Part 1: **Mastering the Power of Networks: Who is Creating Value?**

2 Looking Behind the Scene: Assessing the Value Drivers Behind Digital Business Models

As digital technology demonstrates rapid changes, it creates a highly competitive environment that forces businesses to have an effective strategy to remain relevant. The digital can be considered a catalyst for value-creation as it opens new avenues to exploit the technologies developed in the last decades. Smart devices provide a wealth of data that is yet to be fully leveraged by marketers. Behavioural data refers to information produced as a result of actions and typically tracks the sites visited, the search performed, the apps downloaded and the games played. Essentially, it allows businesses to acquire an unprecedented insight into consumer preferences at any time and any place. Yet, digital transformation no longer relies on specific technologies or activities in business. It must be consistent and coherent with the entire business. Irrespective of the industry sector (e.g., retail, services, media, advertising, travel, health, home and manufacturing), digital has become a strategic foundation of value chains and a core component of business models and value drivers.

2.1 A Digital Disruption at Work

The Impact of Digital Disruption on Business

As digital technology rapidly changes, it creates a highly competitive environment that forces businesses to achieve an effective strategy to remain relevant. Digital can be seen as a catalyst for value-creation since it opens new avenues to exploit the technologies developed in the last decades. Smart devices provide a wealth of data that is yet to be fully leveraged by marketers. Behavioural data refer to information produced due to actions and typically track the sites visited, the search performed, the apps downloaded and the games played. Essentially, it allows businesses to acquire an unprecedented insight into consumer behaviour. Marketers not only collect this data but also act on it: the mobile device is the ultimate overlapping device between the outside world and the consumers' brains. Successful corporations can populate a smartphone with relevant apps and media content that can help in capturing the location, behaviours, thoughts, mood and social network of potential or actual consumers.

Disruption is a word often associated with digital business, with a significant impact on traditional industries. Uber, for instance, although founded only in 2009, is now the world's largest taxi firm. However, unlike traditional cab companies whose fleets are generally specific to a town or city, Uber is present in more than 900 cities worldwide and owns no taxis itself. In the accommodation space, Airbnb is the biggest player. Within a decade of its inception in 2007, it is now the world's largest accommodation service provider. Although it does not own any real estate, it lists more

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accommodation on its website than the Hilton and Marriott chains have rooms in their hotels even after decades of doing business.

The telecommunications industry has similarly been disrupted by apps like Skype, WhatsApp and WeChat that let customers make free calls to anyone, anywhere. By using others' telecom infrastructure rather than their own, they have effectively become the world's largest phone companies. In effect, they have commoditised rather than replaced traditional telecommunications companies by turning them into mere infrastructure providers. In the e-commerce space, Alibaba has grown to become the biggest player by brokering leads between buyers and sellers on an enormous scale, although perhaps since it has no inventory of its own, it is better considered a marketplace.

Amongst media organisations, the focus for many years has been on putting digitised content on their websites. However, in recent years, social networks have revolutionised the industry by changing the way people access news. Facebook and Twitter, for instance, are now the primary news source for many, even though they do not create any news content. Currently, rather than reading articles in newspapers, people prefer getting the latest updates based on their areas of interest from specialist journalists on Twitter. The limited characters in a tweet may not allow in-depth exploration; however, it is sufficient to cover core facts and provide real-time information without waiting for news to move through the standard editorial process. The impact of digital on the print media may be assessed by the establishing outlets ceasing their print versions across the globe, for instance, *The Independent* in the UK (2016), *Wall Street Journal* in Europe and Asia (2017), *The Times Ireland* (2019) and the *Playboy* (2020) being the latest.

Netflix is the world's largest movie house but owns no cinemas. Instead, it has disrupted traditional television stations by offering a catalogue of on-demand television series, making pay-per-view movies of traditional cable television networks virtually obsolete in the process. Netflix pays to license content, after which the cost-per-view is minimal.

The largest software vendors, Google and Apple, do not write their applications but provide developers with programming tools that they can use to create applications that will run Android and iOS, respectively. This has been a huge shift in the way software is created and distributed. Rather than coding, the main challenge for Google and Apple is to maintain control over the apps in their stores that are created by third parties and to avoid those that might not share their vision or may act maliciously. In order to prevent this, both companies have an approval process for all apps.

Tomorrow's Leaders in Digital Disruption

GAMA (Google, Apple, Meta, Amazon) may also face future disruption as new companies might challenge their content, processes, and monetisation. However, they are

at an advantage since they have the money to combat attacks from future competitors. For instance, they may simply buy them before they become too disruptive. An example of such a scenario is the acquisition of WhatsApp and Instagram by Facebook (i.e., Meta).

Another advantage is GAMA's status as the supplier of the digital infrastructure that is used by disruptors. For example, a cloud storage company, like Dropbox, could be using Amazon Web Services servers. Moreover, a site that offers users a quick and convenient login process might be dependent on "Facebook Connect". This means that disrupting GAMA may be risky for potential disrupters who might lose access to infrastructure, leading to a reduction in the disruptive power of such companies.

Other new players in digital business are NATU (Netflix, Airbnb, Tesla, Uber). Despite some operational (Tesla production system), regulatory (Airbnb and Uber), and competitive pressure (Netflix), these companies are registering consistent growth.

Digital Technology, Consumers' Behaviours, and Social Norms

Digital technology is also evolving the way we behave as consumers. Some companies are quicker to take advantage of those changes and define new ways of creating value. The sharing economy, for example, describes a new economic system wherein assets or services are shared between private individuals. Consumers are shifting away from fixed ownership towards a system of shared access. Instead of prioritising buying expensive items, such as houses and cars, consumers, and in particular millennials, are generally focused on the experience of collective use of resources. This usage has been enhanced by the Internet.

Eventually, technology allows for the emergence of new business models that are fundamentally changing society, sometimes by redefining our concept of social norms, for example (e.g., Facebook) or trust (e.g., BlaBlacar). For instance, in 2010, Mark Zuckerberg announced that the rise of social networking online meant that people no longer expect privacy. This assertion was conveniently aligned with the business model of the social network, which turned out to be at least partially incorrect. Yet, no one can deny that our attitudes and actual behaviour with regard to privacy have dramatically changed over the last two decades. This has been activated or at the very least facilitated by digital technology (smartphone) and the rise of social networks. Another dramatic shift in social norms can be illustrated by the users of BlaBlaCar – the world's leading carpooling company. A study by Arun Sundararajan of NYU Stern Business School showed that users of BlaBlaCar trust its drivers more than they trust their next-door neighbours. This is thanks to the trust mechanism put in place by the company. It allows users to witness the reviews from other BlaBlaCar users, creating a sense of security that brings peace of mind with respect to getting into a car with an otherwise stranger. This also exemplifies a significant shift in social norms instigated by technology.

Yet, digital transformation no longer relies on specific technologies or activities in business. It must be consistent and coherent with the entire business. Irrespective of the industry sector (e.g., retail, services, media, advertising, travel, health, home, and manufacturing), digital has become a strategic foundation of value chains.

2.2 Business Models as the Perfect Layer

Business Model: A Powerful Concept Beyond a Buzzword

"Business model" is a ubiquitous buzz phrase that proliferated largely from the internet boom of the 1990s. In the past, the term was often invoked, as writer Michael Lewis put it, "to glorify all manner of half-baked plans". Indeed, some of the early digital start-ups were not underpinned by any effective business model at all with no generation of stable and visible pricing mechanisms. Instead, such ventures often relied on flawed, advertising-driven revenue streams, and offered free value to their users. The burst of the dot-com bubble in 2001 exposed their limitations. While we may now find it easier to recognise a terrible or even an outstanding business model, many of us still struggle to define the term precisely. In its simplest form, a business model is a process which enables a company to make money. This would be an excellent definition were it not for the fact that it fails to convey the complexity of the methods used to achieve this seemingly simple goal.

Therefore, we provide a single-dimensional expression, rather than a definition, revolving solely around revenue. As Peter Drucker observed, "any definition of a business model should encapsulate all the 'assumptions about what a company gets paid for."[1] These assumptions may revolve around strategy, transaction, and particularly the notion of value. Certainly, the most widely accepted characterisation of business models is that they describe the rationale of how an organisation creates, delivers, and captures value. In this section, we first explore the notion of "value" around which the digital business models usually pivot. We then briefly outline the complementary strategic and transactional definitions of the business model.

A Value-Driven Approach to Business Model

Value is a useful concept widely utilised in economics and marketing since it measures the benefits gained by consumers from using a good or service as well as the

1 Magretta, J. (2002). Why Business Models Matter. Harvard Business Review, 80(5), 86–92. Quoting Drucker, P. F. (1994). The Theory of the Business. Alfred P. Sloan: Critical Evaluations in Business and Management, 2, 258–282.

benefits gained by businesses from selling the said service. In marketing, value refers to the customer-perceived value, which is the difference between a prospective customer's evaluation of the benefits and costs of one product when compared with others. In economics and for businesses, monetary worth is assigned to the technical, economic, service and social benefits a customer company receives in exchange for the price it pays for a market offering.

It is worth noting that in marketing, value is not solely derived from utilitarian benefits but also the social and emotional experience of a service. Price may affect the perception of value ("this is good value for money"), and therefore, the customer's willingness to pay; however, the price may never be equated with value. The pricing mechanism simply enhances or inhibits the acceptance of a value proposition (product and services). Prices must be consistent with the customer experience. Similarly, value does not equal revenue. Therefore, value is a fluid benefit created by the company for the benefit of consumers and the company.

Following this approach, a key question for a business remains. How can we create, deliver and capture value for and from our consumers? A business model describes the rationale of how an organisation creates, delivers, and captures value. Based on Osterwalder and Pigneur (2010), three key processes must be in place for a (digital) business to be viable (Figure 2-A):

- *Value creation:* the production of value or benefit for its consumers by the company. For instance, Google creates value for its end users by providing relevant search results.
- *Value delivery:* the governance and structure that underpins a business and which enables it to efficiently create and distribute goods and services to set standards, i.e., cost, time, quality and quantity.
- *Value capture:* the monetisation of the business through its transactions with customers for instance via payments, subscriptions, fees and/or data.

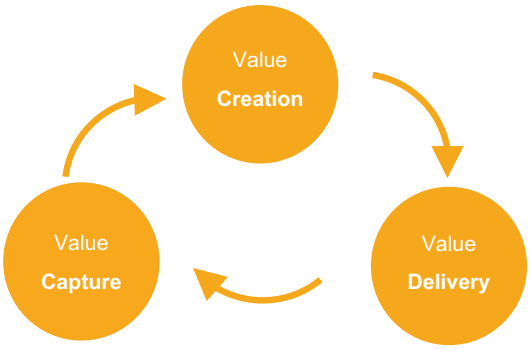

Figure 2-A: Value-driven approach of a Business Model.

Transactional Approach to Business Model

Business models, more so digital ones, may also be defined from a transactional viewpoint wherein businesses and consumers exchange value (e.g., goods, services for money, or data). In this conception of the business model, we must consider three aspects – content, structure, and governance (Figure 2-B).

- *Content:* the goods, service, or information exchanged, including the resources and capabilities required to enable that exchange. The reader may note that exchanging "content" can imply more things than simply exchanging physical goods. For instance, Facebook provides a social media platform to users at no monetary cost but only does so in exchange for users' information.
- *Structure:* the order in which exchanges take place as well as the mechanisms that enable these exchanges to occur. The structure has huge implications for the business model, especially in the digital context. This can be illustrated with Booking.com. When travellers book a room through Booking.com, they receive a confirmation email. The hotels receive a reservation notice, but not the guest's contact information. This limits their ability to employ digital marketing tactics, such as email remarketing. This structure influences the hotel industry as it limits hotel chains' marketing capabilities. However, from the perspective of Booking.com, it creates a competitive advantage.
- *Governance:* the ways in which flows of information, resources, and goods are controlled by relevant parties. This covers the organisation's legal form and how people are incentivised to transact. Hosts who post lodgings on Airbnb, for example, can "multi-home" by using other platforms to increase their occupancy rate as Airbnb does not demand exclusivity. However, the network effects associated with Airbnb ensure that it remains the first choice of the hosts despite the possibility of multi-homing.

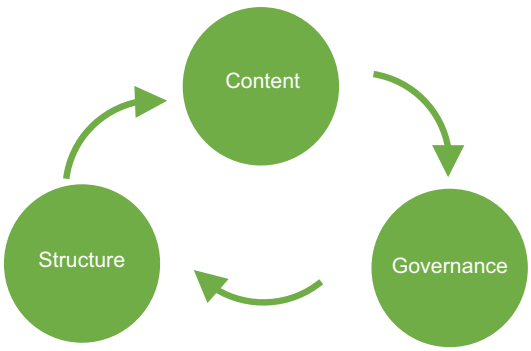

Figure 2-B: A Transactional Approach to Business Models.

Irrespective of the approach one takes to understand and explain a business model, the digital revolution has a large impact on how a business operates and creates value for its stakeholders.

In the last 25 years, new companies have emerged, and the terminology GAMAM (Google, Amazon, Meta, Apple and Microsoft) encapsulates their economic and societal predominance. More agile than older traditional companies, they quickly rose to the top, and in 2020, their market capitalisation placed them in the top five most valuable companies in the world. Today, the most valuable company in the world is Microsoft, which is valued at $1.2 trillion. With the special case of Apple, which was effectively reset as a digital company after it almost went bust in 1997, Microsoft is the only traditional business that has made its way to the top by successfully transitioning to digital.

In the 1990s, customers of Microsoft, one of the world's best-known IT companies, were required to visit bricks-and-mortar retail shops in order to buy physical copies of its Office suite that came in a box with a CD inside. However, in recent years, Microsoft has changed its model to software-as-a-service. Therefore, rather than buying a physical copy of a Microsoft product, customers now must subscribe to Office 365 for a monthly or annual fee for which they receive software updates and upgrades. Microsoft's business model evolved from traditional to digital.

Microsoft also illustrates another prevailing trend by designing a business model that locks in customers. For instance, the Seattle-based firm provides university students free access to its Office product suite, who then get accustomed to using software such as PowerPoint and Word. This makes them much more likely to become subscription-paying users following their degrees. Since they have grown used to the "Microsoft user experience", they are less likely to switch to other products when they continue with their career after graduation. Of course, Microsoft's transformation is much greater than the Office 365 example, which is almost anecdotal in comparison to other aspects of its transformation. Microsoft's digital transformation is rooted in a cultural shift initiated by Satya Nadella in 2014. It took the form of massive investments in future technology, such as cloud and Artificial Intelligence (AI). In 2017, Microsoft launched an AI division with more than 5,000 computer scientists and software engineers. It also launched Intelligent Cloud, which included products such as Server and Azure. However, the Office 365 example illustrates how technology may have a profound impact on the way companies create, deliver and capture value. The move from software as a product to software as services hereby described is much more than a simple change of distribution tactics (value delivery). Combined with a new billing strategy (value capture), it illustrates an evolution of the business model.

2.3 Value Drivers Behind Digital Business Models

At the Root of e-Businesses

The drivers of value creation outlined by Amit and Zott (2001)[2] are still applicable for digital business models today. The two authors explore how value is created in e-business by examining 59 American and European e-businesses. They observed that e-businesses create value through four interdependent drivers, namely efficiency, complementarities, lock-in and novelty (Figure 2-C). These dimensions may be illustrated using the example of Google.

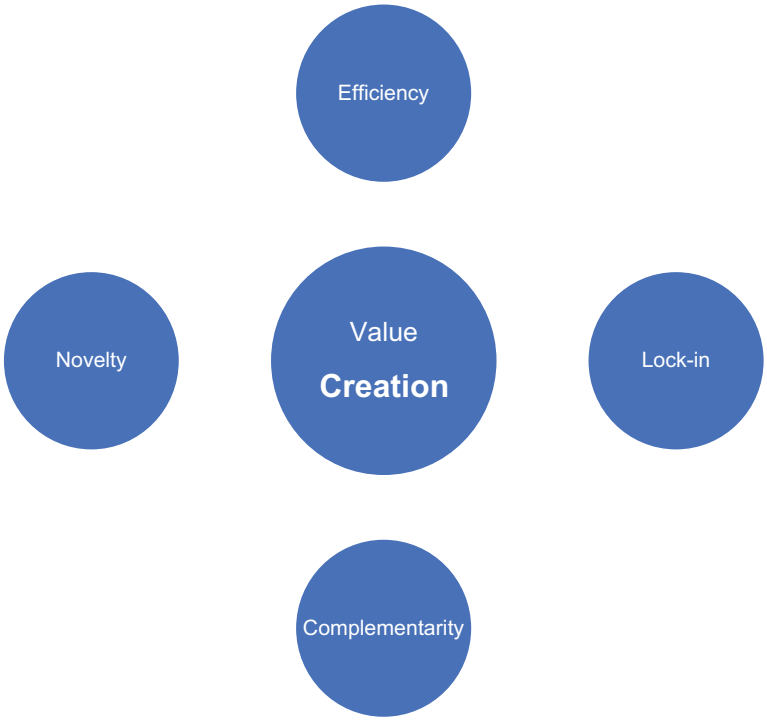

Figure 2-C: Value Drivers Behind e-Businesses.
(Adapted from Amit & Zott, 2001)

When Google first introduced its search service, end users were quick to adopt it, usually for its efficiency. Google's page-rank algorithm was a closer match to users' requirement than the existing practice of ranking the page based on category and/or

2 Amit, R. & Zott, C. (2001). Value Creation in e-Business. Strategic Management Journal, 22(6–7), 493–520.

money received (e.g., Yahoo!). Another novel factor for the users was a clean user interface, which incorporates only a search box to "google" a query. Due to the relevance, reliability and speed of its search results, Google became synonymous with an online search. Google use is likely to be frequent as users continue to find the relevant results that they are looking for, thereby creating a mental lock-in effect, therefore becoming a goal-activated automated behaviour (Murray & Häubl, 2007).[3]

The choice architecture of the Chrome browser sustains and strengthens the lock-in effect by providing the default choice of Google search by allowing the facility of directly typing the search term in the address bar. Along with the automatic login via a Gmail address, it also allows Google to collect individual behavioural data that are then integrated into the algorithm for specific, individually tailored search results. Moreover, the entire product suite offered by the company (search, e-mail, location-based services, smartphone operating systems) introduces complementarity, thus boosting the value proposition for the customers.

Data at the Epicentre of Value Creation for Digital Business

Digital technologies have drastically enhanced the volume and nature of content exchanged. It is the creation, the capture, the exchange and the exploitation of this content, which is now referred to as data that confers the value of a digital business. Digital removes frictions and provides a set of contents along the user/customer journey while harvesting the data generated by users' behaviour (browsing behaviour, location, search queries, devices, etc.).

When a customer purchases a product on their favourite e-commerce website or app, they simply exchange money for a product. The exchange remains a physical transaction, which will transit from an external supplier to a customer. Yet, the value creation process does not stop them. The consumer journey leaves a digital footprint, which will be analysed by the e-commerce platform owner to better understand the customer, their shopping preferences, and the way in which they navigate the app, along with the device they are using. This data or the aggregated data of multiple users can then be leveraged to create more value for the platform, the supplier, third parties or advertisers. In addition, traditional linear business models flow the value along value chains from suppliers to consumers. However, digital removes barriers and eases the process to transform traditional customers into producers. Typically, buyers on the e-commerce website become suppliers of content when they are enticed to produce a review/refer a friend or share their purchase on social networks.

3 See Murray, K. B. & Häubl, G. (2007). Explaining Cognitive Lock-In: The Role of Skill-Based Habits of Use in Consumer Choice. Journal of Consumer Research, 34(1), 77–88.

Data, therefore, takes an important dimension in the strategy and management of digital players. The **efficiency** of their processes relies on removing any frictions from the exchange activity. Data are exploited to identify **complementary** products and services by interlinking more and more players between them ("customers who liked this also liked that").

Data also reveal new ways to deliver products as well as **new** services enhanced by innovative technology development. Data are exploited to **lock** customers **in** a user experience and develop loyalty. Producing data is a relatively low-cost exercise for digital players and does not require any effort on the side of the users. Metadata capture the behavioural response and digital footprint of users as they browse through a website and carry on with their purchasing journey.

However, making sense of big data and generating insights has become a new fundamental strategic activity in those organisations. Very often, it is the main competitive advantage of digital players. It is well documented that Blockbuster's online video services copied Netflix ergonomics. Yet, despite a better catalogue of films at the time, Blockbuster failed to beat Netflix, whose algorithm and clever use of subscribers' data proved to be an unbeatable competitive advantage.

A Change in the Structure of Transactions

As digital enhance the disintermediation and reintermediation of traditional industries and markets, it is possible to rearrange all kind of structure for the exchanges beyond the traditional Business-to-Consumer (B2C) settings:

- Consumer-to-consumer (C2C) – The fastest growing type of business model. Airbnb, BlaBlaCar and Tinder are some examples of disintermediation of traditional exchanges before being powered by central players concentrating assets to deliver a standardised value.
- Consumer-to-business (C2B) – Businesses using digital platforms to crowdsource ideas. Lego is an excellent example where the company uses its platform to generate new ideas from Lego enthusiasts. The Irish online peer-to-peer lending platform Flender, described as a "friendly crowd finance" company, allows individuals to lend to small and medium-sized businesses. These are examples of intermediations reinvented by new participants involved and becoming active producers of the contents they would like to consume or active contributors for established businesses.
- Consumer-to-administration – Consumers starting online petitions to send to governments and political representatives through platforms such as Petition.org or Change.org is an example that demonstrates new ways to perform and act democracy that do not exist without unexpected consequences on the stability and disruption of traditional institutions.

- Business-to-administration – Digital removes traditional geographical barriers. As digital players scale, they become more global. However, in opposition, regulations remain continental (regional) or even local. Accordingly, businesses must conform their activities to local authorities and regulations regarding the exploitation of data (GDPR), taxes regulations, HR regulations, and conformity for products and services. Accordingly, they are asked to open their books with regulators and local authorities to comply with regulations. However, government agencies can save money by turning to cloud computing options that do not require purchasing costly servers and equipment. E-procurement portal over cloud is a suitable example.
- Administration-to-consumer (A2C) – Government organisations providing access to public services through online platforms. Majority of the governments in the Western world are providing such services via their citizen portals.
- Administration-to-business – The fast adoption of digital in business processes pushed administrations to adapt themselves and develop new ways to interconnect with businesses and release frictions of administrative declarations. Similar to A2C, businesses access government services online to register for new business licenses or pay their taxes. In this vein, some states are more advanced than the others and experiment a digital revolution of their processes and practices. Estonia is considered as the most advanced country in the Worlds for digitisation of administrative practices, including internal and interconnections with economic institutions and citizens.
- Administration-to-administration – State and local government organisations sharing their information systems data via data sharing protocols or open data. Administrations adapt themselves to more efficient and open processes and practices, thanks to digital adoption.

These new settings reveal new strategic priorities to govern the flow of information, resources and goods (Amit & Zott, 2001). The control of intermediations and structures by relevant parties becomes the new strategic game at play. This ecosystem uncovers the participants who will be able to sustain and develop competitive advantages throughout their journey. In this movement, the GAMAM control much of the game. These companies were not necessarily considered pioneers in their industries; however, they were able to establish large ecosystems wherein businesses, consumers and administration were required to plug their activities as a matter of efficiency. The GAMAM have quickly developed architectures to connect with users, irrespective of their location. At the heart of these GAMAMs ecosystems, we find core assets to control and govern relations among parties: tech infrastructures and continuous innovation; data concentration and exploitation; global and efficient value chains interlinking different industries; a capacity to deploy and establish new standards of user experience.

2.4 Key Takeaways and Further Considerations

Industry Trends due to Digitisation

Digitisation offers a huge potential for companies and industries far beyond the established digital players. Users and/or data are at the heart of a business ecosystem that will continue to be profoundly transformed by digital technology.

– **Future Digital Opportunities for Traditional Industries and Start-Ups**

While it may seem that businesses are already reaping the benefits of digital technology, McKinsey Global Institute (MGI) estimates that an additional €12 trillion may be added to Global GDP by the year 2030. MGI also predicts that AI and robotic process automation (RPA) will become the main driver of this growth. While manufacturing is slowly gearing up to tap the potential of RPA, traditional sectors, such as agriculture or retail, have started to explore AI applications. In most industries, digital start-ups now form a sizable chunk that is increasing with time. Relative to the traditional players, these start-ups are digital natives that offer value propositions derived from digital technologies. For instance, the start-ups related to speech recognition or image processing are hugely sought after by big firms such as Amazon or Microsoft.

– **Further Transformation of Business Ecosystem**

Digital technologies will continue to facilitate the migration of players towards areas beyond their original playground. MGI reports that digital leaders are expanding beyond their traditional industries. For instance, Amazon, starting as an online retailer, is now one of the largest providers of cloud-based services, competing directly with established technology players, such as Microsoft and IBM.

Irrespective of the sector, participating in the platform ecosystem is becoming crucial for modern businesses. For instance, sellers need to be on Amazon (or Alibaba in China) if they wish to expand their market.

While digital channels may partially hamper the growth of traditional channels, businesses need to digitise to stay relevant. Moreover, the dynamic digital landscape requires that businesses continuously innovate their product and services. Lego is an excellent example; the company has only diversified its traditional offerings and optimised its production and delivery process, thanks to digital technology. It is also harvesting the creativity of its community to crowdsource ideas for new Lego sets via a dedicated platform at ideas.lego.com.

– **Investment in digital capabilities but management and processes remain key to successful transformation.**

To remain competitive and relevant, businesses must be at the forefront of digital technologies. Thinking beyond current trends, firms must assess the potential of and invest in emerging technologies, such as blockchain, internet of things, and/or quantum

computing. For example, Google and IBM are investing heavily in building a quantum computer. Traditional companies, such as LVMH, are also acquiring start-ups around e-commerce, blockchain, AI, data analytics or natural language processing. Digital leadership and effective management of digitisation remain the key success factor for companies. Experience suggests that solely the acquisition of technology is inadequate since it requires business process reengineering and change management know-how to succeed.

More Disruption on its Way?

The COVID-19 pandemic and the corollary decision of confinement have acted as an accelerator of an existing transformation. Similar to the virus that affects the old and sick, social distancing is destroying many of the old traditional businesses (e.g., cinema and restaurants). However, it is boosting digital platforms such as Netflix, Deliveroo, Shipt, Buymie and Amazon Fresh as well as companies that help companies in their digital transformation from Microsoft to Facebook.

Other industries seem now more than ripe for disruption. Education has been majorly disrupted by the COVID-19 pandemic. Coursera, a leader in e-learning platforms, recently launched an online MBA in a partnership wherein the University of Illinois created content and then used Coursera's infrastructure to offer this programme at a lower cost than other universities' MBAs. Data from the platform can also be used to adjust and improve the course as well as provide feedback on individual students' competencies and performance, which they may use to support their job applications. On completion of the course, graduates become alumni of both Coursera and the University of Illinois. Although this partnership will raise the university's profile in the short term by making a premium course continuously available, in the long run, it is Coursera that is more likely to benefit. The trend is expected to see most universities offer online or blended degrees in the wake of social distancing measures introduced during the COVID-19 pandemic. Differentiation may be challenging for most universities, and further consolidation may be expected.

While considering future digital business models and potential disruptors to GAMAM and NATU, it is judicious to assess Asia and Africa, where conglomerates, not well known in North America or Europe, are on the rise.

Alibaba, with its mix of services and features, is a hybrid of Amazon, eBay, and PayPal. Other examples include Tencent and Xiaomi. All of these are Chinese companies whose growth has been aided by the country's large population. India is another nation that is likely to reshape digital business worldwide. For instance, India's educational platform, Byju's, has set an eye on international expansion following its huge domestic success.

In Africa, digital businesses are also creating innovative technological solutions to cater for the diaspora. Therefore, e-commerce solutions have been created that help Africans settled abroad to support their family by sending home food and household goods instead of sending them money, which might not be used for its intended purpose. If an item is available in the country, the e-commerce website pays the retailer for it and then delivers it directly to the recipient.