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The Rise of the Imagination Economy, *p6*

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ENGINEERED FOR MEN
WHO ARE MASTERS
OF TIME.
IWC
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THE RISE OF THE IMAGINATION ECONOMY

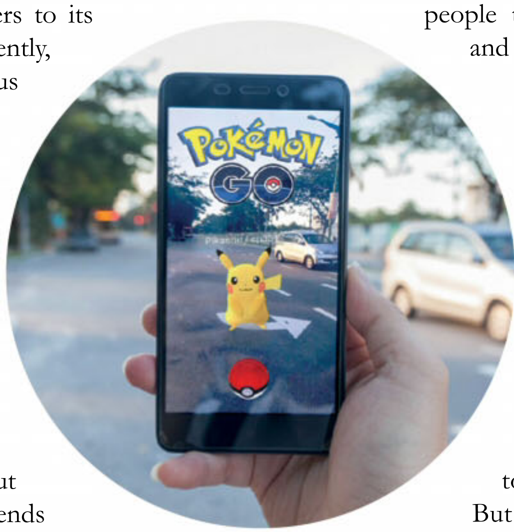
BY MARK PURDY, ATHENA PEPPES AND SUNING AN

The physical constraints of distance and geography shape how we live, work, produce and consume. But advances in Extended Reality technologies promise to break the limits of distance and create new sources of value marked by an appeal to the imagination.

In 2016 the world went crazy for the augmented-reality game Pokémon Go. In the same year, Alibaba, the world's largest retailer, introduced Chinese consumers to its virtual-reality store, Buy+. More recently, Facebook announced that its Oculus Go VR headset will go on sale in 2018 at $199 – roughly 170 euros or 150 pounds – as part of the company's goal of getting one billion people into the world of virtual reality.

We label such technologies – augmented reality (AR), virtual reality (VR), and also mixed reality (MR) – collectively with the umbrella term "extended reality" or XR. Many believe that they have, so far, overpromised and undelivered. But the examples above reflect a set of trends that are colliding to turn the promise of XR into (actual) reality. One recent estimate pegged the industry's potential value at $200 billion as soon as 2020.

How can business leaders take advantage of this massive emerging opportunity? They must first understand, and then prepare for, the coming of the Imagination Economy – an economy where the widespread presence of XR technologies allows people to transcend physical limitations and unlock new sources of economic value.



Pokémon Go is a free-to-play location based augmented reality mobile game developed by Niantic and published by The Pokémon Company as part of the Pokémon franchise.

A Collision of Trends

The three most important trends converging to usher in this new economic era are the approach of peak consumption, the evolution of the way people think about work and organisations, and rapid technological advances.

Peak stuff. Consumers' demand for experiences over ownership is increasing. We see this in the growth of the travel and tourism sector, which has outperformed global economic growth for six consecutive years. And this trend may well gain steam: 78 percent of millennials report that they'd rather spend more on experiences than material goods. Some retailers have attributed disappointing sales to this shift in consumer preferences.

But it doesn't have to be an either-or trade-off: virtual experiences can be used to enrich consumption. At a food and drink festival in Singapore, Diageo gave guests a VR headset and earphones during a whisky tasting. As visitors tasted the whisky, they were taken on a two-minute virtual tour of Scotland and

the distillery in the Highlands. Eighty-five percent of participants reported an enhanced experience, which also translated into sales of the product and plans to roll out the VR experience to other markets.

Changing Workplace. The modern workplace isn't what it used to be. Fewer people work for a single company or go to the office every day. In the US, for example, estimates indicate that 50 million workers freelance. This figure will likely grow as more baby boomers choose a "staggered" retirement. These workers are looking for ways to stay active with work, look for their next project with ease, be part of a bigger enterprise, and maintain their independence. XR technologies could become important tools for bringing together an increasingly fragmented workforce.

Technological Building Blocks. Technological developments such as 3D printing, superfast connectivity, sensors, and human-computer interaction are creating a strong foundation on which XR technologies can build. For example, the development of cloud computing and 5G networks have the potential to meet the computational demand of wireless VR headsets, whose data consumption is projected to grow by 650 percent over the next four years. The development of haptic technology gives users the illusion of touching a real object in a virtual world. And advances in eye-tracking technology allow users to pick up, aim or throw an object in virtual games just by looking in a certain direction. Further technology improvements – in battery life on mobile devices, for example – will help the Imagination Economy take off.

The Promise of the Imagination Economy

In the next five to ten years, the growing penetration of XR technologies will blur the boundaries between the real and the virtual – in the marketplace, the workplace and society.

The Marketplace. The gaming and entertainment industries are at the forefront of changes in consumption patterns. From 2016 to 2021, the compound annual growth rates of AR and VR games are expected to reach 50 percent. The live-streaming of events viewable with VR headsets, such as the Rio 2016 summer Olympic games and Coldplay's Chicago concert in 2017, has also started to take off.

But other industries are making forays with XR technologies too. Ikea's new AR app uses smartphones' rear-facing camera to let consumers place digital replicas of the company's furniture in their living rooms. Shoppers can walk around that virtual furniture and evaluate it from all sides. The 3D furniture shows up at scale with 98 percent accuracy, with true-to-life representations of the texture, fabric, lighting and shadows.

The Workplace. The Imagination Economy is also enabling new ways to produce, not just consume. A broad range of organisations are starting to take note. From 2016 to 2021, the use cases in education are estimated to grow at a rate of 166 percent; in therapy and physical rehabilitation at 152 percent; and in public infrastructure maintenance at 138 percent.

In the next five to ten years, the growing penetration of XR technologies will **blur the boundaries between the real and the virtual – in the marketplace, the workplace and society.**

Many businesses are already deploying XR technologies as training tools. UPS plans to train student delivery drivers using VR headsets that provide them with realistic streetscapes and a 360-degree view. This virtual training presents drivers with a heavy dose of hazards, which they might not encounter when practicing in the real world. In this risk-free VR world, drivers can learn valuable – and damage-free – lessons.

The Social Sphere. In healthcare, VR technologies can be used as therapy for physical and psychological illnesses and even to treat substance addictions. Research shows that playing VR games eases patients' reported pain up to 50 percent, significantly better than other forms of distraction, such as music or video games. It also showed that playing VR games reduces activity in areas of the brain associated with pain perception. Diageo announced that it would experiment with using VR to curb binge drinking, following its launch in 2016 of a 360-degree experience that puts the consumer in the front seat of a drunk-driving crash.

Mixed reality is even being used to solve crimes. For instance, Black Marble, in partnership with Microsoft, has made available a solution for law enforcement officers to improve crime scene recording and evidence preservation. And (much) further afield, NASA's astronauts are using VR to simulate working on the Martian surface and the International Space Station.

Great Expectations

After years of relative disappointment, hopes are also high for what XR technologies can do for job creation, access to talent, and faster innovation.

New Job Creation. Just as the creation of personal computers brought about a large number of new jobs and occupations, the Imagination Economy holds similar promise. Engineers, programmers and designers who specialise in XR technologies will be needed, and completely new roles could be created, such as ethics specialists for the virtual world. Aware of the potential for job creation, the New York City government plans to open up a VR/AR lab in Brooklyn.

Better Access to Talent. XR technologies will also give companies better access to pockets of talent far from physical offices. Microsoft is developing a system or set of technologies called Holoportation that will use 3D cameras to capture a person's movements in real time and construct a realistic hologram. This will be a big improvement over the limitations of current technologies, as colleagues will be able to interact as if they are sharing the same physical space.

After years of relative disappointment, hopes are also high for what XR technologies can do for job creation, access to talent, and faster innovation.

Innovation. In the Imagination Economy, companies will be able to test and iterate previously unattainable or unfeasible products and services. This will help shorten innovation cycles. Take architecture. Traditionally, architects and builders share ideas through sketches, blueprints or two-dimensional renderings. New VR tools will allow designers to create a building and then step down onto the street level to experience it at life-scale. Their ideas can be evaluated not only by how the design looks but how it feels to be in the space.

NASA teamed up with Microsoft to create a "holographic instruction manual" for the ISS crew. © NASA

ONE THING IS CERTAIN: OUR REALITY IS NO LONGER JUST WHAT WE SENSE IN THE PHYSICAL WORLD. **IT'S ABOUT TO BE EXTENDED IN WAYS FEW HAVE IMAGINED.**

Mattel Aristotle by Nabi is a baby monitor, child entertainment centre and personal nanny-assistant all in one. A petition asking Mattel not to release the Aristotle gained more than 17,000 signatories, which said the device not only infringed on children's privacy by collecting their data, but could have an unknown effect on their psychological development.

Anticipating Change

In addition to the opportunities, the world of XR will also test companies, consumers and societies with a new range of challenges.

Industry Disruption. As virtual reality becomes an increasingly acceptable substitute for physical experiences, industries that rely on brick and mortar may need to look for new sources of competitive advantage. Consider what might happen to airlines, given that business travel accounts for about 30 percent of annual revenues. Some companies, such as Intel, are already holding all shareholder and annual board meetings virtually, in efforts to cut down on air travel. This shift raises questions about how the air travel industry can entice passengers in a world where they compete not just with other airline companies but also with VR tourism firms. One strategy might include using points of sale as "experience centres" to help customers select their next destination, or using in-flight VR entertainment to attract passengers.

Privacy and Data Protection. Employees and customers will have privacy concerns in an increasingly XR world, as activities are easier to track in virtual than physical reality. Shifting more activities into virtual environments increases vulnerability to hacking of personal information. And there is much uncertainty about XR's impact on intellectual property and other legal and regulatory issues. Recently Mattel announced that it had scrapped Aristotle, a voice-controlled child monitor fitted with cameras, after parents expressed concern about how the images and data would be used.

New Ethics. Companies will also have new responsibilities. Consider the potential for new ethical and health issues to arise, such as addiction to XR. Organisations need to anticipate these challenges and act before they become major problems. In a recent survey of youth in the UK, 71 percent supported the use of pop-up warnings once certain limits of social media use have been approached or exceeded. In South Korea, where online gaming addiction is a serious issue, the government introduced a law to prevent children under the age of 16 from playing computer games between midnight and 6:00 a.m. Similar measures may be needed to prevent potential addictions to XR.

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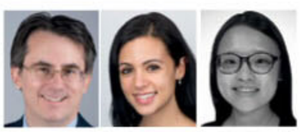
The rise of the Imagination Economy promises to improve access to new services and experiences, boost job creation and job matching, and give companies a much-needed productivity burst. As with other powerful emerging technologies, business leaders will need to work with governments and institutions of civil society to address the ethical and privacy concerns. One thing is certain: our reality is no longer just what we sense in the physical world. It's about to be extended in ways few have imagined. EBR

About the Authors



Mark Purdy (left) is a Managing Director and **Athena Peppes** (middle) is a Manager with Accenture Research; both are based in London. **Suning An** (right) is a Specialist, also with Accenture Research, in Beijing.

BREAKING THE MOULD!

A NEW BUSINESS MODEL FOR THE 21ST CENTURY

BY KARL-HEINZ STREIBICH

The pace of change in the digital era is too fast, and survival is the main objective. Software AG CEO Karl-Heinz Streibich shares a new business model for the 21st century, strategies we can learn from the foundation of ADAMOS, and the future of the software industy as it engages others more.

Every great idea needs the right time and the right participants to come to full fruition. Every invention or innovation needs the right business, social or economic conditions if it is to make the full impact that its potential promises. Every ground breaking concept needs the right actors to bring it to life, the right interpretation to capture the imagination and to fly.

I have been personally proposing for over a decade that Europe's software industry must follow the Airbus or Star Alliance[1] principal if it is to flourish. That the continent must pool its Information Technology (IT) resources if it is to be the global force that it should. But the reality has proven to be bigger than that.

In a recent article[2] in this esteemed journal I proposed that Europe need not try to copy Silicon Valley if it is to reap the awards of a thriving software

> "A Star Alliance of software vendors and industry will give Europe a wealth creating platform fit for the 21st Century."

1 https://www.technologybreakingnews.com/2007/03/software-ag-plans-soa-alliance/
2. http://www.europeanbusinessreview.com/who-needs-silicon-valley-made-in-digital- germany-is-europes-big-hope/

industry with a huge global impact. I argued that the elements needed for success of a magnitude never before achieved by Europe's software industry lie in our own hands, our own back yard so to say, and in our own industrial, engineering and manufacturing heritage. I proposed that the marriage of the manufacturing sectors and the high-tech industries, a Star Alliance of software vendors and industry, will give Europe a wealth creating platform fit for the 21st Century. But the reality has proven to be bigger than that too.

The reality is a global alliance of Software AG with a who's who of international machine manufacturing – and the reality was launched in September with the foundation of ADAMOS[3]: Software AG Dürr AG, DMG Mori, Zeiss AG and ASM Pacific Technology; leading visionary manufacturers from Germany, Singapore and Japan jointly addressing the huge opportunities of the Industrial Internet of Things (IIOT) markets. ADAMOS: bringing leading edge IT, operational technology (OT) and industry expertise together and making it available to any manufacturing company. Together we will set the standard for IIOT adoption. This is not a take it or leave it approach, this is not one size fits all business model, this is from the manufacturing industry for the manufacturing industry.

Why is this the right time? Because technology developments are changing the landscape of every industry at an accelerating pace. It could be called the perfect storm: a whirlwind of digital disruption and innovation unleashed by the increasingly pervasive use of ever more intelligent software, devices and digital sensors. Throw in the globalisation of the software industry, the threat from the "born digital" generation of enterprises currently dominating stock markets, the urgent need to "in-source" enterprise software architecture capabilities – reversing a decades long trend – the arrival of artificial, or at least augmented, intelligence and you have a bewildering convergence of technology issues that must be dealt with at a board level by every enterprise.

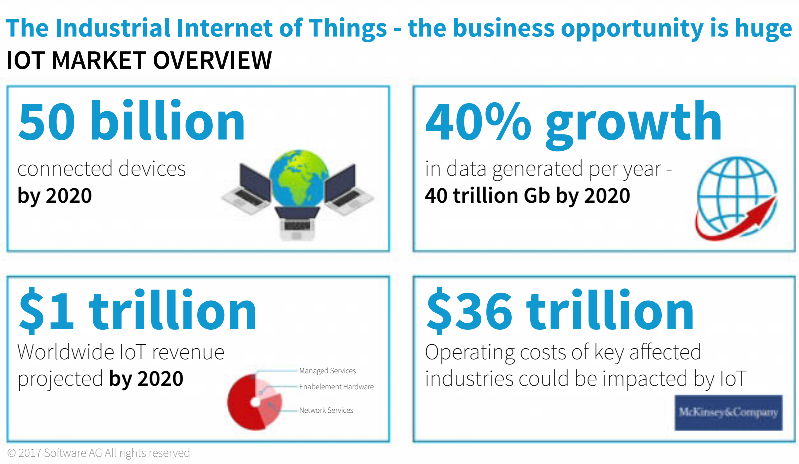
Secondly, because the IIOT business opportunity is so huge: It is in Industry 4.0, or the Industrial Internet, that the real profit from digitalisation lays. IT today provides the customer interface, the customer feedback loop, social sentiment monitoring, the integration of external data sources, the real-time analytics of unfolding business events and the dynamic automated process to respond to them. OT operates the manufacturing processes, real-time identification of manufacturing events, the near real-time isolation of quality aberrations, the robotic assistants that dramatically reduces the dangers inherent in many jobs or eliminates the tediousness of repetitive tasks. It improves the accuracy of repetitive jobs freeing real people to add more value to the business chain.

Bringing these together allowing dynamic manufacturing based on real-time demand, basing product design on how machines or devices, anything really, is actually used as opposed to how they were supposed to be used, allowing the total integration of the full business value creation chain and back again, is the real pot of gold at the end of the Industry 4.0 rainbow.

Thirdly, because if every company must become a software company – and this

ADAMOS

It is the strategic alliance for machinery and plant engineering and stands for **ADA**ptive **M**anufacturing **O**pen **S**olutions. The joint venture was founded by DMG MORI, Dürr, Software AG and ZEISS as well as ASM PT.



3. https://en.adamos.com/

ADAMOS provides not only an open, entry level and scalable IIOT infrastructure but the APP factory that enables any company to kick-start its own IIOT adventure.

Decision makers know they have to act - but how?

90%
of executives surveyed feel the Industrial Internet of Things (IIoT) is critical to their company's success

16%
have a comprehensive IIOT roadmap

45%
of decision-makers do not have an IoT strategy

Source: Industry of Things World 2017 Survey Report

idea has been on the table for a number of years now – then every CEO must become a software expert. In a nutshell: the age of the non-technology savvy executives is over. It starts at the top – the CEO must take personal responsibility for enterprise digitalisation strategy. But the pace of change is too fast for any but the largest companies to keep up and time waits for no one. Most decision-makers know they have to act but only a minority have well defined plans today. (see exhibit above)

These are the forces driving the foundation of a new constellation of software expertise and industry knowledge, behind taking Software AG's market approach of co-innovation (software vendor and industrial enterprise jointly exploring the possibilities of IIOT) to the next level. This is industry level, or industrial strength, co-innovation. ADAMOS[3] is a joint venture bringing the machine industry and software industry together to jointly navigate a path through ever changing technology currents and sharing the results with all industry players.

This is the future of the software industry's engagement with other industry sectors, a fully, and I do mean fully, open software platform, a fully open approach to sharing IT infrastructure and industry expertise. This is the only way the technology and industry expertise needed to not just compete, but to simply survive, in this ever accelerating digital world and it can be made available to the medium and small enterprise.

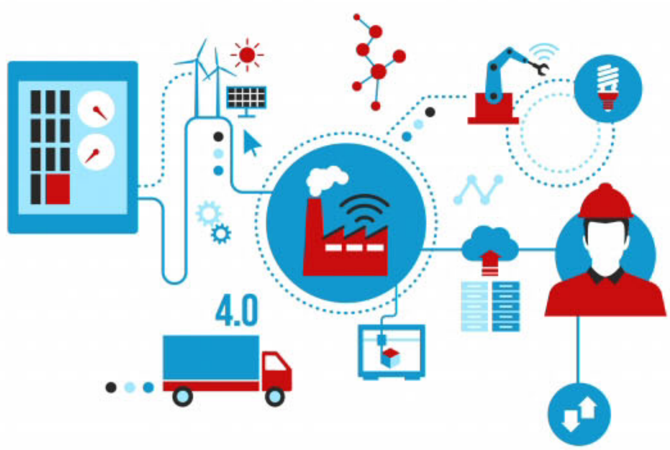
ADAMOS provides not only an open, entry level and scalable IIOT infrastructure but the APP factory that enables any company to kick-start its own IIOT adventure. APPS produced by the industry itself – APPS that can operate with any existing IT or OT technology.

This allows manufacturers to focus on what they do best: innovate. Innovation with lower risk, with minimal entry barriers to IIoT, with a learning approach that does not bet the company's future, that will accelerate IIOT adoption and ultimately benefit everyone.

So the Star Alliance of software industry and the manufacturing industry has been born. It only took the right constellation of events, technology developments and the combined innovative vision of five CEOs. It has been worth the wait.

About the Author

Karl-Heinz Streibich has been Chief Executive Officer of Software AG since October 2003. In this role he is also responsible for the following functions: Global Human Resources, Global Legal, Global Information Services (IT), Corporate Communications, Global Processes, Audits & Quality and Corporate Office. Throughout his career, Karl-Heinz Streibich held various management positions in Information and Communication Technology. He is a member of the Supervisory Board (Aufsichtsrat) at Deutsche Telekom AG, Dürr AG, Deutsche Messe AG and holds several honorary positions including Member of the Presidency of the German IT Association BITKOM., Co-Chairman of the Platform "Digital administration and public IT" within the framework of the German Chancellor's IT summit and he is a co-founder of the German Software Cluster of Excellence.



ADAMOS

Christian Thönes

CEO of DMG MORI AKTIENGESELLSCHAFT:

“Regarding digitisation the machine and plant building industry has to set its own standards and drive development. This can only work with strong partners. That is why we are offering an open network with ADAMOS together with leading machine building, production and software/IT know-how – from machine builders for machine builders, their suppliers and customers.”

Günter Lauber

CEO of the SMT Solutions Segment of ASM PT

“The growing interconnectivity of production means that not only our customers, but also we ourselves have to change our thinking. We create the conditions for this at ASM PT with innovative solutions for various line and factory workflows for electronic manufacturing – whilst complying with the highest IT security standards. Through ADAMOS we are combining this knowledge with leading machine building, production and software know-how.”

Ralf W. Dieter

CEO of Dürr AG

“As a machine builder we know our customers’ requirements and know what is important. In the ADAMOS App Factory we bring industry knowledge for intuitively operated applications together with the design of digital marketplaces. The ADAMOS App Factory is a cooperation between machine builders and software companies that is closely linked with the partners.”

Jochen Peter

CEO and President at Carl Zeiss Industrielle Messtechnik GmbH

“With ADAMOS strong partners are working together equally on pushing digital connectivity. Together we are developing technologies for the factory of the future. Companies that use the IIoT applications from ADAMOS, will be making use of innovative services and thus increase the efficiency, transparency, reliability and availability of their systems significantly.”

Karl-Heinz Streibich

CEO of Software AG

“Software AG's technology leadership and digital expertise is based on a total investment of more than one billion euros. Our industry nuetrality and global presence combined with the know-how of leading machine and plant builders worlwide form the foundation of ADAMOS”

Aargau – a location that moves companies forward

The Aargau Services team

f.l.t.r.
Josef Küffner, Monika Ulrich, Annelise Alig Anderhalden, Ellen Hildebrand, Antonietta Lomoro, Florian Gautschi

Aargau is a canton of technology, energy and culture. It offers an overall package that is unbeatable. Quite rightly, Aargau has three "A"s in its name: The well-known rating agency, Standard & Poor's, rates it with "Triple A", the best rating for company locations.

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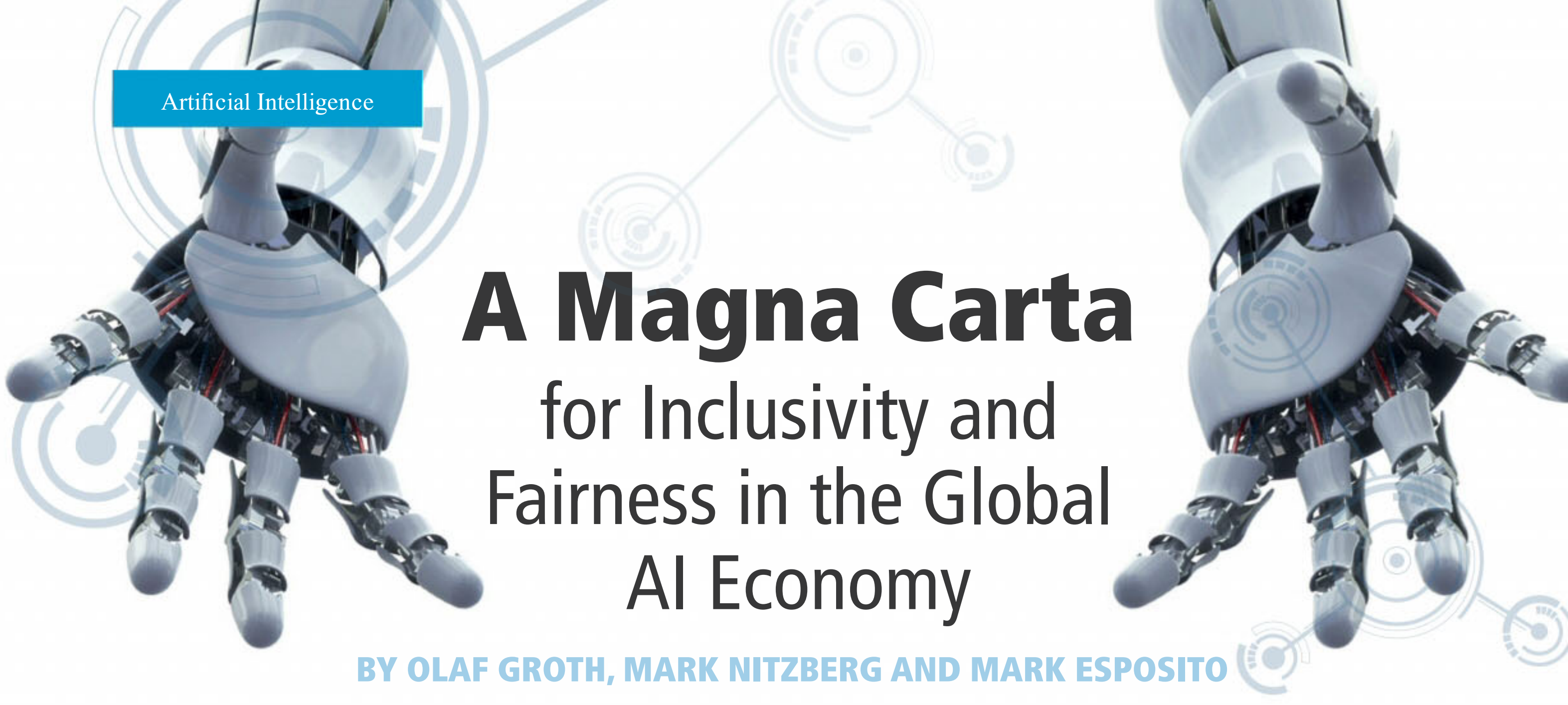


A Magna Carta for Inclusivity and Fairness in the Global AI Economy

BY OLAF GROTH, MARK NITZBERG AND MARK ESPOSITO

Machine meritocracy is here. In this article, the authors elaborate on questions of inclusivity, fairness, and governance. Will we survive as we are or is there a need for a new Magna Carta?

We stand at a watershed moment for society's vast, unknown digital future. A powerful technology, artificial intelligence (AI), has emerged from its own ashes, thanks largely to advances in neural networks modelled loosely on the human brain. AI can find patterns in massive unstructured data sets, improve performance as more data become available, identify objects quickly and accurately, and, make ever more and better recommendations and decision-making, while minimising interference from complicated, political humans. This raises major questions about the degree of human choice and inclusion for the decades to come. How will humans, across all levels of power and income, be engaged and represented? How will we govern this brave new world of **machine meritocracy**?

To answer this question, we need to travel back 800 years: January 1215 and King John of England, having just returned from France, now faced angry barons who wished to end his unpopular *vis et voluntas* ("force and will") rule over the realm. In an effort to appease them, the king and the Archbishop of Canterbury brought 25 rebellious barons together to negotiate a "Charter of Liberties" that would enshrine a body of rights to serve as a check on the king's discretionary power. By June they had an agreement that provided greater transparency and representation in royal decision-making, limits on taxes and feudal payments, and even some rights for serfs. The famous "Magna Carta" was an imperfect document, teeming with special-interest provisions, but today we tend to regard the Carta as a watershed moment in humanity's advancement toward an equitable relationship between power and those subject to it. It set the stage eventually for the Enlightenment, the Renaissance and democracy.

It is that balance between the ever-increasing power of the **new potentate – the intelligent machine** – and the power of human beings that is at stake. In a world in which machines will create ever more value, produce more of our everyday products with reducing human control over designs and decisions. Existing work and life patterns are changing forever. Our creation is running circles around us, faster than we can count the laps.

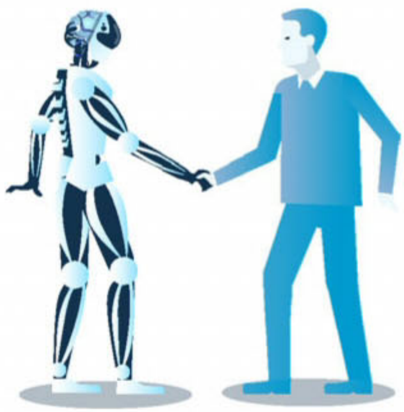
It is that balance between the ever-increasing power of the new potentate – the intelligent machine – and the power of human beings that is at stake.

This goes well beyond jobs and economics: in every area of life machines are starting to make decisions for us without our conscious involvement. Machines recognise our past patterns and those of allegedly similar people across the world. We receive news that shapes our opinions, outlooks and actions based on inclinations we expressed in past actions, or the actions of others in our bubbles. While driving our cars, we share our behavioural patterns with automakers and insurance companies so we can take advantage of navigation and increasingly autonomous vehicle technology, which in return provides us new conveniences and safer transportation. We enjoy richer, customised entertainment and video games, the makers of which know our socioeconomic profiles, our movement patterns and our cognitive and visual preferences to determine pricing sensitivity.

As we continue to opt into more and more conveniences, we choose to trust a machine to "get us right". The machine *will* get to know us in, perhaps, more honest ways than we know ourselves – at least from a **strictly rational** perspective. But the machine will not readily account for cognitive disconnects between that which we purport to be and that which we actually are. Reliant on real data from our real actions, the machine constrains us to what we have been, rather than what we wish we were or what we hope to become.

Will the machine eliminate that personal choice? Will it do away with life's serendipity? Will it plan and plot our lives so we meet people like us, and thus deprive us of encounters and friction that forces us to evolve into different, perhaps better human beings? There's tremendous potential in this: some personal decisions should be driven by more objective analysis, for instance including the carbon footprint for different modes of transportation, integrating this with our schedules and socio-emotional needs, or getting honest pointers on our true talents when making partner choices, or designing more effective teaching plans for diverse student bodies. But it might also polarise societies by pushing us further into bubbles of like-minded people, reinforcing our beliefs and values without the random opportunity to check them, defend them, and be forced to rethink them? AI might get used for **"digital social engineering"** creating parallel micro-societies. – Imagine digital gerrymandering with political operatives using AI to lure voters of certain profiles into certain districts years ahead of elections or AirBnB micro-communities only renting to and from certain socio-political, economic or psychometric profiles. Consider companies being able to hire in much more surgically-targetted fashion, at once increasing their success rates and also compromising their strategic optionality with a narrower, less multi-facetted employee pool.

A machine judges us on our **expressed values** – especially those implicit in our commercial transactions – yet overlooks other deeply held values that we have suppressed or that are dormant at any given point in our lives. An AI might not account for newly formed beliefs or changes in what we value outside the readily codifiable realm. As a result, it might, for example, make decisions about our safety that compromise the wellbeing of others based on historical data in ways we might find objectionable in the moment. We are complex beings who regularly make value trade-offs within the context of the situation at hand, and sometimes those situations have little or no codified precedent for an AI to process. Will the machine respect our rights to free will and self-reinvention?



Will the machine eliminate that personal choice? Will it do away with life's serendipity? Will it plan and plot our lives so we meet people like us, and thus deprive us of encounters and friction that forces us to evolve into different, perhaps better human beings?

Similarly, a machine might **discriminate** against people of lesser health or standing in society because its algorithms are based on pattern recognition and broad statistical averages. Uber has already faced an outcry over racial discrimination when its algorithms relied on zip codes to identify the neighbourhoods where riders were most likely to originate. Will the AI favour the survival of the fittest, the most liked or the most productive? Will it make those decisions transparently? What will our recourse be?

Moreover, a programmer's personal history, predisposition and **unseen biases** – or the motivations and incentives their employer – might unwillingly influence the design of algorithms and sourcing of data sets. Can we assume an AI will work with objectivity all the time? Will companies develop AIs that favour their customers, partners, executives or shareholders? Will, for instance, a healthcare-AI jointly developed by technology firms, hospital corporations and insurance companies, act in the patient's best interest, or will it prioritise a certain financial return?

Whether in an economic, social or political context, **we as a society must start to identify rights, responsibilities and accountability guidelines for inclusiveness and fairness** at the intersections of AI with our human lives.

Magna Carta, meaning "The Great Charter", was originally issued by King John of England (r.1199-1216) as a practical solution to the political crisis he faced in 1215. Magna Carta established for the first time the principle that everybody, including the king, was subject to the law.

We can't put the genie back in the bottle, nor should we try – the benefits will be transformative, leading us to new frontiers in human growth and development. We stand at the threshold of an evolutionary explosion unlike anything in the last millennium. Explosions and revolutions are messy, murky, and fraught with ethical pitfalls.

Therefore, we propose a **Magna Carta for the Global AI Economy** – an inclusive, collectively developed multi-stakeholder charter of rights that will guide our ongoing development of artificial intelligence and lay the groundwork for the future of human-machine co-existence and continued more inclusive human growth. Whether in an economic, social or political context, we as a society must start to identify rights, responsibilities and accountability guidelines for inclusiveness and fairness at the intersections of AI with our human lives transparency on code, data sourcing integrity and biases. Without it, we will not establish enough trust in AI to capitalise on the amazing opportunities it could afford us.

This article is adapted from the forthcoming book "Solomon's Code: Power and Ethics in the AI Revolution" (working title) copyright © 2017 Olaf Groth & Mark Nitzberg.

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SUSTAINABILITY: A $12 Trillion a Year Market by 2030

BY JOHN ELKINGTON AND RICHARD ROBERTS

Leading companies today are starting to think of sustainability as a tool for growing profitability, using frameworks such as the UN Sustainable Development Goals as a guide to future market opportunities. In this article, we outline three imperatives for leaders who want to thrive in tomorrow's markets: think exponential, think open and think circular.

"How much will it cost?"

Even if these are not the first words out of a senior executive's mouth when approached about a new sustainability initiative, it's generally the first thought that crosses his/her mind.

It's an understandable response. Companies have long recognised the intangible benefits of sustainability activities – on brand or talent acquisition and retention, for example. These benefits do, in most instances, enhance profitability, but the relationship is indirect. The notion of sustainability contributing *directly* to a company's bottom line remains foreign to most people in business, including – perhaps most especially – sustainability officers.

Not any more. Accenture estimates the value of implementing a circular economy to be $4.5 trillion globally.[1] Analysis by the We Mean Business coalition has found that implementing the Paris Agreement will unlock at least $13.5 trillion of economic activity in the energy sector alone by 2030.[2] And at Davos this year, the Business & Sustainable Development Commission launched its *Better Business, Better World* report, which identifies at least $12 trillion a year (by 2030) of market opportunities linked to implementing the UN Sustainable Development Goals. This, by the way, is a conservative estimate. According to the Commission, the real market value could be as much as 2-3 times higher.

None of these numbers should be taken too literally, clearly, but they provide useful

$4.5 Trillion

Accenture estimates the value of implementing a circular economy to be $4.5 trillion globally.

broad-brush indications of the scale of economic opportunities linked to sustainability that business leaders interested in long-term value cannot ignore. As a recent white paper by The Generation Foundation put it:

"These opportunities do not come at the expense of profits, but have often been the basis for identifying new business initiatives. This underscores what we have observed more generally to be true with great companies: sustainability is a tool for growing revenue and profitability while strengthening their competitive position." [3]

This powerful trajectory in our economies calls for a radical new function – and mindset – for corporate sustainability teams. It is now clear that it is time to stop thinking simply in terms of the business case for action and to start thinking about new business models, new forms of value creation. The inescapable conclusion: sustainability need not be a cost centre any longer; rather it must find a place at the heart of a company's approach to generating profits.

Stranded Assets

At the same time as these new value creation opportunities appear on the horizon, a wave of technology-driven disruptions (the so-called "Fourth Industrial Revolution", as the World Economic Forum has dubbed it) is causing widespread value destruction. Incumbent companies in many sectors are already struggling to keep their heads above water – and those close to the bleeding edge of change conclude that there is much more to come.

By way of example, consider the findings of a recent report on the future of transportation by a new US think-tank called RethinkX:

"We are on the cusp of one of the fastest, deepest, most consequential disruptions of transportation in history. By 2030, within 10 years of regulatory approval of autonomous vehicles (AVs), 95% of US passenger miles traveled will be served by on-demand autonomous electric vehicles owned by fleets, not individuals, in a new business model we call "transport as-a-service." [4]

This disruption, the report states, "will have enormous implications across the transportation and oil industries, decimating entire portions of their value chains, causing oil demand and prices to plummet, and destroying trillions of dollars in investor value". It estimates that, by 2030, 70% fewer passenger cars and trucks will be manufactured each year. Oil demand, meanwhile, will peak at 100 million barrels per day as soon as 2020, dropping to 70 million barrels *per day* by 2030. That's 40 million barrels per day below the Energy Information Administration's current "business as usual" case.

Again, we should not take RethinkX's projections too literally, but rather as an indication of the scale of value destruction we are likely to see over the next few decades.

Sustainability need not be a cost centre any longer; rather it must find a place at the heart of a company's approach to generating profits.

Whichever way you look at them, however, they should send a chill down the spine of any automotive or oil and gas industry executive. The value of assets stranded by 2030 as a result of ecological boundaries may yet turn out to be relatively inconsequential compared with assets stranded as a result of technological change. That said, the longer-term risk of asset stranding driven by climate change is likely to be off the scale.

So how should business leaders respond to this changed – and changing – world? What kinds of strategies and mindsets can help companies capitalise on the opportunities whilst minimising their exposure to at least some of the risks outlined above? We now sketch three simple principles that can help any company navigate these choppy waters.

1 Think Exponential

In our Project Breakthrough initiative, co-developed with the United Nations Global Compact, the world's largest corporate sustainability platform with 9,000+ member companies, we are focussing on three aspects of this latest economic earthquake: exponential technologies, exponential business models and, perhaps most fundamentally of all, exponential mindsets.

To get a better grip on what is going on, we have been accumulating air miles at an almost exponential rate. We have visited such Meccas of the X-world as the XPRIZE Foundation, Singularity University and – perhaps most mysterious of all – Google's X facility, the self-styled "Moonshot Factory". For a sense of what we are finding, take a look at the first round of filmed interviews on the Project Breakthrough website (www.projectbreakthrough.io).

Thoughtful business leaders sense that the rules of the game are about to change faster than at any time in their working lives. Simply parroting the latest disruption jargon won't make the cut. Nor will parroting sustainability jargon. Indeed the entire Sustainability Industry must undergo a radical reinvention, involving defragmentation and re-capitalisation, if it is to tackle its current weaknesses, including intense siloing, internal competition and a Babel-like confusion of terminologies.

In the same way that business leaders once looked to activists and social entrepreneurs for evidence of where markets

X, The Moonshot Factory.
Projects include:
- Loon: balloon powered internet
- Makani: energy kites
- Wing: autonomous air delivery
© LinkedIn

were headed, they must now engage a very different set of players. These new players are not happy with 1% or even 10% year-on-year improvements, instead pushing towards 10X – or 10-fold – improvements over time.

2 Think Open

"The argument for using the crowd that makes it a no-brainer is that everyone, I think, can agree that the smartest people in the world don't work for your company." So says Marcus Shingles, CEO of the XPRIZE Foundation.

XPRIZE launches challenge prizes to incentivise and harness the ingenuity of the crowd to solve "global grand challenges". It may be an eccentric organisation in some ways – the fact that it has a Science Fiction Advisory Council may cause some eyes to roll – but it's also a lead indicator of a trend towards more open and decentralised business models that's already well under way.

In the age of Uber and Airbnb, it's become a truism that access is better than ownership. Every company wants to be a platform. The three-word title of Andrew McAfee and Erik Brynjolfsson's latest book – *Machine, Platform, Crowd* – captures the Zeitgeist perfectly.

But this is much more than a Silicon Valley fad. In an interview for Project Breakthrough, Patrick Thomas of Covestro explained why the company has chosen to license its technology for turning carbon dioxide into plastic.

"If you make a breakthrough in innovation, you cannot keep it to yourself," Thomas explained. "That's very, very important. It's a different way of thinking about how you make money. To keep it to yourself runs the risk that it would die. If you license it to everybody else, you guarantee that they change their view, they change their method of operation, and they adopt your technology. And that's why we went from nothing to commercial manufacture of a product in less than 10 years... That is way faster than traditional innovation technologies where everything's kept secret. You've got to blow things open."

3 Think Circular

As more companies experiment with closed-loop business models, they are learning to see value in new places. Externalities that have long been thought of as costs avoided are beginning to look like value wasted instead.

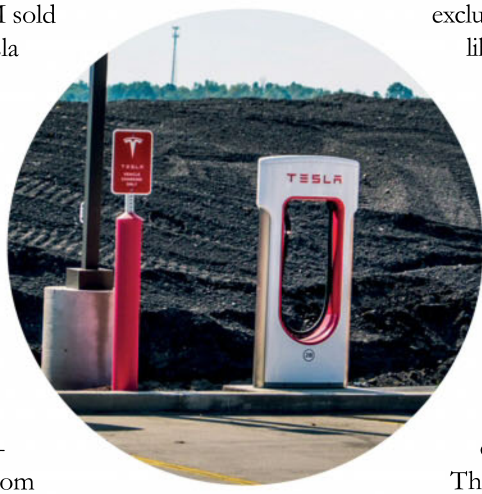
Take the example of IKEA. The company's zero waste to landfill policy has meant that much of what would previously have gone to landfill has been recycled and incorporated into its products instead. The result: rather than costing money, IKEA actually made a profit out of the policy. Now the company is on a quest to generate more value from its waste: "the next step is not just about recycling, but it's about using waste in our own operations".

It's not just material waste that can be re-imagined as a resource. In the age of Artificial – or Augmented – Intelligence, companies that create reams of data as a by-product of their core business are fast learning that this data is anything but worthless. Earlier this year an *Economist* editorial described data as "the world's most valuable resource", arguing that just as oil was the lifeblood of the global economy in the 20^{th} century, data is its 21^{st}-century equivalent.

The market dominance of data-rich companies like Alphabet, Amazon and Facebook is one indication of this, but it's not just the tech industry that has been rocked by the data revolution. "Industrial giants such as GE and Siemens," reports *The Economist*, "now sell themselves as data firms."

> "The argument for using the crowd that makes it a no-brainer is that everyone, I think, can agree that the smartest people in the world don't work for your company."
>
> **– Marcus Shingles, CEO of the XPRIZE Foundation**

And consider what's been happening in the automotive industry, where for three months this year Tesla superseded GM to become the most valuable US car manufacturer (its share price took a tumble in July, which meant it lost the top spot). This was despite the fact that GM sold more than 100 times more cars than Tesla in 2016. So what explains Tesla's high market valuation relative to sales? Answer: data. For every single mile driven in a Tesla, the company reaps valuable information to feed to its algorithms and improve its self-driving technology.



Tesla supercharger stations, West Virginia © Getty Images

Perhaps more surprisingly, a similar revolution is under way when it comes to greenhouse gas emissions. Thanks to rapidly improving carbon capture technologies, it is now possible to extract CO_2 from the atmosphere and convert it into new materials and products – creating value from climate change-causing emissions.

One pioneer in this space is Covestro (formerly Bayer MaterialScience), an advanced materials company. The discovery that it could use atmospheric CO_2 as an input to its business shifted the company's perspective on carbon. Rather than seeing it simply as a problem, it now sees carbon as a valuable asset. The CEO, Patrick Thomas, talks in terms of maximising "return on carbon invested" or "carbon productivity".

The implications of this shift in perspective are three-fold. First, it requires the company to take a much more holistic view of its role in the carbon system – identifying where it can help redirect carbon flows to reduce environmental harm and, at the same time, create economic value. Second, by reframing the problem – from decarbonisation to maximising return on carbon invested – it invites greater creativity and innovation. And thirdly, by reducing the company's reliance on other sources of carbon, it increases its resilience and reduces its exposure to fluctuations in the oil price or the potential impact of carbon pricing.

This shift in focus is not, and should not be, exclusive to Covestro. Along with a handful of like-minded organisations, we are currently building out a Carbon Productivity initiative, designed to spread this thinking across industry and beyond. (For more, see www.carbonproductivity.com)

So what explains Tesla's high market valuation relative to sales? Answer: data. For every single mile driven in a Tesla, the company reaps valuable information to feed to its algorithms and improve its self-driving technology.

The Best is Yet to Come

There are no guarantees for the businesses that embrace these three principles of exponential, open and circular, but they are significantly more likely to survive and thrive in the coming decades than those that don't.

There will be many failures along the way. Indeed, in times of radical experimentation of the sort we now need the corporate failure rate tends to go off the scale. But the scale of the market opportunities now being forecast suggests that, for those who survive and don't simply limp along, the twenty-first century could prove to be their – and our – best yet. EBR

About the Authors

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Richard Roberts is Project Breakthrough Lead at Volans. His research and writing covers the role of new technologies, business models and mindsets as enablers of sustainable growth.

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SIX SIGMA CIRRHOSIS

HOW AN OVERRELIANCE ON IMPROVEMENT MAKES ORGANISATIONS ILL

BY CHRISTOPHER SURDAK

There was a time when delivering "perfection" at a low price was like a business miracle that customers get a "high" from – but not anymore. In this article, Christopher Surdak elaborates on customers' perception of quality and cheapness, the "four horsemen" which limit organisations from adapting to an evolved market, and the looming end of Six Sigma.

The human body is an amazing machine. Our bodies are highly developed, remarkably complicated systems that produce complex outcomes from many complex inputs. With complexity comes errors, as the various parts of our bodies constantly struggle to maintain homeostasis in an ever-changing environment.

For such complexity to work there always has to be some function that cleans up these errors. Some system has to compensate for our bodies' over- or under-response to the environment, because even the most sensitive and agile systems cannot compensate for every variable it encounters. In our bodies this sanitary function is largely taken up by our livers.

Livers are amazing organs that maintain the chemical balance in our bodies. They remove toxins, store surplus energy or nutrients for future use, and ensure that all of our functions operate in harmony. They are the biochemical equivalent of executive management, compliance, accounting and housekeeping all wrapped up into one.

A Disease of Excess

But like the processes and control mechanisms in organisations, our livers have their limits too. Among its many functions, the liver removes alcohol from our systems when we choose to imbibe. When we have one too many pints or that extra glass of chardonnay or merlot it's our livers that step in and deal with our excesses, ensuring that we recover the following day.

Like all things in life too much of a good thing can be a bad thing and such is the case with alcohol. If we expose our bodies to too much alcohol for too long our liver runs out of capacity for maintaining balance and begins to actually scar from overuse. This condition is known as cirrhosis, and over time it is a fatal condition. It turns out that every time we overindulge in almost anything, alcohol, sugar, fat or cholesterol, our livers end up "taking one for the team". Over time this eliminates our ability to compensate for systemic errors and stresses, and ultimately may kill us. While the trip along way may be fun, cirrhosis is a terrible place to end up.

Too Much of a Good Thing

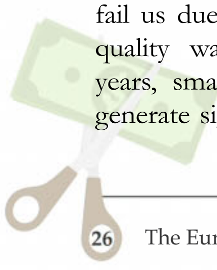
So what does this have to do with six sigma, lean manufacturing and other quality initiatives? Six Sigma arrived after World War II, where global demand for products and services exploded as part of the peace dividend. Demand was also pushed along by the need to rebuild most of the civilised world and to fight a new, Cold War, but I digress.

Companies were hard pressed to meet the global demand for goods, and in many cases quality was sacrificed in the name of quantity. This was acceptable when people were happy to have anything, but as the global economy recovered, and then boomed, customers could afford to demand more from manufacturers, and so they did.

The inefficiency of producing defective or low-quality products annoyed one Edward Deming, a cantankerous American economist. At a time when customers were willing to buy almost anything that companies produced, Deming argued that improving quality could actually reduce costs, improve productivity and increase customer satisfaction. Like most revolutionaries, Deming was a polarising character. His notions were considered radical at the time, and companies in his native United States summarily ignored his advice.

Deming's story is well-documented elsewhere so I won't belabour it here. Suffice to say Deming's quality revolution did indeed take place, first in Japan and much later in his home country. His belief that improved quality could actually reduce production costs, improve productivity and increase customer satisfaction has been proven conclusively. The world around us today is a product of the successful implementation of Deming's then-radical ideas about quality and cost. We drank lustily from Deming's fountain.

After 60 years of working to improve business quality perhaps we have drunk too much and our systems are now beginning to fail us due to over exposure. When product quality was horrible, as in the Post-War years, small improvements in quality could generate significant reductions in cost. These small improvements produced outsized returns because there was so much room for improvement. Cost-cutting works like compounding interest in reverse. With compound interest you earn more money overtime. With compounding cost-cutting you earn less and less overtime, but hopefully the savings outpace the reductions in revenues.



The challenge in all of this slicing and dicing is this: after decades of cutting perhaps we have gone too far. The fat in our processes was cut away long ago, yet we have continued to trim away. Now, many organisations find themselves cutting away at their muscle, sinew, and bone, or worse, allowing entire limbs to be severed; their functions left to others to provide.

We are habituated, even addicted, to cost-cutting as a means of creating value long after most of the value in cost-cutting has already been harvested. However, we continue to go back to that well, that bottle, over and over again because we hope to get from it the same benefits, or buzz, that we got before. But, not only is the high not what it used to be, the cost of going back for more keeps getting worse and worse.

Four Horsemen of the Value Apocalypse

Decades of Six Sigma over indulgence has made many organisations ill. Their disease is caused by excessive reliance on incremental improvement to the exclusion of real innovation. This disease has moved beyond merely damaging their businesses, it has in many cases left permanent scars. This damaged, ineffective, moribund organisational tissue no longer creates value for its organism. Indeed, it destroys value, much like the sick liver in an aging rock star.

Decades of Six Sigma over indulgence has made many organisations ill. Their disease is caused by excessive reliance on incremental improvement to the exclusion of real innovation.

These operational scars leave a mark, much as a damaged organ can be diagnosed with medical tests. Four of these mechanisms of value destruction are as obvious as they are insidious. They exist in most organisations long-suffering from their Six Sigma hangovers, and they likely sound familiar to you. I call these four symptoms the Four Horsemen of the Value Apocalypse; because the name sounds dramatic, but also because they foretell of coming doom to any organisation who has over indulged from the Six Sigma Keg.

The Four Horsemen are:

1. Unilateral Thinking
2. Linear Metrics
3. Looking Inward
4. Acquiescence

Unilateral Thinking

Unilateral thinking is the tendency to focus on only one aspect of an issue, or an opportunity, to the exclusion of all others. Singular focus was management dogma in the 1980s and 1990s. Business guru's such as Jack Welch, Tom Peters, Peter Drucker and so on all promoted the idea that maniacal focus on a single outcome was the key to being the leader in your chosen industry. At the time, when Information Technology, the Internet and Globalisation were new trends, such focus was key. There were so many new changes to the business landscape that focus was critical in picking the right approach and seeing it through to competitive advantage.

When these organisations added Six Sigma, Quality and Lean Manufacturing to their single-focus strategy they tended to look at cost as the one and only driver of customer value. The vast majority of companies measure, manage and manipulate their costs, in order to remain competitive. Cost control is an obsession with nearly all companies and in many cases this is warranted. For publicly traded companies fiscal responsibility isn't just a strategy, it is a legal obligation.

But, after decades of successful optimisation this singular focus has now become a strategic dead end. The danger in such myopic focus on cost-cutting is that you quickly become a one-trick pony. If the only thing you have to offer your customers is a price lower than your competitors', then price is your only differentiation. You will quickly find yourself in a commoditised business, competing with other companies in a "race to the bottom". In a world where customers have instantaneous, ubiquitous and nearly perfect access to information, market prices are set by your most efficient, least rational, or most desperate competitor. Further, in a race to the bottom there are zero points for coming in second place.

While cost still matters it no longer differentiates, except in situations where customers value nothing else. Companies who focus strictly on price have effectively self-selected only those customers who care about nothing else. Customers who value other things either go without or find organisations who share those values. This process explains why many consumers will buy a non-fat, fair-trade, gluten-free, organic, sugar-free, solar-powered latte from Starbucks for three times the price of an average cup of coffee. Companies that focus on only one dimension of customer need abandon the field to those who broaden the scope of their appeal.

Linear Metrics

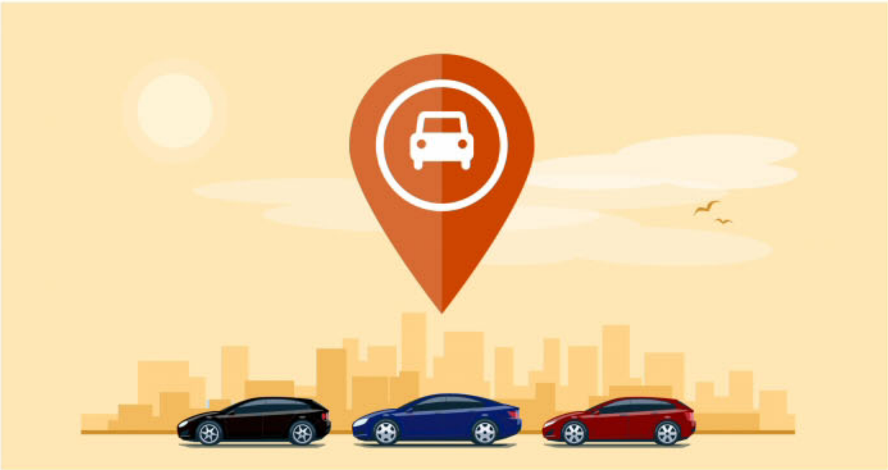
One foundational principle of Six Sigma is constant, incremental improvement (CPI). CPI (Continuous Process Improvement), or Kaizen, builds on the notion of compounding interest. If you make things a little bit better or a little bit cheaper over time the accumulation of these improvements leads to big rewards. Edward Deming was a proponent of this philosophy, but not in isolation. Nonetheless, most organisations are thoroughly with the

Cost control is an obsession with nearly all companies and in many cases this is warranted. For publicly traded companies fiscal responsibility isn't just a strategy, it is a legal obligation.

expectation of small, incremental, linear improvement.

This belief is so deeply ingrained in modern business thinking that such cost reductions are actually written into many business contracts. No matter what you did for a customer last year, this year you need to do it X percent cheaper. There are many problems with this approach. First, your customers come to expect these reductions, and so they do not value them (again, the destruction of perceived value). Second, your own organisation expects these reductions, and so people build "margin" into their estimates, budgets, costs and models. The result of all of this is decreased accuracy in all of these things, which is the exact opposite of the desired result. And this expectation of constant, relentless decreases in cost runs entirely counter to the Capitalist Era's expectation of constant, incremental inflation.

The most insidious effect of linear metrics is that they prevent breakthroughs. If you gave your organisation the goal of cutting costs in half, or cutting cycle times by an order of magnitude many of your employees would say this goal would be impossible; others would say it is possible. In both cases those employees would probably prove themselves to be right. The question then must be, which group of employees deserves the company's support? Non-linear metrics lead to non-linear results. These tend to break our ROI models with which we run our businesses, but they also break through the roadblocks to the value generation those same models reinforce.



Looking Inward

The vast majority of Six Sigma or Lean Manufacturing initiatives focus on processes that are internal to and upstream of an organisation. The reason for this is simple: organisations have some degree of control over their inputs. By controlling their inputs, and how they are used, organisations can improve how they generate outcomes that are valued by customers.

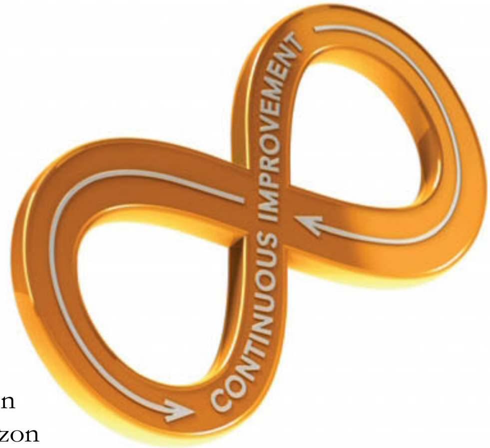
Anyone familiar with business modelling and analysis has probably witnessed a disturbing trend: the disassociation between inputs and outputs. In many large organisations inputs (raw materials, labour, know-how) are managed by one

The most insidious effect of linear metrics is that they prevent breakthroughs.

group (operations), and outputs (products and services) are managed by an entirely different group (Sales and Marketing). Frequently these organisations are at loggerheads, if not fully at war with one another. Operations tries to figure out how to squeeze as much as it can from its inputs, while Sales tries to figure out how to push the results into the marketplace.

In either case, the organisations are focussed inward, rather than outward. Operations is looking inward, trying to get the same inputs they require for less, while Sales is trying to take what they have on the shelf and get it off their shelves. In either case, a focus on cost reduction and improved efficiency removes any hope of generating more value for customers. Companies do invest in things like market research, focus groups, pilot projects and the like, but these efforts are nearly always tempered by the inherent inward-focus of these organisations.

This is why breakthrough products such as the iPhone or iPad, the Tesla Model S or ride-sharing apps like Uber or Lyft are so rare, and so compelling. In each instance the creator didn't look inward towards improving an input, they looked outward at what customers would value and then how to deliver it. An internal focus is a natural consequence of Six Sigma and Lean Manufacturing because both approaches demand looking at oneself with excruciating detail. However, organisations may find that the harder they look inside themselves, the faster the world outside may be passing them by.



Acquiescence

It is important to realise that the quality revolution began in Japan in the 1960s, then arrived in America in the 1980s. This means that Western Capitalist companies have been doing the Six Sigma shuffle for half a century! The vast majority of the global workforce has never not worked under the expectation of constant, relentless cost-cutting. For people working in larger, older, more established companies this has created an environment of "do the same, or less, with less", mentality.

The expectation of constant cost-cutting and constant profitability hasn't always made sense. At times, such as during the crash of the Internet Bubble in 2000 or in the Great Recession of 2008, they were downright irrational. But, these expectations have nevertheless prevailed, fed by weekly reports generated by our oxymoronically-labelled "business intelligence" applications.

Toiling to achieve irrational and rewardless goals leads to one of two outcomes: Either you buy into the irrationality or you recoil against it. Those who buy into it are familiar with the process of acquiescence, or treating irrational thinking as if it were both normal and appropriate. Those who acquiesce are easy to identify, they usually speak in a common language of surrender. Some of their favourite phrases include:

- It is what it is (IIWII)
- That is just our way (TIJOW)
- I can't help you (ICHU)
- That is not our responsibility (TINOR)

And so on…

It's often hard to get through a day without being inundated with these slogans of servitude, immediately following a huff, an eye-roll, or a shrug of the shoulders.

There are some who do not acquiesce. Some who do not accept doing less with less, or the same with less. Rather, they try to do more with less. They break out of the improvement treadmill and jump to the zipline of innovation. These people don't buy into these old, tired paradigms. Instead they work to use innovation to meet customers' unmet, and sometimes unrealised, desire for value.

Such revolutionaries may be loved or hated, depending upon which side of their revolution you find yourself. Regardless, by challenging current dogma, such people tend to be controversial. In a call with his staff in 2017, Amazon CEO Jeff Bezos challenged his employees to "Disagree, then commit." As a dyed-in-the-wool revolutionary, his words carry weight. Merely complaining about the status quo makes you a malcontent. Complaints are for the lazy and the uncommitted. True revolutionaries and innovators don't just complain about the status quo, they challenge it. They don't acquiesce to dogma, they doggedly work to assassinate it.

Single-threaded focus. This is great if you're a wooly mammoth or saber tooth cat during the middle of an ice age, but it's not so great if you're a hyper adapted animal, like polar bears, during a period of change.

The Four Horsemen Among Us

I recently experienced an excellent example of the Four Horsemen in action. I was working with a company that specialised in business process outsourcing, an industry that relentlessly, almost psychopathically, follows the principles of Six Sigma. Among my expenses was a charge for $11.97 for a dinner grabbed at a fast food restaurant one night while running from one flight to another. I faithfully retained the receipt from that purchase so that I could submit it for reimbursement.

Quizzically, this particular company required receipts for any expense over $10; which is the first time I've seen this requirement in 25 years of professional travel. Apparently someone, somewhere,

Complaints are for the lazy and the uncommitted. **True revolutionaries and innovators don't just complain about the status quo, they challenge it.**

determined that the return on investment from receiving, reviewing and retaining $10 receipts, versus the global normal of $20-$25, was sufficient to justify the added cost. How the economics of this worked out in that person's Excel model baffles me still, but I followed the policy nonetheless. I dutifully submitted the report including that receipt and waited to be reimbursed by the company's "optimised", "benchmarked", "World-Class" business process.

Almost a month after submitting that expense report I received a notice that it had been rejected. The reason given was that my $11.97 receipt was not itemised, and itemisation was required. Most people I've shared this story with have accused me of exaggerating, embellishing or simply making it up, but I assure you, this actually happened.

That company, in its infinite wisdom and dedication to "quality" and "World-Class operations" required an $11.97 dinner expense to be itemised. I have no idea what it actually cost to audit that report, find that line item, single it out as a disallowed exception (it was a manual process), take the time to reject it and then send it back. But I am absolutely certain that those costs alone were well in excess of $11.97.

But wait, there's more. Upon having the multi-thousand-dollar report rejected I then needed to have my "exception" reviewed and approved by not one but two vice presidents at the company. This caused an additional two weeks of delay in processing the transaction and any number of additional communications between those involved. Others at the company shared with me that their standard practice was to submit every single expense line item as a separate report, so that each exception only impacts a single item, rather than a whole week or two of expenses.

Dumbfounded by what had occurred, I did a quick calculation of the likely costs to the company for finding and managing this one "exception". It wasn't hard to conclude that the cost of this decision was at least forty times the value of the amount at risk, and yet none of those involved thought that the practice was questionable. Indeed, their uniform response was, "That's just our policy.", or "It is what it is.", and "I just do what I'm told."

Many companies are contemplating the use of robots to further automate their business processes. Upon some self-reflection on how they presently operate, they may discover that they already have robots in these roles, they just run on food rather than electricity.

CUSTOMERS' PERCEPTION OF VALUE HAS CHANGED BECAUSE THEY'RE HABITUATED TO PERFECTION AND CHEAPNESS.

Deming Detox

I am a career-long fan of Edward Deming. I have studied his philosophy and approach, and I have applied it to my work for over a quarter-century. But, over time I have become increasingly convinced that the time of Six Sigma is coming to an end. I'm not suggesting that people no longer want quality; far from it. Sixty years of improvement has taught customers to expect perfection. But in our success we have taught customers to not value cheapness or quality. Quality and low price have become like oxygen: as long as you or someone else delivers them, they don't matter.

Customers' perception of value has changed because they're habituated to perfection and cheapness. They no longer get a "high" from these things. Instead they perceive value elsewhere, like "green-ness", "meaning" or "purpose". Businesses that provide quality, low cost and then something more stand to dominate their markets because they stand out. Their differences make them resilient against the Four Horsemen, who are otherwise busy stampeding organisations suffering from empty casks, cost-cutting hangovers and scarred ability to adapt to change. In the next installment of this discussion, we will review how organisations can detox from their addiction to cost-cutting, and start delivering new value to their thirsty customers.

About the Author

Christopher Surdak is an industry-recognised expert in Mobility, Social Media and Analytics, Big Data, Information Security, Regulatory Compliance, and Cloud Computing with over 20 years of professional experience. Mr. Surdak is author of *"Data Crush: How the Information Tidal Wave is Driving New Business Opportunities"*, published by AMACOM Publishing, recipient of GetAbstract's International Book of the Year Award, 2014. He launched his own international consultancy firm Surdak & Company, providing strategic business and technology guidance to leading organisations around the world. To learn more about it, visit www.surdakandco.com saturated.

HOW TO CATCH A *Moving Target* IN THE DIGITAL WORLD

BY STIJN VIAENE

In this article, Prof. Stijn Viaene continues to shed light on the realities that executives and business leaders must face in the digital era. In an era where customers are moving at the speed of the Internet, how does a digital leader catch them?

Digital leaders understand that being relevant once is not enough. They must remain relevant and appealing, at the speed of the Internet – the speed at which their customers are moving. They do this by deploying data capabilities broadly, effectively stapling themselves to their customer's digital self. They bank on digital technologies to continuously monitor the environment, sense customer needs and track behaviour in real-time, and systematically run experiments to see what works and what doesn't. They treat current value propositions as a set of critical assumptions to be continuously tested.

For such digitally attuned companies, the adoption of business analytics for decision-making comes naturally. Business analytics refers to the use of digital data technologies to enable applied analytical disciplines to drive data-driven business experimentation, business insights or decision-making. Analytics capabilities allow businesses to move from being product-oriented to being able to offer a continuation of valuable customer experiences. They enable digital frontrunners to be effective at treating customers as the moving targets that they are. Will you be a frontrunner?[1]

Targetting Reach and Richness

Thanks to modern business analytics, we finally seem to be able to blow up the trade-off between *reach* (i.e. convincing more customers with a particular information-based proposition) and *richness* (i.e. reigning in customers with a more complex, customised or personalised information-based proposition).

For a long time, the belief has been that you could not have both with information technology: the greater the reach, the less rich the information offering and customer engagement, and vice-versa. Thus, digital channels targetting a mass audience were restricted to providing simple products, with standard transactions, requiring "low-touch" engagement. More complex customised or personalised transactions, on the other hand, required face-to-face channels and decision-making based primarily on human engagement, possibly supported by customer relationship management tools.

Those days are over. Leading companies seek their competitive edge by using advanced analytics to break the trade-off between richness and reach.

Digital leaders understand that being relevant once is not enough. They must remain relevant and appealing, at the speed of the Internet – the speed at which their customers are moving.

For example, ING Bank has been profiling itself as a frontrunner in digital innovation in the financial sector. “When we launched ING Direct in 1997, we changed the banking landscape. We were the disruptive challengers then and we need to disrupt again today”, as per ING.[2] With its *Think Forward* strategy – launched in 2014 – the bank wants to excel with a promise to be clear and easy, help customers make smart financial decisions anytime-anywhere, empower them, and keep getting better for customers. ING’s grand plan is to move its diverse set of country banking models into a single leading digital model that provides the best customer experience in each country.

Business leaders are lured into believing that, because of their massive availability, data are not the problem. Experienced data scientists know better.

Figure 1 illustrates how the ING Group intends to morph its two traditional banking model clusters in Europe – i.e. the branch-based models for high cross-buy (richness) and the direct models for simpler products and transactions only (reach) – into a single *Direct First* model with high cross-buy, effectively using digital to break the reach-richness trade-off.

ING bets big on using advanced business analytics to win based on propositions that combine richness and reach. This includes, for example, intensifying its use of robo-advisers in several countries.

Figure 1: ING Converging to Direct First with High Cross-Buy
(ING, 2016)[3]

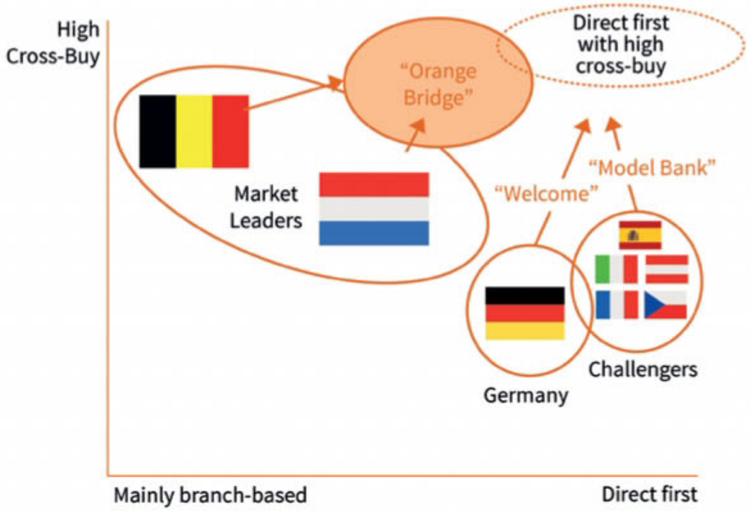
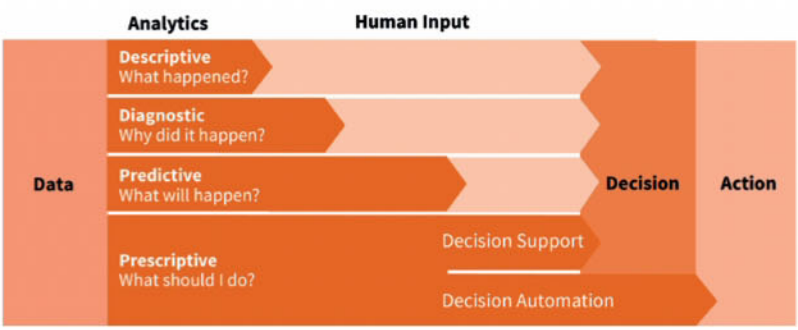


Figure 2: 4 Types of Analytics Questions
(Gartner, 2015)[5]



The Analytics Decision Spectrum

Data-driven business decision-making has become a competitive necessity. Thomas Davenport and D.J. Patil have certainly helped fuel business interest these last few years by announcing that “data scientists have the sexiest job of the 21st century”.[4] Popularised by a new breed of gurus groomed by digital native companies such as Amazon, Google and Facebook, the emergence of this job title symbolises the next step in business analytics’ coming of age.

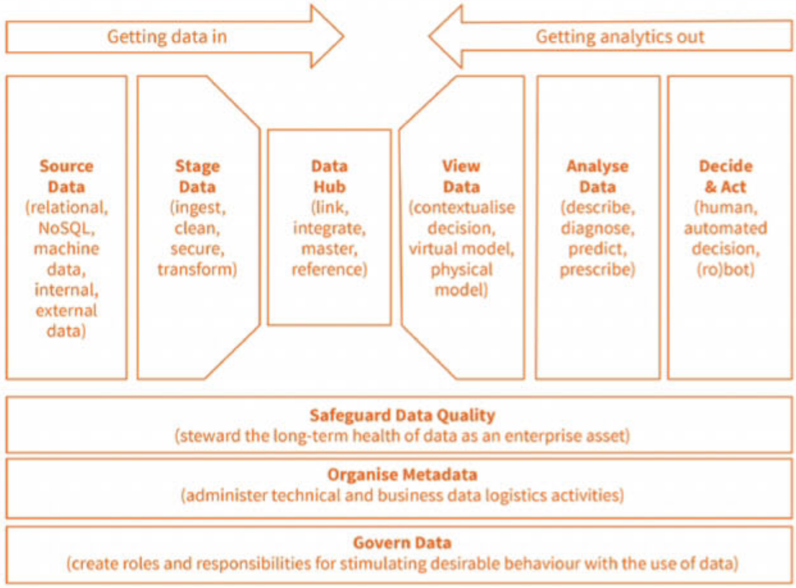
Talking about “data science” signals how scientists, technologists, engineers, and mathematicians (STEM) have joined forces with the data business to carve out their turf. Business analytics is now benchmarked against practices employed by highly skilled digital age professionals, who can make big money using scientific methods to mine the gold in complex data. Decision questions addressed by business analytics can be categorised in four types:

1. Descriptive analytics: What happened?
2. Diagnostic analytics: Why did it happen?
3. Predictive analytics: What is likely to happen?
4. Prescriptive analytics: What should I do?

This progression represents the increasing complexity of questioning entrusted to a machine. It stands for a growing digital aspiration, in the sense that the part of the decision process performed by a human decision-maker gets smaller as it is progressively replaced by machine intelligence. This evolution is depicted in Figure 2.

Decision automation is not science fiction. Robotic trading, for example, is already a major component of regulated equity markets: in 2012, Tabb Group estimated that it made up 51% of equity trades in the US and 39% in Europe.[6] Today, decision automation is used in cars, factories, call centres, logistics (e.g. drones), surgery, etc. In the years to come, many jobs involving human decision-making are likely to be augmented, if not replaced, with machine intelligence.[7] To keep up, companies will have to transfer a larger part of their decision-making processes from humans to more sophisticated machines. The popularised notion of "big data" expresses the need for investing in novel, cost-effective digital capabilities for handling high-volume, high-velocity and high-variety data.

Figure 3: A Generic Data Logistics Architecture



Think Data Logistics

Too easily, business leaders are lured into believing that, because of their massive availability, data are not the problem. Experienced data scientists know better. For all of the excitement generated around the potential of data analytics to transform businesses, turning data into real business value is often no small beer. Clearly, there is more to this than just pushing and pulling data around. In positioning yourself to benefit most effectively from the wave of technological opportunities, thinking in terms of end-to-end data logistics is useful.

Effective data logistics implies creating a systematic, high-performing process architecture to gather data from a diverse set of sources, curate it for business analysis, and feed insights out into decision processes in ways that lead to desirable action. This process involves executing and coordinating a set of activities that collectively produce business value with an eye on progressive, long-term customer value delivery. Figure 3 provides a high-level, generic view of this data logistics architecture. This view allows you to treat data as an enterprise asset in its own right, managed to be broadly and conveniently used for creating customer and business value.

The good news is that, for each of the activities in Figure 3, new digital technologies are available for capturing the competitive data advantage (e.g. cloud technology, NoSQL databases, open source big data technology, visualisation, in-memory computing, machine learning, cognitive computing). These technologies allow you to do things faster, cheaper and better than before. The bad news is that there is no single technology capable of supporting the whole architecture or of dealing with every type of data or analytics job. Moreover, many of the big data technologies are continuing to evolve rapidly.

Unless you are a technology start-up, you probably also have some legacy data and analytics technologies. Luckily, in most cases, you won't have to replace all that legacy at once. Many of these "older" technologies still have a lot of potential and possibilities. So, rather than thinking in terms of replacing your entire

In positioning yourself to benefit most effectively from the wave of technological opportunities, **thinking in terms of end-to-end data logistics is useful.**

Exploration environments should allow one to travel through unfamiliar areas in order to learn about them and discover new insights. **Exploitation** environments aim to make full use of the insights and benefits derived from a data resource.

legacy data architecture, think about upgrading, selectively replacing and extending your legacy. Based on a firm understanding of your business strategy – reimagined for the digital age[8] – map out your roadmap to adapt and mature your technology configuration in stages. You will need information systems architecture and integration skills to implement this technology strategy properly.

Exploration and Exploitation Logistics

Whilst there are many possible data logistics configurations, it makes sense to think differently about these logistics for exploration and exploitation purposes. *Exploration* environments should allow one to travel through unfamiliar areas in order to learn about them and discover new insights and opportunities. *Exploitation* environments aim to make full use of the insights and benefits derived from a data resource and capture the value from opportunities. For sure, big data technology expands the exploration possibilities in the digital world. But many of the technologies are equally useful in exploitation settings. Ultimately, exploration is not a product or a technology – it's a data logistics process.

The two environments carry distinctly different requirements:

- Exploration's use of data is characterised by freedom, openness, trial and error, generativity, ad-hoc activity, non-standard behaviour, bricolage. You will want to play around with the latest beta versions of an algorithm. You'll get your hands dirty with open source and want to share freely with colleagues and academics.
- Exploitation's use of data, however, is characterised by *more* control, mediated access, productivity, scale, agreed service levels, standardisation, industrial quality.

And each environment comes with different data quality, meta-data and data governance considerations. Leading companies manage to have effective data logistics for exploration and for exploitation. Most importantly, however, they are also capable of smoothly transitioning initiatives from the *lighter*-weight governance necessary for exploration to the *heavier*-weight governance of the exploitation environment. To do so, however, requires excellent business-IT alignment skills spanning both environments.

Data Science is a Team Sport

When customers are moving at the speed of the Internet, customer experience creation and design thinking cannot do without advanced business analytics – which allows for more frequent and faster iterations between the design and operating environments, enabling business experimentation at a proper velocity. But, according to Digvijay

Lamba, tech entrepreneur and former distinguished architect at Walmart Labs, there is a real issue with data science in practice:[9]

> "What's happening is [that] there are domain experts – buyers, merchandisers, product managers and others [who] have worked in retail for years and years – these people know the market really well … They throw these ideas over the wall to data scientists, who go through the data and come up with these brilliant ideas to answer questions. But there is a wall there. The data scientists are not domain experts … What we want to do is break down the walls."

Multiple "data scientist" definitions circulate. Many of them paint an idealistic picture of a person with the curiosity to answer higher-order business questions combining STEM skills, hacking, data storytelling and business skills. Rarely, however, are data scientists domain experts.[10]

We need to connect the world of data scientists to the world of domain experts. Data science exercises aren't about just publishing insights; they're about producing working solutions in the business domain. To generate real business impact, we need to combine a whole set of skills, including business and data modelling, data discovery, decision operationalisation and cultivation skills. In addition, we need a robust data logistics platform to stand on. Traditionally, little, if any, attention has been paid to supporting team collaboration with these platforms. This must be revisited: while your data logistics platform must provide data logistics support, it also needs to support conversation management in and across business analytics projects.

In the end, your data logistics platform should form the basis for an enterprise business analytics capability. It should stimulate business productivity by opening up the world of data and analytics to the entire business community, and by making it convenient for internal and external partners to connect, collaborate and innovate with data. It should offer robust support for running value-adding business analytics projects and making sure that every project progressively contributes to collective learning.

Business Analytics Project Success

Applying design thinking significantly increases the chances of successfully managing business analytics projects for customer innovation. Its principles have been described in a previous article in *The European Business Review*.[11] Our research on business analytics project success has revealed a number of critical success factors:[12]

PLAN, BUT PLAN FOR CHANGE. DON'T ASSUME – CHECK YOUR HYPOTHESES BY USING YOUR DATA AND ANALYTICS, AND PROGRESSIVELY CREATE DATA AND BUSINESS INSIGHTS.

Start with the ends in mind. Business analytics or data science projects are often characterised by uncertain or changing requirements. That makes managing goals, scope and expectations particularly challenging. But remember: although you might be in discovery mode, you are also on a timeline to deliver business impact. Business analytics projects are not IT projects, nor pure data experiments. They are business projects, targetting customer and business ends. So, try to be clear about what you hope to achieve at the outset. Clarify the customer and business impact you aspire to, and then think about how you can most efficiently achieve that goal with data analytics – minimally, as with a minimum viable product.

Plan, but plan for change. It's important to plan for desirability, feasibility and viability of the project before you get going. But don't overdo it. Have an execution bias, rather than a planning bias: start with the assumption that the initial plan will have to change as the project progresses through iterations of validated learning. Aim for showing value in use with data and analytics early and often, and continuously capture the value of learning. Don't assume –check your hypotheses by using your data and analytics, and progressively create data and business insights.

Take a holistic stance towards benefits realisation. Do you have representation from both the business and IT in your projects? Do you have business and data modelling, data discovery, decision operationalisation and cultivation skills seamlessly working together as a team all through the project's life? Where are the data logistics people helping you to transition from exploration to exploitation (and back)? Your project teams must be able to manage the combination of customer desirability, operational feasibility and business viability all along the project's life.

Work to gain stakeholder commitment. Engage business stakeholders and customers as early as possible, and then throughout the project. Clarify expectations from the outset, and manage them throughout. By continually explaining, engaging and managing expectation clarity, you will gain trust in the decision support provided by your business analytics. The lack of trust in automated decision-making remains a show stopper in substituting human decision-making by business analytics – especially when using artificial intelligence "black boxes". Still, working on the digital edge, the black boxes will be unavoidable. That means you'll have to work to develop trust in, and gain adoption of, these solutions. Actively coaching the stakeholders into cultural change is crucial.

Develop an enterprise capability project by project. Every business analytics project should be able to capitalise on the data products, insights, and lessons learned from previous projects, and serve as a springboard for the next ones. An enterprise business analytics capability is developed over time – project by project. Ideally, every project's business case includes objectives for short-term business return as well as for long-term business analytics capability development. Securing the long-term value of your data and analytics capabilities – your platform – requires involving enterprise and other architects in the design and use of data and analytics assets.

Digital leaders strive to keep up with the customer's digital self. They want to capture this moving target effectively.

Conclusion

Digital leaders strive to keep up with the customer's digital self. They want to capture this moving target effectively. They understand that the use of digital technologies allows for forms of customer co-creation that cannot possibly be achieved with just human observation or design. This requires growing data and analytics prowess as an enterprise. Data scientists alone are not enough. Business and IT have to join forces in creating an enterprise that thrives on smart data decisions. But don't underestimate the data logistics challenge. Project by project, you will have to grow your enterprise's analytics capability to explore and exploit opportunities more quickly than your competitors. EBR

About the Author

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When it Comes to Cyber Security, A Step Ahead is a Step Out of Harm's Way

BY LAURENCE MINSKY, BEN DISANTI, & JOSEPH CARSON

Marketing in the digital arena is one great balancing act. On one hand is the need for data, including customer personal data to create a customised product experience, and on the other is the looming invisible threat of data breach and cyber attacks. In this article, the authors elaborate on and provide crucial measures to ensure that you're a few steps ahead in cyber security and a great deal out of harm's way.

Cyber security is a lot like the famous story of two campers and a bear.[1] In it, the two campers see a bear approaching them. One of the campers drops down and reaches for his shoes. The other one starts running, shouting back, "What are you doing? You can't outrun the bear." "I don't need to outrun the bear," replies the one putting on his shoes. I just need to outrun you." In other words, having a slightly better cyber security system than others – and the cues that let people know that the system is in place – can often be the best strategy for protecting a company's data from being compromised.

Seems like an easy solution, yet one where many struggle due to the unwarranted fear that customers might not want to take the extra time that the added friction of the security and cues bring to the transaction.[2]

But due to the overall changing landscape of cyber security itself as well as the impending implementation of the European Union (EU)'s General Data Protection Regulation (GDPR), this simple approach might make more sense than ever.

Scheduled to go into full force by May, 2018, GDPR will have an impact for business well-beyond EU's borders as one of its principles is that any company dealing with an EU citizen (including an EU IP address) is bound by it. One of the main provisions of this governance is that an EU citizen must provide their consent for the use of any personal identifiable information (PII) before it can be captured or used.

As a result, the individual and household data that is currently being gathered in an unbeknownst manner – such as from databases and by following online behaviours – will no longer be available for marketers to use. This has the potential to significantly hamper targetted marketing efforts for many products and services.

Yet another indication of the grand shifts in cyber security relates to the expert who taught the world to use complicated passwords. He now admits he was wrong – that because of the growth in the amount of accounts and passwords, the guidelines that many of us follow today can result in passwords that are susceptible

Having a slightly better cyber security system than others – and the cues that let people know that the system is in place **– can often be the best strategy for protecting a company's data from being compromised.**

to hacking. As a result, the password guidelines from America's National Institute for Science and Technology have, with necessity, been updated.[3]

So, with these changes looming, how do marketers continue to deliver a worthy brand experience while also staying ahead of the hackers?

The first, and perhaps most important step is to gain a greater understanding of the tension between consumer needs and wishes for privacy and the marketers' needs for information. Anyone who's visited TelePort to find the best place to live can attest to the power of receiving a personalised experience, one where the consumer provides personal information and receives a customised result just for them. Trend prognosticators have long documented the consumers' wish for customisation. Anyone in a marketing department can also speak to the importance of creating personalised brand experiences and the detailed knowledge of what each and every customer is seeking at each key inflection point along his or her unique path-to-purchase. But this customised experience comes at a price for the consumer – the need to provide personal information. So, marketers must seek a balance regarding how they can meet both needs and build their brand along the way.

Brands that have shown success in this area should not come as a surprise – Microsoft and Apple, to name two. Both provided empowering experiences with their brands at every touchpoint, building trust by providing more than what is expected for what was paid and exhibiting a knowledge about the product or service that allows the consumer to believe it will deliver without question and then defending this trust with transparency about the data they process and collect.

Each of these brands certainly foster confidence within their customers. As a result, their customers are more willing to share personal information, which continues the relationship and further affords each brand the ability to offer more empowering interactions. And the brands benefit as well. For instance, Microsoft has become the preferred cloud provider internationally as a result of their vocal position with data privacy.

As cyber security concerns grow, the more traditional "value exchange" that drives most transactions will shift to more of a "trust exchange". While trust has always been rooted in the value formula – what I get for what I pay – consumers today want that form of trust to marry with their security best interests too. We have recently seen the impact on loss of trust and value with the catastrophic data breach at credit reporting agency Equifax resulting with the CEO retiring and the stock price at one point down by $3.5 Billion.

Within the EU, the GDPR helps ensure the security portion of the relationship and, thus, helps alleviate concern from consumers.

Which brings us to an interesting question: **With a regulation like the GDPR being enforced within the EU and beyond, does that relegate data security to just being a defensive effort by brands?**

The unequivocal answer is "NO".

It is evident that a data breach of any kind will damage trust consumers have built with a brand. As Pat Contry and Anupam Narula reminds us in their *Deloitte Insights* study, *Building Consumer Trust: Protecting Personal Data in the Consumer Product Industry,* "… Negative brand experiences can quickly negate years of brand-building, a hard-gained positive reputation, and – perhaps most importantly – the trust a consumer places in a brand."[4]

The same *Deloitte* study also highlighted consumer willingness to support and choose those brands/retailers that take action to better secure personal information in an online setting prior to any breach. In fact, 80% of consumers indicate they are more likely to purchase from consumer product companies they believe protect their personal information.[5]

The key here is that when it comes to cyber security efforts, it is not just a defensive move on the part of organisations, nor is it a legitimate endeavour for helping to build a brand. Rather, it is an attempt to further build TRUST with consumers.

Customised experience comes at a price for the consumer – the need to provide personal information. So, marketers must seek a balance regarding how they can meet both needs and build their brand along the way.

Trust that will lead to a deeper relationship with one's brand.

People are willing to give up their data knowing that:

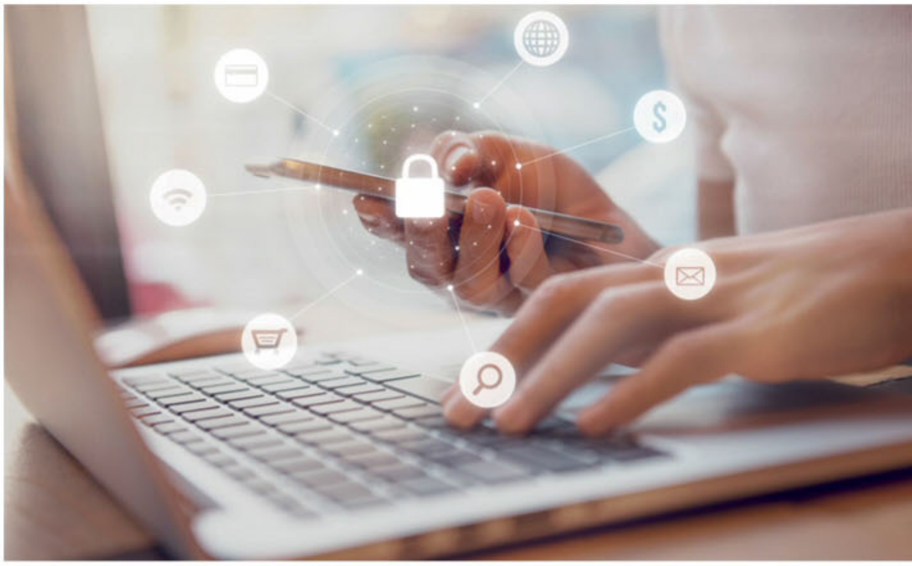
- only the required data needed is being collected and processed;
- it is used for only the purpose it was intended
- the veracity of the data is maintained;
- adequate security is in place;
- and when an incident occurs, the company takes full responsibility in return making their lives easier and less time wasted.

What happens when a data breach does occur? According to the US National Cyber Security Alliance, 60% of small businesses closed just six months after a cyberattack. According to Thycotic, "while you may have done everything to stay protected, and everything to be compliant this does not necessarily mean that your business will survive."[6] Once a data breach occurs, the company must respond quickly and intelligently. Cyber incidents should be treated like any crisis management and must involve cross business functions working together as a team whereas too many times they are left solely to the IT team. Being prepared and having a tested incident response plan can mean a company can reduce the impact of cyber incidents, get back to operations quickly, and maintain confidence with consumers. A well-defined incident response plan means:

- Executive team are educated and cyber aware.
- Incident ownership is detailed and responsibilities are clear.
- Internal and external capabilities are identified.
- PR and legal are ready at a moment's notice.
- Alternative communication and backup plans defined.
- Eradication and recovery steps prepared.

In an ever-evolving world like that encompassing cyber security, there are few hard and fast rules. But as we mentioned earlier, the goal is simply to stay a step ahead of the hackers. Right now, that is defined by:

1. Offering a more secure environment than competitors, or other online retailers/resources.
   - Making a concerted commitment to consumer security is a very basic first step. In many countries, the security of consumer data is paramount and not available in any form unless specifically granted by the consumer themselves.
2. Prominently displaying partners as it relates to privacy and security of consumer information.
   - Just as security signage outside a home such as an ADT home security sign can deter burglars from entering, so too can identifying third-party security partners on a website. This is just a subtle indicator to hackers to move on to other potentially less secure pastures. In the hacking world, any sign of potential resistance is also a signal to move on to the next easiest target. There is no need to take on the risk of a challenging opponent, if there are easier organisations available to hack into.
   - Meanwhile, don't provoke or challenge the hackers. If you claim to be impenetrable, hackers will take it as a challenge to prove you wrong.
3. Being transparent about security efforts, and how collected data is used.
   - Make the consumer king yet again. Be open and honest with them regarding why the data is being collected and how it can help them. The key here is to continue to focus on THEM, not US (or the organisation).
4. Respond swiftly to any security breach, and work quickly to restore confidence within one's customer base.



Cyber incidents should be treated like any crisis management and must involve cross business functions working together as a team whereas too many times they are left solely to the IT team.

DON'T PROVOKE OR CHALLENGE THE HACKERS.
IF YOU CLAIM TO BE IMPENETRABLE, HACKERS WILL TAKE IT AS A CHALLENGE TO PROVE YOU WRONG.

5. Don't piss-off the hackers through efforts to provide a secure online experience.
   - Hackers exist in communities. Working against this community can have an adverse effect on security efforts.
6. Ensure the organisation's focus is in the right area – securing consumer data.
   - The gaming industry is well aware of this. Their focus in many instances has been on hardening code to reduce piracy. This has made them more susceptible to data breaches against gamers. In some instances, this is exacerbated by enthusiastic gamers who disable their antivirus apps, as they tend to slow down their machines which is the last thing they want when in gaming mode. Either way, focus needs to be placed squarely on inhibiting any access to data and to avoid any long-term impact on any of the key players in this industry.

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FUN & GAMES:
Business Models for Innovation

BY GREGORY GIMPEL

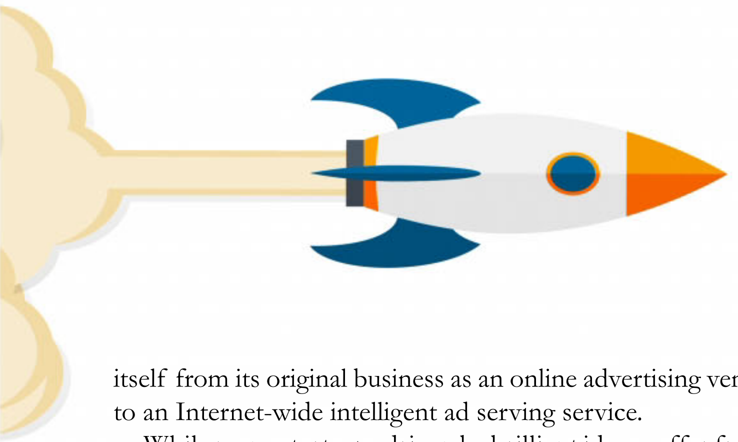
While many brilliant ideas come from start-ups with unsustainable business models, well-established firms suffer from an inability to innovate, especially in regulated industries. The innovation paradox can be overcome by applying the right business model: 1) Fun & Games, which ignores regulations; 2) Hide & Seek, which exploits regulatory ambiguities; and 3) Carnival Rides, which requires full regulatory compliance.

The Innovation – Profit Gap

Barriers to entry decrease daily as technology becomes cheaper, key infrastructure moves to the cloud, and digital platforms make it easy to develop apps and sell physical products. Ease of entry, combined with the growing mantra of "fail fast and fail often", is creating a flurry of entrepreneurial efforts. Many digital ventures, however, launch a product or service before developing a way to create profit. For every big success, countless entrepreneurial tech ventures go bankrupt and thousands survive, but never thrive.

Although elite firms such as Netflix, eBay, and Zynga have successfully monetised their innovations, many innovations launch without a business model and the dangerously vague "build it and profits will follow" mindset. For all its popularity, YouTube remains a perennial money loser that survives only through subsidies from its parent Google.[1] Twitter continues to lose money, with aggregate losses exceeding $2.5 billion.[2] Other build-then-monetise firms find profit by radically redefining their core business models, such as Facebook, which transformed

While many start-ups driven by brilliant ideas suffer from poor or absent business models, well-established firms with proven business models often suffer from an inability to innovate.



itself from its original business as an online advertising venue to an Internet-wide intelligent ad serving service.

While many start-ups driven by brilliant ideas suffer from poor or absent business models, well-established firms with proven business models often suffer from an inability to innovate.[3] This is especially true in industries that face heavy regulation.[4] Firms in regulation-heavy sectors such as healthcare, finance, and telecommunications are often slow to bring innovative products and services to market. The regulations present many constraints; however, much of the innovation shortage can be overcome by applying the right business model. This article introduces a business model framework for launching innovations in highly regulated environments.

Introducing Three Business Models

After a careful study of businesses within heavily regulated spaces and interviews with top executives, three innovation business models emerge: 1) Fun & Games; 2) Hide & Seek; 3) Carnival Rides. Each business model reflects different constraints from regulation and different levels of potential impact. Rapid innovation and most disruptions usually come from the first two business models. The ability to scale up in regulated environments comes from the third.

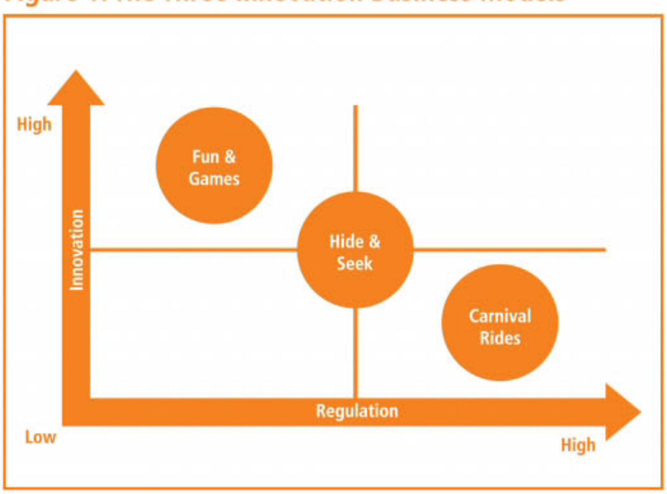
The *Fun & Games business model* ignores regulations by stating that the product or service offered is NOT for use that falls within the regulated space. The Fitbit wearable health-monitoring device is one of the most high-profile examples of this business model. The product clearly offers the capability of monitoring blood pressure, heartrate, and other functions that clearly fall within the regulators' definition of medical devices.[5] Nevertheless, the company's terms of service specifically state: "The Fitbit Service is not intended to diagnose, treat, cure, or prevent any disease."[6] Thus, the Fitbit was launched stating that it is for entertainment – fun & games – rather than the health-monitoring reasons most customers will use it for.

The *Hide & Seek business model* exploits regulatory ambiguities or operates where existing regulations are unenforced. For example, in the United States, the Food and Drug Administration has a practice of not regulating mobile apps as long as they pose a low risk to the public. This allows companies to introduce products like the Medisafe Meds & Pill Reminder, which is designed for "managing drugs for many complex health conditions such as diabetes, heart conditions and cancer treatments, but also as a convenient reminder for taking birth control pills and vitamins. Track your glucose levels, blood pressure, pulse, temperature and weight alongside your medication management".7 It also enables firms to design tools for doctors and other medical professionals, such as the QxMD Medical Calculator MDSS, which is used to help doctors diagnose and treat conditions such as heart failure, lymphoma, and chronic obstructive pulmonary disease[8].

The *Carnival Rides business model* is employed by established companies that seek regulatory approval and compliance while developing new products and services. It is like a carnival – companies must pay the price of admission, then continue to pay every time they try something new, just as carnival goers must pay to enter and then pay for every ride. This business model is expensive financially and costly in terms of time lost to bureaucratic approval processes. Innovation is slow because initiatives are developed using design processes that are constrained by regulatory compliance procedures. Most of the established firms within the healthcare and financial services sectors employ this business model.

Some projects require the Carnival Rides business model. At the same time, many innovations, especially those with a quick time-to-market and those gaining wide adoption by individual (rather than corporate) users will come from companies using the Fun & Games and Hide & Seek business models.

Figure 1. The Three Innovation Business Models



Operating within the “Hide & Seek” area of a regulated industry allows you to innovate quickly and bring your products and services to market quickly.

Fun & Games

The *Fun & Games business model* is most often used by firms with a single product or service offering. They serve an established need within the regulated industry. They exploit the market; they do not create it. Consumers, not companies or professionals, are the target customers. There are two revenue models: sales and freemium offerings. Fun & Games firms can charge consumers for the product, like Fitbit charges for its devices. Freemium models, in which customers get some functionality for free but must pay for premium features, can be effective when providing services tied to products; however, except for mobile video games with in-app purchases, freemium strategies for services not tied to products are rarely successful.

Fun & Games offers the prospect of long-term monetisation that enables entrepreneurial firms to continue as ongoing concerns. The companies can be profitable selling their products and bundling freemium services to maintain ongoing revenue streams after the initial purchase. It is not advisable for a company founded on a Fun & Games business model to try getting regulatory approval. It is expensive, time consuming, and can reduce the firm’s ability to argue that the product or service is only for “fun and games”.

Fun & Games customers are usually a one-sided network of consumers, not professional users. Open your technology or API so that other firms can add functions, which makes your offering more attractive to new customers. Your technology can become a platform for Hide & Seek and Carnival Rides firms to build upon, increasing demand for your core product or service in the process. Allow other companies to apply for regulatory approval of products and services that use your core platform. In many industries, once your core platform has been approved for a few regulated uses, it sets precedents that make future approvals easier. This leverages other companies’ money and resources in ways that benefit your firm. Other companies build the market for your product or service. Other companies formally open your product to regulated markets while you remain unregulated.

The Fitbit wearable health-monitoring device is one of the most high-profile examples of Fun & Games business model.

Managers of Fun & Games firms should keep in mind the following key lessons:

- Open your technology to other firms to increase the attractiveness of your product
- Don’t pursue regulatory approval
- Instead, allow partners to apply for narrow approval of their specific use of your platform.

Hide & Seek

The Hide & Seek business model is also built upon a single product or service offering (or closely-related set of offerings). Like Fun & Games, the innovation meets an established need within the regulated industry. The business model is appropriate when 1) there are no competing products or services; 2) competing offerings have failed to gain much traction; or 3) the product or service is comparable to existing offerings but offered at a significantly reduced cost.

Revenue comes from companies and professionals working within the regulated industry. Companies and industry workers will pay to use the product to improve or facilitate their job performance, like doctors who use QxMD’s Medical Calculator MDSS. Hide & Seek firms can also employ a subsidy revenue model, in which they provide the product or service to one set of users for free, while they require other user types to pay for it. The Medisafe Meds & Pill Reminder smartphone app employs the subsidy model. It provides the app for free to patients, but charges doctors to use the app to monitor whether patients take their medication properly.

Operating within the “Hide & Seek” area of a regulated industry allows you to innovate quickly and bring your products and services to market quickly. “Flying under the radar” presents both opportunities and risks. You can sell your offering within regulated industries and to the consumers who make up the Fun & Games customer base. BUT, it also puts you at a competitive disadvantage to firms who ultimately release competing products that have formal regulatory approval. Hide & Seek offers the prospect of long-term monetisation that enables

> Carnival Rides executives should seek to buy products and services created by firms using the more agile business models.

entrepreneurial firms to continue as ongoing concerns; however, the size of the market will remain limited because many firms and individual practitioners within heavily regulated markets will be weary of using the product.

Hide & Seek firms are not speculative and created only to be sold, as they have viable revenue streams. Their advantage is faster time-to-market than firms working strictly within the regulatory approval system. Nevertheless, executives should build the business as a proof-of-concept to be acquired by Carnival Rides firms that can better navigate the approval process and have existing infrastructure to exploit the product or service within the regulated industry.

Managers of Hide & Seek firms should keep in mind the following key lessons:

- In many cases, your ability to scale will be limited, as potential customers may be hesitant to use unapproved products and services
- Prepare for competitors to lobby government agencies to begin regulating your products or services
- Team with a Carnival Rides firm when seeking regulatory approval. It will be better equipped to navigate the regulatory process and market your product within the regulated market.

Carnival Rides

Carnival Rides firms should recognise that they are at a strategic disadvantage when it comes to creating innovative products and services. The regulatory bureaucracy slows down the release of new offerings. Therefore, Carnival Rides executives should seek to buy products and services created by firms using the more agile business models. Once products and services have been developed and field tested in the marketplace by more nimble companies, Carnival Rides firms can leverage their expertise to navigate the regulatory approval process. Carnival Rides firms also should create an investment subsidiary that funds Fun & Games and Hide & Seek firms. Carnival Rides firms can then formally acquire the products/services and run them through the approval process only after they are proved to be useful. This allows Carnival Rides firms to combine the greater innovativeness of entrepreneurial firms with their financial resources and expertise navigating the formal approval processes.

Managers of Carnival Rides firms should keep in mind the following key lessons:

- Look for opportunities to grow with help from innovative start-ups rather than lobbying regulators to police these firms
- Increase nimbleness by providing seed round investments in start-ups that create products and services aligned with your strategic goals
- Use your expertise with regulatory procedures to shepherd offerings from Fun & Games and Hide & Seek firms through the process.

Concluding Remarks

Although several examples in this article come from the healthcare sector, these business models apply to many regulated industries. For example, within the financial services sector, investment planning tools useful for retail investors can be packaged as games or educational products under the Fun & Games business model. Likewise, research firms can use a Hide & Seek business model to sell investment analysis reports to financial professionals as journalism products rather than financial products or services. By employing the less constrained business models, firms can penetrate markets and challenge the incumbent Carnival Rides firms. At the same time, resourceful Carnival Rides executives will reach outside their firm boundaries for Fun & Games and to play Hide & Seek. EBR

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Organisational Vitality:
THE LIFE LINE FOR YOUR COMPANY

BY DAVID DE CREMER

Where do you see your company many many many years from now? In this article, David De Cremer tells us the importance of passion, energy, company culture and more in cultivating organisational vitality. Where best to learn than from global telecom giant, Huawei.

No company lasts forever! As in life, corporate funerals are no exception. Of course, an important challenge of any founder is to create long-term visions that enable long-term survival. To sustain a motivation to survive in the contemporary complex world requires a dynamic and collaborative organisational culture. A company unable to deal with the rapid changes, while not being able to question and reinvent itself will lack this drive to contribute to its long-term robustness. Given this economic reality, it is no surprise that current debates involve discussing what leaders can do to create a sustainable work environment to meet these dynamic forces. One focus that seems to emerge from these debates is on establishing fertile ground to make one's organisation and its employees more vital and energetic, or, in other words, focussing on promoting "organisational vitality".

The Rise of Organisational Vitality

As a human species we can only survive if we can use sources of energy. In fact, one of the basic requirements for life concerns the availability of an energy source. Specifically, conditions have to be shaped in such a way that energy sources like sunlight can be being transformed into food (i.e. a process called photosynthesis). In a similar vein, to remain an active and living entity, organisations need to create work environments that energise rather than deplete human resources. Most of us will have experienced the difference between a high-energy versus a low-energy company. In a high-energy company you can feel the passion of the people and how it influences the way they relate and connect with their colleagues, bosses and customers. The energy seems to be in the air and feeds creativity,

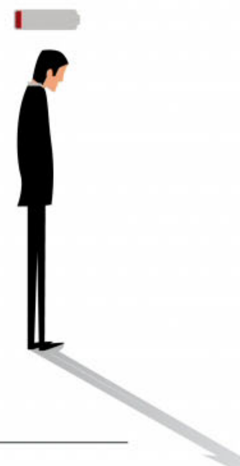
excitement and eventually performance. Of course, implementing a drive associated with high-energy levels is one thing whereas another equally important thing to do is to maintain this kind of energy. This challenge requires that founders can build cultures that inspire the right kind of energy, which is intrinsic, genuine and long-term focussed. The ability to infuse the organisation with this type of energy makes for a company characterised as high in organisational vitality.

Being effective in managing energy in effective ways is not an easy task to do. The fact that burnout is considered to be one of the primary drivers of employee absence and widely considered to be the number one health threat to employees speaks for itself. To deal with these health issues, companies now deliver different types of mindfulness training, which all have a focus on mindfulness meditation. These training sessions have been shown to positively affect people's well-being and ability to deal with stressful situations. Of course, these training sessions are in a way reactive as they have been implemented after the problem emerged. A more direct and preventive way is to create leadership in combination with an organisational system that serves as an almost unlimited source of energy. In addition, leadership building the right conditions for people to blossom also requires that the purpose and ambition of the company is clearly defined and endorsed by its members. Being clear about the purpose will bring resilience when unexpected changes have to be faced. It is clear that such a work culture may succeed by beginning each new business journey with the necessary energy and at the same time work on the ability to continuously be successful in meeting new challenges to ensure stability and viability on the long-term.

As such, in my view the notion of organisational vitality includes a focus on two important elements. The first element concerns the state that organisational members are in. Do they feel strong and energetic to take up the challenges and be actively involved? The second element concerns the competencies to extend the energy that is present in all living things into the future. Can organisational members sustain their level of energy to show the needed resilience for future challenges? These two elements require a kind of leadership that is able to elicit sources of energy in their followers but at the same time also to teach those same followers to regulate their levels of energy in a sustainable way. Recently, these leadership abilities to install organisational vitality have been summarised in the notion of spiritual leadership. Spirituality can be seen as referring to leadership being open and empathic to others, concerned with people's growth beyond one's professional skills, and opposite of employing a controlling and sometimes manipulative way of leading.

The notion of spiritual life and placing energy and stability as key concepts in effective leadership practices find its roots in more Asian philosophies and theories.

Critics have pointed out that the rise of a notion like organisational vitality combined with a stronger interest in the process of spiritual leadership has to be seen as a Western hype. Since the financial crisis in 2008, companies and leaders reached the point where they realised that the traditional Western management approach, which relies heavily on rational economics, needs to be modified to be able to come to terms with the uncertainty and unpredictability of the business world. The financial crisis was a powerful reminder that our life quality and corporate success cannot be sustainable by only focussing on the rational side of things. Instead, management theories need to embrace a more meta-rational approach that accepts human irrationalities and the spiritual life of employees. This perspective that organisational vitality may be a typical Western concern is, however, not entirely true. The notion of spiritual life and placing energy and stability as key concepts in effective leadership practices find its roots in more Asian philosophies and theories. At the same time, however, we have reached the stage of a global economy, making that effective leadership and building organisational vitality has to be looked upon by using an integrative perspective where East and West meets. One such company that fits these integrative criteria and is currently soul searching in a way that it aims to find



Ren Zhengfei turns his attention to what really matters to him: **"how to avoid becoming arrogant, complacent and sustain innovation to survive as a company."**

a balance between materialistic and spiritual work conditions is Huawei.

Huawei was founded in 1987 by Ren Zhengfei and until today is still a private company owned largely by its employees (about 98.5%). This Chinese telecom giant employs more than 170,000 staff and serves more than 3 billion customers. In the fiscal year of 2016 Huawei's revenue reached CNY521.574 billion (US$75.103 billion) and CNY37.052 billion (US$5.335 billion) in net profit. Although the company is nowadays run by a rotating CEO system,[1] it is fair to say that the impact and influence of its founder is still very strong. Over recent years, Ren Zhengfei has transformed into an important thought leader, both within and outside the company. As a thought leader, one of the most important questions he talks about concerns the issue of Huawei's survival. This is not surprising given the fact that Ren Zhengfei is known to be a person who after each business success or failure, turns its attention to what really matters to him: "how to avoid becoming arrogant, complacent and sustain innovation to survive as a company". It is his drive as a leader to keep Huawei employees hungry in aiming for the impossible. For obvious reasons, setting such goals requires energy and an organisational culture that continuously feeds the drive to stay hungry.

In trying to sustain such a drive, in the last year, the company has started several initiatives and discussions to install the necessary confidence that they can inject vitality in their organisation. Those efforts are the ones that Huawei refers to as implementing a spiritual culture. According to Ren Zhengfei organisational vitality is spiritual culture. Why has Huawei sharpened its focus on this topic? People familiar with the company know that Huawei makes use of their "Contribute and Share" principle. This principle stands for the idea that employees receive the freedom to show themselves and if their entrepreneurial spirit pays off in the projects they undertake they are eligible to share in the wealth generated. This approach has been very successful to create a company culture in which a shared sense of dedication and entrepreneurship has emerged. However, at the same time, this same kind of success has also created a potential pitfall in which an increasingly amount of distributed wealth (among the employees) is not generating more happiness and intrinsic motivation towards future projects and undertakings. As one employee noted on the online communication platform of Huawei, called Yinsheng Community: "Nowadays, the canteens in our representative offices are bright and spacious, business vehicles are increasingly upscale, and we have fewer turnkey projects. Despite this, we are not as happy as before. The company has invested a lot in strengthening the material culture, but the investments in this regard have not had the same effect as before."

Huawei as a company has always assigned much importance to building an intellectual climate where the spiritual and scientific world interacts. Symbolic messages combined with hard scientific facts drive many ideas and inspire the company to set its own path. However, in the transformation of Huawei from a local telecom leader to a world leader, the company also decided at one point to embrace the rational Western management styles. Specifically, in what we call their second phase of development,[2] which ran from 1997 to 2007, Huawei hired IBM to implement

The more energy employees feel they can extract from the work culture the more likely that employees will be dedicated to treat their customers well.

management structures to eliminate the chaos of their first 10 years of existence and to learn from the West to start building a more global vision. It was a move that demonstrated the awareness of Huawei that if they wanted to meet their ambition to become a world leading company in the ICT sector, they would have to adapt. In the words of Ren Zhengfei, at that time it was needed "To cut off your feet to wear the shoe." Together with better management and performance structures increased wealth arrived. But, as noted earlier, these changes installed a feeling that their spiritual culture was fading. Therefore, loyal to its Chinese philosophical roots, Huawei has since then tried to look for ways to bring in more creative latitude and room for spiritual leadership to take place. Its spiritual roots lie in their purpose statement, which is the sole focus on customer centricity.[3] Indeed, the way survival can be achieved is to put the customer central and to be able to feed this focus on a continuous basis organisational vitality need to be ensured.

Function of Organisational Vitality: Serve the Customer

Companies scoring high on organisational vitality are populated by passionate and energetic employees. Their energy fills the air and creates a vibrant work culture that is felt when entering the company. Interestingly, employee passion is one of the key dimensions that predict positively their willingness to serve the customer. If energy is low no passion will be felt by employees with the direct result that the interest of the customers will suffer. The more energy employees feel they can extract from the work culture the more likely that employees will be dedicated to treat their customers well. In light of this specific relationship between energy, passion and customer dedication, it is no surprise that especially a company like Huawei is looking for new means to promote its organisational vitality. Indeed, according to Ren Zhengfei: "serving customers is the only reason Huawei exists." Huawei sees innovation in the ICT sector as one way to help customers realise their dreams. Purpose at Huawei has thus one clear value proposition: "serve our customers."[4]

This passionate drive towards customers has been well documented over the years and is considered as a primary source of employee satisfaction. As one employee recently noted: "When the company first entered overseas markets, our colleagues in the field needed to overcome a lot of difficulties in their day-to-day life and work. We went to and from warehouses, built base stations, and lived in tents with our customers. Though life was difficult, we felt happy to work hard." An important consequence of this focus on customers is that those employees who care most about their customers will be promoted faster. This philosophy is part of the spiritual culture the company aims to implement, because it signals clearly that not only your objectively rated performance matters but that also other ways beyond performance level are rewarded. As such, multiple forms of contributions matter. As Ren Zhengfei, puts it: "We want engines big and small to drive our team forward."

How to Increase Energy and Vitality? Two Routes

When organisational vitality needs to be promoted an important mission will be to bring the level of energy that is going down up again. How to do this? In order to promote organisational vitality on the long-term it will be necessary to build a (a) foundation in which people's basic needs are satisfied (i.e. a material culture taking care of the basic needs of people) and (b) more spiritual culture that creates shared values that sustain the intrinsic motivation to keep growing and innovating beyond financial incentives. As one Huawei executive put it: "Material culture and spiritual culture must complement each other and develop together. This is the only way to generate sustained and improved motivation. The principal goal of strengthening both cultures is to cultivate a disciplined, capable, united, and dedicated team with a strong sense of mission and responsibility."

Route 1: Strength via Financial Incentives

Financial incentives are vital at any stage of both business and personal development as they satisfy basic human needs that are essential to survival. For example, money helps people to obtain clothing, food, shelter, and transportation; all services and goods that help employees to feel more comfortable in life and focus on their personal tasks at work. In this sense, financial incentives have a lasting and positive impact on human beings. Huawei has invested significantly in this route by offering a growing array of material incentives. For example, an average annual pay raise of at least 10% encourages employees to create more value. What is interesting is that research shows that financial incentives can actually help in making people more resilient to stress and difficult conditions.[5] These studies show that thinking about money or the presence of money can help people to withstand hardship – a much valued ability at Huawei – and feel strong. At the same time, the possession of money also helps employees to feel more autonomous, and in turn such a sense of autonomy has been found to be associated with higher levels of vitality and energy.[6] So, financial incentives are needed to build fertile ground for vitality to grow out, but although it is a necessary tool it is not sufficient. Indeed, over-reliance on material incentives will cause negative results. In this respect, a post of a Huawei employee on the *Xinsheng Community* is very telling. The employee wrote: "Mercenaries receive only material incentives. Sometimes a mercenary army is much more formidable than a regular army. However, without a sense of mission, a sense of responsibility, or the spiritual drive, such an army cannot sustain its capabilities. Only the sense of mission and sense of responsibility of a regular army can drive long-term dedication."

Route 2: Strength via Spiritual Life

To ensure that enough strength exists to sustain long-term passion and vitality, another lens is needed than only a financial one. If the view point that employees use to give meaning to their job is only a financial one, then by consequence only a short-term sense of motivation will exist. This other type of lens requires a high-order sense of meaning that gives spiritual strength and installs a strong sense of innate vitality. Once employees recognise and embrace this energising process, a long-term intrinsic sense of motivation will drive performance and decisions, which helps to realise untapped potential and capacities. Indeed, under such circumstances, other sources of energy will be tapped into that go together with a healthier life style and a mission to create value not only for oneself but for the greater community.

According to Ren, leadership can be compared to a fire place in which trust plays a role. The fire represents the passion and potential of the employees that needs to be unleashed.

First, with respect to the latter point, Ren Zhengfei recently made this broader perspective clear to all Huawei employees by noting that: "We [Huawei] need to have the right values, and work hard to create value for society… We need to have the right spiritual pursuits." Second, with respect to the former point, the first line of the motto of Huawei University is "be healthy and strong". Tsinghua University has recently required that students learn how to swim in order to graduate. This is actually something first proposed in 1919. According to Ren Zhengfei, having a healthy body is the basis for everything else, and Huawei employees also need to have healthy thoughts and actions. Physical exercise unites people. It gives us courage, and nurtures resolve, tenacity, and grit.

How to Lead Companies to Achieve Organisational Vitality?

In his typical style, Ren Zhengfei, makes a point to demonstrate in his own speeches that inspiring positive and upbeat energy in people is a necessary quality for leaders. In this respect he often refers to the observation that all successful people throughout history have had a spiritual yearning. So, what features make leaders effective to elicit energy in their employees and vitality in the organisation?

1 Emotional Intelligence (EI):

This feature involves the ability to identify your own and others emotions so that you can make correct interpretations, regulate your own emotions and say the right things. It is thus no surprise that people with high emotional intelligence are seen as more effective and performing people. By their ability to work with emotions and focus on the positive, leaders with high EI are able to relax negative situations and install a focus on more comfortable and positive emotions. This ability stems from their skill of not holding on to anger over how others treat them and focus on a positive future instead. This way, leaders can thus help playing down situations that ask energy from you (negative emotions) and instead promote environments that help building vitality.

2 Compassionate Leadership

As negative work relationships demand energy and can lead to burn-out and other related work diseases, leaders need to be able to develop and foster positive relationships. Positive relationships indeed improve employees' physical and psychological health and raise their feelings of optimism. This ability requires that leaders can take the perspective of their employees and

> If employees are confident that their leader is competent and will take their best interests to heart then there is less fear and more optimism to work harder. In other words, **rather than an energy depleting situation of fear it is important to create an energy evoking situation of optimism instead.**

adopt a forgiving style in dealing with failures. Such kind of leadership is referred to as compassionate leadership.[7] Individuals able to be compassionate toward others are masters in understanding the human nature. Because they recognise the primary drivers of human motivation, these leaders are able to understand employee needs better and build a fitting work environment that enhances inner drives and builds resilience over the long term.

3 Trustworthy Leadership

Great leaders are able to make their followers grow and achieve their potential. Trust plays an important role in this process in two ways. The first way is the ability to give trust to your employees so that they feel empowered. If employees feel that they are trusted by their leader, a sense of responsibility is elicited combined with a drive to develop one's own potential. In that sense, the leader provides the employee with more freedom to perform and demonstrate one's abilities. A second way of creating trustworthy relationships includes leaders demonstrating that they act in terms of the interests of the employees and they do so in competent ways. If employees are confident that their leader is competent and will take their best interests to heart then there is less fear and more optimism to work harder. In other words, rather than an energy depleting situation of fear it is important to create an energy evoking situation of optimism instead. At Huawei, Ren Zhengfei uses this psychology of trust in sophisticated ways as is clear in his portrayal of what leadership is about. According to Ren, leadership can be compared to a fire place in which trust plays a role. The fire represents the passion and potential of the employees that needs to be unleashed. Employees need to be empowered and be confident that they can earn that freedom.[8] At the same time, however, Ren Zhengfei is somewhat hesitant to give complete freedom, because if fire cannot be constrained a dangerous situation will emerge. For this reason the constraining contours of a fire place exist – to keep the flames under control. As such, Huawei endorses a view that gives trust to employees to develop their own passionate entrepreneurial style, but at the same time wants to implement a system that can control self-interested impulses.

Founder and president of Huawei Technologies Co. Ltd Ren Zhengfei

4 Transformational Leadership

Once in charge and being successful many people develop a habit to stick to the status quo bias. This bias reflects a tendency to be reluctant to implement corrections when they are needed. Because of the fear to make bad decisions and lose out on what has been built, a vast amount of leaders believe that it is better to keep acting in ways that made them successful rather than changing their decisions and strategy. An essential function of leadership – and what makes it different from the notion of management – is that it includes the ability to deal with change. So, the decisions and actions that made people successful will not necessarily sustain success in the future. For this reason, organisational vitality can be

sustained if the company leadership shows transformational qualities. These qualities include the willingness to experiment with the given situation and to assess which potential changes can be effective to sustain good future performance. A famous Western example of such leadership style concerns Amazon's CEO Jeff Bezos, who considers it his responsibility to create a work culture in which the status quo basically does not exist. For that reason an important skill to work at Amazon is to display a willingness to experiment at all times. In a similar vein, Huawei is also undertaking efforts to create fertile ground to establish a mindset that risks have to be taken to promote innovation and sustainable successes.

As mentioned earlier, Ren Zhengfei demonstrated this skill himself when he hired IBM in the nineties to ensure that "Chaos was removed and structure entered Huawei".[9] This forceful decision turned out to be a tremendous success and transformed Huawei into the company that we know today. However, standing still is not an option for Huawei and therefore Ren Zhengfei and his executives are already planning for the next transformation phase in which the rigid management structures that have evolved over time need to be simplified to create conditions of breeding again more creative chaos.

In conclusion, with rapid changes taking place at the global level and the existence of an increasing competitive business climate, organisational leaders have to be concerned more than ever about ways that make their company survive on the long term. One way to approach this challenge is to work on organisational vitality in which the human resources of the company are motivated and transformed into an energetic work force.

With rapid changes taking place at the global level and the existence of an increasing competitive business climate, organisational leaders have to be concerned more than ever about ways that make their company survive on the long term.

Being able to unleash the energy and vitality of what lives in the company will create value for all stakeholders involved and ensure a sustainable company future.

About the Author

David De Cremer is the KPMG Professor of Management Studies at the Judge Business School, University of Cambridge, UK, where he heads the Department of Organisational Leadership and Decision-Making. He is also an advisor to the ethics-based compliance initiative at Novartis. Before moving to the UK, he was a Professor of Management at China Europe International Business School in Shanghai. He is the author of the book *Pro-active Leadership: How to overcome procrastination and be a bold decision-maker (2013)* and co-author of *"Huawei: Leadership, culture and connectivity" (2017)*.

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Make an impact

Gender Diversity in the Boardroom: Finding an Optimal Level?

BY WON-YONG OH, LOREN FALKENBERG, AND JIM DEWALD

There has been an increase in the number of women serving on boards. Today, everyone talks about "more" women in the boardroom. The more, the better? Probably, not always. In this article, the authors propose that there should be an "optimal" level of gender diversity in the board depending on organisational and company needs.

Recent tracking of gender balance on corporate boards reflects that there has been an increase in the number of women serving on boards.[1] Among Fortune 500 companies, about 20% of the directors are female, and one-third of new director positions have been filled by women.[2] A number of European countries, including Norway, Germany, France, Belgium, Iceland, and Italy, have legislated quotas for female board members.[3] But even with this positive trend, there is an ongoing debate on how to increase gender diversity; however, we suggest that a more critical area of focus is identifying the appropriate gender balance and qualifications to improve board performance.

Research indicates that **female directors** broaden board discussions, facilitate collaborative approaches to leadership, and increase attention towards stakeholders' interests.

Research indicates that female directors broaden board discussions, facilitate collaborative approaches to leadership, and increase attention towards stakeholders' interests.[4] More importantly, having even one female director may improve board performance, while having more than one positively changes the dynamics in the boardroom.[5]

After completing a series of interviews with more than twenty male and female directors from North America, Europe, and Asia, we conclude, however, that simply enforcing "a gender quota of 40% (e.g. Norway) or less" will not lead to improved board performance. Rather than enforcing a "broad-based quota"

One director from Norway said, **"Selecting females based on gender, rather than qualifications, has not led to better board performance."** Thus, it is important to establish a system of selecting directors **based on experiences and skills that can satisfy the board needs**.

or assuming that a "set diversity ratio fits all organisations", we propose it is more important to align the gender composition and skills/knowledge matrix with the operating context of the organisation (i.e. the demographics of the key stakeholders).

We identify three steps towards improving board performance via the appropriate gender composition.

Aim for the "Right" Numbers. The targetted gender ratio should be based on the company's operating context. A North American director noted that industries with a greater number of female stakeholders, such as employees, clients, and suppliers, will have a greater pool of female candidates from which to select directors. For example, an appropriate gender diversity ratio might be even higher than 50% of women in industries where females comprise a majority of customers and employees.[6] Five of the eight board members of American Water Works Co. are women.[7] The senior vice-president of human resources justified this proportion saying that the company wanted the board to look like the customers and employees.[8]

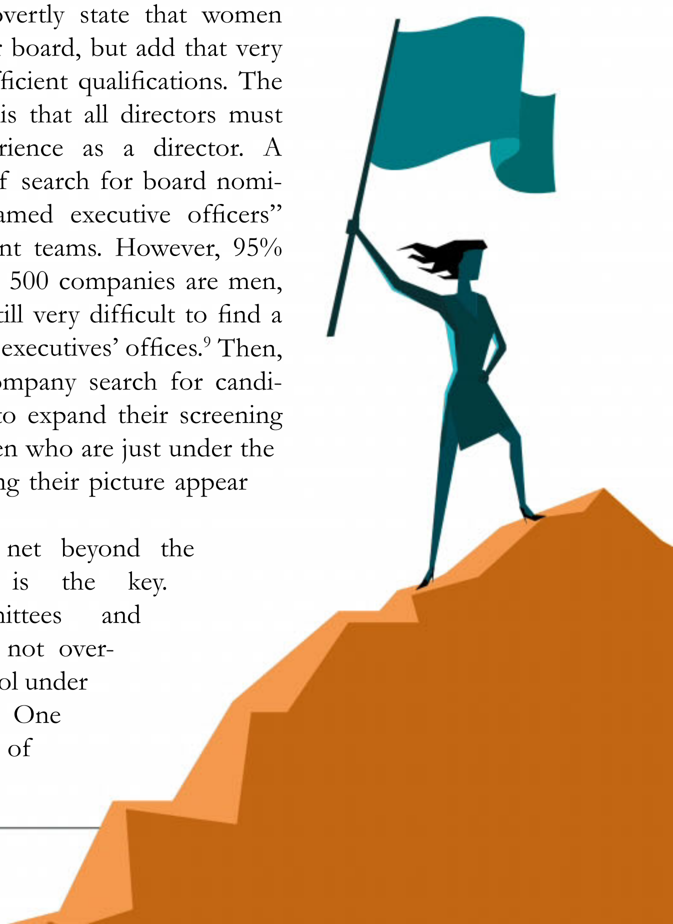
Also, the right number of women on boards may vary across countries. A male director in an Asian country said, "While I strongly agree that women directors are valuable in the boardroom, it is extremely difficult to find qualified candidates because there is a greater glass ceiling in our country, compared to European or North American countries." In contrast, a Canadian director noted that part of identifying the right numbers is to ensure that there is both female and male representation on a board and that both genders have a voice.

Clearly Define Board Needs. Before nominating new directors, whether male or female, the needs of the board should be carefully reviewed. It is relatively easy to identify the functional backgrounds (e.g. accounting, finance, and law) needed; however, a more difficult task is to identify individuals who can advise a firm's complex organisational decisions, including setting strategic directions, managing relationships with stakeholders, and dealing with emerging societal issues. Even though the experiences and skills required for such tasks are less obvious than functional qualifications, the company should define the board's needs clearly.

A major concern regarding gender quota systems, without careful consideration of board needs, is that a quota-based system may result in selecting women who lack the required qualifications. One director from Norway said, "Selecting females based on gender, rather than qualifications, has not led to better board performance." Thus, it is important to establish a system of selecting directors based on experiences and skills that can satisfy the board needs.

Find Hidden Talents. A key challenge is finding qualified directors. Many board nominating committees overtly state that women should serve on their board, but add that very few women have sufficient qualifications. The irony of this belief is that all directors must have previous experience as a director. A conventional point of search for board nominees is through "named executive officers" or senior management teams. However, 95% of CEOs in Fortune 500 companies are men, indicating that it is still very difficult to find a woman in the named executives' offices.[9] Then, where should the company search for candidates? Boards need to expand their screening process to find women who are just under the radar screen of having their picture appear in the annual reports.

Casting a wider net beyond the conventional area is the key. Nomination committees and search firms should not overlook the untapped pool under the C-suite officers. One director told a story of



a search firm presenting a board with a list of candidates dominated by men. The board had to push back by refusing to accept a list of candidates that was less than 50% female. Some of these female candidates might have less experience, but still have the appropriate level of judgement and critical perspectives contributing to the board discussion. Once candidates reach a certain threshold of qualification, it is less likely that their contributions to a board vary that much due to the differences in their years of executive experience.

OPTIMISING GENDER DIVERSITY IN THE BOARDROOM IS AN IMPORTANT ISSUE FOR EFFECTIVE BOARD DECISION-MAKING AND STRATEGIC INVOLVEMENT. IT IS ABOUT MORE THAN RESPONDING TO THE PUBLIC'S CONCERN ABOUT WOMEN'S EQUALITY.

In summary, optimising gender diversity in the boardroom is an important issue for effective board decision-making and strategic involvement. It is about more than responding to the public's concern about women's equality. Therefore, discussions of board diversity need to move beyond quotas to understanding factors that influence the "optimal" gender diversity for a given board, and to identifying and obtaining the "appropriate", rather than the unobtainable, background and expertise.

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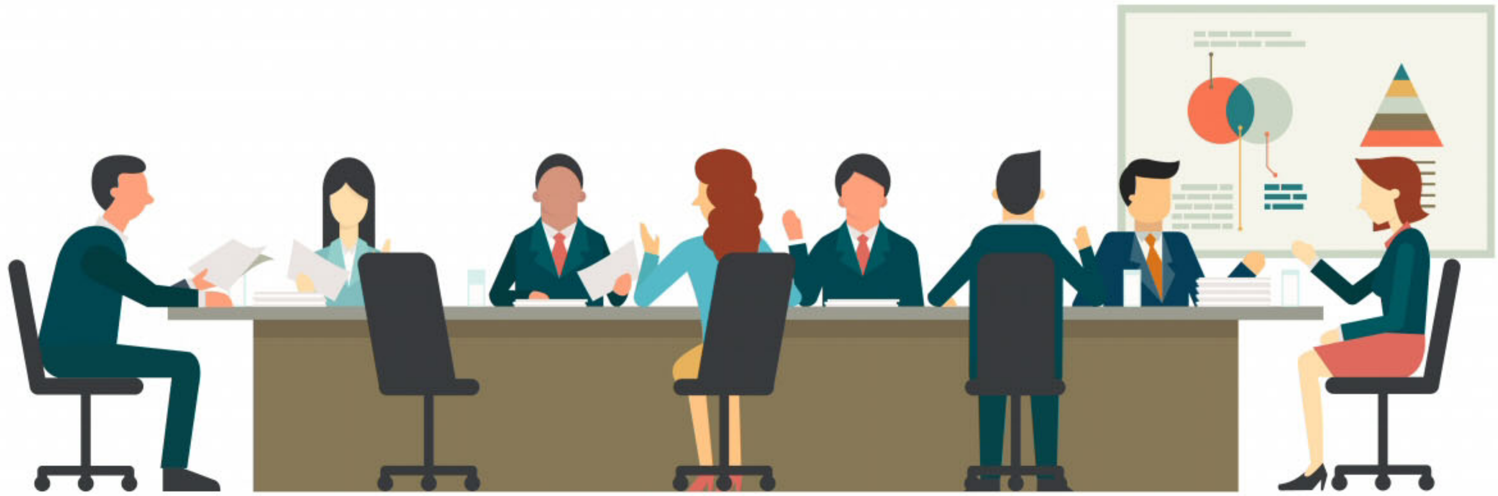

WHAT'S YOUR SUPERPOWER?

BY LAUREN NOËL AND CHRISTIE HUNTER ARSCOTT

Imagine you enter an interview for a job and an executive asks you: "What's your superpower?" How would you respond? Your answer would require the insight to know how your differentiators contribute value to your prospective employer and fuel your passions at the same time. Knowing your superpower – something that is different about who you are and how you behave that has contributed to your success – is essential for your career journey and your organisation's growth. Based on recent research by Lauren Noël and Christie Hunter Arscott, discover actions you can take to unleash your signature value add for the benefit of your company.

In our conversations with colleagues around the world who are interviewing for jobs across industries – consumer goods, technology, professional services – we have noticed a growing trend. In the interview process, they have been asked an interesting question: "what's your superpower?"

We were recently talking to an early career woman who had just joined one of the world's top employers for millennials. She was talking to us about her experience with her interview for the job. She shared that the only question she was asked during her final interview before the offer was made was: "So, what's your superpower – what makes you-you?". We know how important it is to hire the right person.[1] We thought it was odd for her not to be asked about her work history, specific accomplishments, or even the expected question about where she saw herself in five years. She then shared that it was arguably the most important question she had ever been asked in an interview. Why? It made her reflect on who she *really* was – what was it within her that made her tick; what special edge did she have that would make her a great contributor at work?

These conversations got us thinking about our research and work with early career women.[2] Imagine you were about to go for an interview for a job that you were excited about and were asked that same question. How would you respond? Your answer would require the insight to know how your differentiators could be used to contribute value to your prospective employer and fuel your passions at the same time. This has nothing to do with being boastful, but rather entails being clear and confident about your signature value add.

Let us make one point clear: Reflecting on your superpowers does not mean, in any way, that in addition to all the other stresses and expectations in your life, that you now need to be Super Woman! To the contrary, instead of trying to be all things to all people, we are simply asking you to think about what makes you-you. What drives you? What unique skills and insights do you have that have served you well over the years? What do you really enjoy doing? Then ask yourself: How can these inner drivers, qualities, and passions be unleashed to produce tangible and unique benefits to your company?

This has nothing to do with being boastful, but rather entails **being clear and confident about your signature value add.**

Don't be afraid to try different things and take on new challenges. Worst case? You won't fail, you'll learn!

We were in conversations recently during a leadership programme with two colleagues, Professor Linda Hill from Harvard Business School, and Professor Doug Ready from the MIT Sloan School, who co-authored, along with Jay Conger, a highly popular *Harvard Business Review* article: "Are You a High Potential?".[3] The article is filled with important insights into what traits companies are looking for to have employees placed in their companies' high potential talent pools. With its organisation-centric perspective, this is a very helpful article for companies. But we believe there's another part to this story – the employee-centric piece. With that in mind, here are actions rising star women can take as they set out on their career journeys.

A Letter to Early Career Women – What Makes You Different is What Makes You Great

Knowing your superpower – something that is different about who you are, how you behave, how you deal with the world around you, that is a differentiating factor that has contributed to your success thus far – is essential both for your career journey and your organisation's growth.

How can you optimise your best talents for your company, yet stay true to who you are? This challenge resonates across genders and generations, yet is of heightened importance to you – the early career woman. Research shows that ambition[4] and confidence[5] dip for a larger percentage of women than men only a few years into a career. As an early career woman, a better understanding of your unique differentiators will help you hone in on opportunities to be yourself, while simultaneously driving value for you and your company.

Get Started Now!

As you navigate your career journey, one message is clear: the road starts with knowing who you are, what you want to achieve, and why that helps your company win. Based on these insights, here are key actions that you can take:

1 Reflect on what has made you successful throughout your life, inside and outside of work. In an effort to get to the root of who you are at your core and understand your signature value add, take the time to reflect on what you love to do and what you are really good at. When you are at your best and time is flying by without you even realising it, what are you doing? Consider what has driven you throughout your life – whether that might be at work, home, sports, or in the community. Your unique differentiator is not just related to a skill you have at your job. It is what makes you successful as a person.

This could go back as far as your earliest years. For example, one successful pharmaceutical executive we interviewed said she gained critical insights about herself when she was in the first grade: *"I can remember saying to my teacher, 'but I don't want to color inside the circle'. Coloring inside the lines just wasn't me, and still isn't!"*[6]

Today, as a business leader, she's not tentative about exploring possibilities, taking risks, and going for opportunities. What have been the common threads that have made you

successful throughout your life? Know this and you could be on the road to uncovering your superpower.

2 **Pursue your "out of the box" interests.** Don't be afraid to try different things and take on new challenges. Worst case? You won't fail, you'll learn! Explore new paths. As one woman we interviewed said: *"A plan is a nice thing to have, but a career is an obstacle course. It's not a path. There is no straight line."*

Many of the women we talked to said that their career paths took twists and turns. One spent a year in Australia learning to sail, another had a fellowship with the government, others had career switches from sociology to finance or scientist to marketing executive. Often, these diversions turned out to be some of the most rewarding and valuable experiences of their lives.

Take advantage of sabbaticals or sign up for a class that aligns with your natural interests, even if it does not directly relate to your current job. Then, look for common themes. Did you enjoy the interpersonal aspects of an opportunity? Do you have a strong sense of "stick-to-itiveness" to excel at challenging tasks?

3 **Seek out networks that will further your strengths and interests.** Have you ever met someone with whom you instantly connected? With this person, you feel like your authentic self, they give you energy, and you naturally want to spend more time with them, introduce them to your community of friends and colleagues, and meet others in their network.

To increase the chances of this happening, we suggest you seek out networks that align with and further your interests. For instance, search for an upcoming event where the topic genuinely interests you. Have you always wanted to learn how to code or train for a marathon? Are you interested in mindfulness? Passionate about mentoring girls in your community? Register for an event or get a group together regularly that aligns with your natural passions, feels distinctly "you", and is not a logistical challenge to attend. More connections and chances to build upon your interests will naturally follow. You'll be more likely to fuel your network and tap into your authentic passions if you seek out opportunities that you are truly interested in. This sense of community is deeply important as it provides a sense of camaraderie that adds richness and meaning to your life and a valuable sounding board for the variety of challenges you face, including balancing work and family, career switches, difficult projects, and more.

4 **Be guided by purpose and passion.** When trying to hone in on who you are at your core, we encourage you to explore what you are truly passionate about. One executive we interviewed said: *"A millennial woman will not necessarily leave because she's offered a $10,000 increase. It's more the opportunity to work on the next meaningful, cutting edge, cool thing. They want to be a part of something bigger than themselves."*

Is there an initiative, big or small, that you could engage with at your organisation or in your community? For example, a women's group we met at a leading education company ran a Wikipedia edit-a-thon during which the participants learned how to edit Wikipedia pages, a new skill for all. Afterwards, they spent a day building Wikipedia pages for women in education or STEM fields who were previously under represented on Wikipedia. The initiative was a success: The participants learned a new skill and they were highly energised by contributing to the company's mission of improving the lives of global learners.

Get excited about your future and the future of your company and community, think big, and dive in to lead an initiative that fuels your passions. Along the way, you will likely discover more about what drives you.

5 **Articulate why you have been successful and how that benefits your company.** Once you know your signature value add, it is essential to be able to communicate how this benefits your company or potential employer. Women from our recent research identified why they have been successful throughout their lives and how this has positioned them to drive value and growth for their organisations.[7] As one female attorney said: *"A quality that I have is combining imagination with pragmatism. Imagination is what you need if you are going to build out a law practice, which is what I am doing at the global level at the moment. My mandate is to grow this global team. I love building. But in order to build, you need to have imagination."*

GET EXCITED ABOUT YOUR FUTURE AND THE FUTURE OF YOUR COMPANY AND COMMUNITY, THINK BIG, AND DIVE IN TO LEAD AN INITIATIVE THAT FUELS YOUR PASSIONS. ALONG THE WAY, YOU WILL LIKELY DISCOVER MORE ABOUT WHAT DRIVES YOU.

Or, remember the risk-taking pharmaceutical executive? She has endless ideas, many of which are shaping the future of healthcare. Her edge that helps her company win? She explained:

"I love anything that is game changing, or redefines a moment in time. What really excites me is always looking for new ways to do things and create value, have impact, and redefine."

Above all, remember this: In today's world, what makes you unique is more often than not what makes you valuable to your organisation. Be confident that if you tap into your superpowers that you can generate benefits for you and your company.

About the Authors

Lauren Noël is the Managing Director of QUEST, a global leadership centre for early career women. In 2017, Lauren was named to the Thinkers50 Radar list of the 30 management thinkers most likely to shape the future of how organisations are managed and led and was shortlisted for the 2017 Thinkers50 Talent Award. She holds an MBA from the MIT Sloan School of Management. She can be reached at lauren@herquest.org.

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In today's world, what makes you unique is more often than not what makes you valuable to your organisation.

Claiming Your Value: A Key Skill for Women in Transition

BY SALLY HELGESEN

"What's your worth?" might be one of the more difficult questions that women, particularly in the corporate world, need to face. In this article, Sally Helgesen elaborates on the importance of confidently articulating and claiming one's value as a key skill for women particularly those in transition.

The ability to strongly and persuasively articulate your potential value is a key skill for anyone in transition. This seems like an obvious point, but it's a requirement women sometimes shy away from. In my thirty years of working with women leaders around the world, I've encountered a suprising number who routinely underplay their achievements. This has the effect of holding them back at various points in their careers, but the costs can be particularly high during transitions.

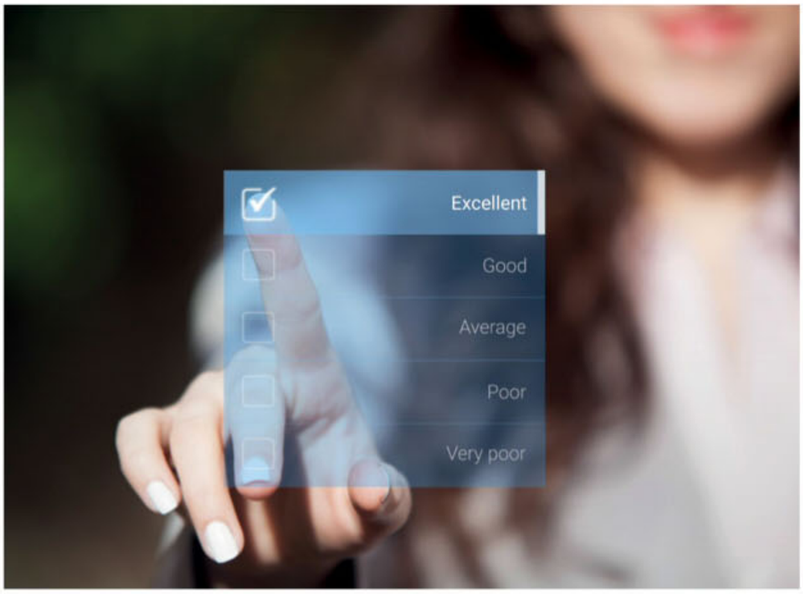
Let's first look at the hows and whys of women not fully claiming their value. Then we can examine how this affects them during transition, especially when seeking to move to a new job.

Some years ago, I conducted a series of interviews with senior female partners in accounting, law, consulting, and investment firms. I wanted to learn what they believed had been responsible for their success in cultures dominated almost entirely by men. I was especially eager to get their thoughts on how younger women in their firms might better position themselves for partnership.

The responses to my questions ran a wide gamut, but in two areas were remarkably consistent. When asked about the greatest strength of the younger women in their firms, the female partners almost unanimously cited the ability to deliver high quality work. "The women here go the extra mile when you give them assignments," said one partner. Said another: "They are extremely conscientious, crossing every *t* and dotting every *i*. They take deadlines seriously. They are meticulous and reliable. You can count on them to get the job done."

When asked what the younger women in their firms were worst at, the responses were also remarkably consistent. Here are the most frequent comments: "Hands down, they are worst at bringing attention and visibility to their successes." "They often work harder than their male peers but seem to go out of their way to avoid taking credit for what they've done, especially with senior leaders." And, "A lot of our women seem uncomfortable using the "I" word, so they try to spread the credit around or even give it away. This might make them good people but it doesn't help their careers."

These observations were all made about associates in partnership firms, such as law, accounting, consulting and investment banking. But I find reluctance to claim achievements is common among women in every sector and at every level. For example, when delivering workshops to women at varying levels in organisations, I often reference my partnership survey and then ask,



Contrasting your refusal to claim credit for your own good work with an extreme opposite example can inspire you to feel morally superior to anyone who is comfortable doing so.

"How many of you are good at drawing attention to what you achieve?"

Usually, only scattering of hands go up. Sometimes, not a single woman describes herself this way.

When asked to reflect on why they struggle with claiming their achievements, answers vary. But two responses surface nearly every time: "If I have to act like that obnoxious blowhard down the hall to get noticed, I'd prefer to be ignored. I have no desire to behave like a jerk."

And, "I believe great work speaks for itself. If I do an outstanding job, people *should* notice."

Let's examine the "obnoxious blowhard" answer. It's quite common. A woman will frequently pick out the most shameless self-promoter in the organisation and decide that, if she tries to draw attention to what she's doing, she will be acting like him (it's usually a him). Since emulating this insufferable colleague's behaviour repels her, she decides to keep her head down instead of trying to get recognised for her contributions.

There are two problems with this approach.

First, citing "the jerk down the hall" as an example of everything you are not and don't wish to become betrays an either/or way of thinking. *Either* you exemplify the worse aspects of a given behaviour, *or* you behave in an entirely opposite manner. Either/or thinking offers no possibility of finding a middle ground, no graceful way, for example, to bring attention to the quality of your work without being obnoxious and self-serving. This then becomes a convenient way to justify your inability to find a middle ground.

Second, contrasting your refusal to claim credit for your own good work with an extreme opposite example can inspire you to feel morally superior to anyone who is comfortable doing so. This is unhelpful, because it gives you an excuse for buying into what is ultimately a rationale for staying in your comfort zone. Instead of asking yourself *why* you have trouble bringing attention to your successes and then figuring out an appropriate way to do so, you congratulate yourself on being a wonderful human being who doesn't need to toot her own horn – and then try to take solace in that when you're passed over for a promotion.

The other answer I frequently hear – "if I do good work, people *should* notice" – is also ineffective, particularly given how busy people are today. For example, I worked with a senior Silicon Valley engineer whose morale and career were suffering from precisely this misplaced expectation. She described herself as a "go-to" person in her firm, someone who had broad and wise relationships and made good use of them to keep resources flowing and connect others with people who could help them. She was therefore stunned when, during her annual performance review, her boss critiqued her for not being broadly connected in the company and so unable to spread the word about his unit's innovations.

The engineer was deeply disturbed by this feedback. She said, "Here he was criticising me for what I thought I was *best* at, what I thought was most valuable about what I offered. I felt like he didn't know me or appreciate me, which was discouraging, since I'd always thought we had a good relationship. But then I started asking myself *why* he had this impression. And I realised: how could he know I was well-connected when I'd never bothered to tell him? He didn't monitor my email. He didn't stand guard at my office to watch who went in and out. He didn't know my

Research suggests that women are more likely to be judged on their achievements whereas men are more likely to be judged on their perceived potential.

value because I'd never told him! I just somehow figured he would know – or that he *should* know."

Once she recognised this, she was able to shift her boss's perceptions by deciding to present him each Friday with a list of people in the company she had connected with that week. "I felt awkward at first," she reported. "I feared he would think I was wasting his time. But he appreciated it. He saw the connections I was making as strengthening him. And he told me, 'This is information I need to know.' "

Her proactive approach gave her a way to more powerfully articulate the value she provided on the job, and came in handy when she applied internally for a higher position. She explains, "First, I had gotten over my shyness when talking about myself, so I no longer trying to be modest and non-threatening above all. And second, I now had enthusiastic support from my boss, who was able to make the case that I would be a big asset to any division in our company that wanted to spread the word about what they were doing."

It's easy to see why comfort with claiming your value is useful when making a transition. But it's important to remember that people usually move to a higher position not just (or even primarily) because they've done well in their present job, but because they make others, especially higher ups, aware of their value while also making clear that they're aiming for something more ambitious.

However, claiming your demonstrated value and articulating your *potential* value are not the same thing. Skillfully positioning yourself for your next job requires you to articulate why what you have done qualifies you for something more demanding. This can be particularly challenging for women.

For example, research suggests that women are more likely to be judged on their achievements whereas men are more likely to be judged on their perceived potential.[1] This often provides men with a strong advantage when being considered for the same promotion as a woman.

Many commentators view this achievement/potential divide as a prime example of unconscious bias, and certainly this is often the case. But two examples from my own experience suggest that women may also be penalised for not explicitly making the case for their potential value or trumpetting what exactly they intend to achieve.

Two years ago, I undertook a survey of senior female law partners to find out what kept them in their jobs. There's been a lot of research on why women leave law firms, and I wanted to look at it from the other side: what motivates the top tier of women in firms and keeps them engaged? I surveyed about 30 senior female law partners, many of them among the most successful in their profession. I learned a lot, but one takeaway was especially vivid.

The majority of them had made partner later than men with comparable qualifications who had been hired in the same year. Every one of them found this discouraging when it happened, and all of them were of the opinion that senior male partners tend to be more sceptical of what women can contribute. However, a surprising number also said that, when they inquired *why* they had not made partner in their first year, they were told that the head of their practice "had no idea" that they aspired to partnership.

As one survey participant said, "Why did he think I was working myself to the bone? I would have thought that was sufficient evidence, but apparently he was misled by the fact that I hadn't been talking about how I wanted to make partner or saying what a great partner I would be starting on the day I arrived. My male colleagues had done so, so they were perceived as having fire in the belly, and their actions from their arrival were scrutinised through prism of "is he partner material?" Since I never said anything, either about making partner or about why I thought I could be successful at it, no one paid attention. I had figured that doing stellar work would get me there, but it was clearly not enough."

"The Fearless Girl" statue in Lower Manhattan was made to help mark International Women's Day. The plaque below the statue states, "*Know the power of women in leadership. SHE makes a difference.*"

Upon hearing that her practice head had no idea she wanted to be partner, this woman changed her behaviour. She says, "I began proclaiming to anyone who would listen that I was set on being partner. And I figured out how to talk about why my credentials and successes made me uniquely qualified. After I started doing this, I made partner within six months. And now I tell every female associate in our firm: if you want to be partner, you have to let them know, and continue to let them know at every opportunity."

Discomfort with articulating your ambitions and your potential can be a hindrance to women in transition at any level, but it can have an especially severe impact when seeking a new job. I got a good lesson in this when interviewing search firm professionals in preparation for a book about behaviours that get in successful women's way.[2] A partner who ran a firm that placed health care professionals told me, "We get so many supremely qualified female candidates but we find women are often tentative when describing their skills and experience. For example, it's not uncommon to come across comments in application letters such as, 'I've never held a position like this before so I'm not sure if my qualifications are an exact match.' "

By contrast, she noted, "A man might typically say, "I have exactly the skills you are looking for and can easily meet these requirements because I'm excellent at x, y and z." Maybe x, y and z have little to do with the actual job he's applying for, but his confidence is so convincing it sweeps you along."

A frequent upshot, the search executive explained, is that "the job may end up going to a less qualified man. Since he so firmly believes he can do the job, and since he views himself as superbly prepared, the employer who lists the position decides to give him a chance. Of course, unconscious biases may also be at work, but I also find that even highly qualified woman can be too hesitant in making the case that they are ready or have the skills their past record indicates they have."

Knowing how to articulate both your proven and potential value – strongly, persuasively, specifically and with confidence and verve – can be of enormous benefit to women in transition. But the time to start practicing is before you're looking for a promotion, or the next job.

About the Author

Sally Helgesen is an author, speaker and consultant who delivers leadership programmes for organisations and associations around the world. Her six books include *The Female Vision: Women's Real Power at Work*, *The Female Advantage: Women's Ways of Leadership*, and *The Web of Inclusion: A New Architecture for Building Great Organizations*. Her new book, *How Women Rise*, co-authored with Marshall Goldsmith, will be published in April 2018.

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Knowing how to articulate both your proven and potential value – strongly, persuasively, specifically and with confidence and verve – can be of enormous benefit to women in transition.

Overcoming the Illusion of Email Overwhelm

BY JOE BECCALORI

> What if, however, much of the urgency we perceive was actually "false urgency"?

One of the most dreaded activities that executives have got to face is treading through an overwhelming amount of electronic messages. In this article, the author shares a new perspective that can get you through an email overwhelm, useful hacks to put into practice, and one message that needs to be your new mantra.

Now, more than ever, we rely on technology as the primary form of business communication. In fact, in any given day the average business person has to content with at least 150 emails, 10 text messages, and a few dozen business-related social media and messenger alerts. In addition, busy managers can face the dilemma of a dozen or more unplanned inbound phone calls, unscheduled employee walk-ins dealing with everything from urgent client matters, to new ideas, or unsolicited, untimely feedback. It's no wonder that so many of us find ourselves ever-stuck in a cycle of communication overwhelm and daily distraction from core goals and responsibilities. We are also in a culture that has evolved into expecting immediacy in response-time and demand on our resources.

What if, however, much of the urgency we perceive was actually "false urgency"? What if, for lack of a system for dealing with a heavy volume of e-communications, we were instead just looking for a scapegoat for our lack of efficiency, or ability to prioritise. After all, if we were so busy dealing with every communication, unconsciously trying to please everyone with a timely and thorough response, and blindly prioritising all requests as equally worthy of our time, we could then blame the company, or outside forces, or the technology itself. The problem couldn't possibly lie with me and my inability to manage. Or could it?

Coming to Grips with Email Reality

The reality for the manager or executive is that we really do have a fair amount of control over certain communications processes, business procedures and processes, and staff. By developing our own control mechanisms, and internal communication culture, we can better manage or reduce communication volume, and with a little effort actually shift it into an effective time management paradigm, where we go back to using the technology as a tool for increased productivity, rather than the technology owning us.

Tips on How to Tame the Email Overwhelm Beast

Email Block Time. Choose the times in advance when you will check email, how much time you will spend responding, and limit the number and length of responses you are allowed in each cycle. Carving out blocks of time to tackle email may take some getting used to, but you will find that you can become more productive in other tasks you are obligated to. Giving 100% of your attention to the task at hand instead of an overflowing email inbox gives you the focus you need to get things done. Additionally, though we all do it from time to time, clicking that email icon on your phone the minute you wake up is not the optimal time for anyone to start checking email. This is the fastest way to overwhelm yourself the minute you wake up, and possibly miss some important messages while you are still adjusting to the stark brightness on your screen. Your email check block can still happen before business hours early in the morning, but try not to make it before your feet hit the floor getting out of bed.

Email Response Jujitsu: This concept takes all the energy coming towards you on an inbound email, and allows you to quickly redirect that energy towards a more effective form of communication, and also defers the communication timeline.

Not all emails require a timely reply, so only respond when necessary. For those emails that do require a response, you may find it can be a very brief response that conditions the recipient towards more practical communications patterns. Consider short, succinct replies like these:

- *"Received, thank you. Will add this to the discussions at our upcoming meeting"*
- *"Can we set a brief call later this week to step through this and develop an action plan?"*
- *"Thanks. Good idea. Please be sure to add this to our R&D ideas list for consideration at the next quarterly meeting, when we'll have time to appropriately address."*

The strategy here is to confirm that you have received the message, but that at a more mutually optimal time, you would like to flush out their ideas. This way, the recipient won't feel ignored, and you are able to divert your attention to them more fully at another time.

For more urgent emails that can be handled efficiently by another member of your management team, you can always redirect the thread so that you can still be in-the-know, but issues are tackled with more immediacy. Consider a reply like this:

"Thank you, I am including John on this email, as he will be handling the day-to-day on this account."

Cultural Email Protocol Training: You can also condition internal stakeholders, staff, or even your boss to keep a list of things they need to discuss and then share just the list in a single summary email to be reviewed once daily in a fifteen-minute face-to-face meeting. This protocol alone could prevent dozens of email threads from ever spawning. Consolidating these less urgent threads into a bulleted list of updates ensures that you stay informed in a fraction of the time. Think about the time of day that works best for your workflow – would the end of the day serve you and other internal stakeholders best, or should this meeting occur first thing in the morning right as the caffeine kicks in? A lot of the success that I have found in business can be attributed to procedures I implement that become standard across the company. Upon onboarding, employees are taught protocol, and though it can be improved over time, consistency limits mistakes and creates a better experience both internally, and when in contact with those outside the company.

Don't Read Every Email: It can be immensely helpful to have an assistant or executive admin read your email and identify patterns of communications and email filtering so you only need to read the important messages from the right people, and not be distracted by vendor pitches, unsolicited service offerings, newsletter subscriptions and other daily email distractions that the admin can route elsewhere, respond to, or bring to your immediate attention. Having a trusted second set of eyes on your email may even help you catch things you may have otherwise missed. Though this tip may be easier said than done to implement, releasing the grip on your inbox will free you up to re-channel your attention where it is truly needed. Managers are commonly cc'd on emails, but that does not necessarily mean that your attention should absolutely be focussed on that particular thread. The intent might only be that you can reference the email at a later date, while the meat of the discussion is handled by another point of contact. Training your team correctly, as well as trusting them is the key to mastering this idea.

Not all emails require a timely reply, so only respond when necessary. For those emails that do require a response, you may find it can be a very brief response that conditions the recipient towards more practical communications patterns.

Gone are the days of when "You've Got Mail!" was a thrill. The reality is that we all need to create a foundation to manage a cell phone that never stops pinging.

Set up Automated Email Rules: If an executive admin is not right for you, utilise the tools offered through your email provider or software. Email rules can automatically file messages using inbound email filters and storage rules. For example, if there are certain clients you absolutely cannot miss, use your email rules to automatically move messages from a specific person to its own specialised folder so you never miss a beat. Your rules wizards can even grant you the power to filter messages via keyword. Newsletters can automatically be filed into their own folder while unsolicited service offerings that have a "Special Offer!" call to action can be automatically deleted or archived for later viewing.

Use the Delayed Response Feature. Email responses can be electronically delayed if you are able to draft a longer email, but want to make sure that it gets to the recipient at the most optimal time. If you feel most productive answering email during your block at 11:00pm, you can use the delayed response feature to make sure that email gets sent out at 8:59am the next morning. It is not only more professional, but the recipient will not grow accustomed to having you at their disposal out of office hours. Delayed response also reduces the chances that you glance at an email, and never answer it. If you have a short answer that is not time sensitive, but you know it will lead to a further discussion that needs to be tabled momentarily, sending a delayed response ensures that you do get back to that person, but you still have the time to finish what needs to be done before delving further into that topic.

Develop Proper "Out of Office" Etiquette. You can use, but don't abuse the "Out of Office" (OOO) feature during days when you are in the office, but your attention needs to be in one place completely. This feature is especially helpful when travelling out of the time zone that those you are in communication with would typically find you in. Crafting the right OOO response can redirect the recipient to the appropriate person or outlet if immediate communication is required. Being transparent about why you are not currently on email is a best practice, and you should be specific about the time you'll be away, and when you'll return. As an example, here is a standard OOO message I'd use on a particularly busy day full of face-to-face meetings:

- *"Please note that I am working on-site with clients in the NYC area on [Insert date]. Therefore, I am not immediately available for phone calls and email. During this time, I will reply to urgent inquiries within 1 business day."*
- *"Current clients: For a timelier response, be sure to cc: your account manager on all project related email correspondence or call our main office at {XXX-XXX-XXXX} during business hours."*
- *"All off-hour emergency issues such as website outages may be reported 24/7 via email to Support@InteractMarketing.com for Interact hosting clients only."*

Once you have developed a message that works for you, consider duplicating your custom OOO message across all channels, including your office phone voice mail as well as your cell phone voice mail. Taking two minutes to coordinate custom OOO messages across all points of contact may save you uncomfortable conversations with clients that feel slighted by an ignored phone call.

I also find it useful to forward my cell phone to the office phones so that those trying to get in touch with me can still talk to a manager and get a resolution without waiting. Prioritising your time is important, as we all have finite hours in the day that everyone is constantly trying to get a piece of. In addition to forwarding calls, if you're on the road with meetings all day, but those you are in contact with are more used to sending you a text message, there are apps that auto reply for you. This not only keeps you safe behind the wheel, but it's just one more way to make sure that business associates, co-workers or potential clients know that your intention is not to ignore them. You can find apps compatible with both Apple and Android devices for most cellular carriers.

Put It Into Practice

Gone are the days of when "You've Got Mail!" was a thrill. The reality is that we all need to create a foundation to manage a cell phone that never stops pinging. You can tame the Email Overwhelm Beast by implementing these ideas across the company, so that everyone on your team is on the same page, and clients or customers know what to expect of your firm. Your ability to run your day starts with your confidence to take it on, full force.

Don't let your inbox run your life.

About the Author

Joe Beccalori is a twenty-two-year digital marketing veteran and industry thought leader. After working for fifteen years in enterprise web programming, design, and marketing services he founded Interact Marketing in November 2007 and is currently the company CEO, visionary, and public speaker. He is also a contributing author on *Forbes, Huffington Post*, and Relevance.com.

CHIEF WELLBEING OFFICER

BY STEVEN MACGREGOR

In this issue we include an excerpt from Steven MacGregor's new book, *Chief Wellbeing Officer: Leading in the Fourth Industrial Revolution*, co-authored with Rory Simpson and published by LID.

"We stand on the brink of a technological revolution that will fundamentally alter the way we live, work, and relate to one another. In its scale, scope, and complexity, the transformation will be unlike anything humankind has experienced before."

– Klaus Schwaub, Founder, World Economic Forum

In a city that is both ***mar*** and ***muntanya*** (sea and mountain) Barcelona has no shortage of stairs. There is however a set that is less well-known. This secret stairway winds itself up from the upper part of the Sarrià neighbourhood, starting at the world-renowned Montserrat school and delivers you into the main square of the village of Valvidrerra. Now, if you were to climb these 477 steps you would surely be tired, but happy, and enjoy the best views of the city of Barcelona.

Let's say you devise a strategy to make those 477 steps a little less daunting. Good practice in fields from learning to athletic training would advocate breaking a big goal down into bite-size chunks. Maybe taking 40 steps at a time then pausing for breath would seem a reasonable approach. So where do those 40 steps take you? A little less than 10% of the way to enjoying those fabulous views (and perhaps a well-deserved refreshment in the town square) right? What if we change the scale? Do you know where 40 steps would take you if we substitute the linear scale for an exponential one? The moon!

We present this vignette as a way of understanding the shift in mindset that is happening today in many areas of society, from technology advance to population increase. Many people believe we are at a tipping point in human history with an Artificial Intelligence driven near future ready to bring about unprecedented levels of change.

Arriving at the Moon is an appropriate image, with "moonshot thinking" being increasingly employed by ambitious, innovative and disruptive organisations worldwide. First coined by Google X in 2010 (now simply X after the group

name change to Alphabet in 2015) moonshot thinking is inspired by the original moon landing in 1969 – an incredibly difficult thing to do with little actual understanding at the time of setting the goal, of how to actually do it. Aiming for the impossible and starting from scratch are therefore two of the defining factors of moonshot thinking. The combination of ***"a huge problem, a radical solution to that problem, and the breakthrough technology that just might make that solution possible"*** is, according to X, the essence of a moonshot.

AIMING FOR THE IMPOSSIBLE AND STARTING FROM SCRATCH ARE TWO OF THE DEFINING FACTORS OF MOONSHOT THINKING.

Though pioneered by a business much of the focus is on grand challenges that face society as a whole. Examples within the X portfolio include Waymo, the self-driving car and Project Loon which aims to bring the Internet to the most inaccessible parts of the world through hot-air balloons. Projects "graduate" when they are mature enough to be developed within another part of the business, such as the case with Waymo and others including Google Brain which is driving development in Artificial Intelligence.

Waymo, Google's self-driving car
© autocar.co.uk

The change in thinking where failure is celebrated (even encouraged) and short-term value is eschewed in favour of the deep learning that drives long-term leaps needs a supportive environment of course, together with people who have a deep passion for what they are doing on a day-to-day basis. Will we be able to create a critical mass of these passionate, supportive environments to truly realise a shift to exponential progress?

Chief Wellbeing Officer is for anyone who wants to create a more human workplace. It is a comprehensive and accessible guide for enterprises of all shapes and sizes to improve health, happiness and to achieve high-performance. In an age where everyone is focussed on digital transformation and artificial intelligence it is those organisations who increase their care for humans who will thrive. In fact the goal is a more human organisation.

Our vision is to help create environments that allow leadership to flourish from all levels and functions of a business, in order to make the best of the many opportunities in this exciting age. It will be of particular interest to Chief Human Resource Officers as they become more involved in the strategic direction of the company. Indeed, all managers in human resources and learning and development will gain value in an age where talent attraction and retention is a key differentiator and where learning is a lifelong on-demand process.

Yet we see great value in the book for those outwith, perhaps aspiring to, such managerial positions. We hope to be of particular use to those charged with wellbeing in an organisation at a relatively junior level, and that the discourse here may help them make the case for a louder voice. In a world where rapid change is the norm, leadership by example, and from all levels of the organisation is very much sought after. The holistic approach offered in ***Chief Wellbeing Officer*** will allow any workplace professional the means to think on their own life and how that fits with work. Being

Our aim in *Chief Wellbeing Officer* is to accompany you on those steps as a means of changing your mindset to the world around you.

able to reflect on, and change behaviour, can reap tremendous benefits through significant improvements in wellbeing.

The book contains three parts, moving from presenting the big picture towards concrete action. Part 1 is "Chief" which highlights the top-level view of wellbeing, discussing the key organisational and societal issues for more humanity at work. Responsibility and purpose are key themes in discussing the role of business in society today, and into the future. This first part of the book will set the foundations by focussing on the "WHY" allowing us to address any cynicism over the presence of wellbeing at the top table of business. We establish the human foundations upon which a more enlightened approach to leadership may rest.

Part 2 of *Chief Wellbeing Officer* is "Wellbeing" with focus on the WHAT. We look more closely at our human nature which sets the template for what the future of work must look like. The main content blocks of holistic intelligence and the rhythms of our lives are presented.

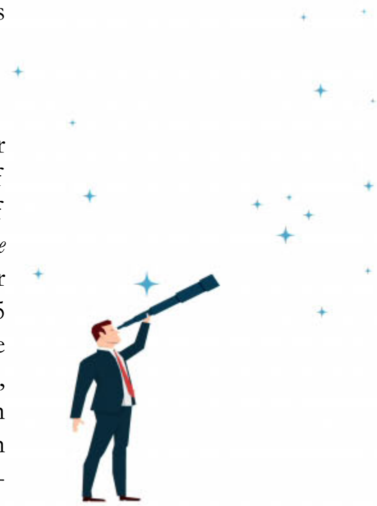
The third and final part of the book is "Officer" and is the HOW of ownership and implementation. We aim to highlight good organisational practice and provide guidance for the reader on the myriad challenges and opportunities presented. It is the prescriptive part of our discourse but we try and detail the right questions for you as opposed to thinking we have all the answers.

Steps have been central to human progress throughout history. The Pyramids of Egypt, the ancient Incan City of Machu Picchu, the Pheoencian Steps in Capri, all have allowed human beings to climb ever higher or connect with previously inaccessible parts of their world. The next time you walk the 40 odd steps across one of your rooms at home, imagine for a second where those 40 exponential steps would take you. Our aim in ***Chief Wellbeing Officer*** is to accompany you on those steps as a means of changing your mindset to the world around you.

Rather than reserving such a mindset for a technology focussed context what is the moonshot you can aim for in your own life? We hope you enjoy the journey, and the steps you take through each of the chapters of this book. Our wish is that the impact these steps have on you, for both your personal and professional live, will result in your very own Moon landing. Let's keep climbing.

About the Author

Steven P. MacGregor is Founder of The Leadership Academy of Barcelona [LAB] and Author of *Sustaining Executive Performance* (Pearson 2015). Dr. MacGregor has delivered over 1000 sessions the past 5 years in executive health and behaviour change for clients including Telefónica, Danone, IESE, IMD, and the BBC. He holds a PhD in Engineering Design Management and has been a Visiting Researcher at Stanford and Carnegie-Mellon. His executive education teaching is informed by academic interest in sustainability and design and he is an article reviewer for, among others, *Industry and Innovation, Journal of Engineering Design,* and the *International Journal of Design Creativity and Innovation.*



What is the moonshot you can aim for in your own life?

The Role of Ethical Values in Economic Value Creation

BY S. RAMAKRISHNA VELAMURI
AND WILLIAM HARVEY

Values integration in businesses keeps the highly competitive world humane. In this article, the authors elaborate not only the benefits of having a values based business approach but also how skillful utilisation of values can boost business and economic success.

Ever since Edward Freeman published his path-breaking book *"Strategic Management: A Stakeholder Approach"*,[1] a vast body of research, both conceptual and empirical, has examined how managers should identify and engage with stakeholders to further the objectives of their organisations.[2] Effective identification and engagement with stakeholders enable managers to create and capture value through a number of mechanisms such as innovativeness, risk management and reputation building. One stream of the stakeholder literature underscores the importance of ethical values in dealing with stakeholders, i.e. treating them as ends in themselves and not merely as means to the organisation's ends.

Economic value is created when parties willingly enter into mutually beneficial transactions.

We have studied, in contexts such as Egypt, India and Zimbabwe, how ethical behaviours lead to the creation of economic value.[3] We

Values thus lead to greater confidence in the interactions between organisational members, and between the organisation and its external stakeholders. **This greater confidence leads to greater productivity.**

find that for such behaviours to translate into economic value creation, a deep and nuanced understanding of the stakeholder landscape is a critical first step for organisations. Second, it is important to engage with like-minded stakeholders, who themselves are committed to values, and who would be favourably disposed to supporting the organisation by providing resources (financial, human, material and social). Third, once stakeholders commit resources, the organisation needs to go beyond purely ethical values and sustain their support by providing economic value to them.

Values and Economic Value Creation

The Cambridge Online Dictionary defines values as "the beliefs people have about what is right and wrong and what is most important in life, which control their behaviour." Schwartz defined values as "desirable, trans-situational goals, varying in importance, that serve as guiding principles in people's lives."[4]

Economic value is created when parties willingly enter into mutually beneficial transactions. For example, when a customer pays a shop owner one dollar for a pen, value is being created for both parties to the transaction: the shop owner is getting one dollar for something that has (presumably) cost him less, and the customer is getting a product that is of greater value to her than the one dollar she paid for it. Mutually beneficial transactions that create value are the building blocks of the free market system. A large number of transactions in a market economy is conducted on the spot, such as the purchase of a pen. In most such transactions, it is not necessary for the parties to know about each other's values, since the product or service transacted is standardised, its value is small, and neither party has the expectation of interacting continuously with the other in the future. However, there are other high stakes transactions, such as the recruitment of a senior manager or the formulation of a strategic alliance, where values can solve important information problems, because the interaction between the parties is continuous and over the long term, close collaboration between the parties is required, and the magnitude of the outcomes can be in the millions of dollars.

Values – the beliefs of an individual that influence her behaviour – can contribute to economic value creation in two possible ways:

1 Values make possible transactions that in their absence would not have taken place. We shall refer to this facet of values as the *transaction enabling* facet. At times, values make possible transactions through a sacrifice made by one party in favour of another. This type of altruistic behaviour happens, for example, when customers do not mind incurring a cost because they think that a particular organisation espousing certain values deserves to be supported, or when investors support an ethical organisation knowing fully well that the return they can make on their investment will be lower than what they could make elsewhere.

2 Values lead to greater productivity in transactions than would otherwise be the case. If you know that your business partner is totally trustworthy, then you can reduce the monitoring costs in your relationship, leading to better communication and coordination. Values thus lead to greater confidence in the interactions between organisational members, and between the organisation and its external stakeholders. This greater confidence leads to greater productivity. We shall refer to this facet of values as the *productivity enhancing* facet.

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For values to enable transactions or to enhance productivity, it is critical for one party to have information about the other's values. In many cases, firms pro-actively communicate their values to their current and potential stakeholders. For example, they include information about their corporate social responsibility (CSR) programmes in their annual reports, on their websites and in other documents. However, values are not always actively transmitted; often, one party will attribute values to the other simply from the latter's characteristics and behaviours. Sometimes there can be a disconnect between the projected values of an organisation and the perceptions of those values on the part of its external stakeholders. This dissonance requires an organisation to respond either by changing or better communicating its values to its stakeholders.

We have studied five organisations in three countries (Egypt, India and Zimbabwe) that made a deep commitment to values at the time of their founding. In this article, we rely on

Infosys CEO Vishal Sikka. © Aniruddha Chowdhury/Mint

Values cannot substitute for competence. For this reason, organisations would do well to apply the values filter after they have applied the competence filter.

evidence from two of these companies, one Indian and the other Zimbabwean, to convey some key findings from our research. We start by providing a brief description of the two organisations.

Infosys Technologies

Infosys Technologies was founded by a team of seven professionals, all first generation entrepreneurs, in 1981 with a share capital of a little over US$ 1,200. By 2007, it had grown to over US$ 10.2 billion in revenues (CAGR since 1994 of approximately 35.2%), profit after tax of US$ 2.1 billion (CAGR 33.1%), market capitalisation (as of March 31, 2017) of US$ 34 billion, cash reserves of nearly US$ 3.5 billion, zero debt, and a workforce exceeding 200,000 employees. Its performance over its 36-year history was based not only on financial parameters, but also on reputational ones. For example, a survey conducted by PwC and the *Financial Times* placed Infosys 62nd in the top 100 most respected companies in the world (Infosys was the only Indian company in the top 100). The Institute of Chartered Accountants of India gave Infosys the Best Annual Report award ten years in a row. The Business Today-Mercer-TNS survey rated Infosys the best employer in India in 2006.

There were several instances in which Infosys's refusal to bribe imposed higher costs on the company in the short term, but by their willingness to absorb these costs, and by their insistence that the means were as important as the ends, the founders were successful in building a positive and enduring reputation for the company in the eyes of its major stakeholder groups such as investors, employees and customers.

Econet Wireless Zimbabwe

Econet was founded by Strive Masiyiwa in Zimbabwe, and its history can be traced to 1993, when he first approached the Zimbabwean Post and Telecommunications Corporation (PTC) for a mobile telecommunications license. After his request was rejected, Masiyiwa fought a five-year legal battle, first against the PTC and then against the Zimbabwean government, for a license that was issued to his company only in July 1998, five-years after his first request and nearly two years after PTC launched its own mobile service and cornered the corporate market. In spite of this two-year disadvantage, it took Econet only a few months to achieve market leadership, and to achieve the remarkable feat for a telecommunications company of turning a profit in its very first year of operations.

There were a number of occasions during Masiyiwa's five year battle in which he could have obtained the license if only he had "accommodated" a few individuals in positions of power, but he steadfastly refused to do so and preferred to get the license the proper way. One press article reported that a middleman for three government ministers had stated outright to Masiyiwa – "The price for a license is $400,000 US." He then reportedly consulted with the ministers, who were in an adjoining room, and returned to say – "OK. You can pay in instalments."[5]

Masiyiwa's story was covered extensively in the Zimbabwean and international media, including *The Economist, Newsweek, Christian Science Monitor, The Vancouver Sun,* and others. In 2002, he was also selected by CNN/Time as one of the most globally influential leaders. Econet's market share in Zimbabwe in 2016 was 71%. As of 2017, the Econet Group was a privately held conglomerate comprising 27 subsidiaries, with a further 6 companies in which it had an ownership stake.

Key Messages

There are several points to note in the relationship between values and economic value creation. First, it is meaningless for individuals or organisations to claim that they are values driven, as many of them do, if they are not willing to absorb short term costs in defence of these values. If certain conditions are met, these short term costs can become investments in reputational capital which can have major positive returns among a wide group of stakeholders, as was the case with Infosys and Econet. However, they can also undermine the viability of organisations. For this reason, multinational companies from industrialised countries and large domestically owned corporations that operate in emerging markets with high corruption ought to lead the way by showing a strong commitment to values, because their ability to withstand the resultant short term costs is much higher.

> Multinational companies and large domestically owned corporations that operate in emerging markets with high corruption ought to lead the way by showing a strong commitment to values, because their ability to withstand the resultant short term costs is much higher.

Second, values cannot substitute for competence. For this reason, organisations would do well to apply the values filter *after* they have applied the competence filter. As Masiyiwa pointed out, he first ensured that potential employees are competent to do the job before exploring whether their values fit with those of Econet. Similarly, Infosys is inflexible in applying its main criterion for employment – learnability – which it measures through a rigorous written test and subsequent interview. This determination to hire the best talent with the right skills to provide the highest quality service, coupled with a very strong ethical value system, came out strongly in both organisations.

Third, values may play a role in bringing together two parties in a business relationship.

However, the sustenance of the relationship depends as much on each party meeting its business expectations as it does on the values. This is because values solve an important information problem in bringing the two parties together, but this information problem is largely resolved once the two parties start to work with each other. For example, in some instances, the inability of Econet and Infosys to satisfy the business expectations of their stakeholders on an ongoing basis led to some attrition in these relationships. During 2000-2001, Zimbabwe had one of the fastest shrinking economies in the world, with real GDP declines of 4.2% in 2000 and 7.3% in 2001. Inflation in the two years ran at 55% and 75% respectively. The official exchange rate of the Zimbabwean dollar to the US$ was 55, but the parallel market rate was 200. In this tough macroeconomic climate, Econet lost roughly 30% of its skilled workforce of technicians and IT specialists. On the one hand, the company was unable to sufficiently compensate its employees for the inflation in Zimbabwe; on the other hand, new cellular networks that had come up in other African countries and beyond prized the experience of the Econet employees, and offered them salaries denominated in hard currencies. Masiyiwa and his team, in an attempt to keep their skilled personnel, had to institute new policies whereby skilled Zimbabwean technicians would be posted on short and long term assignments in the group's operations in Nigeria, Botswana, Lesotho, and London, and have the opportunity of earning expatriate packages denominated in hard currencies.

Even Infosys faced a minor human resources crisis in 2002-2003. Its attrition rate went up from 6% to 16%, and it dropped in terms of overall employee satisfaction to 16th rank, from 13th in 2001-2002, and from 7th in 2000-2001. Employees expressed disenchantment with training, salaries, appraisal systems, among other criteria. The company acted quickly and made adjustments to its human resource policies, which enabled it to reverse this negative trend.

Fourth, values have a higher reputational payoff in those environments where they are scarce. This is because an ethical reputation is rare and therefore stands out more and is easier to

Points to note in the relationship between values and economic value creation.

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3 Values may play a role in bringing together two parties in a business relationship.

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5 Values exclude as much as they include.

communicate to stakeholder groups. For example, a company that does not practice bribery in low corruption environments such as Finland and Denmark would hardly attract any media attention because this is common practice. This has a very important implication for businesses operating in environments where corruption is widespread because notwithstanding short-term costs and risks, these environments present wonderful opportunities to build reputational capital with a wide group of stakeholders, which can have positive long-term financial outcomes.

Finally, values exclude as much as they include. When a company attracts certain types of stakeholders who share its values, it is at the same time excluding others whose values do not fit with its own. If these values are universal, then values driven organisations can foster diversity in their ranks with all the attendant benefits, such as higher quality and diversity of decision making and greater innovativeness. However, if they are not universal, then they could lead to groupthink. Whether specific values are appropriate or not as transaction enablers or productivity enhancers is therefore a subjective call. For example, a number of family businesses reserve senior management positions for family members in the belief that these individuals add value to the business as a result of having imbibed family values such as a long term focus, continuity of the business, humility, austerity, etc. Non-family members might view this policy as nepotistic and lacking meritocracy. Irrespective of whether they are considered appropriate or inappropriate, values based decision making has an impact (positive or negative) on organisational performance. EBR

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POST GLOBAL, GOING TO A "LOCAL-TO-LOCAL" APPROACH. *SOMETIMES.*

BY FRANCESCO STEFANELLI

Today's companies are global in nature and for many, this translates into a dynamic environment for designing their Supply Chains, in order to optimise the overall processes or relocating the industrial operations abroad (Offshoring) or re-thinking about how to bring them "back home" (Reshoring).

Today's companies are global in nature and as such, they're exposed to uncertainty and volatility in marketplaces, where the only paradoxical certainty is represented by the unavoidable and continuous mutation of the conditions of the context they operate in. For many companies, this translates into a dynamic environment for designing their supply chain. More than 20 years ago, General Motors began moving their facilities into the Far East, kicking off a trend to include offshore locations as part of their global supply chain. This helped elevate the supply chain into a key-role and function to help develop the company business. More recently, there are a number of factors that have led some to claim that there is a groundswell of movement by companies to shutter Asia-based offshore operations in favour of re-creating operations in Western headquarters locations. This alleged trend and variations have been referred to as "reshoring".

Among the different factors which in different manners contribute to favour the phenomenon of the relocation of industries in the West countries, themes concerning energy and labour cost are crucial.

For example, related to energy cost, referring to 2011, the natural gas processing in the USA has increased by 24% (*compared to 2006 – The*

There are a number of factors that have led some to claim that there is a groundswell of movement by companies to shutter Asia-based offshore operations in favour of re-creating operations in Western headquarters locations.

Table 1: Labour Cost: US/China Analysis Results: Summary of Changes

	Industry #1	Industry #2	Industry #3	Industry #4	Industry #5	Industry #6
Industry Name	Consumer Appliances	Consumer Electronics	Machinery	Chemical & Plastics	Furnitures	Apparel & Fashion
Overall Labour Cost US/China Difference (1999-2012)	-13%	No Variations	-9%	-5%	-6%	8%

White House Report, 2012).[1] North Americans have managed to make processing far cheaper than in other developed countries such as China (+16%), France (+28%), Germany (+29%).[2,3] Meanwhile, the United States became less dependent from volatile geopolitical dynamics.

On the other hand, a considerable increase of productivity has made labour cost in the US particularly attractive, especially because together with the US labour cost, salaries in China have increased too. For instance, referring to the US-scenario only, labour cost decreased about 9%, 6% & 4% on the related consumer appliances, machinery and furniture's cost structures. This meaningful data emerges from a study leaded by the authors, analysing a set of US-industries' cost structures between 1999 and 2012.

Therefore, changes in cost structure's components might lead to reduce the US gap with China in some cases, making the *"tipping point"* closer *(defining the "tipping point" as the overall cost structure difference limit to consider for a localisation change – this study relate to US and China),* assumed it as the estimated percentage of 16%, over this balance point every consideration in terms of re-location will be allegedly considered more and more crucial.[4]

The authors of the report intend to provide a more comprehensive assessment of the current dynamics to help with a broader understanding of those dynamics in order to define, to contextualise, and to analyse the *"reshoring"* movement from a supply chain perspective. As previously introduced, the authors produced a research that led to the creation/analysis of a broad dataset of several industry cost structures' development across a nearly 15-year period, from 1999 through 2012, taking the American market as the final reference point, and considering the Chinese baseline as a production reference.

Differently from the past, the study has not been conducted on surveys and case-studies' gain, but the authors built up a quantitative dataset model which should be able to describe different industry trends, related to the developments in their cost structure. Hence, reshoring has been analysed under a different perspective, monitoring trends for every cost structure component, related to a broad set of industries *(Consumer Appliances, Consumer Electronics, Machinery, Furniture, Chemicals, Plastics, Apparel and Fashion).*

Yet, there is much more than this. American selected industries' cost structures have been compared to the Chinese related ones, in order to underline how every gap's trend developed in the 1999-2012's timespan. These insights were meaningful: for example, related to American-Chinese gap in labour costs, it decreased about 13% for consumer appliances, while it will drop by 9% for machinery. At the same time, apparel and fashion's differential has been rising up to 8% more.

In order to have a complete idea of the Labour Cost Analysis, authors provided summary of results, as explained in the Table 1, as reported.

This is not strange at all: it might be assumed as one of the reasons to explain a broad set of reshoring case-studies about consumer appliances and machinery, and very few related to the apparel and fashion industry. In addition to that, the effects of the unpredictability of the price of crude oil contributes to a fluctuation in the structure of some industry costs, especially where transportation cost assumes a key role in the business, due to specific aspects of some of the involved industries *(i.e. Consumer Appliances and Furniture).*

In Table 2 (next page), Transportation Cost Analysis results summary have been reported. As clear, industry by industry, Transportation Cost's incidence has been analysed in terms of share in the related business cost structure and considering other qualitative aspects emerging from the specific industry studies *(i.e. key cost driver related to each industry).*

The entire study of the data by creating a descriptive model *(and potentially, "predictive")* let the authors to define a precise reference framework

A considerable increase of productivity has made labour cost in the US particularly attractive, especially because together with the US labour cost, salaries in China have increased too.

Reshoring is not a trend in the sense of a meaningful representation of industry practitioners behaviour in re-locating production operations back to original locations.

and take a clearer and stronger position compared to the existing studies. They have also been the first to prove a strong relationship between cost structures and relocation for every sector. Based on the analysis of the industry cost structure drivers as well as on an interpretation of the dynamics, the authors offer suggestions from a quantitative perspective.

Several non-quantitative aspects have been not included in the model yet, so further developments and integrations are more than possible. For example, it might be interesting how to relate issues regarding intellectual property's management and relocation strategies. Other interesting developments might concern how the sector's rapidity can push the related industry's players closer to the costumers. For example, this last aspect represents an actual dynamic operating into the consumer electronic industry: innovation's speed cannot allow long transportation time without assuming it as a concrete risk in the progress of bringing the player closer to the costumer.

Therefore, on the one hand, the authors have centred their assumptions on data extrapolation from the dataset, but on the other hand they related the trends to the case-studies and to reality. This analysis leads the author to define conceptual limits of the reshoring phenomenon in a wider framework, bringing to a more complex scenario of the Supply Chain Design's panorama.

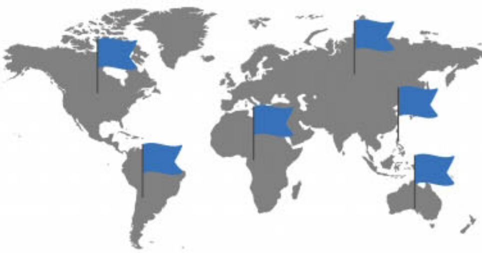
As said, analysis was conducted on data considering several different industries, with the following conclusions and final remarks:

- Reshoring is not a trend in the sense of a meaningful representation of industry practitioners behaviour in re-locating production operations back to original locations. The data does not indicate that this is occurring

Table 2: Transportation Cost Analysis Results: Summary

Industry	Transportation Cost General Incidence	Transportation Cost Incidence (Private Projections)	Transportation Cost Incidence (Official Projections)	Transportation Cost Stability/ Volatility	Transportation Cost Main Driver	Transportation Cost Role About Decision Making on Relocation
Consumer Appliances (CA)	High	Around 5%	Around 11%	Medium Volatility	Product Size	Key Driver
Consumer Electronics (CE)	Low	Around 2%	Around 5%	Stable	Innovation Rapidity	Possible Driver
Machinery (MA)	Medium	Between 4% & 6%	\	Medium Volatility	Level of Assembly-Disassembly	No Role
Chemical & Plastics (CP)	Medium (Chemicals), High (Plastics)	Around 5% (Chemicals), around 10% (Plastics	\	Stable (Chemicals), Volatile (Plastics)	Unknown	Unknown
Furnitures (FU)	High	Around 10%	Around 20%	Volatile	Level of Assembly-Disassembly	Key Driver
Apparel & Fashion (AF)	Low	Around 1%	Around 2%	Stable	Unknown	No Role

across all or even many industries. At this point in time, Reshoring appears more of a descriptor of some companies that have relocated operations back to home locations but this is more a function of the industry's dynamics and its related cost structures.



- Reshoring is distinct from Offshoring and there is no evidence suggesting a connection between the two within industry. Although the Far East delocalisation has been often superficially described as the Reshoring's opposite, no Far East plant has been closed due to come back to the West .
- Reshoring represents a Supply Chain Design matter, related to the best productive-logistic global configuration's design in order to serve the corporate business strategy. Although qualitative features have not been exhaustively reviewed in this paper and research, reshoring represents a concise supply chain design decision in the whole company strategy, not a simple trend-back.
- Reshoring seems to assume a role in a sort of world regionalisation, as introduced by several studies and recent surveys *(i.e. The Hackett Group-Jansen et al., 2012,[5] The Standard Chartered Global Research – Jha et al., 2015,[6] and AlixPartners 2016 Survey)*[7].

There is more evidence that would suggest that **firms are locating production operations in multiple regions in order to serve those regions**, rather than locating production operations in single locations based on low-labour costs or home headquarter locations.

Indeed, "Reg-shoring" *(Regionalisation)* makes sense once assumed the view as wider, considering horizontal supply chains, the resilience and other factors to be explored as related evidences. Specifically, there is more evidence that would suggest that firms are locating production operations in multiple regions in order to serve those regions, rather than locating production operations in single locations based on low-labour costs or home headquarter locations.

Further research is definitely necessary. For example, it would be productive to consider the role of related industry innovation and financing, especially as factors that may affect and/or influence more of a regional approach to location selection.

Yet, relationship to industry level of innovation or aspects related to finance's role are only a couple among a broad set of suggestions emerging from the study, as said, representing only a starting point to further explorations on the subject.

Therefore, due to all the explained reasons, Reshoring is not a trend.

It might be assumed as a strategic option to pick whenever the related industry cost structure's conditions push to a different business model, making production closer to consumption. Maybe 100% reshored, maybe nearshored. Definitely to a "local-to-local" approach.

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Francesco Stefanelli gained his Ph.D in Supply Chain Strategy at the University of Ancona, visiting the Massachusetts Institute of Technology. He has been working as Manager in the Management Consulting Industry and nearby Global Companies in the Operations and Supply Chain functions. His has worked in more than 15 industries across 55 projects of different nature and complexity in 10 different countries all around the World.

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What You Need to Know About Supply Chain Disclosure

BY LUCY MCCARTHY, PAUL MCGRATH, AND DONNA MARSHALL

Our study examined twenty multinational companies and their supply chain disclosure decisions. We found a number of principles that underpin their disclosure strategies: holistic understanding, supportive infrastructure, data requirement knowledge, essential information interpretation, strategic alignment, mitigating the information burden and communicating good news.

Introduction

Recurring corporate scandals from incorrectly labelled horsemeat, unsafe toys, illegal dumping, to exploitative work practices continue to keep the issue of supply chain disclosure to the fore as a key strategic concern. Here we take supply chain disclosure to mean the release of accurate, comprehensive and cogent information about the supply chain into the public domain.

While improved supply chain disclosure is generally regarded as a positive development by most stakeholders, it can highlight a range of challenges for managers. As companies grapple with frequently conflicting demands from internal and external stakeholders they are faced with a range of impediments in their attempts to gather ever-greater quantities of high-quality, detailed and reliable data across a multi-tiered, fragmented and geographically-dispersed supply chain.

Our research finds that some companies appear to be managing the process of supply chain disclosure more effectively and strategically than others. Here we summarise our findings in terms of what sets these companies apart.

Principle 1: Holistic Understanding of Current and Future Demand for Supply Chain Information Disclosure

Certain companies tend to have a deep grasp of the demand for improved supply chain information disclosure. They appreciate that prior to developing an appropriate disclosure strategy, the variety of demands for supply chain information need to be fully understood and potentially conflicting tensions managed. One key risk is that a company may disclose too much information exposing core competences and key sources of intellectual property to competitors.

Pressures such as regulation, behaviour of exemplar companies and increasing demands from customers, NGOs, the media and academics need to be identified and managed. Proactive companies can stay ahead of the curve through industry collaborations, such as the Electronic Industry Citizenship Coalition (EICC), which drives disclosure and sustainability best practice in the electronics industry. Other cross-industry collaborations include the Ethical Trade Initiative (ETI), which started in fashion but now encompasses a multitude of other industries.

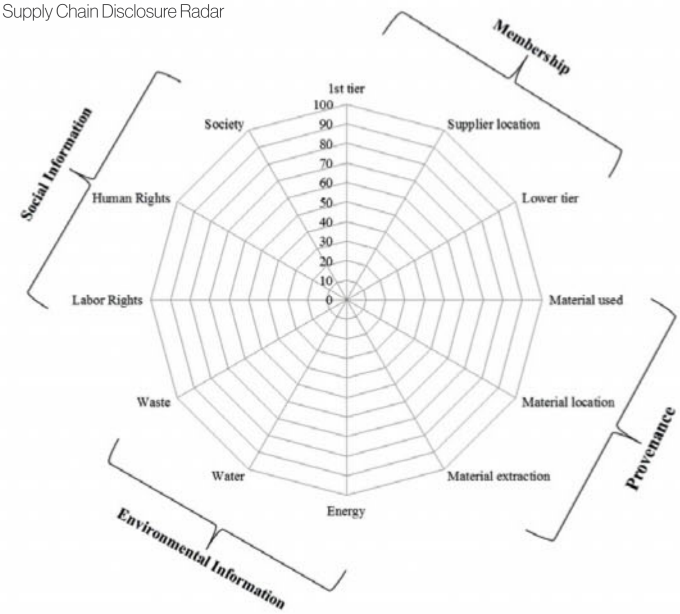
Principle 2: Supportive and Motivating Infrastructure

To allow for disclosure across functions there must be a supportive culture in place. Proactive companies embed openness and honesty as core values and this culture is reflected across their supply chain. This necessitates top management support and prioritisation and, in many instances, it is strongly driven by the CEO or senior management champion. This facilitates a clear sense of the organisational and societal benefits derived from improved disclosure. An exemplar of this behaviour is the current Unilever CEO, Paul Polman, who was the only business executive invited to help craft the United Nations Sustainability Development Goals.[1]

Principle 3: Understand Supply Chain Data Requirements

There is substantial variation in the types and levels of supply chain information gathered and released into the public domain. From our analysis, there are four common categories of supply chain information disclosure. We developed the Supply Chain Disclosure Radar[2] (see figure below) to aid managers in understanding which data they already have and which they should gather. Managers can use the radar to plot their degree of disclosure on each of the following metrics, membership, provenance, environmental information and social information. Nike, for example, is actively gathering and disclosing information on all four categories.[3]

Figure 1: Supply Chain Disclosure Radar



Principle 4: Gather and Interpret Essential Information

Many managers have limited knowledge of the supply chain information already available to them. In forward-thinking procurement departments supplier evaluation and selection systems are fairly sophisticated and involve extensive information capture. Companies that already have lean or agile systems in place are likely to have details on multiple-tier supply chain membership as well as provenance information. With the gathering momentum for more sustainability in companies and supply chains, social and environmental criteria are widely used for supplier selection.

For example, Nike gathers sustainability information for their supplier performance scorecards. This means gathering information from different departments and different software systems. However, once identified and collated, templates are easy to update. Using the radar, managers can assess the supply chain information they have access to, the information gaps in the supply chain and be able to resource supply chain information-gathering activities accordingly. Additionally, proactive companies engage in productive dialogue with their suppliers to avoid overburdening them with unnecessary audit requirements.

Principle 5: Strategically Align Information Demand and Disclosure

Once clarity is achieved on supply chain information requirements, there are four main strategies available to managers to guide them on what to do with this information.

- **Transparent:** This means maximum internal and external disclosure of supply chain information. For example, Honest By, the Belgian fashion company, claim to be the world's first 100% transparent company. They disclose not only membership, provenance, social and environmental supply chain information but also

Unilever allowed Oxfam access to its staff, operations, data and key suppliers at its factory in Cu Chi district, Ho Chi Minh City, which manufactures personal, home care, and food products.
© Unilever

disclose the financial data for their transactions throughout the supply chain.

- **Secret:** This involves high internal disclosure but little or no public disclosure, due to IP concerns or concern over disclosure of key competences or sources of competitive advantage. Prior to Nike's decision to disclose their supplier list in 2005, it was common practice to keep supplier lists secret. Since then disclosure is much more common across multiple industries.
- **Distracting:** This means disclosure of substantial volumes of supply chain information into the public domain but in a manner that is wittingly or unwittingly distracting. Companies engaging in distracting practices, particularly environmental sustainable supply chain practices, have been acknowledged through the Greenpeace Emerald Paintbrush Award for *Greenwashing*.
- **Withheld:** Intentional or unintentional failure to collect and disclose supply chain information or deliberately not releasing supply chain malpractice information is regarded as a withheld strategy. Benetton's initial denial of involvement in sourcing from suppliers located in the Rana Plaza building in Bangladesh, led to activism and campaigns against the company in 2013 and generated negative publicity for the brand.

While we suggest that there is not an optimal strategy for disclosure, the distracting and withheld strategies have the potential for significant damage to brand reputation. This is particularly the case if there is third party involvement in information gathering, which may lead to unplanned and uncontrolled disclosure. Equally, the effort to prevent disclosure is regarded as deceptive intent and, if revealed, can seriously harm the status of the company.

Principle 6: Manage and Mitigate the Burden of Disclosure

While desirable, effective supply chain information disclosure can come at a high cost, particularly in a geographically-dispersed and multi-tiered supply chain. There is considerable cost in developing information systems to gather, integrate, interrogate and store the supply chain information. Our research indicates an evolutionary change in both the awareness of the burden of supply chain disclosure and the desire to share this burden with suppliers. For example, onerous supplier burden include situations where clothing companies ask for audits or repeated or numerous style changes at short notice. To overcome this, several of the proactive companies in the study provide supports for suppliers such as simplification and streamlining of data, advance communications of impending changes, on-site assistance and training, resource transfer for updating information systems and implementing improvement plans collaboratively with suppliers.

Principle 7: Disclose, Disclose, Disclose

Supply chain information, especially sustainability information, can lead to brand protection and enhancement. Patagonia, Honest By and People Tree, for example, have built their brands on disclosing supply chain sustainability information. Their communication through social media, advertising and their websites highlight supply chain sustainability competence.

However, some companies are still reticent to release supply chain information. Unilever,

While we suggest that there is not an optimal strategy for disclosure, **the distracting and withheld strategies** have the potential for significant damage to brand reputation.

Supply chain information disclosure is an area of growing interest especially for large brands who are now demanding this information and parallel disclosure from their suppliers.

however, have led the way in demonstrating that even seemingly harmful information disclosure, can actually be beneficial. Unilever, in a long-term collaboration with Oxfam, took the brave step of giving the NGO access to Unilever's Vietnamese supply chains. Oxfam uncovered multiple worker rights issues during the course of the investigation. However, Unilever, rather than seeing this as detrimental to the company and attempting to withhold this information, accepted it as a useful mechanism to understand issues in their own supply chain. Additionally this may provide impetus for other companies to open their supply chains and allow industry-wide collaboration to improve standards in supply chains. Unilever were praised for their no-holds-barred approach to disclosure in their supply chains and their approach to stimulating action in the industry by Oxfam.

Conclusions

Supply chain information disclosure is an area of growing interest especially for large brands who are now demanding this information and parallel disclosure from their suppliers. For companies who have not disclosed they need to keep in mind seven key principles: have an understanding of the demand for supply chain information, create and maintain a supportive and motivating infrastructure across the supply chain, understand the types of supply chain information they need to gather, effectively gather and interpret essential supply chain information, align this to their corporate and supply chain strategy, manage the burden for their suppliers and, above all, disclose this information to a demanding public.

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