

The analytics imperative for consumer goods companies

Consumer goods companies need to up their game on building Data Analytics capabilities to get ahead in the transition towards mass customization



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The coming 5 years, the world of consumer goods is going to turn up-side-down. The old paradigm of large scale product push is now – finally - evolving towards a more personalized, consumer-driven pull model. All driven by changes in technology and consumer behavior. Consumer goods companies will increasingly engage with consumers directly through digital channels. This is not only about cutting out the middle man. This is about transitioning towards becoming truly consumer driven: serving individual customers to their unique needs and preferences, building direct relationships with recurring interaction and creating new value in unprecedented ways. Capitalizing on this opportunity requires a new set of non-trivial capabilities powered by big Data Analytics.

Drivers of change

Consumer goods markets are being shaped by the interplay between evolving consumer preferences and technology. This interplay is mutually reinforcing, and the pace of change is accelerating.

The internet has caused market power to shift from producer to consumer. Competing offerings can be compared and reviewed in a click and switching costs between products have drastically reduced. Brand allegiance is no longer a given, but has to be earned through meaningful experiences. Technological progress has also led to proliferation of consumer choice with quality standards and feature sets which are constantly rising. A new iPhone comes out every 12 months. Volvo anticipates car development cycles to drop from 42 months in 2012, to only 20 months by 2020. As a result, the playing field is constantly levelling in virtually all categories and incumbent producers are strongly challenged to find new ways of vying for the consumer's choice.

As we look ahead, what are the specific trends that spur from the interplay between consumers and technology? As explained below, we first see the rise of the on-demand, relationship-driven economy. Enabled by mobile connectivity and spearheaded by new business models like Uber, consumers have an increasingly pervasive expectation for instant (on-demand) service with a high degree of relevance and personalization. Second, the everything-digital trend causes an explosion of data from sensors and connected products that allow for a new wave of innovation, personalized offerings and add-on

services. Third, personalization will increasingly extend also to the off-line world in the form of mass customization.

Rise of the relationship economy: consumers expect on-demand, personalized service

The advent of internet, ecommerce and mobile connectivity have gradually altered consumer preferences and behavior. Loyalty is no longer derived from brand image or functional attributes, but from the experience and value consumers derive from products and services. It has to be on-demand, seamless and personalized.

“On-demand” refers to technology-driven business models that fulfill consumer demand via the immediate provisioning of goods and services. Service providers like Uber and Netflix have pushed the envelope. With the immediacy of smart phone apps, consumers expect a seamless shopping experience with almost instant gratification. With so much choice in products, the experience and quality standard have become differentiating factors. An ecommerce player in the Netherlands discovered that reducing delivery times of health and beauty products to 1 day doubled the total sales in that category. No wonder Amazon is working on same-day drone deliveries. The on-demand expectation also translates offline. A producer of durable consumer goods in The Netherlands analyzed the effect of long lead times on sales volumes. Figure 1 shows that conversion from store visits into actual sales orders dropped by more than 50% for increasing lead times.

Personalization is the other key ingredient. Online retailers like Amazon create personal-

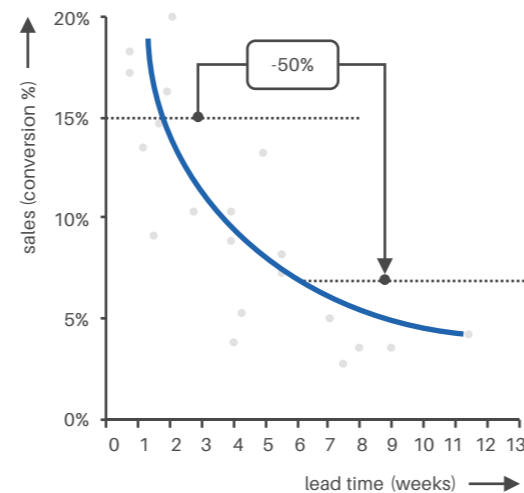


Figure 1. Effect of lead time on retail sales (durable consumer good)

ized shopping experiences, in the form of differentiated website formats and product offerings. At some point Amazon allegedly derived 30% of retail revenue from product recommendations powered by advanced next-product-to-buy algorithms. More and more companies are offering the possibility to customize products, ranging from bikes and clothes to cereals and crackers. For example, Nike has been front running in the personalization space for a while with NIKEiD, allowing consumers to fully customize their shoes. This trend is foreseen to take off with Industry 4.0.

Getting the formula right is not trivial, but the rewards can be huge through establishing loyal

1:1 relationships with consumers. Consumers value to be serviced to their exact needs and are willing to play their part – having their data analyzed, or providing direct feedback. Digitization has opened up the digital channels to reach consumers directly. Consumer goods companies now need to find ways to leverage these channels for more than plain distribution, by developing new value propositions and establishing trusted relationships with consumers. This implies a shift from transactions to relationships. The value lies in the relationship, which is why Unilever recently bought the Dollar Shave Club for a whopping \$1 billion.

Digitization of products: sensors and the internet of things

Information technology is not only revolutionizing marketing and sales channels, but also products themselves. Digitization of products leads to a plethora of new features and performance. Smart, connected products are embedded with sensors, processors, software and connectivity. Exponential developments in sensor technology have drastically reduced both the size and cost of sophisticated sensors. Anything can be equipped with sensors. Babolat, for example, has produced tennis rackets and related equipment for 140 years. With its new Babolat Play Pure Drive system, which puts sensors and connectivity in the racket handle, the company now offers a service to help players improve their game through the tracking and analysis of ball speed, spin, and impact location, delivered through a smartphone application. Ralph Lauren recently launched a new shirt (the PoloTech) which measures all kinds of biometric data like heart rate and burnt calories.

The data which is generated by connected products is inherently part of their functionality, but also provides a wealth of information about the user. This in turn offers opportunities for the producer to develop new functionalities and improve performance, thereby creating and extracting more value.

The global number of connected devices – now largely comprising of smart phones, tablets and computers – is expected to grow by an average 25% per year reaching about 50 billion online devices by 2020.

Industry 4.0 will pave the way for mass customization

The third major trend is the rise of Industry 4.0. Until now, the impact of technology on business models has primarily taken place in the front-line: internet and mobile as channels to the consumer. The coming years, technology will further move ‘upstream’. Industry 4.0 refers to the combination of digital technologies that are now coming to maturity which are poised to massively transform manufacturing and logistical processes. These technologies include robotics, additive manufacturing (3D printing), cloud computing, sensors and Internet-of-Things, virtual reality, big Data Analytics, and more.

Physical assets like manufacturing plants will come ‘online’ through sensors and network connections, enabling an interoperable global value chain that not only encompasses different functions within a company, but connects the value chains of different companies across countries and continents.

The implications of Industry 4.0 are manifold. As physical systems become imbued with information technology, their efficiency can be pushed to new limits. Production plants will automatically adjust to demand. Stock levels are optimally synchronized. In short, a next wave of productivity and efficiency improvements will result. But equally important, industry 4.0 will enable producers to get much closer to end-customers. The promise of industry 4.0 will solve some of the most difficult issues now preventing mass customization to be economically feasible for many product types.

For example, traditional mass production methods are based on economies of scale which drives cost per unit up for lower batch sizes. The advent of new manufacturing technologies, such as additive and distributed manufacturing, will allow for customized products in batch sizes of one at costs which are equivalent or only slightly above mass production. Moreover, in a world of Industry 4.0, physical supply chains and distribution channels will be radically different. A digital product design for an individual consumer will be “uploaded” to a production system. That system will automatically carry out the different tasks to produce a single unit which is fully tailored and personalized to the consumer, delivered to the doorstep.

The Data Analytics opportunity for consumer goods companies

The overarching result of all these developments is an explosion of customer data which consumer goods companies can use to get closer to their end-customers. As such, the trends that

challenge the business and operating model of incumbent consumer goods companies, also provide the solution to outperform competition. It is the data and associated analytics opportunity, that consumer goods companies must embrace. To build-up their capabilities in this area, we see three stages of development that consumer goods companies go through as they start capitalizing on Data Analytics.

Stage I

The first stage consists of improving the established business model by developing and using insights from data which is already available. At this stage, companies broadly keep doing what they do, but they do it better and more efficiently. They use their own as well as third party data to optimize their product development, category planning, campaign ROI, pricing, store replenishment, inventory levels, etc. Although no direct relationship with the consumer exists, they may have access to customer data and have an opportunity to become more market driven (e.g. through point-of-sale data from retailers). Omni-channel strategies are put in place to reach and influence consumers along the myriad touch points in their (digital) consumer journey. Social listening can help to gauge consumer sentiment and use that to improve products and services. Website traffic and point-of-sales data can be used to develop better demand signals, and optimize the supply chain from the market back (remember the bike manufacturer that loses out on sales due to long lead times?).

Stage II

In a second stage, companies find ways to build

direct-to-consumer relationships, or start to capitalize on existing relationships which they have not yet fully tapped into (e.g. loyalty programs). The data which is generated from transactions can be used to devise a lifetime value approach to building out these relationships. Customer behavior can be analyzed to learn about individual needs and preferences, and used to develop much more targeted and differentiated one-on-one interactions and offerings. It provides opportunities to maximize value to these customers by tailoring to their needs, engaging with them at the right time with relevant content. Conversely, it allows producers to identify the customer segments most valuable to them over time, and select those they wish to serve and build loyalty with.

Stage III

The third stage consists of developing new value propositions tied to a direct relationship, potentially in the form of a subscription model. It is the next step in customer lifecycle management (CLM) where deep customer insights are used to develop entirely new value propositions that meet unmet needs. While in many instances CLM is a clever marketing tool to serve up the right offers at the right time, this next step is about creating more value by increased personalization and meeting a broader spectrum of customer needs. In many cases it involves adding a “solution” element to the value proposition that has broader benefits to the consumer than the product alone.

Consider for instance the European meal box subscription MarleySpoon. Users can use an app to choose from 7 different recipes the meals

they would like to order for a particular week, which are then home delivered on Sunday. Each meal is packaged in a different bag, with fresh and organic ingredients. The proposition of MarleySpoon is to bring restaurant quality meals to home cooking, to be prepared in 30-40 minutes without requiring a high level of cooking skills. The meals are tasty, healthy, easy to prepare and even give novice cooks a chef-like experience. In total, the value proposition offers time saving, convenience, a feel-good experience and a high quality meal at an affordable price. So MarleySpoon is not just home delivery of groceries. It's also not just home delivery of convenience food. Rather, it offers a finely balanced mix of benefits with the potential of creating a fan base of loyal customers.

This brings us to the point of stage 3. When done well, the opportunity is to provide a solution to users that creates so much value that it provides a platform for further growth. The combination of regular consumer interaction around primary need and customer data is a potential gold mine: knowing what customers value, and having the ability to directly offer it to them. This is the essential implication of smart connected products. It becomes easy to distinguish the aficionado from the leisure-type if you have real time data about product use. A manufacturer of connected bikes can offer tailored maintenance, accessory or other services to frequent users and reach out to them directly with an offer (potentially after they just finished their Saturday afternoon tour).

So products will increasingly become part of broader value propositions that cater to

the individual underlying needs in a personalized manner, rather than only providing a certain benefit through a mass-produced product. These value propositions will consist of different permutations of both online and offline products and services. Cars and bikes become multi-modal mobility solutions. Mattresses become health and wellness solutions fully customized to your physique and preferences. Groceries become time-saving, restaurant-quality meals packed with a confidence-boosting cooking experience.

Capturing the opportunity requires holistic approach to building Data Analytics capabilities

Not all consumer goods companies are created equal, and the opportunities differ. Categories differ in many ways such as purchase frequency, after-sale service, branding and competitive differentiation, etc. Needless to say, these and other factors determine the opportunity space for an individual player. So the first step is to determine where you are now, get a substantiated view on the nature and size of the Data Analytics opportunity and develop a transformation plan.

Stage I - Develop a holistic opportunity view and capability building approach

Firms in the first stage can be at different levels of maturity for different opportunities. For instance, they may be optimizing campaign effectiveness in sophisticated ways but miss out on inventory optimization through improved forecasts and demand management. Firms in this category often have a fragmented view of the analytics opportunity, and lack a holistic

approach for tapping into the full impact. In some cases, different departments are starting up their own initiatives and build patchy capabilities. Efforts are not connected and there is no view of prioritization. Firms in this situation need to do 3 things.

First, they need to perform a company-wide Data Analytics discovery to determine the top-3 value creation opportunities. This requires an ability to combine a thorough understanding of (big) Data Analytics with cross-functional business expertise.

Second, they need to translate the identified opportunities into discrete impact programs that go after the identified prize in a systematic manner. This can involve for instance a program to build marketing optimization capabilities, improve supply chain efficiency through better demand forecasts, or develop sales analytics tools.

Third, they need to develop and execute a plan to build structural capabilities: people competencies, data & technology infrastructure and the required analytical models.

Next to reaping the full benefits of transitioning towards analytical leadership in stage 1, firms in this category should explore their options for stage 2 and 3. What opportunities exist or can they start plotting towards for building direct consumer relationships? Are there ways to innovate and digitize otherwise “offline” products, thereby providing services that entice regular customer interaction? A connected mattress with all kinds of biome-

tric diagnostics and sleep improvement features could turn a 5-year purchase cycle into a daily consumer interaction.

Stage II - Maximize the potential of direct consumer relationships and customer data

Companies which are in the second stage dispose of individual customer data, potentially supplemented with channels to reach those customers directly. This granular customer data often presents huge opportunities to devise much smarter and more targeted marketing approaches. This often implies a complete overhaul of their marketing capabilities. They move from mass media ATL campaigns to one-on-one BTL campaigning with a much more data driven approach: triggered by events or contact, and personalized according to insights gained from individual consumers. Customer Intelligence needs to step up a notch. A key ingredient is to develop customer lifecycle management practices. These practices are not new, however they can now be applied in markets in which mass-volume push marketing prevailed so far. Implementing those practices and getting them to the point where they yield real impact is however no trivial feat – for different reasons.

First, they need to adopt a different way of managing and analyzing their customer data. Rather than focusing on volumes, margins and products in a particular accounting period, they need to start steering their business through the lens of the customer. In order to understand individual customer behavior, a longitudinal customer view is required which tracks all relevant customer data through time.

Second, they need to develop deep customer insights and predictive models to learn how each individual customer is best served and approached at a particular point in time. Both from the point of the customer and the supplier. Lifetime value modeling can help to determine the most valuable segments. These insights help to focus on the right customers, make a data-driven trade-off between marketing or customer acquisition costs and return on that investment.

Lastly, they need to build new “machinery” which connects these new insights from Data Analytics to the established ways of operating. Becoming more customer centric often implies a much more agile way of working. Processes that used to take weeks or months, in which decisions were largely based on intuition, will now be led by insights from data and can even be automated. Once this machinery is up and running, firms in stage 2 need to think about opportunities to innovate their value proposition and how (commercial) analytics will play a role in that. That will transition them towards stage 3.

Stage III

Companies in stage 3 have been able to reinvigorate their value proposition by means of digital media (e.g. mobile App), service and experience, and potentially connected products. Data analytics becomes core to the business model in two ways: it powers both the product or service and the organization that delivers this. Stage 3 is all about personalizing the experience and product itself, and continuing to innovate and evolve based on new consumer

insights. Much deeper and frequently updated insight into customer behavior is required, and both the analysis and actions that flow from it increasingly happen in real time. As such the analytics capability becomes much more multidisciplinary and engrained in key processes and business functions.

Start now

Einstein famously said that in “every challenge lies an opportunity”. In the same vein, consumer good companies can turn the increased consumer savviness and competitive environment into an opportunity to drive break-out growth. Consumers will more than ever reward superior and more personalized products, service, experience and convenience. The same digital trends that drove the balance of power towards the consumer, are supporting consumer good companies to win the hearts of the customer. Digital enables consumer good companies with more data on the customer journey, an opportunity to leverage analytics to design and optimize the personal offering and interaction, but also deliver mass products in a customized manner. Analytics has proven its value in front-running industries like banking, insurance and telco due to their contractual relationship with customers. Interestingly, these are industries which not all deal with primary consumer purchases. We usually look at our health insurance once a year. Consumer goods hold the potential to get much more in the heart of consumer spending, with much more regular direct customer engagement. The firms that manage to establish themselves as the provider of choice in these categories have an opportunity to build a consumer marketing

platform that holds the potential for break-out growth. Companies need to get clarity on where they are and where they aspire to be. Based on their opportunity view, they need to develop a game plan on building the required capabilities. One thing seems clear: to win the game consumer goods companies need to embrace and improve Data Analytics capabilities.

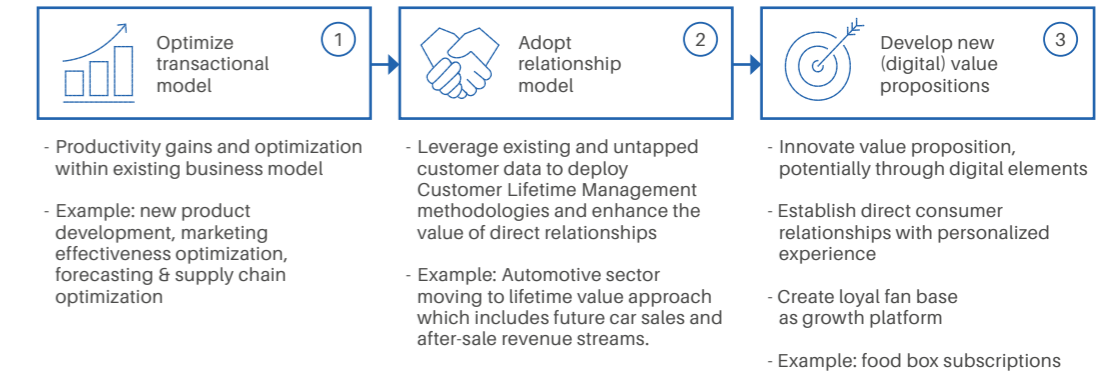


Figure 2.