

## **Print and digital : a valuable alliance**

This article was written as part of Intergraf's 2023 Young Talent Awards. I would like to thank Intergraf for giving the young generation the opportunity to share their ideas on current and red-hot topics.

I am a graduated student from Pagora (Graduate School of Engineering in Paper, Print Media and Biomaterials) and I am very interested in the evolution of the print sector. I enjoyed writing this article and I hope you will appreciate this piece.

Inès Capdevila

## From Gutenberg to digital printing

Print and digital are at first glance two opposite concepts. Print means an object whereas digital is not physically perceptible. Moreover, digitalization has a direct impact on the decline of the print industry whose future could seem compromised. However, in this publication, I am going to demonstrate how both print and digital can support each other in various sectors.

Around 1455, Johannes Gutenberg, a German inventor, created the first movable type printing system in Europe. Thanks to this invention, book production was facilitated and books were available to a wider audience. Since then, the printing process has been under constant improvements to increase performances including the use of printing plates. Major innovations occurred after the emergence of computers, revolutionizing the whole graphic chain.

From conception to final page proof, digitalization helps printers to reduce time from web to print.

The design of new artworks is facilitated by CAD (Computer-Aided-Design) softwares. They quickly enable graphic designers to modify an artwork following the product specifications of a client.

Digitalization also made possible the creation of content by customers themselves. Thanks to IT modules implemented directly in websites, individuals can create, personalize and visualize products in real time before ordering. Over the last decade, several companies have surfed on this trend offering photo books, key rings, magnets or clothing entirely customized.

Technological advances also concern the printing processes with the rise of digital printing. The main difference between traditional and digital printings comes from the disappearance of the printing plates. The files pass through a RIP (Raster Imaging Processor) transforming vector images into raster images before printing. The process is quicker and files could be personalized without any extra cost.

Thanks to these technological advances, printing becomes affordable for brands and invades our daily life : posters, brochures, leaflets, flyers, catalogues... But this old medium of communication is now disrupted by the rise of digital communication.

I remember the time when my grandmother would order products from a thick catalogue. This is not distant history but digitalization took over mail orders at great speed. According to studies, the turnover of advertising on paper medium has decreased while digital advertising has built up. Hence, we can wonder if print still has a place in a digital world.

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## Print and digital : a win-win relation

### A fantastic pair for marketing communication

Digital communication invaded our daily life : on the web, in the street.... Each day we are exposed to hundreds of commercial messages which most of them are forgotten.

In fact, studies show that print has more impact than digital to convey messages. Therefore, print is an efficient tool for brands when it comes to the promotion of products. Among all the communication tools, print obtains the highest score for the message memorization.

Consumers are more sensitive to print products because they have become uncommon so they pay more attention to the advert. Digital communication is ubiquitous and therefore less efficient. Moreover, print is durable, the information is conserved for an endless time whereas digital is versatile.

Nowadays, a successful communication campaign relies on both print and digital leading to a new concept : cross-media communication. This concept combines the advantages of several communication channels : print, TV ads, magazines, social media or web banners. This method boosts the target population with lower additional costs. Typically, an individual receiving information through print will then look for more information on the internet. Once the user passes on the internet, it's easier for brands to study the consumer's interests. The main drawback of print for brands is the impossibility to get feedbacks and to know if the prospect is interested. In this case, digital is a tremendous asset almost a frightening one. The incredible amount of data that can be analyzed enables brands to target and customize their communication to the prospect.

Through printing, you gain the trust of the customer ; with digital you transform the interest in sale.

To facilitate the path from print to digital, QR codes are everywhere. Easy to use, you only have to open the camera of your smartphone and scan the code. Then you are immediately redirected on the website. Once on the website, it is easy to collect personal data from the prospect and retrieve mail address and phone number to be able to communicate offers thereafter.

Moving a little deeper, we can observe that luxury brands still widely use print to communicate. Thanks to the various print processes and finishing stages available, brands can imagine brochures of high quality reflecting their luxury images. Among possibilities : hot foil, intaglio, selective varnishes, embossing combine to high-end paper give gorgeous results.

To avoid significant costs, brands can edit special brochures for high-standard customers giving them an even more privileged status.

According to recent information, the luxury industry has been growing despite a difficult economic context and print communication keeps being key for them.

To put it in a nutshell, for a successful communication campaign both print and digital must be combined and use all channels available. I will now consider other sectors where print is still prevailing.

### **Print resistance in some sectors**

As regards identity documents, diploma or other sensitive official records, digital hasn't replaced print yet. Secured documents guarantee our identity and innovations are constant to prevent fraud. In a digital era, professionals are currently studying on solutions to store ID documents in smartphones. But as for printed documents, digital databases are not safe from hacking. Therefore suppliers are developing Digital ID Wallet gathering on one application all identity-related services. Users are looking forward to having digital wallets as it's an easy tool to store all of their documents in one place. Moreover, users can control the data they share with third party. Nowadays, such solutions are implemented in several states of the USA but standards are not finalised yet.

Even if Digital ID Wallet may soon enter the markets in many countries, print documents will always remain the starting point before dematerialisation. Underdeveloped countries must also be taken into account since their telecommunication networks make digitalisation impossible at the moment.

Besides, the book industry is also confronted to the rise of ebook readers. Convenient and easy to transport, it's a major invention for readers to collect an important number of books without clutter. A large amount of titles are available right away after purchasing the products without going to any bookstores. Those innumerable advantages combined to a worldwide lockdown in 2020 fast-forwarded the ebooks growth. But, according to surveys, many readers are still committed to hard copy books. In France, only 5% of the population buy digital books whereas readers of paper books represent nearly half of the population.

Contrary to the book industry, magazines suffer more from the competition with digital. Their content is not lasting and customers prefer to consult websites instead of buying magazines. In order to adapt to this new way of consumption, publishers developed paid subscriptions for online magazines and reduced the number of publications of physical magazines. However, we can observe that specific magazines and high added value magazines still attract consumers.

As seen with previous examples, digitalization brings flexibility and attract new prospects. Consumers can choose what suit them best between print and digital. Digitalization also enables the development of new technologies that are now democratized.

### **Digital : an opening towards other horizons**

In 1984, the first patent concerning additive manufacturing was registered. At the beginning of the 2000s, the first 3D printers were created. 3D printing is a major breakthrough which would not have been possible without digital development.

This new process is used in many sectors. In the medical field, it is possible to print prosthetics suitable to a patient shape in a few hours using materials adapted to the patient needs. In the aeronautical sector, parts manufactured thanks to 3D printing are lighter which is a clear advantage.

3D printing allows the creation of complex form with tight deadlines and without any preliminary stages. However, progress must be done concerning surface conditions and researches must be carried out to broaden the range of materials available.

Linkage between print and digital can be achieved through QR codes but interactions are strengthened with the use of augmented reality. To visualize augmented reality, a specific mobile application has to be downloaded by customers. Once the app is opened, it recognizes markers and displays an animation. Augmented reality is a solution to enrich printed medium with interactive experiences. It has a direct positive impact on the customers and enhances users' experience with entertainment contents.

### **Ecological impact, a key parameter for the future**

Last but not least, I have to refer to the ecological impact of print and digital. Print is often pointed at because of its negative impact on the environment. Accused of being responsible of deforestation, a lot of strategies have been implemented. Certifications have been set up to guarantee the origin of the paper and improve forests management. Ink manufacturers offer inks that are easier to separate from substrate. Consumers are aware of the importance of recycling. This way, the product life cycle is controlled and efforts are steady to reduce the carbon footprint. In the other hand, digital advertising is seen as greener. But this is a popular misconception as studies have shown that print has a less environmental impact. In fact, digital means servers, web hosting and data flows. Those are not noticeable by the general public but generate important carbon emissions.

Consequently, the implementation of communication campaign must integrate this parameter in their plan and try to find the best balance between print and digital.

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I hope this article convinced you that print and digital are not the enemy we think they are. Both have assets and drawbacks but their synergy is key for their respective growth. Digitalization brings new perspectives and it would be a loss not to consider its potential. Fortunately, print still has its place amid innovations as shown by the numerous fairs and conferences that experts dedicate to this medium.

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