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Datafication of Value

How Data Redefines the Value of Asset Based Business

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IN A BLINK:

The business model for asset centric organizations is increasingly dependent on the provisioning of services that are bundled with products. These services rely increasingly on the data that originates from the production and use of the product. However, both technological developments and customer demand enable the free availability of this data to all, including third parties. This undermines the very business model that supports the production of the product and its data. Value in the value chain shifts from the assets required to produce goods to the data used to create value added services.

This whitepaper discusses how modern corporations can achieve continuous data driven innovation, on par with the agility of disruptive startups, whilst retaining a competitive advantage by leveraging their traditional asset-base.

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1 Introduction

After the sudden rise of high-tech Internet startups at the turn of the century, corporations are again under attack from high-tech, low organization, infant businesses. And yet again, even the best-organized corporations appear to have no clear answer to the disruptive power of teenagers in t-shirts. And while the long revered stability and trustworthiness of the financial sector took a nosedive in public opinion, startup founders and entrepreneurs have risen to rock star status to fill the void.

As a result, Amazon's and NY Times' bestseller lists in management literature have been overflowing with startup success stories, how-to's, self help guides to entrepreneurship and lessons in start-up methods and principles. All attention goes out to Exponential Organizations, Lean Startup methods, Data Driven Strategy and digital disruption. And none of these books sell the idea that well organized, well researched and carefully planned execution of technological advances is the way forward. Instead they sell the idea that the startup is the only successful form of organization and that data is its raw material.

As if digital innovation is the only way forward and corporates are, by nature, not capable of innovation and disruption.

This whitepaper takes the position that at least the latter is not true. However, developments in technology and business have led to a situation where the current organizational and business models for large organizations have become out of sync with their environment. Production of goods and products in most cases requires assets and infrastructure that are complex to operate and capital intensive to own. Yet the marketable value of these goods is increasingly driven by data. This data is no longer the exclusive property of the organization that created it through its assets. It is quickly becoming easily available to third parties, allowing them to harvest the data driven value without owning the assets. This leaves manufacturers with complex, capital intensive production facilities competing with low cost, high margin technology companies over their most lucrative data driven services.

This confronts corporates with a classic 'catch-22' situation. The business model for asset centric production is increasingly dependent on the provisioning services that are based on the data that originates from the production and use of the product. However, both technological developments and customer demand enable the free availability of this data to all, thereby undermining the very business model that supports the production of the product and its data.

This whitepaper discusses how modern corporations can achieve continuous data driven innovation, on par with the agility of digital startups, whilst retaining a competitive advantage by leveraging their traditional asset-base.

2 The revolutions of Xerox, Uber and Transferwise

2.1 Industrial revolution

As much as the Internet revolution in the last years of the 20th century, the industrial revolution of the late 18th century was a technology boom which sparked a frenzy of entrepreneurship. Until 1750, manufacturing of goods relied on manual labor using mostly simple tools to make manual labor more effective. For serial production, a system of 'putting-out' work was used, in which a client would commission a number of goods from a trader or agent. This agent would then put out work to a number of craftsmen to each produce a number of the individual goods. In the industrial revolution, modern technology replaced the putting-out system by mechanizing the work of individual craftsmen in a centralized location. The machinery used in this process became the competitive force in the markets of the day. Capital intensive assets such as textile looms, steel hammers and rolled plate glass mills became the single most important driver of commercial success. Ownership of assets was a competitive advantage, and producing as much goods as possible was the goal.

Data, in the industrial revolution, was used for accounting purposes only. The number of goods produced and sold were accounted for and little else was measured or calculated, primarily because data needed to be collected and administered by hand, a laborious task that added little value to the production process.

2.2 The service mark-up

Up until World War I, the asset centric business from the industrial revolution was the norm. After the Great War innovative ways to promote and sell the products were quickly developed. Marketing emerged as an area of expertise and especially after World War II, service mark-up on goods became an increasing source of income for manufacturers. Until then, companies had mostly relied on product quality to get customers to purchase come back for more and on 'cost-price plus margin' calculations to keep a competitive advantage. In the upcoming age of marketing 'customer loyalty' became an activity rather than a consequence and services were the instrument at hand.

It is generally considered that Xerox was among the first companies to build a business model primarily based on the (financial) services it offered in relation to its core product: the copying machine. Rather than charge a fixed price per copier or service round, Xerox charged a small fee per month, plus an additional fee per copy over 2,000 copies per month. Service charges included.

From the 1980's onwards, more and more service oriented business models emerged, although most of them related the service strictly to the goods produced by the company's own assets. The service margin was primarily regarded as a mark-up on the sales margin created by the physical product.

The service era evolved first in industries where data was created almost automatically by the serviceable products, such as copiers and cars. Data determined the threshold for service levels: a number of copies made, a number of miles driven, a level of wear and tear on a product. But administration of the data was still cumbersome and most of the data was not digitized. Copiers had physical counters and service staff had to visit each office to check the numbers and provide the necessary service. Data was still inextricably linked to the physical product.

2.3 Digitization: the online revolution

When the smoke settled after the online revolution at the turn of the century, one concept remained standing amongst the debris of failed startups and investments: Application Service Provisioning, later popularly renamed 'Software-as-a-Service'. Websites were turned into fully operational software applications, performing important service tasks in the life of customers. Online banking, e-commerce, video rental and even telephony were now offered as services on websites and later in apps.

So many products were being digitized that Marc Andreesen, the creator of the world's first web browser, NCSA Mosaic (later Netscape), wrote an influential article in the Wall Street Journal in 2012, entitled "Software is eating the world". In the article he points out that many physical products are quickly being replaced by digital services, with the goods coming second. After all, the physical store originally was created as a logistical convenience to allow many people to easily compare and choose products from various vendors. Turning the brick-and-mortar store into a digital service, the website enables the functions of 'compare and choose' and the asset 'building' can be replaced by a much cheaper asset: 'delivery van'. The digitized service has all but replaced the physical offering.

In the era of digitization, something interesting is happening to the data, compared to the previous periods. In the brick-and-mortar store example, the store systems can collect data about all sales in the store. Vast amounts of statistical data about purchases of product and brands, which items are sold together often (such as peanut butter and jelly), frequency of purchases by individual customers (through the use of loyalty cards) etc. However, in the brick-and mortar world the data cannot be acted upon immediately. It serves an analytical purpose rather than an actionable one. Analysis allows the store manager to place peanut butter and jelly close to each other to increase cross selling of the products, but that is about as dynamic as it gets.

In the digitized world, data is no longer just the result of the production or use of the physical product, it allows for immediately feedback into the system. Analysis of data and response to its outcomes can be almost instantaneous. Data is generated *by* the service and immediately *becomes* that service. When multiple customers order both peanut butter and jelly in a single order at their online grocery store, the service uses that data to automatically offer jelly to all customers who have placed peanut butter in their digital shopping carts, but not the jelly. The service cannot be seen separate from the data.

2.4 Datafication: The New Putting Out System

Exactly 50 years after Xerox introduced its first copier service concept, in 2009 Travis Kalanick took the 'outsourcing assets' principle one step further. When he founded his taxi company Uber it was clear from the start that his company would never own any vehicles. It would not even outsource the operation of a fleet of taxis to a third party. Uber did away with organized assets all together: it outsources the 'production' phase of a taxi ride to whichever asset is closest to the customer regardless of who owns that asset.

In a remarkable move back to what was called the 'putting-out system' before the industrial revolution, Uber decentralized work to individual owners of assets, coordinated from a central system. The comparison is remarkable and only differs in the volume and scale of the work distributed by the central agent.

But Uber did not simply return to earlier system using modern means: it actually flipped the focus of the business model from the physical good to the service. Many executives, even today, would likely have regarded Uber's app a service layered on top of the taxi ride. After all, what taxi customers really want is to be transported from A to B. But data changed the perspective. Yes, the customers really want to get from A to B, but their problem was not the actual transportation. Their problem was getting the quickest available cab at the best price at a point where there were no taxis around.

In the age of datafication data is the dominant value creating entity. It is a circular process in which data is created by a process and is immediately used to improve or change that very process. Ownership of the assets in that process is no longer required. The margin is in the data driven service and the physical product has become a commodity. Asset based organizations lose their edge over those focusing on data driven services: the margin created by assets is slimming to a minimum value in the entire value chain.

3 Data outpaces assets' economic value

Although popular opinion has it that traditional assets have become obsolete with the advent of datafication, nothing could be more besides the truth. The belief was popularized in the quote of Tom Goodwin, Senior Vice President of Strategy and Innovation at Havas Media, when he stated that: "Uber, the world's largest taxi company, owns no vehicles. Facebook, the world's most popular media owner, creates no content. Alibaba, the most valuable retailer, has no inventory. And Airbnb, the world's largest accommodation provider, owns no real estate." Goodwin wrote his paragraph as the start of an article about how 'the battle is for the customer interface'. He explains how "…these companies are indescribably thin layers that sit on top of vast supply systems (where the costs are) and interface with a huge number of people (where the money is). There is no better business to be in."

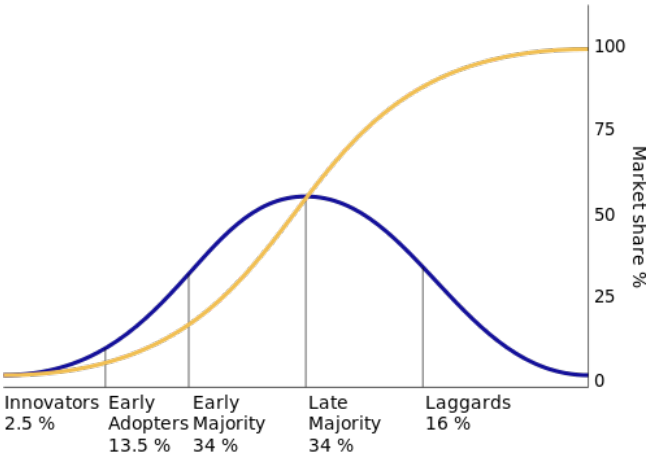
Goodwin is spot-on about how data is quickly becoming the dominant connector between supply (products) and demand (customers). However, his quote has become popular for another reason: all of the companies he mentions in his example seem to be replacing the supply of 'products' from a small number of professional asset providers to a system of distributed supply, mostly from SMB's (Alibaba), individual entrepreneurs (Uber) and even private individuals (Facebook and AirBnB). As if the data driven layer could outpace the corporate asset's economic value and render asset centric businesses obsolete. Apart from the fact that this is not what Goodwin intended, it is not true.

It is not very likely that we'll see initiatives such as Uber replace the airline industry by matching business traveles with private aircraft owners. Nor will individuals be selling gasoline or packaged milk out of their homes anytime soon, no matter how slick the app may be. But it does mean that corporations need to change the way they look at the economic value of their asset base: ownership and centralized management of assets is not necessarily a competitive advantage anymore. Markets will no longer be very willing to pay a premium for the organizational capacity of corporates to own and operate centralized assets. Most certainly when competing decentralized options are available, but also when only centralized options are available: economic value is increasingly less created by assets and more by data.

On hindsight it is interesting to see how industries such as personal transport (and indeed even parcels), hotels, retail and publishing have long relied on the exclusivity of access to enough assets to build a profitable business. That era has now passed and corporates in every industry need to reconsider the origin of their competitive power.

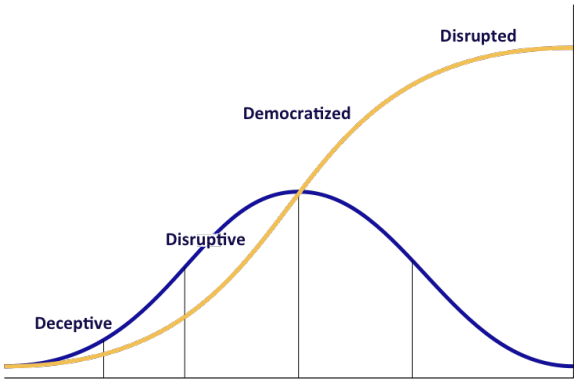
3.1 Slow assets and the speed of innovation

Development of products and markets generally follows a mathematical logistic curve, or S-curve. In his 1962 'Diffusion of innovation'-theory (Rogers, 1962) Everett Rogers, communication scholar, sociologist and writer, explains how each new technological development starts at a small, often experimental scale and then grows in consecutive stages. Everett identified five separate groups of users of innovations, starting with 'innovators', 'early adopters', 'early majority', 'late majority' and 'laggards'. Each group or stage in innovation is linked to a particular market share of the innovation in the total market.



Digitization and datafication have spawned a myriad of innovations. Digital products can be very quickly developed and tested and can be scaled to global reach rapidly and at extremely low cost. Because of these characteristics their impact on traditional industries is often very disruptive, hence the popular reference to 'disruptive technology'.

Disruptive technology is no exception to the diffusion of innovation theory. When it catches the imagination of 'innovators' it grows not so much in volume but in maturity of technology and applications. It is tried and applied not in one, but in a range of industries and applications. The technology often poses as a promise rather than a realistic driver of change. It is therefore often deceptive to incumbents whose markets would be threatened by this technology, which appears nowhere near powerful enough to disrupt the existing marketplace. But as it goes, this '*deceptive technology*' can very quickly become '*disruptive technology*'. Disruptive technology is not so much disruptive by the nature of its technology, but by the speed at which it scales across the market through online channels. Especially digital or data driven solutions can have great impact on existing markets and businesses. They are disruptive because not they not only replace existing products and services with ones that offer better or more functionality, they also impact the fundamental dynamics of the market itself. But once these dynamics have settled to the new norm, the disruptive technology itself becomes subject to disruption from new initiatives, which often seem deceptively insignificant to the previous disruptors.



The flow of disruptive technology innovations through the S-curve has become so quick that the economic lifespan of assets in a single organization is being outpaced by innovations based on the data these assets produce.

Nowhere is this more visible than in the utilities industry. The supply of electrical power into homes was once a proud industry where the production of electricity was at the heart of the business. Attention focused on power plants and their output. Delivery lines and transport costs to bring the power into the house were regarded a necessity to use the thing that really mattered: electrical power. In most countries, utilities were monopolies because the power plant and network were owned by a single organization. But as time went by, and as energy markets were liberated, power produced in powerplant A could legally be delivered through network B. Since electricity is a commodity, the actual power delivered into the home did not actually have to be produced by powerplant A: company A and B could balance the supply of power over their networks and simply administer the transaction. Electricity had turned into data.

Today, the data system in the utilities market has become a dominant factor and is about to become far more complex. Renewable energy technology has created a situation in which small firms and individuals have become a sizable group of small energy producers through windmills and solar panels. On sunny and windy days these local producers can generate far more energy than their own consumption requires and become net providers of energy to the network. They can balance their own production with previous consumption on the grid and, through the exchange of data, even make money off the utility company. The utility, which started out as a power producing company, nowadays is far more like a data processing plant, administering checks and balances on the grid. So much so, that ownership of power producing assets is no longer a reasonable business decision on the balance sheet: Energy production and energy distribution have been separated into different businesses. Both using capital intensive assets and asset management. And both losing margin to a new breed of market: local energy trading and balancing. However, this time some unlikely competitors are lurking around: since trading and balancing have become purely data driven exercises with the competitive power and margin firmly rooted in the availability of data and data science. A field of expertise in which technology startups tend to be far more skilled than utilities.

The margins on energy production and transport have collapsed over the last few years. The reasons are clear to understand: the rapid expansion of local production capacity and liberalization of energy trading have created a large spot market for energy. Margins have shifted from asset based production to commodity trading. And since price trading is data intensive, most of the margin is to be made in smarter and faster data exchange. Asset owners are left to produce at market prices or seize operations and take a huge write-off on their assets. In a business model where asset operations such as network maintenance are linked to commodity trading, the disadvantage compared to data-only players is enormous.

4 Deceptive innovation and network effects

Data centric 'deceptive innovations' in the bottom of the S-curve have a tendency to become disruptive once they have met two characteristics: the so-called 'network effect' and the point that Malcolm Gladwell calls 'the tipping point' of volume.

The network effect is the effect where the value of a service increases exponentially with the number of users in the network. Facebook is a good example: with only a few members on Facebook, the social website would not be very attractive for users, since not too many people would be able to read their posts. So with the increase of the number of users, Facebook becomes more attractive, drawing in more users, making the site even more valuable, etc. In markets with network effects one player quickly becomes the dominant supplier, leaving no room at all for competitors.

The network effect alone is not enough to disrupt an industry. An innovative player can be the only player in a given domain, if that domain does not constitute the majority of the industry, it will not be disruptive. In his book 'The Tipping Point' (Gladwell, 2000), author Malcolm Gladwell shows how innovations need to reach a certain volume in the market and 'tip-the-scale' to become the norm. When the first fax machine was introduced in the 1960's, very few organizations owned a fax and could therefore send faxes to only a few companies. However, Xerox cleverly secured the network effect by setting the standard for fax transmissions and then set out to create a tipping point, not by selling fax machines but by leasing them out at an affordable low rate per month. When enough companies owned a fax machine, sending faxes became the norm, the market tipped and in a short period of time companies were more or less forced to buy fax machines in order to be able to communicate with business partners.

Data, as a raw material for products and services, has properties that make it so scalable and so flexible that it can very quickly be molded into services that create network effects and cause a tipping point in the market. Whenever this happens in a short period of time, small or local deceptive innovations can turn to global disruptive technology almost overnight. Whenever such data driven innovations embody the digitization of existing asset-based markets, this can severely impact these markets. One study shows that in only a few years, AirBnB's impact on revenues in the existing hotel industry in Texas can amount to 8-10%. Even though many hotel executives have long dismissed AirBnB as a small niche market player, and to some extent it actually is just that, the impact of 10% on incumbent business is harsh by any standard. The fact that AirBnB is valued at US$ 10B, well more than for instance Hyatt Hotels, is an indication of the impact yet to come.

5 The decentralization of assets

All good things come in pairs and datafication is no exception. Datafication as a business model thrives when combined with a massively decentralized asset base, such as the taxis in the case of Uber. Obviously, not all industries are very prone to this type of decentralization. As mentioned before, commercial airlines will not have to fear competing fleets of privately owned Boeing 747's. Neither will gas stations need to be afraid of home-grown biofuel outlets, although there is a good reason why there never will be a market for 'electricity stations' to charge electrical cars, since charging stations have been largely decentralized from the start.

Technological advances that rely on the principles of datafication rapidly find applications in the decentralization of assets. Low cost windmills and solar panels, owned and operated by private individuals, form a huge network of energy providers that are directly competing with commercial utilities via digital communities. Similarly, 3D printers owned by enthusiasts and small firms are now commercialized through 3D Hubs, a company that takes orders for printing 3D objects and outsources the printing part to well over 22,000 3D printer owners all over the world. And The Weather Company, a commercial venture from Atlanta Georgia, uses a network of over 100,000 connected weather stations, operated by amateur meteorologists around the world, to better predict the weather around the globe. The 40,000 decentralized weather stations in its network in the US are in stark contrast with the 3,500 stations owned by the U.S. National Weather Service. Many examples of similar outsourcing options can be found in helpdesk services, analytics, computing power, design etc.

5.1 Internet of Things and the Blockchain

Decentralized assets are not just made possible by datafication. Two other trends in technology amplifying the threat to centralized asset owners: The Internet of Things and Blockchain.

The Internet of Things is the trend that more and more sensors are directly connected to the Internet. These sensors share data easily and immediately. Some of these sensors are deliberately placed in an environment by product owners, such as sensors in car engines and movement detectors for burglar alarms. Because they are connected to the Internet, the data that these sensors create can be used for other than their original intended purpose, and by many different parties. Provided of course that their owners allow that, but as I pointed out in my book 'The New Oil' (Spijker, 2014), many owners are actually discovering valuable new business models in sharing their data.

Apart from sensors with a specific purpose, many devices are now equipped with a range of non-specific sensors that allow virtually anyone to develop applications for them. Smartphones are the best examples. They are crammed with sensors and through apps on smartphones smart companies can quickly build on an array of sensors for their products and services in the largest decentralized sensor network in the world: people's smartphones.

The Internet of Things actually allows the decentralization of assets when these assets rely on connected sensor technology in combination with particular functionality. The Google owned company Waze, for instance, used GPS tracking on individuals' smartphones to detect traffic jams on roads and quite literally outmaneuvered various company's that owned proprietary in-road traffic detection systems that were expensive, difficult to maintain and less accurate than Waze's phone based system. And increasingly, news publishers rely on private individuals' recordings of photograph and video of newsworthy events as they unfold, replacing a vastly expensive asset base of vehicles, cameras and staff. It may not be an overnight replacement of assets, but it is an unmistakable trend that is clearly noticeable on the balance sheet.

Blockchain

Potentially even bigger in its impact on corporate assets is a relatively new technology called ‘Blockchain’. The Blockchain is a system running on the Internet that can process virtually any transaction between parties without the need for a trusted third party to guarantee ownership, authenticity or the safe transaction of property.

Originally, Blockchain was developed as the underlying technology for the digital currency Bitcoin. Although Bitcoin has suffered some reputational damage as a reliable form of payment, the application of its underlying technology has proven to be as promising as the Internet itself was 20 years ago.

In essence Blockchain allows the transparent and ‘unhackable’ registration of transactions in a public system. In brief, it is a worldwide system for registering transactions, running on thousands of servers around the world, each holding a copy of the central ledger of transactions. A transaction can take the shape of a payment in a currency (Bitcoin, or any other digital currency) or the registration or transfer of ownership of a house or for instance a certain text or video. The first person to register a piece of text in the Blockchain is apparently and undeniable the owner of that text, and through Blockchain can then transfer that ownership to anyone else, safely registered by the Blockchain system. So when an upcoming young musician writes a masterpiece of lyrical poetry and stores that text in the Blockchain, the system safely acknowledges its origin. Once famous he can transfer his original ownership to anyone with a registration number in the Blockchain and enough cash to buy his musical legacy. At no point will anyone doubt the legitimacy or the authenticity of the work.

Blockchain transactions are smart in the sense that they can be programmed to perform particular functions: governments can use Blockchain to design social security benefits in a digital transaction that can only be used to pay for the rent or medical bills. In a similar example the directors of a company can program budgets to be spent before a certain date, or else the budget will automatically return to ownership of the board and not the department.

Blockchain is a new and revolutionary technology and much has be achieved before it works on a global scale. But one thing is certain: the technology is rapidly being adopted by small and large organizations across the globe. Whenever it is used to disrupt existing processes or methods of working, it tends to remove centralized assets and decentralize them across a group of users. Datafication and Internet of Things primarily impact physical ‘production’-related assets by replacing one centralized asset with many decentralized ones. Blockchain, by its nature, primarily impacts assets in the form of centralized service infrastructures, such as banks’ transaction infrastructure or governments’ cadastral ownership registrations

Bitcoin effectively decentralizes cash management and banking services to the Blockchain. Registration of property, such as housing, can be decentralized from governmentally owned cadaster to the blockchain, where there is an unhackable registration of property, yet without a single centrally kept overview managed by a government or business. In a similar fashion, Blockchain has every potential to decentralize other service oriented industries such as (part of) notary work, intellectual property ownership (patents) and copyrights, energy trading, business contracts, identity registration, e-commerce etc.

Although within blockchain the distinction between asset-generated data and the service-asset itself becomes blurred there is no other possible conclusion that ownership or control over centralized assets loses value to decentralized data driven alternatives.

6 Shifting value forward in the value chain

Because assets are required to fulfill the need, they are still important in the value chain. However, assets used to be (and in many cases still are) exclusive abilities to perform a task: one had to own the hotel room to operate it and to make the profit. One had to own the taxis to drive them and make the profit. In the era of digitization, value shifted forward in the value chain. Digitization of the booking systems initially reduced booking costs for the hotel owners. When hotels allowed third party booking companies to offer what were then regarded as 'online travel agents, initially these companies brought more traffic to the hotels and offered more value to the customer, such easy selection of alternatives. In the process value started shifting forward in the value chain, from the property owners to the data owners. With datafication, control over the flow of data in the booking process, allowed third parties to marginalize the value of assets in favor of ownership of customer knowledge. The system that was initially regarded by property owners as beneficial because it brought in more traffic to hotels, now backfires on them and draws economic value away from hotels.

Data driven business opportunities force the unbundling of asset based offerings and servicing the customer. If asset owners are locked in a business model in which asset management is a prerequisite for service provisioning, than they are highly likely to be disrupted by data driven parties can leverage that profit without the need for asset management, such as Uber and AirBnB.

It would be easy to say that asset owners are in the wrong place and are fighting a lost cause. They are not. However, before becoming trapped in the highly disruptable space where asset management and service provisioning are inextricably linked to make profit, asset owners should own the asset and make money in a different way than before.

The value of an organization is not determined by the value of the assets on its balance sheet but by the way in which it can generate free cash flow from those assets. If the company, through competition from data driven players, is no longer able to generate this cash flow from the services it provides on top of the assets it should build an unbundled business model consisting of two separate parts. One that is based on leveraging the original asset at low margin to its maximum capacity, without a service markup and with the aim to generate as much data as possible. And another that is based on leveraging the data that its assets generate and that is required by the data driven parties to market their services.

7 Decoupling assets from services

The existing correlation between assets and corporate value is quickly being decoupled by disruptive virtualization through digitization and datafication. Assets in many industries have become a slow moving burden in a fast moving world. Correlation between the lifecycle of assets and the lifecycle of digital product lines and service programs is no longer a given fact. Hence, business models that rely on mixing asset-based revenues and services revenues create all sorts of problems.

To counter the threat of disruption from digitalization and datafication, corporations have three scenarios to choose from:

1. The unbundling scenario
2. The 'De/centralized' scenario
3. The Data Driven Strategy

7.1 Unbundling-scenario

The most traditional strategic response to declining returns on assets is to unbundle the asset based business from the service offerings. In the telecom industry and in utilities this unbundling has been prominent for years. By splitting the network business from the customer facing subscription business, both offerings have seen more and faster innovation. The network asset especially has seen more diversification into new markets and applications, whereas the customer facing business in both industries is on the verge of being disrupted by data driven technologies.

The rationale behind the unbundling is that the asset based business will become more focused, competitive and innovative when no longer attached to the front-end and often high-profile customer services. At the same time, the service offering, once detached from its forced sourcing from the asset base, can become highly competitive in challenging deceptive and disruptive innovations.

7.2 De/centralized-scenario

This scenario aims to beat disruptive players at their own game by combining the strengths of traditional asset ownership with scenarios for distributed asset offerings. In short, the scenario challenges companies to find the Uber or AirBnB in their own business. The scenario resembles the unbundling scenario in the sense that it maximizes the revenue potential of the asset base. It differs from unbundling because it emphasizes the strengths of joining central assets and decentralized assets in a new combined strategy. Particular benefits of owning (part of) the asset base are usually found in operating a predictable required production capacity to its maximum efficiency. These benefits can be extended by leveraging the benefits of decentralized assets, offering easy scalability of service and, for instance, easy geo-expansion of service.

7.3 Data Driven Strategy

The Data Driven Strategy scenario aims to find new business models based on the data that is generated by the core asset based processes and services. The strategy aims to optimize the asset based and service based businesses to generate as much data as possible which is then used as raw material for entirely new value propositions. Good examples of Data Driven Strategy include payroll service provider ADP, which is selling reports about the state of the economy, based on the HR-data, collected from its payroll services. Or logistics provider DHL, which is selling air quality data it collects from sensors on its delivery vans.

Data Driven Strategy capitalizes on the idea that data originating from the use of a product or service has a much wider application than the markets that these products and services are used in. If this data is regarded as a key 'asset', new business opportunities arise that offer greater scalability and hold a much higher margin potential than the original business.

8 Growthpath for innovation for corporates

Harvard scholar Rita McGrath described innovation as a series of stages relative to the uncertainty of technological and execution capability of the organization and the uncertainty of its market and organizational capabilities. Innovations that are technologically simple and are executed or implemented in a know market and through existing organizational channels are called 'core enhancements'. These enhancements are relatively easy to achieve but also show a limited potential upside. More complex innovations, either from a technical or market perspective, are dubbed 'platform launches' and although they are more difficult and risky, but also offer a bigger potential upside. Extremely challenging innovations with high uncertainty in both markets and technology should be considered 'stepping stones' or options to the future. From the perspective of corporate boardrooms data centric innovations are often regarded as 'stepping stones': they bypass known expertise and experience in the organization, often rely on complex and unknown technology and address unknown and uncertain markets.

In chapter one of his book Bold, Peter Diamandis refers to Kodak as being ignorant for not seeing the opportunities of digital photography in the 1970's when one of its own employees invented the 0,1megapixel camera. He criticizes Kodak management for remaining strategically stuck to paper and film, the core business, and not noticing the exponential powers of digital camera's, a technology that could render much of Kodak's asset base obsolete. But in the 1970's, the Internet was nowhere to be found and seeing the full potential of digital camera's required making incredible assumptions and even plain fortune telling. Although it is undeniable that Kodak management made serious errors regarding digital photography in the 70's and 80's, not taking an all out bet on the digital camera in the 1970's was not one of them. Modern corporates face the same situation in digital transformation and datafication scenarios: the heavy weight of existing business simply makes 'stepping stone' innovation strategically 'plain stupid'. Why invest in something with extremely high risk and uncertain potential? But datafication and Data Driven Strategy do not rely on stepping stone innovations and great fortune for success. It does not take an all-important bet, but rather sound reasoning about the speed of change that envelops the market. Harnessing that change does not call for revolution, but for rapid evolution: a structured process of high paced, manageable, iterative change. It calls for improving existing business through core enhancements whilst step-by-step building the platform launches of the future. And in the mean time experimentation with some really crazy 'stepping stones'.

Google, widely regarded as one of the most innovative companies in the world, took almost 20 years to reach its current position. It brought us some of the most innovative products and services imaginable, and it is a driving force behind digitization and datafication. But it cancels far more innovative ideas that it brings to market and it never rushes ideas to production. Google has mastered the art of rapidly nursing innovations to fruiting. Although it does not shy away from attempting crazy challenges, it despises a senseless, high-risk approach.

Nowhere is the path of innovation better described that in the letter that Google founder Larry Page wrote on the launch page of Alphabet, Google's new parent company on September 1st, 2015:

"As Sergey and I wrote in the original founders letter 11 years ago, "Google is not a conventional company. We do not intend to become one." As part of that, we also said that you could expect us to make "smaller bets in areas that might seem very speculative or even strange when compared to our current businesses." From the start, we've always strived to do more, and to do important and meaningful things with the resources we have.

We did a lot of things that seemed crazy at the time. Many of those crazy things now have over a billion users, like Google Maps, YouTube, Chrome, and Android. And we haven't stopped there. We are still trying to do things other people think are crazy but we are super excited about.

We've long believed that over time companies tend to get comfortable doing the same thing, just making incremental changes. But in the technology industry, where revolutionary ideas drive the next big growth areas, you need to be a bit uncomfortable to stay relevant."

BlinkLane Consulting

BlinkLane Consulting is an advisory firm founded in 2007. In our 9-year lifespan, we have evolved together with our clients. We continuously innovate our services to keep delivering the value our clients need in order to deal with today's and future challenges. We help our clients increasing business value from IT investments, act more agile and innovative and transform their organizations for the future. For 2016, we focus on the following four themes:

- Digital transformation
- Strategic Sourcing
- Business Agility
- Innovation & Venturing

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