



ERICSSON

THE DISRUPTION OF INDUSTRY LOGICS

PART 1/3
DIGITAL BUSINESS
TRANSFORMATION

PREFACE

This series of reports on Digital Business Transformation provides insights into how new and established businesses are responding to some of the major technology-driven trends that are reconfiguring the global marketplace. The methods consist of extensive qualitative analysis including:

- > A series of in-depth interviews conducted by Stockholm-based insight agency, Augur, with 71 business executives from a range of industries including, among others, finance, retail, manufacturing, media and digital services, as well as with professors from leading business schools.
- > Secondary research analysis conducted by Augur from sources such as OECD Internet Economy Outlook, MIT Sloan Management and other research institutes, Wired Magazine and other publications on digital transformation, a number of blogs and websites on the digital economy and homepages of digital companies.

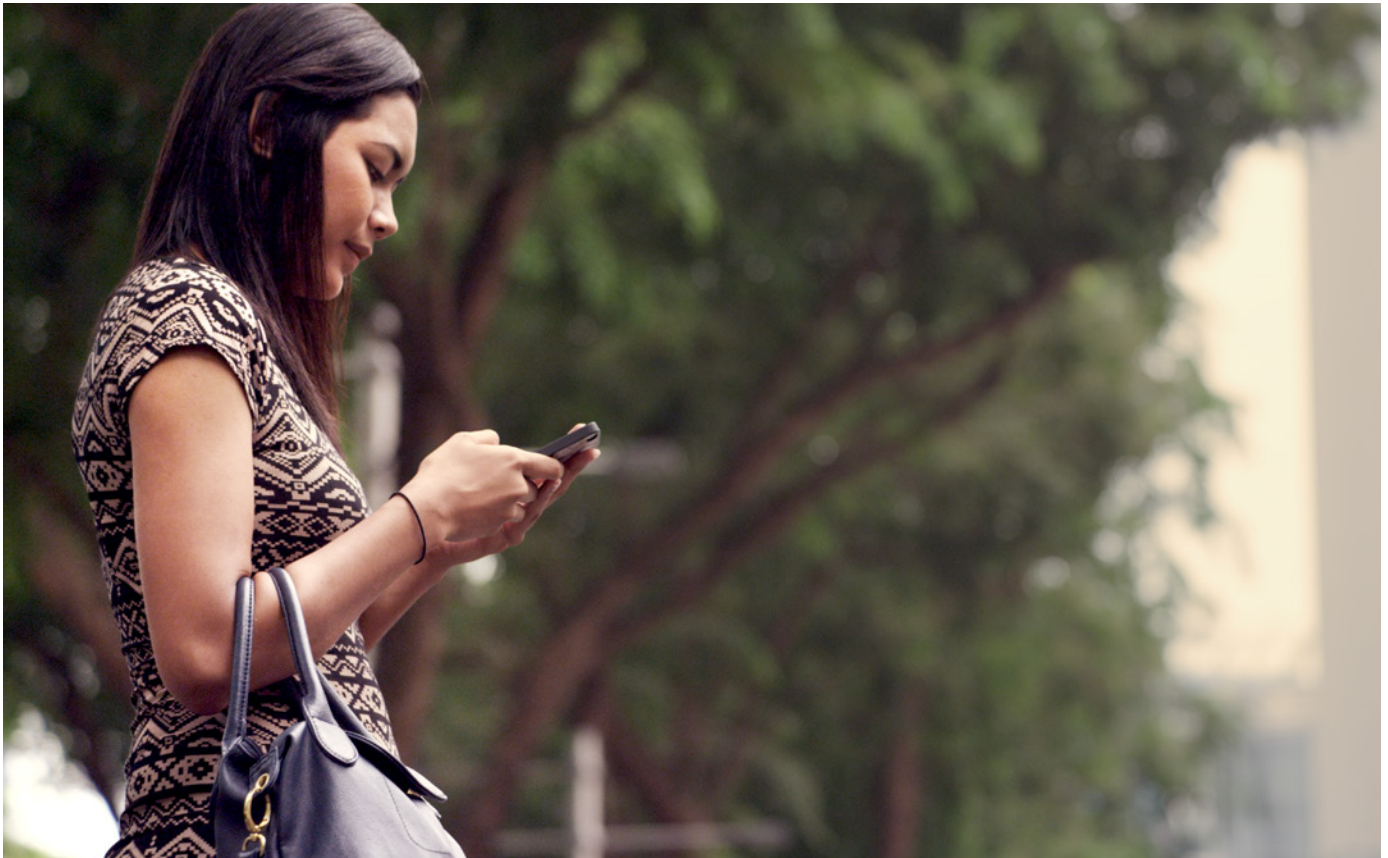
The report series consists of three parts examining, respectively: the technology-driven macrotrends disrupting conventional business logics; the operating models of new digital enterprises; and the strategies and logics of traditional businesses undergoing various stages of digital transformation. Under the banner heading Digital Business Transformation, these reports are published consecutively under the following titles:

- 1. The Disruption of Industry Logics**
- 2. Models of Digital Operations**
- 3. Traditionals in Transformation**

Special thanks to Jan Unkuri, Josef Conning and Annalena Carlsson at Augur, as well as to all the executives whose interviews contributed to these reports.

TABLE OF CONTENTS

Executive Summary	4
Forces of Digital Transformation	5
Characteristics of Digital Markets	7
The Rise of the User-centric Ecosystem	9
Breakdown of Market Barriers	11
New Logics of Digital Transformation	15
The End of Industrial Organization	19



EXECUTIVE SUMMARY

Disruption. Digital transformation. The digital economy. However you label it, one thing is clear about today's shifting business landscape: As far as new technologies go, nothing in human history comes close to Information and Communications Technology (ICT) in terms of the speed at which it has dropped in price, pervaded the world economy, and unleashed waves of creative destruction across a range of industries.

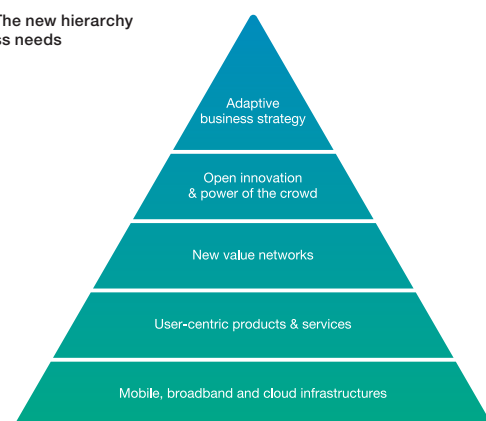
As digital markets continue to mature, the pace of change will only accelerate. Technologies will become cheaper, faster and more powerful. New, highly efficient competitors will emerge. And everything from business models and product categories to financing and human resources will be forced to reinvent themselves, or be left behind.

With the rise of mobile, cloud and broadband technologies, we are witnessing a radical transformation of the global economy. One that has already pushed the costs of producing and sharing information close to zero, and is now doing the same for a wide range of products and services. This near-universal interconnectedness and access to technology has driven billions of people, businesses, processes and things to reconfigure themselves into new networks of real-time interaction, collaboration and innovation.

To manage this fundamental shift, successful organizations will have to adapt their strategies to meet a vast array of new market conditions. Depending on the industry's degree of digital maturity, this means dramatically redefining the boundaries of a company's existing markets, competition, resources and the enterprise itself.

In this, the first of a three-part series on digital business transformation, we examine the substantial technological forces that are disrupting conventional business logic in order to gain insights into new opportunities that are only just beginning to emerge.

Figure 1: The new hierarchy of business needs



FORCES OF DIGITAL TRANSFORMATION

Whatever can be digitized will be. And whatever can't be digitized will have an increasingly complex web of interconnected digital layers. Whether leveraged to fuel growth, cut costs or spur innovation, these core truths lie at the heart of the dramatic changes that are transforming businesses throughout the world.

In itself, digitization is nothing new. From books, maps and music to flight check-ins, online payments and virtual personas, digitized products and services have been on the rise as a de facto way of organizing production and distribution for decades. So what makes this particular technological transformation different? And why is it critical for businesses to understand its true impacts?

The short answer to these questions is the power of the network, in which each new technology, each new person and each new source of data creates an exponential potential for growth. The early stages of digitization may already be well under way. But only now – thanks largely to broadband, the cloud and billions of mobile devices – are these digital resources being made available to businesses and users everywhere, at all times. It's an unprecedented explosion in access that is fueling rapid market transformation, new networks of stakeholders and groundbreaking forms of business innovation unlike anything ever seen before.

As business becomes increasingly defined by new intelligent networks and the interactions they empower, we see six key technological forces driving this development:

Hyperconnectivity

High-speed internet, whether fiber, 4G or LTE, is the fundamental force driving digital transformation. Reliable and widely accessible, it has propelled us into an era in which people and businesses from all parts of society are constantly online, connected to one another and to all connected things. Once connected, their ideas, behaviors and whereabouts become to some extent datafied, and therefore available as resources to be communicated and analyzed from nearly any corner of the world.

“If the industrial revolution was defined by radical efficiency in production, then the digital revolution is defined by radical efficiency in communication.”

Mike Arouz, Undercurrent

The Internet of Things

Increasingly, internet connections are becoming embedded into everything from cars and TVs to electrical appliances and physical environments. Powered by miniaturized microchips and sensors, these objects are constantly adding new sources of real-time data that can be aggregated and utilized across a range of markets including utilities, transport, retail and more.

Commoditized technology

In the 90s, a typical IT system for a mid-sized company could cost millions of dollars to install. Today the same technology might be affordable to an individual for a fraction of the price – possibly as a cloud service, or just as likely, for free online. The cloud, in fact, is a prime example of a commoditized technology, hosting entire operational infrastructures for companies whose technology investments might consist of nothing more than laptops, smartphones and tablets. By remaining “light” on technology and equipment, these businesses can scale, shift strategies or spin off into new collaborations whenever and wherever their markets demand.

FORCES OF DIGITAL TRANSFORMATION

Ubiquitous access

As resources, people, goods and services become digitized and connected, they become available across time and space, and eventually to everyone. In many ways, this completely upsets the traditional economic model based on the exclusive control of resources. Inexhaustible and instantly global, digital data is being unleashed through open sources, open databases and open technological platforms, often together with open APIs. In this way, resources that were once scarce are now our most abundant and accessible, serving as the raw material for an endless array of innovations.

Converged markets

In complex digital markets – where technology builds on technology and services spawn new services – categories that were once distinct begin to converge. Technology pulls different categories and markets towards one another, connecting them in various ways and making previously unrelated sectors dependent on one another in order to be able to build successful business models. A classic example is the convergence of the telecom and media sectors that have long been intertwined, for instance through business models like “triple play”. The smartphone, however, is perhaps the most apt example. In just a few years it has become a gravitational force for everything from communication and media to banking, health and retail. In effect, it’s one of the most densely converged consumer channels ever created – a global marketplace in our pockets.

The Networked Society

As we progress towards a world in which all people and things are connected, the Networked Society emerges. Driven by a culture of increased openness, sharing, collaboration and global self-organization, it is a society in a state of constant transformation. Social networks may be an early sign of this, but other networks of digitized relationships are constantly expanding from every connection point – horizontally among our contact lists and

connected things, vertically through various levels of apps and services, and into new dimensions of communication and collaboration. This leads to a number of notable network effects, including:

- > **Networked marketplaces** – where sellers and buyers in a particular category can come together online and access each other’s resources, skills, products and services at a much greater scale than was previously possible.
- > **Crowdfunding** – allowing individuals with new ideas but limited financial resources to aggregate small bets from the crowd to fund business startups.
- > **Value networks** – where providers of goods, services and content can create relationships directly with customers, suppliers, partners or users, instead of going through long chains of intermediaries.
- > **Third party involvement** – in which market actors that are either completely new or from another category enter into established markets as an equal partner to existing market players. By bringing new functions to the market, they create complex ecosystems, rather than linear value chains.

Together, these six forces of transformation will have seismic impacts for businesses of all kinds. As the transaction costs for business-critical processes – whether for access to resources, production of goods and services, organization of businesses and people, distribution of offerings or market communication – reach closer and closer to zero, the most unexpected forms of competition will arise, and in greater numbers. Now that the costs of launching global-scale businesses and ideas are affordable to the masses, a whole new breed of stakeholders is poised to enter the scene.

CHARACTERISTICS OF DIGITAL MARKETS

As a market undergoes various stages of digital transformation, a number of distinct characteristics emerges. To adapt to these changes, more traditional companies will be forced to shift strategies and relate to their markets in fundamentally new ways.

High-speed

Speed, above all else, is the defining characteristic of digital markets. As technology continues to shrink the distance from idea to execution, markets will emerge, develop and be disrupted faster than ever before. Following Moore's law, new services and products might initially fly under the radar of established players, only to reach a critical turning point of exponential growth – at which point it may already be too late for traditional businesses to react and respond.

All-embracing and super-niche

The tendency among digital players is to do one thing very well. At the same time, what starts as super-niche can leverage the same platform to include all data within its reach, making it possible to scale to entire category dominance in a few short years. In the best-known cases, a relatively narrow service has created entirely new market categories, upending whole industries in the process. Spotify, Facebook, Youtube and Amazon are all prime examples of this.

Blurred boundaries

Consider the merging of the telecom and media sectors. Or the swallowing of the digital camera category by increasingly powerful mobile phones. Digital transformation causes markets, products and entire industries to collapse into one another, meaning previously unrelated companies are diversifying into new competitive ecosystems as never before. Who, other than

Amazon, would think an online retailer would become a media production and distribution platform, producer of e-book readers, provider of cloud services and a global logistics pioneer – all stemming from the same technology platform?

Business complexity

The old linear relationships between buyers and sellers are fading fast. Or rather, they are dissolving into complex cross-market networks. New market niches are created every day, previously unrelated niches align, network effects come into play, and new types of relationships and collaborations take shape. Business models might involve third or fourth parties, along with a globally dispersed base of developers and users. In many cases, the true business opportunity is far removed from the actual product or service being offered, requiring businesses to develop models and strategies across a number of markets at the same time.

Hyper-competitive and collaborative

It may seem counterintuitive, but the availability of Google Search and Google Maps in Apple's AppStore highlights an interesting paradox: In digital markets, competition and collaboration often go hand-in-hand. When it comes to operating systems and browsers, the two companies are fierce competitors. But within the app ecosystem, user experience and preferences have ensured that collaboration prevails.

CHARACTERISTICS OF DIGITAL MARKETS

Indiepreneurial

Often skeptical towards the traditional corporate model, many digital businesses pride themselves on remaining independent entrepreneurs. By steering clear of traditional market and business logic, they may want to solve a real-world problem or simply create amazing new experiences. Getting rich fast is always a bonus, but not always a primary concern, whereas social responsibility, sustainability and altruism may be genuinely incorporated into their business models from the start. The emerging sharing economy, in which individuals work in explicit opposition to the conventions of consumption and growth, is just one of many manifestations of this.

User-experience driven

Wherever there is a point of contact with users, which is all but inevitable in digital markets, user experience is critical to success. Today it seems obvious, but until the launch of the iPhone many tech providers failed to realize this simple fact: The average user has zero patience for something that is more about effort than value. For traditional businesses this tends to come as an after-thought, an attempt to adapt existing products and services into digital versions. Digital upstarts, on the other hand, focus on user experience from the start, usually with far more intuitive and inspiring results.

Product-focused

In any sector that's been digitally transformed, product development is constantly ongoing. This includes everything from updates, versions and additions to improvements down to single buttons. This goes for

hardware as well as for software and services, where a significant breakthrough in design or functionality can unleash a completely new ecosystem of added-value products. Ever since the iPhone, this much has been clear: A successful product is more than just an incremental improvement over the competition – it's the invention of a new category unto itself.

Innovation-driven

“Innovation” in a traditional company is a formally organized project. In today's digital enterprises it's a default mindset. A pre-digital boardroom meeting might have asked: “What's the first-year revenue forecast?” Or “What's the business plan?” Today, by contrast, it's just as often a matter of trying out something new, seeing if people like it, and finding a way to monetize it further down the road.

Scale fast

Waze. Minecraft. Nest thermostats. The list of businesses that have risen to millions of users with a just a handful of staff goes on and on. It's a sprint to the top driven largely by a single and simple truth: Category domination is not just more possible and more rapid than ever – it's also one of the most successful business strategies of the digital era.

THE RISE OF THE USER-CENTRIC ECOSYSTEM

In the Networked Society, individuals are the first to embrace innovation. Empowered by new technologies and mobile devices, these changing behaviors are at the center of an emerging connected lifestyle. It is the beginning of tomorrow's user-centric ecosystem, and it will demand a major shift in logic from all businesses and market actors.

We have already witnessed a number of early indicators of the significant transformation now taking place. In less than a decade, media has become more of a social and digital service than a physical product for mass consumption. Hundreds of start-ups like Airbnb and eBay have enabled people to directly share and sell some of their most valuable possessions. And mobile payment and mobile health solutions now threaten to bypass some of society's most fundamental institutions. All of these examples point towards a broader, more systemic shift – one in which the evolving needs of increasingly empowered end users are reshaping markets to their core.

From ownership to access

As we move toward a situation where all products are becoming networked, this unleashes an enormous potential for the introduction of new services to the market. Rather than owning and consuming products, we prefer to stream, share, rent and subscribe to them. This has clearly been the case for the newspaper industry for some time, where even the world's most dominant publications continue to invent new ways to charge for access to their content. The film and music industries took a similar hit when the internet went mainstream and consumers began to download their media for free, leaving players like Spotify to step in with its streaming music model.

As the supply of information and content available to the average user has increased, the market's willingness to pay for information and content has dropped significantly. But although most content can arguably be found for free online, the inefficiencies of unmanaged information remain a hurdle for most users. Which is precisely where innovative companies are rising to the fore, providing quality content, ease of use, improved aggregation and curation – on demand. It is these constantly connected services and experiences, rather than a single piece of content itself, that today's consumers are proving to be willing to pay for.

It is a dramatic shift in consumption patterns that will impact more and more of the physical world over the coming years. As users increasingly share not just online content but everything from cars and apartments to clothing and power tools, the product itself is becoming an enabler for the service business. The only thing needed to spawn such new industries is a powerful network designed specifically around user access.

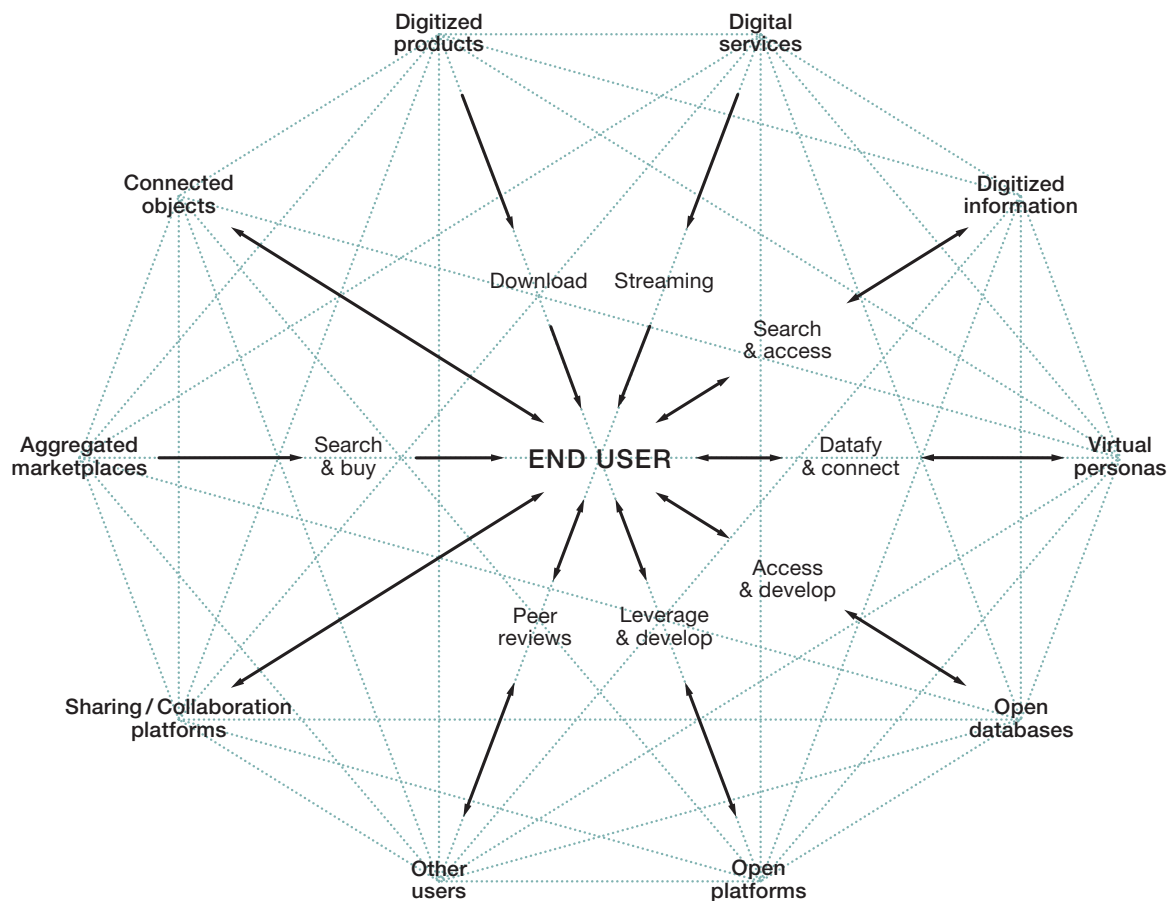
THE RISE OF THE USER-CENTRIC ECOSYSTEM

Transforming the possession/transaction model

In many ways, it is clear that the inherent business strategy for a physical economy no longer applies. Based on the traditional model of possession and transaction, its focus has largely been to build organizations that acquire, secure, exploit, guard and market its resources – and to do so in opposition to other market actors who also want access to them. These markets, which compete for and exhaust resources, innovate internally with a high degree of secrecy, and maintain a heavy focus on marketing and sales, are far less relevant as they become digitally transformed.

For a digitally networked business, the very idea of information as a scarce resource is an anachronism. As markets move from huge stockpiled inventories of physical products to massive cloud servers filled with on-demand software products and services, they will demand more collaboration and disruptive business models from all stakeholders. No longer in the business of top-down planning and industry-centric organization, they will be forced to turn outward toward more open networks characterized by crowdsourcing, crowdfunding and open innovation. All focused on discovering and delivering the right interactions and access models to meet consumer demands.

Figure 2: The user-centric ecosystem



BREAKDOWN OF MARKET BARRIERS

In pre-digital markets, a few predictable factors were essential to scaling up from market entry to category dominance. Generally, it was important to own or control the production resources, to build a large organization, to create a distribution network and to take a strong position in the value chain. On top of this, you needed the marketing muscle to sell and promote yourself, not to mention the upfront investment capital to get started, regardless of whether or not the market even yet existed. Naturally, this put already successful businesses and wealthy financiers at a distinct, and often unassailable advantage.

In digitally transformed markets, this is no longer always the case. Commoditized technology, open digital resources and digital networks give many more people easy and affordable access to productive resources – both digital and physical. As a consequence, the old market barriers are breaking down, allowing new entrants into the field thanks to several important developments.

Tech leverage & cheap startups

Beyond the clear advantages of digital resources and services, there are a range of points in every value chain that can be better replaced by digital equivalents. Not only can they be more user-friendly and more affordable, but they can be leveraged towards more users at little to no added cost. Examples of this are numerous and can be found in many different categories:

- > **Uber**, the San Francisco-based taxi service for the internet generation, has replaced traditional taxi centrals with a digital platform that directly connects drivers with customers, without the need for a central taxi organization and dispatch service. Regulatory agencies in a number of cities are already struggling to adapt to the threat, or opportunity, these and similar car-sharing services pose to traditional taxi and automotive insurance organizations.
- > **iZettle** and **Square** are examples where a much simpler mobile device is now replacing traditional card terminals used by merchants. Even though they require a physical add-on accessory to the mobile phone for swiping the credit card, both services are basically digital platforms that execute card payment transactions using the internet and the existing digital technology of smartphones.

- > **Local Motors**, to give an example in the world of physical manufacturing, is a case of a car manufacturer that leverages technology platforms and existing manufacturing capacity to build completely new types of cars.

In all of these instances existing technology platforms are used to dramatically simplify, and in most cases shortcut, previously complex functions in supply and service chains. Based on low-cost technologies, more and more companies are thus finding it easier to acquire large-scale user bases before even becoming funded businesses. Still others rely on talented individuals who work cheaply or for free, just for the chance of fame, fun or outsized financial rewards that are now possible with relatively little upfront investment.

“The old way is that the rich get richer. Now, if you have a rich network – then you can be successful.”

Robin Tieglund, Stockholm School of Economics

BREAKDOWN OF MARKET BARRIERS

Networked funding, production & organization

In traditional markets, getting funding from venture capitalists or business angels was very much based on the premise of having the right connections and access to the right business contexts. Your success of securing funding was also, to at least some extent, dependent on your own ability to think and strategize as a seasoned business professional, rather than as an innovator, creator or problem solver. With internet-based platforms like Kickstarter, IndieGoGo, Seethers, Lending Club and CrowdCulture, funding is now more accessible than ever for those who can inspire a following or tap into an urgent need. For established players, the risk is that the more verticals you build, the further you are from your base of users, where the biggest threats can gain traction in no time at all.

When it comes to production, open marketplaces like Fiverr, oDesk and eLance make it possible to organize excess labor capacity at an individual level throughout the world. Rather than hiring full-time staff or paying sub-suppliers, many businesses can simply choose to hire on demand. Even existing products can be integrated into this network. Such as when Airbnb, Relay Rides, or Rent a Runway allow individuals to rent out unused resources including apartments, cars or entire wardrobes as needed.

Entire networked organizations are only a logical extension of these trends. When physical location no longer matters as much as having the right talent connected by the right digital working tools, it becomes possible for specific projects, rather than long-term investments, to steer the course and scale of complete enterprises. This is particularly true for software development, where a broad collection of developers can work independently for a number of companies, shifting commitments according to personal interest and potential gains for the project they happen to be engaged in.

Digital distribution

Creating established distribution channels, and controlling them, has been a competitive edge for established companies and served as a market entry barrier

for many startups. Often, these channels have been built up over years or decades of investment, negotiations and active relationship-building between parties in the traditional value chain. Digital transformation is now changing all of this.

- > **First**, a digital presence enables direct distribution to end users over the internet. Although this is not an exclusive advantage for digital businesses, it is a strength for those who have organized their operations around direct distribution from the very start, rather than having to transform their existing value chain model. The explosion of OTT (Over-the-Top) media services like Netflix, HBOGo and Hulu, to name a few successful American examples, have gained a significant advantage on the market in this regard.
- > **Second**, businesses that solve consumer needs digitally rather than with physical products and services have access to open digital marketplaces where they can launch and distribute their offerings. These marketplaces, in contrast to traditional markets based on exclusive agreements, tend to aggregate the widest possible range of brands for customers who prefer the ease and searchability of a single market channel. Accordingly, many startups of today have better success through open marketplaces like Google Play, App Store, Amazon, Etsy and Zazzle than the small startups of the past could ever have hoped to achieve.
- > **Third**, various online platforms that are not set up as actual marketplaces are nonetheless used as such by enterprises of all sizes. YouTube is an interesting example, where established brands, startups and individuals alike take advantage of its familiarity and easy access to distribute content and marketing.

BREAKDOWN OF MARKET BARRIERS

In none of these three examples are digital businesses dependent on a traditional, established value chain to distribute their offering. Instead they can shortcut the traditional middlemen and distribute directly, globally and nearly instantly online. Although this never automatically implies market success, it is one major step removed in introducing a new business to a global market.

Lower risk means more players

When digital technology makes it easier to enter a market, the playing field opens up to those who have few assets to risk, and to those with little experience in the sector at hand. Low development, marketing and inventory costs mean that, in practice, the market is wide open to more initiatives from players of all kinds.

A case-in-point is the Swedish food product information app Shopgun. Created by a carpenter named Ola Thorsén, the app allows consumers to scan a product to access additional information about whether the product was sustainably produced. Using a combination of consumer-generated data and neutral information from NGOs including WWF, Greenpeace, the Swedish Society for Nature Conservation and Fair-Trade, it empowers consumers to make more informed decisions about products before they buy.

In a pre-digital market, it is highly unlikely that such an idea would have been realized, and even less likely that it would be launched by a private citizen and carpenter, rather than by an existing non-profit or trade organization. Less than a decade ago, neither the technology (smartphones and apps), the distribution channel (app stores), nor the affordable app-based networked model even existed.

This is of course just one of many examples, but one that illustrates the power of new competitors to come virtually out of nowhere in an effort to rapidly reshape established markets. At this point, it is hardly rare to find dozens of apps struggling against one another to try to solve a single, identical problem. Only those who provide the best experience will succeed, but as global phenomena like WhatsApp have shown, the potential rewards far outweigh the risks of entering such highly

competitive new marketplaces. The speed of scale for these new players is virtually unlimited, something we can only expect to accelerate over the coming years.

New forms of competition

With business costs being driven ever lower, today's innovators can experiment cheaply and rapidly, reaching nearly every market segment from the start. Rather than focusing on one conventional strategy – e.g. the low-cost producer, the sleek innovator or the user-friendly start-up – they're able to combine off-the-shelf technologies with big ideas to see what new types of business might emerge. For incumbents in any industry, this unleashes several new forms of competition into the market.

- **The super-efficient competitor** – Whether through cloud-based infrastructures, crowdsourced ideas, user-generated data, open databases or free digital channels, the super-efficient competitor can create products that are simultaneously better and cheaper than existing products. And they can do it with just a handful of full-time staff. As examples such as Skype and Wikipedia have shown, a single competitor can create a new expectation for low-cost or free digital alternatives, leaving industries as powerful as telecom and publishing struggling to reinvent themselves for years to come.
- **Outside category competition** – Google's recent purchase of Nest highlights the unpredictable nature of outside competitors entering new digital markets. Rather than an effort to improve thermostat, smoke detector and alarm system hardware, it likely represents a play into the burgeoning market of the connected home, where the search giant might hope to become the dominant operating system or cloud service provider behind our smart products and digital selves. As digital technologies cause markets to converge, unlikely new sets of competitors will become the norm. In the emerging smart home ecosystem, players as wide-ranging as telecoms, energy companies, gaming systems and home appliance manufacturers will all be competing for market share.

BREAKDOWN OF MARKET BARRIERS

- > **The swarm of niche** – On their own, most small digital initiatives, startups and business ventures pose little initial threat. Collectively, however, they have the potential to unlock small, yet expanding market niches and revenue streams that major players have ignored. The finance sector is one such industry facing a countless array of niche competitors – from micro-financing and mobile money to personal finance aggregators, loan comparison services and crowdfunding platforms. In the short term, the massive resources of traditional financial institutions are all but certain to prevail. But especially on the customer side, the general dissatisfaction towards banks and credit card providers leaves ample opportunity for new, user-friendly digital platforms to transform the competitive landscape over the coming years.
- > **Business logic disruption** – Following closely on the heels of new technologies, business logic disruption is without a doubt the major threat facing established businesses today. After all, it may have been technology that enabled Google and Facebook to dominate the search and social media categories for billions of users worldwide. But only by applying a new business logic, largely based on innovative advertising revenue models, did they truly become disruptive. The result has been a fundamental reconfiguration of business models ranging from journalism and marketing to GPS navigation. As global behemoths, it is now their turn to diversify, fend off or acquire the next generation of disruptors.

NEW LOGICS OF DIGITAL TRANSFORMATION

Faced by increasingly intense and unpredictable competition, and enabled by new technologies and business networks, the 21st Century enterprise is confronted with an entirely new set of business logics.

Users, not consumers

In a digital economy the term “consumer” no longer captures the true nature of those on the receiving end of products and services. After all, digital information and data-based experiences, shared physical resources and online services are not consumed, in the sense of being exhausted or taken out of circulation upon use. Instead we refer to users, who leave resources still available after accessing them.

“You can’t be good at just one part of the value chain anymore, because you end up being commoditized. All you do is make the one part and there’s only a couple of pennies in that game for you – and they’re going to be half pennies in four years. So you have to figure out how to get close to the customer, the user, and figure out what they need and provide it quickly.”

Aaron Dignan, Undercurrent

This is an especially useful shift when it comes to consumer goods, apartments and modes of transportation that can be shared through digital services. By speaking of resource usage, rather than consumption, we are already one step further on the path towards sustainability. Following this logic, we consider ourselves as temporary users of limited resources, instead of private consumers engaged in endless cycles of overconsumption and waste.

Recognize the network

The access model of a user-centric ecosystem is based on the premise of a networked business. This means that businesses have to recognize and accept the network structure of their market in order to organize themselves based on access. To recognize the network means to consider all kinds of market actors – not just usual customers and suppliers – as potential contributors to their network. This includes existing customers, non-customers, competitors, all kinds of suppliers, completely different markets and categories, third parties and more.

Free access

As people grow to expect certain things to be provided online more or less for free, new business models will have to be invented to monetize categories of free digital products and services. The media sector is a classic example, having struggled for years to shift from “user pays” models to advertising models that capitalize on the mass access to media products. The flat-fee streaming rental model (S-VOD) of video services like Netflix and Viaplay is another route towards an access-based business model instead of pay-per-view. Despite the fact that much of the same content

NEW LOGICS OF DIGITAL TRANSFORMATION

can be found for free online, users are nonetheless willing to pay in order to gain instant, high-quality, and often personalized access to video content. This pushes competition on the market towards the game of who can provide the best type of access, i.e. user experience.

Aggregation over refinement

In traditional value chain logic, raw materials are refined by different parties in several steps, with each step adding value until the right product or service is delivered to the end user. In the digital space, a single party can directly create successful products and services from scratch, as can a growing number of competitors. This means that, other than a well-designed user experience, these digitized offerings need little in the way of added “refinement”. Instead, it is their aggregation that adds new value to digital markets, in several layers.

An example could be any of today’s social platforms that aggregate people into a network. Within these networks it’s possible to further aggregate people into groups, events, or tap into streams of information based on personal contacts and interests. Other platforms, such as the New York-based digital startup EventBrowsr, are built on top of the open databases of services such as LinkedIn and Meetup. The value in this case lies in simply aggregating data in new ways, making it easy to access according to user-specific needs.

Value networks, not value chains

The access model changes the value chain logic of many traditional markets based on possession and transaction. In a possession/transaction economy, the value chain is a rational organization of an industry vertical. Different market actors can focus on refining resources in various stages to increase their value, from raw materials to packaged and marketed consumer goods on the supermarket shelf. Taking care of an entire value chain vertical is usually a scope too large for an individual enterprise to manage effectively, leading to high degrees of specialization within the vertical.

The direct online access enabled by digital transformation changes much of that, usually by eliminating one

or more steps in nearly any value chain. Distributors, for instance, often become redundant as all enterprises within an industry begin to have touch points with end users. In the digital space, where access is disrupting the old linear value creation process, it is increasingly relevant to work within value networks.

When all market actors have direct access to all other market actors, they can deal directly with one another – as well as with end users – incorporating each other’s products and services into their own market offerings. Accordingly, in the access model, we see markets that produce for the end user in relatively complex value networks, where two companies can be both suppliers and customers to each other in the creation of relevant market offerings.

Take, for example, the world of video streaming apps. Here, you might find an app produced by a traditional media company, aggregating content from various other media channels and streamed over a telecom competitor’s networks. Available in several app stores, it also might produce its own film and TV programs. It is thus embedded tightly into a complex network of marketplaces, production and streaming channels, often using the platforms of direct competitors. In this type of value network there are few distinct positions, as each player is constantly shifting into new constellations.

New understanding of resources

Everything that can be digitized, represented in digital form or translated into data is a resource in the digital space. This is as simple as it is fundamental to how companies can approach the digitized market to develop new business opportunities. There are a number of new forms of “digital resources” that are available thanks to the access that digital transformation enables.

Collaboration over competition

When access is crucial to creating successful products and services, market logic shifts from competition to collaboration. In an access model it becomes more important to have access to the digital resources of others than it is to protect one’s own from potential competitors. By accessing and making use of competitors’ technology platforms, services,

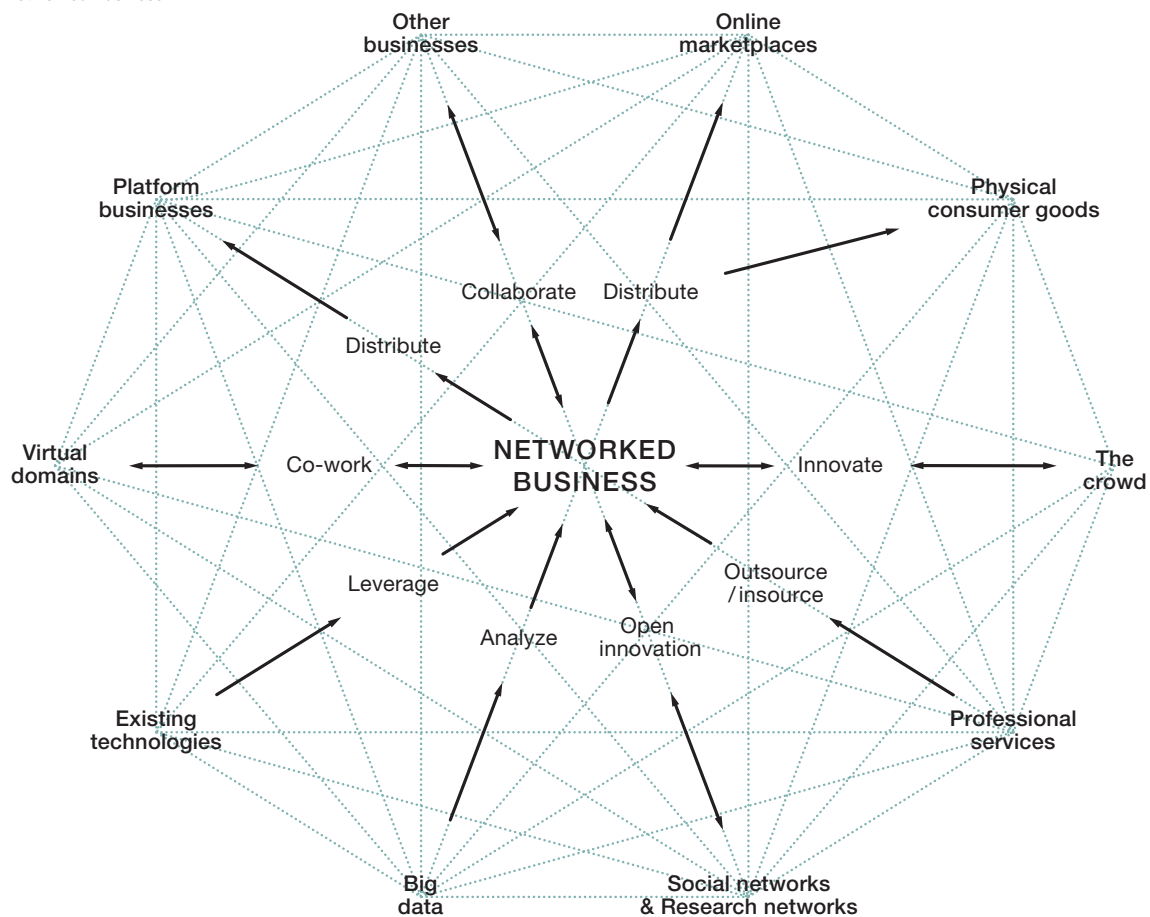
NEW LOGICS OF DIGITAL TRANSFORMATION

content, etc. it is possible to offer an even better product or service to the market. These collaborative relationships, where all market actors are interconnected and to some degree dependent on each other, make it possible to leverage the strengths of others to keep up with the constant pace of market transformation.

> **Instabridge**, a telecom startup, is building a free wifi network based on the excess capacity on private citizens' and various organizations' wireless networks (by accessing and connecting their routers). As such, Instabridge could be perceived as a challenger to the internet providers whose networks the company accesses and shares for

free. Rather than rebuking Instabridge, however, Deutsche Telecom and others are choosing to collaborate with the company, understanding that they can take advantage of Instabridge's service in order to better leverage the capacity of the wifi networks they are themselves providing. This, in turn, makes it possible for Instabridge to expand their services in a virtuous cycle of collaboration that benefits both partners.

Figure 3: The Networked Business



NEW LOGICS OF DIGITAL TRANSFORMATION

Transparency

In markets where almost anything is easily accessible – so is information about anything. This amounts to increased transparency in all aspects of business: about business models, business processes, internal company culture and procedures, and much more. The transparency is also prevalent on the market as a whole, meaning that (in theory) all alternatives on a market are available to all and that customers can relatively easily evaluate all (or at least several) alternatives in a category before making their choice. Accordingly, this transparency is utilized by both customers and competitors.

Need for trust

To increase and build on the shared access within a network, the level of trust must be high. This means that all business models that are access-based must work to build trust into their model. Only when all the network actors can ensure the reliability of their contribution to the network can a systemic level of trust be created. And when all market actors begin to rely on this trust, more complex layers of collaboration can be added, ensuring that the whole network functions seamlessly as it expands.

- > **Uber** is one such access-based business model that has built trust into its platform. By allowing customers and drivers to rate one another, and by making all ratings transparently accessible to all parties, the service ensures that drivers who deliver good service and well-behaved customers are naturally selected. A similar ratings-based approach is used across a number of sharing services. By institutionalizing trust within the system, they help to increase access to those who are most active, engaged and professional, so that even if a relatively small portion of participants perform according to expectations, they nonetheless rise to the top.

In a networked market it's not unthinkable that all market actors, from individual customers to companies, will be rated by the crowd and that these ratings will be made widely accessible. Companies will have ratings – which in many cases they already have, considering the impact of services like TripAdvisor and Yelp within the restaurant industry – based on how well they deliver their service, and people will receive ratings on how valuable a customer they are. Crowd ratings become the new credit ratings, determining the level of space that actors will have on the market.

THE END OF INDUSTRIAL ORGANIZATION

Looking ahead at the trajectory of today's digital markets, the question arises whether companies will even be needed in certain realms of the digital space. Digital transformation has the tendency to minimize the gap between trading parties and eliminate the need for middlemen who primarily serve to distribute and provide narrow channels for products and services towards buyers. Instead, producers and individuals can directly connect with one another. In other cases even this distance won't be necessary, since more and more individuals are themselves becoming producers.

If the maker movement, for example, continues to grow in its abilities to personally manufacture goods using technologies such as 3D printers, there is a rising possibility that individuals will be able to produce and trade physical goods without involvement from commercial providers. After all, makers can accomplish their projects from start to finish through crowdfunding and digital channels, rather than through purchasing the extensive chains of resources needed to produce, refine and distribute their goods.

Closing the market gap

If this trend continues, it may just turn out that the era of industrialization – with its concentrated and specialized mass market verticals – was a historical anomaly. It may come across as the natural state of things today, but the extreme distancing and concentration of the sites of production, distribution and consumption that industrial markets entail has been a radical departure from the local trades that characterized most of human history.

As digital transformation continues to close the gap between market actors, a renewed proximity on a global scale arises, bringing digital markets together within Marshall McLuhan's so-called "global village". Although many of the operating models for such 21st Century digital businesses have yet to be invented, their possibilities are something we will explore in the next part of this series on Digital Business Transformation: Models of Digital Operations.

Ericsson is the driving force behind the Networked Society - a world leader in communications technology and services. Our long-term relationships with every major telecom operator in the world allow people, businesses and societies to fulfil their potential and create a more sustainable future.

Our services, software and infrastructure - especially in mobility, broadband and the cloud – are enabling the telecom industry and other sectors to do better business, increase efficiency, improve the user experience and capture new opportunities.

With more than 110,000 professionals and customers in 180 countries, we combine global scale with technology and services leadership. We support networks that connect more than 2.5 billion subscribers. Forty percent of the world's mobile traffic is carried over Ericsson networks. And our investments in research and development ensure that our solutions - and our customers – stay in front.