# HOW WILL PRINT DEVELOP IN THE FUTURE?

All industries are repeatedly exposed to new technologies, changes of society and new issues. Therefore it is important to remain open and prepare to adjust one's business to said changes. What the future will hold isn't clear until we get there. However, we can take a look at current trends and use those as a base to make predictions for the future.

## FURTHER IMPROVE THE QUALITY STANDARDS

Repeatedly in history quality standards are approaching new levels. Standard print productions will most likely be approaching the current level of high quality print, whilst high quality print will be improved to an even higher level and will be reaching untapped potentials.

In order for this to happen, the used technologies need to be brought to a higher level of sufficiency. Color management will be improved and standardised further, so that the printed color values will always match the target values. This should also hold true when using additional process colors, like green, violet and orange, since the color gamut will probably be overstepped more often in the future and all printing processes should be able to keep up. In order for more recent content to be printed, the deadlines to submit jobs need to be decreased. This can be done through faster order processing and quicker print production through technical development. As already happening today in many print houses, in- and offline quality controls will be used to sustain high levels of quality. However, those will become a standard in every print house and will also be further improved to detect and automatically correct mistakes.

For the higher quality prints, such as packaging of perfumes, the print will likely still be improved by using special techniques, such as foils and special inks. However, I believe there will be many new special techniques, inks etc. available to the market. Furthermore, the form of the packaging will no longer be limited to standard boxes. Special forms that improve attractiveness and stand out will gain a larger market share. Additionally, the used substrates will incorporate haptic feeling, e.g. they'll have textures that make them feel smooth. This will make the product an eye-catcher in between the ever expanding product options to choose from and therefore generate sales.

Using individualised and personalised prints and print on demand will likely become a new standard, as those are already on the rise today. Some known examples are the individualised names on coke bottles or chocolate and personally addressing the customer in printed advertising.

New technologies such as NFC (Near-Field Communication) and printed electronics will be further improved as well. As a consequence, they will be made financially accessible and therefore will soon make more appearances on the market, starting with high quality packaging.

### DECREASE THE ENVIRONMENTAL IMPACT OF THE PRINT INDUSTRY

Nowadays, most of the substrates made from alternative raw materials, which claim to be environment-friendly, aren't fulfilling the high quality standards of standard paper. And many printers face problems with these substrates, for example with the folding and the ink acceptance. However, I believe that the companies providing these alternatives are aware of the issues these papers cause for the printers. Therefore I assume that there will be a time where they can be used without loss of quality.

However, the substrates aren't the only issue the print industry faces. Printing presses, inks and post press devices will likely be improved in terms of their environmental footprint as well.

Generally, it will become more standardised to reduce waste throughout the entire printing process. Many print houses already use techniques such as intelligent placement of prints on their sheets or web. Furthermore, most are correcting the incoming data to prevent having to reprint an order. But some techniques, for example foil stamping, do still cause a lot of waste and I believe there is a lot of potential to improve these types of processes.

Producing packaging and other print products that have multiple use cases is also likely to become more popular. One example which has existed for years are glasses for mustard with cartoon characters on them. Those glasses are used as drinking glasses once the mustard is empty and many households have those for their kids. My grandparents used to have a lot of them and whenever we were at their place as kids we were excited to choose a glass for the day and some of us had their favorite glass which they would always choose. This example shows that the thought of multi-use packaging, which is currently becoming a trend again, is not new. In my opinion, it is a good trend that should become a standard aspect of designing products.

Even in terms of reducing food waste, packaging can be used as a further tool to make a difference. Intelligent packaging can increase the longevity of food, which I expect to be further improved and made more financially accessible in the future. Furthermore, intelligent expiry date labels could decrease the amount of good food being thrown away at home.

# WHAT KIND OF WORKING ENVIRONMENT ARE YOU LOOKING FOR? HOW COULD A PRINTING COMPANY PROVIDE THIS?

In my statement I am mainly focusing on office jobs, since that is the major experience I have within the printing industry so far and I can't say too much about how to improve working on a machine from the little experience I had with that.

### GENERALLY

Before I get into describing my perfect working environment, I'd like to describe the aspects of the classical workspaces that led me to formulate the following alternative proposals. When I do repetitive tasks I tend to get bored easily and my motivation decreases which means I work slower and pay less attention to details. To avoid only doing repetitive tasks, I usually take on additional tasks in order to increase the number of varying aspects throughout my day. Nevertheless, the daily work still needs to get done. This in turn results in loading myself with too much work, over hours and a negative work life balance as I want to do my job excellently. Therefore, I would like to suggest a different approach, which is to switch up the work in all possible ways.

The tasks of each person should be managed individually. Everyone should have their personal tasks, like in any other business, but these shouldn't take up their whole working hours. To fill up their additional hours, everyone should have some choices available. There could be some projects and some regular tasks which everyone could technically do. Whoever doesn't have enough projects to fill up the additional time will then take care of the regular tasks instead. The project would have an allocated timespan and group size. All the employees could then sign up for the projects they'd like to do, rating them from favorite to least favorite. A project manager would then decide who gets to do which project. This way, the employees constantly switch up their work according to their preferences and get to work with different co-workers. This could also be perfected by analysing who is which type of team worker and then building the groups accordingly, since some personality types could clash. Managers might want to form their employees and intentionally let people of opposite types work together from time to time though. Example of how this could look like:

In terms of hierarchies and work relationships, I prefer low hierarchies and calling my co-workers by their first names. However, some people need hierarchies to work properly and as long as the hierarchies were created for understandable reasons, I am not opposed to it either. In order to grow relationships between the colleagues, bonding activities can be scheduled. Some companies are already offering that. Instead of prescribing activities, it would be best for the companies to suggest fun activities and let the employees make the final decision.

I want the work environment to be respectful, open and kind. Since the employees are spending the majority of their time in the office, I think it is of utmost importance to feel good and welcome there. If anyone is bullied or toxic work environments exist, there need to be fair and effective consequences, as well as some sort of support for the person who was bullied.

In terms of dress code, I suppose it would be important to have some freedom to express oneself. I know this can't be fully granted for all workplaces and that's understandable. Generally speaking, there shouldn't be any targeted restrictions for people with physically visible differences such as tattoos, colored hair, skin color and ethnicity. I have none of the mentioned, but I feel like these are still, even nowadays, reasons some get treated differently. The pay should be fair and openly discussed. I don't want to work in an environment where I need to argue in order to get the money I deserve, I expect my work to be respected and appreciated. One should get paid enough to be able to live comfortably and maybe even help support their parents or kids with only that one income stream. This of course varies greatly depending on where the print company is located, e.g. how high the rent and living costs are in that area, and what kind of support the country or state already provides in terms of e.g. child benefits, rents.

Today, flexible working hours as well as working from home (if possible on that day) should be a standard option for work which also shouldn't get paid less.

There should be clear incentives to improve the work one puts in. But when one works more than their original job entailed, they should be given a promotion without them having to argue for it. There should be openly accessible measurements in place that everyone can use to see how well and how much they work. This way, there would be no differences in pay based on gender, age, race etc. but only their work ethic and what they offer to the company.

### **OFFICE**

In my opinion, every employee should be equipped with a laptop or tablet, the required software and some headphones which can be used to attend calls, meetings, online conferences or even listen to music. I know there is a stigma that young people listening to music are considered unproductive. However, in my experience it has the opposite effect. I, for example, have a better time concentrating when listening to lofi hip hop or movie soundtracks, in fact I am listening to lofi hip hop writing this essay. When a deadline approaches quickly and I need to work fast, I listen to game soundtracks. And when I do a repetitive task, I would usually get unmotivated and would work slower and slower as time progresses. However, when I listen to music, I work way faster and don't lose my motivation. And I know that I am by far not the only one who uses different types of music to improve their work, so I believe that most companies could profit from allowing their employees to listen to music and/or white noise.

In terms of sitting on the same desk and same chair all the time, there is also some improvement I'd like to bring forth. First up, there should be enough standard desks with ergonomic chairs. Everyone should be able to create their work space in a way that makes them feel comfortable. But I believe providing different types of seating is the way to go. When I work from home, I use different places to work from, such as my bed, my couch, my dinner table and of course my desk. Imagine an open office with different types of seating areas with different moods, some being motivational, some minimalistic. All equipped with the necessary connectors to plug in the laptop or tablet. Additionally, some closed offices are needed for when one needs to work in a completely silent environment, for group works or conferences.

### **WORKING WITH MACHINES**

In some work environments, listening to music on headphones could be a safety hazard. However, where it is possible, I would still recommend it (e.g. bluetooth headphones without cables), because the machines are often quite loud. Or, if the whole department agrees to it, they could listen to music from a radio or speakers.

Depending on the type of work, people stand or sit a lot of time. Therefore, it is important to have a good posture, which can be improved by ergonomic shoes and chairs. In my opinion, the shoes should be paid by and ordered by the company. Additionally, I would like all of the work spaces to have tables with adjustable heights. The displays used to control the machines should be of adjustable position as well. I also think there should be some type of relaxation room, where everyone has their own mat and can do some stretches to relax their muscles and improve their posture.

Of course the lighting, humidity and temperature should also be regulated in order for it to be a good work environment.