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A Sustainable Platform Economy & the Future of Corporate Governance

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March 2019

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Keywords: Blockchain, Coding, Community, Corporate Governance, Culture, Digital Transformation, Organizations, Platforms, Reporting, Sustainability, Technology, Theory of the Firm, Transparency

JEL Classifications: D23, D25, G34, K22, L21, L22, L25, L26, M13, M14

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February 2019

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In this paper, we identify the distinctive features of a "platform business model" (though a comparison with the modern company) and introduce the concept of a "sustainable platform," to describe a platform-style business that is both innovative *and* socially responsible. The main argument of the paper is to suggest that there is a "disconnect" between the current business needs and values of sustainable platforms and contemporary policies and regulation, particularly corporate governance. Overcoming this disconnect – developing a new "platform governance" – is crucial for the long-term prospects of sustainable platforms, and the economy more generally.

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A Sustainable Platform Economy & the Future of Corporate Governance

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1. Platforms

A significant development in the global economy over the last two decades has been the emergence of businesses that organize and define themselves as "platforms."[1] By platform, we refer to any organization that uses digital and other emerging technologies to create value by facilitating connections between two or more groups of users. Think *Amazon*, *Facebook*, or *Uber*.

The type of connection varies depending on the platform. Some platforms facilitate connections between the buyer and seller of goods (*Amazon*); some facilitate connections between those wanting a service and those willing to provide it (*Uber*); and others simply facilitate connections (information exchange) between friends (*Facebook*). *Table 1* highlights the diversity of the platform model. However, what is common to all platforms is that they make connections between "creators" and "extractors" of value and the platform generates a profit from making these connections, either by taking a commission or advertising.

Compare a list of the world's largest companies from 2008 with 2018 (see *Table 2*). In 2008, none of the companies on the list were platforms. Now, you could make the argument that six or possibly seven of the world's ten largest companies are organized as platforms or, at least, derive a significant slice of their income from platform operations.

The emergence and growth of platforms is a significant event, not least because they have become a routinized feature of everyday life within such a short period. To illustrate this rise, consider that it took the radio 38 years to reach 50 million users. It took television 13 years to

[1] See Geoffrey G Parker, Marshall W. Van Alsyne & Shandgeet Paul Choudry, *Platform Revolution: How Networked Markets are Transforming the Economy and How to Make them Work for You* (2016); Alex Moazed & Nicholas J. Johnson, *Modern Monopolies: What it Takes to Dominate the Twenty First Century Economy* (2016).

achieve the same degree of market penetration. But *Facebook* "only" needed two years to gain the same number of users. Now, it has an active user base of over 2 billion.

Table 1 – "Platforms" & their "Users"

Platform Type	**Examples**	**User Group 1** ***(creators)***	**User Group 2** ***(extractors)***
Exchange Platform	*Amazon, Alibaba*	Producers of Goods	Consumers of Goods
Service Platform	*Airbnb, Uber*	Service Providers	Service Users
Content Platform	*YouTube, Medium, Netflix*	Content Creators	Content Consumers
Software Platform	*Apple iOS, Google Android*	App Developers	Smartphone Users
Social Platform	*Facebook, Instagram*	Friends	Friends
Investment Platform	*Priceland, OpenTable*	Investor	Businesses
Smart Contract Platform	*Ethereum*	Contract Party 1	Contract Party 2

The remarkable success of platforms has been made possible by the emergence of a number of inter-connected digital technologies – most obviously, PCs and smartphones, the Internet, algorithms, and cloud computing. The mass dissemination of these technologies encourages more users and other service providers to join a platform, adding more "content" which, in turn, attracts additional content "creators" and "consumers." This is important because platforms benefit enormously from 'network effects;' the more people that use a platform the more it benefits everyone.[2]

[2] See Paul Belleflamme & Martin Peitz, Platforms and Network Effects, *Handbook of Game Theory & Industrial Organization* 286-317 (2018); Nirmala Reddy, How to Harness the Power of Network Effects, *Forbes* (2018) available at: https://www.forbes.com/sites/forbescoachescouncil/2018/01/02/how-to-harness-the-power-of-network-effects/#2b41823462e8.

Table 2: The World's Largest Companies

	2018		2008	
Rank	**Company**	**Founded**	**Company**	**Founded**
1	*Apple*	1976	*PetroChina*	1999
2	*Google*	1998	*Exxon*	1870
3	*Microsoft*	1975	*GE*	1892
4	*Amazon*	1994	*China Mobile*	1997
5	*Facebook*	2004	*ICBC*	1984
6	*Tencent*	1998	*Gazprom*	1989
7	*Berkshire*	1955	*Microsoft*	1975
8	*Alibaba*	1999	*Shell*	1907
9	*J&J*	1886	*Sinopec*	2000
10	*JP Morgan*	1871	*AT&T*	1885

Source: Bloomberg

Moreover, the global proliferation of digital technologies and communication networks means that platforms can be established anywhere. The emergence of hugely successful platforms in China (*Alibaba*) or Indonesia (*GoJek*) illustrate the universal appeal and adaptability of this business model. It also shows how less developed economies might employ platforms as a means of "leapfrogging" an earlier (industrial) phase of economic development and "jump" directly into the digital age. At least, that is what many governments and international organizations believe.[3]

The diversity and adaptability of platforms mean that they can be attractive in any sector of the economy (and not just tech companies) and all over the world (and not just in more "developed" economies).[4] And – as evidenced by the commercial success of platforms (see *Table 2* again) – platforms have been hugely popular with investors, as well as consumers (and other stakeholders).

The success of platforms has forced incumbent organizations to re-examine their business models. Many traditional retailers, for example, are shifting their distribution channels for their products from "stores" to online platforms. Many industrial organizations now wish to re-invent themselves as platform service providers rather than (simply or only) producers of goods. *General Electric* – the archetypal twentieth-century industrial giant – has tried to

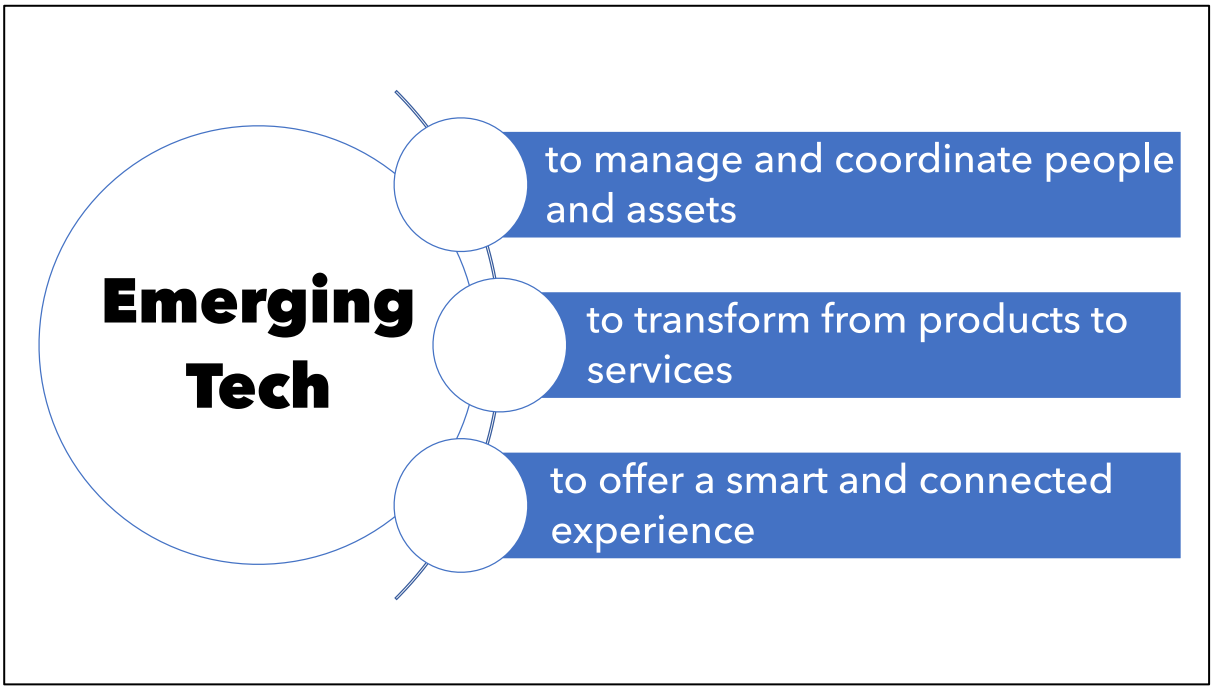
[3] The World Bank, for example, organized a Disrupting Development event on this theme in Bali in October 2018, available at: https://live.worldbank.org/disrupting-development.

[4] For an overview, see https://www.accenture.com/us-en/insight-digital-platform-economy.

transform itself from a hardware manufacturer into a data science company that utilizes platforms, software, applications, and big data analytics.[5] And, more recently, as new Fintech startups are moving into the financial services sector, many incumbent banks are considering how to introduce platform services.[6]

In fact, every organization is now obliged to consider integrating platform ideas and experience into their operations. Think about it. Emerging technologies have not only enabled the management and coordination of creators and extractors of value (challenging existing business models and organizations), but they have also made products significantly more durable, forcing organizations to focus more on connected and sustainable services or to add more platform/network functionality to their products (see *Figure 1*).

Figure 1: Emerging Tech and the Emergence of Platforms



Thus, whereas in the twentieth century, capitalism was organized around large, industrial companies, much of the contemporary economy is now organized around software-driven

[5] See https://www.ge.com/digital/iiot-platform.
[6] See Ernst & Young, A Vision for Platform Based Banking (2018) available at: https://www.ey.com/Publication/vwLUAssets/ey-a-vision-for-platform-based-banking/$File/ey-a-vision-for-platform-based-banking.pdf; Imran Gulamhuseinwala, How Banks Could Join the Platform Economy (2017) available at: https://www.ge.com/digital/iiot-platform; Ian Pollari, The Rise of Digital Platforms in Financial Services (2018) available at: https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2018/02/kpmg-rise-of-digital-platforms.pdf.

platforms. Within a generation, we have experienced a reconfiguration of global capitalism in which platforms and their founder-owners have acquired an enormous degree of economic power and cultural influence (think Jeff Bezos or Mark Zuckerberg).

As such, platforms are disruptive, as well as controversial.[7] Most obviously, they raise concerns about privacy (think *Facebook or Google*) and unhealthy market dominance (think *Amazon* or *Google*). As platforms have grown, they have struggled to maintain their initial promise and brands that were once disruptive have lost much of their shine. The result is that many people are deeply ambivalent about platforms. On the one hand, we use them on a daily (even hourly) basis but, on the other hand, we are wary of their influence and doubt the ability and willingness of platform leaders to exercise this new power responsibly. Trust in platforms is declining rapidly.

But we shouldn't allow concerns about platforms to blind us to the potential of this way of organizing a business. The essence of platforms is connections and connecting. They leverage technology to create trust between parties that facilitates the freer flow of goods, information and services. They promote more efficient and open markets and a more open society. We should, therefore, look for ways to harness the promise and potential of this new business form and the values of openness and inclusivity that (at their best) they promote. We need to focus our energies on developing an environment that can help nurture "better" platforms – the sustainable platforms of tomorrow.

Given the importance of platforms to the global economy, it makes sense to deepen our understanding of this new business form and ask what role regulators and consultants can play in promoting innovative and socially responsible platforms (i.e., sustainable platforms). Here, we explore the thought that platforms are organized differently from a traditional company. In particular, platforms face multiple incentives to organize themselves as flatter, more open inclusive "ecosystems." Not all platforms reach this ideal – far from it – but the concept of a sustainable platform is, nevertheless, useful as an ideal. Not least, the sustainable platform idea has implications for business models and regulation, particularly corporate governance. Corporate governance practices – the rules of the game, if you like – were developed in a pre-platform era and (primarily) based on the needs of large, industrial companies. In contrast to platforms, such companies were organized as closed, hierarchical systems. There is a

[7] See Scott Galloway, *The Four: The Hidden DNA of Amazon, Apple, Facebook & Google* (2017).

"disconnect" between the business needs and values of platforms and much contemporary business models and existing regulations may be contributing to the difficulties that many platforms experience once they reach a certain size. Overcoming this disconnect – i.e., "re-connecting" platforms and regulatory models – is crucial for the future of platforms and the global economy, more generally.

2. Modern Organizations

To understand the organizational distinctiveness of platforms, it is helpful to begin by considering the main features and history of the modern organization. For the last one hundred and fifty years, the global economy has been dominated by companies. They have provided the basis of sustained economic growth and individual prosperity. But what distinguishes a company from earlier forms of organizing and operating a business? Three aspects seem particularly important:

- Companies have an independent identity. A clear boundary separates the company from the "outside world" (i.e., other stakeholders (e.g., consumers and creditors), the market, and society).
- Companies have a formal hierarchy with a well-defined chain of authority and processes – from shareholder-owners, the board of directors, executives, managers, down to employees.
- Companies have "horizontal" departments with functionally differentiated tasks (e.g., production, sales, marketing, personnel, finance, legal, etc.), specialist managers, and standardized operating procedures for "getting things done."

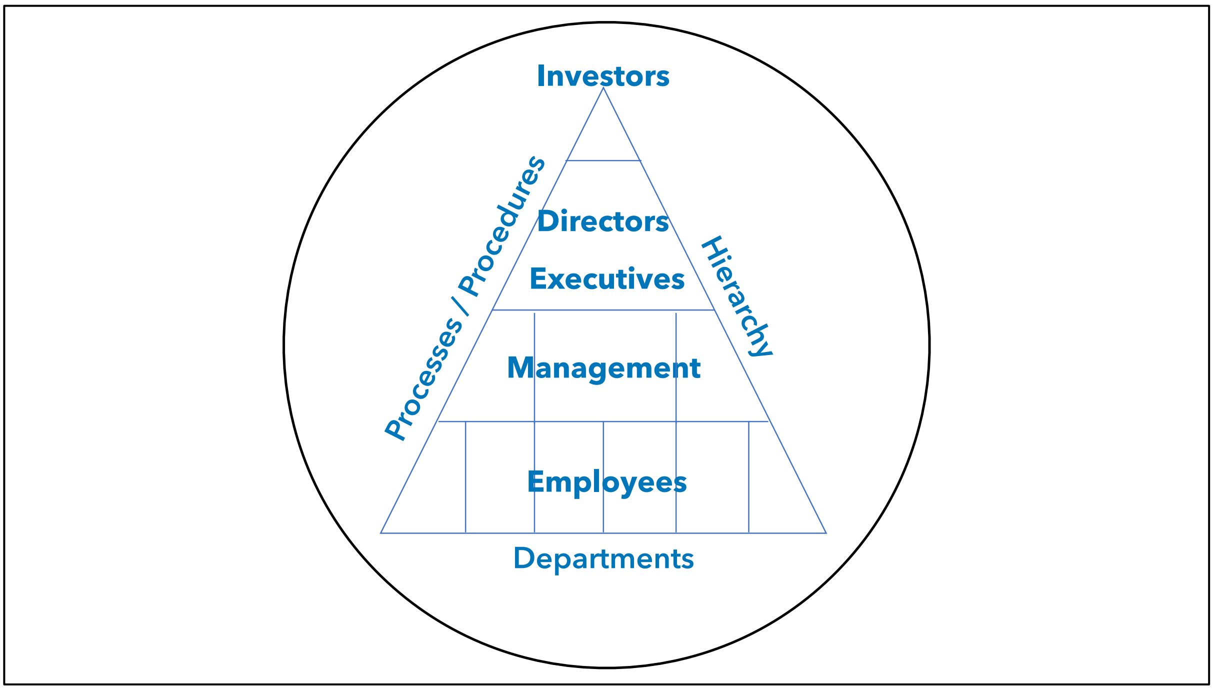
In short, the modern company is organized as a closed, hierarchical and proceduralized system (see *Figure 2*).

It is worth emphasizing that this way of organizing a business is a relatively recent phenomenon.[8] In early Europe, for instance, loose partnerships and networks of mutually beneficial interests conducted trade. These relationships developed slowly into "self-protective

[8] For a history of the company, see John Micklethwait & Adrian Wooldridge, *The Company: A Short History of a Revolutionary Idea* (2005).

organizations," backed by the money-lenders (the precursors of modern banks) who financed their operations.

Figure 2: The Modern Company



The first European joint-stock companies were created by royal charter, which granted a monopoly on trade in a specific territory for a fixed period. Instruments of foreign policy as well as profit, the *East India Company* and its Dutch rival, the *VOC*, fought long-running wars for the right to trade with India and the Spice Islands, ending up as "proxy governments" supported by private armies in their respective territories.

A crucial moment in the history of the company was the UK Companies Act of 1862 (and similar laws elsewhere) that established the legal doctrine of limited liability. From that point onwards, anyone could set up a company; anyone could invest in companies and, if a particular company went bankrupt, all that the investors lost was their original investment. In this way, the risk was simultaneously diversified to a large number of investors and transferred from the investors to a company's suppliers, creditors, and customers. This marks the moment when the company emerged in its fully-recognizable modern form.

A sophisticated system of rules and regulations developed to support and sustain this type of organization. Legal doctrines for achieving this include legal personality (confirming the idea of the company as a legal entity that exists separately and independently from its founders, shareholders, and managers) or modern corporate governance practices and guidelines (putting in place structures and processes that companies need to adopt to continue operating).

Other entities (banks, accountancy firms, and law firms, for instance), organized themselves along similar lines and played a crucial role as intermediaries allowing third parties to engage in business transactions with companies. Finally, centralized "nation states" provided the supporting infrastructure – political, as well as legal – that allowed companies to operate safely and efficiently.

Closed, hierarchical businesses supported by the correct processes and procedures were hugely important in promoting economic growth throughout the twentieth century. Previous technological revolutions – steelmaking, the automobile, or the telephone – simply expanded the power of companies, as society adapted to the uncertain meaning, effects, and risks of complex technological change by pooling authority in these closed, hierarchical business forms. One can reasonably argue that the company has been the most important organization of the last two centuries.

The obvious questions to ask when considering this history are "Why have companies been so successful? What is the advantage of organizing business in this way? And, is the company a solution for all times or is its success contingent on a particular set of (favorable, but contingent) historical circumstances?"

In 1937, the economist Ronald Coase famously argued that companies exist because of the higher transaction costs of doing business "outside" a firm.[9] Coase's idea was simple: companies make sense as repeatedly going back to the market imposes higher costs. Suitable contract workers would need to be found, prices negotiated, and contracts concluded and enforced. The company structure represents a way of avoiding these limitations in market transactions. A company provides a degree of stability and certainty that facilitates efficiency gains. Moreover, firms offer additional advantages or resources that cannot be found in repeated market transactions. Over time, a company will develop shared knowledge, understandings, and routines ("know-how" or corporate culture), and these can be leveraged in all aspects of a firm's operations for additional gains.

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[9] See Ronald H. Coase, The Nature of the Firm, 4 *Economica* 386 (1937).

The distinctive features of the corporate form (its closed, hierarchical and procedural character) were an organizational response to the environment, (markets in which transaction costs were high.) Company-style organizations made sense when a business's primary objective was to minimize transaction costs and information asymmetries and deliver a (relatively) static product or service to a (relatively) stable national market.

However, in the digital transformation, this type of organization has been disrupted by the new possibilities created by networked technologies.

3. The Digital Transformation & the Rise of Platforms

Over the last half-century, digital technologies have changed the world. The emergence of computer-based devices and communication infrastructures have triggered multiple social, economic and cultural effects. Here, we use the term "digital transformation" to refer to this on-going shift from analog, electronic and mechanical machines to networked, digital devices and the social effects associated with the proliferation of these new technologies. Platforms are an important example of an innovative adaptation to the opportunities created by this new environment.

This process of digitization began in earnest with the launch of the *Intel* microprocessor in California in the early 1970s and is driven by an ongoing series of technological innovations.[10] Most significantly, these include cheaper and smaller digital hardware (first PCs and, more recently, smartphones); global communication networks and mass connectivity (i.e., the Internet); cloud-based data storage & automated algorithms; emerging digital technologies (e.g., robots/automation, AI, the Internet of Things, and distributed ledger technologies, such as blockchain).

These developments provided the technological infrastructure for the emergence of platforms. At the most basic level, digitization refers to a process of converting information into digital "bits" of 0s and 1s. In contrast to analog data with its continually varying values, digital information is based on just two states; in the digital world, things are either 0 or 1.

[10] See William Mitchell, *City of Bits, Space, Place and the Infobahn* (1996).

This feature of digital information facilitates the creation of large amounts of easily manipulable and perfectly reproducible data that can be almost instantaneously transmitted across global networks. Combined with cloud-based algorithms and a software-powered user interface, platforms can deliver a customized user experience that offers all manner of socially-useful services.

But digital technologies have facilitated the emergence and growth of platforms in another (less obvious) way. An important consequence of Coase's account of the nature of the firm is the suggestion that if the transaction costs of exchanging value within society are significantly reduced, then the size of companies will shrink correspondingly. Firms do not keep on getting bigger; they impose transaction costs of their own, which inevitably rise as the business grows. If it makes no economic sense to maintain stable, long-term relationships within a company – i.e., if transacting outside the company is cheaper – then the very reason for having a company in the first place disappears. Instead, we would inhabit a world of smaller, leaner companies that rely on an extended network of market transactions.

It is this aspect of Coase's story that is particularly interesting in the context of the digital transformation.[11] The suggestion is that new technologies – and particularly network-based technologies – have disrupted markets by facilitating a significant reduction in transaction costs across multiple sectors of the economy. Gathering information on market actors, negotiating and concluding agreements are all made much easier by information technology and the Internet. We have entered a world of smaller, leaner firms that can operate their business with a combination of a software platform, network technologies and market-based transactions outside the framework of the firm. In consequence, traditional firms are disrupted by the emergence of more agile competitors that take advantage of these low-cost opportunities.

Innovative founders quickly recognized the potential of new technologies and platforms were set up that used this new combination of network-based software architecture, a lean, asset-light organization and market-based transactions outside the framework of the company.

Take *Amazon*, for example. They contract with (external) producers to sell their goods. *Amazon* can operate as a much leaner organization as the software platform removes the need for (i) physical stores and the associated costs of maintaining those stores (everything is done

[11] Tim O'Reilly, Networks and the Nature of the Firm, *Medium* (Aug 14, 2015).

online), (ii) knowledgeable sales staff to help customers identify the best product for their needs (an algorithm-driven search engine helps customers find what they want, and accessible customer reviews establish which products are best), and (iii) cashiers to process payments (the software allows payments to be made autonomously by the customer). *Amazon* then employs (external) local delivery companies (or even individuals) to distribute and deliver the goods quickly and cheaply.

Other platforms do something similar. For example, if we compare the number of employees working for hotel operator *Marriot* with *Airbnb,* we can see the enormous difference in the size of the organization (see *Table 3*). A lean organization is made possible by the fact that *Airbnb* does not operate any rooms directly. It simply offers an online service that connects those looking to monetize excess space with those seeking affordable accommodation. In this way, a well-established and reputable brand is disrupted.

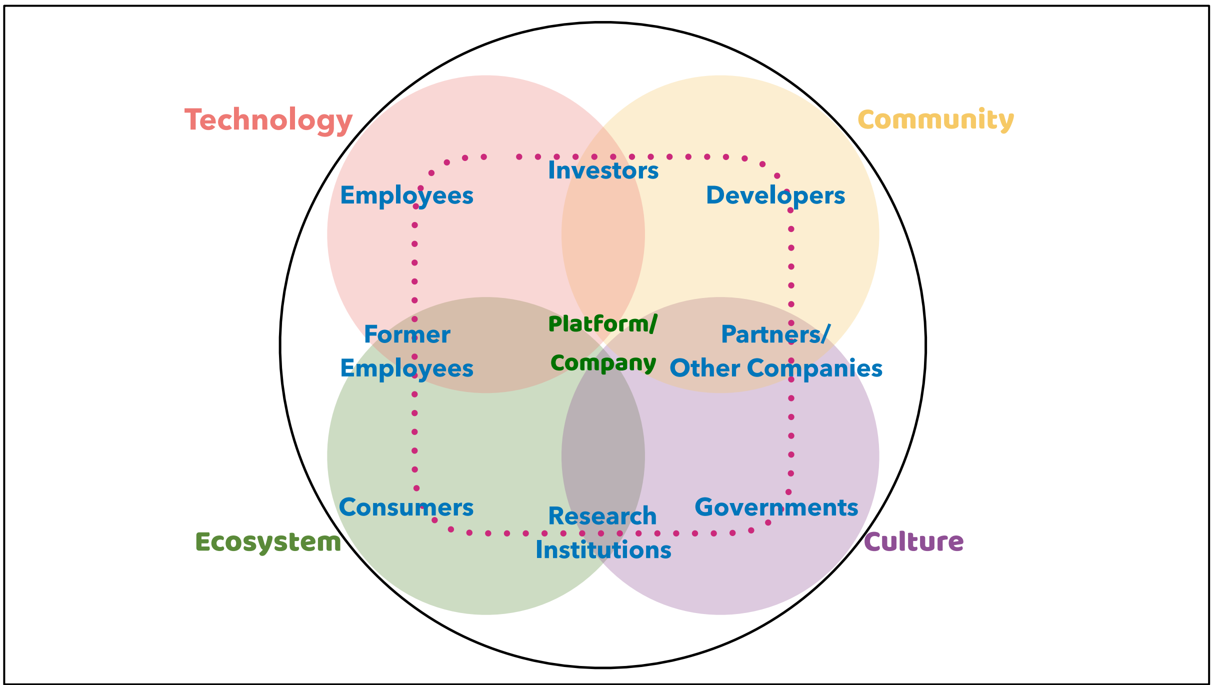
Table 3 – The Lumbering Incumbent v. The Agile Platform

	Marriot	**Airbnb**
Age	90 years	9 years
Rooms / Listings	1.1.million in 100 countries	2 million in 191 countries
Employees	127,500	4,227
Valuation	$17.8bn	$30bn
Value per Employee	$0.1m	$7m

4. Sustainable Platforms

There is more to a successful platform than simply leveraging networked, digital technologies to facilitate connections and adopting a leaner and more agile type of organization. There are a number of other features that distinguish a platform from a traditional company. In particular, the platform business model itself creates strong pressures to break from the closed, hierarchical and procedural organization characteristic of modern companies. Here, we highlight three such pressures that "nudge" a platform into adopting a flatter, more open and socially responsible form of organization and operations. We refer to such a flat, open and decentralized form of organization as a "sustainable platform" (see *Figure 3*). Of course, many – perhaps even most – platforms will fail to achieve this ideal, particularly when they scale. Nevertheless, the goal of becoming and then remaining a sustainable platform of this kind will maximize the chance of continued relevancy and positive brand image. Moreover, the concept of a sustainable platform can provide guidance when evaluating regulatory choices.

Figure 3: A Sustainable Platform



4.1 The Pressure to Acquire and Retain Users Requires an Open, Inclusive and Responsible Community

Michael Cusumano defines a platform business strategy in the following terms:

> "A platform or complement strategy differs from a product strategy in that it requires an external ecosystem to generate complementary product or service innovations and build positive feedback between the complements and the platform. The effect is much greater

potential for innovation and growth than a single product-oriented firm can generate alone."[12]

Cusumano makes an important point here. The dependence of platforms on the "external ecosystem" and the "feedback" that such an ecosystem provides has important implications for how any platform needs to organize itself.

To operate effectively, a platform must acquire and then retain users, and to do that it needs to be open to user feedback. A distinctive feature of a platform business strategy is its (relative) dependence on retaining and leveraging stakeholders' input and feedback to improve the user experience and, therefore, promote engagement with the platform.

A successful platform, therefore, needs to build and maintain an active and healthy community ensuring a sustainable relationship between the platform and its participants. Are you constantly enticed to use the platform? Are you able to make using the platform a routine, habitual part of your everyday life? To do this, a platform needs to offer an accessible, honest, and personal experience to participants. Participants must be able to verify the reputation of, and trust, other participants. Platforms must facilitate connections to a community of users that "matters" to them. They must "invite" genuine user creativity and engagement (through social media, reviews, blogs, and perhaps loyalty coins), as well as a flexible, reliable, personalized experience, that can provide meaningful content.

To be successful, a platform then needs to gather feedback from the community and ensure that the interests and concerns of users get regularly integrated into platform operations. The platform community needs to offer users feedback that "kickstarts" a "platform cycle" of continual self-learning.[13] A successful platform needs to make the shift from a closed system to a more open community or ecosystem, and the effect of this pressure is the blurring of the distinction between the "inside" and "outside" of the organization.

This creates a strong incentive for platforms to institutionalize open dialogue and communication with its users and other stakeholders. It is interesting to note that many of the

[12] Michael Cusumano, Principles for Managing Strategy & Innovation (2012) available at: https://blog.irvingwb.com/blog/2012/01/principles-for-managing-strategy-and-innovation.html
[13] Erik P. M. Vermeulen, Education is the Key to a Better Future *Medium* (2018) available at: https://hackernoon.com/education-is-the-key-to-a-better-future-but-6516903c547f.

problems that arise between a platform and its users are often the result of a platform's "failure" to communicate properly (i.e., openly and honestly) with the community of platform users. For instance, *YouTube*'s on-going difficulties with its content creators have tended to be the result of poor communication over the future direction of the platform.

Crucially, the "smarter" platforms understand that communication is not a "one-way" process of information disclosure (from platform operators to platform users) but, instead, requires a more engaged, responsive and open process that encourages a mutually productive dialogue. In such circumstances, the tight control of information characteristic of (closed) companies becomes a high-risk strategy.

More generally, if a platform fails to behave in a responsible manner – in terms of how it handles user data, service providers or any platform stakeholder – then users will quickly migrate to an alternative platform, and – given the dependence on the network effects that come from retaining users – that platform will risk severe damage or even collapse. Network effects bring enormous advantages, but they also bring risks that need to be mitigated by creating an open, inclusive and responsible platform community.

4.2 The Pressure to Attract Talent Requires a Flat, Disruptive and Strong Culture

The second set of pressures relate to the culture of a platform. The stronger the culture, the less corporate processes and procedures are needed. Processes and procedures will, over time, kill creativity and destroy the organizational culture. Constant dedication to identifiable core values is essential in building and maintaining a strong culture. To create such a culture of genuine entrepreneurship, trust, freedom, and responsibility, a business has to identify and then "live by" a set of core values in all its decisions and operations. The culture needs to become an authentic, lived manifestation of these core values. When done "right," company culture can make an important contribution to better decisions and better, more productive "outputs." For example, who you "hire and fire" should be determined by these core values. A strong culture can lead to greater loyalty and a strong sense of community that attracts and helps retain the best talent. This ensures that the whole organization is unified, working together to achieve a common goal.

Here it should be noted that potential employees – particularly the most talented – are no longer satisfied with the prospect of a lifetime of secure employment spent as an anonymous cog in a hierarchical organization. Instead, individuals are looking to maximize their potential by building capacities and a sense of personal identity doing something that matters to them. Personal growth, and not job security, is the primary expectation of an increasing number of prospective employees and this has implications for the kind of culture and image that a platform must adopt and project.

Reid Hoffman, Ben Casnocha and Chris Yeh, for example, discuss this issue in their book, *The Alliance*.[14] They acknowledge that lifetime employment is not desirable in a digital age and that we, therefore, need a new model for employment relations. Such a model would not only aim to rebuild trust and loyalty between organizations and employees but also creates incentives for employees to become more entrepreneurial.

Their answer is an "alliance-based relationship," which offers mutual benefits to the organization and its employees. This alliance between the managers and its employees has various aspects. Core features include mechanisms that enable a company to hire employees for well-defined, but successive "tours of duty." Also, there is the creation of employees' networks outside the organization. The final pillar includes the creation of an "alumni network" which enables companies to maintain long-term relationships with their former employees. The employer-employee alliance can already be observed in some startup communities, where the establishment of networks and connections is crucial to the success of both the organization and the employees.

Significantly, this way of thinking can be extended to all of the stakeholders of an organization. Much of the appeal of being involved – either directly or indirectly – in a dynamic, innovative business as an investor, CEO, other executives, manager, employee, or even a consumer is, in large part, about participating in a project to build something new and exciting that is meaningful and relevant. Smarter organizations recognize and leverage this valuable resource to the benefit of all participants, as well as the company itself. These organizations recognize that culture has become an important element or "component" of a platform's products or services. In a digital age, the culture of business cannot be concealed. Sooner or later, it becomes visible and determines how products or services are perceived by

[14] Reid Hoffman, Ben Casnocha & Chris Yeh, *The Alliance: Managing Talent in a Networked Age* (2014).

consumers. As such, culture is no longer distinguishable from the product but is part of the product. And if the culture is "wrong," in some way, users and consumers are much more likely to reject a firm's products and migrate to rivals.

Organizations – and especially business firms – are a vital means for an individual to accumulate experience, develop capacities and express their self-potential in an on-going life quest to construct a unique identity. In this way, businesses provide one of the most important sites for self-expression within modern societies. Within the overarching narrative arc of a "career," a particular organization becomes a means for contributing to this larger project of personal development.

In this context, the branding and image of a platform matters. Stakeholders don't want to be associated with a tarnished brand. Again, this creates pressure for a platform, in this case, to be more socially responsible or, at least, more careful to avoid the kind of scandals that have affected some platforms (think *Facebook* or *Uber*).[15]

And if a particular organization is failing to deliver in this regard, then stakeholders are inclined to look elsewhere for the fulfillment of their needs, rather than passively accepting the status quo. If an organization provides a meaningful experience then individuals (executives, managers, employees, investors, and partners) will remain motivated and committed.

In particular, hierarchies and procedures need to be replaced by "flatter" structures, and a "best idea wins culture." Employees in search of a meaningful career experience are not willing to passively accept the view of managers and will move somewhere else if the organization does not afford opportunities to contribute to their personal growth. In this way, a flat hierarchy works to retain the relevancy of the organization for employees and other company insiders, as well as for the consumers who benefit from the higher-quality products or services that such a flat culture produces.

Of course, this is a challenge for all organizations today, but it is a particularly pressing issue for organizations operating as platforms. The pressure to innovate and (again) the possibility of user migration makes platforms particularly dependent on finding and retaining the most talented employees.

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[15] See, for example, the cache of internal *Facebook* emails published by the UK Parliament in December 2018 revealing the gap between public statements and internal correspondence regarding user data.

Offering a personally meaningful stakeholder experience is, therefore, important in attracting – and retaining – talent. There is a clear connection between the culture of a platform, stakeholder experience, and the platform's performance. A platform culture that delivers a meaningful stakeholder experience – particularly for employees seems likely, over time, to attract the "best talent," which in turn seems likely to result in the most innovative service. Equally, those firms that fail to deliver a personally meaningful stakeholder experience seem likely to suffer, at least in the medium-long term. In the absence of such fulfillment, the most talented stakeholders will opt for the exit.

4.3 The Pressure to Continually Evolve Requires Innovative Partnering and a Dynamic Ecosystem

All platforms now operate in hyper-competitive global markets against a background of exponential technological growth, fast-moving business developments and continuously evolving consumer demands. This new operating environment creates a constant pressure on platforms to evolve their business model. Simple "tweaks" to existing platform services is not going to be enough to survive in the medium-to-long term. Indeed, if one looks at any of the major platforms, one can see a constant expansion in platform services.

However, the delivery of innovation over the long term is never smooth and requires a higher degree of cooperation between multiple actors both inside and outside the firm. Platform evolution requires gathering together disparate elements (of hardware and software) and integrating them into a coherent product that delivers a value proposition that has relevancy for platform users. This task of gathering – identifying, coordinating and then combining – diverse elements requires high levels of cooperation both within the platform but also with "external" partners. A platform's capacity to build and maintain inclusive relationships in which partners work collaboratively together will become crucial. This is the third pressure that all platforms must face.

From this point of view, the existence of hierarchies or "silos" with entrenched interests becomes enormously counter-productive, as platforms that fail to embrace the possibilities of a more inclusive style of partnering will struggle to innovate.

Partnering-for-innovation in this way also involves re-thinking the external boundaries of the platform to include actors that are not generally thought of as being part of the organization, but who nevertheless have a crucial bearing on decisions and actions. In particular, the list of "inside" actors should be expanded beyond the traditional list of executives, managers, and employees. Key stakeholders now include the early adopters and other key opinion leaders within the platform community, but also research centers, universities, and startup companies. Traditionally, such actors have been conceptualized as being on the outside, or peripheral to a large company, but the need for inclusive partnering means that such metaphors are no longer appropriate given the increasingly central role that such actors play.

There are various "partnering" strategies to achieve the goal of institutionalizing "innovation." Those strategies involve direct and indirect investments (traditional corporate venture capital strategies); external incubators and accelerators; co-working spaces; retaining acquired founders and maintaining acquired start-ups' identities; in-house incubators; and turning the corporate into an ecosystem with "fluid and vanishing boundaries" with the outside community.

When multiple startups are acquired, the model of the company as a hierarchical organization with a clear, singular culture, purpose and practices is transformed into an open, flatter and more fluid structure with diverse goals. The key thought here is that this new-style company is not characterized by a "stable" organization in which activities are coordinated and controlled by managers who derive their authority from their place within a hierarchical order.

Nor is it the focus on short-term financial returns. Instead, the new-style firm is a constantly evolving (and re-inventing) autonomous ecosystem that has multiple interacting stakeholders with distinct identities – including employees, acquired start-ups and communities – all of whom are open and entrepreneurial.

Crucially, such a company adopts strategies that contribute to the blurring of the boundaries between the corporation and the outside world. For instance, as new firms are integrated into the ecosystem, they are allowed to retain their own identity, but – crucially – the acquiring platform is open to the possibility of learning *from* such startups. The most effective forms of partnering occur when the boundaries between the different partners become more fluid in this way.

The goal of any sustainable platform is to evolve continually and to create a dynamic ecosystem around its core activities. When implemented successfully, the effect of this more dynamic and inclusive style of partnering will be a new fluidity in both the internal "divisions" of the firm and the "outer limits" or boundaries of the firm.

4.4 From an Old World of Stable Hierarchical Companies to a New World of Open Sustainable Platforms

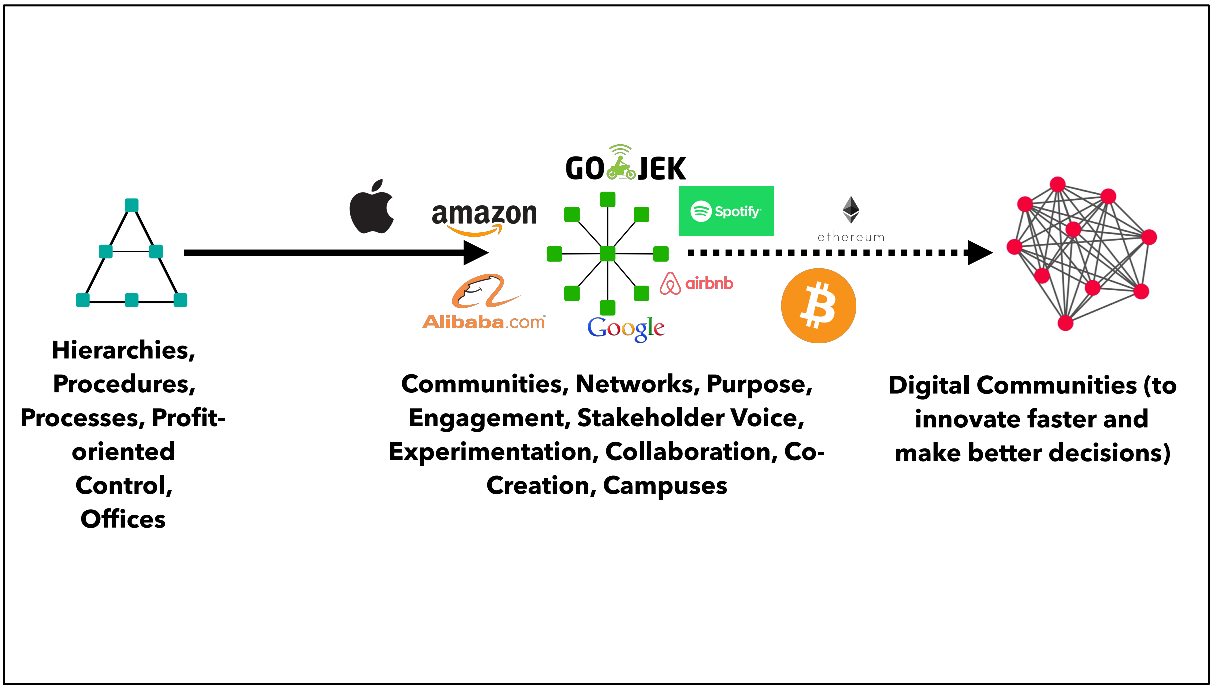
It seems clear that the platform model is disrupting traditional economic theories based on organizations, firms, and markets. The world of closed, hierarchical companies is being challenged. The Internet, algorithms, online ratings, artificial intelligence, provide instant access to all kinds of information (with minimal effort). This offers new opportunities for firms to bind users into their platform, to set up partnerships and to engage in constant innovation across multiple sectors of the economy. The success of platforms shows the enormous disruptive power of this new way of operating.

The emergence of platforms has coincided with a profound decrease in information costs, and this transforms the traditional balance between the benefits of internal (firm-based) and external markets. In this sense, information technology contributes to an erosion of the boundary between the firm and the market. In the best and most successful firms, governance is no longer about hierarchy, control or maintaining a clear border between the firm and the world. 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. At best, platforms are built around the idea of delivering constant innovation via an open and inclusive process of collaboration and co-creation.

It is for this reason that many firms and other organizations – and not just tech-businesses – are looking to re-invent themselves as platforms. By operating as a platform, they hope to build their capacity for disruptive innovation and ensure that they remain relevant. Established and traditional companies are making this transformation. The rule is straightforward: "either become a platform or be disrupted by one."

Two additional points are worth emphasizing. First, there is no "one-size-fits-all" model for platforms. Platforms can take multiple forms ranging from a slightly "tweaked" version of a traditional closed, hierarchical company through to blockchain-based "decentralized autonomous organizations" (see *Figure 4*).[16] At one extreme are the most well-known platforms like *Amazon* or *Netflix*. In contrast, an example of a decentralized platform is *Openbazaar*, a peer-to-peer trading network that uses Bitcoin. The "best" approach to platform design depends on the individualized circumstances of a particular business model and its goals. Every firm has to analyze its own needs and aims to find the unique recipe to maximize opportunities for sustained innovation.

Figure 4: Centralized versus Decentralized Platforms



But, this idea of a spectrum of possibilities connects to a final point on platform organization, namely the constant danger of transforming (back) into, a company. Remaining a sustainable platform can be difficult. As platforms scale – and particularly when they "go global" – they inevitably come to rely on hierarchical organizational structures. Such structures make a lot of sense as a strategy for managing the complexities of size. The problem is that a hierarchical organization can easily result in the bureaucratization of the platform, i.e., becoming closed, hierarchical and proceduralized. This type of organization worked well in an era of mass-production but is less suited to the dynamic business realities of today, particularly

[16] For more on decentralized forms of platform, see Mark Fenwick & Erik P.M. Vermeulen, Technology & Corporate Governance (2018) available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3263222.

for platforms. A tension can emerge between the organization of a platform and what made it successful in the first place.

The effect of this tension is that established platforms are unable to react effectively or quickly enough to the challenges created by fast-paced changes in markets, consumers, and technologies. The recent struggles of *Facebook*, as well as the image problems experienced by other large, well-known platforms (*Amazon*, *Google*, *Uber*), illustrate this risk of "devolving" into a more corporate style of organization.

While recognizing the validity of such criticisms, we must also acknowledge the innovation that platforms have delivered both to diverse stakeholders (most obviously, consumers and employees) and the global economy, more generally. After all, platforms have made an essential contribution to the creation of our new digital world. It is a fast-changing world that is structured around innovation, computer code, and fluid identities. Flatter hierarchies, open communication, multidisciplinary teams, and the power of dynamic ecosystems are the principles and values driving the economy, culture, and society. These changes owe much to platforms, and we should focus our attention on designing business models and regulatory frameworks that can promote sustainable platforms that maximize the genuine potential of this new way of organizing and operating a business.

5. Regulating Companies

Having identified the distinctive features of a platform-style business model (as compared to a modern, but traditional, company) and introduced the concept of a "sustainable platform," we now turn to the role of consultants, regulators and other policymakers in managing these new business forms. In the following, we suggest that all levels of government need to re-think their approach and focus on ensuring that the environment is conducive to building and maintaining innovative and socially responsible platforms. Here we focus on corporate governance to illustrate what we see as the central issue in this context, namely the disconnect that has emerged between traditional regulatory models and the business needs of platforms.

5.1 Corporate Governance

Traditionally, corporate governance refers to the structures and procedures within an organization that aim at ensuring that (i) authority, responsibility and control flows "downwards" from the investors (the economic, legal and moral "owners" of the company) through a board of directors to management and, finally, to the employees, and (ii) accountability flows "upwards." The primary goal of corporate governance law has, therefore, been to protect the interests of the investor/owner/shareholders and maintain the authority structure within firms.[17]

It is evident from this definition that corporate governance is built on the idea of a closed organizational form with a clearly-defined hierarchy and distinct roles. Corporate governance rules have been designed to protect the interests of those at the pinnacle of that hierarchy, namely the investor-shareholders. The discourse and practice of corporate governance was an adaptation to, and product of, a world of closed, hierarchical organizations, especially large corporations.

In practice, this shareholder primacy model means adopting measures that aim to ensure that all of the other actors within a firm act *"as if"* they were investor-shareholders. By aligning the incentives of the various actors in this way, firm performance – as measured by the share price – is improved, benefiting "all" of the stakeholders in a firm, as well as the public who benefit from the goods and services that a successful firm provides.

The context for the emergence of this shareholder primacy model has been corporate scandals. Over recent decades, corporate governance reform has been driven, in large part, by the desire to minimize the risk of managerial wrongdoing. The idea is that "good" corporate governance should aim to reduce the risk of managerial misbehavior and, by doing so, maximize shareholder value. Identifying structures, processes and mechanisms for achieving this goal has provided the impetus for much regulatory reform in this field.

According to this view, executives, managers, and other employees are understood as being motivated by self-interest and of having a selfish disregard for the negative consequences of

[17] See Steven Bainbridge, S, *The New Corporate Governance in Theory and Practice* (2008); Frank Easterbrook & Daniel Fischel *The Economic Structure of Corporate Law* (1996); Jonathan R Macey, *Corporate Governance: Promises Kept, Promises Broken* (2008).

their actions on investors (and society). Increasing shareholder control over other actors within the firm – becomes the primary goal of corporate governance rules and many requirements are imposed on firms to mitigate this agency risk.

There is now a global consensus that investor confidence depends, in large part, on the existence of an accurate and useful corporate governance framework. Such a regulatory framework has focused on establishing: (i) an accountable board of directors that supervises executives; (ii) a range of internal control and monitoring processes that ensure that managers act in the best interest of the company (and not themselves); (iii) transparent information disclosure to the market about the financial performance of the company; and, (iv) measures designed to protect the interests of "minority" shareholders. The overall goal of such an approach is to maximize shareholder value and, by doing so, encourage more significant investment. Get the corporate governance "right," and shareholder value will naturally follow, and this will promote economic growth, more generally. According to this view, corporate governance is intimately connected economic development and prosperity.

5.2 Platforms "Disconnected"

However, a corporate governance framework based on embedding hierarchy and control seems ill-suited to a new world of platforms.[18] A shareholder primacy approach may have made sense in a world of closed company hierarchies, but there seem to be good reasons to doubt its appropriateness for platforms. Such a framework promotes business structures (closed and static) and forms of decision-making (cautious and hierarchy-driven) that will alienate stakeholders and, ultimately, undermine a platform's chances of succeeding. As such, the contemporary corporate governance framework risks becoming disconnected from the business needs of platforms.

One might even go as far as to suggest that the recent difficulties of platforms are, in some part, a consequence of regulatory structures that "nudge" them to abandon the values and organization that made them so successful and exciting in the first place. On this view,

[18] Mark Fenwick, Joseph A. McCahery & Erik P.M. Vermeulen, *The End of "Corporate" Governance: Hello New World of Platform Governance* (2018) available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3232663

corporate governance can become an obstacle to building and maintaining sustainable platforms.

A more skeptical view of the effects of corporate governance is gaining traction, at least amongst some business leaders (if not academics or government officials). Serial entrepreneurs and venture capitalists often argue that a focus on maximizing shareholder value creates a corporate environment in which conservative decision-making, short-term profit, and formalistic compliance (box ticking) are prioritized. This is to the detriment of *any* company and its long-term prospects of building being successful.

According to this critical account, increasing the accountability of corporate executives to shareholders and of shareholder control over executives does not address the business needs of most firms – especially young and innovative firms, such as platforms – and may, in fact, have the counter-productive effect of incentivizing a damaging emphasis on opaque (i.e., legalistic) financial reporting and quarterly results. The focus on maximizing shareholder value feeds an unhealthy short-term focus on firm share price and market valuations that frustrates genuine innovation and openness.

Shareholder value maximization often results in a focus on the execution of a settled business plan built around already existing and successful products or services. In these companies, executives with a knowledge of, and focus on, innovation and consumer experience – i.e., those individuals responsible for the initial success of a company and best placed to deliver relevancy – often find themselves marginalized from core decision-making processes as the company scales.

Another group of stakeholders that find themselves marginalized in the shareholder primacy view of the firm are the employees. The problem is that a strategy of building a business around the promotion of shareholder value and bolstering hierarchy and control can easily result in practices that run counter to the interests of employees. An obvious example would be the use of mass layoffs to balance the firm's books in a firm where executive performance is solely evaluated based on the firm's stock price (i.e., balanced books = share price is secured = big executive bonus). In certain circumstances, laying off employees and reducing labor costs may be a natural mechanism to achieve strong quarterly performance.

However, a corporate environment in which mass layoffs are implemented to secure an increase or maintain the current level of the stock price can easily have a damaging effect on the culture within a firm. There seems to be something perverse about rewarding executives for the business decisions that (presumably) created the problems on the balance sheet and triggered the pressure to reduce labor costs.

More generally, this model seems unlikely to result in the kind of corporate values and culture that will motivate employees or maximize opportunities for employee job satisfaction. Quite the contrary, it seems likely to breed a culture of mistrust between employees and executives and managers. And if maintaining employee happiness is the key to innovation, customer happiness and the long-term commercial success of a firm, then a corporation oriented around maximizing shareholder value is likely to fail. At least, it will struggle to attract the best talent.

Silicon Valley serial entrepreneur Steve Blank, for example, argues that a "shareholder value maximization" model built on financial metrics to measure business efficiency makes it extremely difficult for a company to retain the type of consumer-oriented focus that is critical to maintaining relevancy over the long-term.[19] Focusing on shareholder value and associated metrics means that companies end up being controlled and managed by "salespeople" (with a focus on marketing), and make decisions based on the strong input from the accountants (with a focus on financials and past performance), and strategy consultants (with a focus on structures and processes that increase "total returns to investors"). Paradoxically, executives with a knowledge of, and focus on, products and services, and consumer experience find themselves marginalized from core decisions. Steve Jobs described this risk, very well, when reflecting on his early involvement with (and removal from) *Apple*:

> "The people that can make a company more successful are sales and marketing people. And they end up running the companies. And the product people get driven out of decision-making forums. And the companies forget what it means to make great products. The product sensibility and product genius that brought a firm early success get rotted out by

[19] Steve Blank, Intel Disrupted: Why Large Companies Find It Difficult to Innovate, and What They Can Do About It (2016) available at: https://steveblank.com/2016/06/23/intel-disrupted-why-large-companies-find-it-difficult-to-innovate-and-what-they-can-do-about-it/.

people running these companies who have no understanding of a good product versus a bad product."[20]

Ironically, the shareholder primacy view sets in chain a process of (inevitable) long-term decline. In the hyper-competitive world of platforms, this is catastrophic. The counter-intuitive effect of strengthening control mechanisms is to create a culture that is at best inefficient and at worst institutionalizes box ticking and the subtle evasion of legal obligations that result in socially destructive behavior and corporate scandals. As such, contemporary corporate governance structures seem to promote formalistic compliance, and, at worst, such structures seem likely to push a platform in a damaging direction. It is for this reason that we speak of a disconnect between the business needs of sustainable platforms described above (i.e., the need to open, inclusive and innovative to retain users and talent) and regulatory structures that push platforms in a different direction (closed, hierarchical and conservative).

6. Towards "Platform Governance"

So, what should regulators and other policymakers be doing? What could the government do to ease the effects of this disconnect? How can we put in place the regulatory environment that can help build the sustainable platforms of the future and maximizes the promise of this new business form? Here we offer some preliminary thoughts by way of a conclusion.

For a start, we need to acknowledge that the environment created by the above technological and business trends create an enormous challenge for all levels of government:

> "Emerging technologies such as nanotechnology, biotechnology, personalized medicine, synthetic biology, applied neuroscience, geoengineering, social media, surveillance technologies, regenerative medicine, robotics, and artificial intelligence present complex governance and oversight challenges. These technologies are characterized by a rapid pace of development, a multitude of applications, manifestations and actors, pervasive uncertainties about risks, benefits, and future directions, and demands for oversight ranging from potential health and environmental risks to broader social and ethical concerns. Given

[20] https://www.businessinsider.com/steve-jobs-on-why-innovation-dies-at-tech-monopolies-2014-11.

this complexity, no single regulatory agency, or even group of agencies, can regulate any of these emerging technologies effectively and comprehensively."[21]

In an age of constant, complex and disruptive technological innovation, knowing *what*, *when,* and *how* to structure regulatory interventions has become much more difficult. That much seems obvious.

But, in spite of these difficulties, governments could do more and persisting with existing models seems short-sighted. Instead, lawmaking and regulatory design need to become more dynamic, responsive and experimental.[22] In the same way that platforms have disrupted business creating more open and inclusive ways of operating, governance and regulation will be similarly transformed.

So how can regulators achieve this goal? What can they do to promote innovation and offer better opportunities to people wanting to build a sustainable platform business? At best, the essence of a platform is connections and connecting. Regulation needs to embrace a similar openness, inclusiveness, and diversity in its approach to designing a new regulatory framework. Here are three preliminary suggestions focusing on *who*, *what* and *how* regulation ought to be structured in this new world.

Regarding the issue of *who* participates in the regulatory design of platform governance, regulators need to understand that we have moved away from a model in which regulatory decision-making related to new technology could be fact-based, and the task of regulatory design could legitimately be delegated to a combination of "experts" with knowledge of settled facts and democratically legitimate politicians making policy determinations. This model – which Michel Callon calls "double delegation" – has broken down.[23] In the context, of complex technological change, such models are much less useful as it is often not clear who the experts

[21] Gary Marchant & Wendell Wallach, The Governance of Emerging Technologies in Gary Marchant, Kenneth W. Abbot & Braden Allenby (eds) *Innovative Governance Models for Emerging Technologies*, (2013) p.136.

[22] Mark Fenwick, Wulf A. Kaal & Erik P.M. Vermeulen, Regulation Tomorrow: What Happens When Technology is Faster than the Law, *American University Business Law Review*, (2017) Volume 6: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3204119; Mark Fenwick & Erik P.M. Vermeulen, Technology & Corporate Governance (2018) available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3263222.

[23] See Michel Callon et al, *Acting in an Uncertain World* (2009).

are or the basis of their claim to claim to authority. Similarly, public trust in politicians has dramatically diminished.

The solution to this predicament is by no means obvious, but there is a need for more flexible and inclusive law-making processes that involve more diverse voices, including, for example, start-ups and established companies, as well as the public. This type of regulatory design could be thought of as community-driven in the sense that it is more attuned to the demands and expectations of the various communities that are operating in a particular space. In this way, regulated entities can be made to feel invested in the regulatory process and the substantive norms that emerge.

Such an open and more polycentric approach to the law-making process is currently being tested in the financial industry, for example, as a response to Fintech.[24] It is only to be expected that this trend will expand to other fields of business regulation related to emerging technologies.[25]

Regarding the *what* question, we should not be thinking of ways to strengthen hierarchy or control, as in traditional approaches to corporate governance. The benefits of such an approach are dubious for any company but seem particularly ill-suited to companies that are built on flatter and more open values. Instead, we need to deepen our understanding of sustainable platforms and regulatory measures – what we term "platform governance" – could be identified that help firms to achieve and maintain these goals and are, therefore, more closely aligned with the business needs of such firms. The "disconnect" that currently exists between "regulatory pressures" and "business needs" could then be mitigated.

Finally, *how* might we do this? This is undoubtedly the most challenging issue of all. But the answer has to involve the co-creation of regulatory schemes that allows regulated entities to feel invested in those schemes and not see them (as they do now) as a nuisance (or worse something that can be ignored).

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[24] Dirk A. Zetzsche, Ross P. Buckley, Douglas W. Arner & Janos Nathan Barberis, *Regulating a Revolution: From Regulatory Sandboxes to Smart Regulation, Fordham Journal of Corporate & Financial Law*, (2017) Volume 31.

[25] Julia Black, Proceduralisation & Polycentric Regulation, *Especial*, (2005) Volume 1, p. 99-139.

This means that there should be a greater willingness to engage in regulatory experimentation and responsive regulatory solutions that are customized to specific situations and which are adjusted constantly. Michel Callon, for example, has emphasized how regulatory decisions should no longer be thought of as "final events" (to be made for all-time and from which we "all move on").[26] Rather, we should think of them as "measured decision-making." i.e., regulatory choices are open-ended and highly contingent choices that form one stage in a longer process and not the "final word" on a particular issue. Similarly, Gralf-Peter Caliess and Peer Zumbansen's concept of "rough consensus and running code" developed in the context of transnational business law also highlights a new contingency as a defining feature of contemporary law-making in transnational settings.[27]

Regulators need to abandon a fixation on finality and legal certainty and embrace contingency, flexibility and an openness to the new. We are entering a new world of polycentric, decentralized regulation characterized by a plurality of regulatory forms, combinations of iterative regulatory strategies, and individualized and negotiated regulation via "sandboxes" and "test-beds." Regulatory responsibilities become more across local, national and supranational state and non-state authorities. Diverse coalitions of private actors utilizing complex new normative orders will only become more important in managing the deployment of highly complex emerging technologies. This will require the design and installation of "touch points" or "sensors" across the economy and society that facilitate meaningful dialogue and collaboration with innovator-entrepreneurs aimed at promoting responsible deployment of innovation.

Of course, this is much easier said than done. All levels of government struggle to adapt to the fast-changing realities of a networked age. Rapid technological change makes it difficult to identify and agree on an appropriate regulatory framework. But existing corporate governance frameworks have become a part of the problem. Traditional models of corporate governance are an adaptation to a world of hierarchical and centralized organizations and seem ill-suited to the organizational and business needs of flatter and more open platforms. "Corporate governance" feeds a short-term, compliance-oriented and cautious corporate attitude that is counter-productive in a world where companies need to be dynamic and continuously adapt to shifting technologies, markets, and shifting consumer demands. In short, the development of

[26] See Michel Callon et al, *Acting in an Uncertain World* (2009).
[27] Gralf-Peter Calliess and Peer Zumbansen, *Rough Consensus and Running Code: A Theory of Transnational Private Law* (2010).

platform governance will demand more diverse coalitions of actors working in partnership to provide contingent and dynamic solutions. In this way, everyone can enjoy the benefits of this important new business form.

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