



# THE DIGITAL DESIGN PROFESSIONAL

Food for thought about a profession whose relevance cannot be overlooked in the age of digitalization.

# FOREWORD

Digitalization still feels like a buzzword. However, the fact that the term is being used more frequently does not make it easier to understand, unfortunately. On the other hand, ignoring the term doesn't help either. In its various meanings, digitalization describes a development that is taking place before our very eyes and that is changing our world fundamentally.

We are feeling the effects of this change even behind the scenes. All of the professions associated with digitalization, above all software development, are noticing that something is happening. Projects are becoming more extensive and more complex; the weight of expectations for innovative technologies (e.g., AI) is increasing.

The response so far has primarily been to make development more agile. A high capacity for responding to customer requirements that appear to be changing rapidly is a promising solution in fast-moving times.

But how does a short response time help us if we don't have a clear vision or if the solution is a moving target? Where are the innovations supposed to come from if there is a lack of ideas?

With this brochure, I want to recommend „Digital Design“ to you as a possible answer to this dilemma. The „Digital Design Professional“ is someone whose profession is designing digitalization. Why is this person different? Why is this person important? You'll find the answers on the following pages.

Kim Lauenroth, Chairman of IREB e.V.

## DIGIT[IZATION|ALIZATION|AL TRANSFORMATION]

When a term appears to be ambiguous, it helps to break it down. We like the following three-level understanding of the term:

### DIGITIZATION

Analog-digital conversion of data and processing of data in digital form — for example, the step from a record to a CD, or from paper files to digital forms.

### DIGITALIZATION

Transfer of analog business processes that are already understood into the digital world — for example, the move from doing business at the bank counter to online banking, or from a physical bookstore to online bookselling.

### DIGITAL TRANSFORMATION

The development of innovative business models and social structures based on information technology — for example, streaming services for film and music or social networks.

## THE CHALLENGES ARE INCREASING ...

With these three terms, we can take a closer look at digitalization.

It is obvious that the technical challenges increase with every level. More complex technologies are used, weaving themselves deeper and deeper into the processes.

But it is not only the technical challenges we are faced with; with every level, we have more freedom in the design. To achieve really successful solutions, we have to use this freedom.

## DESIGN IS BECOMING MORE CHALLENGING!

At the digitization level, design was clear because there was an analog model; an insurance contract on paper has the same data as a digital insurance contract. The systems were operated by experts who had to be trained to use the systems.

Digitalization and digital transformation are different; here, the users are no longer experts in the subject. Also, the user is often a customer who can choose between alternative offers. For the customers, therefore, digitalization must offer a real added value, otherwise they will stay with the analog equivalent they know so well. One example: buying books on the Internet is easy and popular; buying fresh food online, however, is still a niche market in comparison.

Ultimately, with digital transformation, we leave the known world completely. New digital business models such as

streaming services are achieving some success, but nobody can really predict just how successful these new models will be over the long term. Does anybody remember Second Life?

For digital projects to be successful, everyone involved has to abandon the assumption that there is someone who has already understood the software being created in the project and thought it through. Digital products require an approach that does not stipulate a precise image of the target. Experts work out the target image as part of the project. They identify and validate the relevant suppositions and assumptions at an early stage.

## TECHNICAL EXPERTISE DEFINES THE SPECTRUM OF POSSIBILITIES.

Discussion about digitalization is always marked by new technologies. A few years ago, it was the smartphone; today, it's topics such as big data, blockchain, artificial intelligence (AI), etc.

The protagonists of these technologies always promise us that they will deliver new possibilities; they show us these possibilities using impressive examples.

Unfortunately, the examples cannot be transferred to our own business; or do you know spontaneously what artificial intelligence has to do with your industry?

The potential of any new technology can only really be used if the technological capabilities are considered during the design process and the limits and capabilities are clearly understood.

**CONCLUSION: WE NEED A NEW PROFESSION!**

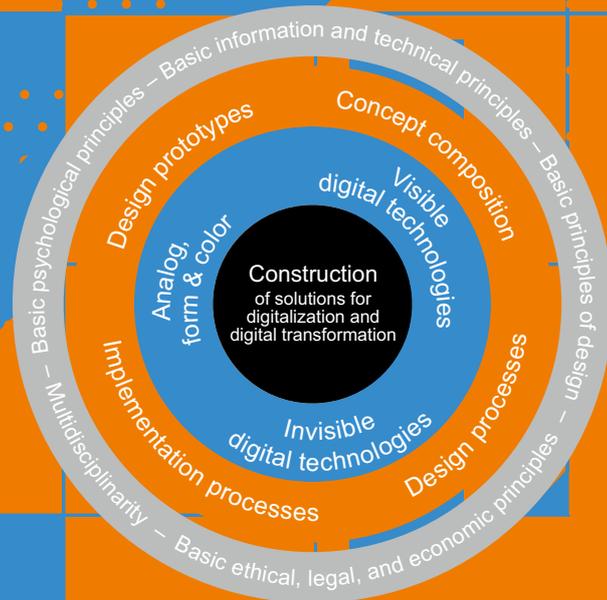
If we take the increasingly demanding design contexts of digitalization and digital transformation, together with the necessity for technical expertise in design, the answer is almost automatically digital design.



## DIGITAL DESIGN AS A PROFESSION

Digital designers understand digitalization as material that can be shaped. They think through the possibilities and potential of technology in combination with the economic conditions and the current or future desires and needs of people.

The competences in digital design are manifold and, in the style of the Bauhaus, can be presented as follows:



## MATERIAL SCIENCE

Material science expresses the idea that digitalization should be understood as a material. If we do not know the capabilities and limits of our material, we limit our freedom of design.

We are surrounded by **visible technologies** — end devices such as tablets and smartphones, technologies for user interfaces, but also new forms of interaction such as speech or touch operation.

**Invisible technologies** are no less important. They are driving digitalization forward. The invisible technologies include databases, programming languages, and technical frameworks, but also AI or blockchain.

**Analog, form and color** ultimately form the basis of many products. This basis is also important for many design decisions in digitalization.



## DESIGN COMPETENCE

In his book, *Designerly Ways of Knowing* (Springer, 2006), Nigel Cross states that there are „designerly ways of knowing“ and there is a „designerly form of activity“ — in other words, design is a way of thinking and working. In digital design, this way of thinking includes many aspects:

**Concept composition and development** encompasses the art of capturing and describing ideas in an integrated concept.

**Design prototypes** are essential tools for thinking, communication, and validation. Prototypes make ideas tangible so that they can be considered and discussed with customers and users.

**Design processes** are important because digital products are highly complex, and the devil is often in the detail. Therefore, the design process for digital products must also be designed carefully.

**Implementation processes** being classed as a competence for digital designers may appear surprising at first glance. But it is precisely in the transition between pure design and starting the technical realization that the rules of play for digitalization projects change fundamentally. Whole systems can be redesigned in the concept with just a few strokes of the brush. In this regard, software that has already been implemented and is being operated is no longer quite so flexible.



## 10 THESES FOR GOOD DIGITAL DESIGN

Digitalization does not take place in a vacuum; it affects us all. This is precisely why an explicit understanding of what makes digital design good is essential.

The Digital Design Manifesto from Bitkom<sup>1</sup> defines the following 10 theses.

<sup>1</sup>© Bitkom e.V.  
<https://www.digital-design-manifest.de>

## GOOD DIGITAL DESIGN...

- [01]...is useful and usable.
- [02]...is elegant and aesthetic.
- [03]...is evolutionary.
- [04]...is exploratory.
- [05]...focuses on the person as a whole.
- [06]...anticipates the effects of its results.
- [07]...respects data protection and data security.
- [08]...is sustainable and creates sustainability.
- [09]...appreciates analog and digital means equally.
- [10]...uses digital means only where this is necessary.

## THE DIGITAL DESIGN PROFESSIONAL AS A NEW EDUCATION SCHEME

This brochure highlights the background, content, and objectives of the concept of the Digital Design Professional and is an ideal starting point for becoming more familiar with the exciting topic of digital design.

If you have enjoyed these thoughts on digital design and would like to find out more, the first step is to read the Digital Design Manifesto from Bitkom:

<http://www.digital-design-manifest.de>

## ARE YOU ALSO INTERESTED IN EXPANDING YOUR FIELD OF COMPETENCES IN THE DIRECTION OF DIGITAL DESIGN?

Then I would recommend the Digital Design Professional education scheme. All of the thoughts expressed in this brochure are revisited in this education scheme and examined more closely. Register today on our website and we will keep you up to date with further developments:

<http://www.digitaldesign.org>

## EPILOGUE WHERE SHOULD THE JOURNEY TAKE US?

Just to make it really clear — the digital designer should not become a new role. We have enough roles in IT already.

Digital design will build bridges between the existing roles and indicate the direction that design competence in digitalization should take. Based on a holistic design profession, roles can then be defined and practiced with a view to the actual circumstances and facts of projects.

## DESIGN AND TECHNOLOGY COMPETENCES MUST BE CULTIVATED TOGETHER!

Digitalization can only succeed if we recognize that design competence is just as relevant for digitalization as technical competence is. If we think about it in the extreme, neither competence has any value — just like in an ill-thought out full-stack mixture where everybody is supposed to be able to do everything.

Just like construction has architects and construction engineers, with their own professional cultures, so we need designers and engineers for digitalization. Digital design is a byword for designers of digitalization and should be understood as an equal partner to engineers.