Beyond the Hierarchy: When Firms Transform into Ecosystem Brands

WHITE PAPER

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CONTENTS

EXECUTIVE SUMMARY

In January of 2022, Haier contracted Outthinker to initiate a study of Haier's unique management model, Rendanheyi, and, more broadly, its concept of the "Ecosystem Brand." This white paper serves as a document meant to assemble and organize our findings in one place. It is meant for internal purposes and for selective sharing outside of Haier and Outthinker.

BUREAUCRACY REACHING ITS BREAKING POINT

Over the last decade, frustration with traditional bureaucratic organizational models in business has been growing.

Acceleration is thrusting traditional organizations rapidly toward a dilemma. Most of them are still primarily run as centrally planned economies. A central authority decides where capital and talent should be deployed; sets salaries; defines how much businesses should pay for internal support like IT, HR, or finance; and so on. When new information is received ("the average salary of database engineers is rising"), it is passed up the hierarchy through memos and meetings, a decision is made ("let's increase our salaries for database engineers by saving money somewhere else"), and then implemented (new salary bands are set, raises given, recruiting materials updated).

Researchers such as professor Gary Hamel have railed against the negative impacts the hierarchical model implied by bureaucracy implies.[i] Hamel has been studying the cost of bureaucracy for decades and concludes that while the world has changed dramatically we continue to hold on to an outdated operating model – the bureaucracy – that companies will need to abandon if they are to survive.

We know how central planning worked out for economies. We are likely to see a similar bifurcation now with companies. Organizations that adapt their model, that abandon the centralized approach, will survive. Those too slow to adapt risk dying.

As we will see in this white paper, an answer is emerging. Forward-looking organizations are adopting a new, more agile organizing principle. They are evolving into ecosystems in which employees have the freedom to spot opportunities, act on them, and rally the resources to pursue them. In other words, we are entering a world that will push us beyond the centralized hierarchical organizational concept that has dominated business organizations for centuries into something new.[ii]

The financial and human cost

An Outthinker study of the most transformative innovations over recent decades points to the fact that internal innovators working within established organizations have been and continue to be critical drivers of innovation. They have been more significant drivers of societally-important innovation than entrepreneurs have. We owe much of the modern world—from mobile phones to the internet, from MRIs to stents—to their creativity and persistence. Further, all the evidence suggests they are playing an ever-more critical role in shaping the future. Our organizational models should be enabling and encouraging them. Yet, too often we establish "command and control" organizational structures that suppress their entrepreneurial activity.

This suppression comes at a cost. One enormous cost is worker disengagement. Over 80 percent of employees in the U.S. and most developed countries are disengaged at work[iii], meaning eight out of ten workers spend their work hours just trying to get through the day.

This disengagement costs the U.S. economy about $450 billion per year in lost productivity.[iv] That is more than the revenues of Amazon, Boeing, GE, and Google combined. That is more than all U.S. companies spend on R&D every year.

And that's not all. Beyond economics, this is a major humanitarian problem. Disengagement at work has been shown to link to anxiety, depression, and damaged family relationships.

We believe that a major cause of this disengagement stems from the fact that most employees feel their creativity is being suppressed. Is it any wonder so many have lost their sense of purpose or passion? Imagine the growth we could engender if we could reignite that passion. Imagine what we could accomplish as a society if we could reinvigorate that sense of purpose.[v]

The purpose of this White Paper is to explore what an emerging alternative to a centralized organizational bureaucracy might be, focusing particularly on Haier Rendanheyi model and Ecosystem Brand concept, as this model (as of the writing of this White Paper), is the most well-documented and adopted alternative model of which we are aware.

Moving from rallying cry to answers

The majority of work conducted to date in this area has served to raise awareness of the problems associated with bureaucratic models. There has been less focus on a clear solution. This is perhaps of little surprise as clear solutions have not, until recently, been evident. Many attempts at finding an alternative have failed or shown flaws.

With no clear alternative model evident, advocates for moving beyond bureaucracy have been relegated to just that: advocating a move away from what is no longer working without having a clear new direction for us to move toward.

We believe that we are now reaching an inflection point. Companies have been experimenting with alternative organizational models and a new winning model is coming into view. We believe that the model that is most advanced and clear as of this writing is that of Rendanheyi, advocated by Haier.

A NEW ORGANIZATIONAL CONCEPT IS EMERGING

How concepts emerge

We can better understand how innovations will evolve if we stop looking almost exclusively at the core technology and instead appreciate the hidden power the concepts around that technology play. Indeed, the greatest innovations are really new concepts, not technology. Mankind's first transformative innovation, agriculture, came about not because people learned to use a scratch plow attached to an ox. Once people started farming, they could produce more food than they needed. Only once we could do that, did we have time to paint (art was now possible) or study nature (science was born). It allowed for larger societies that required us to establish governments, laws, and armies. Much of what we now consider society came about because of the scratch plow and the ox.

But the scratch plow was not fundamentally a new technological innovation. The first versions were simply sticks of a certain shape that could be used to dig lines in the ground, making it easier to plant large amounts of seeds. Before the concept of agriculture emerged, people might have used that stick as firewood. Now they used it for something else.

We call this shift——from firewood to scratch plow—the "conceptual shift:" The conceptual shift that people make that informs them how to use a technology.

As we will argue later, there are a number of new technologies that make it possible to coordinate human (and non-human) activity in new, decentralized models. The issue that is limiting the adoption of such technologies, and the realization of their potential, is not an understanding of those core technologies but rather an adoption of a concept, or set of concepts, that tell us how to apply those technologies, in the specific case considered in this White Paper, to the coordinating of human and machine activity inside a firm.

When you begin to observe the shifting concepts around technology, when you understand the pattern by which they evolve, you can better understand how innovations will evolve.

Sometimes these shifts take long times to evolve. Salesforce was founded in 1995 introducing a new way to deliver software. But it was not until their concept was given a name decades later—"cloud computing"—that enabled people to understand their software that cloud computing really took off. It was not until people could comprehend what Graham Bell called the "telephone" that engineers, corporations, and users would "get" what this technology really was for.

To understand the potential implications of any new concept, like Rendanheyi, which we believe could be as transformative as what Alexander Graham Bell's "Telephone" (as concept not only a technology) was to communication or "Cloud Computing" has been to software when Salesforce.com introduced it, we must dissect how the conceptual shifts new technology are changing.

Luckily, there is a lot known about how concepts emerge. In social sciences a theory of social movements explains how movements such as the American Revolution, the Polish Constitutional movement of 1791, the British abolitionist movement, or the Russian Revolution of 1905 came to be. In science, Thomas Kuhn wrote a breakthrough paper that broke down how "scientific revolutions" come to be—how did we shift from believing the sun went around the earth to putting the sun at the center of our system—resulting, ultimately, in a paradigm shift. Mathematicians studying how new terms (e.g., the sine function, the zero numeral) and theories come into being lay out a convincing four-step process.

All of these approaches to understand how concepts emerge share remarkable similarities. Here we mash them together to lay out a simple framework of concept emergence. It explains, we think, why Blockchain right now is so hard to comprehend, and what it will take for society to embrace the true potential of the Blockchain concept.

1. **Discontent with current concepts.** The process through which a concept emerges likely begins with the perception that current concepts are inadequate (e.g., to explain anomalies or to solve certain problems). They may be responding to perceived anomalies or failures of the existing concepts[vi] or reveal inadequacies by addressing previously unrecognized practices[vii] [viii]. Both studies of mathematical concept emergence and of theory evolution speak to an individual or group noticing that observable phenomena are not adequately addressed by existing theories or models. Social movement theory contends that an informal group is more likely to become accepted as a field if it seeks to solve a problem that existing fields cannot adequately address.
2. **Introduction of new concepts.** New words, naming new concepts, are introduced. In theory evolution, researchers introduce new “constructs” that will form the building block of a new theory. In mathematical concept emergence, mathematicians may introduce new “intellectual technologies” (Schoenfeld, 1994) or “language tools” (Rorty, 1989) that facilitate solving the problem. These new words, and the concepts they name, begin to define the community behind the new concept, theory, or potential field, as, per social movement theory, the informal community begins distinguishing itself.
3. **The formation of a field.** The concept and, potentially, the theory or field created through the use of the concept are tested and adjusted. In theory evolution, a new or revised theory is proposed and then tested for its predictive value. In mathematical concept emergence, the formal system, once manipulations have been performed, is translated into the real world for testing. In both cases, where the new or revised concept/theory adequately improves prediction or does not adequately fit observation, adjustments are made. Per social movement theory, we can reasonably assume that this testing and adjustment are taking place during the steps in which the informal community shares papers and attempts to engage other communities in dialogue.
4. **Rejection, incorporation, or replacement.** The new concept/theory interacts with existing concepts/theories and is rejected by, is incorporated into, or replaces existing concepts/theories. While mathematical concept emergence and theory evolution address the social aspects of the process with less emphasis than social movement theory, all three suggest that the new concept/theory will ultimately fit existing, accepted concepts/theories. This fit can be achieved when the new concept/theory (a) supports and does not challenge existing concepts/theories or (b) successfully replaces existing concepts/theories. The new concept/theory, failing to fit or replace existing, accepted concepts/theories, may alternatively be rejected.

We believe that in the specific case of the emergence of a new, alternative organizational concept, we are at the breakout point somewhere between phase 2 and 3. In other words, several alternatives have been introduced and experimented on. Most have proven inadequate. But now, clarity is forming around a new organizational concept.

New organizational concepts

Firms have been experimenting with alternatives to bureaucracy. Over the last two decades, several such experiments have gathered interest (phase 2 of concept emergence). These include the team of teams, open organization, Holocracy, blockchain, and Rendanheyi.

Team of teams

In the military, General Stanley McChrystal found that by reorganizing the tight, hierarchical structure of the Joint Special Operations Task Force into a “team of teams,” they became more effective at fighting agile, asymmetrical enemies. Despite the military’s advantages of size, equipment, and training they were ineffective against Al Qaeda in Iraq. Al-Qaeda in Iraq was unlike anything traditional military principles had prepared him for. Composed of decentralized units, they would appear to attack and then melt into the population. Without a formal reporting hierarchy, they offered no clear power center to target.

He experimented with a new organizational philosophy he called a “team of teams.” He broke his organization down into small independent teams then overlaid an “umbrella” team—a team of teams—to help units coordinate with each other. His military force started winning.

Open Organization

Red Hat, the leading open-source software company, realized that its long history of organizing communities of independent developers to collaboratively develop software could also apply to how it organizes itself. They began adopting a model they call the “Open Organization,” which has no top-down hierarchy but is composed of people with a common purpose. Decision-making is inclusive and the CEO, rather than dictating, is tasked with convening conversations and encouraging debates.

Holocracy

Companies like Zappos are experimenting with a new organizing concept called “Holocracy,” which CEO Tony Hsieh describes as “turning everyone into a mini-CEO.” Instead of employees having permanent roles and titles, they sign up to perform the jobs that need to be done to help the organization succeed at that moment. Their roles may change week to week. These roles are broken into smaller pieces than full-time jobs, so at any given time you may have as many as twenty roles.

Platforms

The success of companies Uber and AirBNB have led numerous companies to explore the idea that instead of producing, owning, and selling things, they might instead facilitate providers and users of things to find each other. Microsoft’s recent resurgence is driven in part by its adoption of this philosophy. Its LinkedIn business helps professionals find each other and find employers, Skype helps users communicate, and its XBox-only gaming platform helps game developers reach a massive community of gamers.

Blockchain

Blockchain started as alternative to traditional currencies, showing a currency can remain viable even without a central bank to control it. But the approach is now making its way into numerous new applications—education, digital rights management, supply chains. Wherever a central authority exists today a blockchain-like model might allow communities to regulate themselves instead.

Rendanheyi

Introduced by Chinese appliance giant, Haier, Rendanheyi is an organizational philosophy and system composed of several innovative characteristics including the breaking of large hierarchical units into "Microenterprises" (MEs), turning support functions into profit centers that must sell into the enterprise rather than cost centers, and relating to employees as intrapreneurs. As assessing the Haier model is the primary focus of this White Paper and much is already written about this model, we will not add great detail of the full model or its history here.

From experimentation toward clarity

Many of these experiments are being conducted in walled-off parts of organizations, isolating them from traditional approaches in what Mike Tushman (and co-authors) coined as the "ambidextrous organization."ix This has been critical because some of the characteristics of these structures are incompatible with traditional bureaucracy and cannot, or at least have difficulty, coexisting with or interacting with a bureaucratic model.

Many of these models have proven problematic and seem unlikely to reach sufficient "escape velocity" of adoption to make it into phase 3, let alone 4, of concept adoption. Each of these models enjoyed periods in which they were broadly discussed, but most have eventually confronted complications.

The Holocracy movement, for example, grew popular as Zappos and a handful of other aspirational companies began adopting it. This model introduces several interesting elements that help organizations coordinate human effort through non-hierarchical means. For example, instead of assigning permanent roles, employees pick tasks that need to be done over the period (e.g., over the week) and assemble their own job for the week. In this way, Holocracy replaces the centralized job assignment function to a marketplace. However, this internal marketplace of work is not a true marketplace because one central work assigning body is meant to decide what jobs need to be done. Employees are essentially operating in one-sided marketplace with all employees on one end and onecentralized job provider on the other.

But our research shows that an alternative to models may be finally coming into focus, composed of five clear organizational approaches, most of which do not enhance, but instead replace the traditional hierarchy. These elements are core elements of the Rendanheyi model.

It is unclear whether ultimately the terminology used to name this model will be Rendanheyi, Ecosystem Brand, Ecosystem Economy, or another one, but the organizational principles the model defines, our research indicates, shows strong signs of defining a future organizational alternative model to bureaucracy.

THE RESEARCH

Basis of research

This White Paper is built on several years of research including:

- In-depth interview with over 150 employee innovators who have successfully driven innovations from within mostly large, established organizations
- Conversations on the topic with about 100 heads of strategy of mid-to-large enterprises, primarily members of the Outthinker Strategy Network[x]
- A series of panel discussions we organized around this topic incorporating about 25 senior corporate leaders
- Interviews with about 20 of today's leading authorities on topic of organizational strategy and innovation, including
    - Gary Hamel (London Business School)
    - Mike Tushman (Harvard Business School)
    - Rita McGrath (Columbia Business School)
    - Ben Gomes (Brandeis International Business School)
    - Martin Reeves (BCG)
    - Jonathan Knee (Columbia Business School)
    - Chairman Zhang Ruimin (Haier)
    - Bharat Anand (Harvard),
    - Steve Blank (Stamford)
    - George Day (Wharton),
    - John Hagel (Deloitte's Center for the Edge and Singularity University)
    - Roger Martin (Rotman School of Management, University of Toronto)
    - Linda Hill (Harvard Business Review)
    - Kevin Nolan (GE Appliances)
    - Felix Oberholzer-Gee (Harvard Business School)
    - Tiffani Bova (Salesforce.com)
    - Emmanuel Probst (Ipsos)
    - Geert van de Wouw (Shell)
    - Lieke Van Kerkhoven (FLOOW2)
- Secondary research on Haier's Rendanheyi model and first-hand interviews with experts on the model, including
    - Chairman Zhan Ruimin (Haier)

    - Annika Steiber (Rendanheyi Silicon Valley Center)
    - João Domingos (Fujitzu)
    - Keven Nolan (GE Appliances)
    - Martin Moehrle (EFMD Global)
    - Xie Haiqin (Haier Digital)
- A quantitative survey of about 500 mid-level managers with decision-making authority inside primarily U.S. companies

Summary of findings

<u>From Internal Innovator Interviews: Seven Barriers</u>

Over the course of several years, we started to look closely at experience of employees seeking to innovate from within traditional bureaucracies. We eventually interviewed over 150 internal innovators.

Through these interviews, we found that:

- This path of self-directed, employee-generated innovation has historically been far more prevalent than we understood. Indeed, innovative ideas from employees have done more to shape society than those of entrepreneurs.
- With remarkable consistency, the 150 innovators, when asked what they saw as barriers to driving internal innovation, named the same seven key problems.
- A set of emerging concepts precisely address these seven barriers, opening up a pathway for internal innovators.
- Far more is known than many realize about what it takes to unleash the potential of would-be internal innovators.
- A few organizational principles, when introduced, could have the potential to remove barriers to internal innovation. It is these principles that we plan to highlight and explore in this White Paper.

We asked each of them: "What, in your experience, are the biggest barriers to driving an innovation from within?" Once we collated all their answers, we realized that they clustered into seven clear groupings. Together, the employees and innovation experts repeatedly mentioned these seven barriers as the most common challenges to internal innovation. We also realized that, if we turn those seven barriers around and look at the obverse, we see solutions that organizations can introduce to remove the barriers.

The list below reflects the barriers we found, in an order of the natural sequence by which internal innovators tend to phase of the most common barriers. We gave them names that form an acronym (IN-OVATE) that hopefully we hope make them easy to remember.

1. **Intent**: Facing early obstacles, many would-be internal innovators abandon their original intent. They eventually simply give up looking for chances to innovate. Successful ones dig deep to keep their intention alive and, as a result, are more likely to spot innovation opportunities.
2. **Need**: Most employees do not understand what kinds of innovations their organizations need. Want proof? Fewer than 55 percent of middle managers can name even two of their company's top strategic priorities.[xi] So even if someone is inspired to look for new ideas, they look in the wrong places and then propose ideas of little strategic value. Successful ones take the time to learn critical market forces affecting their company, understand what their organization cares about, and sense unmet customer needs.
3. **Options**: Would-be internal innovators often grow frustrated because they become fixated too early on a few innovative ideas—or even worse, just one. It's much more strategic to continually generate a flow of new ideas and manage them like a portfolio of options.
4. **Value blockers**: It is commonly accepted that innovative ideas are inconsistent with, and therefore disruptive to, a company's current business model. The organization appears to raise value blockers that inhibit an appropriate new business model from forming around the new idea. Successful innovators find clever ways to engineer their ideas so that rather than conflicting, they enhance the company's standing.
5. **Act**: Established organizations tend to ask employees to prove an idea will work before giving permission to take action. This puts would-be internal innovators in a fatal Catch-22: they can't take action so they can't prove their idea will work so they can't take action. Yet most new ideas are better suited to the opposite approach—taking action in order to prove the idea—and successful innovators devise ways to do just that.
6. **Team**: Corporations hamper internal innovation by the nature of their structure: They use siloes hierarchies, act slowly, and value results over learning. Successful innovators recognize that pursuing new ideas often requires the opposite, and so they pull together a cross-silo team that runs at a rapid pace and is geared toward learning, rather than delivering results.
7. **Environment**: Getting support for new ideas is politically complicated because the leadership behavior, types of talent, organizational structures, and cultural norms that help established organizations sustain their core operations also tend to hinder internal innovativeness. Successful internal innovators figure out how to find "islands of freedom" from which they can access the talent, structures, cultural norms, and leadership support that support attempts at innovation.

From expert interviews: guidelines for engaging in ecosystems to maximize value creation and sharing

As companies move away from traditional industry chain models toward operating within ecosystems, their internal organization are also evolving into forms that look more like ecosystems. This is caused by the fact that ecosystem-based competition is shifting the sources of competitive advantage. These are the key insights drawn from expert interviews.

1. Ecosystems are not new (Heinz and other CPG products, airline alliances, IBM-Intel-Windows, Sun Microsystems' are some examples) but they are increasing in importance. This growth seems due to various causes. Digitalization reduces transaction and coordination costs/effort (and increases speed) making collaboration between firms a better choice than alternatives (such as the firm delivering entirely on their own or the customer engaging independently with multiple firms). Digital components of a value proposition mean that one firm is less likely to have the complete solution (digital leads to modularity). Firms are sticking more closely to their core and letting partners manage the ancillary parts. Globalization implies firms must offer different variations in different regions to address different national needs or technological resources. Growing interdependence across industries or regions leads to a bias towards partnering vs. owning. (Knee, Gomes)
2. The advantage of delivering a value proposition through an ecosystem (or "constellation" or "alliance" of "business combinations") comes about when the end-user value proposition is best delivered by a collection of players, rather than just one or a few. The more players required to deliver the superior value-proposition, the more attractive an ecosystem becomes (v. delivery by a single firm). When the players needed offer complements, rather than components, the case for an ecosystem becomes even more compelling. (Bova, Knee, Gomes)
3. It is critical that ecosystem players are able coordinate themselves effectively. This is what Ben Gomes calls "1 + 1 = 1." But such coordination is not easy to facilitate, especially the greater the number of players. Some keys to doing this well include a) ensuring interest alignment upfront, b) APIs, c) standards, and d) mechanisms specific to the industry. Managing the ecosystem players is hard work and takes skill that builds over time. (Gomes, Nolan)
4. Scale is still the primary source of advantage. There are two sources of scale: economic and from network effects. Network effects advantages are (perhaps) the more important source of advantage for ecosystems and they are often misunderstood. For example, neither Netflix nor eBay have network effects because customers do not interact with each other. Traditional cost-based (economic) scale advantages accrue to individual players in the ecosystem and can increase their bargaining power. (Knee, Gomes)
5. When scale advantages are best shared, such activities may become shared "utilities." For example, a group of firms share a bundle of resources that are not owned by the same parent company (independent or interdependent). These can be organized in different ways. One new phenomenon for organizing these are platforms. (Knee, Gomes, Nolan)
6. The more permutations of the value proposition, the higher the minimum scale requirements are. Advantages from network effects are more valuable when the end value-proposition is more complex and so offers more personalization options. For

example, Uber or Lyft offer few permutations and so less personalization opportunities. AirBNB offers many. So it takes less scale to compete with Uber than AirBNB (Knee)

7. If an ecosystem's players have a predilection to stay (i.e., player captivity), the ecosystem becomes stronger. Players may stay because (a) of switching costs or (b) because they are better off staying than leaving. Switching costs can come about because of a gatekeeper (e.g., Apple), because you have to design your product to fit (e.g., a standard), because you adjust your operations to fit (e.g., airline rout systems fit tightly), or other reason. Players stay voluntarily when they get more value out of the ecosystem than out their alternative (what Ben Gomes refers to as 1 + 1 = 1.4 + 1.6 and what Felix Oberholtzer-Gee says comes from improving the Propensity to Sell or what we might called Best Alternative to Ecosystem Participation). When someone extracts more value than they add, the ecosystem becomes unstable because the division of value does not past a "fairness law," as Gomes calls it, or, at the extreme, other player(s) is(are) losing value by participating (they are adding more value than they are extracting). Some ecosystems are exclusive (high switching costs) and some are open (e.g., Lyft v. Uber, eBay). There seems to be a philosophical divide between the two (Knee, Gomes, Oberholtzer-Gee, Nolan)
8. The combination of players must create value, what Ben Gomes calls 1 + 1 = 3. Be selective when you add a player because each time you add one, it increases complexity. Some examples of value include: More scale? A more complete product? Reaching more markets? More agility to change? Network advantages? (Gomes)
9. Value extraction, or value share, by players is critical. How much value you are able to extract depends on perceived bargaining power, which is why a new ecosystem creator may build ecosystem partners over time, as the value of their ecosystem and thereby their bargaining power grows. For example, a gaming platform or app store building developers over time. Partners are never true allies, they are "frenemies" engaged in "coopetition" and it's helpful to think of them in this way. (Oberholtzer-Gee, Bova)
10. If an ecosystem's end-users have a predilection to stay (i.e., customer captivity), the ecosystem becomes stronger. End-users may stay due to (a) habit, (b) the superior value they receive (which comes from what Felix Oberholzer-Gee calls increasing the Propensity to Buy), (c) switching costs, or (d) high search costs. (Knee)
11. Digital aspects of the value proposition tend to reduce player or end-user captivity. APIs reduce switching costs for players and end-users. Digital interfaces make it easier to overcome end-user habit barriers (e.g., one can create an interface that looks and feels close to a competitors'). Digital search reduces search costs. (Knee)
12. To decide if you want to engage in any ecosystem, first ask, "to what extent does your success depend on working with other players?" It's important to ask "what value do I bring to other players" instead of only on the value you gain (Gomes)
13. In thinking through the design of an ecosystem, it helps to start with customer: Ask what do they want and how do they want to buy, then identify what "parts" you can deliver and which other players should deliver. Think about what components are valuable, who you need in place (e.g., do you need a brand, technology, standards) and which of these can you best deliver and which are better delivered by others? (Gomes, Bova)

14. Then choose the relationship with these other players: simple complement (user buys each separately), JV, partnership, platform, etc. (Bova)
15. This requires a mind-set shift. First, shifting from thinking about an alliance, or a set of alliances, which is natural for leadership, to a partnership "program" that many can join. It's one thing to manage a few alliances, but then you reach a point when you say "we have many alliances, how do we manage this?" The second mind-set shift is from wanting to control to relinquishing it and being comfortable with that. (Bova, Gomes)
16. One can think of the ecosystem as an "extended" enterprise. (Gomes)
17. Whether there will be one, a few, or many ecosystems (fragmentation of ecosystems) depends on factors such as scale advantages of ecosystems, industry structure, and network design (Gomes, Knee)

From Rendanheyi expert interviews and secondary research

The secondary research we reviewed (about thirty papers in all) and expert interviews we conducted provided a fascinating view into the Rendanheyi model. While they revealed numerous insights, those that were most directly relevant to this research study were that several unique characteristics distinguish the Rendanheyi model. While there is not clear definition of Rendanheyi, one can say that these elements would form the basis of such a definition:

1. Treat employees like intrapreneurs
2. Collaborate with ecosystem partners to deliver value to end users, conceiving the market as an ecosystem rather than the more traditional linear industry supply chain
3. Work in smaller independent units (Micro-enterprises for “MEs”) rather than traditional business units
4. Empower MEs to operate with considerable autonomy, letting internal marketplaces drive funding rather than using a centralized command and control approach in which a central authority reviews BU performance (e.g., annual) and makes staffing and budgeting decisions
5. Emphasize a closeness with end-users (what Haier calls “Zero Distance”) to enable MEs and intrapreneurs to more quickly spot emerging trends rather than have such trends tracked centrally by, for example, competitive or customer analytics teams
6. Use mechanisms to make it easy to intrapreneurs to get the resources (funding and time) to pursue new opportunities, following a philosophy that allows employees to try and fail, rather than defaulting to standard business case proposal reviews
7. In perhaps the most interesting and radical characteristic of the model, give MEs an option to choose which support services (e.g., R&D, HR, finance, IT) to use. In hierarchical models, business units are forced to use the shared services provided by the

company in order to create scale cost advantages. But for reasons described below, it is now possible to economically deliver shared services as lower scale.

As you can see from the table below, these characteristics of the Rendanheyi model help address the seven barriers our research shows employees most commonly face when seeking to drive innovations from within.

	Barriers	Intrapreneurs v. entrepreneurs	Ecosystem v. industry value chain	MEs v. BUs	Autonomy v. monitoring and control	"Zero distance"	Ease of accessing resources v. business case reviews	Shared service choice v. dictated by corporate
Barriers	Intent	X					X	
	Need		X			X		
	Options	X				X		
	Value blockers		X					
	Act				X		X	X
	Team			X				
	Environment	X		X				X

From quantitative survey of mid-level managers

The recognition that the key elements of the Rendanheyi model represent a set of organizational principles that collectively address all seven of the barriers employees most often face when seeking to innovate from within suggests that introducing these principles should, in theory, unlock internal innovation from employees which, in turn, would ideally result in improved performance of the firm.

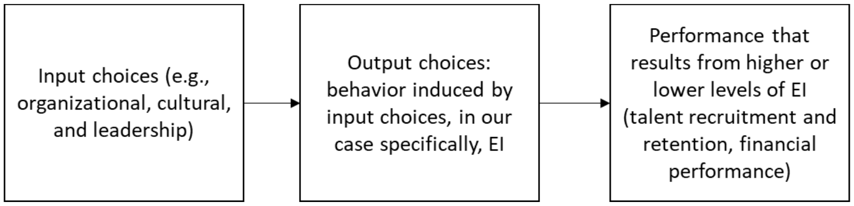
But does it?

We found numerous papers that offered a logical argument for why this should be and case examples that illustrate this to be true, but to our knowledge, no systematic study supports such logic to be true or such cases to represent a norm.

As such, we conducted a survey of nearly 500 mid-level managers with decision-making authority, covering companies across a range of industries, primarily in the United States. We asked three sets of questions, totaling eleven in total:

- Input questions related to organizational and strategic choices a company and/or its leaders can directly influence that could drive performance. In our case, we specifically asked questions that were identifying by expert interviews as the most important unique defining aspects of the the Rendanheyi model
- Output questions relate to actions and behaviors that the input choices produce. In the case of our research, we specifically sought to measure Entrepreneurial Intensity (EI), described in the box below.
- Result questions related to outcomes that come about from the output (in our case from EI). We specifically sought to measure the resulting impact of inputs and outputs on (a) the ability of firm to recruit and retain top talent and (b) the financial performance of the firm relative to competitors.

In other words, inputs drive outputs which, in turn, drive results as the diagram below illustrates.



Entrepreneurial Intensity

Entrepreneurial Intensity (EI) is a well-adopted measure of the level of entrepreneurial behavior in an organization. It seeks to address limitations of the broadly known Entrepreneurial Orientation (EO). EO focuses on the occurrence of entrepreneurial actions within an organization across two dimensions: how often the company engages in such events (frequency) and how innovative, risky, and proactive those events are (degree).[xii]

In total, we asked eleven questions. For each, we asked the respondent what their answer was today and what their response would have been three years ago. We sought to test three key hypotheses:

1. H1: (Successful) companies are shifting more toward an organization that resembles an ecosystem
2. H2: Companies who more resemble ecosystems outperform their peers
3. H3: Certain elements (to be determined) of an ecosystem brand most drive superior performance

In Appendix B: Quantitative Survey, you will see the specific questions we asked.

This summary serves to help more clearly and succinctly describe these questions and how they relate to each other.

Input questions	Output questions	Results questions
• Does your firm treat its people like intrapreneurs rather than employees? • Does delivering value to your end customer involve working with ecosystem partners? • Do you primarily work in decentralized units? • Are teams empowered to work with autonomy? • Are you better at spotting industry trends? • Is it easy to get resources (time and/or money) to pursue a new opportunity? • If you are not happy with the support you are getting from functions (e.g., IT, R&D), do you have alternatives to choose from?	• Do your people take entrepreneurial actions more frequently? • Is that entrepreneurial action of a higher degree (innovative, risk-taking, proactive)? • [My multiplying the results of the two output we were able to calculate EI]	• Are you now more successful at recruiting and retaining top talent? • Have you outperformed on financial metrics over the last three years?

The findings of this survey proved surprising in several ways. First, we found limited evidence to support our first hypothesis, that successful companies are shifting more toward an organization that resembles an ecosystem. Most respondents, when comparing their answers today versus three years ago, did indicate their firms were becoming less centralized, these results proved not to be statistically significant. Companies are evolving, but not so quickly as to be able to see a significant change over a three-year period.

However, we found very clear and statistically significant evidence to support our second hypothesis, that companies who more resemble ecosystems outperform their peers.

Finally, with regard to our third hypothesis—that certain element of an ecosystem brand most drive superior performance—we did find several key input drivers that showed strong correlations with outputs and performance. These will be detailed in the next section of this White Paper.

See Appendix C: Quantitative Findings for a complete report of the findings.

CHARACTERISTICS OF THE POST-BUREAUCRATIC ORGANIZATION

Our quantitative survey showed clear correlations with five organizational principles and higher levels of entrepreneurship. It even showed strong correlations between most of these and the less directly-related performance measures of the ability to recruit and retain top talent and financial performance.

This chart summarizes our findings:

Relative impact of each input measure to output and performance measures*

	Output and Performance		
Inputs	Intensity	Recr/ retain	Financial
Intrapreneurs: treat employees as intrapreneurs	2.77	1.63	1.43
Mutliple partner collaboration: deliver value through ecosystem partners	1.93	1.51	1.38
Decentralized units: operate as smaller decentralized teams	1.49	1.22	1.28
Autonomy: provide autonomy to teams	2.17	1.48	1.25
Spotting trends: pursue: adopt organizational principles that help employees spot emerging trends	4.02	3.31	2.32
Access to resources: it is easy to get time and financial resources to purse new opportunities	1.89	2.16	1.82
Alternative teams: if not happy with shared services, units have altnernative options	2.10	1.64	1.28

*The average score of a firm that scores 4 or 5 on an input measure divided by the average score a firm that scores a 1-3. For example, for "Intrapreneurs," a firm that scores a 4 or 5 on intrapreneurship has an an average entrepreneurial intensity score 2.77 times higher than that of a firm that scores a 1, 2, or 3 on intrapreneurship.

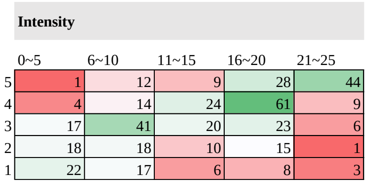
Source: Outthinker analysis

THE IMPACT OF TREATING EMPLOYEES LIKE INTRAPRENEURS

Relating to employees and intrepreneurs rather than entrepreneurs: firms who did this enjoyed a level of entrepreneurial intensity that was nearly 3X (277%) higher than their peers. They also are more likely to outperform their competition (143% more likely) and are better at recruiting and retaining top talent (163%).

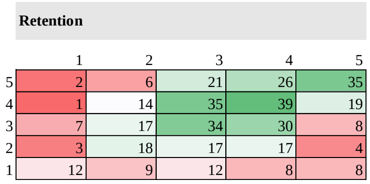
As can be seen from the data below, companies whose employees feel they are related to as intrapreneurs, significantly outperform their peers in terms of entrepreneurial intensity, top talent recruitment and retention, and financial performance.

To clarify the format of the following set of charts, note that the figures to left of each matrix (1, 2, 3, 4, and 5) represent the score that an individual respondent gave to the question related to the specific input question. So, in this case, the question was, “To what extent do you agree or disagree with the following statement: Our organization treats its people more like intrapreneurs than employees?” to which they could have chosen 5 to mean “strongly agree” and 1 to mean “strongly disagree.” The figures at the top of each matrix represent the scores respondents gave to questions related to output and performance measures. In this case, you will note that of the respondents who strongly agreed that their company treated employees like intrapreneurs (who therefore scored their company a “5”), 44 of them also gave scores that resulted in an Entrepreneurial Intensity (EI) score of 21-25 while only one scored their company such that it resulted in a relatively low EI of 0-5.



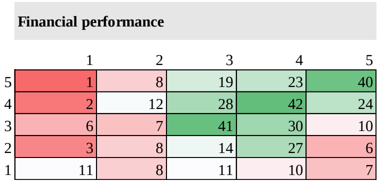
Intensity

	0~5	6~10	11~15	16~20	21~25
5	1	12	9	28	44
4	4	14	24	61	9
3	17	41	20	23	6
2	18	18	10	15	1
1	22	17	6	8	3



Retention

	1	2	3	4	5
5	2	6	21	26	35
4	1	14	35	39	19
3	7	17	34	30	8
2	3	18	17	17	4
1	12	9	12	8	8



Financial performance

	1	2	3	4	5
5	1	8	19	23	40
4	2	12	28	42	24
3	6	7	41	30	10
2	3	8	14	27	6
1	11	8	11	10	7

What is evident is a nearly linear correlation between Intrapreneurshiop input scores and output scores: if you score a 5 on intrapreneurship (i.e., if your people would strongly agree that they are treated as intrapreneurs rather than employees) you are most likely to also get the top score on intensity, retention, and financial performance. If you score 4 on intrapreneurship, you are mostly likely to get a 4 on intensity, retention, and financial performance.

The correlation breaks down at lower scores of intensity, so when your employees strongly disagree that they are treated as intrapreneurs, your intensity, retention, and financial performance can vary widely. This seems a logical pattern to us as when intrapreneurship is not a factor, then other factors will drive intensity, retention, and financial performance.

THE IMPACT OF DELIVERING VALUE THROUGH ECOSYSTEMS

Companies that primarily deliver value to end-users through an ecosystem of partners are twice as likely (193%) to have high EI, are 1.5X (151%) more successful at attracting and retaining top talent, and enjoy more marginal, but significant superior financial performance (they are 1.4X or 143% more likely to outperform their peers).

	Intensity				
5	23	30	33	57	49
4	16	34	21	52	8
3	15	25	12	15	2
2	4	9	3	6	3
1	6	6	0	2	1

	Retention				
5	11	26	47	55	45
4	7	22	32	42	17
3	5	7	26	16	8
2	3	5	10	4	3
1	2	4	4	1	3

	Financial performance				
5	13	16	44	55	54
4	5	10	36	49	20
3	2	9	25	18	7
2	2	9	3	9	2
1	2	1	3	1	5

THE IMPACT OF OPERATING IN SMALLER DECENTRALIZED TEAMS

While we expected that companies that organize themselves in smaller, decentralized rather than larger business units to enjoy a more significant advantage, the impact of such an organizational structure proved still statistically significant. Firms that adopt such an organizational model unleash greater entrepreneurial behavior (149%), achieve better financial performance relative to peers (128%), and are better at recruiting and retaining top talent (122%).

As with prior input measures, we see a strong correlation, especially at the higher levels. An input score of 5 means you will most likely score a five on intensity, retention, and financial performance. If you score a 4, you most likely will achieve a score of 4 on all four. Obviously other factors are at play (note that even with a score of 5, your intensity and retention scores may nearly equally be a 4s or 5s), but organizing as decentralized teams is meaningful driver of success.

	Intensity				
5	7	19	21	34	35
4	14	32	18	49	10
3	14	26	16	23	3
2	14	19	7	19	3
1	16	9	7	11	13

	Retention				
5	7	13	27	32	35
4	11	19	34	41	11
3	4	11	34	21	5
2	3	14	14	13	12
1	6	7	11	12	14

	Financial performance				
5	11	9	17	30	45
4	8	13	31	46	16
3	2	7	35	25	7
2	1	11	17	16	10
1	2	5	14	16	11

THE IMPACT OF EMPOWERING UNITS AND TEAMS TO ACT AUTONOMOUSLY

Empowering units and teams to act with autonomy and make their own decisions proved to be powerful driver of EI. Firms that do this, enjoy over 2X (217%) higher entrepreneurial rates (EI). They are also 1.5X (148%) better at recruiting and retaining top talent, and enjoy a more marginal, but significant advantage in financial performance (125%).

The question we asked here was, “To what extent do you agree or disagree with the following statement: Teams or units in the organization are empowered to act with autonomy and make their own decisions.”

	Intensity				
5	7	14	15	35	40
4	22	54	30	77	17
3	10	20	14	12	2
2	17	12	8	13	1
1	12	4	2	1	4

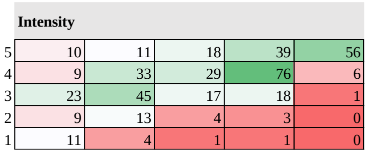
	Retention				
5	2	9	28	33	36
4	17	30	54	58	29
3	3	8	24	14	3
2	5	14	12	10	7
1	4	4	2	7	1

	Financial performance				
5	2	10	23	36	35
4	9	23	53	61	36
3	4	6	19	14	7
2	4	6	16	17	6
1	4	1	3	6	5

THE IMPACT OF INTRODUCING MODELS THAT FACILITATE EMPLOYEES SPOTTING TRENDS

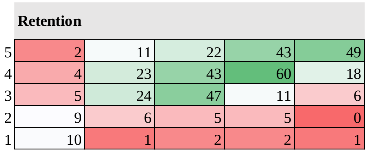
Companies that introduce organizational models that facilitate employees spotting emerging customer and market trends enjoy a remarkable advantage over those who do not. This factor was the most significant of all the input measures we tested. Their EI is 4X (402%) higher, they are over 3X (331%) better at attracting and retaining top talent, and are more than 2X (230%) more likely to outperform their peers financially.

This factor, we feel, deserves deeper analysis, specifically to understand what organizational tools in the Rendanheyi or other decentralized models enable an organization to be better at spotting trends.



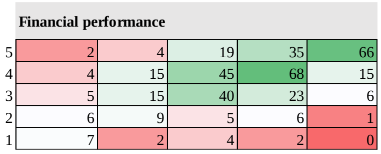
Intensity

5	10	11	18	39	56
4	9	33	29	76	6
3	23	45	17	18	1
2	9	13	4	3	0
1	11	4	1	1	0



Retention

5	2	11	22	43	49
4	4	23	43	60	18
3	5	24	47	11	6
2	9	6	5	5	0
1	10	1	2	2	1



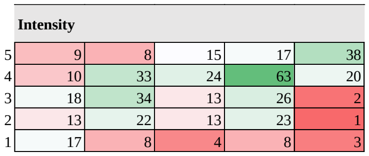
Financial performance

5	2	4	19	35	66
4	4	15	45	68	15
3	5	15	40	23	6
2	6	9	5	6	1
1	7	2	4	2	0

THE IMPACT OF MAKING IT EASY TO GET RESOURCES TO PURSUE NEW OPPORTUNITIES

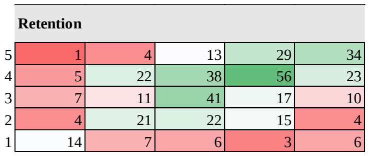
Solutions that facilitate employees accessing resources, time, and support to pursue new ideas is a powerful driver. Companies who make this easy for employees are about twice as likely to have high levels of entrepreneurship (189%), enjoy an advantage at recruiting and retaining top talent (216%), and to outperform their peers (182%).

While traditional hierarchical organizations have implemented approaches to facilitating this (such as idea competitions, dedicated innovation funding, carving out innovation teams to provide support), our interviews of internal innovators indicate that these approaches are viewed by employees most often as ad-hoc and unsustainable. Instead, more decentralized models like Rendanhayi adopt a philosophy that allows employees to act without formal authority. This is consistent with research that shows a strong correlation between organizational structures and cultural norms that encourage autonomous action.[xiii]



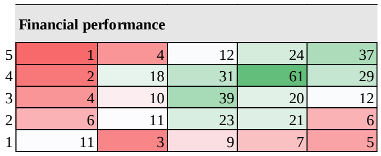
Intensity

5	9	8	15	17	38
4	10	33	24	63	20
3	18	34	13	26	2
2	13	22	13	23	1
1	17	8	4	8	3



Retention

5	1	4	13	29	34
4	5	22	38	56	23
3	7	11	41	17	10
2	4	21	22	15	4
1	14	7	6	3	6



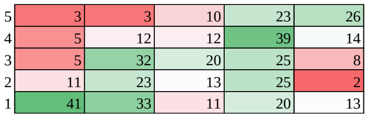
Financial performance

5	1	4	12	24	37
4	2	18	31	61	29
3	4	10	39	20	12
2	6	11	23	21	6
1	11	3	9	7	5

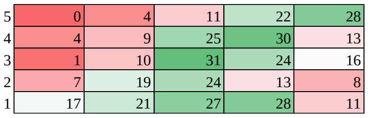
THE IMPACT OF LETTING EMPLOYEES CHOOSE FROM SUPPORT FUNCTIONS

Giving units or team who are not satisfied with the support they are getting from a function like IT, finance, or legal, other options. While fewer companies adopt such practices than the other practices tested, those who do enjoy far higher levels of EI (210%), recruitment and retention (164%), and more marginal but significant advantage in financial performance (128%).

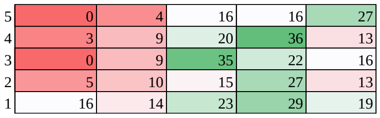
This organizational is, in our view, one of the most exciting and radical of the Rendanheyi characteristics studied. Whenever we have shared this idea within large, established organizations, we have found great resonance with the idea. Adopting such flexibility implies a potentially radical reconfiguration of the firm.



5	3	3	10	23	26
4	5	12	12	39	14
3	5	32	20	25	8
2	11	23	13	25	2
1	41	33	11	20	13



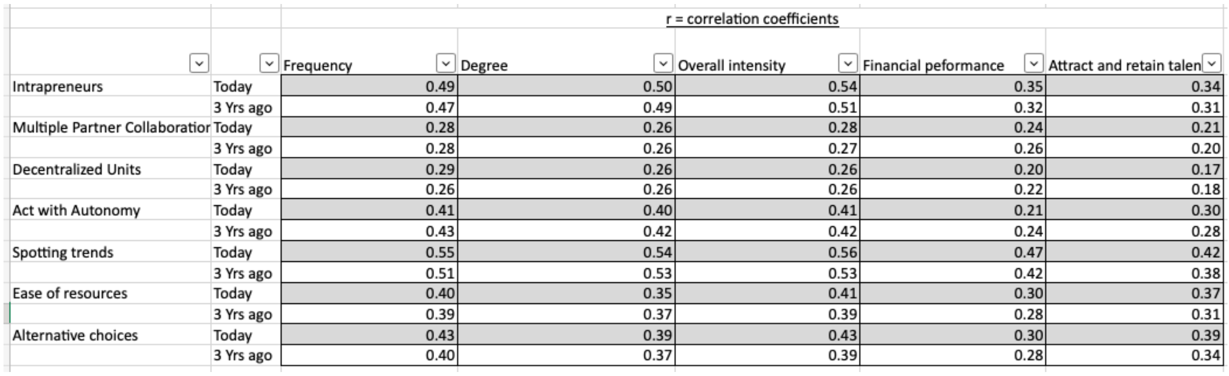
5	0	4	11	22	28
4	4	9	25	30	13
3	1	10	31	24	16
2	7	19	24	13	8
1	17	21	27	28	11



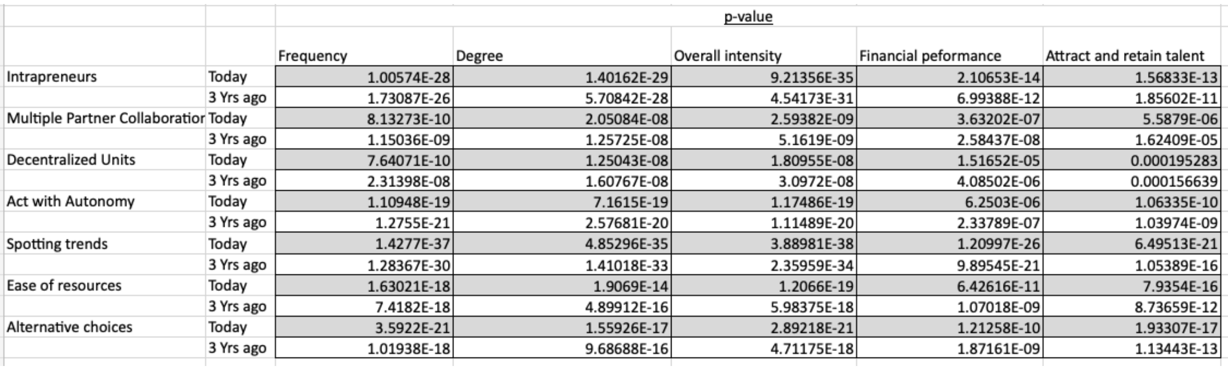
5	0	4	16	16	27
4	3	9	20	36	13
3	0	9	35	22	16
2	5	10	15	27	13
1	16	14	23	29	19

A NOTE ON STATISTICAL SIGNIFICANCE

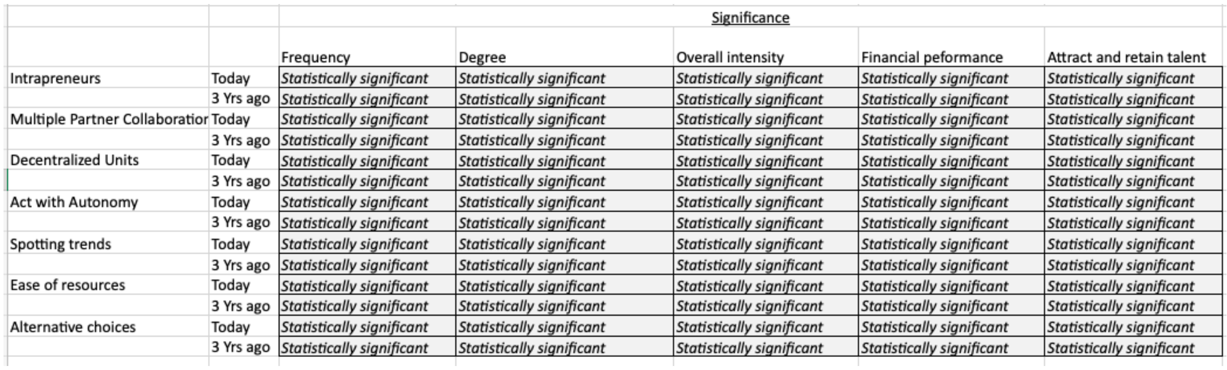
The seven organizational principles proposed earlier were correlated individually with each output. A simple two-tailed T-test at a significance level of 5% (α =.05) was used to detect any significant results. The tables X & Y & Z below summarize the correlation coefficients and the statistical significance of the p-values.



		r = correlation coefficients				
		Frequency	Degree	Overall intensity	Financial peformance	Attract and retain talen
Intrapreneurs	Today	0.49	0.50	0.54	0.35	0.34
	3 Yrs ago	0.47	0.49	0.51	0.32	0.31
Multiple Partner Collaboratior	Today	0.28	0.26	0.28	0.24	0.21
	3 Yrs ago	0.28	0.26	0.27	0.26	0.20
Decentralized Units	Today	0.29	0.26	0.26	0.20	0.17
	3 Yrs ago	0.26	0.26	0.26	0.22	0.18
Act with Autonomy	Today	0.41	0.40	0.41	0.21	0.30
	3 Yrs ago	0.43	0.42	0.42	0.24	0.28
Spotting trends	Today	0.55	0.54	0.56	0.47	0.42
	3 Yrs ago	0.51	0.53	0.53	0.42	0.38
Ease of resources	Today	0.40	0.35	0.41	0.30	0.37
	3 Yrs ago	0.39	0.37	0.39	0.28	0.31
Alternative choices	Today	0.43	0.39	0.43	0.30	0.39
	3 Yrs ago	0.40	0.37	0.39	0.28	0.34



		p-value				
		Frequency	Degree	Overall intensity	Financial peformance	Attract and retain talent
Intrapreneurs	Today	1.00574E-28	1.40162E-29	9.21356E-35	2.10653E-14	1.56833E-13
	3 Yrs ago	1.73087E-26	5.70842E-28	4.54173E-31	6.99388E-12	1.85602E-11
Multiple Partner Collaboratior	Today	8.13273E-10	2.05084E-08	2.59382E-09	3.63202E-07	5.5879E-06
	3 Yrs ago	1.15036E-09	1.25725E-08	5.1619E-09	2.58437E-08	1.62409E-05
Decentralized Units	Today	7.64071E-10	1.25043E-08	1.80955E-08	1.51652E-05	0.000195283
	3 Yrs ago	2.31398E-08	1.60767E-08	3.0972E-08	4.08502E-06	0.000156639
Act with Autonomy	Today	1.10948E-19	7.1615E-19	1.17486E-19	6.2503E-06	1.06335E-10
	3 Yrs ago	1.2755E-21	2.57681E-20	1.11489E-20	2.33789E-07	1.03974E-09
Spotting trends	Today	1.4277E-37	4.85296E-35	3.88981E-38	1.20997E-26	6.49513E-21
	3 Yrs ago	1.28367E-30	1.41018E-33	2.35959E-34	9.89545E-21	1.05389E-16
Ease of resources	Today	1.63021E-18	1.9069E-14	1.2066E-19	6.42616E-11	7.9354E-16
	3 Yrs ago	7.4182E-18	4.89912E-16	5.98375E-18	1.07018E-09	8.73659E-12
Alternative choices	Today	3.5922E-21	1.55926E-17	2.89218E-21	1.21258E-10	1.93307E-17
	3 Yrs ago	1.01938E-18	9.68688E-16	4.71175E-18	1.87161E-09	1.13443E-13



				Significance		
		Frequency	Degree	Overall intensity	Financial peformance	Attract and retain talent
Intrapreneurs	Today	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*
	3 Yrs ago	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*
Multiple Partner Collaboratior	Today	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*
	3 Yrs ago	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*
Decentralized Units	Today	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*
	3 Yrs ago	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*
Act with Autonomy	Today	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*
	3 Yrs ago	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*
Spotting trends	Today	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*
	3 Yrs ago	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*
Ease of resources	Today	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*
	3 Yrs ago	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*
Alternative choices	Today	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*
	3 Yrs ago	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*	*Statistically significant*

As we can see in Table Z, our results show that all seven principles are significantly correlated with the output and performance variables.

These seven organizational principles suggest we may be headed not toward an evolution of the traditional bureaucratic model but, we believe, a departure from it. Our belief is based on three reasons:

1. They show measurable advantages over traditional organizational approaches both in terms of firm financial performance and a firm's ability to attract and retain talent (so both on the customer side and the employee side)
2. They are inconsistent with, or at least unnatural to, traditional bureaucratic models so they force companies to either isolate them (in an ambidextrous org) or choose to abandon traditional models
3. They are choices that firms can take action on now. Indeed, forward-looking companies already are taking such action.

WHY THE BUREAUCRACY IS MORE LIKELY TO BE REPLACED THAN TO EVOLVE

As described above, a new concept, once emerged, faces one of three fates. It can be rejected. It can be incorporated. Or it can replace what is there.

If the contours described above are parts of what is becoming a new organizational concept—whether that concept is ultimately popularized as Rendanheyi or Ecosystem Economy or something else—it seems, initially, that at least several of its characteristics could be incorporated into the prevailing bureaucracy model. For example, a company operating within a traditional hierarchy could effectuate a cultural transformation to start treating employees as intrapreneurs. Many traditional hierarchical organizations have shifted in the last decade toward relying more heavily on ecosystem partners. Most companies focus heavily on helping employees spot trends and adopt programs to facilitate employees' efforts to gather resources and time to pursue new opportunities. Cultural change efforts, ecosystem programs, specialized competitive and marketing intelligence groups, and incubation programs like Adobe's Kickbox[xiv] corporate innovation program are all proven approaches to simulate the characteristics described above, without having to abandon a core, centrally-organized organizational paradigm.

In the case of Adobe, employees are invited to attend a training and then given a box which contains everything an employee needs to test a new innovation idea. As described in a 2015 *Harvard Business Review* article on the Adobe Kickbox methodology: “The top of the box features a clever fire alarm image with the words ‘Pull in Case of Idea’ written on it. When you break open the seal, you’ll find instruction cards, a pen, two Post-It note pads, two notebooks, a Starbucks gift card, a bar of chocolate and (mostly importantly) a $1,000 prepaid credit card. The card can be used on anything the employee would like or need without ever having to justify it or fill out an expense report.”[xv]

MIT professor Michael Schrage, who we interviewed for this research, popularized a program that traditional hierarchical organizations can introduce to activate entrepreneurial intensity by making it easier for employees to get the resources and time needed to take action on new ideas. He calls it the “5 X 5 Experiment,” which advocates for pulling together a diverse team of five employees to come up with five experiments, each of which can be tested within five weeks, for under $5,000 each.[xvi]

There is no shortage of programs and frameworks and hacks that traditional organizations apply to compensate for some of the restraints a centralized model imposes on agility and entrepreneurialism. In other words, there are numerous attempts at work to incorporate some of the seven organizational principles described here into the existing bureaucratic paradigm.

But we believe ultimately, the organizational structure taking form cannot co-exist with a traditional bureaucracy. We believe this for two reasons:

1. It may not seem a big stretch to evolve a bureaucracy so that it can adopt one or two of the seven principles described above, but adapting all seven becomes an effort big enough to cause one to consider simply redesigning the organization from scratch. This is akin to refurbishing a house. Installing some windows or chandeliers is easy enough. But when you decide to also replace the plumbing, move walls, and lay the foundation for a new extension, it becomes more economical to simply demolish the house and build anew.
2. Several of the seven contours are actually inconsistent with bureaucracy. At the very least they are inconvenient for a bureaucracy to assume. In some cases, their adoption would mean abandoning a characteristic that defines what a bureaucracy is. In such a case, adopting a characteristic would mean, by definition, to cease being a bureaucracy.

To see point 2, that adopting some elements of the emerging organizational model means to cease being a bureaucracy, consider Max Weber, the German political economist who in the early 1920s, popularized bureaucracy as the most efficient approach with which to organize human activity (though he did also warn that, left unchecked, bureaucracy can reduce individual freedom). He is arguably the most influential authority on the topic of bureaucracy. In defining bureaucracy, he wrote that an effective bureaucracy must include several things, including:

- a hierarchy,
- with clear lines of authority,
- that divides labor into specialties,
- with the quality of decisions being strictly regulated.

These seven principles described above imply organizational structures that look more like autonomous ecological systems, or marketplaces or ecosystems, of autonomous teams rather than hierarchies. They suggest erasing clear lines of authority, instead leaving the establishment of authority up to the system. For example, in Haier's Rendanheyi model, the CEO of a Microenterprise (ME) can be voted out if their team does not feel they are doing a good job. An IT department (also an ME) loses funding if it cannot secure internal clients, not because a budgeting authority removes funding, but because internal marketplace of MEs do not value the IT department's offer. Instead of dividing labor into specialties, specialists are mixed with non-specialists (or other types of specialists) in a small team. And the quality of decisions are not regulated, at least not by a central authority, but rather by supply and demand dynamics of the internal marketplace.

In other words, adopting all seven of these characteristics in an organization would mean to abandon hierarchy, erase clear lines of authority, mix specialized labor rather than dividing it, and letting the internal marketplace judge the quality of decisions rather than regulating them. Such an organization cannot, by Weber's definition, be considered a bureaucracy.

WHY NOW

We have argued here that we are reaching an inflection point at which frustration with traditional centralized models is culminating, finally, into clarity on a potential solution. But why should it be that we are reaching this inflection point now? Why did we not start settling on an alternative bureaucracy ten years ago? The answer is technology. Specifically, a bundle of technologies and practices are reaching a level of maturity that collectively enables us to organize in forms that heretofore were not possible, or at least forms that until now were not as efficient or effective as bureaucracy.

To see this, its important to remember when and why centralized organizational structures exist. In 1937, British economist Ronald Coase published a highly influential article titled "The Nature of the Firm" (1937), which argued that to understand when firms (companies) emerge and to understand their limitations, we should look at transaction costs. Simplifying his theses here, consider that transaction can be executed either internally, within the rules and structure of a firm, or externally through a marketplace. A transaction might be purchasing raw material or supplies, hiring talent, selling through another party, etc. Whenever it is less expensive to execute the transaction internally, then a firm will be more competitive than a marketplace.

The cost of a transaction includes things like the cost to search (e.g., for a supplier), negotiate, protect trade secrets, police or enforce the trade, all of which can add to the full transaction cost. For example, if every day you had to find a specialized worker to operate a piece of machinery in your factory, you may find it more economical to hire that person as an employee (thereby becoming a firm) than to search for a new expert, negotiate a fee, sign a contract, and ensure you protect trade secrets that person may learn every day.

Firms compete with marketplaces. Wherever they can clear a transaction more economically than the marketplace, the firm takes over. Whenever the marketplace is more efficient, the market takes over.

A number of technologies, however, are reducing the costs of completing transactions outside of hierarchies, making non-hierarchical alternative more competitive alternatives to the firm. Many of these technologies are often bundled together as “4th Industrial Revolution” (4IR) technologies. Swiss Economist, Mark Esposito, wrote “The 4IR is a combination of emerging technologies that is shaping the way we live and work. The Internet of Thinks (IoT), cloud computing, big data, robotics, artificial intelligence (AI), 3D printing, augmented reality (AR), virtual reality (VR), nanotechnology, and biotechnology are the technologies that are gaining more prominence during the twenty-first century and are overlapping and fusing with one another in this age of innovation.”[xvii]

These technologies, in combination, allow us to coordinate people, companies, and activities with greater accuracy and speed than before. We have already seen the impact of these technologies advancing the rise of “gig workers” through platforms like Task Rabbit, Upwork, or Uber. These technologies reduce search costs (you can find a gig worker in minutes with a few clicks rather than through hours of phone calls), negotiation costs (instead of negotiating fees and terms, the platform sets them for you), and enforcing acceptable performance (allowing you to digitally rate the worker and the worker to rate you the platform can create accountability more quickly and at a lower cost than, say, managing regular performance reviews with an internal hire).

And the technology that has enabled gig-working platforms is far more rudimentary than what is now possible. Chairman Zhang Ruimin of Haier, indeed, calls this era the “IoT Era” in which machines and communicate with humans and other machines, data proliferates, which then feeds AI algorithms, protected by blockchain networks, all of which are driving down transactions costs rapidly below what centralized hierarchies can deliver.

A bureaucracy can be competitive if it can deliver a lower transaction cost. That cost is composed of five elements:

1. Search costs
2. Assessment costs
3. Negotiation costs
4. Delivery coordination costs
5. Compliance costs
6. Trade secret protection costs

If a hierarchy can give you the best option to search, assess, negotiate, coordinate delivery, ensure compliance, and protect any trade secrets better than a decentralized alternative, the hierarchy will and should own the transaction. The issue is that, while bureaucracies are losing ground to marketplaces that, thanks to these technologies, are becoming more competitive and to new forms of organization, examples of which we will discuss later.

If a hierarchical firm is to hold on to its current reach, it will need to adapt how it coordinates in order to reduce transactions costs. Otherwise, it will not remain competitive and will eventually lose to alternatives.

Organizations are adapting, but a step behind technology. There is always a lag between what technology makes possible and the adoption of that technology by users of that technology. The same is true here in the application of these technologies. As these technologies reduce transaction costs outside of firms, they are forcing firms to either cease activities they once conducted inhouse or adopt more decentralized coordination models that are able to deliver transactions more competitively. Such models more closely mirror that of external marketplaces and other decentralized models. If they do not, as Martin Reeves said in a recent interview we conducted for this research, “the firm will retract to become the coordinator of coordination.”

More broadly, these technologies are thrusting upon us several new realities to contend with, for example:

- They allow us to create both efficient and highly-personalized experiences as University of Michigan professor, Venkat Ramaswamy, suggested in an interview we conducted with him regarding this research
- They generally accelerate the pace of change
- They shift us from transactions to relationships, from products to experiences, from customers to experiencers
- They move us away from one firm providing the product toward an ecosystem of coordinated but independent firms creating the experience (i.e., because coordinating independent firms becomes easier)
- They are likely to make data universally available, timely, and democratized

BUREAUCRACY FACES NEW COMPETITORS

Coase’s work pitted firms against marketplaces. But today’s firm must compete not just with marketplaces (or even platforms), but with a new generation of organizational forms that were impossible to create or even imagine five years ago.

We see the proliferation of new decentralized models across a range of industries. Crypto currencies are offering viable alternatives to fiat currency. Decentralized finance is shaping the banking sector. Companies like Holtzbrink, the world’s largest publisher of scientific journals, is exploring decentralized science in which rights to scientific advances are not controlled or owned by publishers or universities, but by the scientists who created them.

Decentralized Autonomous Organizations (DAOs) are also forming across a range of sectors. Such organizations are built on blockchain and other Web3 technologies. This new form of legal structure has no central governing body. Instead, every member of a DOA shares a common goal and acts in the interest of the DAO. Decisions are often made and enforced through a set of rules, implemented by “smart contracts”—programs that act like contracts, but that don’t need a human executor to dictate actions, rather, the program trigger actions automatically. The DAO model encourages emergence of coordinated effort from the bottom up rather than imposing it from the top down. You might think of a DAO as technology-enable co-op.

Consider, for example, dOrg[xviii], one of the very first DAOs to be legally recognized as an LLC in the United States. Formed in 2019, dOrg is a decentralized software company dedicated to helping build infrastructure for Web 3 and crypto projects.

There are no formal roles – no CEO or CFO or head of HR. Each member/worker is an owner of the legal corporation, a Vermont-based LLC. Company decisions are voted on using tokens, which members earn for completing projects for the company. The more projects you complete, the more tokens you own, and the more votes you can cast.

Or consider Seed Club[xix], a DAO that “builds and invests in communities.” and does so because “We’re building a future where the value created by communities on the internet is captured by people, not platforms.” Members of this DAO are paid in two different cryptocurrencies. One they can convert into fiat currency to pay for things like food and rent. The other is a coin that gives them ownership in the DAO.[xx]

The scale of DAOs today dwarfs that of companies like Haier and it is far too early to know if this form of organization will succeed. But they offer one other example of an alternative organization form made possible by advances in IoT, blockchain, AI, and other 4IR technologies.

Such models might not even qualify as “organizations” in the common understanding of the term. They can coordinate effort for short-term projects. They can enable people and machines to swarm around new opportunities or threats, then disband, then reconfigure with new sets of members to address a different challenge, opportunity, or project.

The bureaucracy is not only competing with Coase’ marketplace. It is competing with a diverse and evolving set of new organizational forms. Given this, why should we not expect similar models to start taking over how firms organize? If the firm is to remain relevant, it must evolve to realize the transaction advantages available by new technology.

HOW TO EVOLVE

Let’s set aside the question of whether the corporation should survive. It is not clear that the world will need corporations in the future. Indeed, before the East India Trading Company was formed in 1600[xxi], the corporation did not exist and humanity was fine.

But self-preservation is a fundamental driver to all animals and humans and so, presumably, to corporations. We can expect firms will try to survive against new organizational forms. Ironically, in doing so, they are likely to evolve into forms so different from those they embody today to the point of becoming unrecognizable and, perhaps, not even technically firms as we currently define them.

This research suggests some clear steps a company can take to start evolving in order to remain relevant in what Chairman Zhang calls the IoT era. These steps follow the seven contours described above. Here we seek to sequence them in an order that seems most natural.

A possible timeline for implementing insights from this research				
Inputs	**Phase 1**	**Phase 2**	**Phase 3**	**Phase 4**
Intrapreneurs: treat employees as intrapreneurs		▨		
Mutliple partner collaboration: deliver value through ecosystem partners	▨			
Decentralized units: operate as smaller decentralized teams			▨	
Autonomy: provide autonomy to teams		▨	▨	
Spotting trends: pursue: adopt organizational principles that help employees spot emerging trends	▨			
Access to resources: it is easy to get time and financial resources to purse new opportunities	▨	▨		
Alternative teams: if not happy with shared services, units have altnernative options				▨

<u>Phase 1: Advance what you are (hopefully) already doing</u>

Step 1: begin embracing external ecosystems. Remember that companies who deliver value to end-consumers through an ecosystem of partners enjoy double the entrepreneurial intensity (EI) rates and are 50% more successful at recruiting and retaining top talent. By shifting your company's outlook from "we deliver a great product" to "we deliver a great experience of which our product is one component" you should begin unlocking innovation and growth.

Step 2: adopt organizational principles that help employees better spot trends. It is likely you are already investing effort into such initiatives. Now is the time to start considering more decentralized approaches to achieve this, particularly in pursuing "zero distance," approaching a model in which each individual's orientation and incentives are directly tied to end-user success.

Step 3: make it easier for employees to get resources (time and funding) to pursue new opportunities. You likely have already some programs in place. But most of such programs we have studied still require the employee to get permission to participate. They must be chosen for the idea competition or training, for example, or must get budget and time off to launch a "5 X 5 Experiment." Consider now what would be involved in really giving all employees the freedom to take at least initial action on a new promising idea without asking more senior staff for approval.

<u>Phase 2: Initiate an organizational transformation</u>

Increasing your intensity and focus on the things you are already doing (in Phase 1) should start spreading the message that the company is committed to creating a more decentralized and flexible model which will lay the foundation for the beginning of an organizational transformation.

Step 4: begin treating employees like intrapreneurs. This can be done through a variety of cultural change drivers. Those that we have seen to be most effective include (a) getting senior leadership to introduce new language (e.g., replacing the world "employee" in internal dialogue, meetings and artifacts like progress reviews), (b) telling stories of people who acted like intrapreneurs, especially stories of people who tried something entrepreneurial, failed, and still were praised for their effort and learning, and (c) adjusting measurement, incentives, and reporting structures where possible.

Step 5: allow greater autonomy. You have not yet broken down business units and siloes into teams, but you can begin losing the reigns to give teams and business units greater autonomy. We have found that senior leaders often fear "letting go" of the reigns. To counteract this fear, release control in a controlled way, by isolating a part of the business or a team or internal organization.

Step 6: take your efforts to facilitate intrapreneurs accessing resources to the next level. Now that you have started the shift from employees to intrapreneurs and you have begun allowing for greater autonomy and proactivity, you are likely to see new, bolder approaches to making it easy for people to take action on new ideas. For example, Unify, a staffing company with tens of thousands of workers who work in airports, allows local teams to customize training programs (e.g., videos) for onboarding new members. They not only can do so without asking permission, they are expected to do so without getting approval.

Phase 3: break units into teams

Step 7: break large business units and siloes into small teams. Until this point, most of the changes introduced can be implemented through a bureaucracy. In this step you are starting to depart from a hierarchical model. Start forming your version of Haier's Micro-enterprises (MEs), each ME having 5 to 20 people, each with shared mission.

Step 8: provide autonomy to these teams. The autonomy you gave your business units in Step 5, can now be applied at the smaller team level.

Phase 4: break shared services into optional providers/platforms

Step 9: break apart support functions (e.g., IT, legal, R&D) into smaller units and give MEs the option to choose the support providers they want. This is generally considered by those who are implementing this mode to be the most radical change of all, and yet a change that tends to be viewed as exciting and obvious. Just as you did in step 7 for your business units, do the same for your support functions. Then change your budgeting process to allow MEs to choose which support MEs they want to work with.

APPENDIX A: NOTES FROM SENIOR EXECUTIVE INTERVIEWS AND PANELS

Notes from a series of panels of strategy heads of large enterprises conducted for this research.

Health Care Panel
Panelists:
Claus Jensen – Chief Innovation Officer, Teladoc Health
Lieke van Kerkhoven – Co-founder FLOOW2
Sukanya Soderland – Chief Strategy Officer, Blue Cross Blue Shield Massachusetts
Moderator:
Claudio Garcia – President, Outthinker Strategy Network

- **Healthcare has always consisted of ecosystems (payers, providers, regulators), but few companies have tried to leverage it intentionally. Is there an opportunity to leverage these ecosystems more productively, and how does it differ from tradition?**
    - **Claus:** The answer lies in the nature of healthcare. In last 100 years, we've become much more capable. Capability means specialization, which has driven fragmentation. Players become categorized (payors specialize in certain products, providers specialize in conditions.) I spent two years working with MSKCC—highly specialized in dealing with cancer. 100 years of specialization and fragmentation has formed a highly complex scenario—ecosystems of providers and roles. As long as we become more capable, we will have specialization. Institutions need to answer the question: Is there a role to play to amplify the larger healthcare value? Take on the role of orchestrating and amplifying. I think this is happening because when we were forced to embrace a hybrid care model, some of the barriers broke. There is an oppty for a company to step up to be an amplifier instead of a disruptor.
    - **Sukanya:** The opportunity is to move the market and the industry from focus on sick care to improving people's health. Moving from the break fix to working upstream—lifestyle and choices. Diet, exercise, drinking, prescribed medication, stress have a material impact (70% of the healthcare cost dollar.) We have the oppty to understand and influence behavioral motivational profiles of individuals and offer interventions to make healthier decisions. Oppty is going from US $3.5T market in primarily sick care to double the value around greater health. We have seen a lot of specialization. Clayton Christensen's theory suggests that when industries are more nascent, they are more integrated, and as they become more sophisticated, they become more specialized. In healthcare, we've gone through the arc. We have a lot of sophistication and bifurcation. We are entering a new era, an inflection point where there is a desire to integrate and pull together. And many are angling to become the orchestrator.
- **What do companies need to change in order to be successful?**
    - **Lieke:** The main issue is the mindset. We can come up with rational structures, new products, business models—these are the external tangible assets of what is happening inside. We tend to ignore the inside in the greater goals we are trying to achieve. If we keep thinking linearly as we've always done, that we need to grow and do more, then we will always stay on the same track. We need to become aware of the forces that are driving us, the way we rate our employees, or nothing

    changes. You'll keep coming with new deals but you'll be trying to get a square peg to fit a round hole. It will never fit—trying to fit new solutions into your old system will always give you friction. We need a quest for more consciousness. We need a spiritual development—not religion, but letting go of traditional thought systems and conventions, returning to ourselves and reevaluating our relationships and environment. Only then can we emerge in a new way and really change.

- **Teladoc has been successful in setting new standards and setting up new ventures to tackle healthcare. What has been the main challenge in changing that mindset?**
    - **Claus:** It really is a mindset shift; you have to redefine the problem. The problem so far has been becoming more capable, but the problem is changing. Now we have to do a better job of integration. Customers want a whole person health experience. Not just about shifting from sick care to healthcare. That's important, but it's also about the whole person—primary care to chronic care management to mental health to any other specialty need. To an individual, that's one problem. The whole premise for Teladoc Health is to solve that problem, to give people a different whole health experience. This requires a couple paradigm shifts:
        - 1) Acknowledge that care happens in different settings, physical and virtual. For some things, virtual is good and for others it's not.
        - 2) Whole person health means whole person orchestration. We need to make the system better, not replace it. You have to sell your value proposition three times if you want to be an amplifier—sell to payor part of the ecosystems, sell to provider part, sell to health consumer. Need the right value prop for payors, providers, consumers. If you look at every other industry that has successful ecosystem platforms, there isn't one in healthcare because it's more complicated. Need a fundamental shift in the thought model around the problem and how you go about solving it.
        - If you actually want to deliver amplified whole person health, you need 5 sciences: 1) clinical 2) technology to reach people where they are 3) logistics in a really complicated ecosystem 4) behavioral 5) data science. We can't address the problem without a multidisciplinary approach.
- **Blue Cross Blue Shield has been trying to innovate for years as a traditional, legacy company. There is a lot of pain in transitioning—people need to change the way they operate and their learning curve. How has that experience been?**
    - **Sukanya:** We've been trying for a while and BCBS Massachusetts did drive a revolutionary change in the industry over a decade ago. Pioneered the alternative quality contract which shifted the payment model for providers from a fee-for-service to fee-for-value. That was a major shift. It has been successful but there is a lot more to be done to deliver whole value, holistic health (physical, mental, emotional, social, spiritual, financial all interdependent). BCBS Mass is trying to make a dent in the application of our work relative to eliminating health disparities—equity work.
        - Example: Magnolia Model is a framework for understanding various levels of systemic bias that can influence a situation. We've made public commitments to how we deploy interventions using that lens-- including paying providers. Change is hard for traditional incumbents, we can't underestimate that. It can be powerful to tap into purpose to help overcome fear. Our org has rallied around equity. That makes it easier to talk about doing things differently. It's about shifting to a growth mindset. If

    - we want to grow the pie, we have to think about how we interact with others—not elbow them out but work together. That requires building trust and aligning on shared purpose and vision. Need to align incentives and trust, or it will be impossible to get things done.

- **As an outsider looking across many companies, there is a huge shift from competition to collaboration. What other challenges and experiences have you faced?**
  - **Lieke:** FLOOW2 makes sharing marketplaces. We create digital environments that healthcare orgs use to create transparency of supply and demand for goods, services, and equipment to trade between each other or internally. We started in 2012, the circular economy was and is still very young. We've been on a mission of spreading the WHY it's smarter to share and collaborate rather than the everyone for themselves mentality that we've inherited from the industrial age. Then the crisis in 2020 happened and it became so clear that everyone for themselves mentality has made us vulnerable. There were new demands on the system and they were not finding each other. Demand for an informal network—we created a nationwide platform for the Dutch healthcare system hospitals and long-term elderly and disability care (who weren't included in government initiatives.) We created one platform that everyone can use. In a time of crisis, suddenly collaboration and transparency were the only solutions. Outside of crisis, it's a beautiful vehicle to stimulate collaboration, reduce healthcare costs, and work more sustainably.
    - For the current situation in the Ukraine, we are using our platform for help organizations advertise the things they need so we can ask hospitals if they have. Targeted aid to the right people to the right place. The value of collaborating and creating win-win situations is very effective.
- **COVID drove a lot of interest in new technologies to solve pandemic-related problems. How is that evolving as we move on from the pandemic?**
  - **Lieke:** The pandemic has catalyzed that mindset change. When we launched the marketplace, the reaction was "How is this new? Why didn't we have this five years ago?" You can imagine my frustration since we have been doing this for years. But I'm actually glad at this reaction because it shows that the mindset has come a long way. Now orgs are using it to save on procurement costs or they can do something with what they don't use anymore. In the Netherlands, possibly in other countries, there are strict targets on reducing your CO2/carbon footprint so it helps orgs to prove what they are doing.
- **Moving onto management... there are so many areas to tackle and integrate. What is changing in the way traditional healthcare systems manage their operations?**
  - **Claus:** I'll jump off from Sukanya's comment about purpose. Purpose drives how you set up your operating model and how you think about managing your resources and relationships. Teladoc's mission statement is to empower all people everywhere to live their healthiest lives by transforming the healthcare experience. It doesn't say give everybody virtual care or replace the existing system. It says help people live their healthiest lives. If you start with that and then ask the question, "what do you have to do from a resource and management perspective?" you get to a different place than if you started with treating people. You get to answer the question, "what can I do to help people live their healthiest lives?" ~80% of healthcare outcomes are derived from primary care, chronic condition management, and mental health. This is a huge chunk of what needs to happen. If it

was possible to deliver an integrated, holistic experience just among those 3, that would make a difference. Management systems change according to the problem you're trying to solve. Our scope is based on those 3 systems. We have a 100-year-old problem and it's time that we solve it together.

- **Purpose needs to be reflected in incentives, KPIs, and management. Blue Cross Blue Shield was a pioneer in this area—focusing on patient impact rather than traditional outcomes. How has that shifted management for the organization?**
    - **Sukanya:** When trying to do new things as an incumbent, you're trying to sustain the way things have been done and simultaneously trying to find ways to do something really different, which often requires a different operating model. The challenge is to have both. The work that gets done in the traditional way of operating typically follows straightforward swim lanes. When we're trying to do new things, we start talking about boundary-crossing, multifunctional teams. Discarding the old way of working. Currently, we have both—the old model to sustain ourselves to meet our members' needs efficiently, and the new initiative that cuts across the org. We have to organize in a different way, incent in a different way.
- **What would you want your clients to change? You have a perspective of talking to so many players who are collaborating. What would make them more effective in using your collaboration tools?**
    - **Lieke:** Sharing interferes in the procurement process. The easiest way to buy things is through your own org's ordering portal. We've seen some orgs make a new policy if they have an internal sharing marketplace. So, if you want to buy something, you have to first go check if a colleague or someone outside the organization has it. If they don't, you can go through their regular process.
        - Top-down usage also works, but it's not my favorite. I prefer bottom-up when people use the platform and experience the advantage. For example, we have a platform pharmacists use to exchange medication that is approaching the expiration date. This is typically expensive medication that was ordered for a specific patient but now won't be used. It sits on the shelf and eventually has to be discarded. The medication production process is the number 3 most hazardous ecological production process in healthcare. Saving medicine from unnecessary destruction is helpful. We started this but it's actually illegal in Europe. We did it under the radar had huge success, saved 50,000 euro in six months. Then the mainstream awarded us a prize, and then realized it was actually illegal. But it got us a seat at the right table. We went through a 1.5 year process to change our process so that it falls in the "grey area" of the rules. Now we get responses that it's easy to use—pharmacies do well and save 30-50% from the wholesale price. We're crossing the corner of critical mass where the experience starts to spread.
- **Regulation can sometimes be a big constraint. What needs to change in the general approach to regulation?**
    - **Sukanya:** In the last few years in the US we've actually seen positive transformations in healthcare regulation. For example, the data interoperability rules that emerged enable consumers to access their data and grant access to other 3rd parties as they see fit. That unleashes a lot of potential in the marketplace, because the US has had an incredible amount of data silos, shrouded data. We're at a point where there is enough recognition of the problem that there is pressure on

    the gov't to solve. We would like to be able to preemptively address some of those issues before regulators prescribe a solution. Sometimes regulation can become very restrictive.

- **Teladoc has historically struggled with regulation by pushing and making an example of how regulation could change. What would you add?**
    - **Claus:** It comes back to the purpose. What is the purpose we're trying to solve for? All regulation usually comes from a good heart. Sometimes it's a little out of tune. The pandemic accelerated trends that probably would've happened anyway and regulation hasn't caught up. We need to figure out what happens when emergency measures expire. Ex: There are state level rules in terms of what you can/cannot do with virtual care. We need the regulation to catch up to hybrid care. We need regulation that supports a "front door" to health needs—timely, convenient, effective for consumers and physicians and consumers. We make choices every day to give people the experience that actually makes a difference. We've been able to deliver mental health support in days, weeks to Eastern Europe during the current crisis.
- **What advice would you give to healthcare players for joining ecosystems?**
    - **Lieke:** Just give it a try. Stop coming up with reasons not to. Usually, it's hiding behind conventions and fears. See how it works for you.
    - **Sukanya:** It's hard to bring out the crystal ball to see what's going to be successful and what won't. It requires trying things and learning from that.
        - There are a few different factors critical for success 1) Addressing an underlying need and that the ecosystem can address multiple needs in a cohesive way, 2) Ensuring that your vision aligns with the ecosystem's vision. Mindset, shared culture, governance, 3) Have the right incentives in place and understand the value levers for every party in the ecosystem. How does my piece fit in and reinforce? 4) How will you get to scale? One of the biggest challenges in healthcare right now. We have islands of innovation disconnected from each other. Most of the action is still happening on the mainland of large incumbents. What's your strategy to get to scale quickly?
    - **Claus:** Be really crisp about the problem you're trying to solve—holistic, whole person health. Understand your part and what you contribute. Mindset: I'm not replacing healthcare; I'm making it better. And you need a road to scale, which always means working with other orgs. Scale requires collaboration, that we are trying to amplify and orchestrate each other.

Education Panel
Panelists:
Adam Zalisk- SVP Corporate Strategy, Amplify
Ken Eng - SVP Strategy & M&A, Macmillan
Moderator:
Claudio Garcia - President, Outthinker Strategy Network

- **What does an ecosystems approach mean for education? What is the purpose?**
    - **Adam:** In K-12, there has been a substantial transformation as recently as past 18 months. Digital education as a coherent way to run the learner's experience has become actually plausible (due to 1-to-1 computing, bandwidth access, school closures drove more investment and revealed gaps). Changes the tools and

experience of the educator. Previously, the school day was atomized into scheduled chunks. Now those disparate pieces have come to exist in one place, digitally. Educators are looking at the entire value, greater efficiency, integration, cumulative insight, creates deep student engagement. Educators are pushing companies to make this ecosystem work together in service of the end user.

  - **Ken:** There has been tremendous change in the last two years. Improved access for all. Market was fragmented and the orchestrators have made it easier to access content, tools, services in one place. Technology has created efficiencies and challenges—need for support for all levels. Companies have to step up to support and rise to the challenge.

- **How do you align with ecosystems?**
  - **Adam:** We don't choose ecosystems in the abstract, we look at the ecosystem surrounding end user and figure out how those pieces can best work together and create value. That's how you select where to be and find relevant collaborators and partners. Makes us collaborate with unlikely partners—coopetition. We think outside the commercial playbook and think about making content free to learn from user feedback. Creates long-term advantage for our organizations. How can we be an effective aggregator of many of the things our users need (highest quality instruction)? Combine what we know about how to teach with a layer of tech and support that makes it come alive in the classroom. Participating in the ecosystem is about developing the capability to bring together the whole portfolio.
  - **Ken:** Depends whether you are an orchestrator or participant in the ecosystem. Looking for partnerships and collaborators with similar values, expertise and reach, willingness to share. We are more externally-facing than we've ever been. Collaborating with content, technology, data with a focus on helping customers. Partnerships are more successful when there is a lot of information symmetry. Shifting traditional values to more openness to share—this is foundational.
- **What changes, new competencies or processes to you need to establish in your organization to succeed with ecosystems?**
  - **Adam:** Two key capabilities: 1) Cultivate deeper and closer relationships with our customers so we understand how they experience the ecosystem around them. Where do they see gaps? Where do they experience blurred lines? 2) An ability to partner with orgs that are very different than yours (example: translate university research to make it accessible to schools all over the world)
  - **Ken:** The ability to listen more, deeply understand customers/partners/collaborators. Dedicated resources who really understand the underlying needs of each party you're interacting with.

- **How to create seamless customer experience through ecosystems, when you are an orchestrator?**
  - **Ken:** More co-designing and co-creation
  - **Adam:** Look where very small players are capturing huge market share in a short time. Quickly changing the game.
  - **Ken:** We've tapped into the emerging ed-tech community. Different ideas and perspectives. As an investor, partners (co-creation of products, distribution, advisory). Cultivated intrapreneurs and brought in entrepreneurs.

  - **Adam:** Generosity can be as powerful of a tool as direct strategic competition. Finding the right ways to share on behalf of the customer, in ways that expand the customer experience. How products relate to one another. Strengthen our ties by sharing advice and guidance to community of smaller players. It's a power that as strategists we don't always think to use.
- **What are the next key trends/breakthroughs in education ecosystems?**
  - **Adam:** 1) More blurred lines across traditional categories (greater efficiencies for educators and learners), 2) Aggregated info on a student through their authentic performance. Spotlight on end user.
  - **Ken:** Energy focused on microsegments of students, different populations. Human element comes back into the fold
- **What do you recommend to organizations who want to apply an ecosystems mindset?**
  - **Ken:** Start experimenting, map out stakeholders in your system. Understand where you could bring value and where you could benefit from outside capabilities. Take the leap.
  - **Adam:** Listen (the outcome is different experiences—listen to the humans involved). Question where you're falling into old patterns of how you think about competition.
  - **Ken:** The sum of the parts is greater than each part. Potential to solve meaty problems is high. Start.

Hiring and Staffing Panel
Panelists:
Ayman Hamid – Executive Director of Global Business Services, Allegis Global Solutions
Tom Gallo – Head of Strategy & Innovation, ABM Industries
Ying McPherson – Chief Strategy Officer, Unifi
Moderator:
Claudio Garcia - President, Outthinker Strategy Network

- **Ecosystems have been around for a long time in staffing industry, but they've taken on a new form since technology was absorbed by the players (ex: online job boards, recruitment outsourcing, vendor management systems.) What has changed and how is it different from the past?**
  - **Ayman:** Staffing industry is impacted greatly by technology. I'm head of transformation as it relates to technology (VMS platforms, platforms for sourcing and gig work). How do you unify all of these platforms in a competitive ecosystem? Companies that adopt a strategy around ecosystems and learn to compete with an ecosystem will be much more successful in the future vs. traditional success of coming up with an individual company value proposition.
- **What has changed in the value chain? What greater opportunities do companies have now?**
  - **Ayman:** Hiring people just to get work done is getting much more challenging. Need to use data to understand capabilities of current full-time workforce and leverage that. Learning how to access data and info on your current workforce and the way you acquire talent today is essential to getting work done in the future.

  - **Ying:** At Unifi Aviation, everything we do is centered around airports, many of our clients are minimum wage. Historically, we didn't even have a pool of potential candidates. Today, technology is evolving. Pandemic added an additional layer. In our environment it's been traumatic and a lot of pressure. We also have regulation, government subsidized funding, balance of union vs. non-union.
    - Now there is more underlying technology and candidates are getting hit from multiple channels/companies. We're almost in a completely different ecosystem than we were two years ago (in the aviation industry). We are weeding through the noise to figure out which changes are temporary vs. permanent. We're looking at a more sustainable, long-term approach to staffing.
  - **Tom:** We have similar challenges to Ying. 100,000+ team members in the US, many hourly minimum wage and a little higher, spanning across skill levels. Right now, we're focusing on candidate experience. It's the first look into your company. If that experience is bad, the odds of accepting the role and showing up are not good. How do we ID the right channels to communicate w/ candidates we want to bring in for a role? In the pandemic we've had to transition.
    - A cultural phenomenon is how easy it is to download an app onto your phone and know what you need to do—in a corporation it's not always like that. Employees/applicants expect the experience of getting a job to be the same as using their phone. It's challenging to meet that need with enterprise software.
- **How are you handling the competition for candidates during the Great Resignation?**
  - **Ying:** We're experiencing a lot of the same challenges as Tom. Our candidate pool is different. In 2020, the people who are most sensitive to the elements left work first and are last to come back. You probably preserved your best employees. We did a lot of investigation into why people stay. What's driving them? How do we rebuild around that employee and their feedback to attract people with shared core values of the company? Use them to act as front-line ambassadors. Pandemic helped us streamline who we are.
    - From the new employee standpoint, we're focused on employee experience. We have 50-50 male-female, 70% diverse. In each city we have a mini-ecosystem. We don't want a one-size-fits-all model. We allow the local team to refine and define their ecosystem. We have high attrition rate, it's easy to download an app and easy to delete. We are focused on company values and location values. Be clear and up front about the expectations and what the job entails—using 10-20 second videos so hires know what they are getting into. Demonstrate local family, rely on local vetting. Using technology to give standardized tools, but allow local flexibility. Some people get very creative. Normal channels are drying up.
- **Companies are getting creative about reaching the right candidates. How are larger players responding?**
  - **Ayman:** The Resignation is happening to all of us. The focus on retaining our people is critical. Everyone is focused on attracting talent, but need focus on retaining. Onboarding needs to be better than pre-pandemic. Brand experience is critical. Before, staffing companies didn't need to know as much about what it was like to work at a company. Now they need to articulate the value prop once an employee comes on board. The experience of an employee starts much earlier than

  - pre-pandemic—every visual, every message is part of the brand. Staffing companies need to align with brand strategy.

- **What needs to change in management, processes, systems to participate in this new world?**
  - **Tom:** The teaming required is very different. You're seeing more strategy and transformation offices popping up. Be able to articulate the user journey, processes, technology. It helps define the ecosystem. Map out the playing field and figure out where you need to go. The ecosystem works when you understand the goals of each stakeholder.
  - **Ying:** Our strategy team didn't really exist a year and a half ago. Went from a shop of two to twelve. We created a dedicated function for employee engagement. We refined our priorities and focus around data. It didn't matter in the past when we had enough people in the pipeline. Now every candidate is golden. The last thing you want is losing them in the pipeline process after you've spent resources attracting them. We are being very intentional around speed and data, investing speed and manpower to know every candidate. Why did we lose them? Where did we lose them to? Helps us figure out what's working and where to focus. Spend more effort building the right profile.
- **What's changed in management for the big providers?**
  - **Ayman:** For larger organizations—ones where we help manage their workforce strategy—you can get lost in thinking they have different strategies because they're bigger. It comes down to the user experience and how fast you can influence it. Can you understand where people are in the process quickly? Larger orgs are just doing it at scale. Need to leverage technology more, automate as much as you can and figure out where to put the human touch in people getting jobs. Technology can be exciting but when people accept jobs it's a very personal experience. It's about striking a balance.
- **ABM Industries and Unifi are big orchestrators of staffing ecosystems. There is an additional challenge of seeing so many new technologies and providers promising new uses of data and enhanced employee experience. The HR tech industry is filled with recruiters. How do you choose partners in your ecosystem?**
  - **Ying:** Over the last 3.5 years we went through two HRI systems, three if you count the legacy system. We have yet to find the perfect solution. It's either great but doesn't integrate with existing systems or it's fully integrated but provides limited functionality. The best system is the one that works for the industry and company.
    - Airport badging process can take anywhere from 3 days to 6 weeks. That's difficult in competitive labor market. We lose candidates in the onboarding process. How do you keep engaging folks during that 6 weeks time period? We've been picking partners that give the most flexibility in connectivity with employee during waiting period.
    - We're spending more time figuring out the likelihood that the employee will be successful in that location. We can't control the pay but we can control the culture fit and get feedback.
  - **Tom:** I would add two things. We've had to add capabilities we didn't have before (advanced architecture, application development, the ability to integrate systems internally). We need to bring systems up to a level that applicant can consume functionality. Building technical capabilities internally is key in this

environment where there isn't a perfect solution. We're a highly distributed workforce in 10,000-20,000 locations across the country that aren't our facilitates. Creating a digital experience for team members is challenging to get them to feel part of an org when they don't step in a door with the ABM logo. Need to give a compelling reason to come back every day.

- **Some organizations use multiple providers. From a vendor perspective, how do you make an effort to integrate systems and manage multiple vendors in a company's ecosystem?**
    - **Ayman:** You're looking for capabilities that enhance or complement what the other partners have. We build an ecosystem so that the collective whole provides what the customer wants. That's challenging.
        - For technology, you need to make it easy to integrate and access the data you have. Make it easy to understand the analytics and info the data tells you. That's the difficult part. There are so many integrations out there and so much data, it can be difficult to determine a strategy. You also need to align partners to your strategy.
- **What would you recommend to companies to join and gain the support of ecosystems?**
    - **Tom:** Map out the ecosystem. You need to know the playing field. And you need a vision of where you want it to go. Where do you want to be 3, 5, 10 years from now and what do you need to do to get there?
        - Change management is also a huge component. We've been talking about technology and the human element, but then there are the people that support technology. There's someone behind technology and we have to figure out how to make the processes better.
    - **Ying:** Any ecosystem has 4 core elements: 1) The non-living portion. The elements that create the environment that is conducive for an ecosystem. 2) Producers at the bottom that initiate the lifeblood of the ecosystem—candidates and the need for an employee workforce 3) Consumer of the chain of the ecosystem 4) Decomposers who recreate the elements and contribute to the elements. We have to figure out the ecosystem we're in today and which of the 4 stages. Some categories are more mature. Newcomers add a different element.
    - **Ayman:** Your ability to be flexible and understand what problem you're really solving for the client is important. Clients are looking for solutions to help them today. Look for companies who can articulate value today and are willing to progress with you tomorrow. Allow your value prop to evolve with the ecosystem. Understand who you are today and what you offer, and that your value in the future may be something different. If you can be agile, you'll have more success in the future.

Housing and Real-estate Ecosystem Panel
Panelists:
Eric Chesin – Chief Strategy Officer, Realogy
Doug McNamee – President, Magnolia
Mateusz Troicki – VP Strategy, Kohler
Moderator:
Claudio Garcia – President, Outthinker Strategy Network

People are buying homes differently. There are many more platforms to make a home-buying decision, build and decorate our homes. There is a big shift in how people acquire and define their home space. What is the opportunity for the companies playing in this field? How is it different from the past?

  - **Eric:** We have to think holistically about the way a consumer and home-buyer interacts with all companies across the ecosystem. 10-15 years ago, the three companies here would rarely interact. Realogy is in residential real estate brokerage, we have real estate agents who help people buy and sell homes. Over the last few years, consumers are thinking more holistically about living in a home. We've got the oppty to partner across the ecosystem to serve consumer in new better ways—helping renovate and decorate homes. For the consumer, it's all one big interaction with their home purchase.
  - **Doug:** Consumer savviness and business is underestimated. They're looking for brands they can trust to guide them through the process. Need cooperation. Customers notice truth and will sniff out disingenuous relationships. Companies are responding to behaviors of consumer, that's why ecosystems are forming.
  - **Mateusz:** Actually, ecosystems have been around for a long time under different names. Without an ecosystem, you have to drive a better product or price on an individual basis. Ecosystems create loyalty but also barriers to change—you have to be careful to build customer value rather than just locking customers in.
- **How do you decide to align in an ecosystem? How do you choose the best partners?**
  - **Eric:** Progress has been driven by consumer choice. Companies that play in different spaces but focus on the same consumers are anchored on where compatibility is better for the consumer. We are constantly evaluating potential partners. We believe in open ecosystems in terms of which partners we give customers access to. Give consumer choice and the best products win. The guiding light is: Who will best service our consumer? How do we set up a structure that doesn't constrain choice but enhances it?
  - **Doug:** One of the early lessons was, who you say no to is more important than who you say yes to. There are opportunities to expand and partner in every space. It goes back to trust. We have a celebrity brand where people feel they have a relationship—you have a limited amount of errors before you lose them and never get them back. If you partner in a space you shouldn't be in and aren't effectively managing your business, it can blow up quickly. Be sure you can deliver results or can trust your partner to deliver.
  - **Mateusz:** Kohler is a legacy, brand-driven company supported by innovation, design, premium products. That's #1. A lot choice of products in home or office comes down to procurement. You need to make it easy for someone to purchase. At the same time you need the pull of the consumer. Procurement officer pushes for the lowest price but wants something that will delight customer.
    - Ecosystem for homes is collaborating across the chain from the builder to contractor who re-do bathrooms/kitchens. The ecosystem is a means to an end. But it's still a consumer-driven decision.
    - There's a bit of a "watch out" feeling when it comes to ecosystem. If you are a node, consumer brand that is replaceable, attaching to an ecosystem can be scary and may have negative consequences. (Ex: Amazon, If you don't have a strong brand and have success, Amazon product

    development teams could copy your product. Almost better to stay under the radar). Look at the long-term implications of the ecosystem choices you make.
  - **Doug:** There can be a short-term gain with long-term vulnerability (when working with powerful players). If you're playing a long game, it can be dangerous. But it is what the consumer is asking for. It goes against doing what you do well and owning your space—once you go wider the tendency is losing your core competencies. Need to be able to trust your partners when you show vulnerabilities.
- **Realogy is an orchestrator in the home space. You have a lot of smaller partners that may not have the chance to become big brands. What is your perspective?**
  - **Eric:** Our position is a deep privilege. I wouldn't call it orchestration because you can start anywhere in an ecosystem. The general theme in this conversation is, there is no shortcut to excellent products and excellent delivery. Anywhere on the path of ecosystems will fall over if you don't stand behind your brand and create loyalty. There's safety in knowing that everyone has that as a north star. There's some magic when we all in an ecosystem keep our head down and focus on what we do best.
- **What's changing in the way you manage your organization as ecosystems become more complex?**
  - **Mateusz:** Ecosystem is a mentality more than it is a system. It becomes a system if you are successful. In an org, people have to start thinking and collaborating differently internally and externally. The consumer thinks about the portfolio and its value. Companies need to change how they sell a service portfolio as one product over a period of time. The journey starts with the sale, rather than ending there.
  - **Doug:** Seek out generalists in leadership—who have a wide range of expertise in different spaces. Go outside the box, use people from other sides of the business spectrum to get a new perspective on what has been successful elsewhere. Embrace a disruptive mentality.
  - **Eric:** We sit at the center of a real estate transaction. That is an ecosystem with many parts and players to work well. You need enough talent and big thinking to find synergies within our business and expand them across the ecosystem. Strong, tech-driven tools are being built to help consumers so they don't need to know every company involved in the journey. Tech can help us meet the consumer where they are. It's all part of one consumer journey.
- **What do you believe to be the trends in the home segment? Where is it heading?**
  - **Doug:** Home ownership and the volatility of the market is adding a lot of intensity. The consumer is passionate, excited, and under a lot of pressure because costs are rising. Expectation for brand reputation and to go above and beyond in delivery will intensify. Your product and brand need to do what they say they are going to do.
  - **Mateusz:** People are busier, costs are rising, consumers looking for ways to save money and time. How can we make the whole journey easier, from purchasing home to living in home? Creating a convenient experience goes a long way. Ecosystems are a great way to take advantage of that.
  - **Eric:** We work in a volatile, stressful space. Home is the center financially and emotionally—it's a privilege to play a small part. I am confident home-buying will continue because of all of the benefits of homes. The trend toward simplification

and transparency will continue. Our industry has made leaps and bounds in that area and will continue to. More ecosystem collaboration and even inner company ecosystems will make processes simpler, easier to understand, stress reducing rather than stress enhancing. It's always stressful to buy and live in a home because stakes are high. We focus on making the process simpler and better.

- **What would you recommend to players that haven't intentionally leveraged the ecosystems they are part of? What could they do to add value to their customers?**
  - **Mateusz:** Joining an ecosystem is a choice, it's not easy to do. Not everyone needs to jump on the bandwagon, but companies should consider it and make an informed choice. It depends on the industry and the market they are in. Understand where your industry is going, where consumers are going. If you decide to join an ecosystem, it needs to be a top-down decision and involve the whole company. Once you commit, go all-in.
  - **Doug:** Listen to consumers. Understand customer pain points. If you're solving a problem for the customer, you're going in the right direction. Be selective with partners and choose wisely. Err on the side of caution. Is the ecosystem complementary to the core of your business? Does it drive the effectiveness of your core competencies? Not just financial opportunity or because everyone is doing it.
  - **Eric:** No strategy (ecosystem or otherwise) will get you out of delivering a great product and great experience for your customer. We don't need a world where your ecosystem constrains choice. You want to be able to serve your customer—don't limit partners or consumer choice. Meet the consumer across their journey. Think about: 1) Are you solving a consumer need? 2) Should you get tight with a partner(s) to take over customer experience? OR focus on what you're good at and not attach so closely to someone else?

Media Ecosystem Panel
Panelists:
Joanne Sheppard – SVP of Strategy & Investment, Holtzbrinck
Kalina Nikolova – VP of Operations and Strategy, Yahoo Inc.
Moderator:
Claudio Garcia - President, Outthinker Strategy Network

- **Over the last ten years, many major platforms have completely changed the way that people interact with media and publishing. Individuals are creating their own content. Companies are looking for creative ways to monetize and invest in content. Many are moving toward ecosystems. How does competing in ecosystems differ from competing one-to-one?**
  - **Kalina:** The media industry has changed so much. Everybody is a content creator. Think about that for a second. The mass of communication and content out there. Traditionally it was created by media companies—publishing, TV producing professional content. Now anyone can create content. This enriches the experience for the consumer by including their own participation and hearing from more content creators.

        - How do we create even better value for the consumer and for the business customer? It's become much more open, democratic, available, accessible. From the business participants' perspective, (advertisers, publishers, creative targeting...) it has become a richer playing field. Many opportunities to provide value but greater responsibility to protect the consumer in terms of privacy, use of data. New layer of complexity is driving change in business models.
    - **Joanne:** I agree about the need to protect the consumer. At Holtzbrinck, we own Macmillan publishing. Many of the books we sell via the Amazon ecosystem. We are also an ecosystem orchestrator with our Science & Technology business. I'm finding that the Amazon's, Google's, and Apple's are very Web 2.0. We're moving to web 3.0 where the value creation is going to be even more decentralized, distributed, more searchable. Value coming from AI/ML. New forms of value creation.
        - The next level is how do we work together more within the ecosystems—think past ourselves and our bottom line and more about greater good for the world.
- **What changes inside of the organization? What are the implications for people and management practices?**
    - **Kalina:** We are all now creators of value. We're playing together in a richer ecosystem. Internally we need to be more aligned and agile with our operating models. No one company can succeed on its own. We have to partner with others. It's a partnership model on steroids. Our internal model is an open, networked operating model. Yahoo can't deliver its products and services well without our entire ecosystem of partners. We bring publishers together with advertisers. We work with data companies to enrich our understanding of the consumer. It's accelerating. It's not a question of "if" it's a question of who you're partnering with. Those partnering models are becoming richer and more agile, not traditional, oriented to value creation.
        - We have so many partners who are both competitors and partners and that's completely normal.
        - For employees, it is an unprecedented time for people in terms of opportunity, being more connected across the industry. Broader visibility for people to learn and work with/for other companies.
    - **Joanne:** There are several forces coming together that require different styles of leadership. Pre-pandemic icons were hard-charging, masculine. That image is changing. Ecosystems are about diversity, valuing what diversity brings to your level of decision making. Empathy leads to value creation. Thinking about the collective= stronger businesses, loyalty for employees. Change is happening very quickly. Individuals are stretching their style and learning.
- **In an ecosystem, you need to manage the challenges in your organization but also to manage the challenges of your partners. How do you tackle the increased complexity?**
    - **Joanne:** The scientific communication ecosystem that we run externally is modular—you can choose to participate in certain pieces or the whole thing. It is open as opposed to closed. We have strong freemium models. It is driven upon responsible and ethical use of data.
        - We take the same approach internally. We built our own inner ecosystem. We are not over reliant on a single partner. Manages who gets

        your data and who does not so nobody has complete control and visibility into our organization. The more decentralized ecosystems are (internal and external) the more trust has to be included.
    - **Kalina:** I'll keep building on that. With that trust, all have to be anchored in the same values. When a system becomes more decentralized, it needs to be anchored and that anchor is value. You can't bring traditional roles, org charts, or leadership style. The entire way of working and learning has to change. All the pieces need to be attuned to acceleration and agility. More flexible commercial terms with partners. Down to the everyday workflow and internal processes—agile is necessary. How do we create the overall ability to pivot faster? How do we quickly get the signals from outside, across partners to know what is going to happen and when so that we can pivot?
- **It's one thing when you are the orchestrator and can define fair roles for everyone in the ecosystem; it's another thing when you are a node in the ecosystem. I've seen ecosystem orchestrators set the rules and participants complain. What is your strategy for choosing the right partners and roles to play?**
    - **Joanne:** When you are a node, you can feel like you don't have the power. You might feel you can't negotiate from a position of strength, but you can. Start with shared values. If you are in an ecosystem where the dominant party is too powerful, look at startups and see if you can form your own ecosystem and reduce your risk. If you are a party in multiple ecosystems, you are not completely reliant on only one.
        - Ex: Shopify has taken some of the complaints people had about Amazon and built a business that people believe is fairer to ecosystem participants.
    - **Kalina:** I'll add to the notion of shared values. More value for the ultimate customer. At the end of the day, an ecosystem has to increase the pie not slice the pie. If we all drive towards better value for the customer, the pie is going to grow. If you look at the example of Shopify and Amazon, it increased the pie. It may be divided differently between the players but it has grown the pie.
        - I would be looking for similar minded partners. Is the leadership team agile? Is it coaching and guiding versus top-down management? Are the intentions of the leadership team aligned with creating customer value, shared values, creating more safety or diversity in the ecosystem?
        - The other question is how many. You stress your own system when you work with more partners. It should be a win-win for all players. Need to be creating more optionality for each other so we can play in a variety of futures because no one knows what it's going to look like.
- **A lot of good things are coming from increased collaboration among partners. How ready is the industry and the players in it to move quickly and take advantage of ecosystems?**
    - **Kalina:** It doesn't matter how ready we are. It's not up to us. The consumer has spoken, the business customer has spoken. It's happening and we are flowing with that. That is an oppty, but of course it's more difficult. Sustainability is the north star—sustainable goals, sustainable values, diversity, contributing to larger society. The employees have also already spoken. It's not a choice anymore. We have to acknowledge that in our ecosystems and operating models.
    - **Joanne:** Whether or not someone is ready is beside the point. It's more, are you going to participate in what is happening? The pandemic and businesses' responses

to it and how quickly the US has responded to the war in the Ukraine—people are primed to respond to change FAST.

        - On the less positive side, smaller players in our industry have expressed unreadiness for this. But organizations do not have the right to exist, and if they do not do what their customers want them to do, they lose relevance. You don't have a choice right now. You have to get on this train.

- **In the media industry, there is competition for data. In some ecosystems the data is concentrated with one player. What is the responsibility tied to this opportunity?**
    - **Kalina:** The key word is responsibility. I've been in the media industry and advertising for 25 years. We as an industry and an ecosystem have a responsibility to everyone who participates in the ecosystem (consumer, business partner). It's on us, no one is going to do it for us. We need to speak up, collaborate, and make the right choices together. We come together as collaborators and competitors at the same time. We need to think about what's best for the consumer and use targeting in a way that's visible, agreed on, and makes their experience better. Makes people more informed and aware of what's available to them. We need to champion this through the industry. Relentless responsibility to make it better, clearer, visible, understandable, and demand it from everyone we work with. It's not an easy thing to operationalize, but if we stay true to why we're doing it, we're finding ways to make it happen. But it's on us to do it, not for anyone (regulators, gov't) to do it for us.
    - **Joanne:** This is where diversification comes in, so that no one has too much. There is an ability to vote with your feet. Even if you are a consumer or node in the ecosystem, you have the ability to enact change. If you are a small player, how can you align with someone with a greater voice who will stand up and enact change? In a web 3.0 world, the data that's being collected will be as valuable or more valuable than front end. Will lead to new creative instances as AI/ML run derivative products. We need to think now about value creation there and who is entitled to which piece of the pie. How do I want to protect myself? That determines how you choose your partners.
- **There are so many players out there still figuring out how to join ecosystems. What advice would you give to them?**
    - **Kalina:** There is no vacuum in the system. The moment someone misses a consumer need, there is an oppty for the next to see it, understand, and fill that need. Now it happens faster. The media ecosystem is much more visible now, it's easy to quickly see where the gaps are. Consumers have so many options, switching costs are low. If you don't have enough to keep them, they will leave.
        - Advice: 1) ID oppty for innovation 2) Stay laser focused on consumer needs 3) Use the logic we've discussed in today's panel. Feel confident that anyone can drive change and value in the ecosystem. 4) Find your partners that align with what you're trying to build and scale.
    - **Joanne:** Start with your ethics and values. Lead from that, regardless of whether you are a node or orchestrator. Get into the mindset of greater value creation and shared value creation. Competition takes a back seat. Don't be afraid to shop around. Have confidence.

Technology Ecosystem Panel
Panelists:
Chris Huff – Chief Strategy Officer, Kofax
Patricia Miron - Integrated Strategy & Operations GM for US Small, Medium, and Corporate Segment, Microsoft
Tushar Amin – Global Business Model Innovation Leader, Kyndryl
Moderator:
Claudio Garcia – President, Outthinker Strategy Network

- **Over the last 20 years there has been a revolution in business competition. 6 of the 7 most valuable companies are ecosystems. How is that impacting competition? What are the new rules happening in the market right now?**
  - **Patricia:** Ecosystems play a key role in all areas of Microsoft's business—gaming, ad & search, cloud, etc. We're competing for hearts and minds of the ecosystem. This is a big change because the barrier [for consumers] to embrace multiple competitors now is really low. We had to spend a lot of time thinking—how can we be more empathetic to our partners' business and what is best for their business? They are never exclusively our partner; an ecosystem is never exclusively our ecosystem. How can we be the best partner and serve their business needs in that ecosystem?
  - **Chris:** Success in ecosystems comes down to a few factors—1) How do you differentiate yourself from competitors? It's becoming more difficult to tell that story than before, now you have to lean on ecosystem. 2) How well do you create your product-market fit? It's a balancing act. What do you do to keep your customers happy?
    - When Kofax & Microsoft got together—aligned on value—wanted to keep customers happy because happy customers are sticky. Microsoft Azure platform and Kofax automation made sense because Kofax had depth that made customers happy.
  - **Tushar:** How can we effectively partner better with companies that are reshaping the IT industry? Kyndryl jumped into creating partnerships. Partnerships open up the market. Traditionally, if you know your market, you can create a value prop to bring to the table. Ecosystems open up a new set of capabilities in terms of partnering. Know what your core is, know how you're going to partner to develop your end-to-end value prop to deliver to your customer. Benefit of ecosystems: you can quickly compose and decompose partnerships as the target value prop changes.
- **How to choose the right ecosystem to participate?**
  - **Chris:** You need to give as much as you get out of the ecosystem. As a smaller company, how do I play with the big guys but stay at the center of my ecosystem? What's my unique value prop? That's challenging because of accelerated rate of change. In deciding which ecosystem to join, start with the problem you are trying to solve, then craft a very clear value creation statement. Start with the WHY then go to who, what, where, when, how. Use data to create a quantifiable business case.
    - The relationships of the people in the ecosystems need to be just as strong as the technology and product/market fit. Mutually exclusive sponsorship at the exec level from your company and companies you work

with—absolutely critical. If that's absent from the alliance, then the market relationship will be "vapor ware."

  - **Tushar:** We created a senior org to develop ecosystem capabilities. Capabilities you need are very different in an ecosystem. For example, startup engagement. At IBM when we engaged with small startups, we had to develop a capability to industrialize and help commercialize startups. Our ability to partner had to be driven by a very senior level.
    - I don't think we really pick the ecosystem. We had a clear understanding of the market and the core value we deliver. We picked the platforms we were going to partner with and naturally joined their ecosystem. Sometimes you take on a role in the ecosystem of expanding that ecosystem, it's incumbent of you as a participant to expand the ecosystem with the partnerships you bring along.
  - **Patricia:** Microsoft is an orchestrator. Have an organization that's dedicated to focusing on partners—commercial cloud business. What are the groups of ecosystem players we need to engage with? Categories of business: ISVs- partners who are writing unique IP and leveraging Microsoft platforms, for example. Different types of partners and groups of ecosystems to connect and engage.
    - Spent a lot of time understanding all those players at two altitudes—1) global 2) geographical, regional altitude. There are worldwide players, meet them where they are. Regional players—understand their unique value prop, where do they play? Some have deep, specialized expertise.
    - We spend a lot of time understanding that and distributing that across a VERY large sales org. Sellers NEED to understand core eco players, understand their unique value prop (which is changing all the time). Sometimes sellers know this best.
    - AND Corporate needs to communicate to partners what it is trying to accomplish (ie now Microsoft will support some competitors cloud solutions). It's no longer transactional, it's a service without an end. How to we create stickiness and make every process as fluid as possible? (licensing, service problems) How do you allow for fluid comms and transparency to make operations smooth and transparent?
- **What are the fundamental changes that happen in an org that is playing in an ecosystem environment?**
  - **Chris:** Ecosystem business model is not a fad. McKinsey sizes Integrated Network Economy- represents global revenue pool $60T by 2025. Inc. Total economy share from 2% to 30% in just 3 years. This is a massive macro trend.
    - 2 macrotrends to set strategy for an ecosystem business model: First principles approach to solve complex and evolving situations. Break down complex concepts into root cause. Ask WHY. Why does the org exist? To create value for shareholders (stakeholders). But if you think about how value is created, in 1975 83% of value of S&P500 was derived from tangible assets (buildings, land, cash, inventory). In 2020 90% of value is from intangible assets (data, software). Ecosystem approach is to focus on intangible value creation—this leads you to the right partners (Kofax is partnering with digital transformation companies.)
  - **Tushar:** What capabilities do you need to build in your org to compete in ecosystems? 2 levels: 1) You need different capabilities to act as an orchestrator 2)

Invest in skills and talent of your ecosystem. To be an effective player, you need to think differently about investments in human capital. New training and upskilling model. Kyndryl has thousands of certifications on Microsoft. Create the skills for the platform and the technologies in the ecosystem. That's how you become an effective value-added service provider.

        - New business models—5 years from now companies expect 50% of revenue to come from new business models. How do you compose these new models? It will be more ecosystem oriented than ever before. You need to be able to create constellations of capabilities.

    - **Patricia:** Microsoft has gone through a major transformation. We think about the people in the ecosystems, how do we help them? Ways to upskill constantly. How do we help our ecosystem partners find the talent they need? Enable ecosystem partners to build out their own IP. Working with startups requires a different sales model. Evolve our own sales team to encompass the ecosystem. Used to create the opportunity, then hand off to the ecosystem—we changed our whole sales model and mindset. We need to work engineering-to-engineering to really create new business models.

- **What do you recommend as a first step for companies who aren't playing in ecosystems yet?**
    - **Chris:** 1) Value creation—you must have board alignment on value creation or it will be an uphill battle. 2) Culture—you need to promote a culture that discourages operating on an island and encourages operating as part of an ecosystem 3) Strategy—clear ecosystem strategy, plan to achieve connectedness in product & go-to-market. Communicate in a simple way across the org 4) Execution—need a strong ecosystem alliances leader or team who is responsible for operationalizing the ecosystem strategy. Creates accountability.
    - **Tushar:** Start with strategic clarity (know your markets, what is your core, what will you do/not do), understand what partners have convening power in your industry. Determines which ecosystems you will join. You need a capability internally (clear strategy, partnering capability) at a senior level where it's a top 3 priority.
    - **Patricia:** Microsoft has a certain responsibility and accountability when we agree to partner with someone. If you want to be part of an ecosystem, you need to know what your differentiator is and where you want to go. Need board level and exec level commitment. When you approach a large partner you need clarity on who you are and what you want—your differentiated value AND what you need from them. What is the product or distribution augmentation that you need? What is the GTM and sales model piece you need? Or large partner will throw you in and make it harder to play. Be ready to answer WHY WHY WHY. It's to your benefit so you are embraced for the unique capabilities you bring to the market.

APPENDIX B: QUANTITATIVE SURVEY QUESTIONS

The following questions ask about the current state of your organization, and the state of your organization three years ago (2019).

Input questions:

A. To what extent do you agree or disagree with the following statement…Our organization treats its people more like intrapreneurs than employees
[ROWS]
Currently
Three years ago (2019)

[COLUMNS]
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

B. To what extent do you agree or disagree with the following statement…Delivering value to our end-user involves the collaboration of multiple partners in our ecosystem
[ROWS]
Currently
Three years ago (2019)

[COLUMNS]
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

C. To what extent do you agree or disagree with the following statement…We primarily work in decentralized teams or units
[ROWS]
Currently
Three years ago (2019)

[COLUMNS]
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

D. To what extent do you agree or disagree with the following statement…Teams or units in the organization are empowered to act with autonomy and make their own decisions
[ROWS]
Currently
Three years ago (2019)

[COLUMNS]
  a. Strongly agree
  b. Somewhat agree
  c. Neither agree nor disagree
  d. Somewhat disagree
  e. Strongly disagree

E. To what extent do you agree or disagree with the following statement…We are better than others in our industry at spotting customer/ market needs and opportunities
[ROWS]
Currently
Three years ago (2019)

[COLUMNS]
  a. Strongly agree
  b. Somewhat agree
  c. Neither agree nor disagree
  d. Somewhat disagree
  e. Strongly disagree

F. To what extent do you agree or disagree with the following statement…It is easy to get the resources (funding, time, and support) to act on a new opportunity
[ROWS]
Currently
Three years ago (2019)

[COLUMNS]
  a. Strongly agree
  b. Somewhat agree
  c. Neither agree nor disagree
  d. Somewhat disagree
  e. Strongly disagree

G. To what extent do you agree or disagree with the following statement…If a unit or team is not satisfied with the support it is getting from a function like IT, Finance, or Legal, it can choose from other options
[ROWS]
Currently
Three years ago (2019)

[COLUMNS]

a. Strongly agree
b. Somewhat agree
c. Neither agree nor disagree
d. Somewhat disagree
e. Strongly disagree

The following questions ask about the current state of your organization, and the state of your organization three years ago (2019).

A. To what extent do you agree or disagree with the following statement…Our organization treats its people more like intrapreneurs than employees
[ROWS]
Currently
Three years ago (2019)

[COLUMNS]
a. Strongly agree
b. Somewhat agree
c. Neither agree nor disagree
d. Somewhat disagree
e. Strongly disagree

B. To what extent do you agree or disagree with the following statement…Delivering value to our end-user involves the collaboration of multiple partners in our ecosystem
[ROWS]
Currently
Three years ago (2019)

[COLUMNS]
a. Strongly agree
b. Somewhat agree
c. Neither agree nor disagree
d. Somewhat disagree
e. Strongly disagree

C. To what extent do you agree or disagree with the following statement…We primarily work in decentralized teams or units
[ROWS]
Currently
Three years ago (2019)

[COLUMNS]

    a. Strongly agree
    b. Somewhat agree
    c. Neither agree nor disagree
    d. Somewhat disagree
    e. Strongly disagree

D. To what extent do you agree or disagree with the following statement…Teams or units in the organization are empowered to act with autonomy and make their own decisions
[ROWS]
Currently
Three years ago (2019)

[COLUMNS]
    a. Strongly agree
    b. Somewhat agree
    c. Neither agree nor disagree
    d. Somewhat disagree
    e. Strongly disagree

E. To what extent do you agree or disagree with the following statement…We are better than others in our industry at spotting customer/ market needs and opportunities
[ROWS]
Currently
Three years ago (2019)

[COLUMNS]
    a. Strongly agree
    b. Somewhat agree
    c. Neither agree nor disagree
    d. Somewhat disagree
    e. Strongly disagree

F. To what extent do you agree or disagree with the following statement…It is easy to get the resources (funding, time, and support) to act on a new opportunity
[ROWS]
Currently
Three years ago (2019)

[COLUMNS]
    a. Strongly agree
    b. Somewhat agree
    c. Neither agree nor disagree
    d. Somewhat disagree
    e. Strongly disagree

G. To what extent do you agree or disagree with the following statement…If a unit or team is not satisfied with the support it is getting from a function like IT, Finance, or Legal, it can choose from other options
   [ROWS]
   Currently
   Three years ago (2019)

   [COLUMNS]
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

Output questions

H. To what extent do you agree or disagree with the following statement…Broadly speaking, people in my organization take innovative and/or entrepreneurial action more frequently than those in our competitors
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

I. To what extent do you agree or disagree with the following statement…The innovative and/or entrepreneurial action people take in our organization is generally of greater degree than that of our competition (i.e., it involves greater risk, is more innovative, and/or involves more proactive behavior, etc.)
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree
   e. Strongly disagree

Result questions

J. To what extent do you agree or disagree with the following statement…Over the last three years (i.e., since 2019), we have outperformed our competitors in terms of financial metrics (i.e., revenue growth, profit margins, financial returns, etc.).
   a. Strongly agree
   b. Somewhat agree
   c. Neither agree nor disagree
   d. Somewhat disagree

    e. Strongly disagree

K. To what extent do you agree or disagree with the following statement…Over the last three years (i.e., since 2019), my organization has been more effective at attracting, engaging, and retaining great talent than our competitors.
    a. Strongly agree
    b. Somewhat agree
    c. Neither agree nor disagree
    d. Somewhat disagree
    e. Strongly disagree

APPENDIX C: QUANTITATIVE FINDINGS

		Frequency					Degree					Intensity					Financial performance					Retention				
		1	2	3	4	5	1	2	3	4	5	0~5	6~10	11~15	16~20	21~25	1	2	3	4	5	1	2	3	4	5
Intrapreneurs	5	0	1	13	18	62	0	0	19	26	48	1	12	9	28	44	1	8	19	23	40	2	6	21	26	35
	4	0	4	18	70	18	0	7	24	65	15	4	14	24	61	9	2	12	28	42	24	1	14	35	39	19
	3	2	10	36	39	10	2	13	52	23	9	17	41	20	23	6	6	7	41	30	10	7	17	34	30	8
	2	2	13	18	22	3	4	11	24	17	1	18	18	10	15	1	3	8	14	27	6	3	18	17	17	4
	1	11	7	18	10	6	13	5	18	13	3	22	17	6	8	3	11	8	11	10	7	12	9	12	8	8
Multiple partner collaboration	5	5	12	34	63	71	8	13	46	62	55	23	30	33	57	49	13	16	44	55	54	11	26	47	55	45
	4	2	13	34	59	18	4	14	42	56	12	16	34	21	52	8	5	10	36	49	20	7	22	32	42	17
	3	3	7	23	27	3	4	6	34	14	5	15	25	12	15	2	2	9	25	18	7	5	7	26	16	8
	2	1	5	7	7	5	1	5	9	7	3	4	9	3	6	3	2	9	3	9	2	3	5	10	4	3
	1	4	0	6	2	1	2	1	7	1	2	6	6	0	2	1	2	1	3	1	5	2	4	4	1	3
Decentralized units	5	3	6	19	41	47	4	8	29	37	38	7	19	21	34	35	11	9	17	30	45	7	13	27	32	35
	4	4	9	31	55	21	4	12	37	50	15	14	32	18	49	10	8	13	31	46	16	11	19	34	41	11
	3	1	10	24	33	8	2	8	39	22	6	14	26	16	23	3	2	7	35	25	7	4	11	34	21	5
	2	3	8	17	21	6	4	7	22	21	5	14	19	7	19	3	1	11	17	16	10	3	14	14	13	12
	1	4	5	14	12	17	6	5	12	14	14	16	9	7	11	13	2	5	14	16	11	6	7	11	12	14
Autonomy	5	3	4	16	34	54	3	5	23	31	48	7	14	15	35	40	2	10	23	36	35	2	9	28	33	36
	4	3	12	56	83	36	5	15	65	84	22	22	54	30	77	17	9	23	53	61	36	17	30	54	58	29
	3	2	5	19	22	5	5	3	29	15	2	10	20	14	12	2	4	6	19	14	7	3	8	24	14	3
	2	2	14	10	21	2	2	14	15	15	2	17	12	8	13	1	4	6	16	17	6	5	14	12	10	7
	1	5	3	3	3	4	5	3	6	1	4	12	4	2	1	4	4	1	3	6	5	4	4	2	7	1
Spotting trends	5	1	4	15	39	73	3	1	22	40	62	10	11	18	39	56	2	4	19	35	66	2	11	22	43	49
	4	3	8	35	89	17	1	12	48	78	13	9	33	29	76	6	4	15	45	68	15	4	23	43	60	18
	3	3	13	42	25	9	4	13	55	21	2	23	45	17	18	1	5	15	40	23	6	5	24	47	11	6
	2	3	7	11	7	0	4	9	11	5	0	9	13	4	3	0	6	9	5	6	1	9	6	5	5	0
	1	5	5	3	2	0	8	2	4	1	0	11	4	1	1	0	7	2	4	2	0	10	1	2	2	1
Access to resources	5	1	2	11	20	49	1	1	20	18	41	9	8	15	17	38	1	4	12	24	37	1	4	13	29	34
	4	5	7	32	68	37	5	8	44	63	28	10	33	24	63	20	2	18	31	61	29	5	22	38	56	23
	3	1	11	33	33	7	4	9	40	29	3	18	34	13	26	2	4	10	39	20	12	7	11	41	17	10
	2	0	11	22	30	4	0	13	27	25	3	13	22	13	23	1	6	11	23	21	6	4	21	22	15	4
	1	8	6	7	12	3	9	8	8	10	3	17	8	4	8	3	11	3	9	7	5	14	7	6	3	6
Alternative teams	5	0	1	5	21	38	2	0	11	20	31	3	3	10	23	26	0	4	16	16	27	0	4	11	22	28
	4	1	6	11	40	24	2	6	18	38	18	5	12	12	39	14	3	9	20	36	13	4	9	25	30	13
	3	1	3	33	34	15	0	4	44	30	9	5	32	20	25	8	0	9	35	22	16	1	10	31	24	16
	2	2	9	20	35	4	2	9	27	30	2	11	23	13	25	2	5	10	15	27	13	7	19	24	13	8
	1	11	19	33	25	18	14	19	36	22	16	41	33	11	20	13	16	14	23	29	19	17	21	27	28	11

Relative impact of each input measure to output and performance measures*

	Output and Performance		
Inputs	Intensity	Recr/ retain	Financial
Intrapreneurs: treat employees as intrapreneurs	2.77	1.63	1.43
Mutliple partner collaboration: deliver value through ecosystem partners	1.93	1.51	1.38
Decentralized units: operate as smaller decentralized teams	1.49	1.22	1.28
Autonomy: provide autonomy to teams	2.17	1.48	1.25
Spotting trends: pursue: adopt organizational principles that help employees spot emerging trends	4.02	3.31	2.32
Access to resources: it is easy to get time and financial resources to purse new opportunities	1.89	2.16	1.82
Alternative teams: if not happy with shared services, units have altnernative options	2.10	1.64	1.28

*The average score of a firm that scores 4 or 5 on an input measure divided by the average score a firm that scores a 1-3. For example, for "Intrapreneurs," a firm that scores a 4 or 5 on intrapreneurship has an an average entrepreneurial intensity score 2.77 times higher than that of a firm that scores a 1, 2, or 3 on intrapreneurship.

Source: Outthinker analysis

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[i] See, for example, https://hbr.org/2018/11/the-end-of-bureaucracy and https://hbr.org/2012/01/14-ideas-for-busting-bureaucra

[ii] This section was adapted from Kaihan Krippendorff *Driving Innovation from Within*
[iii] *2017 State of the Global Workplace Report*, (Washington, DC: Gallup, 2017).
[iv] *2017 State of the Global Workplace Report*.
[v] This section was adapted from Kaihan Krippendorff *Driving Innovation from Within*

[vi] Kuhn, T.S. (1962). The structure of scientific revolutions. Chicago Uni. Chicago Press.

[vii] Fleck, L. (1979): Genesis and Development of a Scientific Fact. Chicago and London: University of Chicago Press.

[viii] Rorty, Richard. *Contingency, irony, and solidarity*. Cambridge: Cambridge University Press, 1989.
[ix] See https://hbr.org/2004/04/the-ambidextrous-organization
[x] See www.outthinkernetwork.com

[xi] Donald Sull, Rebecca Homkes, and Charles Sull, last modified March 1, 2015, "Why Strategy Execution Unravels—and What to Do About It," *Harward Business Review*, https://hbr.org/2015/03/why-strategy-execution-unravelsand-what-to-do-about-it.

[xii] Morris, Michael. (2015). Entrepreneurial Intensity. 10.1002/9781118785317.weom030029.

[xiii] See Kaihan Krippendorff, *Driving Innovation from Within*

[xiv] See https://www.kickbox.org/

[xv] See https://hbr.org/2015/02/inside-adobes-innovation-kit#:~:text=The%20Kickbox%20is%20a%20small,and%20measurably%20improve%20innovation%20outcomes.%E2%80%9D , access September 12, 2022

[xvi] https://news.mit.edu/2014/michael-schrage-book-business-experiments-innovation-1007

[xvii] Esposito, Mark and Kapoor, Amit, The Emerging Economies under the Dome of the Fourth Industrial Revolution, Cambridge: Cambridge University Press, July 2022

[xviii] See https://www.dorg.tech/#/

[xix] See https://www.seedclub.xyz/

[xx] See https://www.wbur.org/news/2021/10/28/decentralized-work-dao-blockchain

[xxi] See https://newint.org/features/2002/07/05/history#:~:text=First%20in%20an%20ignoble%20line,the%20world's%20first%20commercial%20corporation.