to one metre high. For even bigger surfaces, direct-to-shape printing with robot arms has been proposed already. Several projects exist; however, this is still in an early phase of commercialisation.

The possibilities with inkjet do not stop at the surface. 3D printing opens the door for additive manufacturing. Inkjet in 3D print can take advantage of the inkjet innovations developed for other markets and benefits from the scale of use in heads, inks, and control electronics. Even if a 3D-printed end product is significantly different from a printed piece of paper, printing companies can have a competitive edge by weighing in their knowledge in data handling, colour management, customer contacts and logistics.

Finally, if you can't find the right solution for a specific print requirement available on the market, inkjet integrators can help to tailor a solution. Companies like Bergstein, Cadis, Colordyne, or Neos offer the consulting and engineering services required to assemble a custom printer. Alternatively, users can set up their own solution by investing in a print bar and drives electronics from suppliers like Domino, Fujifilm, HP, Kodak and others. Memjet just launched the Durabolt print bar, called a "print engine in a box". Of course, building your own integrated printer is more complicated than just buying a print bar, however thousands of imprinting solutions are being operated today already.

The beauty of inkjet is the simplicity of the process, resulting often in devices with few moving parts. In

some cases, operating a device is a push-button operation, making set-up and operation easy. An advantage not to be underestimated in times of labour shortages. Obviously, high-end printers can get complex and demanding to operate. However, with inkjet, there is always the opportunity to start small and try out markets with manageable risk and investment and to grow when demand develops.

Finally, technology is not a means by itself. A business plan or at least a business idea needs to come before any investment. I do strongly recommend however to get out and explore where future market opportunities are popping up. Print is used in a lot more places than on plain sheets of paper. Creativity founded the printing industry, so get inspired by print applications produced at trade shows, open houses, seminars, or user group events.

Admittedly, with the myriad of possibilities keeping an overview is challenging. drupa 2024 will be a great opportunity to experience a wide range of applications in one place and get information from known and unfamiliar vendors firsthand. It is time to leave the comfort zone and explore the halls you have not been to before and visit the touchpoint and drupa next age events running alongside the exhibition.

### Quotes

*"While some traditional print applications are fading away, others remains and new application areas keep popping up"*

*"The beauty of inkjet is the simplicity of the process, resulting often in devices with few moving parts"*

*"Technology is not a means by itself. A business plan idea needs to come before any investment"*