



Article

Scenario Planning in the Digital Transformation of the Fashion Industry: Starting Point for the Adjustment of Business Processes from a Colour Management Perspective

Felix Boddenberg¹, Jan Oliver Schwarz², Peter Schmies^{3*}

¹Research Fellow, Bavarian Foresight-Institute, Technische Hochschule Ingolstadt, Ingolstadt, Germany

²Bavarian Foresight-Institute, Technische Hochschule Ingolstadt, Ingolstadt, Germany

³Akademie Mode & Design, Hochschule Fresenius, Düsseldorf, Germany

Abstract

Visions of the future of the digital transformation in the fashion industry are formed within the framework of this paper and are ultimately investigated in greater detail from a colour management perspective. The scenario planning method is used for this purpose with the objective of outlining four plausible and internally consistent scenarios. The scenarios, formed with deviations from the classical steps, are investigated using an implications workshop. Thus, this paper shows to what extent it is possible to deviate from the classical approach of scenario planning in order to still obtain industry-relevant results in a subsequent implications workshop.

Keywords

Foresight, Scenario Planning, Implications Workshop, Colour Management

Introduction

It has been argued that the strategic orientation of fashion companies is rather oriented to the short term. However, it can be stated that the industry is absolutely aware of its volatile market environment but, compared with companies outside the industry has, until now, hardly used any corporate foresight methods in order to make long-term strategic decisions (Schwarz, 2019; Flannery & Brandewie, 2019). Corporate foresight activities have been conceptualised as an indicator for a strategy approach oriented to the long term (Vicchiato & Roveda, 2009).

Consequently, the phenomenon of digital transformation was also recognised in the fashion industry without having any concrete strategies in order to be able to handle the uncertain outcomes of this process (Schwarz, 2019). The digital transformation currently taking place in the fashion industry relates primarily to downstream processes such as the improvement of sales models and new ways of communicating. Upstream processes (design, product development and production) remain largely unaffected (Black & Edwards, 2015).

However, digital transformation goes beyond the mere adjustment of business models using digital technologies since any changes in business activities affect products, services and processes; and not only organisational structures but also management concepts are encompassed (Matt et. al., 2015). In the context of digital transformation, the MIT Center for Digital Business and Capgemini Consulting argues that in addition to the business model, the fields of customer experience and operational processes are also transformable. In this case, the use of digital technologies serves as a basis for the interlinking and extension of all business processes in order to increase entrepreneurial value added (MIT Center for Digital Business & Capgemini Consulting, 2011).

In the field of customer experience, the triggers for digital transformation include not only altered trendsetting in which inspirations for new garments are adopted by customers but also the creation of more transparency as a result

* Corresponding author.

E-mail addresses: felix.boddenberg@gmail.com (F. Boddenebrg), JanOliver.Schwarz@thi.de (J.O Schwarz), peter.schmies@amdnet.de (P. Schmies).

of targeted storytelling (Dr. Wieselhuber & Partner GmbH, 2016; McKinsey & Company, 2018). The changes in the operational processes are driven not only by altered consumer behaviour but also by the rise in the entrepreneurial cost basis (68 % increase in the period from 2013 to 2017, driven by selling overheads and cost of production). It is also necessary to address new technologies such as (partial) automation measures in the form of new laser technologies or new procedures for the manufacturing of knitwear (3D knitting), which call the previous fabrication techniques into question (Global Fashion Agenda & The Boston Consulting Group, 2018; McKinsey & Company, 2018). The growing number of Asian companies and SMEs that no longer produce goods just for large fashion brands but now also organise their own direct sales to end customers may be specified in connection with the business model. Moreover, reference may be made to the shift towards a more local focus so that fashion companies also identify niches outside large cities in order to incorporate any regional peculiarities in a better way (Facebook Business, 2019; The Business of Fashion & McKinsey & Company, 2019).

However, since the industry continues to be unclear about how a striven-for nominal state of digital transformation should be shaped, it is necessary to form visions of the future using scenario planning in order to be able to portray various development tendencies (Kane et al., 2015). With the aim of providing a long-term strategic orientation, this paper reports on a case study applying scenario planning.

The remainder of this paper is structured as follows: first, the scenario planning method is presented in order to use the identification of the trends and uncertainties for the development of plausible and internally consistent visions of the future in which complex systems are divided into easy-to-analyse subsystems (Schoemaker, 1993, 1997). In this respect, the method is one of the "... most prominent and the most powerful techniques [in corporate foresight]" (Rohrbeck et al., 2015, p.3). Thereafter, the method is applied in practice to form the basis for the implications workshop in which, together with the Cologne-based colour management company called ColorDigital (CD), the extent to which is necessary to adjust the business processes in the visions of the future from a colour management perspective is investigated. Last, the staging of the workshop serves to illustrate practical errors to be avoided in scenario planning workshops, here with a focus on the implications workshop and also with reference to the digital transformation in colour management. As already indicated, foresights methods are insufficiently used in the fashion industry for long-term strategies (Schwarz, 2019). The aim of this paper is therefore also to give fashion companies a new option to how they can deal with the future. So far, no approaches are known in which fashion companies have enriched scenarios with a subsequent implications workshop to derive new strategic options.

Scenario Planning and Its Role In The Digital Transformation In The Fashion Industry

Here, we follow the intuitive school in scenario planning, described by Ramirez and Wilkinson (2014, p. 254) as the "standard" approach, because the focus is "... on learning and exploring interrelationships among trends and key uncertainties" (Schoemaker, 1993, p. 194). The qualitative approach pursued in this respect thus permits the classification of complex phenomena into easy-to-analyse subsystems by developing the scenarios via causal chains. In the formation process, this may result in cause-and-effect connections that challenge the mental models of the participating individuals (Schoemaker, 1993; Wright et al., 2013).

Since where digital transformation is leading the fashion industry is currently unknown, it is helpful to use the method of portraying multiple futures instead of concentrating exclusively on one development (Grant, 2003; Wulf et al., 2010). This becomes apparent in the constant exchange of ideas between the team members, and new perspectives are also adopted due to the possible incorporation of different stakeholders "... without fear of the 'finger of God' from the board or elsewhere" (Goodwin & Wright, 2010; Ringland, 2010, p. 1495).

Moreover, it has become extremely complex to find suitable strategies in the volatile market environment of the fashion industry. For this reason, making decisions is associated with considerable uncertainty. With the application of scenario planning, there is, based on cause-and-effect connections (causal chains), a rising self-awareness to be able to estimate parts of the future in a better way. Consequently, the application of the method serves to reduce any cognitive prejudices and, in turn, to extend mental models of decision takers and to stimulate strategic thinking while doing so (Van der Heijden, 2000, p. 2005).

Thus, the scenario planning fulfils three central functions in favour of its utilisation.

First, the understanding of possible visions of the future is extended by networking causal chains. Second, individual mental models and the associated exchange of ideas in the company are challenged. Finally, decision-taking processes are improved since strategies can be tested in advance in a reliable environment of the scenarios (Wright et al., 2013).

Developing Scenarios

In this section we will describe how the scenarios have been developed following the intuitive approach with some deviations. Before that, we will briefly describe the company for which the scenarios were created.

ColorDigital

We cooperated with the Cologne (Germany)-based company CD which is a leader in digital colour and surface communication. In order to guarantee such communication, both founders (Kölling and Willschütz) decided in favour of a cloud-based solution, the DMIX Cloud. In this way, colours and structures are represented on a spectral basis in a reliable, unadulterated and reproducible way. This results in a new type of communication between designers, product developers, fabric suppliers and producers and thus makes decisions in the product creation process, traditionally on the basis of sketches and analogue colour cards, obsolete. At this point, it is important to emphasize that the cloud-based solution was developed precisely to allow all stakeholders to work on the same product in real time and without distortion. The DMIX website states:

The key DMIX software as a service solution has established itself as a new dimension of interaction between brands and manufacturers in the fashion and lifestyle industry. [The goal] is to support the integrated value chain from inspiration to mass production of raw materials on a digital scale – accelerating processes, supporting full product transparency, and at the same time reducing the environmental impact at every step (DMIX, 2022, About).

More and more companies from the fashion industry (e.g. Hugo Boss, Mammut, Valentino) are pursuing the path of changing colour management together with ColorDigital. Without going into further detail, direct digitization of colour, from selection to distribution, promises faster, more cost-effective and ecologically clean processes. Since the speed of collection development is a key issue in the industry, the digitization of all processes, including colour management, will continue to gain in importance in the future (DMIX, 2022).

Step-by-step building of future images

Chermack (2018) notes that there is disagreement between many authors about the components of scenario planning. In this context Wulf et al. (2010) point to the lack of a standardised procedure in developing scenarios. From their viewpoints, Schoemaker and van der Heijden likely offer the most coherent approach. For this reason and due to the practical applicability of their publications, attention concentrates principally on these authors. The following figure illustrates the methodical course of action with reference to both authors whose approach is used in an adapted form for this paper.

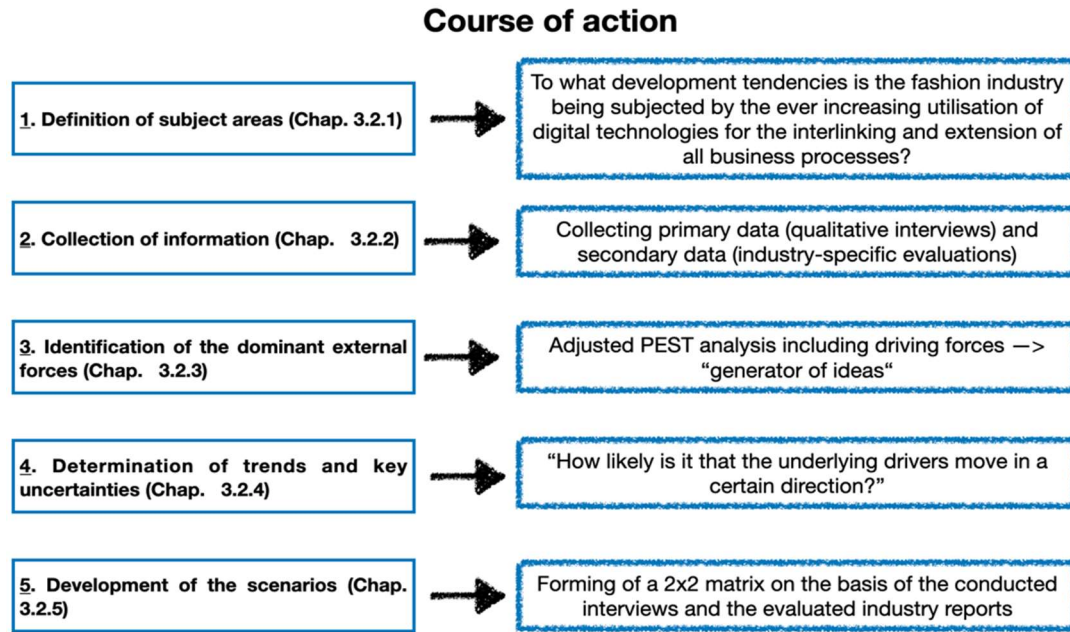


Fig. 1: Principle of scenario building (included in the following: Van der Heijden, 2005, p. 92)

It is important to emphasise that the scenarios are formed in the scientific field of foresight and not in the field of design. This means the strong reference to a macro scale (a whole system) and not the reference to a micro scale, in which specific topics (product or services) are dealt with directly. This approach has been chosen in order to be able to focus the subsequent implications workshop on strategic options. These are based on concrete visions of the future and not only on intangible visions as they are often formed in design approaches (Hines & Zindato, 2016).

Definition of the subject areas

The beginning consists of the formulation of a question ("... organising question ...") that focuses on the objective associated with the formation of the scenarios. It specifies the direction for the project to be executed and guarantees the demarcation of the subject area in this way (Van der Heijden, 2005, p. 188).

The previously mentioned triggers of digital transformation are causing numerous fashion companies to rethink their strategies. According to Grant's (2003) approach, strategies are inevitably formed depending on the in-house resources and abilities that are reflected in the company's business processes. If these are not refined, the strategy portfolio consequently remains limited. In this regard, great uncertainty is prevailing since the outcomes of digital transformation cannot be determined (Kane et al., 2015). Therefore, the following question can be formulated: "To what development tendencies is the fashion industry being subjected by the ever-increasing utilisation of digital technologies for the interlinking and extension of all business processes?" As already mentioned, a direct link to colour management is not established yet. It must be emphasised that the participants in the implications workshop can only specifically elaborate the role of colour management in the whole industry if they have a complete overview of future developments (macro scale). Therefore, it was deliberately chosen to address this broad question.

Formation of central questions and collection of information

Following the strategic relevance, central questions are now formed for the above question (Schoemaker, 2002). On the basis of the previous explanations, it is possible to form the three following central questions.

"What new perspectives arise in the company due to the time savings resulting from digital technologies in product development?"

"How do the customer demands on fashion companies change due to the growing use of digital technologies?"

"With the aid of what capabilities can young innovative fashion companies (startups) successfully position themselves on the market in spite of meagre financial means in the early stage?"

The central questions ultimately form the basis for collecting information using secondary data (industry-specific evaluations) and primary data (qualitative interviews). To maintain a high degree of accuracy the procedure begins with the secondary research in this way, general prior theoretical knowledge can be acquired, and any unavailable data can still be covered by the primary research (Srnrka, 2007).

Within the framework of the primary research, a decision is made to adopt an explorative study since the exploration of the underlying subject matters represents one central aspect for answering the questions. Since these matters constitute largely non-standardised survey discussions during which the interviewer can help to shape the discussion, they are very suitable for questioning experts (expert interviews) (Aghamanoukjan et al., 2007). At this point, reference must now be made to the previously established stakeholders for each of whom an interview guide oriented to the above central questions was formed. However, it was decided not to question customers directly since it is frequently difficult for them to verbalise new demands on fashion companies and to classify them in widespread terms. Therefore, a retail expert was interviewed as a substitute. In addition, not only a technology supplier but also a corresponding user were questioned in order to obtain different viewpoints. Furthermore, an interview was made with a young fashion startup with focus on an ecology-conscious offer.

After recording the interviews, they were transcribed and evaluated by means of qualitative content analysis according to (Mayring, 2015, 2016). The overarching objective consists of forming four plausible and internally consistent scenarios. How the analysis of the data material to be evaluated was handled is shown in the next section.

Identification of the dominant external forces

The dominant external forces make great contributions to the change processes in the respective market environments. For identification purposes, Schoemaker suggests that PEST (also known as PESTLE, STEEPLE¹) analysis should be adopted in order to identify the changes in political, economic, social and technological respects (Schoemaker, 1993, 2002). Criticism of this is made by Burt et al. (2006, p. 55), "... because PEST variables could no longer be considered in isolation of each other." In order to close this gap, it is necessary to introduce the "driving forces" term. Driving forces are understood as variables with high explanatory values in relation to the data to be evaluated. Thus, the connections between the individual phenomena (trends) can be investigated in greater detail. This results in the basis for drawing conclusions about elements with a certain degree of predetermination (trends) and uncertain elements (key uncertainties), strengthened by the continuous "feedback dynamic" (Van der Heijden, 2005; Schoemaker, 2002; Wilkinsion et al. 2013, p.703).

Due to the constant iterations of cause-and-effect connections, the whole demonstration of the executed PEST analysis, including the driving forces, is extremely complex and would go beyond the scope of the paper. However, during a period of three months, the authors collected and analysed more than seventy industry reports, published by consulting companies, NGOs and political as industry specific institutions. The selection of the articles followed a constant iteration. Although, of course, not all factors in the industry could be considered and the weighting was at the discretion of the authors, it was still possible to determine the central and trend-setting elements of the industry. In addition, and based on the results of the secondary research, qualitative interviews were conducted in order to get more detailed information about specific issues. All the information were evaluated and put in the PEST scheme always by ensuring a certain fluidity between the domains. The aim was to find the interlinkages between the elements in order to determine the driving forces that permit to identify trends and key uncertainties.

This process was executed with a high accuracy for which reason the following section starts directly with the formation of trends and key uncertainties that result from the PEST analysis.

¹ These are extensions of the classical PEST analysis by considering not only political, economic, social, and technological aspects but also legal and environmental ones.

Determination of trends and key uncertainties

In order to separate these two fields, the following question is asked: "How likely [are] the underlying drivers ... [to] move in a certain direction?" (Schoemaker, 2002, p. 91; also see Fig. 1). Trends encompass those future developments that, from the current perspective, will almost certainly occur in the previously stipulated period. In contrast, key uncertainties exhibit a high number of uncertain variables (Schoemaker, 1993; Van der Heijden, 2005). According to primary and secondary research and the associated PEST analysis, the following trends and key uncertainties have been identified (Tab. 1). Each trend and uncertainty has its very own composition of different driving forces that ultimately shape its appearance and contribute to its deployment. The trends have an increased degree of predetermination, whereas the development of the uncertainties cannot be predicted. The formation of the scenarios is now continued on this basis.

Table 1: Generated trends and key uncertainties from the primary and secondary research

Trends!	Key uncertainties?
Improvement in the state support possibilities for startups so that new innovative solution approaches arise!	To what extent is the intervention of state regulations with regard to socioecological subjects expected to intensify?
For the coming years, the trade relations must still be considered to be volatile!	Are greater collaborations between the most diverse protagonists to be expected so that new advances arise in socioecological and technological fields?
Due to new customer requirements, nearshore territories are becoming more attractive!	Is company transparency with regard to the consumers expected to increase?
The service fields all around the fashion products will increase even further!	Is the customer more interested in extending business models even further on the basis of a hire service?
The growing awareness of socioecological subjects on the consumer side will make the companies carry out extra sustainable actions!	Is the growing significance of individualisation for the customer feasible on a widespread basis?
The wish for constant innovation at low prices will persist!	
Digital product development must be viewed as the new standard in the future!	
The extension of automation in the production field changes previous product creation processes!	
The extension of omnichannel strategies improves customer loyalty!	
Adjusted stationary trade with regard to hospitality and extensions as a service point will increasingly attract the customers once again!	

Development of the scenarios

Since the scenarios should be clearly delineated from each other so that different visions of the future are represented, a decision has been made to use the heuristic method in the form of a 2x2 matrix. Two central uncertainties that, with their respective projections, are combined with each other so that they result in four scenario fields in total are selected for this purpose (Schwartz, 1996; Ramirez & Wilkinson, 2013). Due to the extremely volatile market environment of the fashion industry, this type of matrix helps to clearly delineate the scenarios. In this respect, it is not the objective to develop "good" or "bad" visions of the future but instead those that companies have not addressed until now (Gordon, 2020; Schoemaker, 1995, 1997).

On the basis of the evaluated industry reports and the conducted interviews, the authors were able, as a result of

multiple reflections, to identify two central key uncertainties. These represent the result of numerous discussions between the authors, which were always focused on the question to what development tendencies is the fashion industry being subjected by the ever-increasing utilisation of digital technologies for the interlinking and extension of all business processes? In the following scenario matrix (Fig. 2), these uncertainties are portrayed with their projections. Each projection tells an independent scenario, which is to be considered independently of the others. The following brief description of the scenarios can be found in more detail in the appendix.

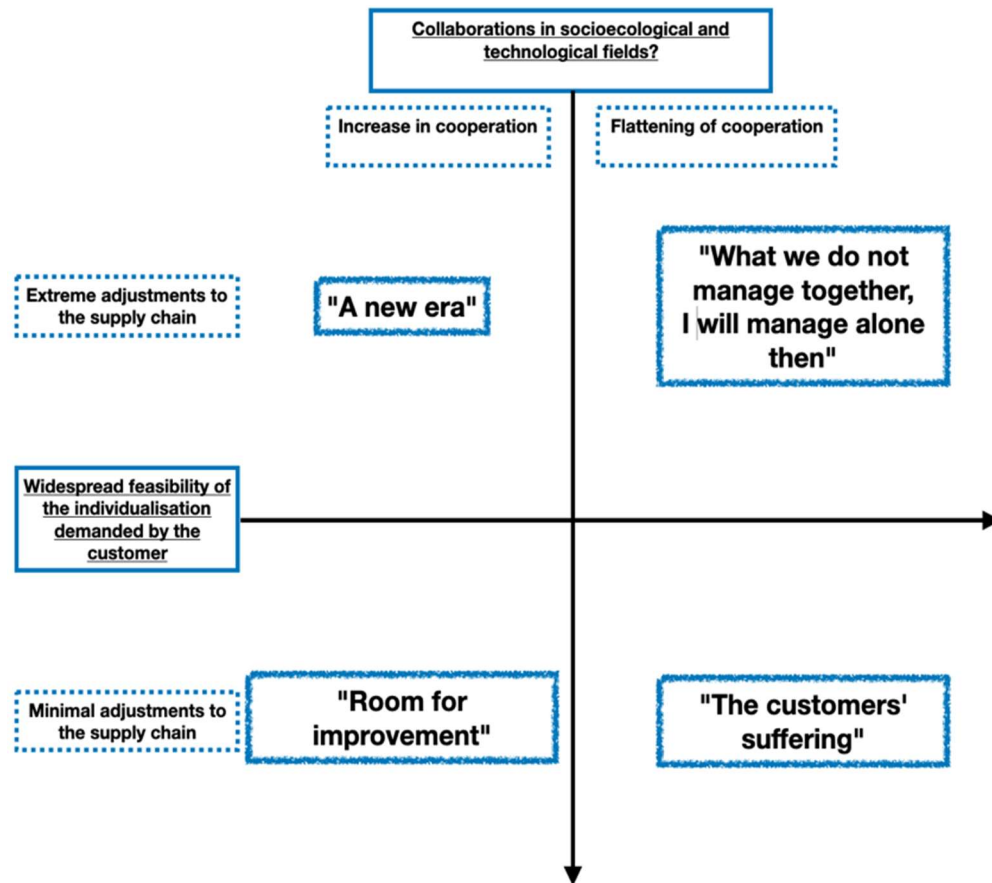


Fig. 2: Scenario matrix

A new era

Collaborations between different players in the industry are taken for granted because only together can significant problems be solved. In addition, new forms of collaboration are creating opportunities to adapt business processes to increase customised manufacturing.

What we do not manage together, I will manage alone then

Collaborations only occur for their own benefit. Otherwise, attempts are made to adapt independently to new customer requirements with the consequence that considerable potential is lost.

Room for improvement

Companies in the clothing industry have recognised that they can only shape socioecological and technological change together. However, they are still operating in entrenched structures that hardly allow for changes with regard

to changing customer requirements.

The customers' suffering

There is hardly any collaboration in the clothing industry, which is why companies do not progress. Due to a lack of customisation options, customers are constantly lured with new collections.

Discussing The Scenarios: Implications Workshop

According to Van der Heijden (2005, p. 273), "the learning loop [is] not closed until we have addressed the link between new insights and actions." Consequently, it is necessary to use the visions of the future for further actions by examining the strategic options from which concrete implications for one's own company can be derived. In this context, reference can also be made to the Vecchiato and Roveda (2010, p.1528). According to the authors, it is necessary to go beyond the so-called "state uncertainty", as "future success depends as much on handling the "effect" uncertainty and the "response" uncertainty about drivers of change as it does on handling their state uncertainty." Consequently, it is necessary to go beyond the mere building of scenarios.

In the following, we describe the implications workshop with CD in more detail with the aim of investigating the implications of the scenarios for the business processes from a colour management perspective. Furthermore, we focus our discussion on the specific difficulties that arose in the course of the workshop.

At this point, it should be noted that the implications workshop comprises the second part of the paper. Therefore, an important methodological delimitation has to be made. The practical and explained execution of scenario planning so far, which ended with the formation of the scenarios, took place exclusively in the cosmos of the authors. Thus, the accompanying challenge of mental models can only be found among the authors and not among the participants in the implications workshop.

In this context, the changes in the authors' mental models should be briefly discussed.

At the beginning, the authors were confronted with a large amount of information from the secondary literature, which had to be sorted and put into a meaningful context. The clear identification of the questions formed in section 3.2.2 provided a good guide through the various reports at this stage. These were also the basis for conducting the interviews. However, due to the large amount of information and the sometimes difficult demarcation between trend and variable, it was unavoidable to neglect or even forget specific aspects. One possible reason is that the authors' mental models were not fully challenged throughout the analysis. The evaluation of the collected information was based on their subjective experiences and an exchange with third parties only took place in a limited way via the expert interviews. Consequently, there was no critical discourse with other people in which the assumptions about permanent iterations would have been reflected. Therefore, the individual scenarios certainly reflect the biases of the authors, although these were less pronounced due to the constant exchange. From a subjective point of view, therefore, it is fair to say that the authors were able to see how preferred assumptions changed after only a short time, and how new stimuli constantly challenged previous ways of thinking. Although this only took place in a small circle, it is quite remarkable how quickly beliefs and views can change.

With regard to the following implications workshop, it should therefore be noted that the scenarios presented to them were not to be questioned, but rather seen as a basis to derive strategic options. This was mainly for practical reasons, as it would not have been feasible to conduct the scenario planning with the company over several days.

Methodical approach

The workshop occurred on the company's premises in August 2019 with CD's managing director and creative consultant. The following scheduled sequence (phases) had already been sent to the participants in advance so that they were aware of the workshop setting (Fig. 3).

Methodical approach of the implications workshop

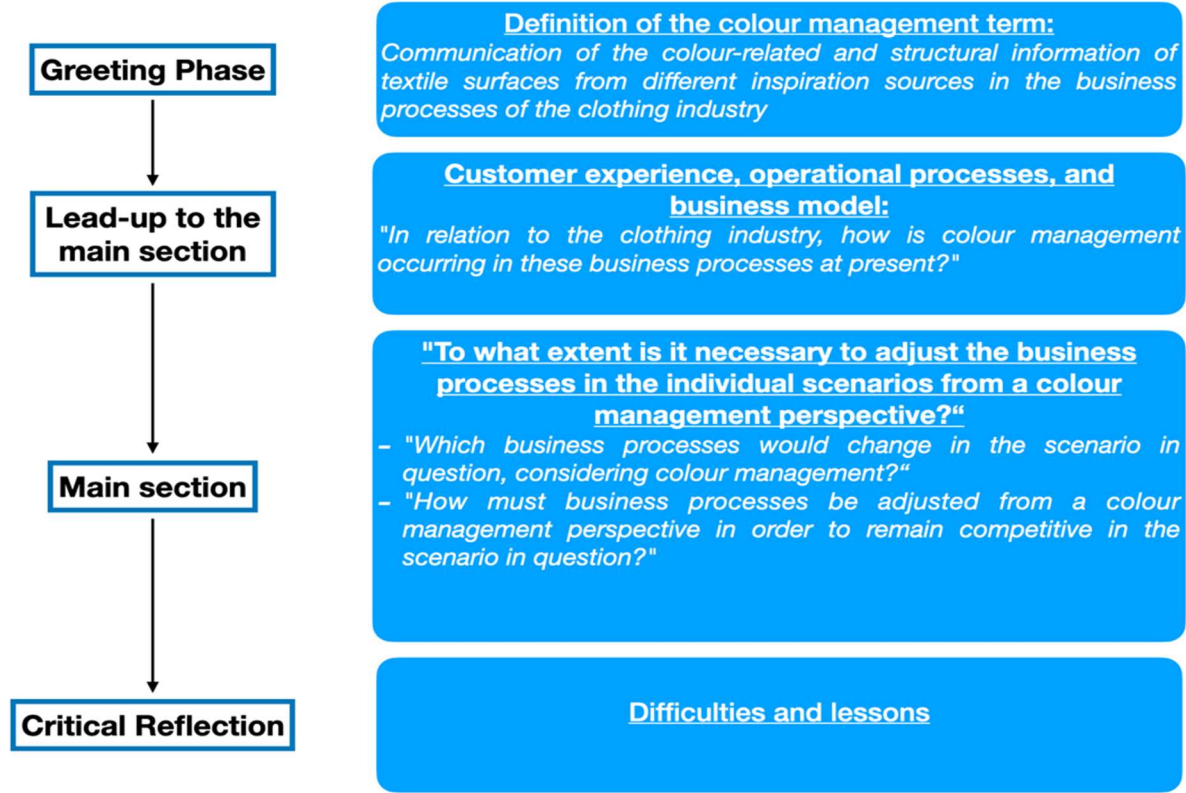


Fig. 3: Methodical approach of the implications workshop

In the *greeting* phase, the colour management term was clearly delimited. In this paper, it encompasses the communication of the colour-related and structural information of textile surfaces from different inspiration sources in the business processes of the clothing industry. In the *lead-up to the main section*, the facilitator of the workshop (one author of the paper) presented the fields of customer experience, operational processes and the business model (without completely excluding any overlaps) considering digital transformation. Subsequently, the following question was examined: *"In relation to the clothing industry, how is colour management occurring in these business processes at present?"* The objective consists of identifying the (digital) business processes relevant to colour management.

In the *main section*, the central question (*"To what extent is it necessary to adjust the business processes in the individual scenarios from a colour management perspective?"*) was submitted to the participants in two sub-questions that, in each case, had to be answered after the presentation of a scenario (also using visualisations). The first sub-question (*"Which business processes would change in the scenario in question, considering colour management?"*) aimed to identify only those business processes in the scenarios that are influenced by colour management (correlation to the question in the *lead-up to the main section*). The second sub-question (*"How must business processes be adjusted from a colour management perspective in order to remain competitive in the scenario in question?"*) sought to collect implications going beyond previous processes. The second and third phases were answered using post-its in order to ensure clear phraseology of the results. In the *critical reflection*, the facilitator received feedback, and it was possible to share any opinions that had not been previously communicated.

Implications workshop

Lead-up to the main section

In this section, the participants quickly agreed that the business processes were not a concern of digital colour management. Applications can be identified exclusively in the operating processes as soon as lab dips² are digitised in order to be able to access them permanently and unaltered (also in terms of 2D and 3D product development).

Main section

Since customers' wishes (customer experience field) for more individualisations are recognisable as a trend in each of the four scenarios and the companies exhibit different reactions to them in the various developments, the individual capacity to experience colour should, from the participants' viewpoints, be adjusted for the end consumer in every vision of the future. Such a procedure would allow the customers to compare any colours recorded by them with those in the offered garments (irrespective of whether they are available physically or virtually) in order to find optimum outfit combinations for themselves or to make their own designs in the case of increased individualisation.

However, it would not be feasible to make such changes without new technological solutions for communication and reproduction with binding colours. In the case of increased collaboration, a cross-company cloud solution can be used in order to share standardised data throughout the industry and exchange ideas with customers. This uniformity would be missed if companies were to concentrate exclusively on their own solutions.³

In the field of operational processes, there are numerous processes that change along with the respective scenarios and need to be adjusted. In order to remain competitive in all four scenarios, the colour development process must be modified. Therefore, colour communication occupies a central position in order to address uniform colour values. In the stages of the product creation process, reference is thus made to the same information that improves the communication between a fashion company, a fabric supplier and a producer. The application of virtual weaving and knitting software permits the production of virtual patterns on which designers can test their desired and already digitalised colour by adopting virtual product development.

Visualisation should be viewed as the priority in the business model. Considering uniformly developed colour-related and structural information in the field of operational processes, trading partners can make remarks (via 3D product development) about the colours portrayed in garments in an early stage. During the subsequent ordering process, buyers can thus be provided with a digital booklet in which the digitised data match the physical garments.

On the basis of the evaluation of the portrayed phases, the necessity of adjusting the business processes from a colour management perspective is recognised. In this respect, it is immaterial in which vision of the future the fashion company is located since attention must focus on the digital reproduction and visual portrayal of the physical initial value of colour. Although exact predictions can never be made, this can certainly be seen as the basis for all future developments in this sector. Consequently, even companies that already partially digitalise their colour management are obliged to engage in continuous extension.

Critical reflection

Upon conclusion of the staging of the workshop, attention subsequently focuses on the resulting difficulties and the lessons associated with them. In the following, the focus lies on the practical errors to be avoided in scenario planning workshops.

During the workshop, there was a certain "school-like" atmosphere. At the beginning, the scenarios were presented in a shortened form to the participants without allowing too much discussion of them. This would not have been purposeful at this point as the primary objective was to create a theoretical basis.

Even though this intention was explained to the participants, directly after the presentation of the scenarios, they discussed occurrence probabilities without engaging with the individual highlighted developments, considering the questions. The course of the processing thus concentrated only on the intersections of projections and not on the

² A sample of dyed fabric or yarns prepared for colour approval.

³ According to the participants, this fundamental principle about whether joint or company-specific solutions are used (depending on the scenario) applies to all fields.

delimitations of the different visions of the future. Another factor was the frequent references to ColorDigital's resources and abilities, which, however, can hardly be avoided if the workshop is staged with a certain company. This effect may have been smaller if several companies had been incorporated.

The scenarios might have highlighted other developments if they had been developed in the team. However, in this paper, they also reflect the authors' prejudices in a certain way, especially when it is a matter of unfolding the individual elements in the different visions of the future. If the participants had already participated into the development of the scenarios, they would have been able to obtain a different understanding of the causal interlinking of the individual elements and to classify these on a more widespread basis.

However, within the framework of the workshop, they were confronted with visions of the future that could not be grasped completely in the short time of the workshop. Throughout the paper, the authors themselves experienced that the understanding of the statement "... to think the unthinkable" tends to constitute a process and cannot be learned within a very short time (Kahn 1984, 56). In order to consider different visions of the future and to relate these to the present at the same time, it is necessary to alter the thought patterns that are formed over several weeks (or decades even). To ask the participants to understand this complex transformation in the course of a workshop lasting nearly four hours was, in retrospect, possibly a little "imprudent". In this context, it can also be noted that extended time taking leads to participants adapting their decision-making. The authors Bodin / Chermack / Coons (2016) have found that the decision-making style becomes more intuitive and dependent from the other participants, as well as less rational, avoidant, and spontaneous through the use of scenario planning. Since making the right decisions ensures the survival of companies, it is important to foster this ability in the process.

To accomplish this, the participants would have had to be present in all the steps for the formation of the scenarios. This would have been impossible to accomplish within the framework of this paper. The resulting lessons are summarised in the following figure (Tab. 2).

Table 2: Practical errors to be avoided in scenario planning workshops

Five lessons from the scenario workshop

1. The participants in an implications workshop must definitely be incorporated into the development of the scenarios so that the comprehension of causal chains is guaranteed. The presenter must conduct preliminary work on this subject in order to provide all the participating people with a considerable amount of information (reports etc.).
2. During the development of the scenarios, attention must be paid to visualisations that are comprehended by every participant. Otherwise, it is not possible to recognize any clear delimitations between the various visions of the future.
3. It is necessary to choose an appropriate time frame so that the process "to think the unthinkable" can be initiated. In this way, the decision-making process is also modified (for further discussion please see Bodin/Chermack/Coons, 2016).
4. The aim should be to convey inclusivity to the participants. The presenter must show that the people participating are indispensable to the development of the scenarios.
5. It is sensible to invite more than two people for the workshop. In the best case, people from various companies should also be invited (for further discussion please see Hagemann et al., 2019; Jolibert & Wesselink, 2012).

A final point, which is not implicit a learning, is the consideration of the extent to which scenarios can change. In the implications workshop, there was no discussion beyond the "endstates" presented. The authors (Marchais-Roubelat & Roubelat, 2015) use the term "action processes." These help to assign some meaning in different contexts to the strategic options discussed, assuming transformation of scenarios. It will not be discussed in detail here, but in future workshops, including possible transformations of scenarios is certainly useful.

Conclusion

In this paper, we have described the application of scenario planning in the context of digital transformation using an example that involved a company in the fashion industry. A core element of our discussion has been the implications workshop. The lessons learned from the implications workshop shed light on practical errors that should be avoided in future scenario planning workshops in order to obtain the best possible results for the previously defined question. In particular, the focus is on the relevance of including critical stakeholders throughout the entire scenario development process.

Fashion companies can check their own colour management and deliberate how the business processes must be restandardised with the aid of digital technologies for the digital reproduction and visual portrayal of the physical initial value of colour so that reference is made to the same colour value in all processes. In the implications workshop in particular, it became clear that, from ColorDigital's point of view, processes in companies are still far from being geared to integrating digital colour management and using it profitably. In coming papers, the industry-specific viewpoint can consequently be discarded, and the research can be related to the company level. Here, the

priorities are, in cooperation with a company, to check the business processes (from any perspective) and to make exclusive adjustments. Although the results presented here can be used holistically, every fashion company must interpret them for itself since there is not a "gold standard" path of digital transformation.

In this respect, it should always be remembered that digital transformation constitutes an ongoing process. Even the formed scenarios will probably be subject to disturbances. For this reason, continuous checking and adjustments must be viewed as a prerequisite for future-oriented action (Kane et al., 2015; Schoemaker, 2002).

It is central for companies to consider futures not as a danger but instead as an opportunity to shape, subject to the prerequisite of a certain openness to new development tendencies. The following maxim is always applicable here: *"The 'one perfect solution' does not exist. The world is too uncertain for that. But a solution that will work for you is out there, waiting to be discovered."* (Van der Heijden, 2005, p. back cover of the book).

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