**PRESS RELEASE**

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**How digitalization is transforming the packaging industry**

Digitalization, defined as the use of digital technologies to change a business model and provide new value-producing opportunities, is transforming entire industries with varying speed and scope. The retail, media and banking sectors are examples of industries that have been shaken to their core over a relatively short period of time. By and large, digitalization is not just the implementation of digital technologies into existing business architectures; it is about questioning existing business logics in the light of new possibilities offered by the latest digital technologies.

The packaging industry is also undergoing a profound transformation, with brand owners shaking its value chain. They are under pressure from competition, market expectation and new local brands to reduce new product cycle times, from packaging design to arrival on the shelves. The reduction of lot sizes, the continual growth of digital printing and the need for color consistency between physical and online product displays, calls for more efficient workflow tools. Competition from traditional and emerging players is also intensifying within packaging plants around digital products and services.

Digital trends are changing the dynamics in the packaging value chain. All stakeholders, from brand owners and packaging designers, printers and converters, to tool and machine manufacturers, need to adapt, while at the same time spot additional opportunities for growth.

In this article we first have a look at waste factors within the packaging value chain and inside packaging plants that can be tackled by digitalization. In a second step we will look at the vision for digital services from a leading solution manufacturer.

**Waste along the packaging value chain**

In general, today’s packaging value chain remains segmented and poorly interconnected. Take the example of folding carton: many successive steps are required from the initial packaging strategy of the brand owner, the packaging design, the pre-press operations to prepare the artwork and process the image, the tools preparation, the package printing, embellishment, cutting, folding and gluing, moving on to the subsequent packing and distribution steps.

The know-how of packaging designers, pre-press specialists, printers, converters, tool makers and machine manufacturers is disconnected into silos, each step being performed without an end-to-end view of the constraints in the other segments of the value chain. When designers conceive a new package, they are lacking crucial process information that would allow them to better take into account downstream operations such as tool and job preparation. Worse still, some actors in the value chain take advantage of this entrenched knowledge structure to cover their own inefficiencies.

As a consequence, it takes brand owners between 6 months and 2 years from the initial packaging specification to the delivery of the packaged goods to their customers.

In addition to reducing time-to-market, brand owners are also looking for cost and efficiency gains. The potential to reduce waste is high: up to one third of food product recalls are due to artwork errors, for example because of incorrect or missing allergen information.

Time and again, across many different industries, digitalization has proven to be a powerful engine when it comes to reducing waste in value chains by breaking information silos and providing increased transparency. The packaging industry is poised to follow the same trend.

**Waste within printing and converting plants**

Turning to packaging plants, printers and converters are facing their share of challenges: increasing price and time-to-delivery pressures, decreasing lot sizes, higher demand for color consistency across many different printing processes, to name just a few. Printers and converters are actively working to reduce spent resources and to avoid customer claims. They need more efficient means to automate plant and job workflows, and they require efficient quality control systems at each process step. At the same time, converters also need to optimize equipment performance, increase productivity and avoid unexpected downtimes.

Most of the above requirements have one thing in common: the need for ubiquitous access to the relevant information. Here again, digitalization is a powerful catalyst for information transparency leading to value creation.

**Vision from a leading solution manufacturer**

A pioneer in the digitalization, automation and connection of packaging machines, BOBST has the vision to shape the future of the packaging industry. Across labels, flexible packaging, folding carton and corrugated board, the company intends to connect stakeholders to a digitalized and automated workflow, accessing information anytime anywhere for a flexible and agile collaborative operation. As explained above, the trend towards greater digitalization will help reduce waste along the packaging value chain and increase efficiency within printing and converting plants. The BOBST vision is translated into three guiding principles:

First, BOBST continues to invest in mastering all key digital and analog processes for printing and converting. In addition, to ensure that produced goods meet converters’ and brand owners’ requirements, all process steps are increasingly equipped with automated closed-loop quality control systems. The optimal combination of processes and embedded quality control systems is a powerful driver for increased efficiency and waste reduction within packaging plants.

Second, the company is striving to offer digital value on top of the physical value. This is made possible in particular through ’Internet of Things’ (IoT)-powered connectivity. As an example, the BOBST Remote Monitoring application is a comprehensive production reporting Software-as-a-Service designed to access remotely detailed machine production, process and technical data in real time. Another service called Helpline Plus, with over 44’000 connections performed in 2019, allows customers to connect with BOBST experts immediately as the need arises, with over 80% of all technical issues resolved remotely within two hours. Or take MyBOBST, a convenient online shop that allows customers to order all the needed services and parts in a seamless way.

Third, BOBST is enabling data sharing across the entire packaging value chain to ensure more efficient operations. Tooling, machine and process knowledge will increasingly be made available during upstream design and pre-press operations, supporting the creation of ‘first time right’ designs and leveraging the full capacities of the downstream processes. Job specifications will be pushed downstream so as to avoid multiple entries into different, error-prone systems. Finally, quality and production data will be pushed along the value chain, for example in the form of custom-made reports, so as to close the loop with brand owners. This feature is already available in ACCUCHECK, an in-line 100% quality control system installed in folder-gluer lines. It creates powerful reports on production quality that converters can automatically upload in their existing workflow management system to share with brand owners.

Through digitalization, the entire production chain will become more transparent, agile and flexible. Across the whole production workflow, timely decisions are made possible. We are entering a period where connected systems will contribute data to the entire production process for faster and precise optimization.

The digital transformation will not only help reduce waste along the packaging value chain from the initial design file to the final produced package, it will also reshape the way production is planned, monitored and optimized.

Inside packaging plants, machines and ancillary equipment from different suppliers are increasingly connected through IoT to the respective cloud environments of the machine manufacturers. Ecosystems of digital applications, like the Connected Services from BOBST, are providing an ever-broader range of digital services for the benefit of printers and converters.

On top of the digital ecosystems provided by the machine manufacturers, generic plant-level platforms will emerge in combination with, or in replacement of, traditional on-premise Manufacturing Execution Systems (MES). The operational process knowledge currently automated into MES solutions will be complemented by real-time IoT-powered sensor data collection and aggregation. Through digitalization, printers and converters will have the ability to look at real-time data across plant operations, giving them a holistic view of their business and allowing them to take action.

**Conclusion**

By breaking data silos, offering transparency and enabling data sharing between different systems, digitalization is a strong transformation vector within the packaging industry. It is spurring a wave of innovations that have the potential to drastically improve decades-old printing and packaging manufacturing processes. To shape the future of the packaging industry, BOBST leads the way with value-added digital products and services, helping to eliminate waste in the packaging value chain and within printing and converting plants.

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**About BOBST**

We are one of the world’s leading suppliers of substrate processing, printing and converting equipment and services for the label, flexible packaging, folding carton and corrugated industries.

Founded in 1890 by Joseph Bobst in Lausanne, Switzerland, BOBST has a presence in more than 50 countries, runs 15 production facilities in 8 countries and employs more than 5 500 people around the world. The firm recorded a consolidated turnover of CHF 1 636 million for the year ended December 31, 2019.

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