MBR

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Spring 2021

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Management and Business Review

Corporate Purpose and Responsibility

The Future of People, Work, and Organizations

People and Strategy, Mergers and Acquisitions

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MBR MANAGEMENT AND BUSINESS REVIEW

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Praise for MBR

The *Management and Business Review* is a valuable addition to the world of business scholarship and analysis. I applaud leading business schools for launching this insightful publication.

David Rubenstein, Cofounder and Co-Executive Chairman, Carlyle Group

I'm delighted to see this caliber of international collaboration for a new kind of journal that brings the views and research of academics and business practitioners together. At a time when business leaders are faced with new levels of diverse and complex challenges that they need to solve, this will serve as a great learning resource from an impeccable roster of contributors.

Janet Foutty, Executive Chair of the Board, Deloitte US

This first issue is *really* superb! You have delivered everything you promised and more. Hard to think of a better way to start this ambitious project. Congratulations!

Kasra Ferdows, Heisley Family Chair Professor of Global Manufacturing, McDonough School of Business, Georgetown University

Congratulations on the launch of the new MBR journal. This initiative is important for the dissemination of insights obtained through academic research to the broader management community. It will support practitioners in answering the challenging issues they currently face and it will help us create value for society at large. I am really looking forward to reading the articles from recognized professors in top business schools around the world, which will challenge us to do better in the business community.

Ronnie Leten, Chairman of the Board of Ericsson and Epiroc, board member SKF Group

What an impressive way to launch MBR! The inaugural issue has an all-star lineup of contributors and is full of relevant and timely content. I have already selected several articles to pass on to the organizations I advise.

Steven Miller, Professor Emeritus, School of Information Systems, Singapore Management University

CEOs are expected to lead in entirely new ways, from ending systemic racism to providing solutions to COVID-affected communities. MBR delivers invaluable counsel and practical ideas, enabling CEOs to earn the trust of stakeholders who need business to fill the void left by government.

Richard Edelman, CEO, Edelman

MBR made a scintillating promise to the business and academic community -- and you have delivered in spades! The MBR layout and design is eye-catching and elegant, and most important, the

articles in the inaugural issue, individually and collectively, are a unique and powerful blend of applied thought-leadership and serious scholarship.

Richard Ettenson, Professor and Kieckhefer Fellow in Global Marketing and Brand Strategy, Thunderbird School of Global Management

A new first-class journal linking management research and practice was long overdue. MBR is a solid and credible project led by an outstanding editorial team that will narrow the rigor-relevance gap.

Alfonso Gambardella, Bocconi University

I am happy to hear about the launch of the new *Management and Business Review* journal. The articles in its first two issues sound intriguing. I hope to send my new articles to MBR on the chance that they get included.

Philip Kotler, S.C. Johnson & Son Distinguished Professor, Kellogg School of Management, Northwestern University

I have followed the efforts led by Professor Kalyan Singhal to develop a new management journal, *Management and Business Review*, to bring a global perspective to cutting-edge research by faculty at the roughly 13,000 business schools worldwide. Kalyan is a spirited and determined entrepreneur who has built a strong team and drawn support from a wonderful array of business schools. I appreciate the value of increasing our publication opportunities beyond the *Harvard Business Review, MIT Sloan Management Review*, and *California Management Review*. I expect that one way that this new journal will distinguish itself is by focused inquiry into top global issues facing business and society.

Edward A. Snyder, William S. Beinecke Professor of Management and Economics, Yale University School of Management

Most academic management disciplines are primarily for professionals. Their first role is to help managers make more informed and insightful decisions based on good science. And yet most of our best journals focus on the science, not its application. Academics and managers alike should welcome *Management and Business Review* as a critical bridge in using our best knowledge to make decisions that lead to a better management and community environment.

John R. Roberts, London Business School and University of New South Wales

The world is in dire need of better-managed organizations. MBR delivers crisp, actionable managerial insights from a global network of experts and thought leaders. MBR brings the best of leading-edge knowledge in accessible language to those who can benefit from it the most. MBR is a fantastic initiative - read it.

Annabelle Gawer, Professor, University of Surrey and University of Oxford Saïd Business School

Welcome to *Management And Business Review*, a timely and relevant trendsetter journal delivering value through crisis management & innovation beyond research. A must-read journal where "the art of leadership blends with the science of management"

Bala V. Balachandran, Professor Emeritus, Northwestern University and Founder, Great Lakes Institute of Management, India

The launch of *Management and Business Review* (MBR), which is devoted to engaging articles that highlight recent research and its implications for burning management challenges of today and the future, is an important addition to the world of credible references and insights. MBR's creation was a collaborative effort with a wide range of participant schools and companies, and as such promises to be broader in editorial scope than well-known journals in its class.

Dino Petrarolo, SVP, Competitive Capabilities International INC, South Africa

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MANAGEMENT AND BUSINESS REVIEW

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- Haskayne School of Business, University of Calgary
- Merrick School of Business, University of Baltimore
- Ross School of Business, University of Michigan

Executive Summaries

Putting Purpose into Practice: How Companies Can Deliver. **Paul Washington**, The Conference Board and **Thomas Singer**, The Conference Board

Investors and business leaders are calling on companies to articulate their purpose and the effects are beginning to show. Over the last five years, the number of companies in the S&P Global 1200 that have published purpose statements has almost tripled. But with limited guidance on this topic, companies may struggle to define what purpose even means, let alone to choose a purpose, articulate it, and put it into practice.

We offer practical guidance based on extensive interviews with executives at fifteen purpose-driven companies. When choosing their purpose, companies should ensure that it is closely tethered to the company's business culture; in articulating that purpose, they must focus on authenticity, composing statements that are aspirational but not generic. The board should engage deeply with vetting and approving their company's purpose, remaining mindful of the benefits and costs of implementing a purpose statement. Before putting the purpose into practice, company leaders should determine how the purpose will be governed, executed, and embedded into the organization. Crucially, companies must have a plan for when profitable opportunities are inconsistent with their purpose.

Corporate Responsibility in a COVID-19 World. **Paul A. Argenti**, The Tuck School of Business at Dartmouth

Is it the responsibility of companies to create value for shareholders alone or for all stakeholders? Can corporations behave responsibly in the Covid-19 era? If so, what does that look like? First, companies must take care of their own, viewing employees as assets, not liabilities. The reputations of those that have not taken this approach are suffering considerable damage. Next, companies must turn their attention to how core customers are affected by the pandemic and find ways to acknowledge this impact without exploiting the tragedy. They should also consider going above and beyond, finding more direct financial means by which to support their customers, from extending loyalty programs to relaxing terms of payment. Finally, companies must support their broader communities as much as possible. If they want to be remembered after this crisis for their responsible actions, companies and other large institutions, like hospitals and universities, will not be well served by a short-term financial focus. If ever there was a time to concentrate on the long-term and to think about the opportunity that comes from a crisis, that time is now.

Forget Dumb Luck - Try Smart Luck: Strategies to Get Lady Fortune on Your Side. **Paul J. H. Schoemaker**, The Wharton School, University of Pennsylvania

Effective leaders enhance their control over an uncertain world through scenario analysis, competitive gaming, options planning, simulation, and more. They recognize the surprising benefits that can result from taking a strategic approach to the uncontrollable elements of the future. While uncertainty is inherently hard to plan for, let alone control, these leaders believe that luck should not be left entirely to chance. Easy enough to say, but how can you learn the tactics that will allow you to shape new opportunities, recognize situations in which chance favors you, and seize those moments when they arise. I have distilled various meta-strategies which we can all use - in our professional and personal lives - to encourage Lady Fortune to smile on us more often. This approach entails moving away from a reliance on "dumb luck" and toward strategies for "smart luck." This reorientation will result in a rich stream of new opportunities wherever luck can strike. My strategic advice applies to individual managers as well as groups and entire organizations, so long as their leaders inculcate the right mindset.

A Future of Work and Organizations. **Arvind Malhotra**, Kenan-Flagler Business School, University of North Carolina at Chapel Hill; **Ann Majchrzak**, Marshall School of Business, University of Southern California; and **Alpheus Bingham**, InnoCentive

Autonomy is central to the future of work and therefore to organizing that work. Future workers will demand three types of autonomy: temporal, locational, and affiliative. The organizations that accommodate these three kinds of autonomy will be "flash powered." Flash powered organizations are globally distributed collections of autonomous workers who briefly come together to address a particular complex innovation challenge. Most members of these flash crowds are freelancers rather than employees of the organization in the conventional sense. Flash powered organizations promote collective knowledge production, using technology platforms which allow those with the pertinent knowledge to share multiple perspectives that constantly redefine the central problem while solving it. The future of work will also be shaped by the concurrent increase in autonomy for human workers and the automation that reduces the need for them. The result will be "humobotic" work: coproduction by humans and machines working together. This fourth industrial revolution will require managers and researchers to think deeply about emergent issues such as how to attract autonomous talent by designing more meaningful work, creating the right motivation, and defining the role of future organizations.

Managing Mergers and Acquisitions: Perspectives from Human Resources. **Stefan Wuorinen**, Broad College of Business, Michigan State University; **Brian A. Burgess**, Broad College of Business, Michigan State University; and **Patrick M. Wright**, Darla Moore School of Business, University of South Carolina

For decades, there has been pervasive evidence that mergers and acquisitions (M&A) often fail to meet their expected financial targets. Although researchers have suggested that many of the factors which contribute to suboptimal acquisition outcomes are "people issues," acquisition planners frequently give little thought to the people question. The human challenges of M&A are a core concern for human resource (HR) professionals, though they are often granted little influence in acquisition planning. We interviewed Fortune 500 Chief HR Officers to better understand common M&A HR challenges and to develop a set of recommendations for increasing HR's effectiveness during acquisitions. The collective insights of our participants provide an extensive list of considerations that can help to facilitate firm integration, manage people issues, and improve acquisition performance. The most critical points include creating a clear vision for the acquisition, managing cultural differences, prioritizing the retention of key talent, and clear communication between organizations. Our interviewees also suggested that a holistic understanding of the business strategy would make HR practitioners valuable contributors to strategy from early in the acquisition process.

Why You Need an Operating Model: To Align Your People and Deliver Your Strategy. **Andrew Campbell**, Ashridge Executive Education and **Mikel Gutierrez**, Siemens Gamesa Renewable Energy

For most organizations, there is a gap between strategies and results. This gap is caused by one of three things: a failure of design, in which insufficient effort or skill is put into designing the operational changes necessary to make the strategy possible; a failure of transformation, in which the organization is not sufficiently transformed to the new design; or a failure of management, in which the transformed organization is not managed in ways that bring the strategy to fruition. Most research to date has focused on the latter two reasons, failures of transformation and of management. The first reason, failure of design, can be addressed using something we call the Operating Model Canvas, along with a related set of tools. This method converts strategy into a high-level operating model which includes process maps, organization design, IT systems, locations, supplier relationships, a management calendar, and a scorecard. This high-level design is then used to guide more detailed planning and the transformation process.

Value Lab: A Tool for Entrepreneurial Strategy. **Teppo Felin**, Utah State University & Oxford University; **Alfonso Gambardella**, Bocconi University; and **Todd Zenger**, University of Utah

To truly create new value, you need a theory. A theory helps you to see what others can't. Through contrarian or unique beliefs, a firm creates the underlying raw material for its theory of value. But unless you identify the specific obstacles to your contrarian beliefs, they are no more than cheap talk. Formulating and solving problems is therefore at the very heart of any theory of value. By identifying the right problems, you can spot valuable solutions, find bargains on assets, and make the right investments. And with a theory you can be more scientific about creating value by performing the right experiments. By developing their own theory of value, both start-ups and established businesses can draw the right lessons from their experiments and, if necessary, pivot accordingly. Perhaps most importantly, you can't rely on

generic approaches or best practices to guide your strategy—you need a theory of your own. It will change how you see the world, allowing you to outthink competitors and create value unique to your firm.

Money or Friendship? Winning over Customers.

Kihyun Hannah Kim, Rutgers University and **V. Kumar**, Indian School of Business

Most firms devote significant resources to direct marketing in an effort to maintain close relationships with their customers. Nonetheless, we have a limited understanding of *when* to deliver *what* type of message to *which* customer. Direct marketing generally offers either *monetary* or *relational* value. Firms can therefore benefit from understanding how customers evaluate the marketing communications that influence their buying behavior. We tracked the marketing and transaction data of a sample of customers from four firms and analyzed customer responses to marketing messages. We first applied our empirical approach to a single firm, a *Fortune* 500 business-to-business (B2B) service firm. We concluded that (i) customer purchase behavior is affected by both types of communications in ways that interact and vary over time, (ii) past experiences influence customer purchases, and (iii) by understanding customers' preferences and spending accordingly, this firm could expect a revenue increase of 8.3 percent ($2.5 million) over four years. We then found that, by using this model, the other three firms could also expect an annual revenue increase of 2.1 to 3.2 percent. Moreover, by increasing their spending on marketing messages by 5 percent, they could increase revenue by more than 20 percent.

Admiral Jacky Fisher and the Art of Disruptive Leadership.

Jan-Benedict Steenkamp, University of North Carolina

Corporate leaders strive to achieve disruptive leadership. Yet any disruption you engineer is likely to meet with organizational resistance, which can bring you abruptly down. So what makes an effective disruptive leader? Admiral Jacky Fisher knew. He led the immensely powerful British Royal Navy between 1904 and 1910. In that time, he drove through a complete restructuring of the organization, cut countless serviceable business lines (ships), and introduced a new product (H.M.S *Dreadnought*) that made the organization's existing business, in which it had a commanding lead over its competitors, obsolete overnight. And he accomplished all that against fierce resistance both from within the organization and from outside stakeholders. Without his leadership, few doubt that the Allies would have lost World War I. Fisher's leadership illustrates six key factors in leading disruptive change. He was a brainiac; was always willing to disrupt his own frame of reference; prioritized the long-term over the short-term; had a high tolerance for uncertainty; was passionate about his organization; and developed a disruptive network of followers who helped him in his work and carried his torch onwards. Disruptive leaders of the 21st century have a great deal to learn from the leadership of Admiral Jacky Fisher.

Nobel Laureate Harry Markowitz: Creator of the Modern Portfolio Theory.

Suresh P. Sethi, The University of Texas at Dallas

Harry Markowitz's modern portfolio theory, by demonstrating that portfolio diversification can reduce investment risk, has become the bedrock of investment management practice and earned Markowitz the Nobel Memorial Prize in Economic Sciences. Modern money managers create optimal portfolios for their clients by maximizing the expected return for a specified risk tolerance. Trillions of dollars in institutional assets are invested under modern portfolio theory guidelines. Markowitz's portfolio theory also laid the foundation for the capital asset pricing model, a theory of price formation for financial assets.

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EDITORIAL

Wallace Hopp
Ross School of Business,
University of Michigan

Christopher Ittner
The Wharton School,
University of Pennsylvania

Kalyan Singhal
Merrick School of Business,
University of Baltimore

BUSINESS IN A DANGEROUS TIME

The first issue of MBR was published earlier this year at the peak of the COVID crisis. This second issue is being released as we enter what we devoutly hope is the beginning of the end of the crisis (and not, as Churchill famously quipped, the "end of the beginning"). Launching a new publication during a global pandemic would certainly not have been our first choice. But Churchill is also credited with saying "never let a good crisis go to waste," and we strive to follow that advice.

Because we knew that lockdowns and work from home policies would limit word-of-mouth communication, we doubled down on email and social media distribution. The huge number of enthusiastic responses we have received seems to indicate that the first issue was well and widely received. We offer our heartfelt thanks to everyone who took the time to send us encouraging, constructive, and thought-provoking feedback.

Understanding the financial pressures the crisis has imposed on both organizations and individuals, we have decided to distribute all four issues of the first volume free of charge. You are free to share these issues with anyone and everyone who you think might be interested, and we heartily encourage you to do so. The more readers we attract, the more topflight articles we will be able to publish, and the more useful MBR will be to all of us.

Most importantly, though, the COVID crisis has cast into sharp relief the reasons for which we launched MBR in the first place. As Rebecca Henderson noted in the first issue "The COVID-19 pandemic has given us a profound opportunity to rethink our society and our institutions." In her article, Henderson pondered the opportunities for competitive business to address the grand social and environmental challenges which humanity faces. COVID has made rethinking the very character of capitalism more plausible and more pressing.

The pandemic has also made us all painfully aware of just how much our lives depend on the successful execution of basic business practices. Product shortages

ranging from critical drugs to mundane paper supplies have made us intensely aware of our total reliance on global supply chains for our health, safety, and well-being. Labor shortages and record rates of resignation have forced managers to reconsider the very essence of their workplace cultures as well as the details of their employee contracts. What, only a short time ago, were considered the esoteric minutia of business, now inspire front-page news stories and letters to politicians. The new normal may be very different from the old normal, but perhaps that is a good thing.

MBR was founded as a platform from which to probe, discuss, and debate matters of strategic and executional management. It publishes articles by both scholars and practitioners so as to maintain both a research and a practical perspective. Like the first issue, this one includes some articles that explicitly address the impact of COVID, while others are written from a more general perspective on the future of business and management. This combination of writings provides fuel for a vital conversation about how business can better serve the needs of all of us, in good times and bad. We hope this issue stimulates your thinking about this essential question and that you will share with us your reactions and ideas.

Wallace J. Hopp is the C.K. Prahalad Distinguished University Professor of Business and Engineering at the University of Michigan. In recognition of his research on manufacturing, supply chain, and health care systems, he has been elected to the National Academy of Engineering, and is a Fellow of IIE, INFORMS, MSOM, POMS and SME. He has served as President of the Production and Operations Management Society (POMS) and as Editor in Chief of the journal *Management Science*.

Christopher Ittner is the EY Professor of Accounting and Chair of the Accounting Department at The Wharton School of the University of Pennsylvania. He earned his doctorate in Business Administration from Harvard University. Dr. Ittner's research and consulting focus on the design, implementation, and performance consequences of cost management and performance measurement systems. He has served as an Editor for *The Accounting Review* and sits on the editorial boards of several international academic journals.

Kalyan Singhal is the Doris and Robert McCurdy Professor of Management at the University of Baltimore. He is a 1967 mechanical engineering graduate of the Indian Institute of Technology, Bombay at Mumbai. He founded the Production and Operations Management Society (POMS) in 1989. He also launched the society's journal *Production and Operations Management* in 1992 and has since served as its Editor in Chief. He is the publisher of this journal and a Fellow of INFORMS and POMS.

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Putting Purpose into Practice: How Companies Can Deliver

Paul Washington, The Conference Board | **Thomas Singer**, The Conference Board

The Conference Board's Paul Washington and Thomas Singer find that, in the last five years, the number of companies with purpose statements has almost tripled. They stress that choosing a purpose is not to be undertaken lightly. To help businesses avoid the pitfalls of purpose and capitalize on the benefits, the authors offer practical guidance rooted in research.

"America's companies have an important role to play in making the U.S. a more just and equal nation. There's no one blueprint to follow. Rather, each company must leverage its own unique purpose and strengths to make a meaningful contribution."
-Roger Ferguson, President & CEO of TIAA.

Prominent investors and business leaders alike are calling on companies to articulate their purpose. BlackRock CEO Larry Fink has written that "every company needs a framework" that "must begin with a clear embodiment of your company's purpose in your business model and corporate strategy." In 2019 the Business Roundtable (BRT) issued its Statement on the Purpose of a Corporation. The impact of these calls for companies to articulate their purpose is now apparent: In 2019, the S&P Global 1200 index included 223 companies that published a purpose statement. Only five years earlier, just eighty companies did so.

But a company's purpose – why it does what it does – can come in many flavors, from maximizing shareholder value to serving a diversity of stakeholders to explicitly addressing a social or environmental need. Each company must decide what its own purpose is. Yet some may find themselves struggling to define what purpose even means, let alone to choose, articulate, and put a purpose into practice.

We provide guidance on these topics which applies to all companies, and especially to those that hope their purpose will address a societal need. This guidance is based on our organization's report, *Purpose-Driven Companies: Lessons Learned,* which in turn drew upon extensive interviews with executives at fifteen purpose-driven companies, many of which have been in business for over a century. These companies have integrated purpose into their business by ensuring that their purpose is more than nicely crafted words: it is integral to the company's culture, strategy, and decision-making.

Above all, choosing a purpose is not to be taken lightly; it must begin with careful analysis and receive constant attention thereafter.

Choosing Your Purpose

Before embracing a purpose, you need to address some preliminary matters. The choices you make at this stage affect everything that follows.

You cannot define or choose your purpose in isolation. You must first reach consensus on what you mean by purpose. If mission is what a company does, and culture is how a company operates, purpose is why that company exists – why it does what it does. Purpose is the North Star that guides all aspects of a company's strategy. Purpose should therefore be closely tethered to what your company does and how it does it. A healthcare company probably doesn't exist to save the environment. A solar energy firm probably won't end hunger. And while purpose is inherently forward-looking, it should also be true to the company's heritage and authentically reflect its people and values.

> Purpose is the North Star which guides all aspects of a company's strategy.

Take time to choose your purpose carefully. In order to explain why your company exists, you must consider what it is trying to achieve and for whom. *What* could include anything from creating economic value to addressing an environmental problem. *Whom* might be stockholders, stakeholders, or society at large.

Traditionally, purpose has often been defined quite narrowly: to maximize economic value (what) for stockholders (whom). Nowadays, purpose is more likely to include creating value for stockholders while considering other stakeholders; or creating value for all stakeholders. A more ambitious purpose can be solving a societal problem (what) for customers, the public, or posterity (whom). All of these choices are valid. But it's important that you reach clear agreement because even subtle distinctions in language can dramatically affect how a company operates.

Be sure that your board is on board. Given that its purpose will be incorporated into the company's business model and strategy, it is vital that the board be deeply engaged both in developing the company's purpose and in tracking strategies to carry out that purpose. According to our research, a change in CEO often brings about a purpose statement. The same change could also lead to a previously stated purpose being abandoned or neglected. The strong support of the board can help to ensure the continuity of a company's purpose and prevent it from being a mere vanity project. By engaging the board, companies can also prepare for the probability of trade-offs – among projects or among stakeholders – that must be made at the board level.

Articulating Your Purpose

Companies will also need to decide how and where to articulate their purpose.

Be forward-looking and aspirational, but not generic. Purpose statements are, by nature, forward-looking and aspirational. Unfortunately, they can also tend to be vague or generic. Of the 223 purpose statements we reviewed, two-thirds bore little relationship to their company's business or industry. An example of this type of purpose statement is "creating opportunities to rise." Effective purpose statements do not exist in a vacuum; they relate

directly to their company's core business. Kingfisher's purpose statement, for example, clearly links to its business: "to make home improvement accessible for everyone." Johnson & Johnson's does the same: "to change the trajectory of health for humanity."

What you say matters more than where you say it. Some companies have explicitly committed themselves to serving a public purpose within their certificates of incorporation. Over 7,500 US companies—mostly new, small firms—are benefit corporations. They are required by law to serve a public purpose. But the research of University of Toronto professor Ellen Berrey reveals that many of those companies show little evidence of acting on their purpose. Meanwhile, a rapidly growing number of traditional public companies have begun to explicitly label themselves as purpose-driven, often through purpose statements included in their annual reports.

Our research found that the number of companies with purpose statements has almost tripled in the last five years, while the number of companies that identify as purpose-driven has grown more than tenfold. Our interviews with purpose-driven companies – including Unilever, Vodafone, and Western Union – reveal two key reasons for these increases: the broadening expectations stakeholders have of business and the increasing calls for businesses to focus on more than the bottom line. Still, wherever a company expresses its purpose, it should ensure that it is authentic.

Putting Purpose into Practice

Before adopting a purpose statement, it is vital that you consider what putting it into practice will mean. A company can do far more harm by failing to fulfill its purpose statement than by never adopting one at all.

> Purpose must inform the micro-decisions which employees make at all levels.

Be prepared to embed purpose in your organization. Adopting a purpose requires strong commitment and sufficient resources to develop and implement that purpose. You will need to incorporate the purpose into a company's governance, strategy, budgeting, risk assessment, and compensation. The CEO, along with their direct reports, must reinforce and champion the company's purpose continuously. At TE Connectivity, the CEO makes a point of sharing a purpose story at every global town hall, whether by describing how a medical invention has saved lives or how work with farm equipment suppliers is making fields more productive. Vivek Bapat, SAP's senior vice president of purpose and brand experience, emphasizes that to be authentic, purpose must become part of the micro-decisions which employees make at all levels.

Have a plan for when profitable opportunities are inconsistent with purpose. Much of the discussion about purpose-driven companies centers on the benefits, which include employee engagement and retention, improved decision-making in a crisis, and even, in the long run, higher shareholder returns.

But having a purpose can also mean foregoing potentially profitable opportunities. In many ways, this is nothing new: companies decide to forego opportunities for a variety of reasons including lack of resources, lack of strategic fit, and so forth. Purpose-driven companies should develop playbooks and decision-making frameworks to help them deal with situations in which an otherwise attractive opportunity is contrary to their purpose. 3M is developing internal tools which will make the company more transparent about how such decisions are made and help it to make them earlier. By preparing for such scenarios, companies can quickly turn their focus to identifying attractive alternatives which are consistent with the firm's purpose.

Finally, create a clear plan for how your company's purpose will be governed and executed. Some, like Western Union or the Dutch multinational DSM, will choose to create a dedicated position to oversee the company's strategy for implementing its purpose. But this is not the only model. Indeed, DSM expects to eventually phase out the company's dedicated purpose-related roles as its purpose becomes fully embedded. At TE Connectivity the chief marketing officer, the chief human resources officer, and the general counsel are primarily responsible for rolling out purpose initiatives and ensuring that purpose is alive and well within the company. The leaders of each company should determine what governance approach works best for them and is most likely to embed purpose firmly in the culture and strategy of the organization.

> Selecting, articulating, and implementing purpose requires hard work.

We expect ever more companies to adopt purpose statements or identify themselves as purpose-driven. Investors' attention to this topic remains high. Moreover, major inflection points of the past, such as significant mergers or major changes in strategy, have also driven companies like Ecolab, Truist, DSM and

more to reconsider their purpose and their broader role in society. The crises of 2020 have created a much larger inflection point, but having a purpose is not a panacea. Purpose helps to guide decisions, but it does not resolve every thorny problem. Furthermore, selecting, articulating, and implementing purpose requires hard work. A purpose statement should extend beyond nicely crafted words to authentically represent the company's business and values. And, as our research shows, to put purpose into practice a company needs both board and broad support, a plan for dealing with conflicts, and a clear governance structure. Having a clear corporate purpose may well reward your efforts, but only if it's done well.

Author Bios

Paul Washington is the Executive Director of The Conference Board Environmental, Social & Governance Center. Before joining The Conference Board, he served as Senior Vice President, Deputy General Counsel, and Corporate Secretary of Time Warner Inc. Paul.Washington@tcb.org.

Thomas Singer is a Principal Researcher at The Conference Board Environmental, Social & Governance Center. His research focuses on corporate social responsibility and sustainability issues. Thomas.Singer@tcb.org.

Endnotes

1. Larry Fink's 2019 Letter to CEOs.
2. "Statement on the Purpose of a Corporation," Business Roundtable, August 19, 2019.
3. Our analysis of companies in the S&P Global 1200 index finds that purpose statements have become more widespread since the beginning of the decade. In 2011, 27 companies published a purpose statement in their annual reports (including sustainability reports). By 2015, this figure had grown to 80 companies, and by 2019, there were 223 companies with purpose statements. Of these 223 companies, 46 self-identify in their annual reports as "purpose driven," up from four companies in 2015.
4. Thomas Singer, Purpose-Driven Companies: Lessons Learned, The Conference Board, October 2020.
5. Ellen Berrey, Organizational Characteristics of U.S. Benefit Corporations, The Conference Board, April 2020.
6. "What can we learn from 15 purpose-driven companies?", The Conference Board Sustainability Watch webcast, September 17, 2020.
7. For examples of research on these benefits see: Claudine Gartenberg and George Serafeim, "Top CEOs Have Realized Companies Need a Purpose Beyond Profit," Harvard Business Review, August 20, 2019; John P. Kotter and James L. Heskett, Corporate Culture and Performance (Free Press, 2011); Global Leadership Forecast 2018, Development Dimensions International, The Conference Board, and EYGM, January 2018; Putting Purpose to Work: A Study of Purpose in the Workplace, PwC, June 2016.

Corporate Responsibility in a COVID-19 World

Can corporate responsibility persist in the Covid-19 era? If so, how? Paul Argenti explains why now is the time to focus on the long term and think about the opportunity that comes out of crisis.

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Is it the responsibility of companies to create value for shareholders alone or for all constituents? Every year, I open my Corporate Responsibility class at Tuck with this question, encouraging my students to discuss the differences between Milton Friedman's shareholder-focused model and Charles Handy's constituency-focused approach. As the years have passed, an ever-increasing majority of my students side with Handy, arguing that companies are responsible not just for the bottom line, but for their broader communities and the world in which they operate.

> Is it the responsibility of companies to create value for shareholders alone or for all constituents?

This belief that today's corporations have a higher purpose is not just the purview of hopeful students in a classroom; the concrete actions of the business world's most influential investors and leaders increasingly reflect the same thinking. Environmental, social, and governance (ESG) issues are an increasingly important metric in the minds of many investors. At the April 2019 meeting of the Business Roundtable, 181 U.S. CEOs joined together to redefine the purpose of corporations as promoting "an economy that serves all Americans." In his 2020 annual letter, Chairman of BlackRock Larry Fink declared that companies must contribute to society or risk losing BlackRock's support. Vanguard and State Street followed suit. Given that these three funds collectively hold roughly a fifth of the S&P 500, it is difficult to ignore the rising and widespread influence of ESG activism.

And then the COVID-19 crisis hit. Abruptly that core question about the responsibility of corporations became enormously more urgent. Now a more appropriate inquiry, both for my students and for all business leaders, might be: Can corporate responsibility persist in the post Covid-19 era? If so, what does it look like?

I believe that the answer to the first question is a resounding "yes." I hope here to help answer the second one.

Corporate responsibility requires companies to take responsibility for how their actions affect individuals, communities, and the environment in which they operate. Nonetheless, they can be tempted, in times of crisis, to narrow their focus to just their shareholders and their bottom-line. Yielding to this temptation is dangerously shortsighted. Today, more than at any time in the past fifty years, businesses are expected to support all their constituents, and all the more so in crisis. The leaders of every major institution should therefore be thinking about how their reaction to this crisis will be remembered and judged, shaping their legacy. Given the immense strain of simply running daily operations during the pandemic, I believe that businesses should focus on three core areas of

corporate responsibility: treatment of employees, treatment of customers, and treatment of communities. By attending to these areas, leaders can position their companies to weather the current storm and to emerge even stronger than before.

Companies must begin by taking care of their own, viewing their employees as assets, not liabilities. In times of extreme financial duress, companies must cut costs. Extensive furloughs or layoffs may be a tempting way to do that, but companies must realize that their employees are among their strongest assets. When this is over, those without a strong workforce will be unable to operate at full capacity. At the same time, companies must weigh the very real health risks their workers face while fully employed against the financial hardship of reduced hours or layoffs. While there is no universal answer that works for every company, viewing employees as assets, rather than liabilities, will guide this challenging decision in the right direction.

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Concretely, that direction is retaining as many employees as possible by providing financial support and prioritizing safety. Shell provided over $2 million in cash contributions and employee match programs to support its employees' efforts to build their savings. Domino's Pizza, most of whose employees must work on-site, has drawn on its credit line to hire more workers, devoted $15 million to second quarter 2020 bonuses, improved its sick pay policies, and provided all employees with safety supplies such as gloves and masks. These steps helped both its employees and the long-term interests of its shareholders. As Domino's CFO Jeffrey Lawrence put it, "This is not a time to pinch pennies. This is a time to do the right thing for your team members, for your customers."

Danone also instituted comprehensive policies and practices, including salary guarantees and benefits, that indicate how highly it values its employees. In mid-March 2020, CEO Emmanuel Faber announced that Danone would guarantee all employment contracts and wages until June 30, 2020, extend healthcare and childcare programs, and establish a €300 million fund to help fragile suppliers. It also gave all employees in factories and warehouses in France a €1,000 bonus. Faber stated, "There is no way we can continue to supply our customers and consumers with food if our staff does not feel absolutely safe at work and secure about their jobs." When the virus struck Danone's Chinese factories in January 2020, it was also quick to react, reconfiguring factories to facilitate social distancing, stockpiling masks, and expanding remote work options. A central committee at Danone then extended the changes made in China to facilities in other parts of the world.

Companies that do reduce their workforce because they are facing serious financial problems should, at the very least, explain the rationale behind their decisions, being transparent about what they are doing and why. The reputations of companies that do not take this approach will surely be damaged.

Indeed, the reputations of Amazon and its subsidiary Whole Foods have taken a beating because, although both are essential businesses, they clearly demonstrated a lack of commitment to the needs of their employees during the crisis.

The CEO of Whole Foods rightfully drew the ire of the press by urging employees to donate their paid time off to coworkers who were directly affected by the pandemic. Critics were quick to observe that, with Amazon's support, the grocery chain should have been more than able to afford granting adequate sick leave to all employees. Following harsh criticism from the media, Amazon rethought its policy and issued the following statement: "… Amazon is matching all funds to the Whole Foods Fund since the acquisition to support the team needs during this unprecedented event, and all Whole Foods team members have access to the 2-weeks paid time off related to coronavirus that was announced for all Amazon employees."

While Amazon itself has often acted responsibly during COVID-19, from spending "hundreds of millions of dollars" (per Jeff Bezos) on developing COVID-19 testing capabilities to procuring 100 million face masks to be worn by "all associates, drivers, and support staff in our operations network," these efforts were overshadowed by their otherwise poor treatment of employees.

Next, companies must consider how the pandemic affects core customers and find ways to acknowledge this impact without exploiting the tragedy. It would be tone deaf for companies to simply not address the upheaval caused by COVID-19, but they also must approach the topic tactfully. Dove walked this fine line brilliantly by celebrating healthcare workers in its Salute to Beauty campaign, stating that, "Courage is beautiful." The US version (the ad was originally created in Canada) also mentioned Dove's donations to Direct Relief

to care for US healthcare workers. The ad was part of parent company Unilever's broader global commitment of around $108 million in supplies and cash to COVID-19 relief, including 200,000 masks in New Jersey and a National Day of Service (May 21, 2020) on which Unilever donated all essential items made in its factories to the relief efforts of Feeding America and other charities.

PepsiCo subsidiary Frito-Lay, on the other hand, released an "anti-ad" celebrating everything it had done and denigrating other brands for advertising during the pandemic. While Frito-Lay genuinely has done great work by, among other things, creating 3,000 new full-time jobs with benefits and donating more than $15 million to relief efforts, Fast Co. said it best, writing, "[These] are all laudable moves. But couching it in holier-than-thou anti-ad sentiment is a bold take. Especially when, and let's be clear, this is 100% an ad itself." Frito-Lay's campaign was not truly sensitive to this challenging situation. By pretending that an ad campaign had no advertising purpose, Frito-Lay at best introduced confusion about its corporate purpose, and at worst sowed the seeds of distrust in consumers.

By finding more direct financial ways to support customers, companies can go above and beyond. These efforts may range from extending loyalty programs to relaxing payment terms. JetBlue, for example, extended all its loyalty programs through December 31, 2021, allowing customers to retain their status without flying the requisite miles. Each current JetBlue Mosaic (frequent flyer program) member could also give one other person a Mosaic membership which lasted from June 15, 2020 through June 15, 2021. Similarly, Anheuser-Busch raised $4 million through a voucher program in which individual consumers could buy a gift card and the company would donate a matching amount to the customer's favorite pub or bar. Anheuser-Busch thus both provided financial support to the bars that buy its products and created goodwill and brand awareness in the consumers who purchase those products.

Finally, companies must strive to support the broader communities in which they operate. To survive this pandemic, companies must remember that they do not exist in a vacuum. Supporting their communities is therefore critically important. By ensuring the survival of its community, the company can also ensure its own survival.

Caterpillar enacted a comprehensive plan to benefit all stakeholders, including its community. The Caterpillar Foundation committed $10 million to directly support the global COVID-19 response and to help organizations, both locally and internationally, that have been affected. Their efforts ranged from food banks to hospitals to educational and international development organizations.

The Foundation worked with other organizations to provide resources to hospitals, medical staff, and patients, as well as facilitating online STEM and coding education for youth whose schools had closed. Furthermore, for a limited time, the Foundation expanded its existing U.S. Matching Gifts Program, providing a two to one match on employee and retiree donations to eligible nonprofits. The Foundation also raised its initial matching gift cap from $1 million to $2.5 million.

Prioritizing those who are most at risk is another way companies can support local communities. Shell, for example, donated $132 thousand worth of isopropyl alcohol to organizations that make disinfectant wipes for surgical and medical applications. Those wipes were distributed to hospitals throughout the US. Shell also produced and donated 1,600 gallons of liquid hand sanitizer to twenty-two emergency management offices, partnered with Mental Health America to provide resources and information to people in the US communities where they operate, and supported the Family & Youth Counseling Agency to help the front-line health care and displaced workers and their families of Southwest Louisiana. Finally, Shell worked with the United Way of Southeast Louisiana to assist people who were severely affected by the crisis.

Unfortunately, not all companies choose to protect the communities in which they operate. American Airlines displayed gross negligence during the onset of the pandemic by steadily increasing its number of flights through the end of April 2020 and seating people close together despite its claims that it was enforcing social distancing. Moreover, the airline then announced it would seat people in middle seats. It is no surprise that over 100 of American's flight attendants and forty-one pilots were diagnosed with COVID-19 by the beginning of April that year. And all this occurred while the company accepted government aid, which should have increased its sense of responsibility to the public.

> Ultimately, corporate responsibility is not about saying the right thing but about doing it, every day.

Companies, and other large institutions like hospitals and universities, hoping to be remembered for how responsible they were during this crisis, were not well served by a short-term financial focus. If ever there was a time

to focus on the long-term and to think about the opportunities that come out of crisis, that time is now. As this pandemic now drags on into 2021, ensure that your employees are well cared for. Continue to speak about the challenges this crisis has imposed on everyone without being exploitative. And extend support to the broader community in which you operate, recognizing that the health and success of local communities supports the health and success of corporations. Ultimately, corporate responsibility is not about saying the right thing but about doing it, every day. ■

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Endnotes

1. Freedman, M. (1970, Sept. 13). 32 The Social Responsibility Of Business Is to Increase Its Profits. The New York Times. https://www.nytimes.com/1970/09/13/archives/article-15-no-title.html
2. Handy, C. (2002, Dec). 32 What's a Business For? Harvard Business Review. https://hbr.org/2002/12/whats-a-business-for
3. Neff, J. (2020, April 9). Dove Puts New Face On 'Real Beauty' In Salute to Health Workers. Ad Age. https://adage.com/article/cmo-strategy/dove-puts-new-face-real-beauty-salute-health-workers/2249186
4. Beer, J. (2020, April 13) Frito-Lay's new Covid-19 ad is an anti-brand manifesto. Too bad it's still a connection. Fast Company. https://www.fastcompany.com/90489142/frito-lays-new-covid-ad-is-an-anti-brand-manifesto-too-bad-its-still-a-commercial
5. Martinez, J. (2020, July 8) American Airlines Called Out Over Packed Flights Amid Covid-19 Pandemic. Complex https://www.complex.com/life/2020/07/american-airlines-called-out-over-packed-flights-amid-covid-19-pandemic
6. Arnold, K. (2020, April 9) Unions: 41 American Airlines pilots and 33 at Southwest have tested COVID-19 positive. The Dallas Morning News https://www.dallasnews.com/business/airlines/2020/04/09/41-american-airlines-pilots-have-tested-covid-19-positive/

Forget Dumb Luck - Try Smart Luck:

Strategies to Get Lady Fortune on Your Side

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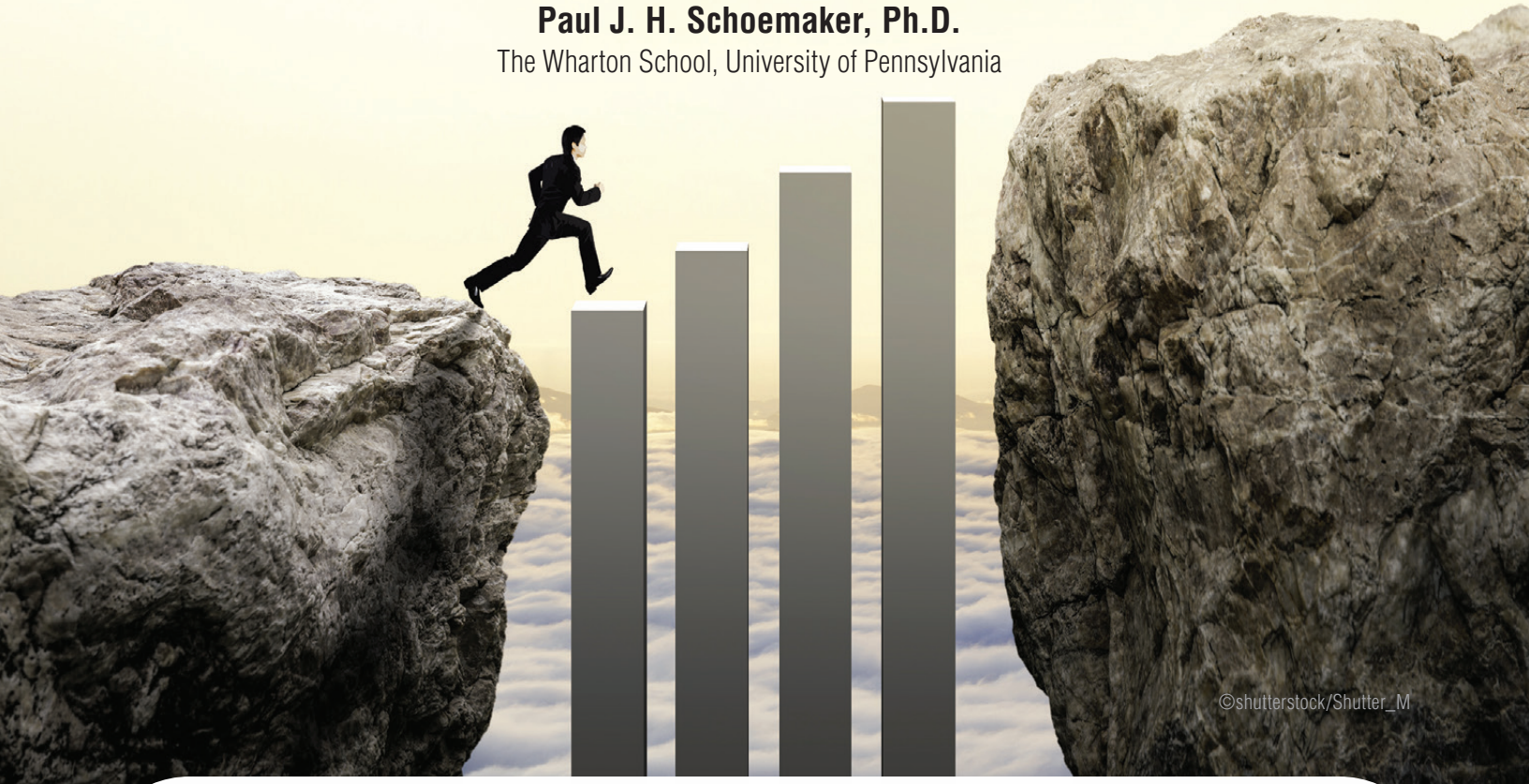

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Life entails a great deal of uncertainty, shaping our careers and personal paths in unexpected ways. Paul Schoemaker examines eight complementary approaches which can improve the odds of favorable outcomes, both in business and in life. This strategic road map will help you to increase the number of times luck smiles upon you and to incur risks only when you have a sufficient statistical advantage.

The Oxford dictionary defines luck as "success or failure apparently brought by chance rather than through one's own actions."[1] This definition focuses on outcomes in which random factors played a dominant role. At its core, then, luck is about random events occurring by chance, a field that has been extensively studied in statistics as well as decision making, economics, physics, and biology (random variation). Most people view luck as the opposite of determinism, control, or strategic intent. But because we can often influence situations in which chance plays a role, these forces are actually linked. In creative fields like art, science, and business, serendipity – the unintended discovery of beneficial events or occurrences - may be brought on by indirect design as well as by pure luck.[2] My recommendations reflect academic research on decision making, strategy, and innovation, including some of my own. I also draw on personal experiences in founding and running companies, as well as in advising numerous organizations worldwide. I have long been intrigued by why some people or firms seem so lucky in business, and have always wondered to what extent strategic designs underpinned their good fortune.

Rather than hope for the best and wait for good things to happen, shape your circumstances so that good luck will find you more often.

Dumb vs Smart Luck

The first challenge is to reframe your views about luck and realize that it usually entails much more than random chance. Yes, the primary force behind luck is the way that probabilities play out, but there are things you can do to shift the odds in your favor. Rather than hope for the best and wait for good things to happen (dumb luck), shape your circumstances so that good luck will find you more often (smart luck). The extent to which success in life is due to luck or skill is in the eye of the beholder and may therefore vary by person, culture, and even language. But whatever your view on luck, there are strategies that will increase the odds that Lady Fortune will smile upon you. This may not work when you are playing games of pure chance like state lotteries[3] or roulette, but when the mix of skill and chance is complex and partly under your control, why not try smart luck?

Most business opportunities lie at the fuzzy intersection of luck and preparation, so you need to be ready when the stars align. Without strategic preparation, many random opportunities will pass you unnoticed, just as they did Romanian boxer Serafim Todorov. After beating Floyd Mayweather Jr in the semi-finals of the 1996 Olympics in Atlanta, Todorov was guaranteed either a silver or a gold medal. A group of American boxing promoters offered him a lucrative contract, ready for signing, before the final match. Being unprepared to be favored by such luck, Todorov refused on the spot. He failed to recognize how perfectly the stars were aligning for him, just this one time in his life. He went on to lose the final match (settling for silver) and became embroiled in suspicions that he had fixed the fight.

The promoters, meanwhile, had turned to young Mayweather when Todorov refused them. Mayweather was psychologically ready for breakthrough success. Despite having just lost his semi-final, he had the ambition, analytic smarts, and presence of mind to seize this golden opportunity. He signed the contract and became the world's most famous featherweight boxer. Floyd Mayweather never lost another match and eventually amassed over $280 million in personal wealth.[4] Todorov was just not poised to act decisively when opportunity knocked and made a bad snap decision. He still lives in a modest apartment in the small town of Pazardzhik in southern Romania, across from a burned-out coffee hut. He has plenty of winning photos and boxing trophies to keep him company, along with daily regrets about what could have been. Without steady work, Todorov and his wife subsist on a state pension of 400 euros per month.

These contrasting cases of dumb and smart luck demonstrate how, by strategizing and being prepared to seize the moment when it arrives, we can often influence the circumstances in which luck may strike. The meta-strategies described below can help anyone to better play the game of luck so as to have a competitive edge in business and life. Although my focus here is on better managing the upside of luck in business, many of these strategies can be applied to any part of life, to find the good luck and avoid the bad. Figure 1 lays out the eight meta-strategies under a conceptual umbrella of four key phases: creating opportunities, assessing risk and return, refining your strategy and changing your mindset.

1. Position Yourself Better

Most people are unduly constrained by their current location, implicit assumptions, or self-image. If you are toiling thanklessly in a backwater business or organization, it is unlikely that you will encounter many lucky breaks. The place where you happen to start your career is seldom the best place from which to succeed in the long term. For college track star Marilyn King, the key to

smart luck was a fundamental shift in mindset. She stopped thinking 'I am an average, hardworking athlete and I hope to someday be on the relay team that goes to the national championships' and adopted the seemingly outrageous thought, 'I could be in the Olympics.'[5] In short, if you want to be number one, you must start to think and act like number one. For King, that meant quitting her job, moving to California, and devoting all her time to her sport.

She found herself an excellent coach, a supportive environment, and a stellar twenty-year pentathlon career, earning five national titles, a World Record, and a place on the US Olympic team in Munich in 1972 and Montreal in 1976. Without an Olympic mindset like King's, it's hard to design the conditions that produce smart luck. The challenge is to overcome the self- limiting perspectives, parochial views, or critical assumptions that are holding you back. Are you in the right job, business, or social group to be favored by chance? Which of your assumptions are holding you down and how can you test them? In my book *Brilliant Mistakes*, I explored how entrepreneurs and innovative leaders tend to be unusually willing to test their most deeply held assumptions, even when they are confident that they're correct.[6]

Are you in the right job, business, or social group to be favored by chance? Which of your assumptions are holding you down and how can you test them?

Practical pointers: Conduct an audit of where you are vs. where you want to be; who do you know that has successfully repositioned themselves and how; how extensively have you deployed the eight strategies in the diagram below?

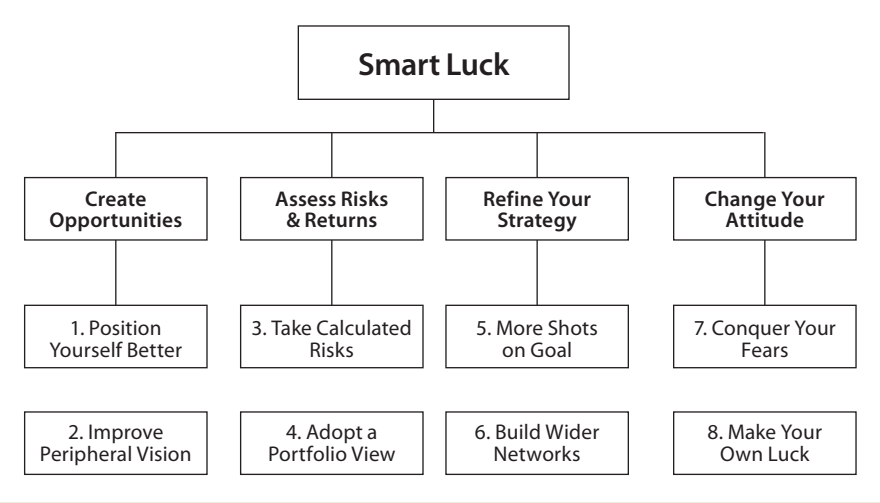
2. Improve Peripheral Vision

Opportunities are all around us, but we may focus so intently on a specific few that we miss a hundred others. Once you have put yourself in a better environment, physically or mentally, try to become a keener observer. Sometimes luck may actually knock loudly on your door, but most opportunities will not be presented on a gold platter. Like Easter eggs, you have to find them yourself. If you keep looking in the wrong places, good luck will simply pass you by. In a famous attention study, participants were shown a film of six people and asked to count how many times they passed a basketball. In their focus on passes, half the participants failed to see a person dressed as a gorilla stroll through the game, turn to pound his chest at the camera, and walk away.[7] Likewise, taking a narrow view of our own opportunities can ruin our peripheral vision. Don't be the person who looks for their lost keys only near the lamp post, where the light is best; search a wider field, explore the shadows, and hone your peripheral vision.

Andy Grove, former Chairman and CEO of Intel, emphasized that, "when spring comes, snow first melts at the periphery, because that's where it is most exposed." Look for new opportunities at the edges of your business, scanning the horizon like the roving beam of a lighthouse. When something catches your interest, zoom in and explore it further. Above all, don't focus too narrowly. FBI agents are trained to use *splatter vision* when scanning a large crowd for a would-be assassin. They direct their gaze at infinity, looking right through the crowd, which widens their visual field to the maximum. This allows them to spot suspicious motions, objects, or commotions across a wide area. When you go to meetings, for example, try to maintain a wide-angle view rather than being absorbed by your own concerns. What others say may be of great importance, even if it's beyond your immediate interests. By being able to see, hear, and explore more widely than your colleagues, you will be able to seize chances that they miss.[8]

Practical pointers: Are you often complimented by colleagues for spotting peripheral signals?

Figure 1: Conceptual Structure



Compared to peers, how do you score in being curious? Have you taken note of people who excel at exploring anomalies and asked them how they do it?

3. Take Calculated Risks

The aforementioned strategies will increase your chances of getting lucky by offering you a wider range of options. But how you approach those options is also vital; in most cases, nothing ventured really does mean nothing gained. Still, most people are risk averse, so stepping into the unknown goes against their nature. Taking a risk means accepting the possibility of losing something (time, money, reputation) and, for most of us, losses are more painful than comparable gains are pleasurable. Most people will not agree to flip a fair coin to either win or lose a $1,000.[9] Even if the chance of winning is raised to 60 percent by using a weighted coin, many are still reluctant to risk the $1,000. But people successful in business, sports, and other competitive fields would probably take the 60:40 bet since it offers a positive edge. They play the long game, not looking at risks in isolation, and expect to encounter occasional setbacks.

> You must be smart about which risks to take, and when you do, remain ever conscious of the most you can afford to lose.

Most people, however, are too timid to pursue a small probability edge because, on a single toss, the risk seems too high. Though negative outcomes in life are seldom as bad as envisioned, fear often causes us to exaggerate the potential losses in our own minds. Yet overcoming setbacks makes us more resilient, which is important to the pursuit of smart luck strategies. "What does not kill me, makes me stronger," Nietzsche famously wrote. In his book *Antifragile*, Nassim Taleb agreed, arguing that when organizations encounter a black swan, they should use it to become more robust.[10] Nonetheless, you must be smart about which risks to take, and when you do, remain ever conscious of the most you can afford to lose. To play a long game well, it is vital to view each individual risk as a small part of a much larger portfolio of risks that you can shape.

Practical pointers: Are you well-versed in statistical thinking, including the law of large numbers, regression toward the mean, Bayesian updating and what order statistics are all about? There is no need to grasp the math but do try to understand the underlying concepts.

4. Adopt a Portfolio View

Consider again that weighted coin you can flip for a 60 percent chance of winning $1,000 (and a 40 percent chance of losing $1,000). If you said no to that one flip, would you say yes to tossing this coin 100 times? If so, you could win or lose $100,000 at most, with a statistically expected net gain of $20,000 after 100 flips. Although any individual coin toss entails a 40 percent chance of losing money, your chance of losing money is less than 3 percent after 100 independent coin tosses.[11] To make the right choices in business and life, it is important to think in portfolio terms and ask how the odds of winning change under repeated plays.[12] Ideally, when considering any given risk, you would need to consider all other risks you face at that time - from financial and health risks to social and reputational ones – plus all future risks you may encounter. This range is nearly impossible to estimate in real life, but just recognizing that your eggs are seldom in a single basket allows you to get a better fix on your risk exposure while avoiding the isolation trap.

The most important factor in the smart luck game is understanding your overall risk-return exposure. The aim is to look for positive edges in your bets - from sports and investing to networking and startups - and then play these sensible risks out over the long haul. In his excellent book *The Success Equation,* investment strategist Michael Mauboussin examined the role of chance in four professional sports. [13] He found that random chance plays a lesser role in basketball than in hockey because players attempt more shots during a typical season of basketball than goals during a season of hockey. The better team will win more reliably the larger the sample from which attempts are drawn. Similarly, a golf tournament of four rounds will more accurately identify the best player than one single round. Portfolio analysis explores the means and variances of each individual risk, as well as all interrelations between them, in order to more precisely estimate the overall risk-return balance of the portfolio.

Practical pointers: Do you think in terms of correlations when analyzing risks; avoid the isolation trap by looking at the big picture; don't be fooled by random chance but instead use statistical principles (with help if need be) to better separate signal from noise.

5. More Shots on Goal

A soccer team that makes thirty decent shots at the goal is more likely to win than one with just five shots. If you blindly draw one ball from a bowl containing one hundred numbered balls, each number from 1 to 100 is equally likely to surface. But if you repeat this experiment many times, after each time putting the ball back into the urn, the average of your scores will tend toward 50 (known as the central limit theorem). Now suppose that you can

each time draw two balls at random and pick the higher one; what will the score trend toward on average? Using the best of two random picks per turn, the average score will rise to 77.6. With the best of ten random draws per turn the average will trend toward 90.9. Order statistics such as these are often counterintuitive since the score of the best of *n* draws climbs exponentially. The formula for uniform draws is $100*n/(n+1)$. The point here is that smart luck is very much a numbers game associated with outliers. Highly successful people typically give themselves far more opportunities than average in their fields, which increases the chances of producing an outstanding score. For example, while average academics may publish less than fifty articles over their entire careers, Nobel laureates may have more than 300.

To appreciate the kind of statistical edge that comes from numerousness, just consider the full catalog of all Pablo Picasso's works. It includes 1,885 paintings, 1,228 sculptures, 2,880 ceramic objects and more than 12,000 drawings. Even though Picasso is known to most museum visitors for no more than fifty pieces, it took all those 18,000+ creations to produce fifty or so masterpieces. Likewise, when job hunting, if the response rate is below 1 percent, you may have to reach out more than a hundred times to get just one offer. Luck is very much a numbers game, so more shots on goal help, provided they are not just pot shots. In the business of innovation, many companies don't have enough opportunities to score big and so need to increase their chances. Pharma companies, for example, may examine thousands of compounds to produce a single blockbuster drug. Most organizations can widen their innovation pipelines by running internal tournaments among their employees (and others). The basic purpose is to bring all kinds of ideas to the surface, at first without imposing any filters, then to do some preliminary scoring, combine related ideas, improve the clusters, and further refine them.[14]

Practical pointers: Try to find the statistical edge in your strategy; understand the risk of failure through insufficient shots on goal; examine your pipeline of business projects to make sure the innovation funnel is well-diversified across activities and time.

6. Build Wider Networks

Few people shape their lives all alone. Our opportunities often come to us through parents, teachers, coaches, coworkers, bosses, friends, role models, and random interactions at work, home, school, or elsewhere. As Malcolm Gladwell pointed out in *The Tipping Point*, making more connections causes your chance of success to increase exponentially.[15] If you know only twenty people in business, go out and expand it to a hundred. Go to receptions you may not feel like attending or join civic groups and boards that may at first hold limited appeal. Just get yourself out there, mixing oil and water, making yourself vulnerable. Don't judge people at first glance and remember to be patient. Once you have a wide and diverse network, don't forget to scan the edges, rather than just focusing on your closest contacts and comfort zone at the middle. Your position within your network is as important as its breadth.

Are you a boundary spanner with one foot in one world and the other somewhere else? Great innovators often operate at the intersections between fields, as physicist Francis Crick and biologist James Watson did when discovering the double helix structure of DNA. Their work built on other scholars' research in genetics and crystallography and earned them a Nobel Prize.[16] By taking part in a diversity of networks, even as a fringe player, you will see things that others in your own domain may not. Sociological research has emphasized the strength of weak ties, arguing that, in business, acquaintances are often more important than close friends.[17] These loose bonds offer bridges to alliance partners, distributors, suppliers and other stakeholders in your firmament and the more of them you have, the better. Giving more than you take is a proven way to network, so say yes to most small requests unless there are good reasons not to.[18]

Practical pointers: Are you well positioned in your current networks or should some parts be extended; consider both external networks and those within your organization; devise strategies (calls, lunches, meetings) to spot new ideas, talent, or weak signals.

7. Conquer Your Fears

Most people seek identity and acceptance in familiar and well-defined groups, so moving into different worlds is not always comfortable. But there are clear advantages to spreading out and allowing yourself to be vulnerable. Children who have moved from one country to another, for example, are often socially and educationally precocious. At an age when they are naturally inclined to seek security in a small group, their parents' circumstances force them to learn new languages and geography and to make new friends. Those who manage these challenges well tend to develop a core confidence that encourages them to take greater risks later in life. Displacement theory suggests that setbacks early in life, such as moving around, losing a parent early, or getting fired from your first job, can build inner strength.[19] In his 2008 commencement speech at the University of Pennsylvania, Michael Bloomberg mentioned that he had been fired early in his career. Although he

was deeply upset at the time, in retrospect he viewed it as one of the best things that ever happened to him: painful, but also liberating and inspiring.

Smart luck strategies require inner confidence as well as a tolerance for failure and the ability to finding silver linings in dark clouds.

Leaders develop inner strength by balancing risk against safety as they mature. Historian Richard Francaviglia found it "especially revealing that most American heroes, presidents included, have been – and continue to be - from small town America."[20] Presidents Harry Truman, Jimmy Carter, Bill Clinton, and Joe Biden all came from rural backgrounds which helped them build their values, viewpoints, and personal characteristics. Perhaps it helped that they were big fish in small ponds before swimming out into larger bodies of water. Helping out on the farm or in a family business may also have instilled an early sense of responsibility and self-reliance. Whatever the reasons, developing inner confidence is crucial in pursuing smart luck strategies, as well as building a tolerance for failure and the ability to find silver linings in dark clouds.

Practical pointers: How well have you handled past failures and success in terms of learning and resilience; are you skilled at finding silver linings when things go haywire; do you typically frame unsuccessful projects as mistakes or as learning opportunities?

8. Make Your Own Luck

In an uncertain world, we cannot control everything, but we can surely change how we take risks. The key is to develop a clear strategy and then execute it with discipline and a focus on intelligent process. Although setting your sights high is wise, focusing obsessively on one ultimate goal may actually prevent you from pursuing the right approach. A Spanish soccer coach wanted passionately for his team to win the European cup but guarded against this kind of obsession by telling his players that being anywhere in the top three would be fine. He knew that it would help his team to focus more on passing so they could get stronger and reach the very top, which they eventually did.

John Kay's book *Obliquity* celebrates the virtues of such indirect approaches, which prioritize mastering the fundamentals over short term outcomes or wins.[21] He argued that Boeing's historical focus on 'excellence in building airplanes' was the key to its initial success. The company's field of dreams logic was that if you build the best planes, the money will come. Yet too often companies reward short-term results rather than building excellent process, an approach which may partly explain the fatal crashes of two Boeing 737 Max airplanes and the (pre-COVID-19) subsequent grounding of hundreds of Boeing planes worldwide. Critics have attributed the crisis to the company's shift from an engineering culture to a short-term profit one, with production speed and cost control its paramount goal.[22] Smart luck strategies must be supported by organizational strategies, structures, rewards, and cultures. The eight strategies I recommend reinforce each other and should be used in such a way that the pieces align and form a whole. The aim is to make yourself into a luck magnet and draw scraps of good fortune toward you.

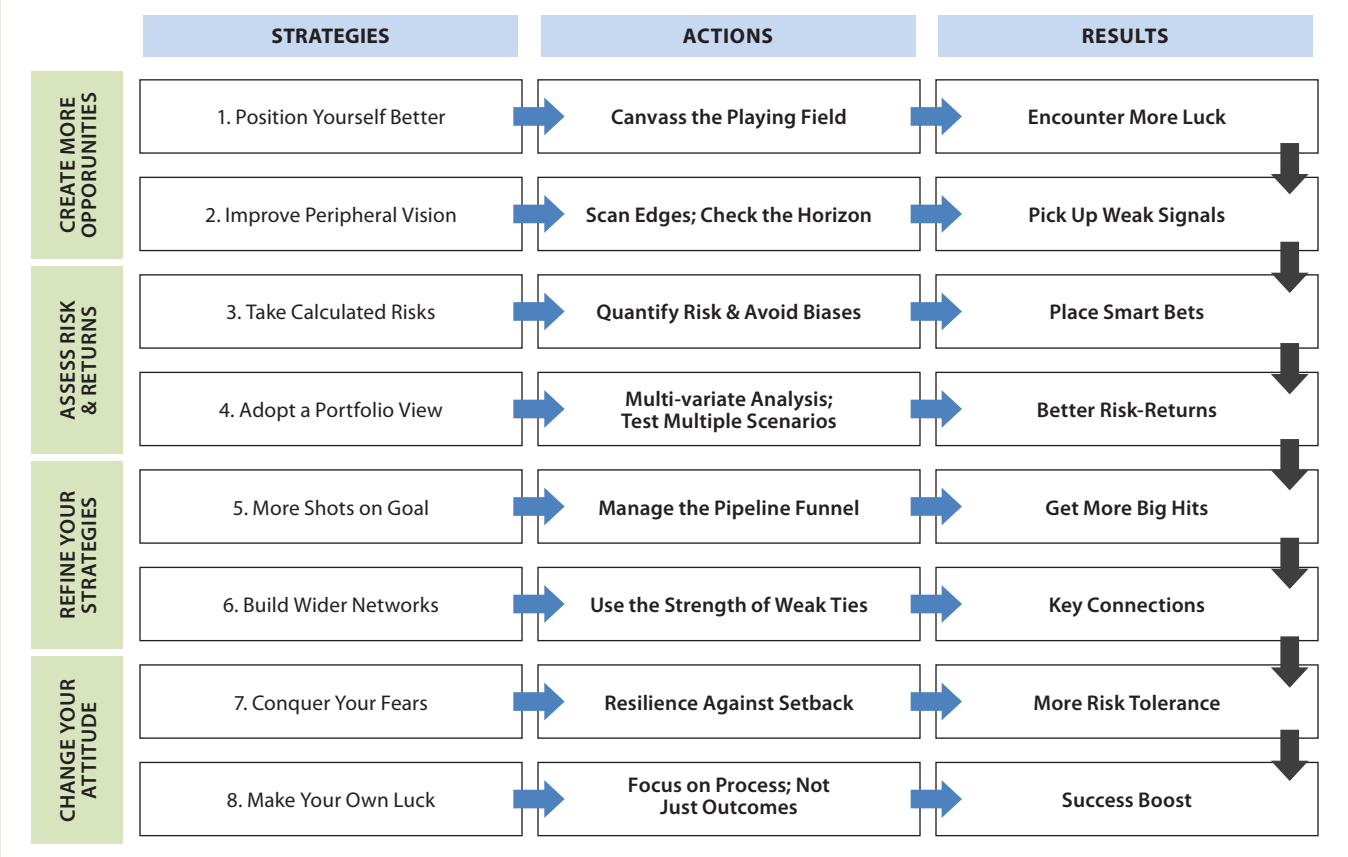
Practical pointers: Score your current performance on each of the eight strategies above and develop plans to shore up weaknesses; validate your self-audits by asking trusted colleagues and friends; learn from those who have mastered some or all of the strategies discussed.

The Fault Lies Not in Our Stars

Most companies promote managers for hitting designated targets rather than for pursing the best process strategy. A good plan which fails is seldom rewarded, even if it had evident merit. But some companies do inculcate a smart process mindset in their culture and try to reward it. Susquehanna Investment Group, a Philadelphia options trading firm, for example, uses poker to teach new hires how to make smart process moves. Participants learn that it is not about what hand they were dealt, but about how well they play the cards they have. In the same spirit, Susquehanna determines bonuses based on the merit of the reasons given for a particular trade in advance, rather than by whether the move paid off in the end. Has your organization ever given a performance reward for an excellent plan that happened to fail? Although most companies only reward good outcomes in the short term, good processes yield the best outcomes in the long run.

Too many people settle for dumb luck and hope for the best, when they should be orchestrating smart luck. Although success in work and life often appears to be the result of random events, in truth the lucky ones often managed the broader context better. Some people may attribute their success to a few key breaks, such as a professor who helped them or an introduction that opened a vital door, but others emphasize that they made sure to talk to all their professors and solicited many introductions before the one that really mattered. This more deliberate perspective is crucial to shifting your view from dumb luck to smart luck. Those who get ahead in life tend to understand that there is

Figure 2: Roadmap for Smart Luck



more to luck than pure chance. They appreciate that they can orchestrate circumstances which are more likely to produce successful outcomes.

In closing, Figure 2 summarizes the various keys you can use to unlock the hidden opportunities that surround you. Don't fall victim to negative self-fulfilling prophecies like the belief that you are inherently mediocre or somehow doomed to bad luck. If you have not been very lucky yet, blame yourself, not the stars. If you never reach beyond your grasp, you will never find out how great you can be. Keep in mind that the strategies above are meant as guidelines and avoid overdoing any single one of them. You don't need to move to a new town every year, seek out reckless risks, or waste time and money on random shots. And don't pin your hopes in life on dumb luck like winning the lottery. Instead, practice these strategies and, step-by-step, create your own *smart* luck. As golf great Gary Player observed after years of winning, "the more I practice, the luckier I get." ■

Test your Smart Luck savvy at www.corpu.com/q2-tech/smart-luck

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Endnotes

1. https://en.oxforddictionaries.com/definition/luck
2. Dew, Nicholas. "Serendipity in entrepreneurship." Organization studies 30.7 (2009): 735-753.
3. Although even in US state lotteries, some clever players manage to find a systemic weakness at times allowing them to turn dumb into smart luck; see https://dqydj.com/beat-the-lottery/
4. https://www.nytimes.com/2015/04/04/sports/the-last-man-to-beat-floyd-mayweather-jr-still-regrets-it.html?mcubz=1
5. http://blog.linkageinc.com/blog/beyond-excited-%E2%80%93-an-olympian-perspective-as-business-takes-its-rightful-place/
6. Schoemaker, Paul J. H., Brilliant Mistakes: Finding Success on the Far Side of Failure, Wharton Digital Press, Fall 2011
7. Chabris, Christopher, and Daniel Simons. The invisible gorilla: And other ways our intuitions deceive us. Harmony, 2010.
8. Day, George S., and Paul J. H. Schoemaker. See Sooner, Act Faster: How Vigilant Leaders Thrive in an Era of Digital Turbulence. Boston, MA, The MIT Press, 2019.
9. Kahneman, Daniel. "Prospect theory: An analysis of decisions under risk." Econometrica 47 (1979): 278.
10. Taleb, Nassim Nicholas. Antifragile: Things that gain from disorder. Vol. 3. Random House, 2012.
11. With just 5 tosses, the probability of a net loss drops from 40% to 32%; with 20 tosses to13%; with 40 tosses to 7%; with 60 tosses to 5%; and with 80 tosses to 3%; https://www.di-mgt.com.au/binomial-calculator.html
12. Schoemaker, Paul J. H., and John C. Hershey. "Maximizing your chance of winning: the long and short of it revisited." Organizational Behavior and Human Decision Processes 65.3 (1996): 194-200.
13. Mauboussin, Michael J. (2012). The success equation: Untangling skill and luck in business, sports, and investing. Harvard Business Press.
14. Christian Terwiesch and Karl Ulrich, Innovation Tournaments: Creating and Selecting Exceptional Opportunities (Cambridge, MA: Harvard Business School Press, 2009).
15. Malcom Gladwell, The Tipping Point: How Little Things Can Make a Big Difference, Little Brown, 2000.
16. https://www.nature.com/scitable/topicpage/discovery-of-dna-structure-and-function-watson-397
17. Granovetter, Mark S. "The strength of weak ties." Social networks. Academic Press, 1977. 347-367.
18. Grant, Adam M. Give and take: A revolutionary approach to success. Penguin, 2013.
19. Shapero, Albert (1984). The entrepreneurial event. In C.A. Kent (Ed.), The Environment for entrepreneurship (pp. 21–40). Lexington, MA; and C.D. Health.Krueger, N.F. & Brazeal, D.V. (1994). Enterprise potential and potential entrepreneurs. Entrepreneurship Theory and Practice, 18(3), 91–104.
20. Francaviglia, Richard V. Main street revisited: Time, space, and image building in small-town America. University of Iowa Press, 1996.
21. Kay, John. Obliquity: Why our goals are best achieved indirectly. Profile Books, 2011.
22. https://www.newyorker.com/magazine/2019/11/18/the-case-against-boeing

A FUTURE OF WORK AND ORGANIZATIONS

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Future organizations will be flash powered - recruiting freelancers looking for high-autonomy work and engaging them in a collective production process - to generate innovative solutions for complex business and societal problems. Arvind Malhotra, Ann Majchrzak, and Alpheus Bingham present frameworks through which to understand the rapidly evolving nature of work and organizations and to address the resulting issues.

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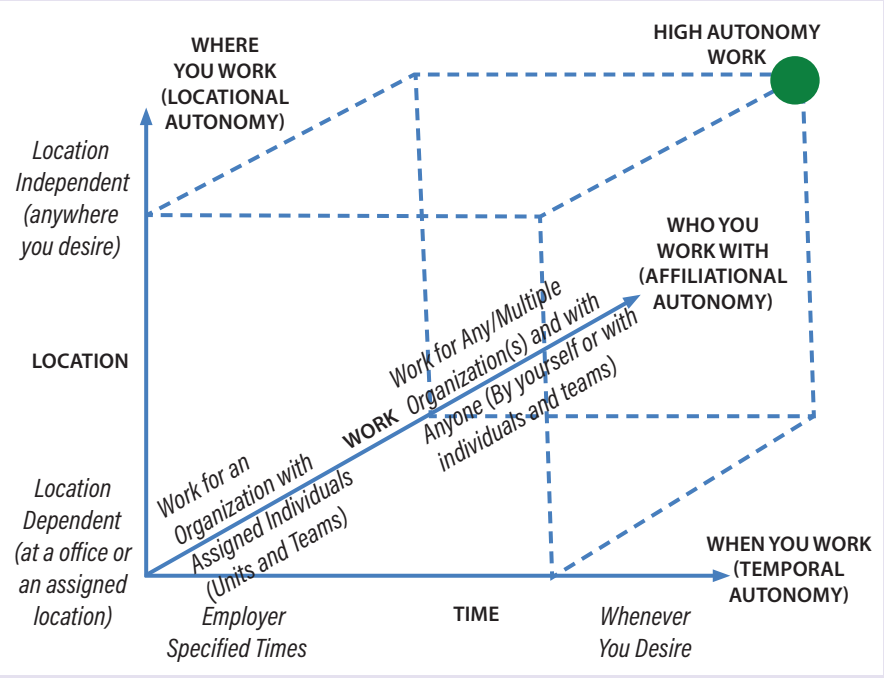
A recent study found that 91 percent of organizations depend on external experts to execute some or most of their work.[1] The most common areas where external help is routinely sought are software development, product testing, product ideation, etc. Organizations are also turning more and more to external experts for creative work such as designing marketing materials, developing new products, and even business forecasting. This change, as well as the rising interest in autonomy, reveals extremely important clues as to the kind of work people are interested in. The increase in gig work, in which individuals work as "independent contractors or consultants on specific tasks for a specific duration,"[2] has been linked to the rising demand for work autonomy. McKinsey estimates that 20 to 30 percent of workers in the US and European economies are now engaged in some form of gig work.[3] Another report by Randstad[4] estimates that, by 2025, most of the workforce will do some form of gig work (i.e., contractor, consultant, temporary, or freelance).

> Autonomous workers perform better, are more satisfied with their jobs, and are more creative. They also learn continuously.

Autonomy as a Critical Driver of the Future of Work

As many organizations know, people are happier and more effective if they feel their work is meaningful. One thing that contributes to this sense of meaning is autonomy.[5] Years of research have revealed that autonomous workers perform better, are more satisfied with their jobs, and are more creative. They also learn continuously.[6]

Figure 1: The Three Dimensions of Autonomy in the Future of Work



Work autonomy is multidimensional and grounded in a variety of concepts such as choice, ownership, and independence.[7] Figure 1 presents three forms of autonomy which are particularly crucial to the future of work: flexibility of location, time, and affiliation. Workers whose skills are suitable to a gig economy, and have not been automated, will have an ever-increasing choice as to where they work, when they work, and with and for whom they work.

With the ubiquity of the internet and its platforms for trading skills for pay, workers in the gig economy enjoy both locational and temporal autonomy. Uber drivers have the flexibility to organize their work so they can pick up children from school, while experts in developing countries can sell their knowledge internationally without leaving home. This constantly evolving work has also been termed "agile work," whereby workers can work anytime, not just during set hours, and work anywhere, not just from the confines of a conventional office.[8]

Workers in the gig economy often also achieve affiliative autonomy, by choosing the organization, team, or colleagues with whom they prefer to work. By maintaining a network of employers to choose from, they can make their own decisions, sharing only temporary affiliations with their employers. In an ideal world, affiliative autonomy allows individuals to perform tasks that resonate with their deeply embedded interests and beliefs rather than tasks assigned by managers.

While some organizations may exploit gig workers by dramatically underpaying them for their work, there is another side to the gig economy. People who are not satisfied with routine work can instead share their knowledge and ideas about difficult and complex problems in ways that benefit a company, a community, or the world. For example, many people are energized

when their passions and interests intersect with a sponsored open innovation challenge. When people collaborate over the internet to solve a particular problem or question, they become a flash crowd, working together for only a few days during which the innovation challenge occurs.

Historically, companies have largely used innovation challenges to fulfill specific one-time needs such as finding new product ideas or solving algorithmic problems. More and more, however, organizations are learning to use flash crowds routinely, to provide a continuous infusion of new expertise, talent, and resources that helps them to maintain close connections with stakeholders while remaining agile enough to pivot instantaneously when necessary. We consider these organizations to be flash powered.

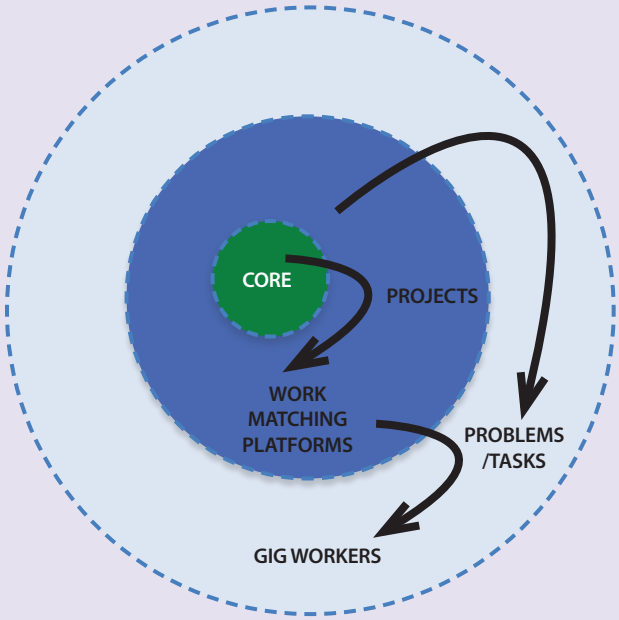
Flash Powered Organizations

These emerging flash powered organizations are those that most effectively use crowds – globally distributed collections of autonomous workers who cooperate for a short time to solve particular problems.[9] Flash crowds, which are central rather than supplementary to flash powered organizations, are different from those conventionally used for crowdsourcing. They address considerably more complex problems that have not been broken down into simple modules. They examine the entirety of these problems and attempt to simultaneously define and solve them. Flash crowds also coalesce for short periods, a few days rather than months or years. They combine a diversity of perspectives in collaborating to find comprehensive solutions to complex problems rather than just submitting individual ideas. Members of these flash crowds bring their own passion and expertise to each challenge, so organizations do not need to own all of the assets involved. In Figure 2, we envision future organizations that use crowds of autonomous workers with a minimal core who orchestrate those crowds either directly or through work matching platforms (e.g. Upwork, Freelancer, Fiverr, FlexJobs, Gigster, Hyr, and Liveops). InnoCentive, for example, is a very successful platform that matches companies with highly creative and technically advanced gig workers who perform the complex scientific and technical tasks necessary for innovation. It will be critical, then, for future organizations to design projects so that crowds of gig workers can accomplish them with little dependence on the organization for resources. Some of these organizations will then amalgamate the resulting work into commercial products and services. As traditional organizations move towards flash power, they will need fundamentally different organizational skills in order to orchestrate networks of gig workers rather than supervising internal units of full-time employees. Many organizations will initially choose to work through existing platforms, such as Upwork, whose orchestration capabilities are already in place. As they become more comfortable with being flash powered, they may find it more effective to create their own work allocation systems. These choices about how to manage a gig workforce are analogous to past make-versus-buy decisions except that the decision will pertain to human intellectual capital. Human resource departments will thus transcend their historic role as personnel departments, and not in name only.

As the sources of innovation move outside the company structure, flash powered organizations

It will be critical for future organizations to design projects so that crowds of gig workers can accomplish them with little dependence on the organization for resources.

Figure 2: Future of Organizations: Leveraging an Autonomous Workforce



will become more prevalent. Some, such as HTT and ConSenSys, a blockchain-enabled organization, are already beginning to design themselves exclusively for flash power.[10]

Glimpses of this future have been visible for some time. Early on, pharmaceutical and chemical companies began using the InnoCentive platform to globally broadcast their complex technical and scientific problems to registered freelance solvers. Internal employees then incorporate the flash crowd's solutions into new and existing projects. IBM's long running experiment with Innovation Jam[11] offers another way that flash powered organizations can be operated. Thousands of people, many of whom have a direct stake in the organization, come together to engage in deep and knowledgeable conversations which become the basis for the company's strategies for the future. Landcare Research, Inc., a New Zealand based governmental research institute which does applied research on the management and eradication of invasive pests, also used a flash crowd of stakeholders to inform its strategic planning.[12] IBM's recent acquisition Red Hat is another indicator of the growing importance of flash power. From its early days, Red Hat used flash crowds of software developers to create open-source software. The company's internal employees worked with these outside experts before bringing the software in-house and incorporating it with customer input.[13]

Flash powered organizations will increasingly choreograph the interactions between providers, creating rules of interaction, regulating the flow of information, and resolving conflicts.

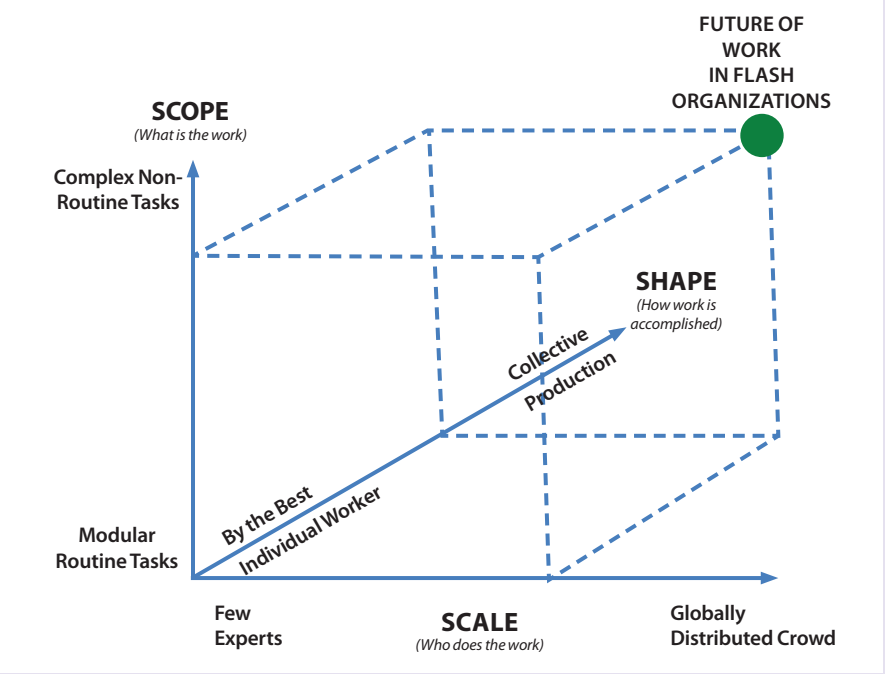
As flash powered organizations become prevalent, research, as well as practice, needs to delve deeper into the most efficient and effective ways for work to be accomplished. Some organizations may become purely flash powered, with almost all their workers outside. Uber and Lyft are already showing signs of being purely flash powered. Such organizations serve as intermediaries, centralizing specific services. Flash powered organizations will increasingly choreograph the interactions between providers, creating rules of interaction, regulating the flow of information, and resolving conflicts.[14] Pure flash powered organizations may be feasible only when the services being performed are highly standardized, repetitive, and suitable for remote monitoring. Most other organizations may continue to be only partly flash powered, using outside expertise for either basic, clearly definable tasks or more esoteric and unique innovations. These companies will need to maintain a sizable internal employee base to filter, amalgamate, and implement the work of the flash crowds.

The Execution of the Future of Work: A Collective Production View

The future of work has first manifested itself in the use of gig workers to execute routine tasks on demand through platforms such as Amazon's Mechanical Turk. Nonetheless, flash powered organizations will increasingly have to rely on crowds to solve more complex problems such as those requiring radical innovation or addressing complex social issues.

The complexity and breadth of these more intricate problems, which often have several interdependent facets, is such that, in many instances, no single gig worker can solve them. This problem is further complicated by the need for useful novelty, a quality of being both new and also practically feasible.[15] Relatively anonymous individuals who are far apart geographically

Figure 3: The Dimensions of the Future of Work[17]



will have to work well together on complex tasks and produce usable solutions.[16] In order to move from a conventional process, that relies on a finite group of internal experts, to a collective production model, three dimensions of work will need to change, as shown in Figure 3. These dimensions are: scope, scale, and shape. Scope refers simply to the complexity of the problem presented to the crowd. Is it an intricate problem that has been broken down into simpler parts to be solved independently? Is the problem instead presented as a whole, with interdependent components and sometimes conflicting objectives? Scale refers to whether the work is presented to a few (often internal) experts or broadcast to a much broader group, often globally distributed, working largely outside the organization. Finally, shape describes the manner in which work will be accomplished. The work can either be allocated to the best possible individual or, if one person cannot be expected to finish it alone, assigned to a collective production process in which many individuals, who may not be identified in advance, work together to get the job done.

Figure 3 shows a progression toward an ideal point in the future of work in which flash-powered organizations employ many individual specialists who work collectively to solve complex problems. While traditional crowdsourcing has already approached this scale and scope, it has not fully embraced the collective production view which differentiates the future of work. The collective production method that underlies the future of work in a flash powered organization necessitates a crowd which responds to innovation challenges by sharing the diverse knowledge and perspectives of all its members. Exploring this knowledge diversity invariably introduces more refined descriptions of the questions, relevant personal experiences, previous solution attempts, and new ideas for solutions.

Collective production requires autonomous workers to freely share their knowledge. Managing such crowds will require the orchestration of individual interests rather than traditional hierarchical command and control management.

This collective production process is different from that of designated experts working as a team inside the organization. Collective production requires autonomous workers to freely share their knowledge. This collective knowledge is drawn from a dynamic pool of independent experts rather than a static team of internal experts. Since the crowd is sharing out of interest, rather than contractual obligation, their motives are different from those of full-time employees. Managing such crowds will require the orchestration of individual interests rather than traditional hierarchical command and control management. For both flash powered organizations and autonomous workers, collective production has a distinct advantage. It is difficult to determine in advance what sort of expertise will be needed to solve complex problems as they emerge. As long as the organization can draw a wide range of gig workers, the likelihood of obtaining the requisite variety of expertise increases. Because the workers are drawn together from diverse backgrounds, they will tend to challenge conventional notions of how work 'should' be done, instead discovering alternative ways to solve problems, and in the process creating further innovations. Collective production also allows workers to exercise their autonomy, selecting work that matches their interests. Each individual can join flash powered organizations and crowds that promise them the greatest potential for learning and professional satisfaction, which will make their work more personally meaningful. Flash powered organizations that cannot provide learning opportunities will find it harder to reap the benefits of this new system.

The Execution of Work: Scenarios for the Co-Existence of Autonomy and Automation

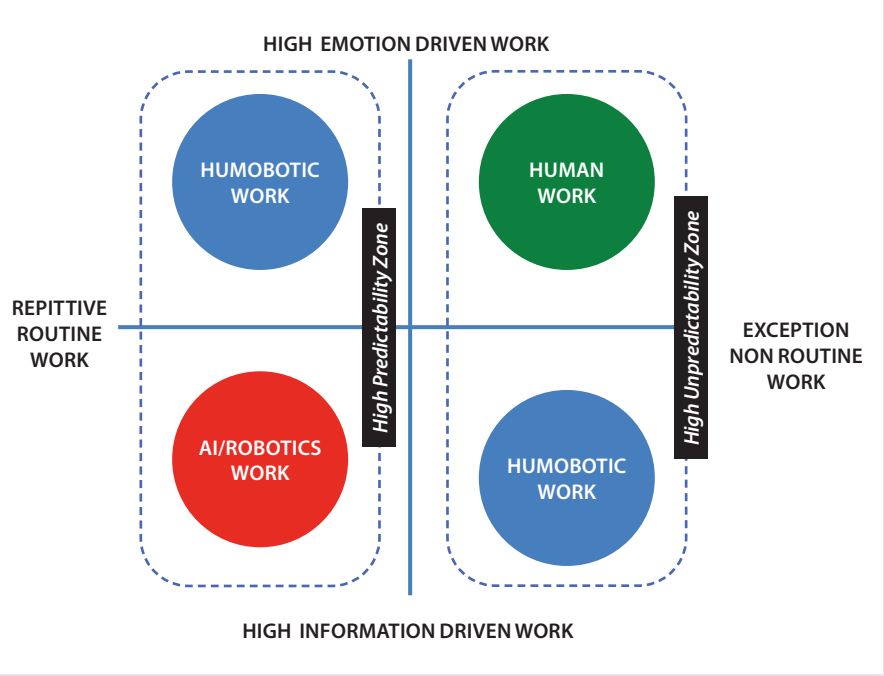
While the future of work promises a much higher degree of autonomy than ever before, that freedom does come at a cost. Such a system could lead to "a dystopian future of disenfranchised workers hunting for their next wedge of piecework"[18] and to lower wages as work becomes commodified in the gig economy. Another major emerging cause of anxiety related to the future of work is the fear that human workers will be displaced by artificial intelligence and robots. While this concern is neither new nor unforeseen,[19] technological development in recent years has accelerated a dash to the future in which robots performing routine mechanical and service work seems more imminent.[20] Uber drivers, for example, may be just a temporary stopgap on the way to ride-sharing in fully autonomous cars. In response to this concern, it has been proposed that the human work of the future will emphasize three categories: solving unstructured problems, working with new information, and performing non-routine manual work.[21]

Work that requires processing volumes of information (particularly at too great a rate for human cognition) but is repetitive will be handled by AI and robots.

We suggest at least four potential scenarios for the future of work (Figure 4). One factor is whether the work is driven by information or human emotion. Some tasks require processing a volume of information while others require an understanding of human emotions or sensations. The second factor is whether the work is repetitive or unstructured. Using these two factors, we envisage four categories that describe the future of work. Work that requires processing volumes of information (particularly at too great a rate for human cognition) but is repetitive will be handled by AI and robots. Within this zone machines will displace humans. Even now, with the advent of autonomous cars and the ubiquity of microsensors (the internet of things), we can easily envision work such as taxi and ride-share driving no longer being in the human domain in the very near future.

In two of the scenarios shown in Figure 4, we see intensive synergies between humans and machines. We label this as humobotic work. When the work is routine and repetitive but requires high emotional intelligence, we envision machines performing the informational analysis while humans make the final judgments and deliver the results in a human-centric way. Health care is already being delivered in this way in remote areas of Canada.[22] Doctors can interact with and diagnose their patients remotely through a telestrator or robot. The robot is then left to carry out the routine work on its own. In the very near future, the robot/machine may gather input from the patient, process that information, and even make an initial diagnosis. Once that's done, the human doctor can interact with the patient and decide which treatment to apply. In such humobotic work, the human is responsible for the perceptive and emotional part of the work while the robot does the background work of processing information. The machine may someday process the information it has gathered and convey it to a crowd of gig work doctors who can then collaborate to tell it how to proceed in delivering necessary health care to the patient. The information could even be broadcast so that the best available doctors can collectively design a treatment plan. In another humobotic scenario, the machine processes high volume information that the human then applies to a non-routine task. Alternatively, the machine can be used to perform intense physical labor. Humans would then be free to do value-added work. This is already the case with Amazon and Gap, where robots are used to fulfill orders so that human bandwidth can be devoted to work which brings value to the company. Another example of humobotic work is when humans interact intensively with machines in order to train those machines to perform certain tasks correctly.[23] The da Vinci surgical system represents yet another kind of humobotic work in which the robot performs very precise operations while controlled at all times by a surgeon. Walmart has begun investing in robots to perform mundane jobs like floor-cleaning, sorting deliveries, picking up dropped products, and shelf-scanning, which tend to produce ennui in human workers. Walmart's plan is to free up human employees to perform more satisfying work like selling merchandise and serving customers. Meanwhile, SEB, a Swedish Bank, uses the virtual

Figure 4: Scenarios of Future of Work



assistant Aida to handle routine customer service calls while referring more complex issues to human agents.[24]

The eventual scenario, then, of the future of work is one in which human workers are still the main actors. This is certainly the case when the work requires the worker to understand human emotions or sensations or when it demands unique or non-routine solutions. In these cases, humans are indispensable and will continue to have a distinct advantage over machines. Our concept of collective production falls within this scenario of human knowledge-intensive work, supported by machines, which produces innovations and solves wicked problems. Machines can process dynamically evolving crowd knowledge and extract patterns. These patterns can then be fed back to a crowd of autonomous humans to inform their judgment and stimulate them to produce more refined knowledge by which to solve complex problems.

Preparing for the Future of Work: The Need for More Extensive Thinking

While our future destination may be flash powered organizations, there are several speed bumps on the road that will take us there. These challenges, some of which concern organizations and others concern individual workers, will demand deeper thinking by managers as well as more extensive research. There are several evident questions which will help to spur this deeper managerial thinking and future research. Answering them may, in itself, require flash-powered organizations to share insights from research and practice. Beginning from the perspective of organizations, reflective thinking is needed to discover how to create and sustain a productive culture in flash powered organizations that exist more outside than inside. Will organizational culture matter as much when the "full time" employees are not performing the work central to the organization? Will the full-time employees of flash powered organizations consist only of those who orchestrate on-demand work, and not those who execute that work? What will such organizations have to do to attract the best talent when so many other flash powered organizations will be competing for that same talent?

Companies will need to ensure that they do not exploit workers in the name of being flash powered. If they don't, regulators should and will.

On the individual level, will simply making the work interesting and meaningful be enough? Throughout this article, we have assumed that when flash powered organizations broadcast their needs to creative freelancers, they will be able to attract the right people to work on their problems. However, as more and more organizations become flash powered, they may find themselves competing for the same workers. They may, therefore, need to consider how to craft challenging and complex problems that appeal to the best problem solvers. They will need to devote more thought to how to make work more meaningful to those who highly value their autonomy. Will these organizations have to act as venture capitalists, investing in developing the best ideas of the crowd while letting the crowd develop and implement the chosen solutions? What else can organizations do to attract and retain people who prefer to seek new challenges rather than be bound to a single company? For flash organizations whose work is less episodic and tends more toward longer projects and problems that take time to solve, attracting and retaining talent will be an even more complex issue. Longer jobs can also encounter thornier regulatory issues, such as whether workers must be treated and compensated as full-time employees. The recent legal wranglings between Uber and its drivers as to whether the drivers should be treated as employees is an early example of the sort of issues that flash powered organizations will face. Companies will need to ensure that they do not exploit workers in the name of being flash powered. If they don't, regulators should and will. Flash powered organizations will also have to ensure that the work they offer is truly accessible to all and that those executing the work are fairly compensated. Systems that build reputations, such as online ratings, are often used in selecting gig workers. More refined thinking is needed to determine how new entrants into the workforce, who have not yet established a reputation, will get work. How can reputation mechanisms be designed to allow autonomous workers fair and equitable opportunities to find work? How, then, do we overcome the forces that drive us toward less than fair compensation, halting the race to be the cheapest worker? Organizations and managers will have to resist the conventional outsourcing mentality which allocates work to the cheapest bidder. They may also need to balance automated, commodified work with designing more creative work for autonomous human workers.

For work that is more creative and less routine, requiring a collective production process, there will be even more complex issues to resolve. Flash powered organizations will need to motivate a crowd composed largely of strangers to work together. These companies will need to rethink the nature of incentives. They will need to design dual

incentive systems, aligned with both the intrinsic and extrinsic motivation of flash workers, in order to quickly attract the right individuals to form a temporary team. Those who do creative and innovative work want to know how their ideas will be used.[25] Questions of ownership and intellectual property will need to be addressed. Who owns the collectively devised product? How will intellectual property rights be determined?

Each new generation of workers — nurtured in an increasingly global education and training system — prizes autonomy more than the last.

A Final Word

It was not so long ago that the image of the "company man" was revered. The title was a testament to an employee's loyalty and evidence of personal and familial responsibility. But in the modern world, the term not only reveals an outdated gender bias but also is rooted in concepts that most workers would find foreign. Each new generation of workers -- nurtured in an increasingly global education and training system -- prizes autonomy more than the last. At the same time, employers who face increasing demands to create value in an instantaneously responsive marketplace have been forced to reexamine workplace values from both sides, preparing their companies for what comes next. ■

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Endnotes

1. Please see: Younger, J., and Oliveira, A. (2017). Make Work Meaningful for Your Freelancers Too. Harvard Business Review, December 8, 2017. https://hbr.org/2017/12/make-work-meaningful-for-your-freelancers-too
2. For further discussion related to the rise of the gig economy and its implications please see: Malhotra, A. (2020). Making the One-sided Gig Economy Really Two-Sided: Implications for Future of Work. Handbook of Digital Innovation, Springer, forthcoming.
3. The McKinsey report referred to is: Independent Work: Choice, Necessity, and the Gig Economy, McKinsey & Company, 2016.
4. The report referred to is: Demystifying the Future Workforce, Randstad.
5. Younger and Oliviera discuss the notion of meaningful work in: Younger, J., and Oliveira, A. (2017). Make Work Meaningful for Your Freelancers Too. Harvard Business Review, December 8, 2017. https://hbr.org/2017/12/make-work-meaningful-for-your-freelancers-too
6. For a more detailed discussion of the implications of autonomy in work design please see the following sources. De Cuyper, N., & De Witte, H. (2006). Autonomy and workload among temporary workers: Their effects on job satisfaction, organizational commitment, life satisfaction, and self-rated performance. International Journal of Stress Management, 13(4), 441; Kim, H., & Stoner, M. (2008). Burnout and turnover intention among social workers: Effects of role stress, job autonomy and social support. Administration in Social Work, 32(3), 5-25; Langfred, C. W., & Moye, N. A. (2004). Effects of task autonomy on performance: an extended model considering motivational, informational, and structural mechanisms. Journal of Applied Psychology, 89(6), 934-; Man, D. C., & Lam, S. S. (2003). The effects of job complexity and autonomy on cohesiveness in collectivistic and individualistic work groups: a cross-cultural analysis. Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 24(8), 979-1001; Volmer, J., Spurk, D., & Niessen, C. (2012). Leader–member exchange (LMX), job autonomy, and creative work involvement. The Leadership Quarterly, 23(3), 456-465; Wang, G., & Netemeyer, R. G. (2002). The effects of job autonomy, customer demandingness, and trait competitiveness on salesperson learning, self-efficacy, and performance. Journal of the Academy of Marketing Science, 30(3), 217-228.
7. A more detailed discussion of various dimensions of job autonomy can be found in Younger, J., and Oliveira, A. (2017). Make Work Meaningful for Your Freelancers Too. Harvard Business Review, December 8, 2017. https://hbr.org/2017/12/make-work-meaningful-for-your-freelancers-too
8. For a more elaborate description of agile work please see: Flexible Working: The Way of the Future, Forbes, May 28, 2019. https://www.forbes.com/sites/joyburnford/2019/05/28/flexible-working-the-way-of-the-future/#7d6207434874
9. Examples of various types of flash organizations can be found in the book: Majchrzak, A., & Malhotra, A. (2020). Unleashing the crowd: Collaborative solutions to Wicked Business and Societal Problems, Palgrave-McMillan.
10. A description of Consensys can be found in Majchrzak, A. & Griffith, T (2019) Organizations as Platforms and what that means for research. Handbook of Digital Innovation; HTT is described in detail in Majchrzak A., Griffith, T., Reez, D., Alexy, O. (2018) Organizations Designed for Grand Challenges: Generative Dilemmas and Implications for Organization Design Theory. Academy of Management Discoveries, 4(4), 472-496.
11. A detailed description of the how and why of IBM InnovationJam can be read in Bjelland, O. M., & Wood, R. C. (2008). An inside view of IBM's' Innovation Jam'. MIT Sloan management review, 50(1), 32.
12. The description of how Landcare Research Inc. engaged in an open strategy

formulation process using flash crowds can be found in Malhotra, A., Majchrzak, A., & Niemiec, R. M. (2017). Using public crowds for open strategy formulation: mitigating the risks of knowledge gaps. Long Range Planning, 50(3), 397-410.

13. You can read and watch more about the RedHat development model at https://www.redhat.com/en/about/development-model
14. For more on the notion of orchestration and choreography please see: Peltz, C. (2003). Web services orchestration and choreography. Computer, (10), 46-52.
15. The notion of useful novelty is described in detail in Amabile, T. M. (1988). A model of creativity and innovation in organizations. Research in Organizational Behavior, 10(1), 123-167.
16. The various elements of collective production are described in Majchrzak, A., & Malhotra, A. (2020). Unleashing the crowd: Collaborative Solutions to Wicked Business and Societal Problems, Palgrave-McMillan.
17. This figure has been adapted from a figure in Majchrzak, A., & Malhotra, A. (2020). Unleashing the crowd: Collaborative solutions to Wicked Business and Societal Problems, Palgrave-McMillan.
18. The downsides of the gig economy are discussed by Arun Sundararajan's opinion piece in The Guardian (2015): The 'gig economy' is coming. What will it mean for work?; The commodification of work is discussed in Hill, S. (2015). Raw Deal: How the "Uber Economy" and Runaway Capitalism are Screwing American Workers. New York: St. Martin's Press.
19. The aspects of future of work, especially displacement anxiety, can be found as early as 1982 in the article: Levitan, S. A., & Johnson, C. M. (1982). The future of work: does it belong to us or to the robots? Monthly Labor Review, 105(9), 10-14.
20. A detailed discussion of the use of robots in the service industry can be found in: Willcocks, L. P., & Lacity, M. (2016). Service automation robots and the future of work. SB Publishing.
21. For a more detailed discussion of the three aspects of future of work please read Levy, F., & Murnane, R. J. (2013). Dancing with robots: Human skills for computerized work. Washington, DC: Third Way NEXT.
22. This example is described in more detail in the article at: https://theconversation.com/how-robots-are-helping-doctors-save-lives-in-the-canadian-north-104462
23. For a more detailed discussion of how humans can train robots to better perform work please read: https://www.nytimes.com/2019/08/16/technology/ai-humans.html
24. For more details on examples of humobotic work please read: https://medicalfuturist.com/robotics-healthcare/; https://hbr.org/2018/07/collaborative-intelligence-humans-and-ai-are-joining-forces; and, https://www.vox.com/the-goods/2019/4/11/18306229/walmart-robot-job-automation-retail-labor-bossanova-robotics
25. A more detailed description of the need for the crowd to know how its ideas will be used please see: Malhotra, A., Majchrzak, A., Kesebi, L., & Looram, S. (2017). Developing innovative solutions through internal crowdsourcing. MIT Sloan Management Review, 58(4), 73.

Managing Mergers and Acquisitions:

Perspectives from Human Resources

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Stefan Wuorinen, Brian Burgess, and Patrick Wright present a wide range of considerations and strategies to bolster acquisition success by expanding the influence of human resources on the processes. Using insights drawn from interviews with Fortune 500 Chief Human Resource Officers, they examine the role of HR in acquisitions and provide practical advice for increasing its effectiveness.

For decades, there has been pervasive evidence that mergers and acquisitions (M&A) often fail to meet their expected financial targets. Although researchers have suggested that many of the factors which contribute to suboptimal acquisition outcomes are "people issues," acquisition planners frequently under-consider the people question. The human challenges of M&A are a core concern for human resource (HR) professionals, though they are often granted little influence in acquisition planning. We interviewed Fortune 500 Chief HR Officers to better understand common M&A HR challenges and to develop a set of recommendations for increasing HR's effectiveness during acquisitions. The collective insights of our participants provide an extensive list of considerations that can help to facilitate firm integration, manage people issues, and improve acquisition performance. The most critical points include creating a clear vision for the acquisition, managing cultural differences, prioritizing the retention of key talent, and clear communication between organizations. Our interviewees also suggested that a holistic understanding of the business strategy would make HR practitioners valuable contributors to strategy from early in the acquisition process.

"The people side of the acquisition is always the toughest, and we read all the articles about why they fail, but it seems that companies don't learn from their mistakes. It's always a new leadership team looking to lead an acquisition… we put good leaders on due diligence or integration team, and it seems like there is a lack of education. It seems like every company makes the same mistakes and we all make the same mistakes every time."

Mergers and acquisitions are common means by which businesses increase the scale and scope of their operations. Both research and practice, however, suggest that more than seventy percent of acquisitions fail to meet their financial targets. While our understanding of the conditions in which acquisitions are likely to succeed has improved, acquisition returns continue to underwhelm, leading researchers and practitioners to examine the less obvious factors by which companies navigate some the most challenging parts of M&A – notably, avoiding losses in human efficiency. Decreased human efficiency, increased employee turnover, and the loss of institutional knowledge are difficult transaction costs to model in a financial plan, making it all too easy to overpay for acquisitions. Firms can readily evaluate the expected return on investment in an acquisition, but the human costs are more pernicious variables. Choosing the right deal is only half the battle; success also requires effectively integrating the target firm.

"The people side of the acquisition is always the toughest."

Experienced financial executives and human resources (HR) officials agree that many acquisitions fail at the integration phase, and often because of 'people issues.' Indeed, the largest obstacle to success may be retaining talent while aligning the vision, incentives, and cultures of two firms. HR plays an integral role, communicating and aligning the shared goals of otherwise disparate organizations and mediating relations between M&A strategies and actions. Yet research suggests that senior HR officials and Chief Human Resources Officers (CHROs) are frequently omitted from pre-integration planning despite evidence that their early involvement significantly improves acquisition performance. Our interviewees confirmed that, even now, Fortune 500 HR officials find that their early participation is undervalued.

Our goal, then, is to gain a better understanding of the challenges that HR officials face during acquisitions and to provide tools with which they can get a seat at the bargaining table. Although these tools should be generally useful in bolstering acquisition performance, every acquisition is unique, and we can offer no panacea for the idiosyncrasies of all. Instead, we shine a spotlight on the difficult questions that HR must address during integration. In so doing, we find that involving HR early in the M&A process is critical to a balanced acquisition strategy.

In 2019, we interviewed eight CHROs and three members of HR acquisition teams from ten Fortune 500 firms. All participants had extensive experience with M&As and had recently (within the past three years) played integral roles in large acquisitions. They shared their collective experience with over 200 acquisitions in industries ranging from biomedical to technology to consumer goods. Although we focused on the acquirer's perspective, some of our participants had also experienced an acquisition from the target side and provided us with additional insight. We have focused on the most common challenges our participants faced and used their knowledge and successes to devise methods by which firms can improve their integration planning.

We began by asking participants to describe the most and the least successful acquisitions in which they had participated and the processes which had led to that success or failure. Their responses allowed us to identify certain themes common to either successful or unsuccessful acquisitions. We then investigated how participants

perceived the role of HR in each phase of the acquisition process. We focused particularly on target identification, due diligence, negotiations, and integration. Our conclusions demonstrate the value of HR in M&As and suggest ways that HR can facilitate more profitable acquisitions.

Insights from Our Interviews

There are many reasons why M&As fail to create the expected synergies between organizations. Our participants cited poor due diligence, poor strategic fit, bad financial planning, and legal issues as possible causes. However, they considered people issues of various kinds to be far more common contributors to acquisition failure. While integrating the best qualities of each organization makes perfect sense on the surface, the value that integration creates must exceed the loss which results from learning time, employee stress, and conflict. Decisions such as which information system or organizational command structure to use can be rife with employee related concerns.

People issues tend to fall into the broad categories of retaining high quality talent, navigating cultural differences, and creating a shared vision and goal. When firms stumble in any of these areas their acquisition success may decrease. Research shows that executives tend to prioritize tangible aspects of the deal far above culture and other human issues. We have identified the challenges that were most commonly mentioned in our interviews, scrutinized the nuanced issues within them, and devised solutions informed by our interviews and by academic research. Both the challenges and our solutions are interdependent. Nonetheless, all the challenges, individually and collectively, impede the alignment of the vision, goals, and values necessary to bring workers from two disparate companies into harmony.

> "A lot of the issues in the integration, honestly, are people issues - I would say that's 75 percent of the issues."

The Lack of a Clear Vision

Many of our participants described the lack of a clear vision or purpose for the acquisition as a core cause of problems. It is critical that leaders have a clear vision for the post-combination organization and its culture and purpose even before the deal is made, and this vision should be continually updated as integration progresses. Since firms often pursue expansion opportunities fiercely, our participants suggested that executives looking to expand can develop "deal fever" or looking "off to the next shiny thing." Our interviewees told of CEOs who were "driven by the hunt," showing little interest in developing and supporting acquisitions that are already underway. In consequence, these organizations often failed to clearly articulate a vision of the organization after the acquisition. Our participants were nearly unanimous on the necessity of having a coherent strategic purpose and a clear vision of how the integration will unfold. As one put it, "if you are too broad in what you are trying to accomplish, you complicate the integration process." In short, lack of vision creates ambiguity, leaving workers struggling to create support systems for poorly defined goals.

> "It's all about management of tension and resources."

Creating a clear vision is both an operational and a human problem and failure can cause members of both organizations to pursue incompatible or inconsistent goals. If the merging firms are to align their goals, strategies, and decision processes, their leaders must present a clear vision. If they do not, the resulting uncertainty can lead to greater friction, stress, and cultural conflict as employees fill the leadership gaps with best guesses or rumors, some of them malicious, and align their behavior and attitudes accordingly. HR systems can only be beneficial to the extent that they support the objectives of the firm. Only by understanding the goals of the acquisition can HR leaders emphasize the right policies. Tightly integrated organizations, for example, may require HR practices which focus more on commitment than those used for 'bolt on' acquisitions or those aimed at harvesting the physical resources of target firms.

"*It's all about management of tension and resources. If you don't know where managers are diverting resources and don't have a management team that is laser focused on particular outcomes, it will be invisible to you most of the time, but people will have divergent interests. The more focused you are on a small set of outcomes, the more predictable your outcomes will be.*"

Creating a Clear Vision

Because the failure to articulate clear goals for the merger can cause the whole process to fail, our interviewees suggested several ways to improve vision.

Ask the Hard Questions: If a vision is to guide the myriad human tasks that make acquisitions succeed, it must be clearly defined at every level – business model, operational, financial, legal, human, etc. By developing clearly defined plans, leaders reduce the risk of acquisitions motivated largely or entirely

by deal fever. Before launching any acquisition, executives should have clear answers to the following questions and more (in accordance with the individual qualities of each acquisition).

- **How will the acquisition add value to the company?** One respondent advised "before you look at the financials, consider what that merger would represent from a business model perspective." Each form of value requires its own support systems, whether it be intellectual and physical capital, human capital, stronger research and development, or product or market diversification. Integration teams therefore require a clearly defined plan in order to develop the support systems necessary for a fruitful integration.
- **What will the identity of the new organization be?** Firms can divvy up brands, regions, tasks, and customers in many ways. Managers can better plan for integration if they know whether the companies will operate under one brand or two and which group or groups of customers they will serve.
- **What qualities characterize the combined company culture you envision?** Once the team has clearly articulated the new business model and strategy, they should outline the cultural mechanisms necessary to support that strategy, considering which elements of each organization's culture to retain and which to discard.[8] They may need to devise different social climates and systems for different areas of operation. By detailing and systematically updating these goals, they will facilitate the use of suitable training procedures (such as role-plays) and of incentive systems that support the desired culture.
- **What will happen if we are wrong?** Given that a firm must evaluate a multitude of factors for each acquisition, it is unlikely to perfectly predict everything that happens. In considering every contingency the acquisition team will necessarily validate (or disprove) its own assumptions about the acquisition. The CHRO and the acquisition team can contribute valuable knowledge by asking hard questions, discussing scenarios in which plans go awry, and devising contingency plans for everything from replacing lost talent to the failure of a new business line.

Be Decisive: The team should consider the answers to the above questions with a view to how the acquisition might limit other opportunities. Choosing any one direction often incurs an opportunity cost. Many of our participants mentioned that the CEO and the top management team must not be afraid to make tough decisions. In some cases, the toughest decision is a cautious one which provides for internally consistent systems and communication in support of a coherent strategy. In short, if the firm can effectively execute a well-defined cautious plan, it may find greater success than it would with a more audacious plan, poorly defined and poorly executed.

"What I have found is that it can be very easy to kick the can down the road…When you're merging companies, people avoid making decisions early… the power differentials suggest that one person will have control. If you create the expectation that both groups will have equal power, you are going to cause problems. It is better to have those conversations about who will be in charge early on and let those who need to heel, heel."

Cultural Obstacles

Our participants also cited cultural challenges as one of most common causes of acquisition failure. Organizational culture is here defined in terms of policies, practices, values, basic assumptions, and decision-making structures. If not carefully managed, cultural differences between the firms tend to damage M&A returns. Their effects generally range from marginally positive to vastly negative. By using inclusive language, the transition team can stymie the magnification of cultural differences, halt the growth of stereotypes, and discourage the use of disparaging language.[8] As the team works to align two companies whose differing concerns cause them to speak fundamentally different languages, conflict may nonetheless arise.

> "If you create the expectation that both groups will have equal power, you are going to cause problems."

Our participants consistently described cultural challenges and conflicts as early signs of trouble. While most research to date has considered cultural issues only at the organizational level, the HR executives we interviewed cited difficult early interactions with the target firm's top management as symptomatic of cultural challenges to come. They observed that both initial and ongoing conflict between top management teams is likely to spread, with the conflict spilling over to the rest of the organization, undermining cooperation and instead creating a competitive environment. These cultural issues presage greater challenges, as disagreements between unhappy employees slow performance and workers begin to leave the company. In successful mergers, our participants observed that managers at the

target company were enthusiastic about the deal. While interactions between the two firms were not free from conflict, they were characterized by congenial collaboration and a common willingness to facilitate cultural and strategic change.

One interviewee described an attempted integration in which the managers of the target firm formed a coalition to express their rejection of the acquisition. Passive aggression was commonplace, and it was clear that the target firm's employees were not in favor of selling their company. The interviewed executive described how the acquiring team arrived at an integration planning session to find every member of the acquired leadership team wearing a wristband that read "Protect this House." Rather than contributing to a smooth transition, managers in the target firm were actively working to protect their territory from the changes necessary for integration. This example illustrates both the cultural challenges which top management may face and the risks of acquiring a company whose employees identify strongly with their existing organization and are determined to protect its culture. Although the tension arising from such a situation is obvious, strong evidence reveals that even some of the world's most reputable businesses will blindly proceed with an acquisition regardless.

Navigating Cultural Obstacles

Culture plays an important role in the success or failure of an acquisition. Our respondents suggested several ways to manage culture and increase the probability of success.

Know Your Culture and Theirs: HR professionals can look at organizational structure, vision, pay structure, and incentive plans to find cultural similarities or differences. Academic researchers have developed many useful survey tools such as the Denison Culture Survey which can help to identify these differences. Participants also emphasized that some cultural differences may be more important than others. For example, moving a company from a control-based HR system, that heavily manages individual behavior, to a system more focused on employee freedoms and commitment is likely to be easier than moving it in the other direction.

Take Culture Seriously: Many of the HR officials in our sample felt that while cultural differences may be only an obstacle to be aware of in some instances, in others they should be a disqualifying factor. Although some acquisitions must proceed for financial reasons and despite cultural differences, significant cultural conflict nearly always leads to an unsuccessful acquisition. It is therefore vital that leaders have a strong understanding of cultural alignment during target identification and due diligence so that they can plan and communicate appropriately in managing cultural challenges.

Change the Pace: The nature of an acquisition will probably determine the degree to which the two firms will integrate. Managers can, however, use the speed of integration to manage cultural issues. Our participants varied widely on how fast and to what degree the target firm should be integrated. Some advised patience and gradual change while others recommended moving quickly and decisively. One interviewee even offered an example in which the team expected cultural differences to undermine merger efforts to such an extent that they chose to incubate the new firm separately until they could build trust over time. Practitioners may want to consider planning a slower integration when faced with serious cultural issues or human capital concerns or when the changes planned for the target firm are extensive.

Talent Retention: Defending the Value of Your Acquisition

When key talent leaves in response to an acquisition, the acquired asset immediately loses value, not only in the obvious sense of decreased performance, but also in the immense loss of knowledge and of social and relational capital. This effect is worsened because it is the most talented workers who are most likely to leave because they have more employment opportunities than their less capable colleagues.

Many studies have examined turnover in top managers during acquisitions and recorded its negative effect on acquisition outcomes in the short term. Now, however, some scholars have suggested that the leadership instability caused by M&As can last up to nine years. Since resignations can be contagious, retaining leaders encourages other workers to remain. Given that turnover among executives of the target firm is generally agreed to be detrimental to acquisition performance, and that the signs of executive turnover are visible early on, mass departures should be viewed as a deal breaker.

Keys to Retaining Talent

Nearly all the recommendations made by the CHROs in our sample related either directly or indirectly to talent retention. Lack of a clear vision, cultural conflicts, poor communication, and so forth can all cause undue stress which drives turnover. However, our participants did suggest some tactics and considerations for retaining talent.

Identify Top Talent: To identify the workers you want to retain you can request a list of high potential employees from the target firm's leaders, conduct interviews and surveys, and even consult acquisition advisors. However, the target firm's leaders may pass on their own bias while outside advisors may lack a fundamental understanding of

either firm. It is often wiser to take a trust but verify approach, conducting your own interviews and using personality or leadership tests to ensure that the suggested individuals will fit well into the culture you are building.

Talent Retention May be Worth More than the Talent Itself: Given that the departure of a few workers can lead to turnover contagion and drive broader losses in productivity, talent retention is more important than simply keeping a role filled. The transition team may therefore want to plan on compensating certain people for a value greater than their direct contributions to the company.

Leverage Your Allies: Our participants described several instances in which top talent who chose to remain acted as instrumental allies, using their relationships to communicate effectively and foster integration. Because the target firm's leaders have more information about human liabilities and assets, their support is invaluable. In instances in which the two management teams maintained an amicable relationship, the acquirers received more candid information regarding the target's opportunities and threats while also enjoying the benefit of having champions of the acquisition on the target side. Leaders at the target firm who support the acquisition encourage support among their colleagues and make internal communications more optimistic.

Lock in Key Talent: When executives at the target firm plan to jump ship as soon as the deal is secured, it may be best to back out of the deal. Yet while keeping key executives is generally good for integration, it is less important afterwards. It may therefore be worthwhile to get top executives under contract for a specified period.

Plan for Contingencies: Although retaining talent is beneficial during an acquisition, it is unlikely that everyone will stay. The acquisition team should therefore have a succession plan for key players, a backup scenario for when things do not work out as planned.

> "Communicate, Communicate, Communicate!"

Other Advice on Effective Integration

Communication is vital in shaping the expectations of acquired executives and employees. If you do not define and communicate a clear vision, gossip will surely fill the void. By setting appropriate expectations and avoiding misunderstandings, you ensure that employees of the target firm feel they are being treated fairly. Effective communication will ease all the challenges described above. Our participants suggested designating a communications expert to ensure clear, comprehensive, and well-articulated communication and to avoid misunderstandings and ambiguity. They also offered the following advice.

Be Honest and Straightforward: Being candid about who will lead the new organization is critical for success. It is also important to set expectations early. Although these conversations can be awkward and uncomfortable, having them early on clarifies everyone's expectations, letting them know who will lead and who will follow in the ensuing integration. Employees of the target firm will appreciate the honesty and refrain from unnecessary power struggles. While in some cases everyone may still have a role, the top management of the two firms cannot be perfect equals in the new organization; some managers will be placed in lower positions. By understanding how people feel about these changes in power and organizational strategy, the acquisition team can get an idea of who will stay or go and who will make a valuable ally.

Don't Acquire; Merge & Integrate: While being clear about future power structures is very important in conversations among top managers, communicating to the rest of the organization presents a different challenge. Our participants warn against using threatening or domineering language that stresses one organization having more power than the other. They particularly suggest avoiding the term "acquisition" and instead using the term "merger." As one HR executive pointed out, "I think there is a natural tendency to think, 'we're the acquirers, so we must be the better company with the best talent, operations, and culture.' If you go in with your eyes open… learn what we can, and adapt to the target firm's strengths, you will have a better outcome." By consciously building a more cooperative environment and mentality, firms are likely to reap better results.

HR Executives in their Own Words

Communication and Integration

"We had a clear vision and plan. Once we decided on the target company, we moved quickly to organize the due diligence process and it was very structured, and involved the whole senior team including the CEO. I met the senior leaders of the target firm, we talked about people and culture and what is important to them and all these HR types of due diligence as far as what programs they were used to. Every function did this. We did a town hall with the leadership and asked the hard questions, so the preparation was critical. Then, we put an integration plan together and a steering team (integration team) with

people from both sides to help. This has been something we have done in acquisitions moving forward. This is hugely helpful. There was not a lack of clarity for how the new business is expected to operate. When you lack clarity, you're more likely to lose talent. We also focused on retaining the talent we didn't want to lose. We also communicated, communicated, communicated."

The Flaw in Simply Seeking the Best of the Best

"A lot of consultants would suggest integrating the best technology and best talent from each firm. This is a frequent prescription and is often a prescription for disaster. The company we acquired was a large acquisition and you would think we should integrate the best technology from both, but this would disrupt the functioning of 11,000 locations. To make that change so quickly would require showing that adding the new technology would have to add more value than the change and disruption it causes. The best of best mentality is too simplistic because it does not include conflict in the equation."

"When you lack clarity, you're more likely to lose talent."

Why and How to Get HR Involved from the Start

Why Involve HR Early?

Our respondents have found that forming a cross-functional team composed of experts from all areas of the organization, including HR, is imperative for success. Mergers are complex and multifaceted. The team which manages them must therefore cover a range of areas of expertise. HR is valuable because it can identify the human and cultural challenges likely to arise throughout the process and create advance plans to manage them. Our empirical evidence to date also suggests that involving HR early in the process contributes to the acquisition's success. Although HR is rarely involved in target identification – generally regarded as the first stage of an acquisition – the HR practitioners we interviewed feel that they could be of use even at this stage by identifying cultural and HR issues before executives devote any additional effort to the potential deal.

One participant aptly described a common sentiment among the HR executives and officers in our sample:

"I would like to see more compatibility evaluation done during the target identification phase because I know how important those things are if you are going to integrate… but at the point at which I have the information I need to advise the organization in the due diligence phase, we are really far down the path. Then you find yourself in a situation where you are bringing unwelcome news as opposed to moving upstream… I think you would find yourself less in a position of trying to talk people out of something or trying to help people understand how significant these kinds of things are."

Throughout our interviews, we noticed recurring discussion of the importance of asking the hard questions and having a clear vision for the acquisition. The CHRO was often charged with asking these challenging questions in order to clarify the how and why of acquisitions. Participants also reported that these contributions are frequently perceived as naysaying by CEOs, focusing on everything that can go wrong rather than everything that can go right. HR executives should be aware of this perception and evaluate the acquisition from a business perspective as well as a human one. By displaying cogent business savvy, they may be better able to combat deal fever.

"I would like to see more compatibility evaluation done during the target identification phase."

How To Get HR Involved Early?

Be an HR Business Partner: When asked about the circumstances in which HR is likely to be involved early, our participants repeatedly gave one simple answer: HR executives will be invited to the strategy table to discuss upcoming acquisitions if they know the business and can contribute to conversations about financials, operations, and more. These early conversations are generally concerned with *what* and *why*. Understanding the competitive landscape and the differences between potential acquisition targets lends the CHRO credibility in turning strategic discussions toward the *how* of HR.

Be a Skeptical Yea-sayer: Many of our interviewees' recommendations for strategic discussions concerned avoiding the use of prohibitive language. "Just saying you 'can't do that acquisition because it's a culture mismatch,' is not helpful for two reasons. First, because the measure of success is typically financial results, HR executives must link culture to those results. For instance, if financial success requires that the two companies collaborate on innovation to create new products, culture clashes which prevent or interfere with that collaboration would be detrimental to financial success. Lee Dyer, one of the first academics to study the link between HR and strategy, often told HR executives "Never say no to a business

leader unless you can provide an alternative way to achieve the same goal." Similarly, some of our participants recommended that when HR professionals point out problems, they should also suggest solutions, proposing a more effective way forward. While we contend that sometimes mounting cultural challenges should be considered good cause to back out of a deal, it is important to recognize that CEOs may not agree. It may be more effective to suggest adjustments that will ease the way ahead. One participant suggested, "Given these potential challenges, we need to ensure that we have strong allied leadership in the target firm, or we may want to take integration a bit slower so we can listen more and give them time to adjust."

Have A Concrete Game Plan: HR is often accused of being too soft on the details because it does not provide hard metrics that link human behaviors to financial performance. If HR professionals propose that HR should be involved but do not provide a concrete plan for their involvement, they only perpetuate this stereotype. Before proposing any involvement, HR officials should lay out their tactics and goals. Some valuable goals are: ensuring that there are no outstanding HR-related financial concerns (e.g. pension plans, law suits, etc.), identifying cultural differences that will require management, identifying the top talent and potential allies, and determining who is likely to stay and who is planning to jump ship. Tactics which may be useful include: interviewing key personnel, utilizing employee selection tools, conducting HR audits, measuring culture and climate, identifying differences in policies and practices, and more. Armed with a concrete plan of this kind, HR managers are more likely to be accepted as valuable contributors.

Conclusions

Mergers and acquisitions will continue to be an important tool for growth. CEOs may focus on the development of new strategic capabilities that will come of combining the firms. CFOs may focus on the increased revenues or decreased costs produced by eliminating redundancies. But achieving these strategic and financial synergies depends upon people.

Research has shown that only a minority of mergers achieve their financial goals and that the rest often fail because of fleeing talent, culture conflicts, and a lack of employee engagement, in short, people issues. If firms are to mitigate these risks, they must first identify them and develop strategies to head them off. We found that HR executives are often tasked with solving these problems in the integration phase of M&A but are not necessarily included in identifying and evaluating potential acquisition targets. By involving HR earlier in the process, firms could avoid these problems rather than asking HR to clean up in the wake of poor acquisition decisions. HR executives can help decision makers to articulate their vision more clearly for a successful merged entity. They can identify potential cultural obstacles before they arise and either propose ways to address them or advise discarding the firm as a viable target. The expertise of HR can also be used to better assess talent and manage culture and relations during the potential merger.

To enact a successful merger, integration teams must have a clear understanding of the combined strategic capabilities, the financial models, and the human capital necessary for building those capabilities and delivering those financials. Now that most organizations understand the importance of HR expertise in the integration phase, it is time that they make best use of HR in the target identification and evaluation phase. We and the HR professionals we interviewed believe that firms that involve HR earlier in the process will be able to entirely avoid many of the people problems that portend failure, and instead reap far greater success. ■

Author Bios

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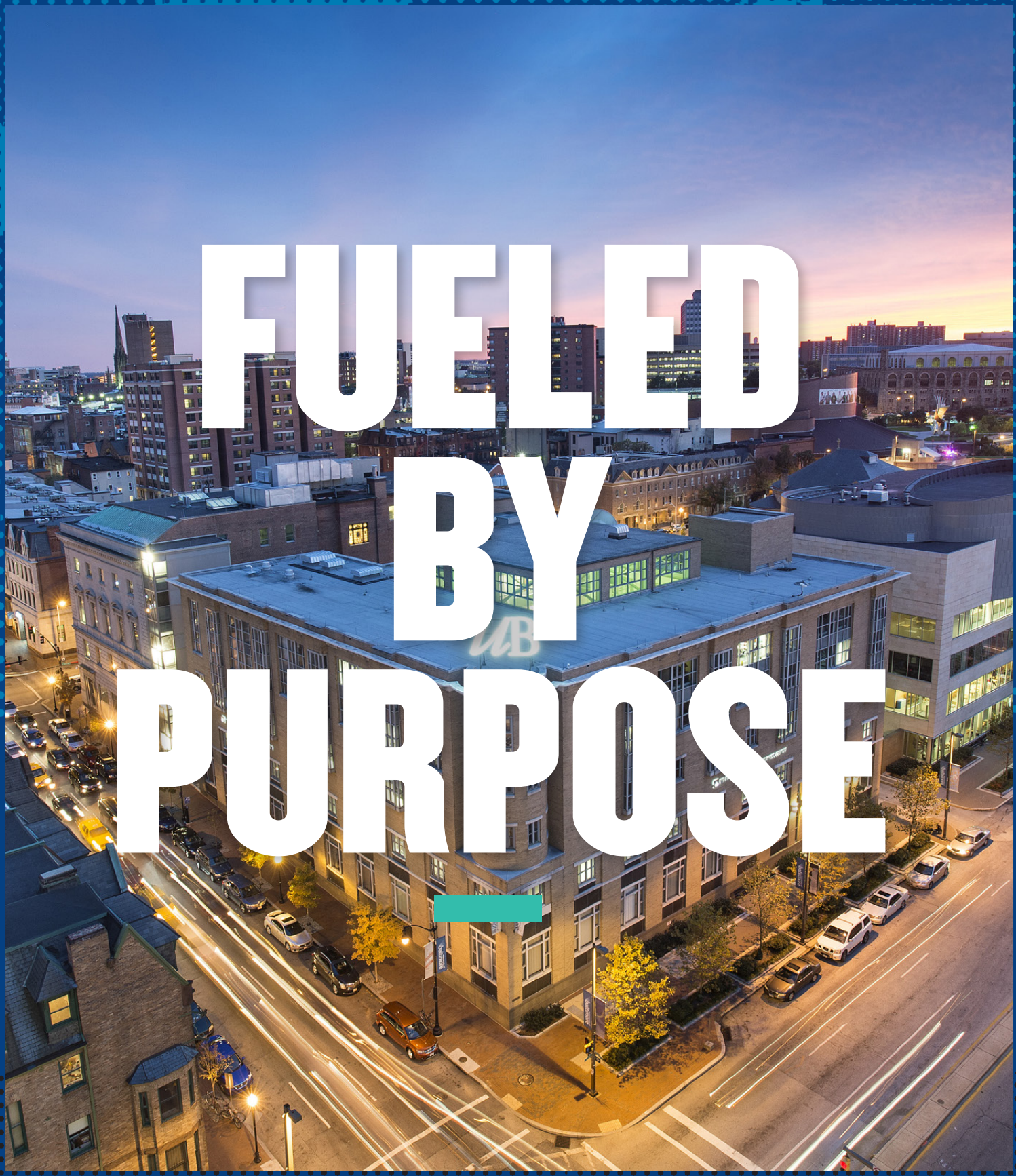
Endnotes

1. J. Haleblian, C. Devers, G. McNamara, M. Carpenter, and R. Davison, "Taking stock of what we know about mergers and acquisitions: A review and research agenda," Journal of Management 35, no. 3 (2009): 469-502; M. Marks and P. Mirvis, "Merge ahead: A research agenda to increase merger and acquisition success," Journal of Business and Psychology 26, no. 2 (2011): 161-168.
2. S. Allocca, "Here are the top 15 risk factors of mergers and acquisitions," www.cfo.com, December 20, 2016.
3. M. Marks and P. Mirvis, "Merge ahead: A research agenda to increase merger and acquisition success," Journal of Business and Psychology 26, no. 2 (2011): 161-168; F. Bauer, K. Matzler, "Antecedents of M&A success: The role of strategic complementarity, cultural fit, and degree and speed of integration," Strategic Management Journal, Feb;35(2) (2014):269-91.
4. Y. Friedman, A. Carmeli, A. Tishler, K. Shimizu, "Untangling micro-behavioral sources of failure in mergers and acquisitions: a theoretical integration and extension," The International Journal of Human Resource Management, Nov 12;27(20) (2016):2339-69.
5. N. Brueller, A. Carmeli, G. Markman, "Linking merger and acquisition strategies to postmerger integration: a configurational perspective of human resource management," Journal of Management, May;44(5) (2018):1793-818.
6. J. Marshall, "Making Mergers Work: The Strategic Importance of People. (Bookshelf)." Financial Executive 18, no. 1 (2002): 14-15.
7. D. Schweiger and P. Goulet, "Facilitating acquisition integration through deep-level cultural learning interventions: A longitudinal field experiment," Organization Studies 26, no. 10 (2005): 1477-1499; G. Stahl and A. Voigt, "Do cultural differences matter in mergers and acquisitions? A tentative model and examination," Organization science 19, no. 1 (2008): 160-176; R. Weber and C. Camerer, "Cultural conflict and merger failure: An experimental approach," Management Science 49, no. 4 (2003): 400-415.
8. M. Marks, P. Mirvis, "A framework for the human resources role in managing culture in mergers and acquisitions," Human Resource Management, Nov;50(6) (2011):859-77.
9. G. Stahl and A. Voigt, "Do cultural differences matter in mergers and acquisitions? A tentative model and examination," Organization science 19, no. 1 (2008): 160-176.
10. M. Gelfand, S. Gordon, C. Li, V. Choi, and P. Prokopowicz, "One Reason Mergers Fail: The Two Cultures Aren't Compatible," Harvard Business Review, October 2, 2018.
11. J. Fondrevay, "After a Merger, Don't Let "Us vs. Them" Thinking Ruin the Company," Harvard Business Review, May 21, 2018.
12. F. Bauer, K. Matzler, "Antecedents of M&A success: The role of strategic complementarity, cultural fit, and degree and speed of integration," Strategic Management Journal, Feb;35(2) (2014):269-91.
13. Y. Fried, R. Tiegs, T. Naughton, and B. Ashforth, "Managers' reactions to a corporate acquisition: A test of an integrative model," Journal of Organizational Behavior 17, no. 5 (1996): 401-427; R. Iverson and J. Pullman, "Determinants of voluntary turnover and layoffs in an environment of repeated downsizing following a merger: An event history analysis," Journal of Management 26, no. 5 (2000): 977-1003.
14. J. Walsh, "Top management turnover following mergers and acquisitions," Strategic Management Journal 9, no. 2 (1988): 173-183; J. Walsh and J. Ellwood, "Mergers, acquisitions, and the pruning of managerial deadwood," Strategic Management Journal 12, no. 3 (1991): 201-217.
15. J. Krug, "Executive turnover in acquired firms: An analysis of resource-based theory and the upper echelons perspective," Journal of Management and Governance 7, no. 2 (2003): 117-143.
16. W. Felps, T. Mitchell, D. Hekman, T. Lee, B. Holtom, and W. Harman, "Turnover contagion: How coworkers' job embeddedness and job search behaviors influence quitting," Academy of Management Journal 52, no. 3 (2009): 545-561.
17. J. Krug and R. Aguilera, "Top management team turnover in mergers and acquisitions," Advances in Mergers and Acquisitions 4, no. 1 (2005): 123-151.
18. O. Engert, B. Kaetzler, K. Kordestani, and A. Koshy, "Communications in mergers: The Glue that Holds Everything Together," McKinsey and Company, January 30, 2019.
19. M. Fuchs, T. Joseph, C. Mansfield, T. Seliga, and M. Usdin, "Driving M&A Value Through HR Integration: Get It Right From The Start," Deloitte, 2017.
20. J. Marshall, "Making Mergers Work: The Strategic Importance of People. (Bookshelf)," Financial Executive 18, no. 1 (2002): 14-15.



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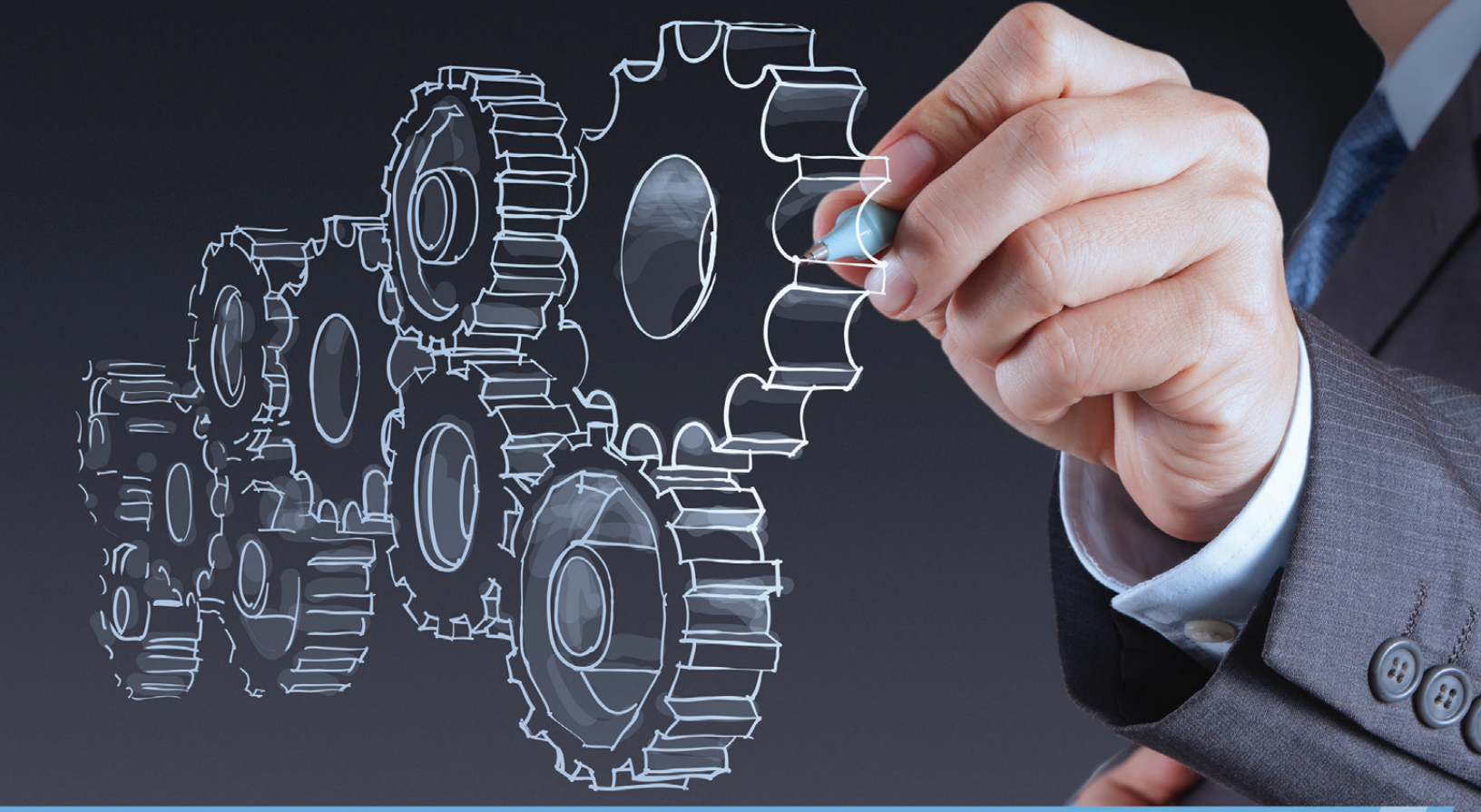


Why You Need an Operating Model:

To Align Your People and Deliver Your Strategy

Andrew Campbell
Ashridge Executive Education

Mikel Gutierrez
Siemens Gamesa Renewable Energy

Putting a new strategy into effect is always difficult. Andrew Campbell and Mikel Gutierrez provide a practical solution to designing the necessary changes: the Operating Model Canvas. They describe how they applied it to the merger between Siemens and Gamesa, demonstrating how this framework, along with its supporting tools, can help leaders to design changes in their organization and operations.

We all know that slippage occurs between the strategic plans we develop, the actions we take and the results we achieve. Few leaders say "Execution is the easy bit. Once we have decided what to do, it's no trouble to make it happen."

There are three parts to the implementation of any new strategy:

- designing changes to the current organization so that it will be capable of implementing the strategy
- transforming the organization, guided by the design, so that it becomes capable of implementing the strategy
- leading the transformed organization so that it delivers the strategy.

Many authors have focused on the second and third parts of the journey: managing the transformation and leading the organization. Don Sull and Rebecca Homkes,[1] for example, looked at barriers to transformation, and Kaplan and Norton[2] looked at how to convert strategy into performance metrics (the balanced scorecard) for leading the organization. But less attention has been paid to determining what changes are needed in the organization and its operations and to how this design work should be done.[3] This is where an operating model is invaluable.

Just like the blueprint for a building, an operating model captures the high-level decisions of the design team, allowing others to conveniently refer to those decisions during the transformation.

An operating model is a blueprint of the new operational design. It can be a one-page document but is more often ten to twenty pages. Just like the blueprint for a building, an operating model captures the high-level decisions of the design team, allowing others to conveniently refer to those decisions during the transformation. It lays out the strategy in terms of high-level operational choices, providing a map for the more detailed work which will be necessary throughout the journey of transformation. You would expect to see those working on a new building - the heating engineer, the foundations expert, the roofing contractor, the project manager - with well-thumbed and marked up copies of the architect's blueprints. Likewise, during a corporate transformation, you should expect to see the head of transformation, the IT architect, the senior HR business partners, the senior operations officers, the head of property, and the head of supply chain with well-thumbed and marked up copies of the organization's operating model.

Who Should Design the Operating Model?

A high-level operating model is the first step towards enacting a new strategy, so it should be designed by the top team: the team who developed the strategy. Strategies rarely say much about specific operations. In fact, when a strategy is complete, there are usually many questions left to be answered: what do you want me to do? by when? how much will this cost? do we have the budget? do I have clearance to hire extra people? what IT changes are needed? what can be outsourced? what new skills will we need? and so forth. Rather than delegating all these choices to lower levels, top teams should provide some broad answers to guide the functional specialists, who make the more detailed choices.

If the top team try to make all the choices, they can easily become overwhelmed. The sheer volume of decisions (see sidebar "What do you need to decide before you implement your strategy?") makes delegation to lower levels essential. Moreover, leaders recognise that many of the decisions should be made by managers with close knowledge of the operations, which can mean pushing some decisions three, four or five levels down the hierarchy.

Unfortunately, managers further down the hierarchy will not necessarily grasp the nuance of thought that lies behind the strategy; making it hard for them to align their choices with it. Moreover, the perspectives of individual members of the top team will vary according to geography, product focus, or function. They may give slightly different interpretations to their teams. Without a blueprint guiding these operational choices, the result can be a patchwork quilt of decisions rather than a single weave aligned with the strategy. Imagine a heating engineer or an electrician deciding where to place ducts and cables without a blueprint of the rooms and their intended uses.

There are, of course, traditional mechanisms through which organizations do try to bring these disparate views into alignment. These methods include: repeated explanations of the strategy, a transformation office set up to coordinate the transformation projects, executive team meetings to discuss the progress of the changes and, importantly, the personal influence and involvement of the leader.

Unfortunately, these alignment mechanisms often prove to be quite weak compared to the forces they hope to control. Repeating the overall strategy often does not help managers lower down with the specific dilemmas they face. Knowing that China is a priority or that new product development is the prime driver of growth does not help an operations team decide

What do you need to decide before you implement your strategy?

Let us use the example of a strategy to enter a new geographic market (let's say China) with an existing product, but with some tailoring of the product to meet the needs of the new market.
Before the company can implement this strategy, managers need to make a large number of decisions about both the organization and its operations.

New Processes
How will we find and prioritize potential customers in China?
How will customer needs be recorded and applied to product tailoring?
How will the products, tailored to Chinese customers, be developed?
How will contracts with customers in China be drawn up?
How will the products for China be manufactured (on the same production line, on a new production line, in a new factory)?
How will these products be shipped to customers?
How will the company provide customer service to Chinese customers?
How will these customers be invoiced and their payments collected?
How will the company handle late payments?
etc.

New People Roles
Who will ensure that the organization has the appropriate licenses to do business in China?
Who will identify potential new customers in China (filling the China business development role)?
Who will find out what those customers need, and translate these needs for product development?
Who, in product development, will be in charge of products tailored for China?
Who will negotiate contracts with Chinese customers?
Who will draw up contracts for Chinese customers?
Etc.

Finding and Training People for the New Roles
How will the company find (move from other roles, recruit, ?) the people to do the China business development and how will those people be trained for their new role?
Similar decisions for other new roles.

Pay and Benefits
What will the people in the China business development role be paid?
On what will their bonus be based and what percentage will it be?
What hours will they work?
Similar decisions for other new roles.

Performance Management
How will managers measure the performance of those in the China business development role?
Similar decisions for other new roles.

Career Paths
What career path will each of the new roles follow?

Structure
Who will each new role report to?
Will those in the China business development role report to the Head of Market Research or the Head of China or ....?
Similar decisions for other new roles.

Decision Rights
How much authority will those in the China business development role have and what roles will they play in decisions?
Similar decisions for other new roles.

Technology and Information systems
What technology and information systems will those those in the China business development role need to support their work?
Similar decisions for other new roles.

Locations
Where will those in the China business development role work (which city, which building, which floor, which desk)?
Similar decisions for other new roles.

Suppliers
Which suppliers will provide the resources and consumables we need in China?
Will we outsource any of the work involved in serving China?
What sort of contracts and agreements do we need with each supplier?

Management System
Who will provide motivation and leadership to the China team?
How will we make decisions to increase or decrease our effort in China?
Who in finance will "control" the China initiative?
How will we set targets and allocate budgets for China?
How will we monitor performance in China?
How will we identify, manage, and report risks in China?
How will we resolve disagreements between those focused on China and those with wider or other responsibilities?
etc.

where to put a new factory or help an HR team choose between a matrix structure and a geographic structure.

Transformation offices are typically tasked with delivery rather than alignment. They focus on ensuring that projects are completed on time, rather than on aligning the detailed choices being made within each project.

A new executive team is typically formed as the transformation begins. Members are keen to work well together, rather than to point out differences or failings, so they rarely challenge colleagues who are going off-piste. Moreover, these meetings are never long enough for complex discussion.

The leader, having delegated the work, typically focuses on motivating people or mediating disputes rather than ensuring overall alignment.

An operating model, developed by the top team, is therefore a vital aid to alignment. It ensures that the top team share a single understanding of how to enact the strategy and provides a common blueprint that can be shared with lower levels.

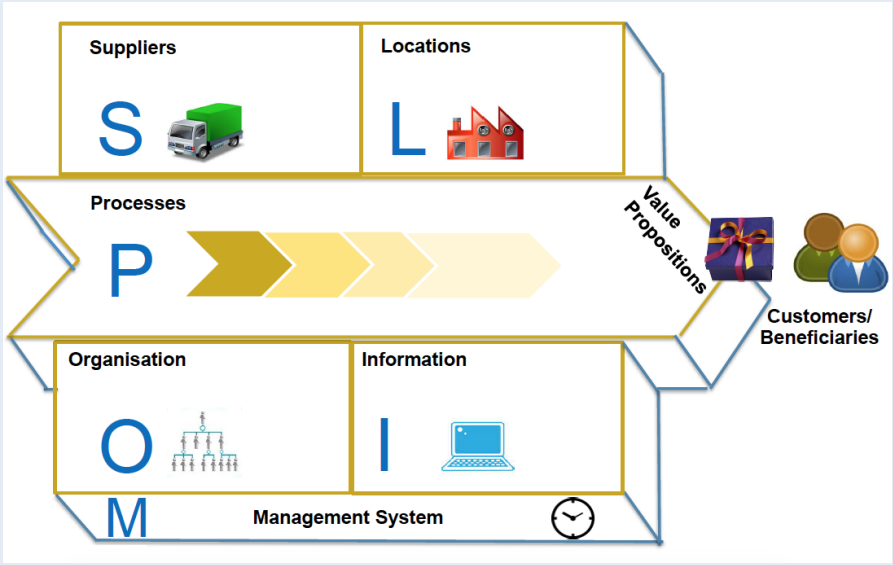
What is an Operating Model?

The phrase "operating model" is interpreted in many ways. Every major consulting company has its own framework and often more than one. One McKinsey framework, for example, has three elements: structure, processes, people.[4] A Deloitte framework covers people, process, and technology, elements that are commonly used by business architects.[5] Alex Osterwalder, in his popular book *Business Model Generation*, lists key activities, key resources and key partners[6] as the three operational elements in his Business Model Canvas. Despite differences in language and emphasis, all of these frameworks concern themselves with broadly similar topics. They cover work processes, people, organizational structure, information systems, locations, operating technology, supplier relationships, and more. The Operating Model Canvas (see Exhibit A)[7], the framework we propose, emphasises the processes of work that need to be done to deliver value to customers and builds the other elements around this focus. It also works in concert with the Business Model Canvas (see sidebar Operating Model Canvas and Business Model Canvas).

Before a company can compose a clear operating model, it must have a clear strategy: what products and services (value propositions) will be produced? for which customers? in which countries or regions? and with what advantage or excellence? The Operating Model Canvas helps leaders convert these strategy choices into operational choices: what work processes are needed, who will do the work, in which locations, etc. The mnemonic POLISM is a reminder of the six operational elements.

- Processes – the work steps needed to deliver the products and services
- Organization – who will do the work, how will these workers be structured into an organization, what support will they require to perform the work, how will they be attracted/chosen and motivated, what decisions will they make, what values will guide their behavior
- Location – where will this work be done and what buildings and other assets will the workers need in these locations
- Information – what information systems (data and applications) will the work require, who will be the "business owners" of these systems
- Suppliers – what sort of external suppliers will be necessary and what kinds of relationships will the organization have with these suppliers
- Management system – what processes for planning, budgeting, performance management, people assessment, risk management and continuous improvement will be needed; what calendar of meetings will

Exhibit A



connect these processes; and what scorecard will assess organizational progress.

The canvas offers a visual representation of these six elements. At its heart are the sequences of work (processes) needed for the organization to deliver the products and services (value propositions) defined by the strategy. The other elements of operations are arranged around these processes, with the management system underpinning and supporting the other five. The model presents these six elements as a canvas. By thus limiting the space allocated to each element the canvas forces leaders to focus on

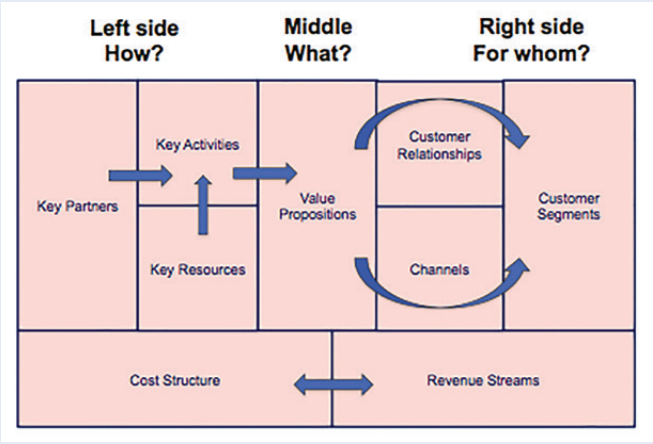
By thus limiting the space allocated to each element the canvas forces leaders to focus on the most important choices.

Operating Model Canvas and Business Model Canvas

The Business Model Canvas (BMC) was developed by Alex Osterwalder and Yves Pigneur and published in the book "Business Model Generation" in 2010. Since then it has become one of the most widely used management tools.

The BMC (see exhibit 1) is a tool for describing, on a single page, a business and how it creates value. There are nine elements which are displayed in the one-page graphic (the canvas) so that their interrelationships can easily be understood. Seven elements describe the business: customer segments (the target customers), customer relationships (how relationships are built with customers), channels (how products/services are delivered to customers), value propositions (the products or services offered to customers), activities (the work that needs to be done to create the products and services), resources (needed to support the work), and partners (needed to support the work). The two additional elements are revenue streams (which typically come from customers) and cost structure (driven primarily by activities, resources, and partners).

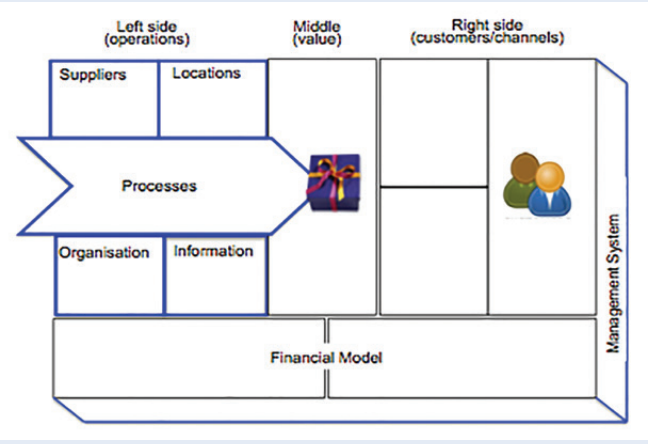
Exhibit 1: The Business Model Canvas



The right-hand side of the BMC is about customers, the value that is being delivered to customers and how to interact with them. The left-hand side is about operations: the work, the resources, and the suppliers.

The Operating Model Canvas (OMC) replaces the left side of the Business Model Canvas (see exhibit 2). The five elements of the OMC (processes, organization, information, location and suppliers) replace the three left hand elements of the BMC (activities, resources and partners). Why is five better than three? Partly because, with five elements, it is possible to focus on aspects of operations that often get too little attention in the BMC, such as people and organization, information technology, and location. The OMC also uses language that is more management friendly, so that it fits more easily into the conversations managers are already having. Finally, the OMC places the work that needs to be done (the processes) at the centre of the canvas, indicating that the other four elements – organization, information, location and suppliers – need to be designed in such a way as to facilitate the work that will create the products and services.

Exhibit 2: The Operating Model Canvas replacing the left side of the Business Model Canvas



The Operating Model Canvas has a sixth element – Management System. This component underpins the other five elements, concerning itself with how to run the organization once it is set up. But, the management system is not only about operations and costs. It is also about customers and revenues. So the management system underpins the whole Business Model Canvas.

the most important choices. This encourages them to create a high-level overview and helps them see how different elements are interconnected.

Take the example of a European company which makes electrical transformers for the power distribution industry, and which devised a new strategy to expand into Asia and the Americas by designing products tailored to these markets. The operating model canvas to support this new strategy requires the company's leaders to define the process steps needed to make the transformers and to sell them, both in Europe and internationally: product design, supply, scheduling, manufacturing, logistics, marketing, sales, and service. It also requires the leaders to determine whether this work will consist of one global process or a number of regional processes. For example, will product design be done globally or done separately in Europe, Asia, and Americas divisions?

In addition to defining the core work needed and how it will be structured, the operating model also requires leaders to address, at a high level, a range of other issues such as who will do the work, how much decision authority they should have, company culture, location, supplier relationships, IT applications, and management systems.

Two factors determine which issues should be addressed at this high-level and which can be delegated down the hierarchy: What is important to delivering the products and services?, and what are the foreseeable difficulties in executing the strategy?

So, if developing tailored products is important to selling transformers in new markets, the operating model might address the following issues: How will the salespeople learn to understand and interpret the special needs of customers in these new markets? What IT support will the salespeople need? How will the product designers be able to quickly fulfil requests from the salespeople? How will manufacturing handle the need to produce special products alongside their standard products without losing efficiency? How will the production schedule ensure that special products are delivered to customers on time? In short, how will a range of departments, already busy with existing markets, give potentially awkward requests from new markets the attention they deserve? The canvas requires leaders to provide some top-down guidance on all of these questions.

Likewise, if the strategy is about lower prices or superior technology or a more complete product range or superior service, the leaders will need to define the main elements in operations that will make these different drivers of success possible. The leaders might decide on high levels of outsourcing to drive low costs that will make lower prices possible or joint ventures with local servicing agents to provide superior service. The content of a high-level operating model is not pre-determined; it depends on what issues need to be addressed at the high level, before the rest of the choices can be delegated to lower levels.

For clarity, these high-level choices are often summarized visually, using tools like organization charts, process maps, and decision grids.[8] A high-level operating model may reflect hundreds of choices, but not thousands. By creating the operating model, top managers ensure that decisions concerning different areas of the organization are interconnected and will work well together. The model also helps managers lower down to fully understand the company's strategy and their part in it, deepening their commitment to the strategy and giving them the clarity they need to make decisions with their teams.

An Operating Model for Siemens Gamesa

The merger of two companies is a time of massive transformation. The newly combined management team wants to preserve the best elements of each company while eliminating duplication, creating synergy, and ensuring that the new company is poised for success.

In 2017, the wind power division of Siemens merged with Gamesa to form Siemens Gamesa, a world leader in both onshore and offshore turnkey wind farms. Mikel Gutierrez, one of the authors of this article, was appointed head of Onshore Projects, a division responsible for constructing and commissioning about 200 wind farms around the world each year. Once a contract is signed, Onshore Projects does all the work until the new wind farm is handed over to its owner, ready to use. When the merger was completed on April 3rd, 2017, Mikel announced his team of direct reports and launched a project to establish a new operating model for his division.

Because the new organization was a union between two successful companies, managers on both sides had strong views about how the new organization should operate, and many were reluctant to change. Mikel explained, "You have been living in two well-designed houses. Now we need to live in one shared house. It must be better than both. We need to create one super-duper new house."

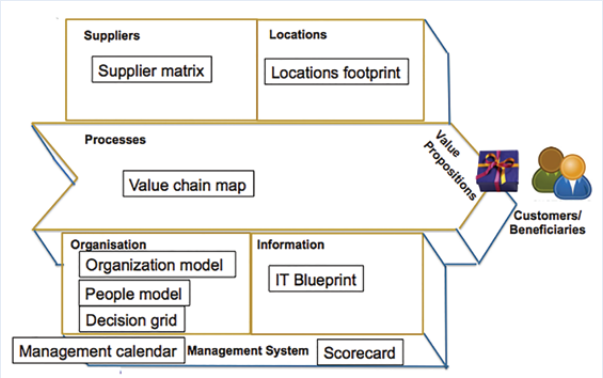
The division's effort to create an operating model began with a training event in London for the more than fifty managers who would lead the work. At the event, trainers explained the POLISM and Operating Model Canvas frameworks and introduced participants to tools such as value chain maps, organization models, decision grids, process owner grids, IT blueprints, location footprints, supplier matrices, scorecards and management calendars

Tools that support the Operating Model Canvas

The Operating Model Canvas provides spaces in which decision makers can capture their design choices. It helps leaders to see all the decisions they are making on one page, so they can spot connections and contradictions.

Lying behind each of the six spaces are tools of analysis that help leaders make good choices – see exhibit below

The Operating Model Canvas



Value chain maps lay out the work – the series of activities or high-level processes – that the organization needs to complete to create and deliver the products and services (value propositions). These maps typically comprise multiple value chains. By laying out these chains horizontally, and arranging them into columns of related skill, managers can explore the synergies between chains and decide where to structure the organization by value chain, where to structure by skill, and where to design a matrix. Value chain maps can also capture areas of needed excellence (activities that need to be done particularly well for the organization to succeed) and current problems (areas in which the company is currently underperforming).

People models describe the types of people the organization needs and the pay and conditions that leaders believe will attract and retain these people. An operating model will typically contain three or four people models, one for each of the three or four most critical skill groups, such as product development engineers, technical sales reps, brand marketers, or platform technicians.

Organization model is a way of drawing a chart of the organization which distinguishes between the operating work needed to create the products and services and the support work, such as HR, finance, and IT. Organization models also capture the different relationships that exist inside the organization, such as policy, shared service, and business unit.

Decision grids define the role each person or each department plays in major decisions.

IT blueprints show which department is responsible for each of the main processes, which IT applications support those processes, which applications need to be woven into an enterprise system, and which applications can stand alone.

Location footprints show where work will be done – the geographical area, the building, the floor in the building, even the desk on that floor – and explain why.

Supplier matrix helps leaders to decide what work to insource and what to outsource, as well as which suppliers to engage with simple contracts and which to engage in collaborative partnerships.

Management calendar lays out the main management meetings needed to run the organization – governance, planning, budgeting, performance monitoring, employee reviews, risk management, etc – and how they link together over a year or six months.

Scorecard captures the following elements: mission, vision and values; major transformation projects and their progress; actual performance as compared to key performance indicators.

More information on these tools can be found in the book Operating Model Canvas or at www.ashridgeonoperatingmodels.com

(see insert Tools that Support the Operating Model Canvas).

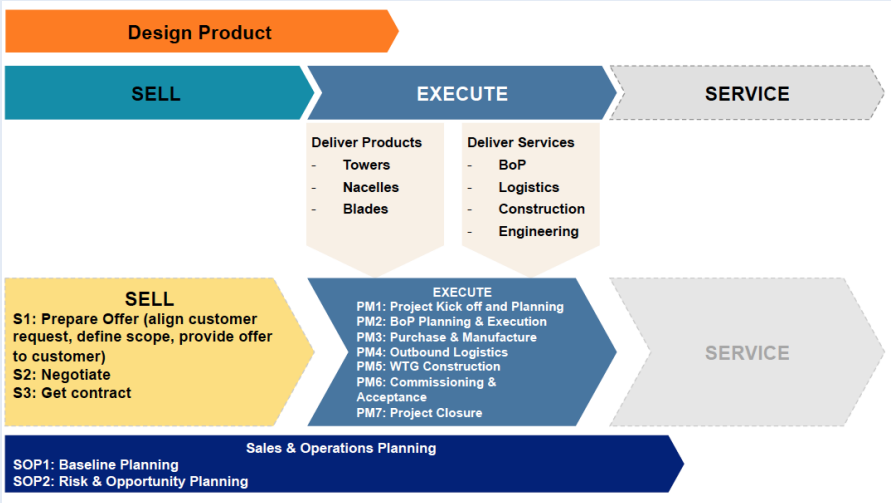
The operating model project was divided into five work streams. Each was tasked with producing three documents within a ten-week period: a summary of the existing operating model for each of the "houses," a description of the proposed operating model for the "new house," and a list of synergies which the team expected would result from the move into the "new house." Emily Wright led the overall project and reported to Mikel's executive team.

The teams were launched with a clear articulation of the strategy and value proposition: to build turnkey, onshore wind farms anywhere in the world which would cost less, be completed faster and have better safety records than those of competitors.

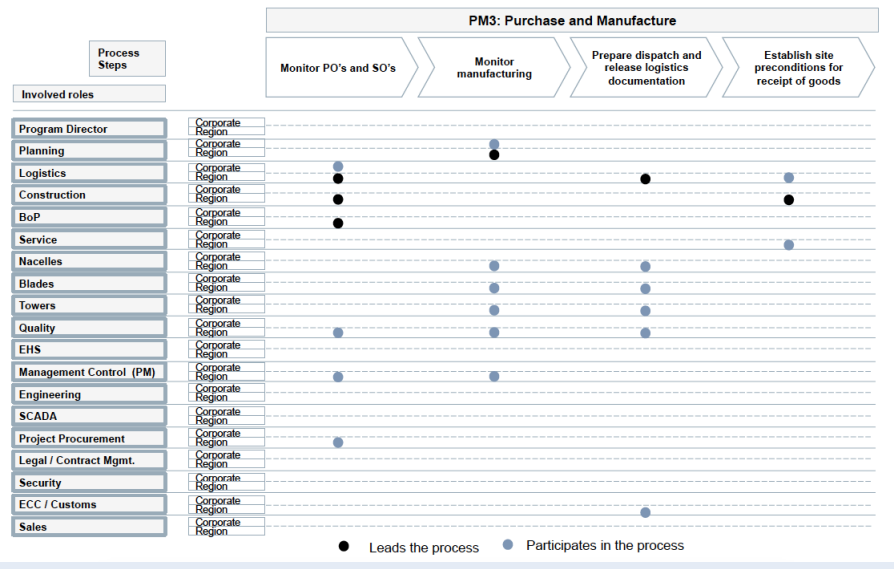
By the end of July, the division had agreed upon an operating model. This model included:

- high-level process maps for each function within Onshore Projects and, in many cases, for lower level processes as well
- organizational models (charts that laid out roles and relationships) for the whole division and for each function
- a decision grid for the major decisions made within Onshore Projects
- role descriptions for central versus regional roles
- a process owner grid to clarify who had authority over cross-functional processes
- an IT blueprint laying out which IT applications would be retained, which would be woven into an integrated system, and which functional leader would be the "business owner" of each application
- scorecards for Onshore Projects as a whole and for each function, listing the timeline and deliverable for each transformation project as well as perfor-

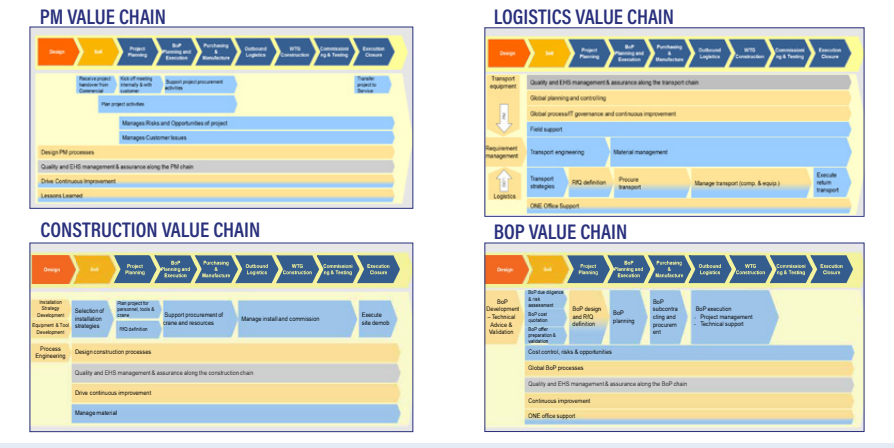
Exhibit B: High-level Process for the New House



Process Owner Grid (clarifying corporate and regional roles)



Process Maps (for selected functions)



mance measures for ongoing operations (it was vital that performance on existing wind farm projects should not suffer during the transformation)

- a management calendar listing the planning, target setting, and performance review meetings that would guide the division through the transformation, the objectives of each type of meeting, the participants, and whether the meeting would be face-to-face or virtual

Exhibit B shows examples of some of these outputs, suitably redacted to protect confidentiality.

This particular operating model had little information about two aspects of POLISM: locations and supplier relationships. The team gave little attention to specific locations because they were not critical to the value proposition. Each wind farm project is built in a different location, so the organization had to be able to deliver anywhere in the world. The question of supplier relationships was left to Siemens Gamesa's procurement team, though in hindsight, it probably would have been better to have developed the supplier side of the operating model as part of this project. Doing so would have clarified some contractual issues that proved to be a problem later on.

A ten-week design project cannot cover everything. Issues which depended on decisions in other parts of the company remained outstanding. The teams involved could only address areas for which they were responsible. For example, health and safety, clearly a vital issue when building a wind farm, was controlled by another function. While Onshore Projects is responsible for ensuring health and safety during construction, the Health & Safety function is responsible for overall governance, setting standards and determining how they will be fulfilled. Because Health & Safety was developing its approach

IT Blueprint

Green shading indicates the application needs to be part of an integrated enterprise system

	Execution									
Functional Area	Project management	Scheduling	Manufacturing	Activity tracking	EAC + Collection	R&O mgt.	Actuals accounting	HS	Q	Doc mgt.
SOP Planning	SAPP OASIS AND Primavera	SAPP OASIS AND Primavera	SAPP OASIS	SAPP OASIS AND Primavera		SAPP				
Operations-Capacity		SAPP OASIS								
Operations-Production			SAP							
Project Management (PDs)	SAPP scorecard	SAPP OASIS AND Primavera			SAPP	SAPP				Sharing docs: Workspace OR Sharepoint Process docs: Process/Doc House
BOP		SAPP OASIS AND Primavera		Qilgac-GQLI? IMAP?	SAPP CTOOLS	SAPP		Altair	GQLI (Qilgac)	Syncplicity OR Siemens Secure Manuals: Fluix?
Cons		SAPP OASIS AND Primavera		Activity: PSR OR WPR-IMAP?	SAPP CTOOLS	SAPP		Incidents: Altair Chemical: 3E OR Altair	Data capture: QSYS,WindQ, Krima OR GQLI 8D mgt: Altiar NCR report: QSYS OR SAP	Workspace OR PDM Site manuals and commissioning: Fluix?
Log		SAPP OASIS AND Primavera		SADGOL	SAPP CTOOLS	SAPP		Altair	Qilgac	Manuals: Fluix?
Controlling					SAPP CTOOLS AND/OR SAP + Impact	SAPP	SAP AND Impact?			

on a different timetable, Onshore Projects could not incorporate it fully within the ten-week window.

Other issues could not be decided until more detailed work was completed. For example, the scorecards for each of the functions within Onshore Projects depended on the outcome of more detailed work and on input from Finance.

Some of the decisions the team made during the ten-week design period didn't work out as the transformation progressed. Small adjustments were needed to the process framework once the transformation teams had time to do more detailed analysis and to integrate their thinking with the work done by other functions.

A new operating model, in other words, is not a final and fully completed document, set in stone. Like an architect's blueprint, it may require adjustment as the house is being built. Unlike building blueprints, operating models do not describe an object that will stand still, but a process that will evolve over time, demanding changes when circumstances change.

Unlike building blueprints, operating models do not describe an object that will stand still, but a process that will evolve over time, demanding changes when circumstances change.

Reflecting on the experience, Mikel and Emily drew out five lessons:

1. Agree upon design principles at the beginning.

As Mikel explained "We were very clear that we were making one organization out of two: we were building only one house. I made it clear to the teams that if they could not decide within the ten-week period, I would decide for them." Design principles are always the first step in design. They limit the team's choices and guide their work. Without clear design principles, especially in a merger situation, managers have a practically limitless opportunity for disagreement and delay. Design principles help to convert a general strategy into thoughts that are useful to the design teams. Other examples of their design principles were "The operating model must ensure that the organization can deliver projects in any part of the world" and "Safety is the most important priority."

2. Document the existing situation first.

Understanding where you are starting from is key. Understanding the exist-

ing operating model helped teams understand which practice was best. Rather than developing a new design, the teams could adopt the best practice already in use. Documenting the existing situation also helped the teams to identify areas of frustration and inefficiency. They could then develop solutions that were better than those of either organization. Unless you are developing an operating model for a new organization or for one that is irretrievably broken, it is well worth taking the time to understand the existing operations before developing new designs.

3. Choose and prepare the teams.

Having the right people on the design teams and preparing them properly is essential. Team members should, of course, be experts in their field, but they also need to be open minded. New creative design solutions are easier with minds open to the possibility that an alternative way could be just as effective or even better. As Mikel explained, "They should be like children: eager to find out what the other organization is doing and willing to adopt new ways if they are better." Many team members spent time working in the other organization to learn how the other team's processes operated.

It is also important to include team members who will be part of the change teams set up to implement the new operating model. Their knowledge of the discussions during the design process will help them win the support of others during the implementation.

Training the team ensures that its members all start with the same understanding of the task, so that they can all contribute equally to the tough choices. The idea of "living in a new, shared, super-duper house" helped everyone to develop a shared focus.

4. Use a common framework and create a lexicon of terms

Never underestimate the benefit of speaking a common language. The training ensured that all teams were using a common framework, making it easier for them to link together. It was also important to use the same words for describing processes, capabilities, and roles. While using a common vocabulary certainly improves communication, it also makes it clear that things are moving forward and prepares the team mentally for change. One of the most valuable tools during this project was a dictionary of common terms used by all teams. "We found that the two organizations were less different than expected. We were just using different names for the same activities" explained Emily Wright. As the two organizations worked together more and more, the lexicon expanded, helping everyone to understand each other and the new model.

5. Ten weeks, not ten months or ten days

There is no question that the teams needed time to fully understand the operating model and to discuss alternatives. But they also needed to feel time pressure so that they would arrive at a conclusion instead of succumbing to analysis paralysis. With no deadline, managers have no incentive to find compromises, and tend to delay the tough decisions. They are likely to focus on getting it exactly right, rather than on getting it done. Mikel made it clear that, at the end of ten weeks, decisions would be made, whether the teams had reached agreement or not.

Speed in the operating model design phase has many advantages. It energises those affected. It gives less time for people to look for other jobs before they know what their role will be in the new organization. It gives more time for making the changes that follow. The downside is that some of the choices will turn out to be wrong. So, it must be clear to team members that it will be possible to revise their choices later if necessary.

Emily Wright reflected, "This has been a highly effective process that accelerated the implementation of our strategy. Most post-merger integration focuses on synergies. Instead, we started by creating a shared vision of our new house, so that we could start implementing our strategy alongside the detailed work on synergies, which has been ongoing for the last year. We are now working in a more connected and aligned way than would otherwise have been the case. In future integration projects, I will always begin with an operating model."[9]

Leaders cannot succeed by strategy alone. The first step in implementing the strategy is to convert their strategic ideas into choices about organization and operations. By using the operating model concept, along with the framework of the Operating Model Canvas and its accompanying tools, leaders are guided to design the changes that will make the organization capable of implementing their strategy.

Andrew Campbell has published more than ten books as well as a number of articles in the *Harvard Business Review*. After six years with McKinsey & Company, he now leads courses at Ashridge Executive Education on advanced organization design and designing operating models. He advises companies and has been a non-executive director.

Mikel Gutierrez has worked in operations, product development, sales, and strategy for more than five companies across Europe. As CEO of Azebal in Spain, he took the company from near bankruptcy to growing sales and profits. In his last three companies he has led major transformations of both strategy and operations.

Endnotes

1. See "Why Strategy Execution Unravels and What to Do about it", Donald Sull, Rebecca Homkes and Charles Sull, HBR, March 2015. "Promised-based Management, the Essence of Execution" by Donald Sull and Charles Spinosa, HBR, April 2007. "Turning Strategy into Results", Donald Sull, Stefano Turconi, Charles Sull and James Yoder, *MIT Sloan Management Review*, January 1, 2018
2. *The Balanced Scorecard*, Robert S Kaplan and David P Norton, HBS Press, 1996 and "Strategy Maps: Converting Intangible Assets into Tangible Outcomes", Robert S Kaplan and David P Norton, HBS Press, 2004
3. One article that addresses this issue head on, in the context of a merger, is "Realizing the value of your merger with the right operating model", Caitlin Hewes, Rebecca Kaetzler, Kameron Kordestani, and Olivier Rigaud, https://www.mckinsey.com/business-functions/organization/our-insights/realizing-the-value-of-your-merger-with-the-right-operating-model
4. https://www.mckinsey.com/business-functions/organization/our-insights/realizing-the-value-of-your-merger-with-the-right-operating-model
5. The Deloitte framework can be found at https://www2.deloitte.com/lu/en/pages/strategy/solutions/target-operating-model.html
6. Business Model Generation, Alexander Osterwalder and Yves Pigneur, Wiley, 2010
7. www.operatingmodelcanvas.com
8. See www.ashridgeonoperatingmodels.com for examples of these tables, charts and maps.
9. This is also the most recent recommendation from the consultants McKinsey & Co, see https://www.mckinsey.com/business-functions/organization/our-insights/realizing-the-value-of-your-merger-with-the-right-operating-model

Value Lab: A Tool for Entrepreneurial Strategy

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Teppo Felin, Alfonso Gambardella, and Todd Zenger argue that managers and entrepreneurs should develop their own theory of value. They present Value Lab, a tool which provides the framework to help businesses create such theories. Their purpose is to help start-ups and established firms to be more scientific and experimental in creating new value.

Teppo Felin,
Utah State University & Oxford University

Alfonso Gambardella,
Bocconi University

Todd Zenger,
University of Utah

Theories drive radical breakthroughs in science. They help scientists to see the world in new ways, to make new observations, and discover new things. We believe that theories can be a similarly powerful tool for managers and entrepreneurs. The greatest breakthroughs in value creation are rooted in the development and execution of unique theories of value. While theories are often seen as overly abstract and impractical, we heartily agree with Kurt Lewin who wrote that "there is nothing so practical as a good theory."[1] Theories help strategists to make sense of an uncertain world, so that they can predict and see more clearly, make better decisions, and create radically new value.

Over the past decade, we have developed an approach that helps the leaders of startups and established organizations to develop their own theories.[2] Our method doesn't tell companies what their theory should be. Rather, it provides the scaffolding for organizations to create their own theory. We call this tool Value Lab—a virtual laboratory in which managers and entrepreneurs can create and test strategy in scientific and evidence-based ways.

Theories as Practical Instruments

Before launching into how to develop a theory, we need to get a bit more precise about what a theory is and what it does.

Theories illuminate paths to value that might otherwise remain unseen.

For scientists, theories are a lens, revealing observations and evidence which are not apparent to others.[3] Einstein put it simply, "whether you can observe a thing or not depends on the theory which you use. It is the theory which decides what can be observed."[4] Theories enable scientists to see the world differently. Theories allowed Galileo to see the earth rotating around the sun, Newton to see light transformed from colorless to intensely colored, and Einstein to develop breakthroughs which enabled others to find eventual evidence of black holes, neutron stars, and gravitational waves.

Like scientists, entrepreneurs and managers can use theories to see the world in new ways.[5] Theories illuminate paths to value that might otherwise remain unseen. Managers and entrepreneurs who hold the flashlight of theory can avoid the streetlight effect—the human tendency to search only where the light already shines, where things are already evident. The term "streetlight effect" is drawn from an old story about a drunkard searching for his keys under a streetlight. A policeman soon joins him and together they search for the keys under the streetlight. After some time the policeman asks: "now, are you absolutely sure you lost the keys right here?" The drunkard answers, "no, I lost them on the other side of the street. But the light is much better over here."[6]

A theory tells you what to look for, and where to look.

All too often managers and founders search for value only under the streetlight—wherever it's easiest to see the data and to gather evidence. Well-meaning approaches like lean start-up reinforce this tendency, asking entrepreneurs and managers to gather data and validation for both their products and strategies as quickly as possible. We have found that an effective search for value starts with a theory. A theory tells you what to look for, and where to look, rather than leaving you to search randomly under the drunkard's streetlight. By composing a theory, entrepreneurs and managers are better able to imagine and foresee opportunities. Their theory guides the choices, experiments, and investments they must make. The unique theories of Steve Jobs, Sam Walton, Howard Schultz, and Walt Disney provided each with a unique map to value which others had not seen.

Our tool, Value Lab, offers a framework through which you,

THE SCIENCE BEHIND VALUE LAB

It's easy for us to tell stories about successful companies and retrospectively argue that their theories made all the difference. But is there scientific evidence that starting with a theory really does create more value? Do those who start with a theory outperform those without?

There is growing evidence that the answer in both cases is "yes." One of the authors of this paper worked on a recently published study in which researchers randomly placed nearly 1,000 start-ups into two groups. The treatment group was taught to start by using tools like those described here to construct theories of value. They were also taught standard business tools like market analysis, experimentation, and customer validation. The second, control group was taught only the standard start-up tools. Researchers then monitored both groups for eight months and assessed their performance.

The results were clear and persuasive. Those who were taught to compose a theory of value before setting out to experiment and act performed significantly better. Their ventures generated more revenue and they were more likely to productively pivot their businesses: interpreting the results of their experiments correctly and confidently to refine their path forward. They were also more likely to simply exit—again, more quickly and confidently recognizing a flawed theory. Indeed, all evidence across the board pointed to firms creating substantially better strategic outcomes when they began with a theory.

Further reading can be found here.[7]

too, can generate and test theories, creating your own map to create and capture value.

Value Lab

The Value Lab is a virtual space designed to help you compose a theory of value. It does not generate a theory automatically. Instead it invites entrepreneurs and managers to engage in careful thinking and structured imagination so they can maximize their own ability to develop a valuable theory. Think of Value Lab as scaffolding to help you build.

In building theories with students, executives, and founders, we have found that three conversations are critical. The first focuses on the subjects' beliefs about the future, bringing to light their unique or contrarian beliefs. The second frames and tightly formulates a specific problem (and its components) that, if solved, will allow them to realize these contrarian beliefs. And the third focuses on composing a clear, concise description of the theory, outlining specific actions to test and realize it. Our framework describes these conversations as sequential (from left to right in the figures below). But they are, of course, tightly interrelated. As you proceed through the Value Lab process, you may want to move back and forth between the elements.[8]

The figures below show three different iterations of the Value Lab framework. Figure 1 is a blank copy. Figure 2 includes comments about each of the columns and boxes, offering guidance on how to fill them. Figure 3 is an informal example of a filled-out framework, applying the Value Lab model to Airbnb.

Contrarian Beliefs

A valuable theory begins with unique or contrarian beliefs. These contrarian beliefs might be about anything, from the future of technology, to the evolution of customer tastes and preferences, or an unmet need. Relevant contrarian beliefs might also touch on societal or cultural trends, or any other aspects relevant to business.

Your unique beliefs need not be expansive, but they must differ from what others commonly believe. This isn't as easy as it sounds. After all, most of our beliefs are held in common with others. Moreover, business relies upon communicating and sharing well-established, agreed-upon knowledge.[9]

But while common beliefs are important, the seeds of a valuable theory reside in *uncommon*, contrarian, or novel beliefs. You need an answer to the question: what do you believe that (almost) no one else believes? We ask this question routinely in our interactions with start-ups and established companies. As venture capitalist Peter Thiel puts it, "most people believe in x, but the truth is the opposite of x."[10] Your answer to this question can provide the underlying raw material for a theory of value.

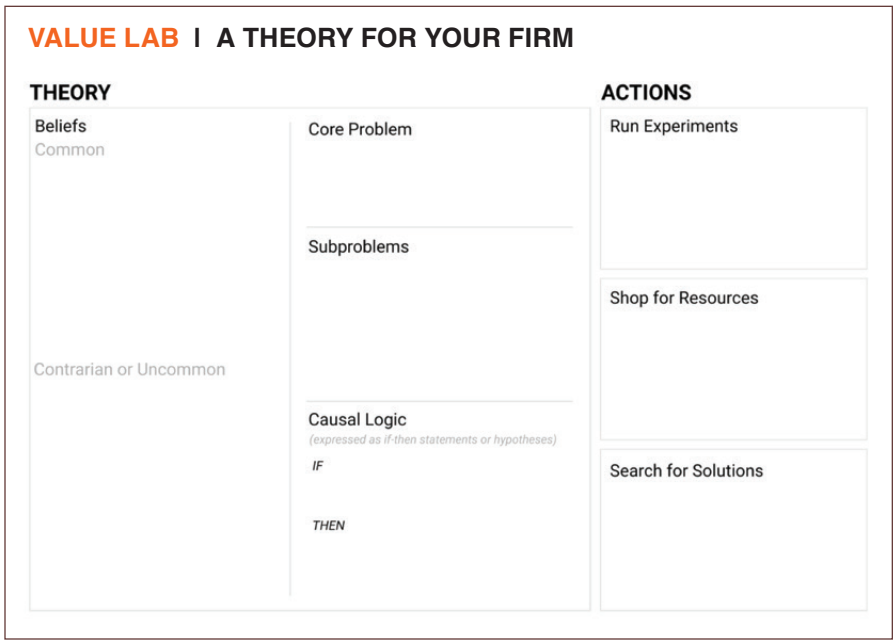
> You need an answer to the question: what do you believe that (almost) no one else believes?

Unique beliefs can be hard to come by. But if you truly want to create new value, you have to find a way to think about and see the world differently. Unless you can do that, you'll just find yourself going after the same assets, people, and strategies as everyone else, which leads to costly competition. Unique business beliefs, like unique scientific ones, are the critical raw material from which *new* insights and theories emerge.

In the late 1970s Steve Jobs and his team held the contrarian belief that personal computers would soon become a mass market product. Although it now sounds bizarre, few, if any, agreed with him. Ken Olsen—the founder and CEO of computer giant Digital Equipment Corporation—told Time Magazine in 1977: "there is no reason for any individual to have a computer in his home."

Indeed, at the time there was little evidence for Jobs's belief about the need for personal computers. Even objective data and evidence,

FIGURE 1: a blank copy



perhaps a survey of potential customers, would have concluded that a plan to build computers for the mass market was madness. Without the ability to envision how they might use a computer, or even what a personal computer might look like, it was hard for consumers to imagine needing one. This uncertainty means that consumer feedback cannot be relied upon to validate or disprove a potential breakthrough product or strategy. It may also be why, to this day, Apple has little appetite for consumer surveys, including those which concern minimum viable products.

Sam Walton also understood the importance of contrarian beliefs. When he began to explore discount retailing in the 1960s, the prevailing belief was that large-scale discount retailing was for large cities and suburban America. Most discount retailers considered small towns to be irrelevant to the industry. But Walton believed that discount retailing could thrive in small towns and so developed his contrarian theory of building discount retailing around networks of stores (first in small towns and then elsewhere), configured densely within a geographic region to allow efficient supply and merchandising.

Every industry has its orthodoxies, but they can and should be questioned.

One simple way to discover or generate uncommon beliefs is to start by listing the common beliefs within an industry (see Column 1). Every industry has its orthodoxies, but they can and should be questioned. They generally include deeply-held beliefs and unquestioned assumptions about technology, consumer needs, distribution and more. By articulating and listing these beliefs you can begin to consider alternatives. Although some uncommon beliefs may sound outlandish or farfetched, it's important, initially, to simply brainstorm and list them, without discarding or filtering any. Brainstorming research has persuasively revealed that if several people are working together to generate ideas, they should first brainstorm independently and then later discuss and work together.[11]

Keep in mind that uncommon or contrarian beliefs are fragile and, often, all too easy to dismiss.[12] You may have trouble drawing any consideration or support for them, particularly if they seem foolish to others. Imagine being Galileo and trying to convince the world that the Earth really does rotate around the sun, when anyone could easily see the contrary evidence of the planet's stability and the sun traveling daily across the sky, moving from east to west. Indeed, it is because they are easily validated by daily experience that existing orthodoxies are hard to topple. Contrarian or uncommon beliefs, on the other hand, allow us to discover new ways of seeing things. And this allows scientists to formulate a theory that enables the identification of the new observational evidence in support of new realities.

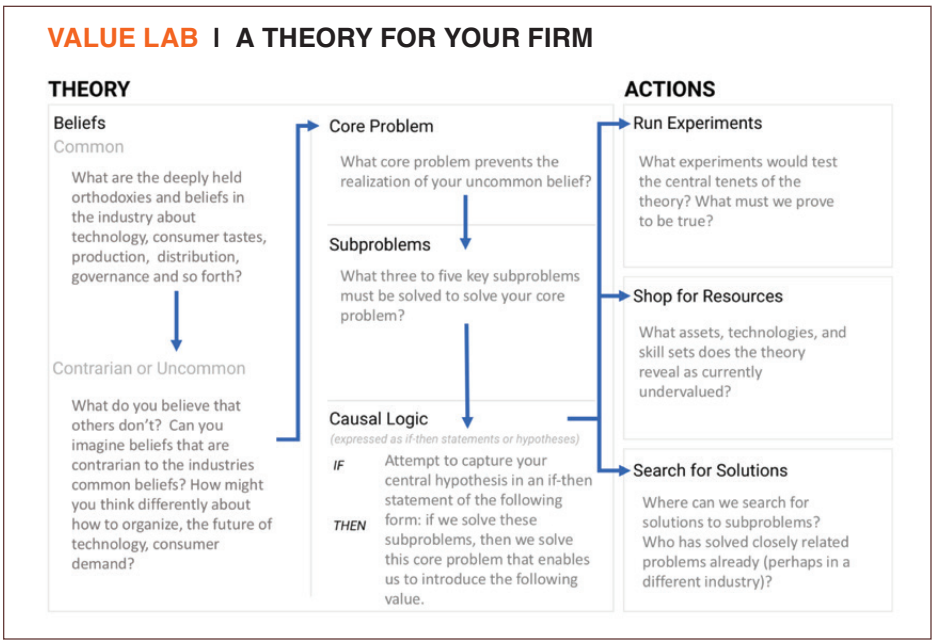
Similar challenges await contrarian beliefs in business. Airbnb's founders initially met with extreme skepticism about the public's willingness to rent homes to (or from) strangers. Top venture capitalists deemed the idea ludicrous, not worth investing in.[13] The evidence that their theory was wrong seemed conclusive; industry experts disagreed with them and customer surveys would likely have found no market or demand. After all, why stay in strangers' homes when most places have hotels or, in cities, highly sophisticated hotel markets? But the founders of Airbnb persisted with their uncommon beliefs.

Now, beliefs are just rhetoric and talk. The critical next step is to convert these beliefs into actionable problem statements, and efforts to solve these problems.

What's the problem?

The Value Lab next requires that you transform your unique beliefs into a clear, simple, and well-framed problem to solve (Column 2). Value

FIGURE 2: includes comments about each column and box, offering guidance on how to fill them.



creation can be viewed as formulating and solving problems.[14] Contrarian beliefs make these problems, and their potential solutions, visible. Without this sequence of identifying contrarian or uncommon beliefs, turning them into problem statements, the underlying opportunities for value creation will not be apparent to entrepreneurs and managers.

To create new value, you must either recognize and solve a problem previously unseen by others, or solve a known problem in a new way. And to do that, you must correctly identify some previously unrecognized or unmet customer need or desire, or find a more efficient or inexpensive means of satisfying a need which has already been met. Although this step is akin to others' notions of jobs-to-be-done or pain points, we offer a more practical way of generating something unique.[15] Most people recognize the importance of identifying a unique problem. But the secret to finding and formulating unique problems is to first clearly delineate your contrarian beliefs, as discussed earlier.

To practically move from a belief to a core problem, you must do more than simply restate your contrarian beliefs as a problem. Simply restating Jobs's belief in a mass market for computers as a question, "how do I ensure the widespread use and adoption of personal computers?", is not very useful. While it may be a good place to start, this formulation would not have provided any practical guidance on what Apple should actually do.

A more effective course is to identify the central obstacles that stand in the way of making your contrarian beliefs a reality. Steve Jobs had to discover what, specifically, deterred consumers from widely adopting computers. He concluded that the main problem was that computers were horribly difficult to use. While the problem may be obvious to us, in retrospect, the idea of ease-of-use *for everyone* was not meaningfully on the radar of other entrepreneurs or computer companies.

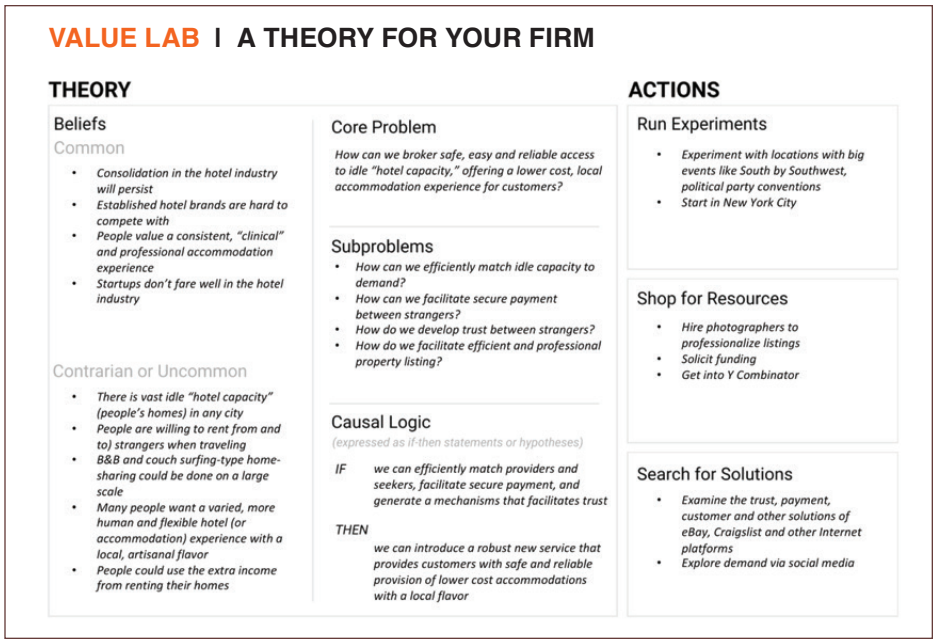
By formulating the problem in this novel way, Jobs was able to *see* value where others could not. As a result, he could walk into Xerox Parc and find powerful solutions to the focal problem, including technologies such as the graphical user interface, the mouse, and the bitmapped screen. Many others knew about these technologies. But it was Jobs's problem formulation that allowed him to see just how they would be critical to enabling and unlocking the personal computer revolution. Again, seeing valuable uses that others can't see is critical to creating value. And it's the process of articulating the obstacles to a contrarian belief, in the form of problems, that allows managers to identify hidden value.

Consider Walmart. Sam Walton's insightful theory was also rooted in a contrarian belief and a core problem. He believed that discount retailing could succeed in small towns. That belief highlighted the core problem of efficiently supplying geographically distant stores. Directly addressing this core problem led him to a solution which others simply could not see. By effectively framing problems we are better able to solve them quickly, and to discover solutions that would otherwise go unnoticed.[16]

Keep in mind that contrarian beliefs and their associated problems can be quite different even within a single industry. There are many ways to create value. To illustrate, a few years after Jobs's insightful framing of his problem, Michael Dell observed the same personal computing industry and framed a very different, but equally insightful, problem. At the time, key players (other than Apple) were obsessed with improving processing speed and storage capacity, and with developing low cost, large scale manufacturing. Dell also aimed for cost reduction, but his focus was on reducing the storage of finished goods and parts because he realized that both depreciated extraordinarily fast. From this belief, Dell built a novel theory and a valuable strategy.

These are just some of the practical examples of how contrarian, novel, and uncommon beliefs can be

FIGURE 3: an informal example of a filled-out framework.



transformed to actionable problems and problem solving. Returning to the Value Lab, during this phase the key is to articulate, in a sentence or two, the core problem, in the form of the key obstacle preventing you from realizing your contrarian or uncommon belief or beliefs.

What subproblems, if solved, solve my core problem?

By articulating the core problem, managers can then identify and formulate the subproblems they need to solve. Imagine these subproblems as the smaller obstacles standing between you and solving your core problem so as to realize your beliefs. Beliefs, problems and subproblems must therefore be coherently linked.

Consider the architecture of Airbnb's theory, from beliefs to core problem and subproblems (see Figure 3). Its founders' early contrarian belief was that people would rent homes to or from strangers and that the world's vast empty housing capacity could be put to efficient use. Despite the initial skepticism of venture capitalists, the founders carefully scrutinized the problems and obstacles that stood in their way. They determined that their core problem was how to efficiently match suppliers with renters. A website supporting peer-to-peer sharing was the obvious solution. But they needed to solve a number of subproblems before customers would feel comfortable renting to or from complete strangers. These subproblems included how to provide secure payment, and how to generate trust between buyers and sellers. Identifying these subproblems enabled them to trace and envision a causal path to generating the foreseen value.

Having traced this path, Airbnb could scour the landscape for existing solutions to solve the key problem and associated subproblems. Companies like eBay had already solved the problem of generating trust between strangers in an online environment. Indeed, eBay had initially faced similar, widespread skepticism about whether strangers would be willing to send each other money and goods through an online marketplace. The company solved this problem by holding the money in escrow until delivery and building a mutual rating system for buyers and sellers. Airbnb adopted similar tools to solve the same problems. Through this type of causal chain of beliefs-problems-subproblems companies can build a unique architecture to create value which may not be evident to others.

Michael Dell's breakthrough traces this same causal architecture. He believed he could dramatically lower manufacturing costs in the computer industry by solving the core problem of shortening inventory holding time. This core problem contained a number of subproblems including: how do we compose an efficient mass-customized assembly operation? How do we build a sales model that circumvents holding retail inventory or reduces its duration? How do we develop these changes into a valuable brand? The solutions of these subproblems form the foundation of the architecture of Dell's theory of value.

During this step of the Value Lab, then, entrepreneurs and managers should succinctly articulate three to five subproblems that, if resolved, will in turn solve their core problem.[17]

What's your theory of value?

We view a theory as encompassing all the elements in the left two columns of the Value Lab: beliefs, core problem or obstacle, and subproblems. However, to successfully communicate a theory of value and render it into useful guiding actions and strategies, that theory must be articulated succinctly. We find it extremely useful to begin by expressing theories as if-then statements which highlight a theoretical path through which value will be introduced. For example: *if* the following core problem is solved by identifying and addressing this set of subproblems, *then* we will introduce this value.

An expression of Airbnb's theory of value might read: Airbnb believes that *if* it can compose a system that efficiently matches providers of idle "hotel" capacity with seekers of this capacity, a system that supports secure payment, and a system that uses information and screening to fuel trust between providers and seekers, *then* Airbnb can introduce a robust new service that provides customers with a safe and reliable local accommodation at extraordinarily low capital costs (see Figure 3). Note that this statement links final success to prior steps in the Value Lab, by restating the core problem as well as the subproblems.

Of course, we do not mean to suggest that Apple, Airbnb, Walmart, and Dell worked from well-articulated theories of value from the get-go. Their ideas were certainly updated and refined as they ran experiments, found solutions to subproblems, and received feedback. Moreover, their ultimate success undoubtedly involved some measure of serendipity. The process of scientific discovery is also interwoven with luck. But research shows that those who begin with novel beliefs, a core problem, and an insightful theory of value substantially increase their odds of success. We have found that using Value Lab to generate a clear expression of a theory of value also significantly increases the odds of succeeding with a new business.

What should you do with your theory?

When you have completed the first two columns of the Value Lab and articulated your theory statement, you can turn your attention to deciding what actions to take (see the final column).

These actions may fall within several distinct categories. Your theory may reveal useful experiments that test key assumptions and validate or disprove the theory. The theory may also reveal critical resources which you need to secure. These may include underpriced resources or assets which will allow you to make productive investments essential to realizing your hypothesized value. Finally, the theory may allow you to identify specific problems for which to find solutions. Some theories may suggest actions in all three of these categories, while others may not. After reflecting on the theory, generate a list of useful actions in the relevant categories.

Run Experiments

If the theory of value concerns a start-up or a new business for an existing organization, you may want to focus your initial actions on assembling data and running experiments which test the core elements of your theory. The key is to choose experiments that maximize your insight about the validity of the theory.

The experiments suggested by Value Lab are likely to be quite different from those that emerge from other approaches such as the lean start-up process. That approach urges rapid experimentation and the fast development of minimum viable products to generate customer feedback. Our worry, which we have articulated more extensively elsewhere,[18] is that efforts to experiment quickly may fail to really test the broader theory of value. We do not believe that experimentation alone is the key. The key is to run the *right* experiment. Lean start-up's sense of urgency pushes toward incremental innovation because it leads its users to look for data and evidence where it's easiest to find. Its focus on minimum viable products then amplifies the aforementioned streetlight effect. Value Lab-based theories, by contrast, provide a flashlight so you can search for value that is unique and not evident to others. A well-composed theory will suggest unique experiments that test your solutions to subproblems and explore the theory's core logic, generating useful data long before you build minimum viable products, much less entire business models. Entrepreneurs and managers who have a theory can learn more from experiments and can, in response, pivot nimbly and wisely.

Shop for Resources

Your theory will help you highlight critical resources that you need to secure, perhaps by hiring talent, obtaining technology, or purchasing assets. Strategy scholars have found extensive evidence of just how hard it is to find bargains on such resources. All too often, companies overpay for their resources. In the merger and acquisitions market, for example, organizations routinely overpay for their target companies. Overpayment is also common in other settings, including the technology market and other asset auctions.[19]

> A good theory reveals value that others can't see.

But theories of value allow entrepreneurs and managers to, in essence, hack these markets. A good theory reveals value that others can't see. A good theory allows you to procure assets, hire talent, and make investments at bargain prices.[20] A theory can also reveal underpriced technology, real estate, human capital, and other services. And it can unearth new and surprising uses for common objects or technologies, and thereby grant you access to assets at a deep discount.

We have already mentioned several examples of this kind of bargain shopping. Sam Walton located undervalued real estate in small towns. Steve Jobs enjoyed a remarkable shopping spree for undervalued technologies at Xerox Parc. Similarly, in the mid-1990s, The Walt Disney Company recognized dormant value in rundown theatres in Times Square. Theories may also reveal synergies between assets that are not as valuable to other companies. Marvel Entertainment was a perfect match for Disney's underlying theory of value.[21]

Search for Solutions

Value creation has traditionally been seen as a search for opportunities, a hunt for the proverbial needle in the haystack.[22] Start-ups and managers must navigate an overwhelming sea of information, uncertainty, and options in order to determine the optimal search pattern. A considerable body of literature emphasizes information processing, environmental scanning, and sensing as the appropriate guides for this search.[23]

Value Lab provides the scaffolding for entrepreneurs and managers to shortcut this exhaustive and costly process of searching for opportunities. With the aid of novel beliefs, and the associated framing of relevant problems and subproblems, you can create a lens or flashlight that reveals what to look for, targeting your search to specific solutions and guiding you to value not evident to others. Your theory will help you know what to look for, and to see solutions and sources of value that others haven't even considered.

Entrepreneurs and managers must determine how best to organize this search for solutions, which may lie somewhere outside the company. An effective search might therefore require you to broadcast

the problem to those with the knowledge and tools to solve it. At other times, problem solving may require you to build customized solutions internally. In either case, the essential task is to match your approaches to the search by understanding the nature of the underlying problem and subproblems.[24]

Concluding Thoughts

Both start-ups and established companies can benefit from a scientific, evidence-based approach to value creation. Managers and entrepreneurs must therefore be prepared to develop their *own* theory of value to guide this effort. The Value Lab offers a generative tool, a scaffolding of sorts, to help them. A carefully formulated theory provides a structure to experimentation and a clear lens with which to find the right data and interpret results. Even more practically, having a theory helps companies to identify promising investments and paths to value which may not be evident to others. We invite founders, CEOs, strategists, and their collaborators to carefully develop their own novel theories which will illuminate previously unseen value and more generally fuel the process of new value creation. ■

Author Bios

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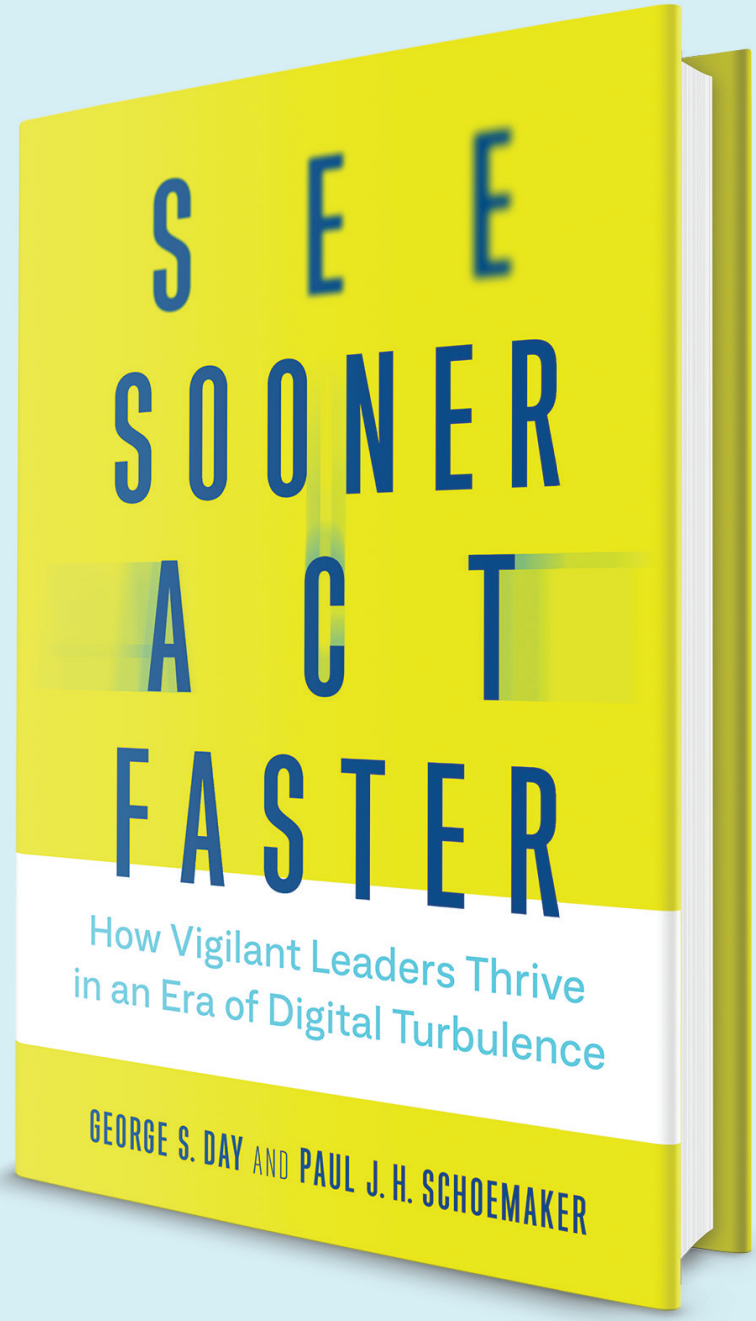
Endnotes

1. Lewin, K. (1943). Psychology and the process of group living. *Journal of Social Psychology*, 17(1): 113-131. For further discussion of the role of theories in enabling sight and ob servation, see Kitcher, P. (1982). *Abusing Science.* MIT Press; and Popper, K.R. 1969. *Conjectures and refutations: The growth of scientific knowledge.* Routledge. In terms of the origins of theories, some useful historical background can be found in philosopher Paul Feyerabend's 1975 book *Against Method* (New Left Books).
2. For early work developing this argument, see Felin, T., & Zenger, T. R. (2009). Entrepreneurs as theorists: on the origins of collective beliefs and novel strategies. *Strategic Entrepreneurship Journal*, *3*(2), 127-146. It's important to note that others have made broadly related arguments. Perhaps the closest "cousins" to the approach suggested in this article can be found in some of the existing work on commitment, managerial vision, and entrepreneurial judgment. For further work in these areas see Foss, N. J., & Klein, P. G. (2012). *Organizing entrepreneurial judgment: A new approach to the firm.* Cambridge University Press; Gans, J. S., Stern, S., & Wu, J. (2019). Foundations of entrepreneurial strategy. *Strategic Management Journal*, *40*(5), 736-756; Gavetti, G., & Menon, A. (2016). Evolution cum agency: Toward a model of strategic foresight. *Strategy Science*, *1*(3), 207-233; Ghemawat, P. (1991). *Commitment.* Simon and Schuster; Van den Steen, E. (2005). Organizational beliefs and managerial vision. *Journal of Law, Economics, and Organization*, *21*(1), 256-283.
3. For a discussion of "theories as instruments," see James, W. (2000) *Pragmatism and Other Writings*. Penguin Books. Karl Popper also offers useful insights on the role of theories in enabling novel observations and knowledge. In short, Popper argues "we learn only from our hypotheses what kind of observations we ought to make: where to we ought to direct our attention: wherein to take interest" (Popper, 1967: 71). See Popper, K.R. 1969. *Conjectures and refutations: The growth of scientific knowledge.* Routledge.
4. Polanyi, M. (1974). Genius in science. In *Methodological and Historical Essays in the Natural and Social Sciences* (pp. 57-71). Springer, Dordrecht. For further insights, also see Polanyi, M. (1958). *Personal knowledge*. University of Chicago Press.
5. Here we concur with the economist Edith Penrose. Many decades ago she raised the provocative question of why there is such a disparity between what economists assume about managers versus what they assume about themselves. As Penrose put it, "For the life of me I can't see why it is reasonable (on grounds other than professional pride) to endow the economist with this 'unreasonable degree of omniscience and prescience' *and not entrepreneurs*" (p. 813). See Penrose, E. T. (1952). Biological analogies in the theory of the firm. *American Economic Review*, *42*(5), 804-819. Similar sentiments can be found in Adam Smith's work. For more, see Rothschild, E. (2013). *Economic sentiments: Adam Smith, Condorcet and the englightenment*. Harvard University Press.
6. Kaplan, A. (1964). *The conduct of inquiry: Methodology for Behavioral Science*. Transaction Publishers.
7. For research related to this article, see Camuffo, A., Cordova, A., Gambardella, A., & Spina, C. (2020). A scientific approach to entrepreneurial decision making: Evidence from a randomized control trial. *Management Science*, 66(2), 564-586; Felin, T., & Zenger, T. R. (2009). Entrepreneurs as theorists: on the origins of collective beliefs and novel strategies. *Strategic Entrepreneurship Journal*, *3*(2), 127-146; Felin, T., & Zenger, T. R. (2017). The theory-based view: Economic actors as theorists. *Strategy Science*, *2*(4), 258-271.
8. Herbert Simon aptly captures this back-and-forth in discussing the "continuing two-way interaction between the gradual construction of [a problem] representation and the construction of the theory that [uses] it" - see Simon, H.A. (1996). *Models of my life.* MIT Press.
9. The economist Frank Ramsey discusses how beliefs can be measured by "the extent to which we are willing to act" on them. Thus we also see beliefs (particularly contrarian and novel ones) as motivating action and strategy. Ramsey, F. P. (1931). *The foundations of mathematics and other logical essays*. Cambridge University Press.
10. Thiel, P. (2014) *Zero to one: Notes on startups, or how to build the future.* Crown Business.
11. For relevant insights into brainstorming, see Diehl, M., & Stroebe, W. (1987). Productivity loss in brainstorming groups: Toward the solution of a riddle. *Journal of Personality and Social Psychology*, *53*(3), 497. For a recent summary of brainstorming best practices, see Paulus, P. B., & Kenworthy, J. B. (2019). Effective brainstorming. *Handbook of Group Creativity: Innovation Through Collaboration*, 287-386.
12. Contrarian beliefs may just seem like rhetoric or "cheap talk" and thus be easily dismissed. In a sense beliefs are just talk. But they can be quickly developed toward a specific articulation of the key obstacles (or problems) standing in the way of realizing these beliefs, along with an articulation of the actions—experimentation, investment, and solution search—that need to be taken.
13. Prominent venture capitalist Fred Wilson, among others, thought that Airbnb was very unlikely to create significant value and thus chose not to invest in the company. His early correspondence and reasoning is informative and can be found here: http://www.paulgraham.com/airbnb.html
14. For the academic literature on problem formulation and problem solving, see Baer, M., Dirks, K. T., & Nickerson, J. A. (2013). Microfoundations of strategic problem formulation. *Strategic Management Journal*, *34*(2), 197-214; Nickerson, J. A., & Zenger, T. R. (2004). A knowledge-based theory of the firm—The problem-solving perspective. *Organization Science*, *15*(6), 617-632.
15. Problems are discussed in various ways in the practitioner literature, including the idea of "pain points" or "job-to-be-done." For more on the latter concept, see Christensen, C.M.,

Hall, T., Dillon, K. and Duncan, D.S., 2016. Know your customers' jobs to be done. *Harvard Business Review*, *94*(9), 54-62.

16. Strategy more generally has been cast as a "search" problem - for example, see Kauffman, S. A. (1993). *The origins of order: Self-organization and selection in evolution*. Oxford University Press, USA; and Lippman, S. A., & McCardle, K. F. (1991). Uncertain search: A model of search among technologies of uncertain values. *Management Science*, *37*(11), 1474-1490. For a recent review of the "search" concept in strategy, see Baumann, O., Schmidt, J., & Stieglitz, N. (2019). Effective search in rugged performance landscapes: A review and outlook. *Journal of Management*, *45*(1), 285-318. Search has also been central in formal approaches to varied approaches in strategy: Steen, E. V. D. (2017). A formal theory of strategy. *Management Science*, *63*(8), 2616-2636. Search is also a central concept in entrepreneurial strategy and the idea of resource mobilization, see Clough, D. R., Fang, T. P., Vissa, B., & Wu, A. (2019). Turning lead into gold: how do entrepreneurs mobilize resources to exploit opportunities?. *Academy of Management Annals*, *13*(1), 240-271. Our argument is that searching for value (solutions or resources) is not so much about the "processing" of information or, say, who you know. Rather, the search for value can be radically foreshortened by having a theory.
17. Theories of value are unlikely to be pursued by an entrepreneur or manager alone—they have to be sold to others. The realization of most theories requires the commitment, resources, and buy-in of various stakeholders—including employees, suppliers, investors, and, in corporate settings, senior management. Eliciting this commitment can be difficult because the very foundation of a theory of value is a contrarian or uncommon belief which, by definition, is *not* widely shared or accepted by others. So, your theory has to be persuasive enough to enlist the stakeholders that are needed for the realization and execution of your theory. If you are unable to sell your theory to others, it is likely to simply remain a dream. Employees and investors have options about where to work and what to invest in. But if they are convinced that an opportunity is significant, they'll vote with their feet and their money and join you. For further reading, see: Benner, M. and Zenger, T. (2016). The lemons problem in markets for strategy, *Strategy Science,* 1(2): 71-89; Ghoshen, Z. and Hamdani, A. (2016). Corporate control and idiosyncratic vision. *Yale Law Journal*, 125: 560-612; King, B., Felin, T. and Whetten, D. (2010). Finding the organization in organization theory: A meta-theory of the organization as social actor. *Organization Science*, 21(1), 290-305; Rajan, R. (2012). Presidential address: The corporation in finance, *Journal of Finance,* 67(4): 1173-1217; Zenger, T. (2013). Strategy: The uniqueness challenge. *Harvard Business Review,* November; Zuckerman, E.W. (1999). The categorical imperative: Securities analysts and the illegitimacy discount. *American Journal of Sociology,* 104(5), 1398-1438.
18. Ries, E. 2011. *The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses.* Crown Books. For a discussion of the problems with lean startup, see Felin, T., Gambardella, A., Stern, S., & Zenger, T. (2020). Lean startup and the business model: Experimentation revisited. *Long Range Planning*, forthcoming.
19. For a discussion of strategy and factor markets, see Maritan, C. A., & Peteraf, M. A. (2011). Invited editorial: Building a bridge between resource acquisition and resource accumulation. *Journal of Management*, 37(5), 1374-1389. For an excellent introduction to markets for technology, see Arora, A., Fosfuri, A., & Gambardella, A. (2004). *Markets for technology: The economics of innovation and corporate strategy.* MIT Press.
20. In the academic literature in strategy, there is a decades-long conversation about whether firms can find and purchase "bargains" (assets, technologies or other factors), that is, whether markets are efficient. Early, seminal arguments focused on market efficiency: Barney, J. B. (1986). Strategic factor markets: Expectations, luck, and business strategy. *Management Science*, *32*(10), 1231-1241. Also see Denrell, J., Fang, C., & Winter, S. G. (2003). The economics of strategic opportunity. *Strategic Management Journal*, *24*(10), 977-990; and Leiblein, M. J. (2011). What do resource- and capability-based theories propose? *Journal of Management,* 37(4), 909-932. However, our argument here is that theories, in a sense, allow entrepreneurs and firms to hack markets and to see value not evident to others.
21. In this article we focus primarily on value *creation*, and less on value appropriation and capture. For further discussion of these value-related considerations (for example, value creation versus capture), see Brandenburger, A. M., & Stuart Jr, H. W. (1996). Value-based business strategy. *Journal of Economics & Management Strategy*, *5*(1), 5-24.
22. The search for a needle in a haystack is a reoccurring metaphor in strategy. Of course, the strategy problem is even more radically difficult than the relatively simple search for a needle. This is because, as Herbert Simon wrote, "the haystack of life is essentially infinite" (1978: 502). See Simon, H. A. (1978). On how to decide what to do. *Bell Journal of Economics*, 494-507.
23. For information processing-related arguments in strategy, see Makadok, R., & Barney, J. B. (2001). Strategic factor market intelligence: An application of information economics to strategy formulation and competitor intelligence. *Management Science*, *47*(12), 1621-1638. Teece's notion of environmental "sensing" is also related: see Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, *28*(13), 1319-1350.
24. Of course, it's important for us to note that a critical—subsequent and ongoing—step is to build (and grow) the organization itself to realize your theory of value. As we have discussed, this includes hiring and attracting the right people, securing the needed financing, ensuring the right governance and incentive structures, perhaps partnering with other organizations, and so forth. Some of these activities are of course likely to be concurrent with the process of developing your theory of value. But we believe that the theory itself needs to be articulated first, perhaps in collaboration with those enticed to join the effort, since it will then condition and shape the subsequent organizing processes. For a discussion of what types of problems need to be matched with which types of governance, see Felin, T., & Zenger, T. R. (2014.) Closed or open innovation? Problem solving and the governance choice. *Research Policy*, *43*(5), 914-925. For a more general treatment of many of the key organizational issues of "building a company," see Boudreau, K. (2018). Notes on designing your company. *Harvard Business School Strategy Unit Working Paper*, (16-131).



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Admiral Jacky Fisher and the Art of DISRUPTIVE LEADERSHIP

Jan-Benedict Steenkamp
University of North Carolina

Firms around the world strive for disruptive leadership. Through a case study of Admiral Jacky Fisher, who completely disrupted the immensely powerful British Royal Navy at the beginning of the 20th century, preparing it for the onset, just four years later, of World War I, Jan-Benedict Steenkamp identifies six key characteristics of disruptive leadership.

"Big risks bring big success!"
- Jacky Fisher

Corporate leaders around the world strive to master disruptive leadership. Competitive pressures, new technologies, new business models, and new entrants are constantly disrupting the established ways of doing business. Nonetheless, disruptive leadership is hard. Many, if not most, people instinctively dislike change. So any disruption you engineer is likely to immediately meet with organizational resistance, which can bring you down. So what makes an effective disruptive leader?

To find answers, we can turn either to present day business leaders or to historical examples. The advantage of finding leadership lessons in history is that the virtues and vices of leaders of the past, their accomplishments and failures, have by now been firmly established. Historical figures offer us valuable leadership insights while allowing us to avoid simply embracing the latest fads, only to find them contradicted and disowned a few years later. As *The Economist* put it, "Those [historical leaders] who have passed through the fire surely have something to teach modern-day managers."[1]

British Admiral John Arbuthnot ("Jacky") Fisher (1841-1920) is one who passed through the fire, facing tests far greater than those most CEOs of today encounter. Historians regard Fisher as one of the most consequential leaders in military organization of the last two centuries. If not for him, many believe Germany would have won World War I and the world we now know would not exist. Framed in the terms of business, Fisher was the CEO of a huge, complex company with global interests. During his time as CEO (1904-1910), he completely restructured the organization, cut countless serviceable business lines, and introduced a new main product that made the organization's existing business, which had a commanding lead over its competitors, obsolete. And he accomplished it all in the face of fierce resistance, both from within his organization and from its outside stakeholders. Yet Fisher was not the CEO of a single company, but the head of the immense Royal Navy. And he was not fighting for the survival of a single company, but for that of Great Britain itself, under threat from a new entrant in its "market" – Germany.

In 1900, Great Britain was the most powerful nation on earth. But Britain's strategic situation was fast deteriorating.

Context

In 1900, Great Britain was the most powerful nation on earth. And as long as the Royal Navy maintained absolute supremacy at sea, it enjoyed invulnerability to any foreign adversary as well as complete freedom of action. But Britain's strategic situation was fast deteriorating. The biggest threat was Germany, which had been unified only three decades before and was industrializing rapidly. By 1900, Germany had begun to aggressively expand its navy. At the same time, a century of undisputed naval mastery had led the Royal Navy into an organizational culture of complacency and conservatism. Many senior officers preferred not to notice the increasingly rapid change in the weapons and tactics of naval warfare. The prevailing sense was that, "Anything new was suspicious and potentially dangerous."[2] The Navy's effectiveness was also undermined by rigid barriers of social class. Deck officers – who would advance to become captains and admirals - came from the higher levels of British society. Engineering officers came from the lower classes. They did not mingle.

In short, the Royal Navy's organizational culture, core competencies, and human resource management had not kept up with the times. Meanwhile its technological edge over the rapidly growing *Kaiserliche Marine* (Imperial German Navy) had all but disappeared. Yet while the Royal Navy urgently needed disruption, most of its senior leadership wanted anything but, preferring to ignore outside threats. Fortunately for Britain, its government had just appointed Jacky Fisher as First Sea Lord (professional military head of the Royal Navy), and he was cut from a very different cloth. During his tenure in the position (1904-1910), he completely disrupted this hidebound organization. He prepared the Royal Navy for the daunting challenges it would face during the Great War, which he foresaw, and which would begin a mere four years after he stepped down.

Fisher's life and leadership exemplify six vital factors for leading disruptive change (Table 1). He was a brainiac; was always willing to disrupt his own frame of reference; prioritized the long term over the short term; had a high tolerance for uncertainty; was passionate about his organization; and developed a disruptive network of followers who helped him in his efforts and carried his torch onwards. His use of these qualities offers powerful lessons for disruptive leaders today.

Fisher was committed to lifelong learning.

Be a Brainiac

Fisher was an avid student. When he sat his lieutenant's examination, he earned top grades in seamanship and gunnery, as well as the highest

score ever for navigation. But he did not stop there. On the contrary, he was committed to lifelong learning. Over the course of his career, Fisher not only had many operational commands, he also spent four tours of duty, fifteen years, at the navy's elite Gunnery and Torpedo Schools, both naval research centers. At these schools, he studied gunnery and emerging new technologies including torpedoes and submarines. According to Press and Goh, disruptive leaders should take any chance to be "a mad scientist,"[3] experimenting and exploring the "what if." Fisher experimented extensively with systems and tactics for quick-firing breech-loaded guns and different types of torpedoes. As commander of the huge naval base at Portsmouth, he supervised extensive experimentation with submarines.

Fisher's experience both in the field and at the navy's research institutes allowed him to become not only an excellent operational (line) manager, but also a technical expert on navy hardware (innovation/R&D). Being a brainiac

TABLE 1: Characteristics of Disruptive Leadership

Disruptive leadership factor	Examples from Fisher's life	Challenges for today's leaders
Brainiac	• Fisher earned top grades; • Fisher continuously updated his technical and strategic knowledge; • He ran countless experiments to test his ideas.	• Lifelong learning takes a lot of time; • Because you may not know a priori what information will useful, lifelong learning can be inefficient; • Experimentation is expensive and time-consuming; when is it enough? Will it lead you to paralysis or action?
Disrupt own frame of reference	• Fisher challenged existing class barriers in the Royal Navy; • Fisher redistributed the fleet; • Fisher acknowledged the threat posed by torpedo boats and devised a solution.	• Pressing daily concerns make it hard to find the time to really think and thoroughly analyze; • Cognitive myopia – to see new threats, you need to step completely out of your current context; • Do you have the required high-level abstract/conceptual thinking ability?; • Do you have high openness to new experience (a Big Five personality trait)?
Prioritize long term over short term	• Fisher introduced H.M.S. *Dreadnought.*	• There is no certainty that you will achieve long-term gain, while short-term pain is a (near) given; • Financial markets will react adversely if quarterly expectations are not met—can you weather that storm pressure?; • You need the resources to pay for short-term pain.
High tolerance of uncertainty	• Fisher introduced untested turbine engines; • It remained to be seen whether *Dreadnought* could actually fire a broadside without being ripped apart.	• Humans are not wired to embrace uncertainty; • Be willing to risk failure by having either a golden parachute or a very strong organizational commitment.
Passion for the organization	• Fisher's entire life was focused on the success of the Royal Navy; • Fisher worked 24/7; • Fisher valued the organization's success over his own; • He rejected lucrative outside offers; • Despite fierce resistance and vicious personal attacks, Fisher persisted, but was eventually forced to resign early.	• True passion for one's organization is rare; • Disruptive leadership soaks up time, which conflicts with desire for work-life balance; • If necessary, are you willing to prioritize company success over your own?; • Are you ready to take the risk that if you lose your protectors in the C-suite, you may be fatally exposed?
Develop effective disruptive networks	• Fisher's officers were free to offer ideas and disagree with him, as long as their arguments were sound; • Fisher valued ideas over hierarchy; • Fisher's vision inspired his followers; • Fisher was a strong role model and led from the front.	• Finding pockets of people with the right mindset. Can you identify your Fishpond?; • Creating a culture that encourages openness to change, risk taking, and tolerance for failure; • Disruptive networks are especially difficult to establish in bureaucratic, hierarchical organizations.

may be easier if you have had advanced education, but Bill Gates and Mark Zuckerberg have amply proven that it is not necessary. What Gates and Zuckerberg share with Fisher is not formal education but a lifelong passion for learning. Still, becoming (or staying) a brainiac has its costs. It takes time away from daily operations and can be inefficient. Indeed, you may spend a great deal of time learning things that are not quantifiably useful. Experimentation can also be costly and, in the worst case, may lead to dithering rather than learning. Anybody who has run experiments knows that, all too often, the results are not as clear as we would like them to be.

Disrupt Your Own Frame of Reference

Fisher built his career in an organization that was characterized by: 1) social segregation and 2) an emphasis on gunnery. Yet, unlike many of his colleagues in the Royal Navy, he was willing to question and disrupt his own frame of reference by continuously thinking about potential new threats and devising ways that they might be addressed.

Social segregation: By thinking in this way, Fisher came to understand that the traditional barriers of social class harmed the Royal Navy. In an early example of diversity and inclusion thinking, when he took charge, he made all ranks open to all cadets, regardless of their social origins. He also ensured that all cadets would be educated in both seamanship and engineering. It sounds reasonable now, but the decision met with great resistance. Members rose in Parliament to protest the disgraceful proposal to send "our (upper class) officers … down in the coal hole."

Gunnery: In the late 19th century, simple gunnery was no longer sufficient. Torpedo boats – fast, cheap ships designed to launch torpedoes – had become a viable threat to the dominance of the Royal Navy's battleships. When they first appeared, the then First Sea Lord protested that "there were no torpedoes when I came to sea and I do not see why the devil there should be any of the beastly things now." He was a leader unwilling to disrupt his own frame of reference. When Fisher took over, he acknowledged the threat, came up with the solution – destroyers - and gave them their name.

In order to disrupt your own frame of reference, you have to be willing to treat your accumulated experience as sunk cost.

In order to disrupt your own frame of reference, you have to be willing to treat your accumulated experience as sunk cost, to be discarded as circumstances require. It's a psychologically difficult thing to do.[4] Moreover, ordinary daily pressures make it difficult to find the time to really think about, and thoroughly analyze, environmental trends. Many people, managers among them, suffer from cognitive myopia, the inability to step outside their current context to do the high-level conceptual thinking necessary to see new threats. To be a disruptive leader, you must be intellectually curious and investigate new things proactively, identifying and solving unprecedented problems, and devising new ways of doing business.[5]

Focus on Long-Term Gain Instead of Short-Term Pain

Fisher's most controversial decision was to introduce what we would now call a radical product innovation, viz. H.M.S. *Dreadnought*. In Fisher's day, the backbone of every major navy was the battleship. Naval strength was assessed by the number of battleships each country had, and Britain had the most by far. When this new *Dreadnought* appeared, standard battleships in the world's major navies carried four 12-inch guns, supported by various guns of smaller caliber. The *Dreadnought* carried ten 12-inch guns and nothing smaller. The *Dreadnought* was therefore equivalent to two or even three (depending on the line of fire) earlier battleships. Using new and essentially untried stream turbine engines, the *Dreadnought* could also sail 50 percent faster than existing battleships, putting them at a serious disadvantage.

The launch of the *Dreadnought* sent shockwaves around the world. It was immediately obvious that the revolutionary ship made all existing battleships instantly obsolete.

For launching the *Dreadnought,* Fisher was savagely attacked by his naval peers, Parliament, and the press. Critics regarded it as a horrendous blunder because it threw away the Royal Navy's overwhelming superiority in the existing type of battleships (quickly dubbed "pre-dreadnought"). Fisher responded with his usual direct language, observing: "Only a congenital idiot with criminal tendencies would permit any tampering with the maintenance of our naval supremacy." Yet unlike his peers, including several former First Sea Lords, he understood that, as the leading maritime power, Britain should *lead* – not follow - in naval innovation. And already there were worrisome indications that others were beginning to think about all-big-gun battleships. In 1903, the chief constructor of the Italian navy wrote an article for *Jane's Fighting*

Ships in which he proposed just such a ship. Fisher saw clearly that Britain's current lead in battleships was only a short-term advantage.

The launch of the *Dreadnought* sent shockwaves around the world. It was immediately obvious that the revolutionary ship made all existing battleships instantly obsolete. Britain's head start nonetheless proved decisive a decade later in the Battle of Jutland (May 31, 1916), "the mother of all sea battles." Winston Churchill, who was Navy Secretary at the time, summarized what was at stake when he said that Admiral Sir John Jellicoe (the commander of the Royal Navy's fleet) was "the only man on either side who could lose the war in an afternoon." It was not to happen. At Jutland, the Royal Navy, with its superior number of dreadnought battleships, beat back the challenge of the German Imperial Navy. Without Jacky Fisher's innovation, there is little doubt that Germany would have won The Great War. In World War II, the Germans did not even make a serious effort to challenge Britain's naval mastery.

Focusing on long-term gain rather than short-term pain is hard because the pain is all but guaranteed while the gain may never materialize. Financial markets typically focus on the short term and, while you innovate, your share price may take a hit. You'll need to have the financial resources to bridge the gap between the short term and the long term. Great Britain had the wealth to build a large number of dreadnoughts quickly, though the expenditure did contribute to the constitutional crisis of 1909-1911.

Have a High Tolerance for Uncertainty

When the *Dreadnought* was built, the standard reciprocating steam engines were simply incapable of driving her at twenty-one knots. Turbine engines offered a solution, but in 1905 turbines were on the technology frontier. Their thousands of blades had only a few thousandths of an inch of clearance. One defective blade could well destroy the entire engine and make the ship a sitting duck for enemy torpedo boats or submarines. It was also uncertain whether the ship could actually fire its full broadside, since its structure had not been tested against the potentially devastating recoil of so many 12-inch guns firing simultaneously. If the *Dreadnought* failed on either count, Fisher's career would be over.

But Fisher had an uncommonly high tolerance for uncertainty. For the most part, humans are not wired to embrace uncertainty. Most people prefer a certain outcome, like a guaranteed $100, over a rationally more attractive uncertain outcome, like a 50 percent chance at $400 paired with a 50 percent chance of losing $100.[6] Disruptive leadership requires handling high levels of uncertainty. To find out whether your disruptive actions will succeed you have to try, and once you have you can't turn back. To be willing to risk such failure, you need either a golden parachute or a very strong organizational commitment.

Have Passion for Your Organization

At various times, private shipbuilding and armaments companies offered Fisher top positions in which he would have earned much more. Although he was tempted, he never made the switch. The Royal Navy was the central passion of Fisher's life, driving his actions over fifty years of service. He devoted himself wholeheartedly to improving its efficiency, modernizing its structure, increasing its readiness, and revolutionizing naval combat. Fisher had a colossal ego, but it was focused on advancing his organization rather than his own career.

Fisher had a colossal ego, but it was focused on advancing his organization rather than his own career.

Fisher's passion allowed him to overcome the fierce resistance to his reforms. By 1907, that resistance had found its spokesman in Admiral Lord Charles Beresford – a charismatic leader who was enormously popular with both officers and men, and who had many friends in society, the press, and Parliament. He used his position as a Member of Parliament to decry everything Fisher proposed. At the same time, Fisher's position was severely weakened by a change in government. Arthur Balfour's conservative administration, which favored Fisher's reforms, was replaced by a liberal government that cared much less about the navy. Fisher's new political overlords were weak and indecisive. They created a Committee of Inquiry to look into the conflict between Fisher and Beresford, organizationally his subordinate. This action was unprecedented in the long history of the Royal Navy. In an effort to avoid antagonizing the popular Beresford, the committee returned overall conclusions which were critical of both sides. The resulting damage to Fisher's reputation eventually obliged him to retire slightly early, in 1910. Although Fisher claimed to have the skin of a rhinoceros, these relentless attacks hurt. He told a friend that he would someday write his reminiscences and title them "*Hell. By One Who Has Been There.*"

How many managers today are as passionately committed to their organizations as Fisher was? How many prioritize their company's success over their own or forgo large salaries elsewhere to achieve their mission? At universities, for example, disruptive change can

be difficult because many scholars are more committed to their academic discipline than to their employer. And if your protectors – like Fisher's Prime Minister Balfour – are replaced, you can find yourself fatally exposed if your disruption does not have broad support in the company.

Develop Effective Disruptive Networks

Your organization probably has a few members who are passionate about change and a great many others who don't really want to upset the status quo. To succeed, a disruptive leader has to motivate hidden pockets of people with the right mindset so that their actions will support the leader's goals.[7] Leadership expert John Kotter calls this "building a guiding coalition."[8] Bass and Avilo's transformational leadership paradigm outlines four factors that can help a leader to build such a coalition.[9]

The Fishpond, as Fisher's network of disruptive followers came to be known, helped him to achieve his reforms.

Individualized consideration: Listen carefully to your followers and consider their individual needs. As Commander in Chief of the Mediterranean Fleet, Fisher insured that

Moral Dilemma – Improving a Lethal Organization

Leaders often face moral dilemmas. The leaders of lethal organizations all the more so. Military organizations such as the Royal Navy are the epitome of lethal and there are a range of views on the leadership and role of such organizations.

Some feel that violence begets violence, and that Fisher's work to improve the Royal Navy was a primary driver of the Anglo-German naval arms race before World War I. Indeed, many historians believe that this naval race was a key element in touching off the war. Political scientists later used it as an example of "conflict spiral theory," in which greater power increases the likelihood of armed conflict. A strict moralist might then argue that Fisher should not have done what he did because it increased the chances of war. And even that if he was unable to stop it, he should have resigned, rather than being complicit.

Others argue that the best way to preserve peace is to be prepared for the worst. As the Romans said, "*si vis pacem, para bellum* (if you want peace, prepare for war)." In Fisher's time that meant optimizing the lethal capabilities of the Royal Navy, just as in our time it means optimizing the U.S. military. Political scientists call this view "deterrence theory," according to which strong military power contributes to peace by deterring adversaries from opening hostilities. One common example is the nuclear standoff between the U.S. and the Soviet Union during the Cold War. Jacky Fisher certainly subscribed to deterrence theory. He was a British delegate at the First Hague Peace Conference in 1899 and wrote: "The supremacy of the British Navy is the best security of peace in the world." He was not alone in this view; the British cabinet had instructed the delegation that Britain must retain its naval supremacy.

We will never know for sure which, if either, of these views is correct. There is certainly good reason to doubt whether the Royal Navy's standing down or disarming would have caused Germany to do the same. Most historians attribute the Anglo-German arms race to the German Emperor Wilhelm II, not to British actions. Interestingly, though, there is evidence that Fisher may have struggled with this moral dilemma, but decided that building H.M.S. *Dreadnought* was the right thing to do. In the words of one of his protégés, who was on the design committee: "Knowing what we did, that the Dreadnought was the best type to build, should we knowingly have built the second-best ship? What would have been the verdict of the country if Germany had ... built a Dreadnought while we were building Lord Nelsons [pre-dreadnoughts], and then forced a war on us and beaten our fleet? What would have been the verdict of the country if ... the Admiralty had deliberately recommended the building of second-class ships?"

Britain engaged in disarmament in the 1920s, and accommodations with Germany in the 1930s, but World War II came anyway. And as in World War I, the Royal Navy, revitalized and prepared by Fisher, was the shield that protected not only Britain, but the world. In his December 29, 1940 Fireside Chat, Franklin D. Roosevelt said: *"Does anyone seriously believe that we need to fear attack anywhere in the Americas while a free Britain remains our most powerful naval neighbor in the Atlantic? ... If Great Britain goes down, the Axis powers will control the continents of Europe, Asia, Africa, Australasia, and the high seas—and they will be in a position to bring enormous military and naval resources against this hemisphere."* One of the greatest presidents in U.S. history, then, deemed the Royal Navy to be the barrier between the free world and Nazi domination.

So countries most likely do need a lethal military apparatus to protect themselves and working to make that military more effective furthers the greater good. But what about working for a company whose products are lethal or have lethal side effects? The leaders of such a corporation may need to look beyond accomplishing the company's mission and consider such questions as: Are the company's products likely to be used in committing violent crimes? Does the company manufacture demonstrably unhealthy products such as the habit-forming drugs that kill thousands? Does the company cut corners in the pursuit of financial goals and manufacture substandard goods that can cause death or harm? Is the manufacturing safe for workers? For those who live nearby? Today it is easy to think of companies to which these questions apply. When faced with this sort of ethical uncertainty, you may have to think carefully about whether you feel comfortable working for your firm as it currently exists (after all, it does employ people, provide benefits, and pay taxes), whether you should try to change company practices from the inside, or whether you should find work at another firm. And there is no easy or universal answer; that's how moral dilemmas work.

all officers, junior and senior, had free access to him. One lieutenant brought him a carefully conceived plan for defending the fleet against torpedo attacks; the following week, Fisher ordered all his captains to practice the lieutenant's tactics.

Intellectual stimulation: Encourage your followers to be innovative, challenging their own and others' beliefs. When Fisher was Commander in Chief of the North Atlantic and West Indies Station, he regularly invited junior officers to join him and his wife ashore for the weekend. In this more relaxed environment, he encouraged them to talk freely and share their ideas. When they disagreed with him, he welcomed it, provided their arguments were sound, a most uncommon response in such a hierarchical organization.

Inspirational motivation: Having a vision and presenting it clearly will allow you to inspire and motivate your followers. At the Royal Navy's elite research institutes, Fisher gathered a coterie of younger officers who came to share his sense of alarm and urgency about improving the offensive capabilities of the fleet in the face of the growing strength of Britain's adversaries. When he was assembling the committee to design the *Dreadnought,* he recruited these reformers. The committee was therefore composed of young, exceptionally able men who had shown their eagerness to embrace new ideas. Fisher gave them considerable creative leeway.

Idealized influence: Be a strong role model for your followers. Fisher's drive, relentless search for efficiency, energy, and unapologetic hounding of those who did not measure up inspired and awed his junior officers, binding them to him. He was an electrifying speaker whose fiery language, wit, and sly digs at naval tradition entranced his listeners.

The Fishpond, as Fisher's network of disruptive followers came to be known, helped him to achieve his reforms. Several of them subsequently held senior positions in the Royal Navy, including First Sea Lord Louis of Battenberg and John Jellicoe, Commander-in-Chief of the Grand Fleet at the Battle of Jutland.

A 2008 McKinsey study showed, however, that finding people with the right disruptive mindset – your own Fishpond – may be challenging.[10] The study further emphasizes that organizational culture is a major inhibitor of disruption. Managers generally regarded bureaucratic, hierarchical organizations that make extensive use of incentives to promote short-term performance (e.g., quarterly targets), and which refuse to tolerate failure, as the strongest barriers to disruption. The good news is, that description exactly fits the Royal Navy of Jacky Fisher's time, and his determination broke down those barriers.

Questions to Ask Yourself

Conspicuously missing from Fisher's case study are the softer elements of leadership, especially humility, patience, and respect in helping

TABLE 2: Self-Assessment Questions

Disruptive leadership factor	Questions to ask
Brainiac	• Do you consider yourself a lifelong learner? Do you have a thirst for knowledge? What is your evidence? • Do you make the time to pursue new insights, even when you cannot see an immediate use for them?
Disrupt own frame of reference	• When you earn a new position, do you immediately look for ways to do things better? • Do you habitually monitor and analyze your environment for new opportunities and threats and consider how to address them? • Are you a conceptual thinker or an operational one? • How do you rate yourself on openness to new experience?
Prioritize long term over short term	• Can you endure short-term pain in the pursuit of a potentially great payoff in the future? Can you give examples of when you have done so? • Do you have the resources to bridge the gap between short-term losses and long-term profits?
High tolerance of uncertainty	• How comfortable are you with high levels of uncertainty? Have you taken any major risks in your own career? • Look at your investment portfolio. How much of your money is invested in stocks versus bonds?
Passion for the organization	• Are you truly passionate about the company you work for? Is its success one of your most important goals? Is it the most important? • Do you consider yourself tenacious when compared to others? Do you refuse to give up in the face of organizational resistance or practical obstacles?
Develop effective disruptive networks	• Have you built a network of followers in your organization? Who are they, how strong is their loyalty, and how much influence do they have? If you don't have such a network, could you build one? • Have you earned the strong trust of your superiors? Will they back you when the going gets tough? How secure are they in their positions? • Does your organization encourage openness to change, taking risks and learning from failure? If not, can you change that?

marginal performers to improve. When Fisher discovered incompetence or inefficiency, he was ruthless. He scorned the notion of second chances, dismissing offenders on the spot. Disruptive leaders are, by their nature, ahead of their time, seeing things that others cannot, or will not, see. And disruptively leading an organization may require a measure of ruthlessness and autocratic behavior. The questions in Table 2 are designed to help you assess whether disruptive leadership is for you. They can also be used to assess the potential for disruptive leadership in others. ■

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Endnotes

1. *The Economist* (2018), "History Lessons," August 25, p. 55.
2. Unless indicated otherwise, quotes are from Massie, Robert K. (1991), *Dreadnought: Britain, Germany, and the Coming of the Great War*, New York: Ballantine Books.
3. Press, Joseph and Thomas Goh (2018), "Leadership, Disrupted," white paper, Center for Creative Leadership.
4. Several theoretical accounts for this well-documented phenomenon have been proposed. For an overview and references, see Olivola, C.Y. (2018), "The Interpersonal Sunk-Cost Effect," *Psychological Science*, 29 (7), 1072-1083.
5. Profiles in Disruptive Leadership, https://quarterly.insigniam.com/leadership/profiles-in-disruptive-leadership/.
6. Kahneman, D. and A. Tversky (1979). "Prospect Theory: An Analysis of Decision Under Risk," *Econometrica*, 47, 263–291
7. Barsh, J., M.M. Capozzi, and J. Davidson (2008), "Leadership and Innovation," *The McKinsey Quarterly*.
8. Kotter, John (2014), Accelerate, Cambridge, MA: Harvard Business Review Press.
9. Bass, B.M. and B.J. Avilo (1994), *Improving Organizational Effectiveness Through Transformational Leadership*, Thousand Oaks, Ca: Sage.
10. Barsh et al., op. cit.

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Money or Friendship? Winning over Customers

Direct marketing communication is often seen as unnecessary. Nonetheless, Hannah Kim and V Kumar ask: Can it still help firms to make money? How can they communicate with each customer to increase its effectiveness? Is it possible to determine whether money incentives or relationship building is more effective? More importantly, can firms discover their customers' preferences without asking?

Kihyun Hannah Kim
Rutgers University
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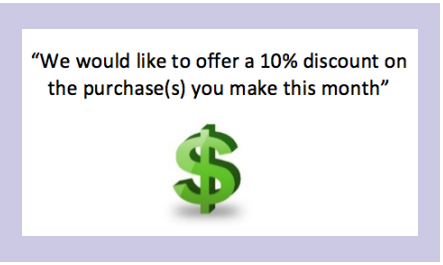
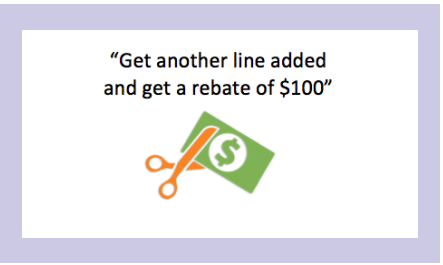
Due to the proliferation of marketing channels in the digital world, the decisions of C-suite level executives have become even more complex. "The concept of finding the right customer at the right time with the right message still exists," says Kevin Akeroyd, CEO of Cision, a platform provider for PR and earned media. Yet many companies struggle to find the most effective direct marketing strategy to convert and retain customers. Furthermore, proving the return of investment (ROI) of marketing initiated by the firm is still, for most, a critical challenge.

We gathered the following examples during interviews with executives. These two messages were sent from business to business (B2B) sellers to their customers:



The next two messages were sent by a telecommunication firm in the business to consumer (B2C) context:



Far too often, managers need to answer a variety of questions before implementing a direct marketing strategy. When should each type of message be used? Should the monetary message (i.e., 10 percent discount or $100 rebate) be sent earlier or later in the relationship? And the relational message (i.e., help grow your business or understand your usage)? To which customers should it be sent? When should it be sent? How many relational messages should be sent before switching to monetary messages?

> Managers who make decisions about which message to send find themselves at a crossroads; should they offer monetary incentives or relational benefits?

Firms send direct marketing communications or targeted messages continuously in order to build strong relationships with their customers. It is only natural, then, to question whether we are spending the right amount of money on the right kind of direct marketing communications for each customer. Managers who make decisions about which message to send find themselves at a crossroads; should they offer monetary incentives or relational benefits? According to Gartner Research, most firms spend about $12 billion each year to manage customer relationships, minimizing customer churn and cultivating profitable interactions.[1] B2B firms typically use emails, phone calls and in-person conversations to communicate the monetary and relational value they can offer to each customer. B2C service and product firms also spend a large part of their budget on marketing in order to retain their existing customers.[2] However, for the managers at these firms there are still no clear answers about direct marketing strategy. Beyond the knowledge, drawn from experience, that it is important to deliver relational marketing communications early and monetary marketing communications later,[3] it is difficult to find any established rules for dynamic marketing (budgeting). Previous academic research has largely overlooked the *content* of direct marketing communication and focused only on channel and total marketing investment. Changes over time in the effectiveness of each communication to each customer have not been studied in depth. Further, more than three-quarters of global businesses still report that they do not take advantage of technology to manage customer relationships or to better understand which marketing efforts work.[4]

Because each customer's experience with a firm is different, not all customers require the same level or type of marketing communication. To build strong and profitable relationships, firms need to tailor direct marketing to suit their customers' preferences, help foster positive perceptions about the firm, and influence purchase behavior, all of which can help to improve the firm's financial performance. One of the most common methods of understanding what customers want is to ask them. This approach may not always succeed, however, since what customers say they care about may not always be what they actually want.[5] How, then, can marketers determine the most appropriate type of marketing messages without asking?

Our research reveals that, by classifying the core value emphasized in each past marketing communication as well as how customers responded (as evidenced by transaction data), firms can determine the 'right' type of message for each customer in future.[6] We found that by tracking how customer preferences change over time, marketers can customize their communications to each customer and improve their firm's financial performance.

Business Questions

Our research answers the following questions:

1. How does the influence of monetary and relational marketing communication on customer

purchase behavior vary over time and across customers?

2. How can firms understand their customers' direct marketing communication preferences without directly asking each customer?
3. How can firms use evolving information about the type of message each customer prefers to improve their overall financial performance?

To answer these questions, we tracked four firms' marketing input and transaction data at each customer level. We included a high-tech firm and a logistics firm in the B2B sector as well as a retail bank and a telecommunication company in the B2C sector. The sample of customers per firm ranged from 550 to 780, while the data were available from between 3.5 and 4.8 years. To provide more detail, we use the example of a *Fortune* 500 B2B service firm where we used data from 675 customers over a period of four years. We can categorize direct marketing communications as either monetary or relational by using text mining to analyze them empirically. We then examine the relative influence of monetary versus relational direct marketing on each customer's purchase decisions, revealing which type of communication each customer prefers. Using this information, we provide guidance to managers on how to consider their customers' evolving preferences in order to best allocate a given marketing budget.

Looking only at the total marketing investments over time is not sufficient to understand the customer's purchase decisions because different types of messages have different effectiveness.

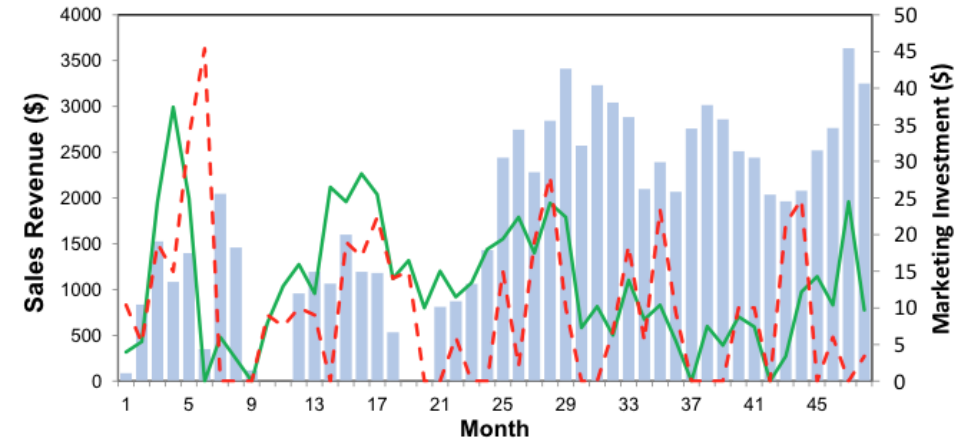
Understanding What Customers Want

Figure 1 presents the behavior of two customers (A and B) over the four year observation period. Both have begun their relationships with the focus firm at the same time

Figure 1: The Effects of Direct Marketing Communication on Sales Revenue

Customer A – Direct Marketing Communication & Sales Revenue

Customer B– Direct Marketing Communication & Sales Revenue



and represent firms of similar size, annual revenue, and expected purchase volume. However, as shown in the figure, the monthly sales revenue for these customers differs noticeably over the four year window. While the focus firm saw a significant decrease in revenue from Customer A, its revenue from Customer B grew considerably. Although the firm's investment in marketing to each customer was similar, the proportion of monetary versus relational marketing differed significantly. For example, monetary marketing communication to Customer A was curtailed in the later periods, which coincides with the decrease in her purchases. Meanwhile, the increase in Customer B's purchase expenditure can be linked to a steady increase in relational marketing communication from the middle of the observation period on. This correlation suggests that direct marketing communication has a long-term effect on the customer's purchasing behavior. Looking only at the total marketing investments over time is therefore not sufficient to understand the customer's purchase decisions because different types of messages have different effects. Furthermore, since the relative effectiveness of monetary and relational marketing to each customer can vary over time, this example also demonstrates the need for a more sophisticated method of understanding what customers actually want.

To understand how the firm's efforts result in different responses from customers, we first examined what communications the B2B seller sent to each customer. We define *monetary marketing communications* as including entirely economic aspects of direct marketing (e.g., promotion), which are then evaluated by the customer's rational judgment. This marketing focuses on making the relationship more financially attractive so as to create financial bonds with customers. *Relational marketing communications*, by contrast, are messages which focus on non-monetary worth (e.g., support services), and which evoke emotional responses. These efforts strive to make the relationship more personal and socially attractive and to create social bonds. We thus examine what has been communicated to customers by a qualitative analysis of the marketing communications written by the B2B seller's employees. Using text-mining, we identify the core value offered in each contact and then measure empirically how much the firm invested in that particular type of value for each customer, each month.

To discover how these direct marketing communications influence customers' purchase decisions in the long term, we used a popular statistical technique called state-space modeling. This approach allows us to capture the evolution of 'state,' the direct marketing preferences of each customer, over time. In simple terms, customers' responses to current marketing may be influenced by messages that they have received in the past. We therefore include past experiences in the model so we can understand how firms should implement different marketing strategies at the right time.

By using a state-space model in a Bayesian framework, we were able to trace each customer's sensitivity to monetary and relational marketing communications.

Figure 2 shows an overview of the modeling process. We compare the relationship between the monetary and relational marketing communications with sales revenue and find that customers' preferences evolve as they accumulate experience with marketing communications. By using a state-space model in a Bayesian framework, we were able to trace each customer's sensitivity to monetary and relational marketing communications. We corrected for the potential endogeneity bias, that is the possibility that monetary and relational marketing may be applied in response to the customer's previous purchase level, by using the firm's past marketing budget strategies as an additional instrument. We further validate our predictions through a comparison with what customers report about their preferences, thereby determining the extent to which our inferences align with what customers say. Since customer surveys are conducted very rarely (e.g., annually), they fail to capture the continuous changes in customer preference. Nevertheless, self-reporting can be useful in determining customers' overall satisfaction, information which we use to validate our model predictions. Having discovered the 'state' through this modeling process, we can then compare the relative influence of monetary and relational marketing on purchase behavior. This comparison yields a clear picture of the type of direct marketing communication that each customer prefers at any given time, their heterogeneous preferences.

Next, we ran a simulation analysis to determine how much revenue the firm could generate by allocating marketing resources based on the changes we predicted in customers' preferences. By reallocating the marketing resources devoted to each customer from our sample in accordance with the changing preferences we traced, we found that, with only 675 customers, the firm

could increase its total sales revenue by 8.3 percent (about 2.5 million dollars) over the four year observation period.

Figure 3 shows how businesses can implement our approach. Many firms could use this same procedure. After the B2B service firm, we tested our method of customizing direct marketing communications in three other firms including a B2B high-tech firm, a retail bank, and a telecommunication company. Although relational marketing by phone or in person is relatively rare in consumer markets, B2C firms face similar challenges when marketing through direct mail and email. For example, the managers at a retail bank wanted to decide which kind of message to send: "introducing a low cost service fee of 0.35 percent on your investments" (i.e., monetary marketing communication) or "we want to help you meet your future goal" (i.e., relational marketing communication). We used the steps in Figure 3 to calculate the future preferences of the retail bank's customers as well as those of customers of the B2B high-tech firm and the telecommunication company. We found that, by sending out targeted marketing based on our predicted customer preferences, the sample firms would increase their average annual sales revenue per customer by 2.1 to 3.2 percent (between $2.2 million to $4.1 million total) over the four year period. With a 5 percent increase in spending on tailored relational or monetary messages, these firms' sales revenue would increase by more than 20 percent.

Figure 2: Modeling Process: Estimating Customer-Level Preferences

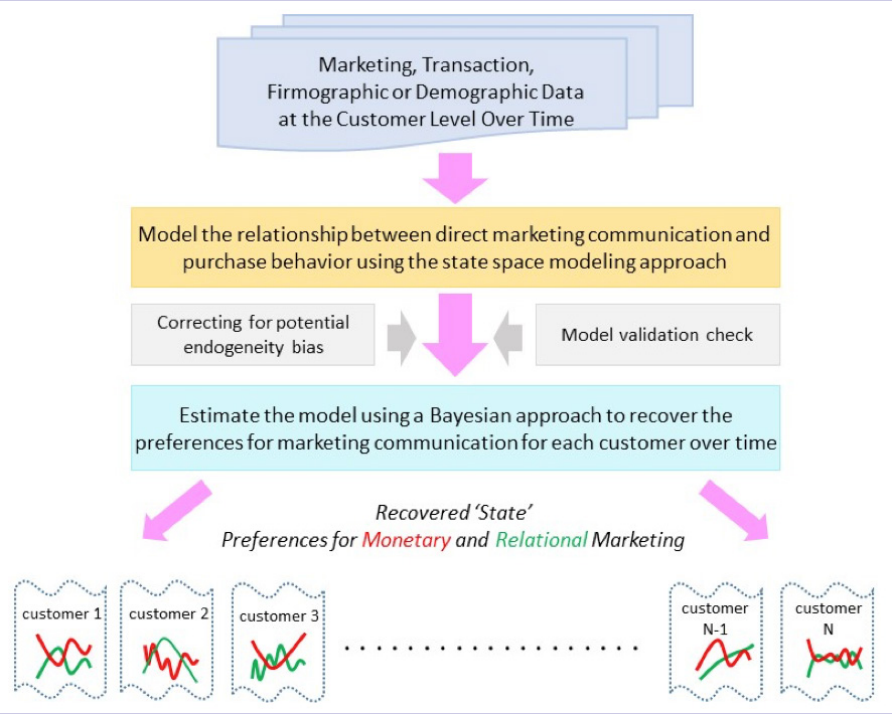
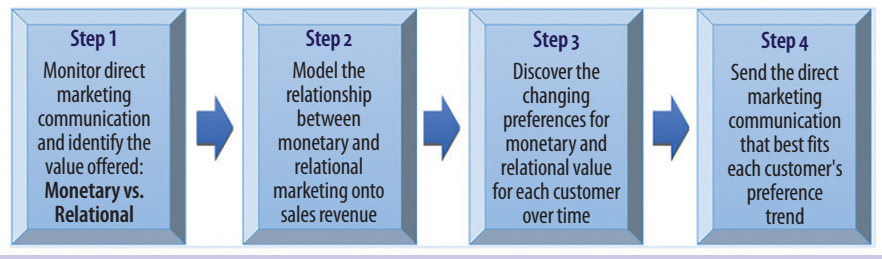


Figure 3: Steps to Maximize the Effectiveness of Direct Marketing Communication



Successfully Implementing the Direct Marketing Communication Strategy

By scrutinizing individual preferences for monetary or relational value, our study also identifies links between marketing preference and customer characteristics. Based on our findings, we have divided customers into four broad groups: the 'show me the money' group, which is most interested in offers of monetary value; the 'let's be friends' group, which is enticed by offers of relational value; the 'give me everything' group, which wants to get all the value offered; and the 'leave me alone' segment, which is unlikely to be persuaded by any direct marketing communications (See Figure 4). We use the size of the firm, its sales revenue, and information about its industry to understand B2B customer characteristics. For B2C firms, we use demographic information and customer transaction behavior to understand the associations between customers' characteristics and their preferences.

We have discovered four key findings that have important managerial implications:

Small firms prefer direct marketing that emphasizes relational value.

Among B2B customers, we found that smaller firms (i.e., companies with few employees) generally want to build stronger ties with the focal firm and thus prefer an empha-

sis on relational value. Among the customers of one of the B2B firms (which deals with small and medium sized clients), we found that 'let's be friends' firms employed an average of 8.4 people, whereas 'show me the money' firms averaged 16.0 employees. This result contradicts the common argument that small firms prefer to maintain their flexibility by remaining less involved in relational exchanges. On the other hand, compared to smaller firms, customers with high purchase expenditures (e.g., large firms) value both types of direct marketing communication more equally. Cognizant of the interplay between monetary and relational marketing, these customers prefer a mix of the two.

Customer demographics influence choices about relational vs. monetary value.

Among customers of the B2C firms, more high income (annual income > $110,000) customers belonged to the "give me everything" group. Older customers (age >50) were often in the "show me the money" group, while women were often in the "let's be friends" group.

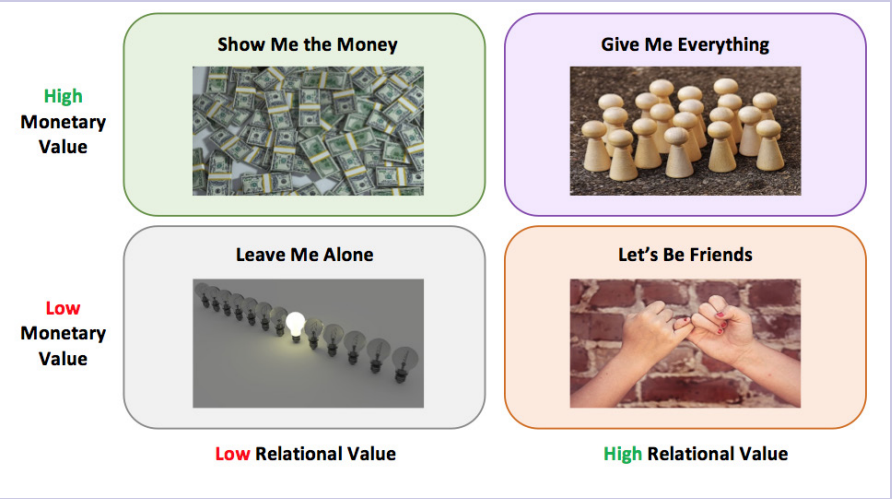
Preferences vary by industry.

We found that B2B customers in the automobile and health industries most often belonged to the 'show me the money' group, while those in the retail and service industries more often belonged to the 'let's be friends' group. B2B customers in high-tech and manufacturing industries were most often in the 'give me everything' group. So by selectively targeting firms with particular characteristics, rather than allocating marketing investments to randomly selected customers, B2B firms can expect positive responses.

More is not necessarily better and timing matters.

We found that, for both B2B and B2C firms, the majority of the effects of direct marketing communication dissipated after a few months. This result is consistent with the notion that, while communicating value to customers helps to shape the relationship between the customer and the firm, repeated interaction is necessary to prevent the effects from diminishing. However, we also found that some customers prefer not to receive any direct marketing communication and may respond negatively (i.e., reduce their purchases). Some customers prefer to build strong relational ties in the beginning and to discuss monetary value later on, while other customers prefer the reverse. The timing of this shift varied significantly according to past marketing experiences. So when a firm is deciding what type of direct marketing communication to use, we found that it should first ascertain how much monetary and relational marketing has been sent in the past in order to determine what to emphasize next.

Figure 4: Segmentation by Preferences



Managers can continually update their classification of customers by knowing their preference as those preferences shift over time.

Conclusion

As the interactions between customers and firms become ever more complex, the importance of gaining a competitive advantage by finding the right direct marketing strategy increases. By tracking the content of direct marketing communications according to the monetary or relational value offered, managers can improve their firm's overall financial performance by strategically allocating marketing resources over time. In applying the right type and quantity of direct marketing communication, firms can expect to improve the responses from each customer and reduce unnecessary marketing investment. Furthermore, managers can continually update their classification of customers by preference as those preferences shift over time. This improved understanding of customer preferences can lead to greater efficiency and profits, and ultimately provide a competitive advantage. Because rich data has become more accessible, B2B practitioners have begun to look for guidance in using the available data to address busi-

ness problems.[7] Especially in light of the growing use of artificial intelligence (AI), such as machine-learning technologies and text analytics, firms can use the proposed framework to analyze their direct marketing messages, capture shifts in their customers' preferences and immediately adjust their marketing strategies.

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Appendix

Sales revenue model:

$$Y_{it}^* = I_{it} + \alpha_{it} MM_{it} + \beta_{it} RM_{it} + \lambda C_{it-1} + \zeta F_i + \varepsilon_{it} \qquad (1)$$

$$Y_{it} = \begin{cases} Y_{it}^* & \text{if} \quad Y_{it}^* > 0 \\ 0 & \text{if} \quad Y_{it}^* \leq 0 \end{cases}$$

where,

Y_{it}^* = the latent purchase revenue variable of customer i in time period t
Y_{it} = the observed purchase revenue generated by customer i in time period t
I_{it} = the intercept for customer i in time period t
MM_{it} = monetary marketing communication (MM) to customer i in time period t
RM_{it} = relational marketing communication (RM) to customer i in time period t
C_{it-1} = matrix of control variables of customer i in time period t–1
F_i = column vector of customer-specific variables of customer i
α_{it} = responses to MM of customer i in time period t
β_{it} = responses to RM of customer i in time period t
λ = parameters of control variables
ζ = parameters of customer-specific variables
ε_{it} = random errors

State equations:

$$I_{it} = \delta_{0i} + \delta_{1i} I_{it-1} + \delta_2 MM_{it-1} + \delta_3 RM_{it-1} + \delta_4 MM_{it-1} * RM_{it-1} + \omega_{it} \qquad (2)$$

where,

I_{it-1} = the latent stock of direct marketing communication of customer i in time period t-1
MM_{it-1} = monetary marketing efforts to customer i in time period t-1
RM_{it-1} = relational marketing efforts to customer i in time period t-1
δ_{0i} = customer i specific time-invariant parameter
δ_{1i} = decay rates of the latent stock of customer i
$\delta_2, \delta_3, \delta_4$ = parameters of marketing efforts in time period t-1
ω_{it} = random errors

$$\alpha_{it} = \theta_{0i} + \theta_{1i} \alpha_{it-1} + \theta_2 MM_{it-1} + \eta_{it} \qquad (3)$$
$$\beta_{it} = \gamma_{0i} + \gamma_{1i} \beta_{it-1} + \gamma_2 RM_{it-1} + \nu_{it} \qquad (4)$$

where,

α_{it} = perceived importance of monetary value of customer i in time period t-1
β_{it-1} = perceived importance of relational value of customer i in time period t-1
θ_{0i}, γ_{0i} = customer i specific time-invariant parameter
MM_{it-1} = monetary marketing efforts to customer i in time period t-1
RM_{it-1} = relational marketing efforts to customer i in time period t-1
θ_{1i}, γ_{1i} = decay rates of the perceived importance of customer i
θ_{2i}, γ_{2i} = parameters of marketing efforts in time period t-1
η_{it}, ν_{it} = random errors

Endnotes

1. Market Snapshot: Customer Relationship Management, Worldwide, 2012. 2013: Gartner Research
2. Highlights and Insights Report. 2017. Retrieved from https:// https://cmosurvey.org/wp-content/uploads/sites/15/2017/05/The_CMO_Survey-Highlights_and_Insights-Feb-2017.pdf.
3. Altman, I., Negotiation: What Makes the Right Business Deal, Forbes. 2015.
4. Duffy, S., High-Value Marketing: Connecting Customers through Technology, Analytics, and Collaboration. 2016: Harvard Business Review Analytic Services Report.
5. Boaz, N., J. Murnane, and K. Nuffer, The Basics of Business-to-Business Sales Success. 2010: McKinsey & Company.
6. Kim, K.H. and V. Kumar, The Relative Influence of Economic and Relational Direct Marketing Communications on Buying Behavior in Business-to-Business Markets. Journal of Marketing Research, 2018. 55(1): p. 48-68.
7. Lilien, G.L., The B2B Knowledge Gap. International Journal of Research in Marketing, 2016. 33(3): p. 543-556.

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Kalyan Singhal is the Doris and Robert McCurdy Professor of Management at the University of Baltimore. Dr. Singhal founded the Production and Operations Management Society (POMS) in 1989. He also founded the society's journal *Production and Operations Management* in 1992 and has since served as its editor in chief. Dr. Singhal is the publisher and coeditor in chief of the *Management and Business Review.* He is a fellow of INFORMS and POMS.

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Nobel Laureate

Harry Markowitz:

Creator of the Modern Portfolio Theory

Suresh P. Sethi
Jindal School of Management, The University of Texas at Dallas

Harry Markowitz developed the modern portfolio theory which earned him the Nobel Memorial Prize and is today used in managing trillions of dollars in assets. Suresh Sethi describes the fascinating life of a scholar whose footprints led the way to almost everything in finance.

One afternoon in 1950, a student at the University of Chicago ran across *The Theory of Investment Value* by John Burr Williams. The student's name was Harry M. Markowitz and he was about to transform the world. The book proposed that the value of a stock should equal the present value[1] of its future dividends. Given the uncertainty of future dividends, that would mean valuing a stock by the present value of its *expected* future dividends. An investor who adhered to this theory, and wanted to maximize the expected value of his portfolio, would thus need to invest in only one single security. As we all know, that is not how investors do or should behave.

Markowitz had a brilliant flash of insight, realizing that investors diversify out of a concern for risk as well as return. In other words, investors do not simply choose the stock that yields the maximum expected return regardless of its risk; they consider their own risk tolerance when selecting stocks for their portfolios. Markowitz put this idea into practical terms by selecting variance as the measure of risk. He thus concluded that an investor selects the stocks in her portfolio such that it yields the maximum expected return without exceeding her acceptable risk level. This approach to stock selection became more plausible in view of the fact that portfolio variance depends on security covariances.

Once Markowitz realized these two criteria, risk and return, it followed that investors make their selections from the set of Pareto optimal risk-return combinations, which are located on what is called the efficient frontier.[2] With these realizations, the modern portfolio theory of stock selection under uncertainty was born. Markowitz's paper "Portfolio Selection" was published in 1952 by *The Journal of Finance*.[3] It earned Markowitz a PhD in economics in 1954 and the coveted Nobel Memorial Prize in Economic Sciences in 1990.[4] As *Investopedia* puts it, "You can divide the history of investing in the United States into two periods: before and after 1952"!

Markowitz also went to work for the RAND Corporation in 1952.[5] There, with the help of George Dantzig, who was honored in the previous issue of this journal,[6] he used optimization techniques to identify the optimal mean-variance portfolios. His procedure uses Dantzig's simplex method[7] to construct the efficient frontier. He described this work in his classic monograph *Portfolio Selection: Efficient Diversification of Investments,* published in 1959.[8]

By demonstrating that portfolio diversification can reduce investment risk, Markowitz's modern portfolio theory[9] (MPT) has become the bedrock of investment management practice. Modern money managers[10] routinely follow its tenets. Financial and retirement advisors create optimal portfolios for their clients by maximizing the expected return for specified risk tolerance. Passive investors use MPT to choose low-cost, well-diversified index funds. Diversification, the financial equivalent of not putting all your eggs in one basket, limits the damage that losses in any individual stock can cause. The extraordinary success and prevalence of passive investing is a clear indication of the popularity of MPT, with trillions of dollars in institutional assets invested under MPT guidelines.[11] *Pensions and Investments Magazine*[12] justly named Markowitz "Man of the Century," in its December 27, 1999 issue, declaring, "Harry Markowitz laid the foundation for investment management in the second half of the 20th century."

In his long and productive life, Markowitz has worked with many scholars and on many topics, but his focus has always been the application of mathematics and computer techniques to the practical problems of making business decisions under uncertainty. In 1989 he was awarded the John von Neumann Theory Prize by what is now the Institute

for Operations Research and the Management Sciences (INFORMS)[13] for his contributions to portfolio theory, sparse matrix methods, and simulation language programming (SIMSCRIPT).[14] Sparse matrix methods are widely used to solve large systems of simultaneous equations with many zero coefficients, which often arise in management, economics, and engineering applications. SIMSCRIPT allowed programmers to describe the system to be simulated rather than listing the actions the computer must take to accomplish the simulation, significantly reducing programming time. And because simulations are so ubiquitous, SIMSCRIPT has been used to program computer simulations in such areas as manufacturing, transportation, agriculture, and war games.

As well as becoming the universal paradigm of modern finance, Harry Markowitz's portfolio theory established financial microanalysis as a respectable area of research in economic analysis. It laid the foundation for the capital asset pricing model or CAPM,[15] a theory of price formation for financial assets for which William Sharpe was also awarded the 1990 Nobel Memorial Prize in Economic Sciences. Indeed, noted financial historian Peter L. Bernstein wrote, "Markowitz's work on portfolio selection was the foundation of all that followed in the theory of finance in general and of the capital asset pricing model in particular."

Markowitz's portfolio theory also transformed production and operations management, with its mean-variance criterion being used extensively in supply chain management for risk-averse agents.[16]

These days, Markowitz consults from his offices at the Harry Markowitz Company. He also teaches at the Rady School of Management, the University of California at San Diego, and gives invited video lectures. He serves on the advisory boards of several blue-chip investment firms and advises ProbabilityManagement.org,[17] a 501(c)(3) non-profit founded by Dr. Sam L. Savage to reshape the communication and calculation of uncertainty. Markowitz remains an active member of GuidedChoice which uses MPT in its investing methodology, ensuring that its clients' investments will succeed. ■

Author Bios

Suresh P. Sethi is the Eugene McDermott Chair Professor of Operations Management at the Jindal School of Management at the University of Texas at Dallas. He earned his Ph.D. from Carnegie Mellon University and conducted post-doctoral work with George Dantzig at Stanford University. Harry Markowitz kindly wrote the foreword to Sethi's 1997 book *Optimal Consumption and Investment with Bankruptcy*[18] and, in 2006, delivered the keynote address at a conference held in Sethi's honor[19] at the University of Texas at Dallas.

Endnotes

1. For more information on present value, see https://en.wikipedia.org/wiki/Present_value
2. https://en.wikipedia.org/wiki/Efficient_frontier.
3. https://www.math.ust.hk/~maykwok/courses/ma362/07F/markowitz_JF.pdf
4. https://www.nobelprize.org/prizes/economic-sciences/1990/press-release/
5. https://en.wikipedia.org/wiki/RAND_Corporation
6. Birge, John R. "George Bernard Dantzig: The Pioneer of Linear Optimization," Mangement and Business Review 1, No. 1 (2021): 161-163. https://mbrjournal.com/2021/01/26/george-bernard-dantzig-the-pioneer-of-linear-optimization/
7. https://www.britannica.com/topic/simplex-method
8. https://cowles.yale.edu/sites/default/files/files/pub/mon/m16-all.pdf
9. Markowitz's modern portfolio theory is described at greater length here: https://en.wikipedia.org/wiki/Modern_portfolio_theory and https://www.investopedia.com/terms/m/modernportfoliotheory.asp
10. https://www.investopedia.com/terms/m/moneymanager.asp
11. A 2012 article in US News and World Report described why modern portfolio theory still works. https://money.usnews.com/money/blogs/on-retirement/2012/12/13/why-i-am-clinging-to-failed-investment-strategies?_ga=2.6496242.1199904918.1590253800-1018108278.1590087401
12. https://www.pionline.com/article/19991227/PRINT/912270716/markowitz-demonstrated-importance-of-diversification (this link requires a subscription to P&I)
13. To learn more about INFORMS, see: https://www.informs.org/ and https://en.wikipedia.org/wiki/Institute_for_Operations_Research_and_the_Management_Sciences
14. https://en.wikipedia.org/wiki/SIMSCRIPT
15. https://www.investopedia.com/terms/c/capm.asp
16. See, e.g., Gan, X., Sethi, S.P., and Yan, H., "Coordination of a Supply Chain with Risk-Averse Agents, "Production and Operations Management, 13(2), 2004, 135-149. https://onlinelibrary.wiley.com/ doi/abs/10.1111/j.1937-5956.2004.tb00150.x
17. https://www.probabilitymanagement.org/ For more information on probability management, see: https://en.wikipedia.org/wiki/Probability_management
18. https://www.springer.com/gp/book/9780792397557 Markowitz's foreword to Sethi's book can be found on pp. xiii-xviii
19. https://utdallas.app.box.com/s/w17jqhuramf940rn35pcjrzm4hrzjjo3

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10. The L. Beril Toktay (Georgia Institute of Technology) and Luk Van Wassenhove (INSEAD) Award for Organizational Research into the Environment and Sustainability
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Please contact Coeditor in Chief Kalyan Singhal at <Ksinghal@ubalt.edu>

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