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Why Blockchain will Disrupt Corporate Organizations – What Can be Learned from the "Digital Transformation"

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Abstract

We live in a world that has historically been dominated by centralized, hierarchical organizations. Such organizations are characterized by (i) a centralized source of authority; (ii) a formal hierarchy with clearly defined "roles"; and, (iii) standardized operational systems and procedures dictated by that centralized authority/hierarchy. This type of organization has exerted an enormous influence on modern political, economic and social life, particularly in a business context. Regulatory models have been designed to support and sustain businesses organized in this way. Today, however, new digital technologies are disrupting this "old world" and introducing a shift in the practices and mindset of our society. New technologies are driving the emergence of "flatter", more decentralized forms of organization. In this paper, we offer an analysis of how blockchain and related distributed ledger technologies are disrupting corporate organizations as an illustration of this broader "digital transformation." The paper briefly introduces the digital transformation and main argument (Section 1); then considers how the digital transformation has led to the emergence of "platform" companies (Section 2). Since blockchain technology can be viewed as a next step in the "digital development" of a corporate organization, the paper then discusses the main features of blockchain technologies and smart contracts (Sections 3 & 4) and examines the often-made claim that these technologies are all just hype / a fad (Section 5). Section 6 explores why these technologies are so potentially disruptive in a business context and then introduces several examples of such blockchain-based business organizations, as well as possible future developments (Sections 7 and 8). Section 9 concludes.

Keywords: *Blockchain, Corporate Governance, Cryptocurrency, Crypto, Decentralization, Organizations, Smart contracts*
JEL Classifications: D20, D24, D26, D85, G30, J20, K20, K22, L17, L26, O16, O30

Introduction

We live in a world that has long been dominated by centralized, hierarchical organizations [1] [2]. Such organizations are characterized by (i) a centralized source of authority; (ii) a formal hierarchy with clearly defined "roles"; and, (iii) standardized operational systems and procedures dictated by that centralized authority/hierarchy [1] [2]. This type of organization has exerted an enormous influence on modern political, economic and social life.

In a business context, for instance, centralized, hierarchical organizations have been central to the emergence and global expansion of capitalism. Corporations are the most prominent example of such structures, and the advent and proliferation of the corporate form has been a defining feature of modern economic development. Recall the rapid growth of such corporate structures during the rise of mass production in the context of the industrial revolution. Moreover, other types of centralized, hierarchical organization (banks and other financial service providers, for instance) played a crucial role as facilitators (or "intermediaries") allowing third parties to engage in various business transactions. Finally, highly centralized "nation states" provided the supporting infrastructure – both political and legal –

that allowed such businesses to operate effectively.

As such, centralized, hierarchical organizational structures supported by the "correct" procedures have been hugely influential in "getting things done" efficiently and creating trust [3] [4]. Previous technological revolutions led to a concentration of such organizations, as society adapted to the uncertain meaning, effects, and risks of technological change by pooling (i.e., centralizing) authority. Regulatory models – particularly company law and corporate governance – have been designed to support and sustain this form of business organization [5] [6].

In recent decades, however, an interconnected series of technological innovations – specifically those associated with the on-going "Digital Transformation" – have re-shaped social life and disrupted centralized organizational forms [7]. Consider the following technologies:

- Cheaper, smaller and more powerful digital hardware (initially PCs but, more recently, smartphones);
- Global communication networks and mass connectivity (the Internet));
- Cloud-based storage of Big Data & automated algorithms;
- Multiple emerging technologies that interact with each other creating synergy effects (e.g., robots/automation, Artificial Intelligence, machine learning, the Internet of Things, nanotechnologies and Blockchain).

These overlapping technological developments provide the foundation and necessary infrastructure for an on-going process of "digitalization" in which technology disrupts every aspect of our lives [8] [9] [10]. The economic, cultural, and social impact of these changes is so significant that it makes sense to speak of a "digital transformation."

A particular significant effect of these global digital technologies is to disrupt the "old world" of centralized, hierarchical organizations. Technology is currently introducing and driving a shift in the mindset and practices of our society [11]. In particular, the limitations of a centralized, hierarchical and "proceduralized" [12] world are becoming more apparent. Most obviously, such organizations are slow to adapt to a fast-changing reality and are losing public trust. New digital technologies are driving the emergence of "flatter," more decentralized forms of social organization [12]. This change can be felt across society, but particularly in a business context.

The implications for regulators and other policy makers seem obvious. A tension or "disconnect" is emerging between traditional regulatory models and the form of contemporary business organizations. It, therefore, seems appropriate to deepen our understanding of these new organizational forms as a pre-condition to developing new regulatory models more appropriate to a digital age.

In this paper, we offer an analysis of how blockchain and related distributed ledger technologies are disrupting corporate organizations as an illustration of the "digital transformation." The paper first considers how the digital transformation has led to the emergence of "platform" companies (Section 2). Since blockchain technology can be viewed as a next step in the "digital development" of corporate organization, the paper then discusses the main features of blockchain technologies and smart contracts (Sections 3 & 4) and examines the often-made claim that these technologies are all just hype / a fad (Section 5). Section 6 explores why these technologies are so potentially disruptive in a business context and then introduces several examples of such blockchain-based business organizations, as well as possible future developments (Sections 7 and 8). Section 9 concludes.

The central claims of the paper are (i) digital technologies have already disrupted centralized, hierarchical corporate organizations by facilitating "platforms," (ii) this process of disruption will only continue as new blockchain-based technologies proliferate, and (iii) regulators need to be more attentive to these changes and their economic and social effects.

Platforms

One important adaptation to the digital transformation has been the emergence of "platform" companies. [13] The term "platform" is usually associated with different types of tech-companies, i.e., companies that operate a "social" platform (Facebook, Instagram), an "exchange" platform (Amazon, Airbnb, Uber), a "content" platform (YouTube, Medium, Netflix), a "software" platform (GE's Predix), or even a "blockchain" platform (Ethereum, EOS). The emergence of these new platforms and services has been one of the significant economic and business developments of the last two decades [14].

In each of the above examples, the platform creates value by facilitating exchanges between two different but interdependent groups (e.g., groups of friends (Facebook, Instagram), content providers and consumers (YouTube, Medium, Netflix) or service providers and users (Amazon, Airbnb, Uber). The platforms leverage networked digital technologies to promote economic exchange, the transfer of information or to connect people. The platform facilitates interactions between creators and extractors of value and then generates profit for itself, i.e., the owner-shareholders of the platform [15].

The popularity of the platform business model has grown in recent years as a series of inter-connected technologies – the Internet, code-based algorithms, and PCs and smartphones – have increased. These technologies have advanced the platform business model by allowing the fast, large-scale exchange of products and information utilizing decentralized networks. This creates a global ecosystem that encourages registered users and content consumers to add more value to the platform by repeatedly creating more content which will, in turn, attract additional content creators and consumers (i.e., platforms benefit enormously from "network effects") [16]. Such platforms are powered by algorithms or pre-defined formulas that are used to matchmake individuals or consumers with service providers/products.

Crucially, the incorporation of the platform model now extends beyond the technology sector. Consider the following examples of non-technology firms that can see the benefits of re-organizing as platforms: most obviously, many traditional retailers are shifting their distribution channels for selling products from "stores" to online platforms [17] [18].

But, we should recognize that there is more to platform companies than just using new technologies to facilitate transactions, exchange information, or to connect people. There is another valuable lesson to be learned from the emergence and success of this type of company. What these companies also have in common is that they organize their "internal" operations to facilitate collaboration amongst multiple stakeholders to deliver constant innovation in the functionality of the platform and related products and services [19]. These various stakeholders include but are not limited to, managers, employees, and investors, but also (and crucially) consumers, developers, content creators, other companies (both large and small), non-profits, educational institutions, governments, etc. [20].

What makes a platform-style of organization distinctive is that it uses stakeholders' input and feedback to improve the user experience and engagement with the platform and its products, services, and other solutions [21]. This is another important lesson to be taken from the success of Amazon, Facebook, Netflix, etc. All of these companies are disrupting and "decentralizing" existing business models by eliminating and replacing traditional intermediaries. These companies facilitate more direct "peer-to-peer" transactions between service providers / creators/producers, on the one hand, and the consumers, on the other.

In the best and most successful firms, governance is no longer about hierarchy or control. Instead, the focus is on creating a flat, open and inclusive organizational environment that leverages the talents of all stakeholders in that company's network [22] [23] As such, platforms are built around the idea of delivering constant innovation via an open and inclusive process of collaboration and co-creation. By organizing-for-innovation in this way, such platforms break from the clearly defined, fixed hierarchies, static roles, and authorized procedures of traditional business organizations [24].

Everyone – business, government, investors, charities – are now experimenting with platform thinking [25]. Various reasons are often given for conducting such experiments. The main benefits? Cost savings that result from cutting out intermediaries and creating more transparency are frequently mentioned [26]. But these new technologies also empower people. They provide a new and secure environment in which opportunities for personal fulfilment and individual creativity increase [27].

"Become a platform or be replaced by one" is the mantra of the new technology-driven economy [12]. Crucially, new technology is central to this approach. In this sense, all companies that wish to operate as platforms need to think and act "as if" they are a tech company [28]. In particular, new technology offers users the possibility to share reviews, experiences and any other information. The technology that drives the platform also connects developers, creators on one side and users on the other. And it is here where blockchain and distributed ledger technology can play an important role.

Blockchain

To understand blockchain technology, it makes sense to first consider the Internet. The Internet enabled a free, fast and global exchange of information and ideas. The blockchain adds another dimension by making it possible to transfer and exchange value and assets without the involvement of traditional (centralized and authoritative) intermediaries. Blockchain technology achieves this by storing personal and other information in a decentralized, accessible, and secure online environment.

Stated simply, a blockchain is a shared and distributed digital "ledger" or "database" that maintains a continuously growing list of "blocks" [29]. A block can contain a record of transactions involving digital assets but could also include "facts" or other information. Once the record is verified and validated, a block is added to the chain with previous records in linear and chronological order.

What makes the blockchain such a revolutionary technology is that the ledger or database is distributed to a countless number of participants ("nodes") around the world in public peer-to-peer networks (similar to the Internet) or private (or permissioned) peer-to-

peer networks (similar to an intranet).[30] It is the decentralized character of the blockchain that makes it so potentially disruptive. Participants hosting a copy of the blockchain can be individuals or organizations (and even things). The only condition is that they have a smartphone or Internet connection. Everybody with a smartphone can create a real digital ID and interact with other people in the blockchain network.

Blockchain technology thus enables and facilitates access to finance, insurance services, stock markets, etc. In this respect, it has the potential to promote financial inclusion and end the social exclusion surrounding the provision of financial services. "Peer-to-peer" transactions are possible because the technology uses a "distributed consensus model" where the network "nodes" verify, validate and audit transactions before and after they are executed [30]. This is often safer than a traditional model in which transactions can only be executed by or through a third-party (and "trusted") intermediary, such as a bank, judiciary or notary [30].

Network connectivity is vital because it allows for multiple identical copies of the blockchain to be available simultaneously across the network. This makes it practically impossible to alter or erase information in the blockchain [30]. The use of cryptographic hashes makes tampering with blockchain records even more difficult, if not impossible [30]. Cryptographic hashes comprise complex algorithms. The result of this combination of technologies is that even a minuscule change to the blockchain will result in a different hash value, making manipulation instantly and readily detectable by other participants.

Digital signatures help establish the identity and authenticity of the parties involved in the transaction. These security measures make blockchain validation technologies more transparent and less prone to error and corruption. Even if they are not 100% secure they are indeed more reliable than existing methods of verifying and validating transactions via third-party intermediaries [31].

In short, blockchain technology creates an independent and transparent platform for establishing truth and building trust [31]. Intermediaries, bureaucracy, and old-fashioned procedures are replaced by the "4 Cs" of code, connectivity, crowd, and collaboration [29]. The technology increases openness and speed, while at the same time significantly reducing costs.

But perhaps the most significant feature of blockchain is that it is so adaptable. There are multiple possible applications relevant to a business context. Most obviously, blockchain can be used to provide new methods of processing digital transactions (i.e., e-commerce or financial services) [30]. But blockchain can also be used for crypto-currencies (e.g., Bitcoin), records management (e.g., real estate, corporate or medical records), "e-voting" and identity management (IAM).

It is for this reason that blockchain technology has been mentioned as one of the most significant disruptive technological innovations since the emergence of the Internet [32].

Smart Contracts

Blockchain is even more significant when combined with so-called "smart contracts." In this context, a smart contract refers to a computer program code or protocol that automates the verification, execution, and enforcement of certain terms and conditions of a "contractual" arrangement [33].

This term was first introduced by Nick Szabo, a computer scientist, and legal theorist, in 1994 [34]. A smart contract is a computer program code that enables the verification, execution, and enforcement of specific terms and conditions of a contractual arrangement. An often-cited example is the "purchase" of music through Apple's iTunes platform. A computer code ensures that the "purchaser" can only listen to the music file on a limited number of Apple devices.

A smart contract could also be an essential part of, for instance, a car loan. If the borrower misses a payment (tracked via a blockchain-like technology), the contract will not allow the use and operation of the car ("enforced" via networked technologies that "disable" the car automatically, rather than a "repo man" physically depriving a driver of access to their car) [35]. Such smart contracts will become more prevalent in the growing world of the Internet of Things [29]. As more devices are connected to each other, the more "smart contracts" will be used to execute and enforce "legal transactions."

All Just Hype?

Many still consider blockchain-based technologies and smart contracts to be a fad or hype [36]. According to this more skeptical view, the hype has been fueled by numerous tech firms, particularly in the area of cryptocurrency, such as Bitcoin. Such firms often have over-promised and under-delivered, feeding doubts about the underlying technology of blockchain.

For sure, challenges do remain. Blockchains still have significant technical, operational and scaling shortcomings [37] [38] [39]. Considering the perspective of mathematicians on these issues is interesting. They will often point to the fact that there is still a lack of complete decentralization in most current applications of blockchain. For instance, the traditional mechanism for validating and verifying a new block of transactions

– e.g., Bitcoin's proof of work protocol - has led to "mining pools" as a result of economies of scale and unbalanced reward structures [40]. Also, the anonymity in blockchain organizations means that they are prone to "Sybil attacks" or "51% attacks [40]." There are also many examples in which the anonymity (and autonomy) has led to hacks [40]. Remember that in a truly decentralized system, the code is law. This means that any mistakes (stolen/lost passwords, programming bugs, etc.) are permanent and irrevocable.

Another important challenge is cybersecurity; supporters of blockchain claim that it is secure by design, but the technology hasn't been adopted widely enough yet for it to be severely tested [41]. Several hacking attacks against digital currencies in recent years underscore such security concerns. Moreover, the use of cryptocurrencies, by criminal organizations has "damaged" the credibility of the underlying technology.

Then, there are the costs of shifting to the new technology, which is continually evolving, and which are also high. Not to mention the many technical challenges involved in integrating blockchain databases with existing systems [28] [41]. Recall the car loan contract example discussed above and the need for a sophisticated and reliable interface between the ledger recording repayments and the car software systems that, under certain circumstances (non-payment) will shut down the vehicle.

Finally, there is a great deal of regulatory uncertainty surrounding blockchain and smart contracts, especially in the financial services industry [29]. Legal frameworks globally will have to change to adapt to the growing use of this type of new technology.

Nevertheless, there are signs that we are close to a tipping point regarding the adoption of blockchain and its impact. There is a widespread proliferation of blockchain applications and initiatives that are considering blockchain. The fact that so many "old world" organizations are exploring possible uses of blockchains and smart contracts suggests that it not all hype [42].

Escaping a "Centralized World"

A particular problem with "old world" centralized, hierarchical organizations is that decision-making processes can become slow, cumbersome and costly [12] [43]. In a fast-paced, consumer-driven economy this can become a problem for incumbents [44] [45]. On an almost daily basis, we see how peer-to-peer technologies and organizations deliver a more satisfying consumer experience than traditional firms. This goes further than the convenience of Wikipedia, Uber or Airbnb when compared to the products or services of "traditional" encyclopaedia publishers, taxi companies or hotel operators. In a legal context, for instance, e-Court, an online private court, aims to replace traditional legal proceedings [46]. Despite the uncertainties of such new systems, many people are attracted by the speed, convenience and user-friendliness of such a system [47][48]. The values of a digital age are pushing consumers towards the more agile solutions offered by younger, flatter organizations.

A similar set of issues affect potential employees as they consider whether to work for "old" or "new" style organizations. The younger "Millennial" generation view centralization as a threat to personal autonomy, choice, and happiness [49] [50]. It's a familiar refrain that an overly "proceduralized" society drags people down [12]. Formal structures and process kill creativity and lead to exhaustion and burn-out [12]. The younger generation intuitively understands that there is little room for manoeuvre in a highly centralized world and find that world frustrating and unsatisfactory. Moreover, hierarchies – which have never been particularly attractive for younger generations – become even more bothersome to younger generations that are increasingly losing trust in people and organization [51].

As such, a decentralized culture creates more opportunities for everyone for personal expression, fulfilment, and – ultimately – happiness. There is greater recognition that hierarchical structures kill open and honest discussion, leading to either indifference, apathy or exhaustion [47]. Plus, hierarchies seem to go hand in hand with formal procedures, and an over-reliance on procedure – especially procedures designed and imposed "from above" – can take the joy out of any activity [47].

Personal happiness, freedom and expression can better thrive in a decentralized world, provided, of course, that it offers a secure environment [12]. This is why so many people are intrigued and captured by blockchain platforms. And, of course, the younger generation are aware of the technological and regulatory shortcomings of blockchain platforms. They also know that many blockchains and smart contract initiatives and start-ups will fail. They know that "prime time" is most likely still several years away [12]. But this is just part of the trade-off. It's worth waiting and investing in the development of blockchain technology, smart contracts, and cryptocurrencies. The more initiatives and experiments, the sooner we will see mainstream applications. Decentralization and automated trust are just a next step in our evolution.

Decentralized Autonomous Organizations

Having described the background technologies and the appeal of a decentralized organization and society, let's consider some business examples. We start with a

particularly radical experiment, "The DAO."

Christoph Jentzsch, the co-founder of IoT company Slock.it, was one of the initial founders of a digital, decentralized autonomous organization" in May 2016 [52] [53] [54]. The original idea was to set up a corporate-type organization without using a conventional centralized structure and which utilized blockchain and smart contracts. The organization, which was called "The DAO" was completely decentralized. The DAO intended to automate governance and was based on the idea that since "people" don't always follow the rules (even if the rules are well-designed), it would be better to use computer code to manage the organization. It was initially set up as an alternative investment platform.

Most strikingly, the DAO didn't have a physical address. It was "merely" computer code. Indeed, the DAO didn't have any directors, managers or employees. The governance structure was built with software, code and smart contracts that ran on a public decentralized blockchain platform, Ethereum [55]. This automated structure was intended to give "participants" in the DAO direct real-time control over contributed funds and where such funds would be distributed. Everyone could become a participant by purchasing DAO Tokens during a crowdfunding campaign in May 2016. The DAO raised more than $150 million from approximately 10,000 "investors." Like shares in a traditional listed corporation, DAO Tokens were designed to be fully transferable and tradable on "peer-to-peer" exchanges.

A series of smart contracts granted the holders of the tokens voting rights. In this respect, the blockchain-based smart contract mimicked the role of articles of association or bylaws. Since the code of the DAO was open source, the token holders would vote on any change made to the code. Such an organization inhibits "rent-seeking" and offers transparency. And they are secure. For instance, the governance protocols used in a DAO are open source and weaknesses are constantly tested [48]. An openly readable ledger means anyone can check the integrity of transactions. The distributed cooperation component implies that "attackers" must be able to "out-compute" the entire network (which is practically impossible).

When we look at these strengths and advantages, we can conclude that DAOs will eventually overtake any organization which lacks these incentives and efficiencies [48]. Moreover, DAOs are cheap and straightforward to "clone," which will potentially lead to more competition. The distributed and anonymous nature of the organizations prevents natural and political monopolies [48].
To be sure, fundamental flaws in the DAO code made it possible for hackers to transfer one-third of the total contributed funds to a subsidiary account. This, and other technological limitations meant the end of the initiative, but it does not mean the end of this vision of a different style of decentralized autonomous organizations.

In January 2017, Jentzsch compared the development of decentralized autonomous organizations with the development of planes. The desire to build flat, unmediated, decentralized and fully democratized companies will not be stopped by setbacks, no matter how severe [56]. He announced his next project: a decentralized autonomous organization that operates in the area of non-profit and charity [56]. The possibility to make donations and aid without the interference of bureaucratic authorities and institutions would set the stage for further corporate organization developments in a blockchain platform.

Crypto Coins and Tokens

The DAO mainly focuses on empowering and incentivizing investors in companies and other organizations. But blockchain technology also has the ability to give more power and control to other stakeholders, such as employees, consumers, developers, creators, etc. A particularly interesting use of blockchain in this context is to develop "company" or "industry-specific" crypto-coins or tokens. We might think of such a cryptocurrency as "loyalty" coins or tokens. The basic idea of such coins is that in a crypto economy, companies (or groups of companies or industries) can issue their tokens as an integral part of the platform operations. These tokens can perform many functions and bring multiple benefits:

Perks

In his book *Masters of Blockchain & Initial Coin Offerings*, Andrew Romans compares the issuance of coins/tokens to a company's loyalty program [56]. The coins/tokens provide access to products, services, discounts and other perks. This will be similar to loyalty programs in that it helps gather a community of participants, such as developers, investors, consumers, etc. on the platform. They provide a convenient mechanism to tie individuals into the platform's ecosystem [57].

Liquidity

But unlike a loyalty program, the coins/tokens have many more benefits attached to them. Most importantly, they offer liquidity [58]. Platform participants can sell and transfer them to other interested parties on crypto exchanges or secondary markets. These parties could be the "public" or a more restricted and pre-defined group of people. Either way, it integrates the token (and the platform) into the mainstream economy [58].

Funding

Because the owners of the coins/tokens aren't "locked" into the loyalty program, the issuance of coins/tokens can be a straightforward and relatively simple means to attract capital/funding for the platform (without issuing shares in the company) [58].

Level Playing Field

Intelligent platforms are built around the idea of delivering constant innovation via an open, inclusive and continuous process of "co-creation." Multiple participants are crucial to a successful platform, but each group may have their unique capacities/capabilities. A well-designed token-driven platform can carefully plan the distribution of coins/tokens across all network participants [58].

All the participants (consumers, developers, investors and alike) are aligned and work together on the success of the platform. The issuance of coins or tokens creates a "level playing field." Crucially, this helps establish a "community-owned" platform, which isn't based on traditional hierarchies between the platform participants (think about the hierarchies between shareholders, managers, and staff) [58]. By doing so, crypto coins and tokens:

- Provide the right incentives to multiple platform participants.
- Satisfy participants' dynamic needs.
- Provide a "personally" relevant experience to all platform participants.
- Facilitate connections to a community that "matters to them."
- Help build a strong and open "company culture" of involvement, engagement, and connectivity.

In short, the coin/token offerings will be integrated into the core functionality of the platform, making them "community-owned and driven [58]."

Finally, crypto coins and tokens offer opportunities for integrating "near future" digital technologies. For instance, coins and tokens can be "smart contract" empowered, allowing specific operations/benefits only if and when predefined rules and requirements are met [58]. The smart contracts could, in turn, be empowered by "artificial intelligence" algorithms, allowing for customized services, continuous communication, and better alignment of interests amongst participants.

Conclusion

We currently live in a fast-developing "space" between two co-existing and competing "realities": a centralized "old world" and an emerging but, as yet, incomplete new "decentralized reality." The centralized reality with its hierarchical structures, systems, and procedures still prevails. It appears unlikely that we will say goodbye to centralized organizations anytime soon. Traditional incumbents still enjoy enormous market power and the "success" of more decentralized systems and organizations currently still depends on the goodwill of the parties involved. Nevertheless, a more decentralized reality has already started to emerge. Facebook, Twitter, Uber, Airbnb, and Spotify are prominent examples of this. Technologies have the potential to create real level playing fields, transparency and applications that run exactly as programmed without any possibility of downtime, censorship, or third-party interference.

And, this is the critical point. We have already passed the "tipping point" in our experiments with decentralization. So, instead of blindly affirming the traditional "centralized" world or remaining trapped in the space between these two realities, it seems prudent to observe and study these new organizational developments. It is necessary to become actively involved in the further development of blockchain and smart contracts and the creation of a decentralized reality. In this way, a decentralized world can reach its full potential and offer greater transparency, convenience, and trust.

What do the most successful companies have in common in a "digital age"? They all strive to create an open and unmediated corporate culture built around technology, data, and algorithms. A tech-driven business culture helps firms to build and maintain "relevancy" in a digitized and networked marketplace. Relevancy, in this context, refers to designing and re-designing products or services that continuously deliver a personal, meaningful, relevant and satisfying experience to consumers. The most successful firms understand that achieving this goal means embedding new technology into every aspect of the organization and governance of a firm.

Companies can use new technologies to build a more decentralized, unmediated and inclusive corporate culture for all stakeholders, i.e., investors, executives, managers, and employees, but also early adopters, former employees, other companies, service providers, the different layers of government and society at large. Such an unmediated and tech-driven culture will give them a competitive advantage in attracting talent, raising capital, finding suitable partners and, perhaps most importantly, in remaining relevant in today's hyper-competitive global markets.

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