



Success factors of digital change

Most companies foster digitalization only within their company. But thinking outside the box of their own company is vital in order to make the digital transformation and to thrive in the process. How to make the most of digitalization in a fair and competitive market, by Alexander Markowetz.

Digitalization will fundamentally change society and economy as we know it.

In order to survive this change and to thrive in a fair and competitive market without depending on single big companies, retailers and publishers as well as other companies not only have to think outside of their own companies, but have to overstep their own value chain and the country's frontiers. Only then can we nurture positive change especially for small and medium sized companies.



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Why This Is Only The Beginning

The central change of digitalization lies in boundless communication between arbitrary end points at a negligible cost. No longer will there be one dedicated administrative or fiscal system per country. Instead there will be a global Internet of

Things (IOE) whose parameters are adapted to local conditions.

Germany's federal government tried to set the implementation of Industry 4.0 and the digital link between people, machines and products at the top of the national agenda, but all results up to this point barely scratched the tip of the iceberg. The real revolution is yet to come and will bring change that will redefine all industries and business models.

Let me give you some examples:

- If a publishing company wants to deal with a printing company, information and files are exchanged via e-mail.
- Countless interns are storing data or replying to customers.
- When booksellers want to know when their order from the publisher is going to arrive they call and are passed from one customer service rep to the next because no one seems to know the tracking number.

What we need are interfaces between companies, which speed up communication processes and data exchange and minimize error sources. Such an interface can work very well between two or three companies. But the real magic happens when such an interface connects as many companies within an industry as possible – and other industries besides. The investment necessary to implement such interfaces are only viable when the interfaces are standardized and as many companies as possible agree to use those standards – within and outside of respective industries.

What We Learn From Other Industries

Such a behemoth can start very small. This is shown by two beacon projects which can serve as blueprints for successfully developing standards:

GSM: In the 1980s several different mobile providers founded the work group Groupe Spécial Mobile which was tasked with developing a pan-european mobile network to replace the several incompatible mobile networks operated at the time. Back then mobiles cost several thousand Deutsche Marks, a single minute of talking almost 2 Deutsche Marks. When the fully digital network developed GSM was introduced the popular success of mobile phones started. Today GSM is the most used mobile network standard worldwide, providing coverage to almost 80% of all mobile customers.

IHE: In 1992 users, developers and service providers from the health industry founded the initiative Integrating the Healthcare Enterprise (IHE) in order to standardize and harmonise data exchange between health institutions like clinics, hospitals and insurance companies. The reason: Data transfer via paper and hardware is too slow, expensive and national – a risk for patients. At the same time

more digital medical equipment and the increasing pace of technological progress lead to many diverging standards. If information is to be exchanged in this more and more complex landscape, clear rules are needed. That is why IHE developed a methodology that defines uniform standards and clear manuals for medical processes. The IHE formulates requirements from practice in so called Use Cases, identifies relevant standards and develops technical guidelines (Profiles), that producers can use to realize and test a product. At the international "Connectathon" producers test their systems against one another and prepare for practical use.

How New Standards Become Successful

The examples of GSM and IHE illustrate the requirements for success for developing standards:

- **International:** A successful standard has to be imagined and thought across national borders. The IHE system is now in use in, among others, Albania, Switzerland, Canada, the UK, and Austria. In Germany the Federal Ministry of Health, health insurance companies and doctors started out using a billion Euro national software solution, which was doomed to fail because it excluded use in other countries. By now two major German health insurances are working on implementing the IHE standard instead of the national standard. An open, global standard will always beat a national solution.
- **Cross vertical:** Developing a standard can start in a single area, but should be expanded to include value chains as soon as possible.
- **Customer oriented:** When developing IHE the Radiological Society of North America were brought to the table right from the start. That way developers made sure to include the wishes of end users from the start instead of – as is common practice in the software development industry – confronting them with a finished product. As of now many more health-sector societies have joined the IHE.
- **Collaborative:** A standard can only become dominant when all members' vote carry the same weight and nobody can take advantage of others. An open solution will always beat a standard set by lobbyists, even if the latter were technically superior. The openness of the IHE standard means that even small IT companies can act successfully in a market otherwise dominated by giant software concerns. Many Use Cases were programmed by small developer teams which would never have prevailed against large concerns.

Who Profits From A Lack Of Standards?

If standards are so important for digitalization, why has barely anybody driven or developed them so far? Let's look at the business model of the so-called vendor lock-in: A large IT company offers software with many attractive features to its customers

at such a good price that the customer signs the contract. The company teaches its new customer how to use the highly complex software, helps them enter their sensitive customer data and ensures perfect functionality. Technology is high maintenance, support and licensing costs are rising year after year. This is too expensive for the customer and they start looking into alternatives, only to realize that migration to another developer would be so high that expensive licensing costs are the smaller evil.

What happened? The software developer created a monopoly and is able to demand absurd prices because its customer depends on its system. Open, standardized interfaces would make it easier to swap one system for another and therefore threaten the IT company's business model. That is why large software companies try to stop or at least delay standardization for as long as possible.

Where To Start With The Book Industry

So especially SMEs are interested in developing open standards and they are the ones who should drive change into that direction. Pain points that can be solved by developing standardized interfaces can be defined together with national and international competitors, service providers and customers all on the same level.

How this can succeed in reality is demonstrated by Bonnier Group, which is working on open interfaces between publishers and printers. Other publishers can participate in the work. Production is a good starting point for developing standards, because many interfaces with other companies are in this area – often also interfacing with other service providers.

An Interface Between Publishers and Printers

After Alexander Markowetz's presentation on the need for open standards in order to promote digitalisation, production departments have started a first initiative towards open standards during the production lead conference in Irsee. Inspired by the presentation, Michaela Philipzen and the committee of the production lead conference appealed to their colleagues to work together in groups to define and promote the requirements for standardizing their own areas of work.

"All publishers are talking about creating interfaces and standards, but up to this point, only individual publishing houses and groups are actually developing them. Alexander Markowetz demonstrated that that is not enough and that we have to develop comprehensive open interfaces in order to promote digitalization within the industry and utilize its potential", says Philipzen.

The first starting point takes the form of a standardized interface between publishers and printers. Bonnier publishing group has been developing it together with printers CPI and GGP Media, as well as the developers of their own publisher software Pondus under project lead Constance Stifft. The goal of this interface: machine readable transfer of data orders from the publisher system to the printers' in order to minimize error sources, work, and cost.

According to Philipzen, one of the challenges of this project was finding a common language: "For one and the same product, such as the matt lamination of an envelope, a variety of different terms were used – in the publishing houses and in the printing houses. To make the information machine readable, everybody involved has to agree on standardized terms and parameters. A machine doesn't understand undefined abbreviations or special requests sent via free formats."

This standardization process demonstrated how difficult it is within a single company to agree on unified methods and tools. Stifft: "Yes, all publishers within Bonnier group use the same publisher system, but individual publishers – like us at Ullstein – use an individualized version of the software. Individualisations like this result in errors and impede a unified interface. It was a long and often painful process, but we agreed to swap the individualized system in favour of a unified system."

It was clear to everyone involved that it would be worthwhile. Thus, the Bonnier publishers' project is receiving dedicated support from the involved partners on the production side. „Without the long-term vision and competency of the developers at GGP Media and CPI, we would not be that far today. To pour great pleasure the cooperation is freed from any company interests, and is based solely on the goal of building a truly sustainable interface“. And so the project team is already talking about making this development accessible to the industry in order to develop it further with other companies and beyond national boundaries. The first interested publishers are already in discussion with each other.

But the book trade, too, can create new guidelines by developing comprehensive standards and provide smelling salts against the impotence in the face of Amazon's market power.

Online bookseller René Kohl has been involved in this topic for about ten years, "even

if I realized only now that many problems we in the book trade struggle with daily are the result of lacking standards.”

Lack of Standards For Booksellers

“We always think our industry is one of the first when it comes to standardization, because decades ago we developed standards for managing orders which used to be cutting edge technology, but by now our ordering system seems almost Paleolithic”, laments René Kohl of Berlin mail order bookshop Kohlibri about the following examples from his day to day business:

- Tracking: As customers of online shops we are used to tracking our parcels right until they reach our front door step, but when parcel is lost when ordering from a publisher distributor you need a half dozen phone numbers until you find somebody who can give you the tracking code for the lost shipment.
- Returns: When I want to return books I need to email the publisher or sales rep, who then sends me a return form to fill in, of which I may keep the carbon copy, while the original form is packed with the return parcel, so that the distributor can open the parcel and manually enter the information on the return form and at some point I will get publisher credit which takes the form of a “corrected bill” most of the time. And more often than not, the amount of credit differs from what we agreed on in the first place.
- Online Ordering System: Almost no distributor gives me a digital overview of my orders, allows me to change new book orders on my own, lets me add order signs or see the state of the order.
- Publisher Software: When I want to place an order for books from seven different publishers with a Berlin sales rep in a rep talk she has to open five different systems from five different publisher distributors. When I ask her for business assessment data (of the digital ordering copy in a format that is compatible with my POS system) she has to work out how



René Kohl, owner of the mail order bookshop Kohlibri

to do that in five different systems. Every publisher software system has a different naming convention for their business assessment file and transfer is adventurous, sometimes via e-mail.

- **Titles Not In Stock:** Whenever I order a title that is not in stock with a sales rep, I get a physical letter a week later informing me that the book has not been published yet. A 30 Cent letter sent with 70 Cents worth of stamps for a 10 Euro book. How can we afford that? Nobody asks where that money goes – to publishers it is included in a large item on the bill of their distributor – but there is no room for larger discounts that booksellers demand.
- **Registration Numbers:** There is a standard for registration numbers within the industry in use by wholesalers and the MVB, but the Hanseatische Gesellschaft für Verlagsservice (HGV) uses different registration numbers. I did come across titles that my system told me were “recalled because of legal disputes”, just because the number that HGV came up with did not correspond with the wholesaler’s registration number. And my wish for a single unifying standard was refused on account of so many people being used to the HGV standard.

Bookseller got used to many everyday problems even though developing solutions can be easy and cheap because other industries have already developed standards that can be applied to the book trade industry, says Kohl: “For years it was a struggle to transfer payments that arrived via online banking into our POS systems automatically. So I had to compare every single item manually.” In the end he found a standard form that can export and import banking data and built it into his POS system. “This way I could cut the cost of manually entering payments, which cost me 1000 Euros per year, down to a one-off programming fee of 200 or 300 Euros, and I cut down mistakes at the same time.”

“Once we start viewing the world through this lens we start seeing this lack of standards and interfaces, which would reduce both our workload and our costs significantly, every day”, concludes Kohl. In a market with little room for financial maneuvering, where sales are unlikely to increase significantly over the next years, these cost-cutting measures will make a difference according to Kohl: “I estimate the rationalization potential of better organizing and standardizing the buying and selling of new books to be around 1% at least, 3 to 5% when it comes to returns just by saving time in all areas, optimizing dispatch and saving on postage and packaging. If we would put more effort in standardizing processes, we could turn our red numbers into a black zero at the very least. Before we don’t finish this homework we can’t even begin to think about uniting against Amazon.”

Summary and Conclusion

- We need international, company transcending digital standards across all value chains in the sense of a cooperative.
- The issue is not about developing standards once, but about creating an open digital infrastructure which defines how standards are developed and maintained.
- There is no money in standards themselves, but they create an infrastructure that opens up new revenue streams.
- A handful of companies, which are as diverse as possible, are enough to start. Following the image of Noah's Arch, two companies from each affected area of the value chain would be ideal.
- It is recommended to connect SMEs to allow communication on the same level.
- Participation should be open to all companies – not just to prevent the formation of cartels, but also to ensure that as many companies as possible support the new standards.
- It would be recommended to start with production and/or book trade. There are enough starting points in both value chains.

Presentation at Frankfurt Book Fair

Integrating the Publishig Environment (IPE) – The only realistic approach to digitalization. Decentralised, collaborative, and inclusive.

- **Date: Wednesday, 11th October 2017**
- **Time: 12pm to 1pm**
- **Location: Forum Börsenverein (3.1. H 85)**
- **Language: English**

This talk presents IPE, a radically different digitalization strategy for the publishing industry. Focusing on standardized IT interfaces, it allows cross-company interoperability and business processes. This community driven approach disrupts the classical vendor lock-in, liberating companies from the mercy of a single software manufacturer. It thus creates a decentralized, participative and collaborative economic space. Most importantly, IPE ends the current centralized platform economy. Lastly, IPE is feasible. It (i) mimics a successful blueprint from health-care IT, can (ii) start with a tiny community,

and can (iii) grow organically. Indeed, IPE poses the only viable approach for digitalizing the publishing environment. IPE is in its founding stage. Join us, learn, and contribute.

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