

How Constant Innovation Still Drives Tangible Products for Fulfillment Partners

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Abstract

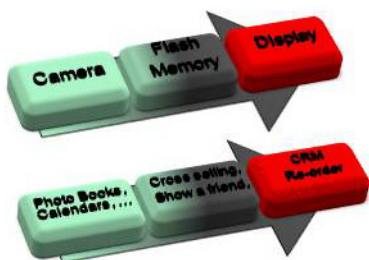
This paper describes the need for the printing industry dealing with consumer images and memories to be much more innovative than they used to in the former “must print to see” business in the analogue times. It suggests a procedure how consumers can be involved in an open innovation environment to speed the development process up and offer accepted software and products to the market.

1. Introduction

In the past years the fulfillment of consumers' images has translated from a must-business – the film roll had to be processed to view ones memories- to a software and marketing business. The consumer has multiple possibilities to view and store his or her images. Tangible output is no longer a necessity.



Classical analogue value chain



New value chain in the digital age

Figure 1: Changes in the value chain

The introduction of digital in the photo business is therefore a disruptive technology by definition [1]. In the classical value chain the print is substituted by the display, but there is the chance in the new added value chain of much more valuable products with respect of turnover per piece.

Producers for tangible outputs like prints and personalized products like wall decoration, calendars greeting cards and photo

books require innovative software and targeted marketing of these products to acquire new and keep existing customers. Preserving memories combined with story-telling using either photo books for multiple images or high quality products such as one or a few images printed on canvas or images mounted on acryl to create high-quality wall decorations are gradually becoming more popular than classical 4*6 prints and classical silver halide posters.

As the software is the key to generate the products, these solutions are compared by the consumers with state of the art software developed by software giants, e.g. Microsoft or Apple. Therefore it is required for the much smaller companies in the printing fulfillment of consumers' images to offer innovative products that are highly accepted by the consumer. So the frill of the disruptive technology offers the chance of disruptive innovation.

Disruptive innovation is the introduction of new technologies, products or services in an effort to promote change and gain advantage over the competition. In this context, the word disruptive does not mean to interrupt or cause disorder -- it means to replace. [2]

2. Lean and fast innovation

For the printing photo industry it was not really required to implement the consumers in the design and the feature sets while developing new products. This was mainly done by the manufacturers of cameras. The driving parameters for innovation in the photo printing industry where mainly product quality and productivity.

Actually the photo industry is highly confronted with a speed while developing new and innovative products which is at the top end of all industries. Products from Consumer Electronics Industry are the same or similar to the ones utilized in digital photography. This is also very obvious in combination with this conference, where the Consumer Electronics Show (CES) and the PMA show are the first time co-located. Mainly devices from the telecommunication and photo are converging, such as smartphones with high resolution cameras on one side or digital cameras uploading to the cloud.

In order to keep the costs affordable and the innovation speed high, the photo printing industry must utilize up-to-date innovation technologies.

2.1 Lean innovation

Lean innovation means to get the whole company involved and not to develop on islands and then later try to sync. While coordinating very early all knowledge that helps to get the divisions to work in parallel and get support from all of them. Also the priorities are set in a very early stage together. At CEWE COLOR we have implemented a weekly meeting with a lot of

divisions as illustrated in Figure 2. This helps to integrate all innovative ideas without complicated decision making processes.

Lean innovation also works very well in combination with open innovation. This means that innovation are accepted from external experts and or partners, customers and even competitors; simply try to make it better!

A very effective parameter for finding successful innovation in a lean way is checking mega trends. This is of course a very generic buzz word, but in the photo printing industry we are lucky in being part of at least one mega trend: Personalization!



Figure 2: Lean innovation at CEWE

2.2 Fast innovation

There is an element of innovation that belongs to both theories; in this paper we include it mainly in the process of fast innovation. This is involving the consumers and experts in order to generate new ideas. Fast also means to get instant and constant feedback, therefore at CEWE the process for fast innovation is shown in Figure 3:

Experts are beside the consumers the retailers served, employee suggestions and market research. In the center of fast innovation is the idea to produce products and software on a higher quality level and highly accepted by the consumers [3].

Feedback can also be obtained by communities (in our case called Forum) where heavy users are exchanging their ideas and discussing it also with the company. Classical optimizations via usability tests and eye-tracking for generating heat maps are of course also still required. One will not get help from consumers if they are used to fix obvious bugs, this is still the responsibility of the quality assurance.

Implementing an employee suggestion program is also a very efficient way of getting instant feedback. The colleagues in production know very well where improvements (low hanging fruits) can be obtained and as consumers they give also perfect feedback especially if they are rewarded.



Figure 3: Fast innovation at CEWE COLOR

3. Resulting development process

Feedback is important for a company working in an environment where innovations are a key success factor in competition. Like during the collection of ideas also during the introduction process the whole company should participate and give initial feedback in a friendly user test. This strategy should secure that mainly software has no obvious bugs left and quality of new products is on an expected level. Also processes based on interfaces between online ordering, producing and ERP systems as well as data for the customer care could be tested before the real market launch.

Figure 3 shows the process how we are introducing new software. It is a closed loop, newer versions automatically benefit from feedback to older versions. Ideas gathered even from discussions with our customer care are put on the decision list for new features/products for the next release control board (RCB). This closed loop is very important, because every lost idea is too much.

Looking at Figure 3 it is quite obvious that the major innovations are still generated in the company itself. We do not think that this will change. Opening the complete process to consumer ideas and feedback will make the whole process faster and in most cases more successful, implementing feedback from blogs, communities and customer care is reducing the risk of failure with new products and software features significantly [4]. This is crowdsourcing and voice of consumer driven (VOC) in combination.

That sounds straight forward but is becoming more and more challenging. As discussed in [5,6] the number of devices and software platforms to be addressed is growing; online, desktop and mobile based solutions are converging in the usage by the consumer. This is perfectly described in the equation defined in [7].

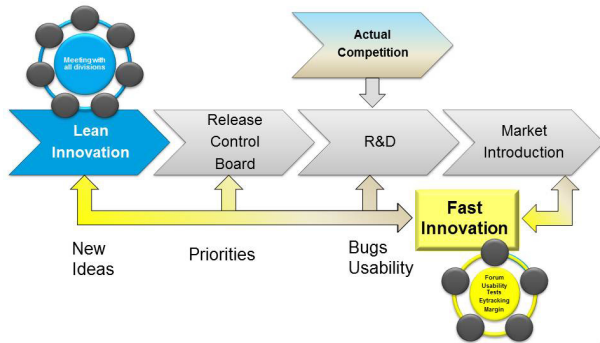


Figure 3: Development process

More customers + more innovation

= more change more often (1)

That means the more you innovate and new customers like your products the more pressure is given by the market to offer new and even more innovative products and solutions. Again, we think that can only be done while involving also the consumers but also work in an open innovation environment also in multi-lateral development networks. These networks help to validate and double-check the own level of innovation, because it is important that the innovation is accepted and appreciated by the market and therefore the consumers.

3.1 Examples of successful integration of consumer feedback

From a lot of consumers as well from pure software experts we got the feedback that the software is great but sometimes feels to be filled with too much choice at once. They suggested implementing several levels, such as beginner, expert and pro. But we thought: Who claims himself or herself to be a beginner and can judge that with the features the software will offer.

But the idea was correct and we had to solve it. We implemented it using new software tools for designing user interface introduced by Microsoft, the so-called ribbons. The really needed functions are always visible (beginner mode), the expert and pro functions can be activated using the well know ribbon technology, e.g. implemented in Microsofts' Office products. This is illustrated in Figure 4. So we implemented different levels without hiding functions on a right mouse click or complicated consumer classifications.

Another example is mainly based on feedback from customer care. We got a lot of complaints about mis-spelled words mainly on the spine and in calendars. Of course, the consumers made the spelling mistake, but they complained and we had to give them to redo the product for free. If somebody has to look a month on a mistake on a calendar picture with text or on the spine of a photo book in the shelf, he or she will maybe not order again.

Therefore we implemented a spell checker (of course in more than 20 languages we are distributing the software) to avoid these costly reproductions. Later we found out that we supported also people writing a lot in our product. There is a remarkable number of pages that do not include a picture at all, it is simply text as

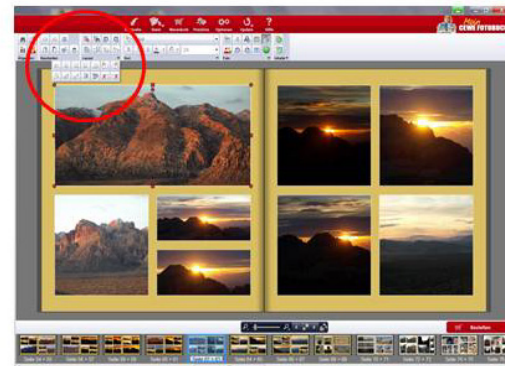


Figure 4: Usage of ribbons in the CEWE Photobook Software

illustrated in Figure 5. Instead of getting negative feedback in the customer care we now get positive feedback from consumers being surprised by this useful feature they only expect in word processing software.

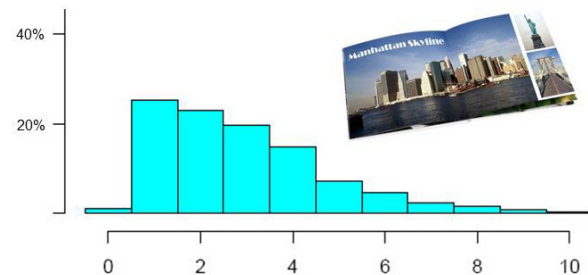


Figure 5: Number of images per page

4. Conclusions

The innovation processes in the photo (printing) industry has dramatically changed because a print is no longer required to watch the image and these images are more often used for story-telling and not only as memory preservation.

Constant innovation has to be a culture in the companies working in this industry but additionally the consumers with their growing experience and their commercial power via social networks (word of mouth recommendations) can help delivering

faster better products. If companies want to be successful in the photo (printing) market long-term they are dependent on innovations.

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Author Biography

Reiner Fageth received his diploma in Electronic Engineering from the University of Applied Science in Heilbronn, Germany (1990) and his Ph.D. in 1994 from the University of Northumbria at Newcastle, UK in the field of industrial image processing. Up to 1998 he worked with the Steinbeis Transferzentrum BMS on designing inspection systems for process automation mainly in the injection molding and bottling industry. He joined CEWE COLOR in 1998 and is since 2007 serving as CTO.