



## From Business Modeling to Platform Design

*How the Platform Design Toolkit can help organizations to craft shaping strategies to explore and transform markets, with smaller investments required*  
*a White Paper by Simone Cicero & the Platform Design Toolkit Team*



PLATFORM  
DESIGN TOOLKIT

Supported by  
SWIFT Inntribe



## FOREWORD

*Launched in 2009, Innotribe was created to identify the emerging technologies and innovative trends surrounding the financial services industry and generate discussions on their potential impact moving forward. Benefitting from SWIFT's central position, Innotribe provides a platform to the global financial community to understand the dynamics behind technology changes and to help focus on the opportunities for transformation rather than the threats to current market practices.*

*In the last couple of years, the impact of "platforms" has been vastly discussed from many angles as businesses realise they will succeed based on their ability to captivate third parties and connect them to each other through creative interactions.*

*There is a real appetite from the industry to explore how platform companies create radical adjacencies and new horizontal markets, and how they fit in the overall digital frame. What are the different types of players? What are the market drivers? What are the evolutionary forces that operate? How are platforms evolving? What is the next generation of platforms? Who are the new entities in this ecosystem: peer producers, peer consumers, partners, platform owners, bricks & APIs providers?*

*There is also a need to understand the difference between a product value creation and a platform value creation. Whereas the Business Model Canvas is a great tool for businesses to articulate their value proposition, more is needed in terms of platform value articulation. Businesses need assistance with the definition of their platform vision, enabling services to the financial ecosystem at large where everyone and everything is interconnected. Whilst defining the core and ancillary value proposition, its infrastructure and core components, businesses have to determine their P2P dynamics to facilitate exchange of value among their peers and partners.*

*Over the last few years, Innotribe has investigated a range of FinTech-related topics, connecting innovative and established FinTech enterprises with academics and industry professionals through the publication of timely research papers. One topic of particular interest and focus is the world of platforms. We believe The Platform Design Toolkit is a great set of tools to help businesses map their requirements in terms of platform capabilities, and Simone Cicero's research is a compelling read for anyone involved in the financial industry.*



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# INTRODUCTION

## WELCOME TO A PLATFORM'S WORLD

*"We become what we behold. We shape our tools and then our tools shape us"*

Marshall McLuhan  
(attributed by Father John Culkin)

In the last couple of years the impact of the so called "platforms" has been vastly discussed from many angles. Platforms have been accused to marginalize workers<sup>1</sup>, negatively impact on cities and nations by stressing existing regulations<sup>2</sup>, behave just as new middlemen, displacing the old ones.

Platforms have been diversely defined. Sangeet Choudary<sup>3</sup> defines platforms as *"business models that allow multiple sides (producers and consumers) to interact [...] by providing an infrastructure that connects them"* while John Hagel<sup>4</sup> states that platforms are made of: *"a governance structure [...] that determines who can participate, what roles they might play, how they might interact and how disputes get resolved"* and *"an additional set of protocols or standards [...] to facilitate connection, coordination, and collaboration"*. The recent Global Survey on The Rise of the Platform Enterprise defines platform business as a *"medium which lets others connect to it"*.<sup>5</sup>

Understanding how to define a platform is certainly key but, on the other hand, is not enough to completely grasp the current state of *post-industrial*, digitally enabled economy. In particular, despite knowing the attributes and dynamics of platforms inner workings is crucial - and we will look into this later - is certainly key to understand also how platforms fit in the overall *digitally transformed* market and societal frame. What are the types of players? What are the market drivers? What are the evolutionary forces that operate in the context? What comes after platforms as we know them today? How are platforms evolving eventually? These are all key questions.

### WHAT'S CAUSING THE RISE OF PLATFORM MODELS?

Beyond tentative definitions, what we are really seeing - sometimes failing to understand the picture completely - is the combination of different, converging, trends. Most of these trends

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<sup>1</sup> Workers on tap. (2015). [online] The Economist. Available at: <http://www.economist.com/news/leaders/21637393-rise-demand-economy-poses-difficult-questions-workers-companies-and>

<sup>2</sup> The Dark Side of the Sharing Economy: Could Airbnb Accelerate Gentrification?. (2016). [online] Shareable. Available at: <http://www.shareable.net/blog/the-dark-side-of-the-sharing-economy-could-airbnb-accelerate-gentrification>

<sup>3</sup> Platform Thinking Blog - The New Rules of Business in a Networked World. (2016). <http://platformed.info/>

<sup>4</sup> The power of platforms: Part of the "Business ecosystems come of age" report. (2016). [online] Deloitte University Press. Available at: <http://dupress.com/articles/platform-strategy-new-level-business-trends>

<sup>5</sup> The Rise of the Platform Enterprise: A Global Survey (2016). [online] Thecge.net. Available at: <http://thecge.net/archived-papers/the-rise-of-the-platform-enterprise-a-global-survey/>

can be related to two **major self-reinforcing shifts** that, as McLuhan explained in his work of a lifetime, cannot be properly isolated (since they recursively shape each other). The first shift lies in what we **expect as customers and users** from platforms, the second lies in the **ever growing potential of the technologies** that we use to build the very same platforms.

The shift in customer’s expectations relates with us, as citizens and users, and it’s a *narrative shift*: it speaks about our **growing expectations towards brands to offer superior delight and experience**:

*“We’ve all been seduced by the deep discounts, the monthly automatic diaper delivery, the free Prime movies, the gift wrapping, the free two-day shipping, the ability to buy shoes or books or pinto beans or a toilet all from the same place. But it has gone beyond seduction, really. We expect these kinds of conveniences now, as if they were birthrights. They’ve become baked into our ideas about how consumers should be treated.”<sup>6</sup>*

**Franklin Foer**

*“Customer experience is an essential dimension of how a company competes”<sup>7</sup>*

**Joseph Pine**

Our idea of modern services revolves around **four major traits**. We want services to be **fast** and in fast control like a Uber ride can be; we want them to be **personalized** like the latest model of Nike sneakers we can self-configure up to the colour of the *swoosh*; we want them to be **relevant** as Amazon’s suggestions and **human** like the *chatbots* with whom you can relate by natural language or, better, like the Airbnb host you can talk to via WhatsApp, feeling like you’re really going to sleep at a friend’s place.

<b>FAST</b> : instantly searchable, identifiable and accessible	<b>PERSONALIZED</b> : enabling us to directly intervene in creating custom solutions, perfect for our needs
<b>RELEVANT</b> : fulfilling our needs contextually when they occur, in a relevant and precise manner without needing our intervention	<b>HUMAN</b> : relating with us in a friendly, interpretable, understandable, accessible, sensible manner, interacting with us as human beings

[Table 1 - The four key attributes of modern product-services<sup>8</sup>]

<sup>6</sup> Foer, F. (2014). Amazon Must Be Stopped. [online] New Republic. Available at: <https://newrepublic.com/article/119769/amazons-monopoly-must-be-broken-radical-plan-tech-giant>

<sup>7</sup> ADVANCING THE CUSTOMER EXPERIENCE (2015) - Harvard Business Review analytics report. [http://www.disneyinstitutecollateral.com/files/Disney\\_Institute\\_HBR\\_AS\\_Final\\_Paper.pdf](http://www.disneyinstitutecollateral.com/files/Disney_Institute_HBR_AS_Final_Paper.pdf)

<sup>8</sup> The four attributes have been defined in the Product Fitness Canvas - more details available at “That’s Cognitive Capitalism, baby”. (2015). Available at:

<https://medium.com/@meedabyte/that-s-cognitive-capitalism-baby-ee82d1966c72#.6sd6aold1>

The second shift of this evolutionary path is, as said, all *technology driven* and it's an effect of the strongest force that always drives market evolution since the beginning: relentless competition.

In a self-reinforcing effect **competition drives technology towards componentization**<sup>9</sup>. Market leaders in search of cost efficiencies typically demand standardization of supplies (*components*) so to generate more competition among suppliers: this in turns enables more competitors to join the market and compete with leaders themselves. This trend eventually reduces room for profiteering and pushes leaders up in the value chain to search for more value and revenues (within an **Innovate - Leverage - Componentize** cycle<sup>10</sup>). This phenomenon has made - over time - the three main technology components of the digital economy available as **ubiquitous commodities**: bandwidth, computing power and storage are now available "as a service". In parallel, an unprecedented penetration of connected devices, from phones and tablets to IoT devices, just brought all human activities into a new "connected" context-state.

The evolution of this set of technology enablers produced in turn two major impacts: it moved most of the new digital tools of production back in the hand and ownership of the users - outside of the industrial factories - and reduced the transaction cost of the digital economy to almost zero, in a world where - according to Mark Zuckerberg's dreams - "*everyone is connected with everyone else*".

### THE NEW POSSIBLE AND THE NEW DESIRABLE ARE INTERLACED

The two major shifts abovementioned are in a strict relationship and reinforce each other: *the new possible* (what is made possible by technological advancements) and *the new desirable* (from the point of view of the user) are producing what in McLuhanian terms constitutes a "*new environment*". Platforms are the Media we - as humans - are using to create this new environment. But to understand what happens in this new environment and how is this new environment growing around these new tools is posing us unprecedented challenges.

In a similar way as we built roads and created infrastructures that shaped our modern world when massive automobile adoption created the city environment in the nineteenth century, the new environment created by firms extending themselves by means of platforms is not yet 100% known, not yet mature and regulated<sup>11</sup>. This new environment is generating totally new circumstances of work and value production, for example by involving those that we formerly considered **consuming customers** into the actual value production process as "**peers**" in *peer* to *peer* systems, workflows and business models.

According to these new possibilities, the **nature of the firm** itself is changing and - as guru of marketing Geoffrey Moore pointed out in his article "The Nature of the Firm—75 Years Later"<sup>12</sup> - these changes are "*deeply disruptive to the hierarchical management structures*" and are changing the inner working of the firm itself. The taylorist, hierarchical, management structure

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<sup>9</sup> Breaking down into interchangeable pieces

<sup>10</sup> Wardley, S. (2013). Bits or pieces? Ecosystems. [online] Blog.gardeviance.org. Available at: <http://blog.gardeviance.org/2013/01/ecosystems.html>

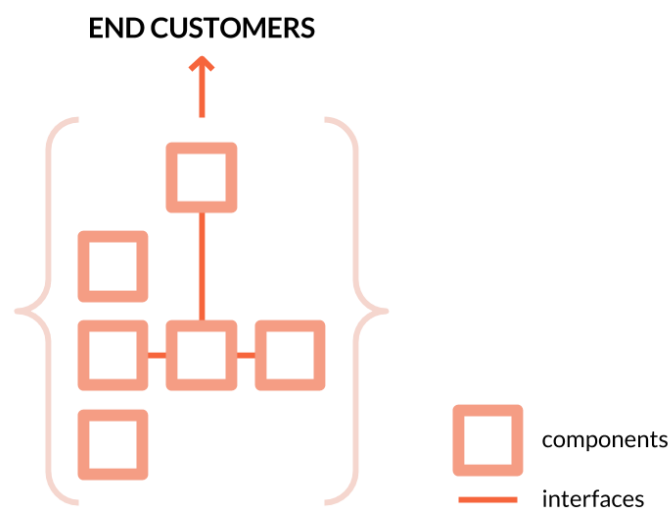
<sup>11</sup> Wilson Miner - When We Build. (2011). [online] Vimeo. Available at: <https://vimeo.com/34017777>

<sup>12</sup> Moore, G. (2016) The Nature of the Firm—75 Years Later - OpenMind. [online] OpenMind. Available at: <https://www.bbvaopenmind.com/en/article/the-nature-of-the-firm-75-years-later/>

that most of the larger organizations still use today may easily be overwhelmed by the challenges posed by the complex digital market.

Industrial firms today experience difficulties in **producing exceptional customer delight and unique user experiences**: creating value in digitally enabled markets is, indeed, less about industrially controlling production but increasingly means to encapsulate and embed third parties provided components in greatly designed, narrated and branded experiences that are siloed, controlled and vertical. The bureaucratic structure of most incumbents may not be ready to operate that way.

Disruption is coming from the transformation of **Value Chains** into multidimensional **Value Networks**. In the past, companies used to compete by owning the different enablers, modules and components of a business process entirely (and deriving sustainable competitive advantage from that possession) whilst, nowadays, if they can't compete with those who excel at perfectly integrating components into excellent experience (owning the least possible parts in the process), they must excel at providing consumable interfaces and infrastructures to allow others doing so.



[Figure 1 - Vertical integration of components into experiences, interfaces for combination]

Most of the times, successful companies are those that are able to do both things in parallel: providing unbundled components to the ecosystem on one hand and bundled, customer facing, services on the other. Such *platform-infrastructure* organizations serve their ecosystems and monitor how ecosystem's entities arrange components to provide services delighting end user customers. By keeping an eye on such patterns, these organizations understand how to re-packetize and consolidate new bundles of higher level services (in the most effective way) and move upwards in the value chain, pushing their own ecosystem to innovate at even higher layers.

There is a very delicate equilibrium that any great *platform-infrastructure* faces in the process of evolving their componentized products and services offering into new layers of infrastructural

utilities and commodities, and it's precisely about **keeping their ecosystem's trust** during the inevitable, evolutionary process of continuous disruption of the ecosystem's business model.

<p><i>In the ILC (Innovate - Leverage - Componentize) Cycle organizations monitor emerging novelty patterns from the ecosystem: within time they componentize novelty and climb the value chain up by offering it as a commodity.</i></p>	<b>Innovate</b>	<b>Leverage</b>	<b>Componentize</b>
	<p><i>In this phase the ecosystem experiment something novel</i></p>	<p><i>The novelty gains traction and generate demands for lower value components</i></p>	<p><i>The novelty gets optimized and transformed in a component</i></p>

Case Studies	Componentize	Innovate	Leverage	Componentize
<p>How Amazon Web Services launched <i>Elastic Map Reduce</i> big data offering on top of on demand computing infrastructure</p>	<p>Amazon Web Services (AWS) makes on demand Computing available at low price.</p>	<p>Brands from the AWS ecosystem experiment by instantiating <i>Hadoop</i> big data framework on the computing infrastructure and creating big data processing services</p>	<p>Growing demand for fast scalable Big Data services grows demand for On Demand Computing Infrastructure provided by Amazon</p>	<p>Amazon Web Services creates a flagship on demand big data processing service offering called <i>Elastic MapReduce</i> and climbs the value chain</p>
<p>Facebook Social Graph</p>	<p>Facebook effectively creates Social Identities</p>	<p>Brands from the ecosystem start to refer to Facebook profiles to characterize public user profiles</p>	<p>Facebook profile get widespread adoption as de-facto identities</p>	<p>Facebook enables <i>Graph APIs</i> to leverage on Social Identities and integrate more data</p>

[Deepening Box 1 - The ILC CYCLE<sup>13</sup>]

**TAKE OUTS**

<p><b>A new service narrative: FAST, RELEVANT, HUMAN, PERSONAL</b></p>	<p>The self-reinforcing effect of technology innovation and customer expectation changes is driving the demand for a new kind of services that are FAST, RELEVANT, HUMAN and PERSONAL</p>
<p><b>Firms in transformation</b></p>	<p>Firms need to transform deeply to be able to cope with the new demands of the connected age</p>
<p><b>Experiences or modules</b></p>	<p>In the post industrial age companies either provide delighting experiences to a growing set of users or provide components that can be arranged and bundled into a delighting experience</p>
<p><b>Embrace evolution</b></p>	<p>Successful companies are those that embrace evolution and always look for higher value services, by listening to the ecosystem</p>

<sup>13</sup> The reader might want to refer to the excellent explanation by Simon Wardley, in footnote 10



# THE EVOLUTION AND CONTEXT OF PLATFORMS INFRASTRUCTURES, INTERFACES, PROTOCOLS AND RESOURCES

A number of interesting studies recently assessed the superior nature of this new breed of “networked businesses” that we sometimes call *networks* or *platforms*. One key analysis is that from Deloitte and Open Matters, *The Value Shift* research<sup>14</sup>. This research categorised the history of business models and concluded that *Network Orchestrators* (businesses that create a network of peers in which the participants interact) perform better - in terms of financial results, valuation and growth - than other business models alternatives (namely *Asset Builders*, *Service Providers* and *Technology Creators*). According to Barry Libert, one of the curator of *The Value Shift* research “*Network Orchestrators receive valuations two to four times higher, on average, than companies with the other business models*”.

Other studies such as Javier Creus’s *Pentagrowth: The five levers of accelerated growth*<sup>15</sup> and Fabernovel’s *GAFAnomics: New Economy, New Rules*<sup>16</sup> substantially reinforced the understanding that such network orchestrators models, where firms and organizations provide a set of tools and a context to the producers of value and leverage on organizing external resources instead of owning them, represents a truly new way of organizing services. *Platform enabled firms* lie in the middle between the industrial mode of production and fully competitive markets and represent a new service model, apt for the future as explained by Albert Wenger in his essay called “*Networks, Firms and Markets*”.<sup>17</sup>

In parallel with the growing awareness on the potential of the platform approach, we are also understanding better how such an approach - based on *designing for interaction* and *leveraging on external resources* - may actually work also on smaller, niche markets. These markets are characterized by smaller size but also typically held higher value exchanges respect to purely transactional markets such as urban transportation or short term travel booking. A particularly effective description of this shift is offered by James Currier with his **Market Networks**<sup>18</sup> concept. Market networks combine the **efficacy of social networks in managing relationships** with the **efficacy of marketplaces in facilitating transactions**: summing it up with an effective

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<sup>14</sup>The value shift: Why CFOs should lead the charge in the digital age - Deloitte United States. (2016). [online] Available at:

<http://www2.deloitte.com/us/en/pages/finance/articles/cfo-insights-digital-age-business-model-innovation-value.html>

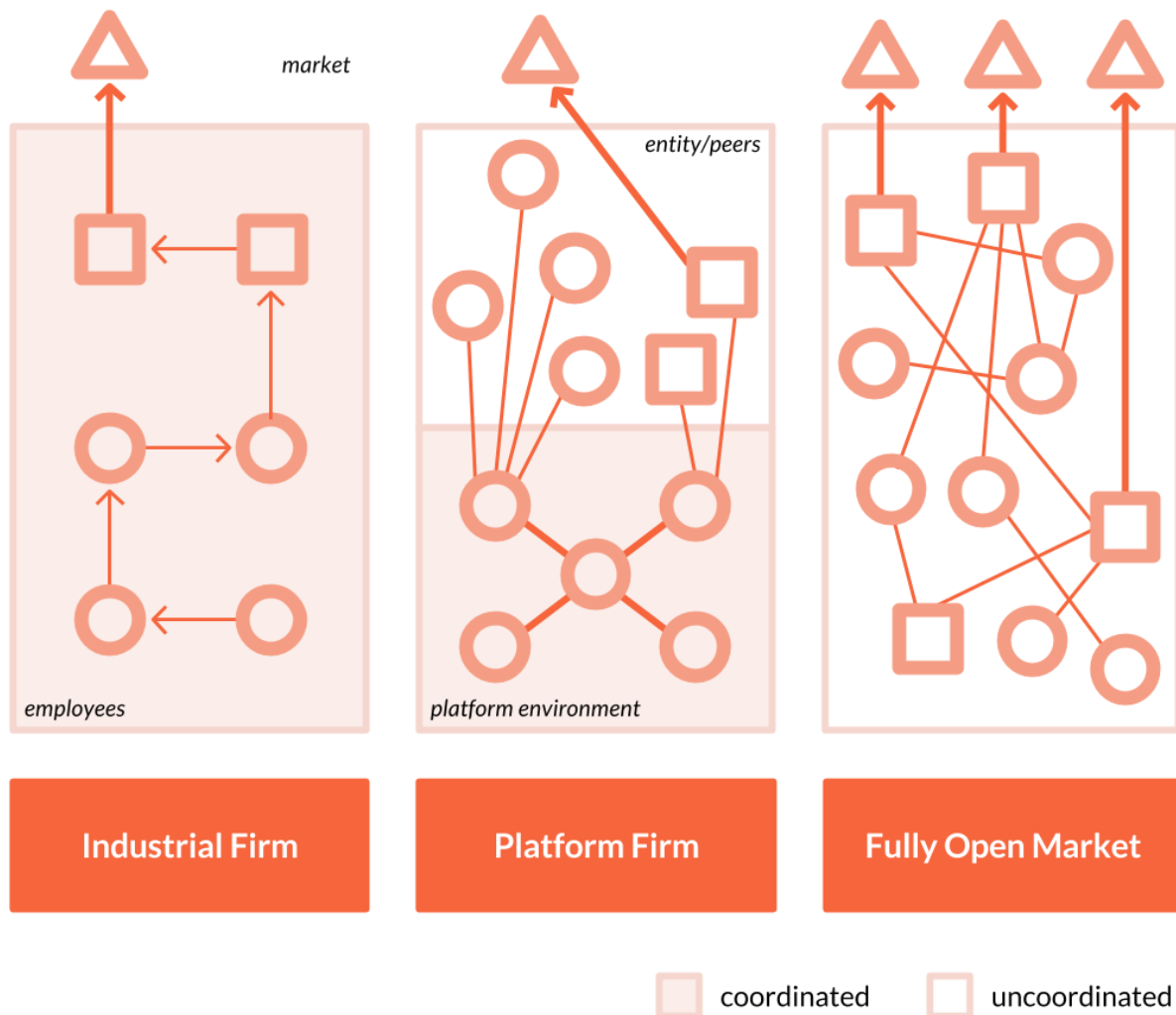
<sup>15</sup> Creus, J. (2015) Pentagrowth Report: The five levers of accelerated growth. Available at: [www.pentagrowth.com](http://www.pentagrowth.com)

<sup>16</sup> GAFAnomics: New Economy, New Rules. (2016). [online] Slideshare.net. Available at: <http://www.slideshare.net/faberNovel/gafanomics>

<sup>17</sup> Wenger, A. (2015) Networks, Firms and Markets. (2016). [online] Available at: <http://continuations.com/post/126909987225/networks-firms-and-markets>

<sup>18</sup> Currier, J. (2016). From Social Networks To Market Networks. [online] TechCrunch. Available at: <http://techcrunch.com/2015/06/27/from-social-to-market-networks/>

workflow management solution the potential to reinvent every single existing market - and to envision new ones - is practically endless.



[Figure 2 - Industrial Firm, Open Markets and Platform/Networks in the middle]

A few conceptual frameworks give us some clear snapshots of today's digital markets. One of the most efficient and clear one was originally proposed in "The hero's journey through the landscape of the future"<sup>19</sup> a seminal paper from Deloitte University Press. The framework introduced on that paper, proposed to divide digitally enabled marketplaces in two *macro parts*: an upper part ("up" as in value chain terms) characterized by a niche, fragmenting **long tail market** - driven by customer preferences and extreme personalization - and a lower part: a mixed context of **infrastructure providers**, **aggregation platforms** and what Hagel calls, **agents of "customer relationship"**.

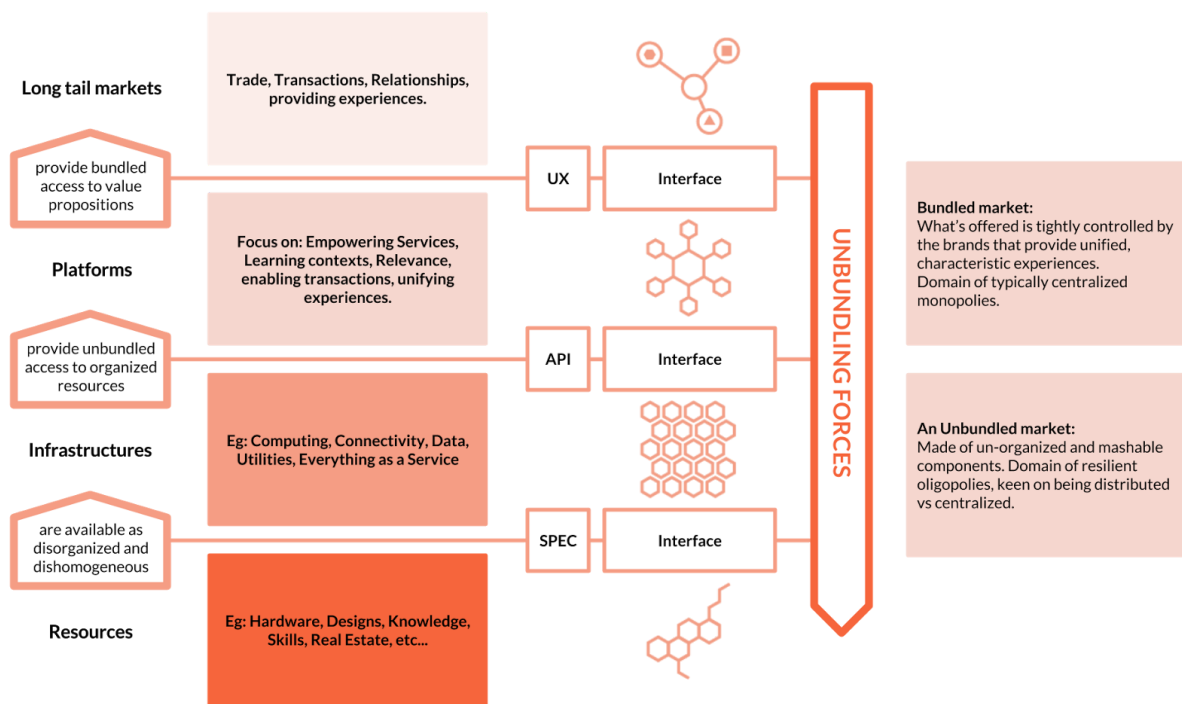
One might be familiar with the concept of infrastructure providers (e.g.: Amazon Web Services): technology enabled players offering services as a commodity.

<sup>19</sup> "The hero's journey through the landscape of the future. (2016). [online] Deloitte University Press. Available at: <http://dupress.com/articles/heros-journey-landscape-future/>

Aggregation platforms might be less known as those reducing barriers to entry, creating shared storefronts and providing an overall “enabling” set of services to all sides of a market (all supply and all demand). The concept of a Customer Relationship agents, on the other side, might be less familiar: we are talking about that kind of agent who’s responsible to connect peers to opportunities, to curate information, to act as an intelligent broker, that is increasingly being incorporated into aggregation platforms itself (eventually being translated into an algorithmic feature).

In a similar picture of the market behaviour, in its “Borges’ Map: Navigating a World of Digital Disruption”<sup>20</sup> Boston Consulting Group recently proposed to look at digital markets as “stacked” in layers made of “Infrastructure Organizations” empowering communities sometimes through the work of “Curatorial Platforms” that may evolve into marketplace monopolies.

In this paper we want to provide a related but slightly different view, building on what’s shared by these models, but also adding a key aspect to the picture: that of *evolution*.



[Figure 3 - Evolving stacks and the value chain subject to unbundling]

In Figure 3 above, on the lower part of the value chain we have the universe of tangible and intangible resources: unorganized, available as commodities and increasingly defined by standardized requirements - resources are subject to **componentization**. As an example, here we put basic hardware and computational power, open source software, bandwidth, storage but even real estate (as in Airbnb) and eventually human skills and time (as in Uber or other Gig-Economy platforms): all inventory resources that are ubiquitous and can be easily organized.

<sup>20</sup> Borges’ Map: Navigating a World of Digital Disruption. (2016). [online] Bcgperspectives.com. Available at: <http://digitaldisrupt.bcgperspectives.com/>

A first **interface** – the one just above resources – is often made of standardized specifications and allows the development of **Infrastructure Services** to be built, wrapping unorganized resources into something that exposes a clearly accessible set of services, usually through open interfaces such as API's. By defining a common, open source database of hardware designs (as an interface) Open Compute project is standardizing large scale computing operations . Similarly, by wrapping the resource of several large carriers from all over the world in an easy to use API, Twilio wrapped a world of resources in an actionable an accessible interface (see deepening boxes 2 and 3 for more information).

#### HOW IS OPEN COMPUTE HELPING STANDARDIZE HARDWARE INTERFACE IN COMPUTING

<p><b>What is Open Compute</b></p>	<p>The Open Compute Project<sup>21</sup> (OCP) is a “collaborative community focused on redesigning hardware technology to efficiently support the growing demands on compute infrastructure.”</p> <p>The project promotes the collaboration around open source hardware designs that providers can adopt when creating hardware for computing infrastructures.</p>
<p><b>Where does Open Compute intervene</b></p>	<p>Open Compute creates a <b>standardized interface</b> between (hardware) resources and Computing Infrastructure demand from platforms and firms.</p>
<p><b>Effects</b></p>	<p>By componentizing hardware design makes it easier for providers to enter the resource market and cheaper for the one building infrastructures.</p>

[Deepening box 2 - How Open Compute is componentizing Hardware Designs accelerating the computing industry]

An interesting consideration to make is that, sometimes, resources building up an infrastructure might be **distributed** and not centralized by one single player: think about the difference between Amazon Web Services (owning its data centres entirely) and the Bitcoin Blockchain or another DLT (Distributed Ledger Technology) where the infrastructure is made by distributed facilities, owned by the universe of miners<sup>22</sup>.

On top of the infrastructure interface we find what we usually call **platforms**. Platforms behave as tools, *media* whose primary feature is to **empower and enable independent exchanges to happen** in ecosystems and to enable **long tail market economies**: platforms are designed for customers' (users, peers, entities) delight, appreciation and use.

#### KEY DIFFERENCES BETWEEN INFRASTRUCTURES AND PLATFORMS

While components and services at the infrastructure layer are usually *unbundled*, available for third parties to bundle them together in a market facing proposition, services offered at platform level are typically strongly bundled and channelled: service bundles (and the customer experiences accessing them) often represent the characteristic of the brand

<sup>21</sup> Open Compute Project Home Page <http://www.opencompute.org/>

<sup>22</sup> For an explanation of Blockchain and DLT see [https://en.wikipedia.org/wiki/Blockchain\\_\(database\)](https://en.wikipedia.org/wiki/Blockchain_(database))

differentiation<sup>23</sup>. Platforms propose well-formed experiences to users and continuously operate a trade-off between a **design-led vision** of “what the experience should be” and a **user-led validated feedback** of “what customers want”.

#### HOW TWILIO HELPED STANDARDIZE ACCESS TO THE TELCO SERVICE INFRASTRUCTURE FOR STARTUPS

<b>What is Twilio?</b>	Twilio wraps global telecom services to expose a globally available cloud API that developers can use to build intelligent and complex communications systems and integrate communication functionalities in apps and platforms.
<b>Where does Twilio intervene</b>	Twilio wraps componentized offering provided by carriers worldwide (Text, Calls, etc...) into a set of building blocks providing easy to use communication services to platform builders.
<b>Effects</b>	Twilio and similar infrastructures accelerate componentization of basic communication services (resources) provided by worldwide carriers by aggregating and overcoming national boundaries, essentially creating global access where fragmented access (different APIs, national boundaries) was available.

[Deepening box 3 - How Twilio reorganized Telecom infrastructure for the startup world]

**The interface that a platform exposes towards long tail markets is user experience.** This interface is, typically, closed and 100% owned by the platform itself: for example you won't be able to transport your reputation on Airbnb or your success history and investment portfolio on eToro online collaborative trading platform to another platform (albeit things may change in the future due to unbundling pressure and narrative shift<sup>24</sup>).

Being customer facing, platforms are usually *experience led* while infrastructure are typically *cost driven* and definitely more subject to competition. By channelling the relationships across the whole ecosystems, platforms ensure resilience: it's difficult to leave the platform when critical mass is present and reputation is not portable; whilst churn may be easier for infrastructures, the investment needed to create them usually strongly limits the number of infrastructure players available. Both layers may achieve quasi monopoly economics, but for different reasons: platforms do that by means of concentrating supply and demand while infrastructure usually do that in a more classic – industrialized – way, by means of efficiency and cost competitiveness.

<sup>23</sup> Belong Anywhere - Airbnb's new mark and identity. (2014). [online] The Airbnb Blog - Belong Anywhere. Available at: <http://blog.airbnb.com/belong-anywhere/>

<sup>24</sup> Kastelein, R. (2016). Airbnb Co-Founder Eyes Blockchain Tech for User Reputation And Trust. [online] Blockchain News. Available at: <http://www.the-blockchain.com/2016/03/13/airbnb-co-founder-eyes-blockchain-tech-for-user-reputation-and-trust/>

## THE EFFECTS OF UNBUNDLING

Media expert David Pakman once defined *unbundling* as “*the great disruptor*”<sup>25</sup> and that’s exactly what it is: on one hand competition drives interface consolidation and standardization and, on the other, fast changing narratives push platforms towards allowing more openness of the interface, fairer treatment of the ecosystem and, in general, push for more diversity of players and third party freedom.

As a platform’s audience grows, the diversity of experiences required also grows as a consequence, and it requires more allowance for “personalization”, beyond the experience as originally designed by the brand. As we will see later in the document, in order to provide more possibilities for personalization a platform may create more touch points for third parties to be able **remix** and **re-bundle** the components making up the offering over time.

As platforms grow they find pressure for more inclusive and participative business models and for more openness in interfaces: this to keep the necessary trust relationship with the third parties engaged in the ecosystem. Platforms that find an evolutionary balance grant the right amount of freedom and get ecosystem’s trust end up being a strong resilient context for thriving economies, both on the owners’ and users’ side of the table.<sup>26</sup>

In parallel with all this, the evolutionary pressure of technological unbundling continuously pushes layers of the stack down in the value chain. Innovating upwards in the value chain is typically much more difficult for players than innovating downwards: going against the evolutionary forces of unbundling might be a daunting process. Brands usually fall in the trap known as the “*stack fallacy*”<sup>27</sup>: companies know pretty well what are the innovations they would like to see from suppliers (lower in the stack) - as this relates with their own changing requirements - but they usually fail to understand what their customers and users are building and how to build these higher value services.

As a result of these forces the digital market usually ends up with layered, quasi-monopolies. On top of the value chain, value propositions are strongly bundled and control is highly concentrated at *interface-experience*<sup>28</sup> level, while in lower parts of the stacks (infrastructures), monopolies or oligopolies are often grounded in the control, ownership and organization of complex tangible resources sets. Resources and resource organizing ties are typically hard to displace, replicate or disrupt, requiring significant CapEx<sup>29</sup>. In few words, despite much more standardized at the interface, it may be even harder to displace Amazon Web Services or the Bitcoin Blockchain ecosystem than Airbnb.

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<sup>25</sup> Pakman, D. (2016). *The Unbundling of Media Disruption*. [online] Disruption. Available at: <http://www.pakman.com/2011/04/15/the-unbundling-of-media/>

<sup>26</sup> Winning on trust | Nick Grossman's Slow Hunch. (2013). Available at: <http://www.nickgrossman.is/2013/12/24/winning-on-trust>

<sup>27</sup> Sharma, A. (2016). Why Big Companies Keep Failing: The Stack Fallacy. [online] TechCrunch. Available at: <http://techcrunch.com/2016/01/18/why-big-companies-keep-failing-the-stack-fallacy/>

<sup>28</sup> The interface with the long tail market, the delightful experience provided from a platform brand

<sup>29</sup> Capital expenditure or capital expense ("CapEx") is an expense where the benefit continues over a long period, rather than being exhausted in a short period. Such expenditure is of a non-recurring nature and results in acquisition of permanent assets. (Wikipedia).

It's important to clarify that the picture we just provided is not a monolith and we may have several different situations. Sometimes, **infrastructures and platform might be embedded into each other, in a single layer**. In many markets, layers might abound or the situation might be more nuanced. Telco industry, for example, is essentially made of fragmented resources (offered by national carriers), on top of which you have wrapping infrastructures (e.g.: Twilio providing API/building blocks for startups to leverage on carrier resources), or even mixed platform-infrastructures such as Google Android's software stack. Google's flagship mobile platform embeds both the propositions: the channel centrality of platforms (Google Play marketplace, Open Handset Alliance) and the component centrality of infrastructures (open source software codebase, Google Cloud Platform and other back-end services, etc...).

The already cited report *"The Rise of the Platform Enterprise"* states that platforms create value in two principal ways:

- "Facilitating transactions between different types of individuals and organizations that would otherwise have difficulty finding each other." [*Transaction Platforms*]
- Providing "technological building blocks that are used as a foundation on top of which a large number of innovators can develop complementary services or products." [*Innovation Platforms*]

In this way talking about both platforms and infrastructures defines them in a slightly different way but substantially attributing them the same features set.

As a general rule we can eventually say that infrastructures and platforms are **similar concepts** and, most of the time, **partially overlapped** but while infrastructures often look at what's below, platform definitely look to reach the top of the value chain and directly talk with end users.

	INFRASTRUCTURES	PLATFORMS
<b>What do they offer?</b>	Mostly unbundled modules made of white labelled building blocks	Bundled experiences that are strongly linked to the brand image and presence
<b>Key elements of value</b>	The building blocks making up the value proposition that adopters can reconfigure	The channels and contexts making it easier to perform transactions and build relationships inside the platform
<b>Key value creation process</b>	Supporting the creation of more value propositions by combining blocks	Give space and empower peer to peer relationships and transactions to happen
<b>Main Competitive Advantage</b>	Economic Efficiency	User (peer) Experience

[Table 2 – key differences between infrastructures and platforms]

## PROTOCOLS AND DAPPS

Resonating with John Hagel's insights<sup>30</sup> identifying governance structures and protocols as essential to a platform's definition, **protocols** are emerging as powerful ways to coordinate the birth of infrastructures, platforms and ecosystems, especially in the case of "open platforms" (i.e.: those allowing everyone to participate). Being the Blockchain one of the first case studies, the role of the protocol in that context has been overwhelming important. In 2009, the still unidentified father of DLTs, Satoshi Nakamoto published a seminal paper<sup>31</sup>. The paper contained the description of the blockchain protocol - disclosed for the first time - and the essential incentive structure for entities to join the envisioned financial ecosystem: that protocol and related open source software release generated the huge industry shifts we've witnessed in the following years.

In this case the protocol itself acted as a governance tool, with decisions as important as the dimension of the block (a variant capable of impacting the very shape of the blockchain ecosystem) being currently taken (or not taken) in the most radically democratic way: by opting in or opting out of a protocol update in a "hard fork"<sup>32</sup>.

Governing infrastructures and platforms by means of a protocol is emerging as a powerful mean to facilitate the transition towards **decentralized systems**. While the decentralization pattern might be clear at infrastructure level, thanks to the experience made by public blockchain projects such as Bitcoin or Ethereum<sup>33</sup> (a similar platform but designed to host decentralized applications), this is now increasingly happening also at platform level, with case studies like OpenBazaar<sup>34</sup> (a platform for decentralized e-commerce trading) or LaZooz<sup>35</sup> (a, struggling, platform for decentralized ride sharing services). By setting open protocols these platforms provide *open opt-in rules* and prepare for seamless and fast exponential growth with no company bureaucracy that act as a growth bottleneck. Decentralized Applications (aka *Dapps*) like these are growing in numbers, enabled by resilient public blockchains and, when we better learn how to use them, may represent forces able to *disrupt disruptors* (centralized, monolithic platforms) at the platform layer, as public blockchain did at infrastructure layer.

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<sup>30</sup> The power of platforms: Part of the "Business ecosystems come of age" report. (2016). [online] Deloitte University Press. Available at:

<http://dupress.com/articles/platform-strategy-new-level-business-trends>

<sup>31</sup> S. Nakamoto: Bitcoin: A Peer-to-Peer Electronic Cash System <https://bitcoin.org/bitcoin.pdf>

<sup>32</sup> <https://en.bitcoin.it/wiki/Hardfork>

<sup>33</sup> <https://www.ethereum.org/>

<sup>34</sup> <https://openbazaar.org/>

<sup>35</sup> <http://www.lazooz.net/>



	Centralized Systems	Decentralized Systems
Long Tail Layer	Users (Peers in a marketplace)	
Platform Layer	Web/App Platforms	Dapps
Infrastructure Layer	As a Service / "Cloud" infrastructures	Public blockchains / Distributed infrastructures
Resources Layer	Owned and centralized	Distributed and leveraged

[Table 3 - Key Differences in Centralized and Decentralized Systems across the layers]

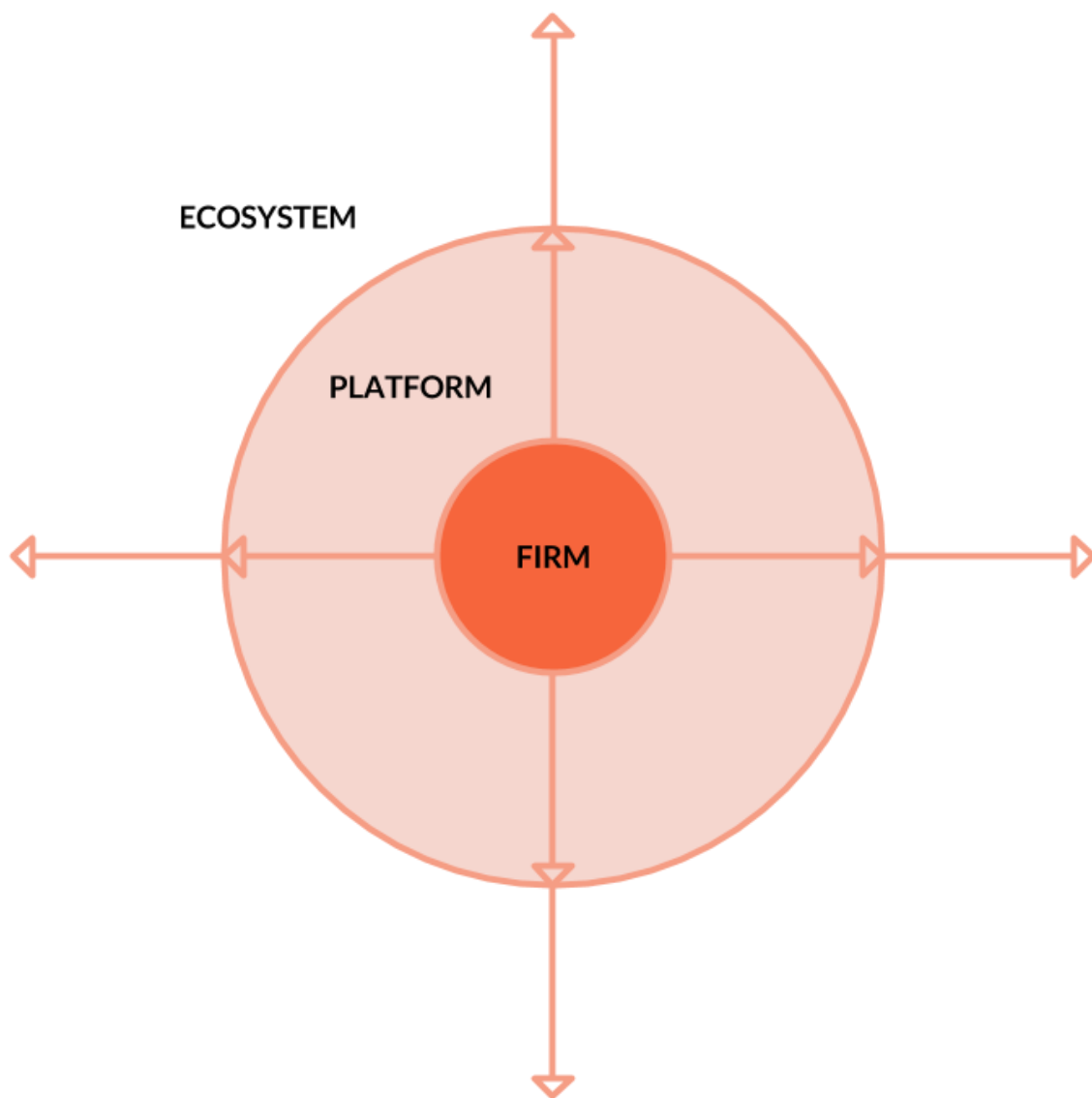
## TAKE OUTS

Interaction centric design	The platform model is about designing for interactions that can happen in the Ecosystem
Platform model goes beyond global monopolies	The platform approach doesn't only apply to global monopolies but can also apply to higher value, niche market-networks
A layered market	The digital market is more or less made of four macro-layers: resources, infrastructures, platforms and long tail markets - all separated by interfaces
Platforms provide bundled experiences	Despite being often interlaced, Infrastructures provide unbundled building blocks while platforms provide bundled user experiences
Open Platform-protocols	Open platforms with public opt-in rules that can grow fast and quasi-exponentially, may be the future disruptors of brand controlled, centralized platforms

# PLATFORM DESIGN

## THE NEW ESSENTIAL SKILL TO SHAPE STRATEGIES AND MARKETS

Understanding platforms as a firm natural extension (beyond of the firm boundaries) to mobilize and conquer markets is the first step for really understanding their potential as tools. Brands can use these tools to shape their reference markets. Implementing a platform strategy is the only way that firms have to achieve (exponential) high-growth up to a quasi-monopolistic position: **platform enabled firms** can thus become “enabling monopolies” without falling in the pitfalls of large scale bureaucratization.



[Figure 4 - Platforms as tools to expand a Firm's reach into the Market-Ecosystem]

In traditional organizations, large scale growth usually leads to bureaucratization and cost implosion, especially when trying to face long tail markets. In a traditional industrial approach, long tail customers may indeed provide too small revenues in face of non-negligible *marginal cost of product personalization*, intended as the cost related to provide a customized/customizable product/service to every user.

Long tail markets are characterized by the need of **mass market personalization** with loads of customers, everyone with a potentially different need: for an industrial brand, providing fully organized centralized services to cope with infinitely different expectations, would be an unsustainable cost burden. In this context, platforms offer brands the opportunity to behave as “enabling” hubs for entities in the ecosystem (often individuals, sometimes firms, big and small) to allow them to **self-organize** and create the bulk of the value by *interacting, creating relationships* and “transacting” value among them thus reducing the marginal cost radically. **Marginal cost of enablement** is smaller than **marginal cost of personalization**.

Furthermore, platforms embody and update MIT Von Hippel’s vision of **User Toolkits for Innovation**<sup>36</sup>, tools with which the brand empowers users to self customize their products, bringing it to a higher level. Effectively relieving the brand from the need to innovate on its own, platforms (and platform/infrastructures) “mobilize third-party producers to invest in and deploy the latest functionality”<sup>37</sup> or just to **impersonate it**. To achieve this, platform owners must be open not only at the “long tail” level, but also produce ways for third parties to access the lower infrastructure and platform’s core components (e.g. with APIs) and reshuffle and remix it.

## FROM IMPLEMENTING LINEAR BUSINESS MODELS TO DESIGN FOR INTERACTION IN ECOSYSTEMS

The first radical mindset switch needed then, when facing platform design, is to leave behind the idea of **organizing production linearly**. Linear business models, with a **service provider** and a **service recipient**, or **customer** - as dictated by traditional business design tools such as the Business Model Canvas<sup>38</sup> - is now marking time.

The **Platform Design Toolkit**<sup>39</sup> was indeed originally created in 2013 exactly to overcome the limitations of the linear thinking implied by the Business Model Canvas (BMC): a magnificent tool, that created by Alex Osterwalder, BMC is great to model linear aspects of businesses but fails in modelling emerging, multi-sided, ecosystem based, platform models where different players - all with their different motivations to join - co-participate in the whole value creation process.

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<sup>36</sup>Eric von Hippel, User Toolkits for Innovation, Journal of Product Innovation Management, July, 2001  
<http://web.mit.edu/people/evhippel/papers/Toolkits%20JPIM%20final.pdf>

<sup>37</sup>Turn products into product platforms: Providing a foundation for others to build upon. (2016). [online] Deloitte University Press. Available at:

<http://dupress.com/articles/disruptive-strategy-product-platforms/>

<sup>38</sup>See: <http://www.businessmodelgeneration.com/>

<sup>39</sup>See: [www.platformdesigntoolkit.com](http://www.platformdesigntoolkit.com) for reference

What we are effectively trying to design by leveraging on platform design is not (just) a business model but what John Hagel effectively calls a *shaping strategy*:

*“an effort to broadly redefine the terms of competition for a market sector through a positive, galvanizing message that promises benefits to all who adopt the new terms”<sup>40</sup>*

John Hagel III

GOOGLE ANDROID AND OPEN HANDSET ALLIANCE: A PERFECT SHAPING STRATEGY	
Entity	Motivation to Join
End Users	Have access to cheaper smartphones
Developers and Dev. Agencies	Have access to a unified mass device base
System On Chip manufacturers	Easily certify hardware vs one single OS
Handset manufacturers / Original Equipment Manufacturer (OEM)	Concentrate effort on hardware concepts and branded high value services leaving OS development

[Table 4: Google Android’s shaping strategy]

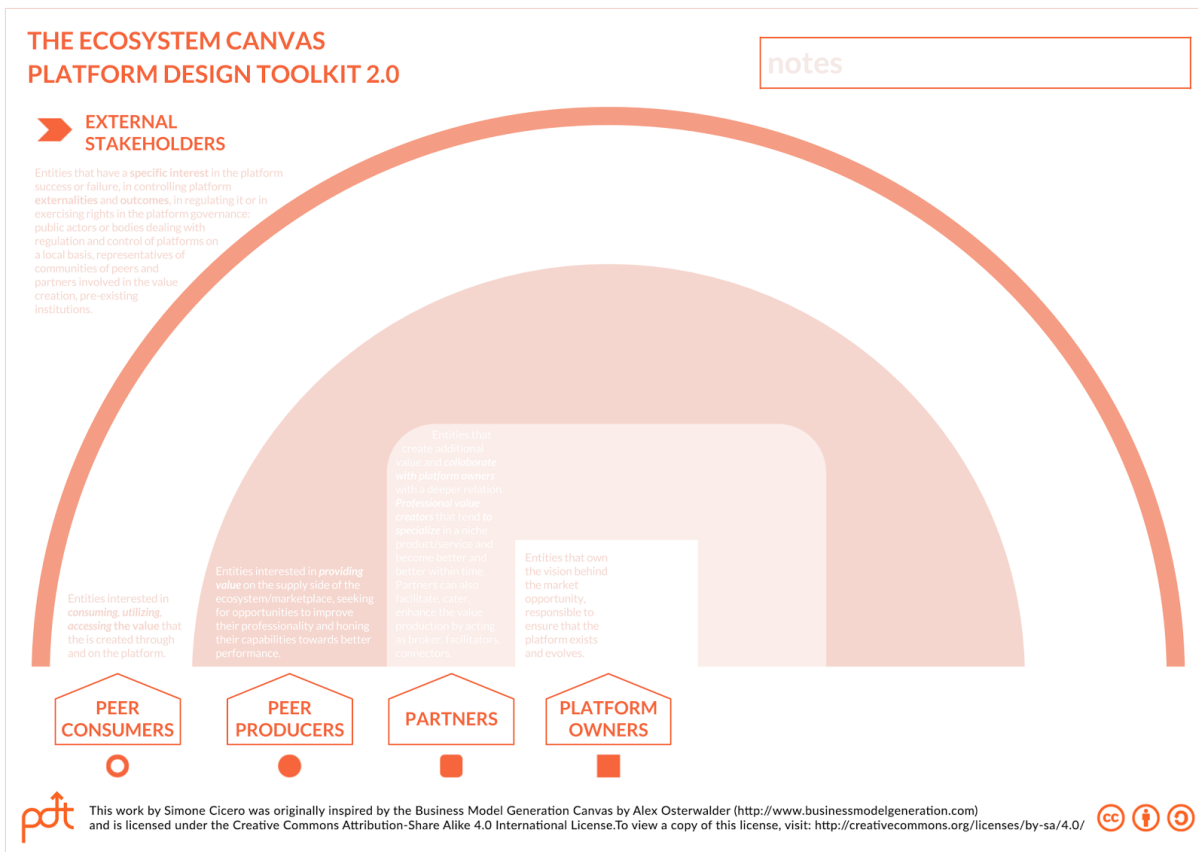
### ENTITIES, MOTIVATIONS AND INCENTIVES

Exactly with the aim of allowing the platform designer to face the daunting task of considering multiple perspectives and spot all the players that may find interest in joining a market shaping strategy, one can use the first two canvases making the **Platform Design Toolkit**.

The **Ecosystem Canvas** (Canvas 1) can help designers identify and position all the players - or better **player archetypes or “roles”** - that are supposed to participate on the platform’s market shaping strategy and to classify them in four different categories: owners, external stakeholders, peers and partners.

Leaving the external stakeholders - essentially those impacted by the externalities of the platform - away for the scope of this white paper, when mapping the entities internal to the ecosystem - beyond the platform owners - we can classify them in two macro types. First and foremost we have **peers**. Despite the trend shift is largely **empowering individuals**, with *peers* we’re not just talking about people: in general we talk about entities (small and midsize businesses for example) that behave as a *single, identifiable player* with a specific interest and identifiable objectives our platform’s value proposition should meet.

<sup>40</sup> J. Hagel III, J. Seely Brown, L Davison - Shaping Strategy in a World of Constant Disruption Harvard Business Review. (2008). Shaping Strategy in a World of Constant Disruption. [online] Available at: <https://hbr.org/2008/10/shaping-strategy-in-a-world-of-constant-disruption>



[Canvas 1 - The Ecosystem Canvas - source and download at [www.platformdesigntoolkit.com](http://www.platformdesigntoolkit.com)]

It's very rare if not impossible to see a large organization behave as a peer because of one key reason: peers operate in the long tail - the part of the market which is **fragmenting** - and therefore it's not economically viable and interesting, for a large company, to play in that context of the digital marketplace; large companies usually go for the **concentrating** part of the market (infrastructures or customer relationship/platform business). That's why we're typically referring to individuals and small-medium ventures when we talk about peers. In higher value platforms, by the way, it's not impossible to see large organizations acting as peers.

Peers can be usually re-segmented in two types. The first type, the **Consuming Peers** (CP) that we may also call **"users"**, are entities that are essentially interested in consuming, utilizing or accessing the value that the is created through the platform in the ecosystem. As in traditional business models, users can therefore be companies (think of "users" of an accounting software) and not just, individuals.

The second type is what we call **Producing Peers** (PP), we could also call *producers, prosumers, providers*: these are entities interested in providing value on the supply side of the ecosystem. Typically, these players can produce value occasionally and not systematically. Often the same *peer* may behave as both consumer and producer in different phases of its relationship with the brand-platform. Like in the case of a traveller that also rents his house when he's not at home, such a user may sometimes contribute value and other times consume it, depending on lifetime phases, contexts and more. Producing peer can as well be SMBs or individuals.

## EXTENDING THE CONCEPT OF PEERS

With the upcoming revolution in *smart contracts*, soon we may have to consider the definition of "peers" to go beyond humans and SME's. This "peer entity" operating on the open marketplace could become some sort of "node": a human, a legal entity, a group, a software agent, an algorithm or, just, a thing<sup>41</sup>. Our definition of a peer as an entity carrying a specific interest/objective is sufficiently future proof to accommodate for the future evolutions:

*"Imagine in the future –summoning a taxi that not only has no driver, but that belongs to a computer network, not to a human being. The network has raised funds, signed contracts, and taken delivery of vehicles, even though its headquarters is distributed all over the net."*<sup>42</sup>

**Matt Ridley**

[Deepening Box 4: a future proof definition of peers]

PLATFORM OWNERS	STAKEHOLDERS	PARTNERS	PEER PRODUCERS	PEER CONSUMERS
Control	Impacted	Producing / Supply side		Demand Side
players who <b>own the vision</b> behind the realization of the market and <b>ensure that the platform exists</b>	entities that have a <b>specific interest</b> in platform success or failure, in controlling platform externalities and outcomes	professional entities that seek to create additional value and to collaborate with platform owners with a <b>stronger relationship</b>	entities interested in <b>providing value</b> on the supply side of the ecosystem/marketplace, seeking for a better performance	entities interested in consuming, utilizing, <b>accessing the value</b> that the is created through and on the platform

[Table 5 - The roles around platforms, according to the Platform Design Toolkit model]

On the same side of the spectrum (the producing one) we also find **Partners**. Partners are essentially professional entities - again, also individuals - that seek to create additional value and to collaborate with platform owners at a stronger level of relationship that we may even define "strategic" for them. Typically, partners are businesses or professionals that tend to become specialized in a niche, provide advanced or premium services and that - in general - want to improve, become better and monetize their own capabilities. Partners want to **stand out from the crowd** as "the best ones". Partners sometimes also take other key roles in the ecosystem, such as that of the facilitation of the value production process, by acting as brokers,

<sup>41</sup> In the Future, Ownerless Companies Will Live on the Blockchain - Singularity HUB. (2016) [online]. Available at:

<http://singularityhub.com/2016/02/16/how-ownerless-firms-will-soon-live-on-the-blockchain/>

<sup>42</sup> Matt Ridley - The Evolution of Everything: How New Ideas Emerge - Harper Collins Publisher

connectors or providers of collateral elements of value. Partners often embody the customer relationship role previously described as part of the platform scope.

In particularly polarized platforms, where the market substantially has **two sides** (supply and demand) the partner could be an evolution of the producing peer into a more professionalized entity. This evolution is typically well received from the platform since partners drive more value than peer producers and are able to pull many other players towards better overall platform experience. With the already mentioned evolution towards market networks, with more differentiated workflows and niche market shaping strategies, the role of the partners is likely gaining even more importance.

### PERFORMANCE PRESSURE AND LEARNING: THE SECRET OF PLATFORMS

The tendency of evolving into being more professionalized (for example becoming a **partner**), reflects another key aspect that is driving platform success in the world of business: that of being a powerful **context for learning** and improving. In a particularly precious distinction that he makes while introducing the concept of platforms in the already cited “The power of platforms: Part of the ‘Business ecosystems come of age’ report, John Hagel explains that we may have to do with four macro platform-types, as depicted in Table 6.

<b>AGGREGATION PLATFORMS</b>	Focus on transactions, connecting users to resources
<b>SOCIAL PLATFORMS</b>	Focus on social interactions, connecting individuals to communities
<b>MOBILIZATION PLATFORMS</b>	Helping people to “act together” on a long term challenge
<b>LEARNING PLATFORMS</b>	Aiming to facilitate learning, help participants realize more together and hone their capabilities

[Table 6 - John Hagel’s platform classification: Learning features are always present in successful platforms]

Despite, quite often, platforms leverage on a mix of these traits, an essential insight is that the most successful ones are those fostering a **learning process**<sup>43</sup>. Many successful platforms work as spaces where participants can find guidance, support services (we’ll explore this later) and an easier way to confront with the increasing complexity they face in their lives, due to the increasing rate of disruption.

As an example, sharing economy and “gig economy”<sup>44</sup> platforms such as Airbnb are - as collateral consequence of their business - helping participants having hard times in finding traditional jobs to become travel hosts, professionalize and create a stable income in hospitality industry. In similar ways, professionals now working on platforms (ranging from the

<sup>43</sup> S. Cicero - Why Platforms need to be Engines of Learning – Stories of Platform Design  
Available at:  
<https://stories.platformdesigntoolkit.com/platforms-are-engines-of-learning-4f7b70249177#.ygl8vmbw>

<sup>44</sup> A. Sundararajan. - The ‘gig economy’ is coming. What will it mean for work? | [online] Available at:  
<https://www.theguardian.com/commentisfree/2015/jul/26/will-we-get-by-gig-economy>

interior designer promoting her work on the Houzz<sup>45</sup> platform to the small application development studio that makes apps and distributes them on the major app stores) can find exceptional opportunities and see their business improve in unprecedented ways, often internationally, thanks to the attracting nature that platforms have on the demand side of the marketplace. Being able to advertise their specific value to a larger pool of recipients, the best professionals can find astounding opportunities for business growth, stability and recognition.

<b>PRODUCING PEERS → PARTNERS</b>
Airbnb Host → Airbnb Superhost
AngelList Angel → AngelList Syndicate coordinator
eToro Trader → eToro Popular Investor

[Table 7 - Example of evolutions from Peers to Partners, most of these paths are learning centric]

According to internet guru Tim O’Reilly one of the key duties of platforms is indeed to reward these best performers by “investing in reputation systems, search algorithms, and other mechanisms that help bring the best to the top.”<sup>46</sup>

### WHAT TRANSACTIONS AND EXPERIENCES SHOULD YOU DESIGN IN A PLATFORM?

Using the **Ecosystems Canvas** to map all the entities involved – or to be involved – is a great starting point to approach another key aspect of *platform design thinking*: **identifying existing incentives and motivations** and design the platform along these lines. For this key task the Platform Design Toolkit provides you with the **Ecosystem’s Motivation Matrix** (see Canvas 2).

Entities involved in an ecosystem may find two macro-types of incentives in joining it and starting to produce value through the platform: **intrinsic motivation** (advantages in joining the system vs. playing independently on the same market) and **give-take opportunities** (possibility to build relationship, transact and trade value with other players, through the platform).

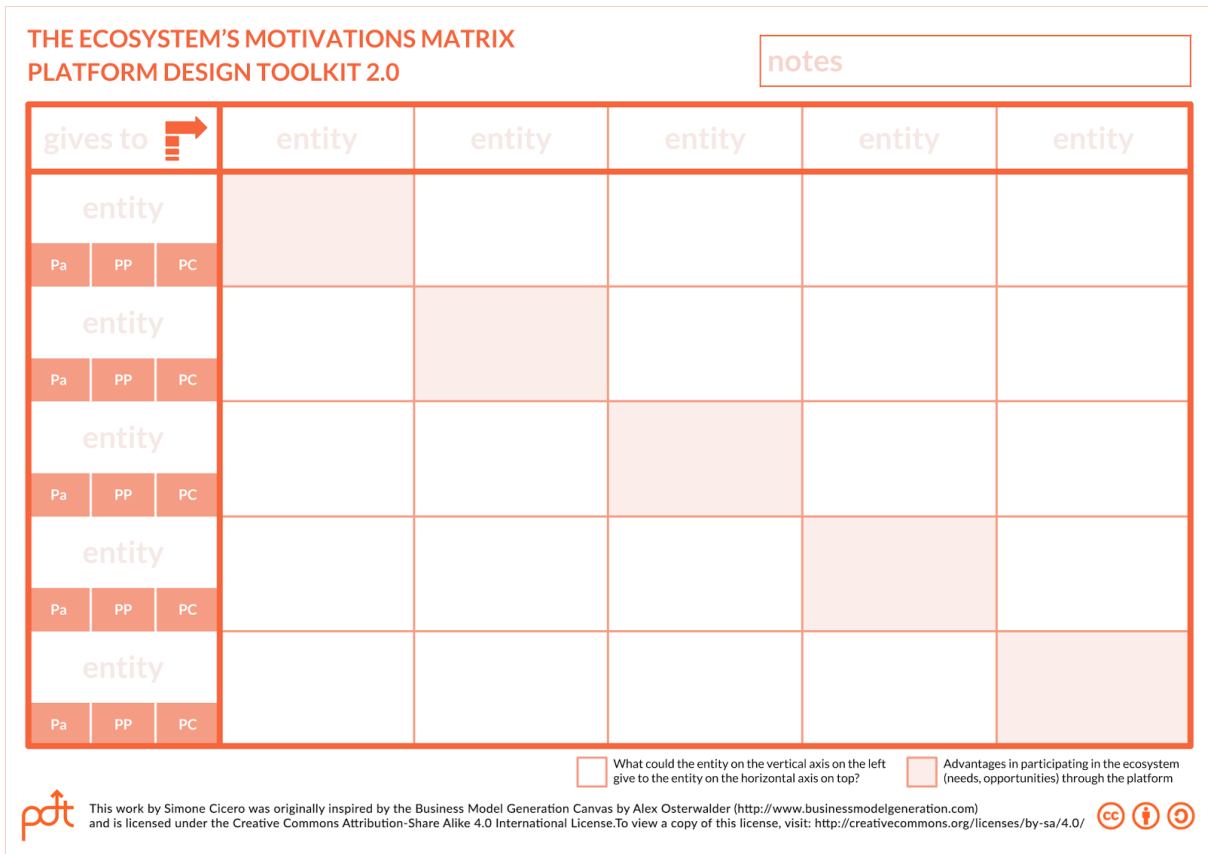
The latter can be identified quite easily and are often underestimated in importance: as we previously explained, platforms have the key role of helping brands complement traditionally produced industrial services that are costly and don't cope with long tail low volume customers. Peer to peer transactions, effectively leaving players in the ecosystem **to service each other** creating value independently, imply much lesser “production” cost for the platform owner: think of the difference between building an hotel offering, and helping people rent each other's rooms as Airbnb is doing.

<sup>45</sup> [www.houzz.com](http://www.houzz.com)

<sup>46</sup> O’Reilly, T. (2015). Networks and the Nature of the Firm – What’s The Future of Work?. [online] Medium. Available at:

<https://medium.com/the-wtf-economy/networks-and-the-nature-of-the-firm-28790b6afdcc#.pdxcyh15z>





[Canvas 2 - The Ecosystem's Motivation Matrix - source and download at [www.platformdesigntoolkit.com](http://www.platformdesigntoolkit.com)]



[Figure 5 - an iconic tweet by Airbnb's co-founder Brian Chesky explaining how platforms can better deal with the long tail, respect to traditional, industrial businesses and grow much faster]

Building platform's value propositions in line with existing strong intrinsic motivations is instead central to the already discussed implementation of a shaping strategy: convincing everyone in the ecosystem that betting on the platform-infrastructure will be a winning move is essential to the platform's success. Deepening Box 5 shows how Bitcoin shaping strategy intercepted the ecosystem's intrinsic motivations.

## BITCOIN & BLOCKCHAIN: SATOSHI NAKAMOTO'S ORIGINAL SHAPING STRATEGY

Entity	Motivation to Join
Users (Peers)	Exchange money with low fees Exchange money (pseudo)-anonymously
Miners <sup>47</sup> (Partners)	Make value out of computing power and real estate
Higher Level Service Developers	Use a secure, distributed, transaction information layer without having to deal with infrastructure management

[Deepening Box 5: Bitcoin & Blockchain Shaping strategy]

### THE PLATFORM DESIGN CANVAS AS AN OVERALL PLATFORM SKETCH

As briefly explained already, we can therefore identify two macro-types of transactions happening in a platform enabled ecosystem: **services** and **transactions**. With **services** we consider everything that is organized by the platform (*platform provided*) towards the three classes of entities that collaborate with it: Peer Consumers, Peer Producers and Partners.

A particular class of services, that we call **Enabling Services**, are those targeted to helping the more professionalized, the **partners**, to generate more value from their professional capabilities: get more visibility, market opportunities and eventually improve as professionals or commercial entities. In a similar way **Empowering Services** are created to help **peer producers** to hone their capabilities, generate more opportunities and to start the evolutionary, learning, process that eventually may let them evolve into Partners. Even if we call these set of services differently to be able to discriminate, they are – most often – similar: empowering services are typically proposed to all producers (partners and peers) and enabling services are often **additional, premium features** available only to partners (also working as a motivators for peers to evolve into partners). A clear example of distinction between peer producer versus partner services could be the difference between giving independent developers the ability to publish apps on a marketplace (empowering service for all producers) versus the ability for the most advanced to advertise the app by buying special advertising spots in the marketplace storefront (enabling).

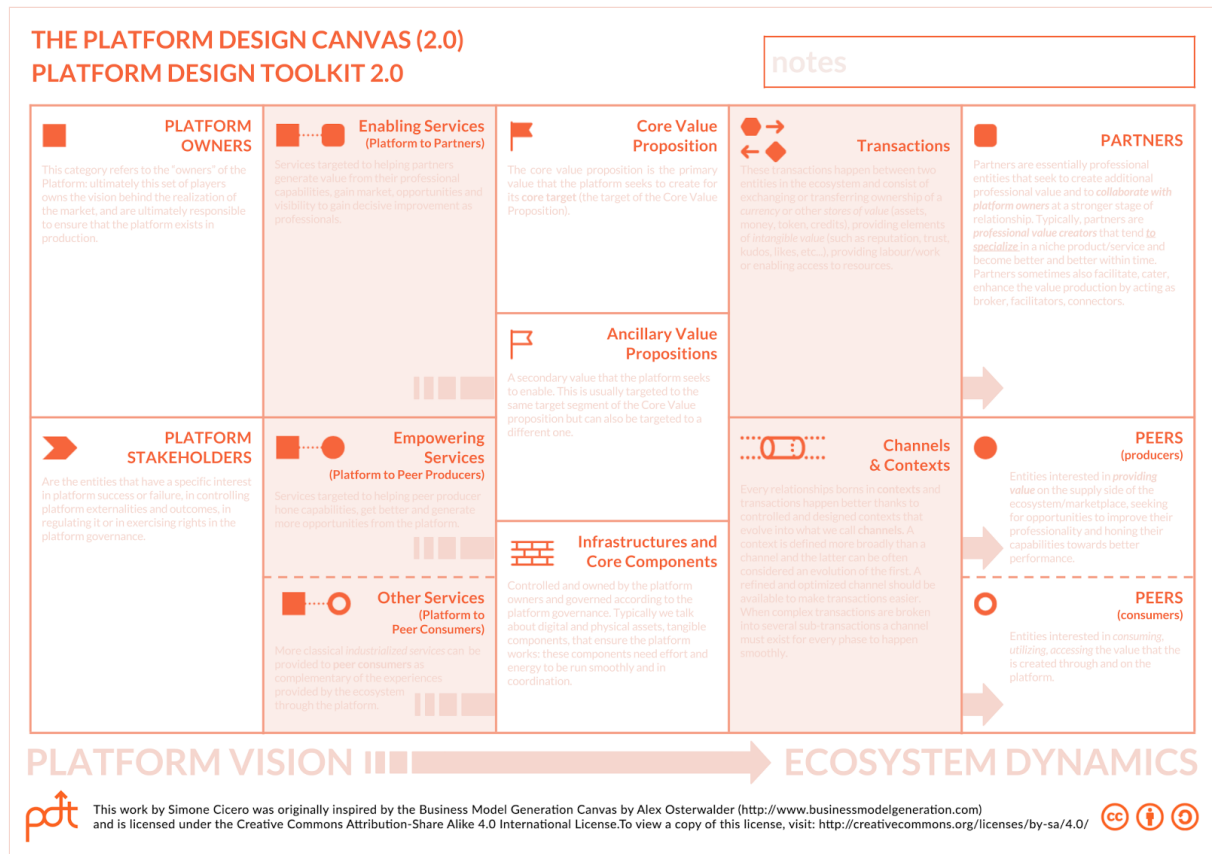
### EXCHANGES ENABLED BY SUPPORT SERVICES

The ultimate motivation for a platform to provide enabling and empowering services is to allow more value creation. The bulk of value in platform economics typically comes from what we call “**transactions**” or “**exchanges**” (transactions happening in **peer to peer**) more than with complementary industrialized **services** that the platform may provide to consumers. Platforms

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<sup>47</sup> Also platform/infrastructure owners

and ecosystems grow and stay competitive by leveraging on *economies of scope*: peer to peer economics are a powerful tool to ensure that the brand can provide an infinite number of different experiences, starting from a common technology infrastructure. By involving individuals and small entities in co-creating and impersonating the value proposition, the *brand-platform* can generate something unique and diversified that can fit the expectations we briefly depicted in the introduction chapter (fast – relevant – personal - human).



[Canvas 3 - The Platform Design Canvas - source and download at [www.platformdesigntoolkit.com](http://www.platformdesigntoolkit.com)]

In a great analysis, Accenture’s Mark Mc Donald explains that while “*expanding a company’s product and service options is an industrial response [...] such mass customization strategies are fundamentally self-defeating*”<sup>48</sup>. Substantially, while big data and analytics may give marketers the illusion of being able to push every possible offer to the user, what’s more important is the capability to provide her with information that she can humanly understand, which feels natural and therefore meaningful and well received. Human (peers) mediated systems such as platform enabled ecosystems provide a powerful mean to generate **mass personalization** that is human, contextual and tailored through peer-to-peer conversations. When a user books a room on Airbnb: besides being able to target almost every city angle - according to its needs - he can also freely interact with the host and accommodate for its peculiar needs to the detail (arrival time, special needs, etc...) and feel welcome.

<sup>48</sup> Mc Donald, M. (2016). Precision and Diversity—Hallmarks of the Digital Future. [online]

Accenture.com. Available at:

<https://www.accenture.com/us-en/blogs/blogs-precision-and-diversity-hallmarks-of-the-digital-future>

## CHANNELS & CONTEXTS FOR TRANSACTIONS

The role of channels and contexts for exchange is crucial in platforms to let exchanges flow as much as possible. In virtue of the motivations for giving and taking (identified thanks to the motivation matrix) entities in the ecosystem will set up for transactions.

Transactions are characterized by **one giver, one taker** and an **element of value**. As much as those transactions are eminently mapped in available channels and combined - by means of a design sensibility - in **full platform experiences**, as much the participants to the ecosystem will be incentivised to make these transactions happen **inside the platform**, and not around it by finding workarounds, and the platform will be successful.

Platforms live on the promise to capture an amount of value that is smaller than the value generated. Being efficient in capturing this value is essential for platform survival. If a platform doesn't offer any long term experience booster respect to an episodic relationship that may well happen outside of it, it will probably be shortcutted. As an example, Airbnb hosts are incentivised to make transactions happen inside the platform thanks to the powerful reinforcing effect that reputation capital gives them in attracting the next booking and emerge from the anonymity of the crowd. Similarly the fact that the Airbnb platform offers free 1M\$ cover insurance to hosts gives them a powerful incentive to stay inside.

## INDUSTRIALIZED SERVICES FOR THE PEER CONSUMER

Beyond exchanges happening between Peers and Partners and beyond the services that the platforms provides targeted to the **productive forces** in the ecosystem (enabling and empowering), the platform might also provide top down, industrialized services to **peer consumers** as complementary parts of the experiences provided by the ecosystem by means of the peer to peer and partner to peer transactions.

As an example, beyond providing the typical application marketplace, all major smartphone operating system brands such as Google and Apple, provide and monetize a bulk of, platform provided, consumer services such as email, storage and more, around which the experience is complemented by means of independently developed applications.

While providing complimentary mass consumer services might be a challenging task for platform builders, these are often powerful attractors in early stages as they provide the so called "**single user utility**": features that users may find useful even if there's not yet a relevant ecosystem provided supply available on the platform<sup>49</sup>. This single user utility can steadily attract users to the platform/ecosystem before the necessary network effects kick in. These services may also sometimes be used as **experience boosters** for premium users that may pay a premium fee to receive a better service with the direct intervention of the brand.

## MAPPING SERVICES AND EXCHANGES TO THE VALUE PROPOSITIONS

Despite being different from industrial businesses and not being properly modelable with the Business Model concept (and canvas), platform business cannot escape the need to have a

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<sup>49</sup> Wilson, F. (2016). Single User Utility In A Social System – AVC. [online] Avc.com. Available at: <http://avc.com/2012/12/single-user-utility-in-a-social-system/>

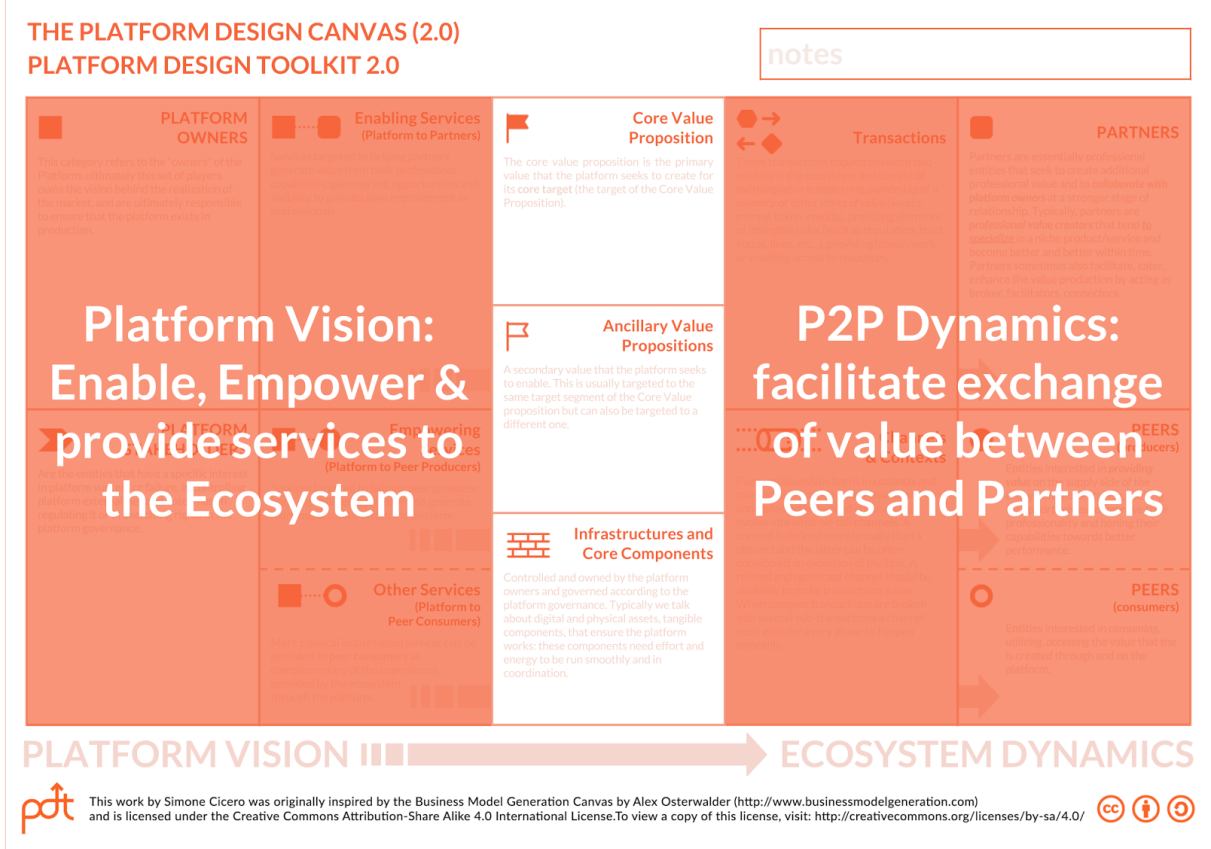
clear value proposition. This proposition shouldn't be necessarily targeted to a *peer consumer* (or "customer" to be serviced) and can be more generally targeted towards a *peer* (also a producing one) or *partner*. We can easily talk about *peer segments*.

Typically platforms don't hold just one value proposition: that's typical of industrial business that organize production keeping just one "target" in mind. That's why the Platform Design Canvas explicitly identifies a primary, **Core Value Proposition** and leaves room for **ancillary** ones. The **Core Value Proposition** is usually targeting **consumer peers**, if not because they're typically the larger set of players in the system, because they are often the ones paying fees in exchange of value. In some cases by the way, especially in market-networks and more niche oriented contexts, where the **volume of transaction is lower** and **value of transaction is greater** partners might be the primary targets of the **Core Value Proposition**. A good example is Honeybook<sup>50</sup>, the event planning platform, whose value proposition is definitely targeted to partners, even if end user/customer might still interact with it through targeted platform extensions.

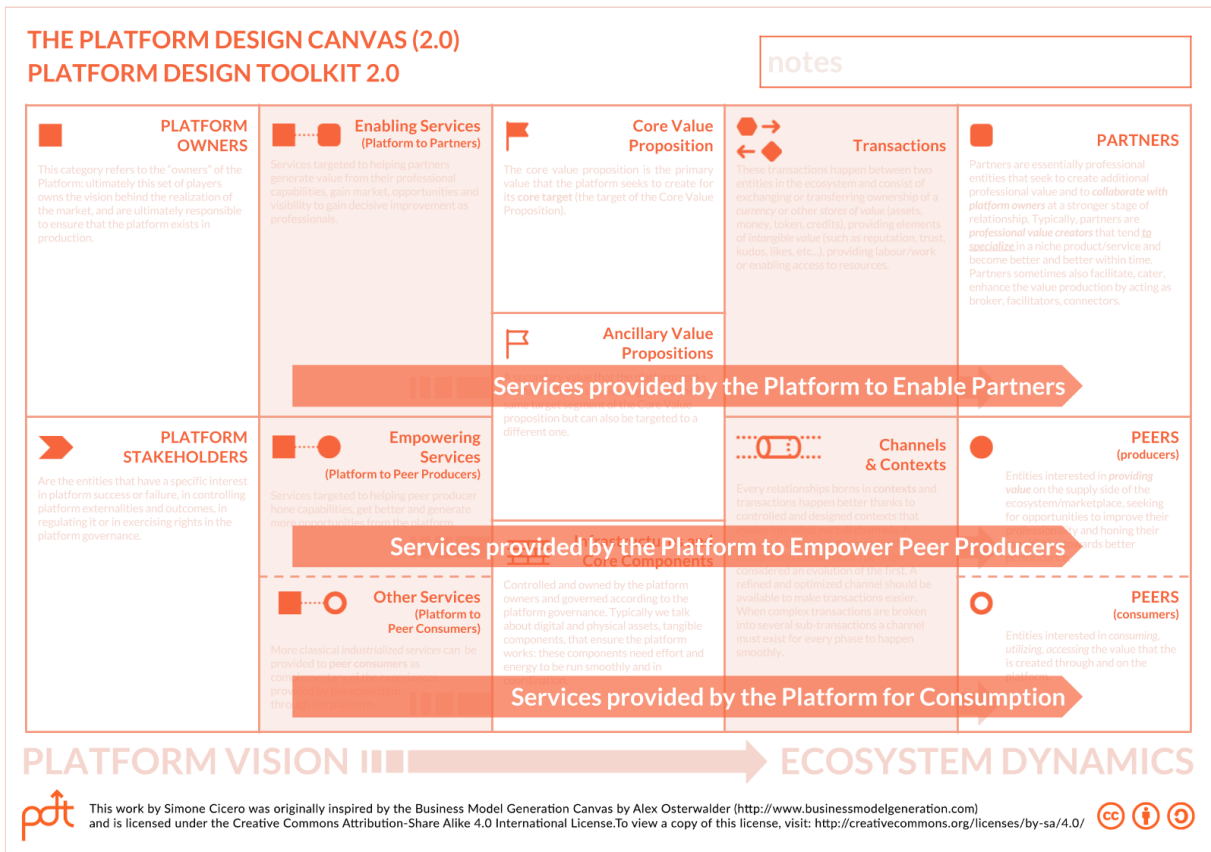
Note that both **services** and **transactions (exchanges)** can make the platform's core value proposition or even the ancillary one: most of the time is an - opportunely designed - combination of them that makes the complex value proposition.

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<sup>50</sup> <https://www.honeybook.com/>



[Figure 6 - the two sides of platform design]



[Figure 7 - the three types of platform provided services]

	LAYER OF OPERATION	ENTITIES	VALUE PROPOSITION(S)
<b>Privateequity.biz</b>	Platform for accessing to pre-IPO securities and - in the same time - creating channels for exchange and trading	Pre-IPO Shareholders (peer consumers)  Investors (peer producers/partners)	Pre-IPO Shareholders (monetize)  Investors (diversify investments with higher risk assets)
<b>Market Invoice</b>	Platform for accessing unpaid invoices and - at the same time - creating channels for trading (the Arena)	Invoice holding company (peer consumers)  Investors (peer producers/partners)	Invoice holding company (ensure cash flow)  Investors (make up short term investing fees)
<b>Lendinvest</b>	Platform connecting lenders with investors that are interested in the specific real estate development market	Real Estate Lenders / developers (peer consumers)  Investors (peer producers/partners)	Real Estate Lenders / developers (access to short term flexible loans for real estate development, Buy-to-Let, etc...)  Investors (make short term investing fees on a low risk market)
<b>EToro</b>	Platform offering bundled access to Stocks, Currencies, Indices and Commodities and channels for helping investor connect, develop and mimic strategies by trading information	Investors (peer consumers)  Popular Investors (partners)  In eToro the object of the trade is information	Investors (find information about the best investing strategies)  Popular Investors (monetize investment market knowledge and time spent on curating strategies)
<b>Hyperledger</b>	Interface (blockchain code) or Infrastructure (shared blockchain)	NA	NA
<b>Kantox</b>	A platform offering channels for managing and exchanging foreign currency among companies	Peer producer/consumer (companies selling and buying currency)	Peer producer/consumer (sell foreign currency at advantageous rate)
<b>Angel List</b>	A platform offering channels for early stage investors and startups to connect for deals and funding	Startups (Peer consumer )  Investors (Peer producers)  Syndicate coordinators (Partners)	Startups (raise money easily)  Investors (invest easily and control portfolio)  Syndicate coordinators (monetize investing knowledge and time spent on curating strategies )

[Table 8- Comparative table of exemplary case studies of platforms and infrastructures in financial markets]

## TAKE OUTS

Long tail customer can be profitable with peer to peer

Platforms help brands serve long tail customers: peer to peer transactions complement centralized services and help create customized peer experiences in ways that are impossible for brands to provide

Humanize services with peer to peer

Peer to peer is the best way to humanize service personalization achieving mass market personalization (beyond marketing options overload)

Shaping strategies

A market galvanizing shaping strategy is essential to conquer and transform markets: designing incentives matters more than building technologies

Enabling a learning process is key

Learning is an essential trait of platform shaped markets: in times of performance pressure, a learning process becomes the key product you're offering on a platform

Centrally provided services can complement peer to peer interactions

On platforms is the combination of centrally organized services and peer to peer transactions that makes the value proposition



# BEYOND YOUR BUSINESS MODEL AND REFERENCE MARKET

## WHAT DOES IT MEAN AND WHAT DOES IT TAKE TO APPLY PLATFORM DESIGN

But when is the right time to “become a platform” or, more properly, experiment platform dynamics? As we’ve seen in this paper, platforms are tools that organizations can use to expand their reach, shape markets and gain market dominance: is this something all companies and organization shall pursue?

A number of studies we already cited demonstrate that the “networked business” and the platform approach is desirable from a business performance standpoint. Furthermore, this approach helps companies explore more possibilities in the market: creating a new value proposition using a platform approach is mainly done by means of a **design empowered vision** and by leveraging available inventory, market forces and capabilities in the ecosystem. Shaping a strategy that “pulls” everything and everyone in, is a more performing alternative to industrially organizing production by looking at all the detail and taking charge of coordinating everyone in the business process.

Market incumbents need to cope with the evolutionary path that every business process - as every human activity - ends up with: value propositions evolve from **novelty** to **ubiquitous utilities** and - as seen in chapter one - a key differentiator of the winning organization of today is recognizing when a value proposition is approaching commoditization and reimagining higher value services, on top of it, in a continuous Innovate - Leverage - Componentize cycle.

### CHOOSING A ROLE WHEN INNOVATING: WHEN IS A PLATFORM (OR INFRASTRUCTURE) MOVE WORTH

It’s also important for brands to carefully understand market dynamics when making a leap to higher value services: brands must learn to understand the data they get from their user base and carefully observe what happens in the market they’re empowering. As a result, companies playing the infrastructure role may be better at climbing the value chain by “*infrastructurising*” upper layers continuing to innovate horizontally instead of vertically (with a true “platform mindset”).

As platform researcher S. Choudary says, platforms are capable of “*bringing order to existing disordered markets*”<sup>51</sup>: this vision of platforms as powerful “market shapers” is not new - it has been central in all the explanation - but explains really well when a platform-marketplace move is worth trying. Generally, a platform strategic move is worth trying on markets that show weak points the reader can see in Table 9.

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<sup>51</sup> S. Choudary - The future of competition - Platform Strategy Blog. Available at: <http://platformed.info/the-future-of-competition/>

WEAK POINTS	HOW PLATFORMS SOLVE THE ISSUE
When access to supply side of a market is prevented by significant barriers in marketing, technology or process complexity	By offering a common storefront, enabling services and tools
When relevant inventory of assets, resources, talent is dormant	By offering easy onboarding services to join the marketplace
When access to demand side of a market is pricey	By lowering transaction cost and by providing support to new (larger) set of providers
When services are fragmented, managed by different gatekeepers on a geographical (cities, national) or industry specific context	Facilitating common practices on multiple context by offering common tools
Have obsolete pricing schemes	By letting providers experiment with price instead of centrally regulating
Have a low consumer-producer trust and give no means to incentivise quality and leverage on reputation	By creating mechanisms to let the best emerge, on top of their reputation

[Table 9 - How platforms solve issues and when a *platform move* is worth]

## INNOVATING BEYOND THE CORE MARKET BY LEVERAGING ON CORE ASSETS AND RESOURCES

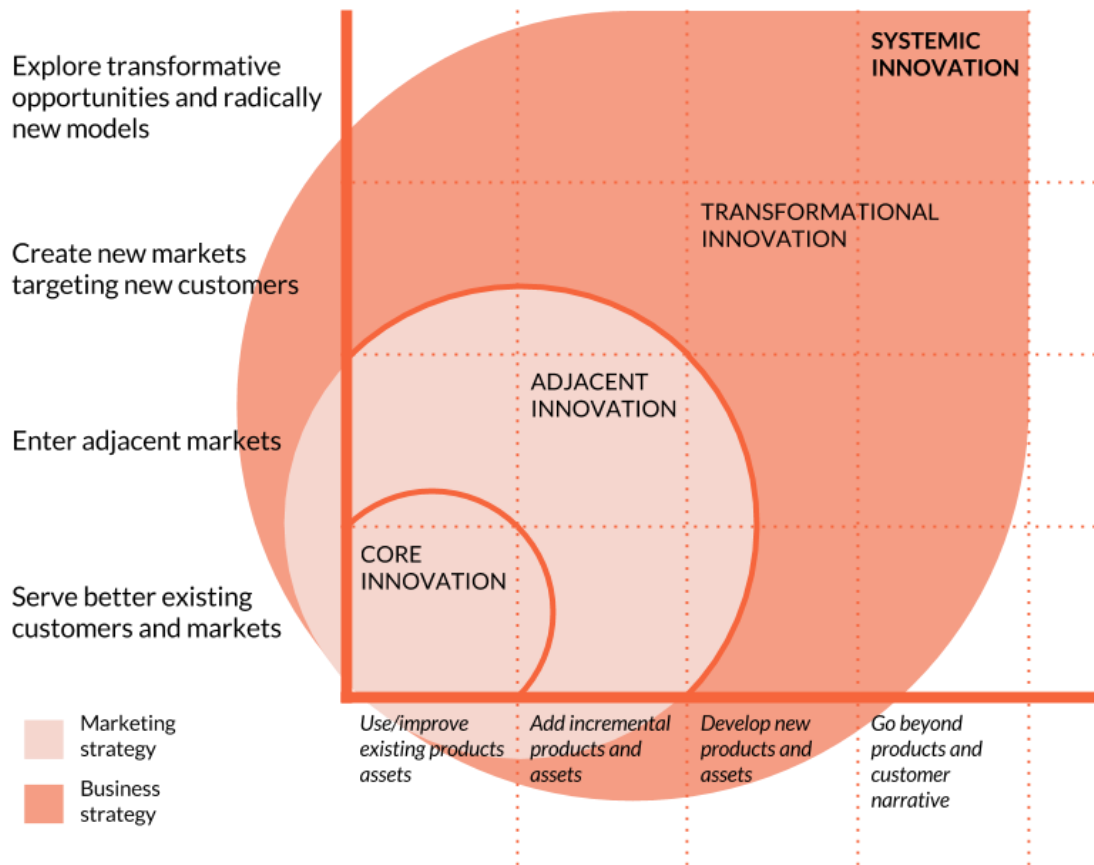
Since a while now, a common understanding of the theory of business innovation - and innovation portfolio management<sup>52</sup> - classifies innovation strategies in three macro-groups: **core innovation** (serving better your existing customers or improving your existing offering), **adjacent innovation** (exploring markets that are adjacent to yours where you can easily leverage on your leading position in core market) and **transformative innovation** (exploring the new - products and customer segments).

In an extended view - made possible by the radically transformative times we are living - we can even consider the transformative innovation to be defined as evolving into “**systemic**”. In a concept popularised by Peter Diamandis and the Singularity University of **Massively Transformative Purpose**: transformative ideas that can bring positive, systemic, beneficial change in the long term and motivate large number of players inside and outside the organization.

The figure 8 explains how when you innovate in core and adjacent markets you’re essentially doing marketing strategy (i.e.: short- to mid-term increase of revenues) while when you move

<sup>52</sup> Nagji, B. and Tuff, G. (2012). *Managing Your Innovation Portfolio*. [online] Harvard Business Review. Available at: <https://hbr.org/2012/05/managing-your-innovation-portfolio>

onto transformational/systemic innovation you move in the field of the so called **business strategy**.



[Figure 8 - Fields of innovation: evolving a business strategy is now easier due to platform model, less CapEx, more potential]

Transformative innovations can help brands find new *extendable cores*<sup>53</sup> that may help achieve long term perspectives by providing the organization a *new route to resilience*<sup>54</sup>: a business line that can generate an exponentially growing revenue base that, in the longer term, can essentially integrate and substitute the core business.

Exploring new business strategies it's easier if adopting a platform approach that is able to control CapEx while still opening possibilities for market shaping strategies. Companies also need to refer to their existing assets when doing so. **Resource Based View**<sup>55 56</sup> or other "unbundling" techniques are generally useful to identify essential resources that may constitute an - at least transient - competitive advantage and may represent resources to leverage in envisioning how to intervene in a market.

<sup>53</sup> Wessel, M. and Christensen, C. M. (2012). *Surviving Disruption*. [online] Harvard Business Review. Available at: <https://hbr.org/2012/12/surviving-disruption>

<sup>54</sup> Gilbert, C., Eyring, M. and Foster, R. N. (2012) *Two Routes to Resilience*. [online] Harvard Business Review. Available at: <https://hbr.org/2012/12/two-routes-to-resilience>

<sup>55</sup> Resource-based view. (2016). [online] Wikipedia. Available at: [https://en.wikipedia.org/wiki/Resource-based\\_view](https://en.wikipedia.org/wiki/Resource-based_view)

<sup>56</sup> Wernerfelt, B. "A resource-based view of the firm." *Strategic management journal* 5.2 (1984): 171-180.

## EXPLORING NEW INNOVATION LANDSCAPES

To successfully achieve the dual strategy that allows them to componentize industrialized parts of their business process, while seeking for higher level innovations in new and potentially unrelated markets, brands should develop the capability to be ambidextrous<sup>57</sup> and be able to pursue “**exploration** and **exploitation** techniques” at the same time.

While exploitation might be a consolidated practice in the corporate and incumbent world, exploration is a much rarer capability. In a very clear explanation of the core capabilities that make a company able to explore, a number of innovation practitioners recently coined the concept of **responsive organizations** and their effort even converged in the *responsive.org* community of practice<sup>58</sup>. Responsive organizations “*are built to learn and respond rapidly through the open flow of information; encouraging experimentation and learning on rapid cycles; and organizing as a network of employees, customers, and partners motivated by shared purpose*”.

Beyond the responsive organization concept, this description identifies few key traits of organizations that are empowered to reach new objectives in markets that are ripe for transformation. These traits are briefly resumed in Table 10.

<b>EXPERIMENTAL</b>	Are driven by maximization of learning and not necessarily maximization of size or revenues
<b>ENTREPRENEURIAL</b>	Depend on the potential of the employee to self-manage and self-determine
<b>CUSTOMER DRIVEN</b>	Are obsessional about fulfilling customer expectations & desires
<b>PLATFORM CAPABLE</b>	See the boundaries of the organization as blended in terms of workforce, resources, skills

[Table 10 - key traits of innovation capable organizations in digital markets]

## ENABLING RESPONSIVENESS AND EXPLORATION

To enable responsiveness and exploration organizations should stand on three enabling pillars. First among these pillars is solid and **elastic technology infrastructure** that - according to Accenture’s Mark McDonald “*represent the ability to generate multiple revenue streams over the same set of assets*”<sup>59</sup>. Organizations must therefore learn the mastery of adopting computing utilities<sup>60</sup> “flexible service infrastructures”<sup>61</sup> as author and strategic consultant Haydn

<sup>57</sup> [https://en.wikipedia.org/wiki/Ambidextrous\\_organization](https://en.wikipedia.org/wiki/Ambidextrous_organization)

<sup>58</sup> <http://www.responsive.org/manifesto/>

<sup>59</sup> McDonald, M. (2015). *Precision and Diversity—Hallmarks of the Digital Future*. [online] Accenture.com. Available at:

<https://www.accenture.com/us-en/blogs/blogs-precision-and-diversity-hallmarks-of-the-digital-future>

<sup>60</sup> Such as Amazon Web Services. An interesting case study read might be that of Airbnb building and scaling its platform on top of AWS: <https://aws.amazon.com/it/solutions/case-studies/airbnb/>

<sup>61</sup> Haydn Shaughnessy, in association with Cognizant’s Center for the Future of Work, (2016). *The Fluid Core* [online] Cognizant.com. Available at:

Shaughnessy calls them. In this framework, incumbent players must carefully consider that strangling contracts with technology and business process outsourcer may end up being a bottleneck in the use of technology in support of new business strategies.

Furthermore, responsive organizations must rely on **post hierarchical** and **networked organization designs** - and business architectures - that allow for self-organization. These organizations rely on rituals for real-time strategy-making, toolkits for collective decision making, self-directed teams and individuals that are keen to self-management. Tools, ranging from monolithic and encompassing Holacracy®<sup>62</sup> to simpler and more adaptable LiquidO™<sup>63</sup>, have been experimented widely and are collecting failures and success stories to confront with, when developing a own way to company transformation.

But beyond tools and processes, the most powerful leverages to eventually generate new capabilities for platform thinking and exponential innovation, are **company culture** and **competences**<sup>64</sup>. Design literacy (Service Design Thinking, Human Centered Design) coupled with customer driven culture (UX research, Customer Driven Development) can help brands maximize value creation on the user side; a culture of leanness and waste avoidance coupled with an agile mindset (attached to the basic agile manifesto<sup>65</sup> principles) can help them efficiently iterate towards their real time identified objectives.

## TAKE OUTS

### No more core business

In the modern digitalized market there's no more core business: business strategy must look at every industry and have transformative purpose

### Ambidextrous organizations

Companies must nurture the capability to be ambidextrous: being able to consolidate and optimize existing business lines while exploring new ones

### A cultural leap is needed

Developing the exploration mindset needs three essential enablers cultural and capabilities leap, organizational change and an elastic access to technology

### Platforms reduce CapEx

Platform moves are an essential tool to explore new markets: incentive design can help companies leverage on ecosystem potential and strongly reduce CapEx needed to shape markets

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<http://www.cognizant.com/InsightsWhitepapers/The-Fluid-Core-How-Technology-Is-Creating-a-New-Hierarchy-of-Need-and-How-Smart-Companies-Are-Responding.pdf>.

<sup>62</sup> Holacracy is a new way of running an organization that removes power from a management hierarchy and distributes it across clear roles that are impersonated by employees contextually. The work can then be executed autonomously, without micromanagement. <http://www.holacracy.org/>

<sup>63</sup> LiquidO™ is an original "liquid organisation" model for governance - born from the experience within Cocoon Projects - which is responding to the fast growing adaptability, engagement and collaboration needs within modern company structures. <http://liquido.cocoonprojects.com/>

<sup>64</sup> Verzera, S. (2016). [online] The Huffington Post. Available at: [http://www.huffingtonpost.com/great-work-cultures/the-future-of-work-people\\_b\\_8457018.html](http://www.huffingtonpost.com/great-work-cultures/the-future-of-work-people_b_8457018.html) [Accessed 10 Mar. 2016].

<sup>65</sup> Manifesto for Agile Software Development. (2016). [online] [Agilemanifesto.org](http://agilemanifesto.org). Available at: <http://agilemanifesto.org/>.

## CONCLUSIONS

Embracing platform design and the ecosystemic way of thinking is not a small challenge but is definitely a challenge that every organization should be interested in taking: it promises to help organizations in building new sources of long term business resilience.

Despite investments might be an enabling factor in the process, it's likely that CapEx are not going to be the lacking ingredient in digital transformation strategies: a much stronger restraint to building thriving organization for the connected age is, more frequently, lack of a company culture of curiosity, systemic bureaucracy and most often, lack of leadership in the workforce.

An effort in building the right set of innovation capabilities and a constructive culture of collaboration will be essential: the creation of smaller units that can be free to experiment with new ways - to be later scaled to the rest of the organization - is also a proven strategy. The latter, represents also a familiar approach to incumbents: banks, for example, once faced the new opportunities in the emergence of the web channel by creating new, dedicated, units or subsidiaries that have been later reabsorbed in the company structure entirely.

Lastly, brands need to understand that new market opportunities are available across the whole spectrum of industries, some of them we don't know yet but we can create: any market can be shaped or reshaped by the right vision and a powerful set of incentives. As Hagel said in the seminal book *The Power of Pull*, "small moves, smartly made, can set big things in motion."<sup>66</sup>

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<sup>66</sup> *The Power of Pull: How Small Moves*, C., Hagel III, J., Davison, L. and Brown, J. (2016). *The Power of Pull*. [online] Goodreads. Available at: <http://www.goodreads.com/book/show/7735000-the-power-of-pull>

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## ACKNOWLEDGMENTS

I sincerely want to thank John Hagel III, Ezio Manzini, Simon Wardley, Javier Creus, Haydn Shaughnessy, and Sangeet P. Choudary for their work on design thinking, business analysis and platform modeling, for having inspired much of my work and exchanged ideas and feedback with me directly in many cases. Special thanks also goes to Stelio Verzera from whom I stole a lot of key ideas and to Eugenio Battaglia, Chiara Agamennone and Jocelyn Ibarra from the Platform Design Toolkit team for the precious research work done together. A key contribution to the realization of this paper was also the one from [OLAB](#), our technical partner, and especially [Sara De Franceschi](#) for the amazing work on graphics.

Furthermore I want to say thanks to Javier Celaya and Angus Scott for having given early feedback that's been very useful for the structuring of this piece of work.

Finally, huge thanks go to Peter Vander Auwera (Co-Founder Innotribe) and Fabian Vandenreydt (Global Head of Securities Markets, Innotribe, and the SWIFT Institute) from SWIFT for having supported, sponsored and helped structure this piece of work from the very start.

## ICON CREDITS

Networking by Ricardo Ruíz from the Noun Project <https://thenounproject.com/term/networking/362134/>

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Network by Rob Armes from the Noun Project <https://thenounproject.com/term/network/160209/>

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*The Platform Design Toolkit has been developed by Simone Cicero and the Platform Design Toolkit team and is originally inspired by the Business Model Generation Canvas by Alex Osterwalder (<http://www.businessmodelgeneration.com>).*

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