


TECHNOLOGY

Small data: data strategies that most companies can profit from

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While big data has proven useful for large multinationals, many companies can benefit from a simpler approach.

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On everybody's lips today is the concept of big data. Big data is concerned with identifying correlations and opportunities from large datasets. This is typically relevant for large multinational corporations, or corporations that can take advantage of novel insights derived from business analytics that examine data in areas like customer behavior, social media use, risk, market movements, and weather data - just to name a few.

However, many executives are still left bewildered, thinking “How may I benefit from big data?”

The answer is: “You probably won’t! Simply because big data is irrelevant for most companies worldwide.”

Does this mean that executives should ignore everything there is to know about big data and the advantages of digitalization and business analytics? By no means. However, executives should be looking for data-strategies that are relevant to their companies and can help them improve the performance of their business model - and in some instances even open up the potential for new business models. We term these data-strategies “small data.”

Small data is concerned with identifying causations in data that are small and logical enough to be understood in the context of a given business and can be analyzed for insights that lead to better decisions. Relevant small data can typically be identified through the analysis of business processes, both internal and external, as well as through the analysis of key resources to the business. Therefore, small data differs from big data in general, although big data may also be attuned to core business activities, customers, and outcomes.

The assertion that big data enables digital business transformation is currently a widely accepted notion. Digital business transformation is seen to challenge, and even disrupt, companies that create value in more traditional manners; one popular case is Netflix versus Blockbuster. Data and digitalization are in this sense seen to give rise to a new set of potential business models that change the competitive landscape of entire industries.

Here we illustrate how small data helped reinvigorate a business that is normally not associated with digital transformation or big data: namely the case of a restaurant. In the restaurant business there are a number of interesting digital transformations, such as online ordering systems and delivery services like Uber Eats, Just Eat, etc. However, here we are interested in the basic restaurant business and how small data can enhance and improve core activities within the business. The idea is to illustrate that even in a traditionally analogue industry setting, companies may profit from small data strategies.

Refocus your business model generation on processes, activities and resources

Digital elements may transform businesses and, in many instances, may improve the performance of a given business model and even lead to alternative business model configurations over time (Lund and Nielsen, 2014). However, business models are business models, regardless their degree of digitalization. Digital elements are therefore enablers of the value creation process in a given business model. Therefore, small data strategies are primarily concerned with making business model improvements, although it cannot be excluded that digitalization may open up for new business opportunities and new business models as was the case with The Relationship Factory that endured a whole new scalable business model by refocusing their business on the underlying IT-infrastructure of their business (Nielsen and Lund, 2018).

While providing a “fairly priced” product may help firms “get by,” we argued in our paper **“Building Scalable Business Models”** that the most successful businesses of today are those that able to attain business model scalability - and many companies are found to achieve scalability through the mechanisms associated with digital transformation. According to Clayton Christensen et al. (2015), digitally-based disrupters often build business models that are very different from those of the incumbents they disrupt.

Central to the mainstream understanding of business models is the value proposition towards the customer (Osterwalder et al., 2014) and the hypothesis that if the firm delivers to the customer what he/she requires, then there is a good foundation for a long-term profitable business. However, Nielsen and Roslender (2015) emphasize the importance of ensuring that strategic partners are leveraged in this value creation, delivery, and realization exercise towards the customers.

Taran et al. (2016) divide business model configurations into an ontology of five main areas. Digitalization is a mechanism that potentially can affect all of these areas, whether being a resource, a channel, or a value proposition. Data, whether in the form of big data or small data, is an important aspect of digitalization and is to be seen as a key resource even in seemingly analogue businesses.

Analogue business example

We conducted a longitudinal interventionist research project with Sokkelund Café & Brasserie (hereafter: Sokkelund) based in Copenhagen, Denmark. We followed the brasserie over a period of 7 years using interventionist type methods combined with a series of semi-structured non-interventionist type interviews, and detailed data collection on all the firm's processes. We studied the process of implementing a series of digital enablers that were a part of a strategy project to transform the brasserie from being a traditional analogue business to a data-driven "small-data restaurant."

In 2009, Sokkelund was bought by an experienced industry professional. The restaurant has a French café, bistro and brasserie style setting, in the mid- to high price-segment. At the starting point in 2009 the restaurant had 40 seats and an annual turnover of USD 1.1 million. In 2017, 34 seats were added by acquiring the neighboring shop and by building a small veranda. The turnover is now USD 6.1 million - an impressive level of growth driven by a talented team and innovative business thinking.

Sokkelund operates a classic, industry-proven restaurant business model, where traditional competition is driven by quality and subjective impression of the food and drinks, service level, price and location (both interior and geolocation). Add in additional factors like culinary trends, marketing, seasonal fluctuations, etc. and you have a set of characteristics that can be adjusted to a market where most are trying to compete on the exact same set of characteristics – and business model.

In the case of Sokkelund, the process of transforming the company to take advantage of small data was initiated with a focus on improving the traditional competitive parameters of a restaurant in a structured step-by-step plan. This required managerial skills and industry experience, and was done by structuring and aligning all processes of the business, and thereafter optimizing them incrementally.

This process naturally opened up opportunities for the digitalization of many processes and planning tools, so that data would be created and placed in a digital environment where it could be put to use. In the initial step it was realized that:

- There were too many documents, notes, and papers involved in operations
- There were inefficient processes
- Internal communication was slow and thus created risks in production
- There was too much irrelevant information
- And most importantly, no information was in real-time

At this point it became evident to the management that digitalization was a central aspect of succeeding in a highly competitive industry, where the typical restaurant is in operation 20 hours a day, 7 days a week, 360 days a year.

The small data transformation

Transforming Sokkelund in order to overcome the five challenges above might initially seem as a simple integration of digital technology into a relatively simple business. However, access to data fundamentally changed how Sokkelund operated and delivered value to customers. It led to a cultural change, both internally and externally, that required the organization to continually challenge its existing business model.

The digital transformation that took place at Sokkelund over the period we studied the restaurant had three main areas: hardware, software and culture.

On the hardware side, it was important to create an inexpensive reliable system based on standard hardware and hosted services. Reducing redundancy, security, and a user-friendly environment was essential for the success.

On the software side the vision was to be a simple speedboat instead of a supertanker. Hence, Sokkelund has no servers of its own, no maintenance and no external support. The final result was a mix of 15 services, supporting:

- All Human Resource aspects of the business such as:
 - Employment contracts etc.
 - All scheduling of staff is done in this system
 - All communication to staff is made via this system

- All communication, schedules, and process manuals etc. are online - at all times - and accessible for all employees on their preferred devices
- Staff driven shift swapping
- Production:
 - Self-regulation reports for public authorities
 - Automatic measurement of temperature in production, and automated reporting for public authorities
 - All recipes both in writing and pictures.
 - All cost calculations.
 - All pictures & process manuals
- Sales and staff costs:
 - A 100% real-time system, with real-time KPI's as sales, cost of labor on different categories etc.
 - Booking (90% is done online)

Finally, in regards to culture, Sokkelund experienced a number of positive effects. Access to real-time information that is focused around the core processes of the business and providing value to customers and strategic partners empowered the employees to become much more independent in their decision-making. This of course gave rise to a much more supportive management culture, in turn improving employee satisfaction and reducing employee turnover. However, even in seemingly simple business, data-discipline becomes crucial for the ability of the digitalized business model to prevail.

For Sokkelund the implementation led to real-time data on operations e.g. sales per seat per day, or per customer, as well as customer retention data. Understanding this data is crucial; for example, when the chef decides to change the menu, or when tracking the effects of marketing. Having access to such small data makes it possible to track small improvements to the business model.

Among the key small-data that proved valuable in the process of the digitalization of this typical analogue business, were:

- Customer data; the low hanging fruit was naturally crunching the data related to customers. This led to information regarding booking information, what customers

bought, turnover pr. seat, seasonal variations, etc.

- Planning of staffing was digitalized
- Consumption of water and energy was made manageable
- Supply chain information was made manageable
- Social media and digital presence were introduced to the staff team

Four small-data strategies

In terms of the effects on the business model, these changes not only led to cost reductions, but lowered customer acquisition costs, improved customer retention and added new revenue channels, and from this we identify a number of data-strategies worth considering for any type of company:

1. Digitalize your customer interaction to create ease-of-interaction at the point of sale.
2. Analyze your processes and identify key value creating mechanisms that you can capture data about.
3. Create real-time data about activities, outputs, and core production, and feed this data to employees via screens or handheld devices.
4. Transform data about activities to enhance the value proposition towards the customer.

Most companies can profit from small-data strategies to make profitable incremental improvements to their business models. However, they may also find that the related digitalization leads to completely new and radical business model opportunities.

► References



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