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Part Four of a Four-Part Series

The Responsible Technology Firm of the Future: Corporate Social Responsibility

In the first segment of this four-part series, we discussed how the changing landscape of the technology industry requires tech companies to take action to restore and sustain trust in what constitutes a challenging operating environment. In the last two segments, we explored ideas to help pursue this opportunity with a focus on corporate governance and regulatory compliance and market forces. This fourth and last segment completes the discussion with a focus on corporate social responsibility and emphasizes the following suggestions:

- Increase diversity and measure the improvement;
- Monitor evolving stakeholder expectations, particularly around social responsibility;
- Help those displaced by technology through training to improve people's lives; and
- Manage brand image and reputation.

Increase diversity and measure the improvement. Progress is urgently needed here. The statistics tell the story. While women make up half of the total U.S. college-educated labor force, they account for only 29 percent of employees in the science and engineering workforce.[1] (See chart on the next page for details about such disparity ranked by profession.) This gender imbalance in science, technology, engineering and math (STEM) will have tech companies struggling to fill the millions of STEM jobs that will be created over the next decade. Unless this issue is addressed, the implication for technology is that there simply won't be enough people in the talent pool to sustain the continued rapid advances we can reasonably foresee in the future. That is a valid point of concern. Without an ample supply of skilled talent, tech executives won't be able to keep pace with change, let alone drive it. So the time for action is now.[2]

[1] "State of Girls and Women in STEM," National Girls Collaborative Project, August 2016, available at https://ngcproject.org/statistics.

[2] "Gender Imbalance in STEM: A Growing Concern," *PreView*, Protiviti, January 2018: www.protiviti.com/US-en/insights/preview-january-2018-edition.

Percentage of Women in Select STEM Occupations (Numbers in Thousands)

	Total Employed	Women
Database administrators	90	46%
Computer systems analysts	526	36%
Web developers	205	34%
Computer and information systems managers	597	26%
Computer support specialists	570	26%
Computer programmers	466	23%
Information security analysts	89	22%
Software developers, applications and systems software	1,483	20%
Network and computer systems administrators	218	17%
Electrical and electronics engineers	293	11%
Computer network architects	115	10%
Mechanical engineers	350	6%
Architectural and engineering managers	136	5%

Source: 2016 data from the Bureau of Labor Statistics. In the 17 occupations listed above, women averaged 25 percent of the total workforce.

In addition to a marked gender disparity in entry-level STEM jobs, there are staggering imbalances at the executive level. The fraction of startups owned by women, and the percentage of women holding executive positions at Silicon Valley companies as well as at tech companies headquartered elsewhere, is abysmally low. The number of women occupying board seats also requires attention. This is important in solving the entry-level challenge because there are those who believe that the issue can only be resolved by starting at the top of the company.

To make matters worse, attrition is more than twice as high for women as it is for men. There is a troubling disparity in compensation, both in entry-level offers and in more senior positions. Interestingly, a strong majority of men in startups believe their companies spend the "right amount of time" addressing diversity, while nearly half of women disagree. Bottom line, it will take extraordinary initiative on the part of directors and senior executives across the industry to right this ship.[3]

There is ample research in the public domain asserting the positive economics supporting gender diversity.[4] The point of this research is that a diverse C-suite and board of directors that are more representative of what the real world looks like will more likely than not lead to better business decision-making and products and services that are more relevant to customers. It also provides the catalyst for driving a more diverse and inclusive culture down into the workforce, where everyone is comfortable sharing ideas and speaking up about potential opportunities and risks. Diversity can also be a critical aspect of managing the ethics underlying AI, machine learning, bots and other digital tools.

[3] "12 Statistics About Women in Tech That Show How Big the Gender Gap Truly Is," by Sage Lazzaro, *Observer*, June 5, 2017, available at http://observer.com/2017/06/women-in-tech-statistics/.

[4] "Why Women on Company Boards Boost Performance," by Karsten Strauss, *Forbes*, April 6, 2016, available at www.forbes.com/sites/karstenstrauss/2016/04/06/why-women-on-company-boards-boost-performance/#654a582f45d3.

Unless [diversity issues are] addressed, the implication for technology is that there simply won't be enough people in the talent pool to sustain the continued rapid advances we can reasonably foresee in the future. … Tech executives won't be able to keep pace with change, let alone drive it.

Diversity reaches beyond gender to other fronts as well — race and ethnicity, sexual orientation, religion, age, and socioeconomic status, to name a few. Diversity programs have been paired with inclusion programs such as those supporting LGBTQ people and veterans in the industry. A more provocative diversity front would be differences in political views, a hot-button issue a year ago at a major tech company.[5] While the research supporting diversity and inclusion beyond gender may not be as robust as that linking gender diversity to superior performance, many believe intuitively that a mature approach to diversity and inclusion beyond gender will help businesses better serve a diverse marketplace and reduce the risk of fatal groupthink that is driven by past success as well as strong convictions of dominant leaders who believe their view of the future is accurate.

It is common for leaders to make bets based on what they envision unfolding in the future. But for the bets that matter, what if they're wrong? While "what if" scenario-planning and stress-testing tools can be effective in evaluating management's "view of the future," having divergent points of view around the decision-making table can be just as powerful in visualizing different future scenarios or events, what their consequences or effects might be, and how the organization can respond to or benefit from them.

Ask Yourself:

- Do we have a clear strategy to address diversity? Are we satisfied with the scope of our diversity program in view of the markets we serve and our commitment to social responsibility? Are we giving adequate consideration to inclusion initiatives as an integral part of our diversity program? Are our diversity initiatives and investments inextricably tied to clearly articulated performance goals? Are we measuring and monitoring our progress?
- Is there representation of women on the board? On the senior management team?
- Are we taking steps to address the need to hire women and better manage attrition through appropriate retention strategies (e.g., work flexibility, pay equality and upward mobility)?
- What obstacles are holding us back on making progress on our diversity initiatives?

Monitor evolving stakeholder expectations, particularly around social responsibility. Corporate social responsibility is sometimes referred to as sustainability. We like to think of it as environmental, social and governance (ESG), a concept of selective investing that offers an explicit set of standards that socially conscious investors use to evaluate a

[5] See "Google's Ideological Echo Chamber": https://en.wikipedia.org/wiki/Google%27s_Ideological_Echo_Chamber.

company's operations in the context of investment alternatives. ESG matters for early-stage tech companies looking to monetize sweat equity, moderate-stage tech companies wanting to pursue an IPO, and more mature-stage tech companies looking to build and sustain long-term value.

ESG is a solid efficiency play when it improves the cost-effectiveness of internal processes. For example, computer manufacturers integrate alternative, recycled and recyclable materials into their product and packaging design, which reduces waste and operating costs. It becomes a strategic play when, in addition to improving process efficiency, the tech company offers services to help customers compute more while consuming less and design for end-of-life and recyclability.

The point is, as a result of investing to enable customers to meet environmental, operational and financial goals, the company advances its sustainability positioning to a leadership role by raising the table stakes for playing in the industry. This position is achieved by incorporating environmental and social objectives into strategy-setting in addition to financial objectives. The implications for "upticking" reputation and brand image are significant.

The "S" in ESG is an important consideration for the responsible tech firm of the future. Social responsibility includes the impact on society. This impact casts a wide net and especially includes the customers, institutions and communities served by the tech firm's product and service offerings. Thinking of "social" in this manner adds a powerful dimension to ESG that reaches beyond the traditional scope of sustainability. That dimension fixates the onus more squarely on governance, risk management and compliance and their collective contribution to the tech firm's prospects for success. These disciplines are vital to the alignment or balance between the responsible tech firm's interests and the public interest.

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Ask Yourself:

- Do we have a clear long-term vision regarding sustainability? Is that vision responsive to investor and stakeholder expectations regarding social responsible behavior for the tech industry?
- Is the board sufficiently engaged in developing the entity's long-term strategy and plan to create long-term value for shareholders? Is the board and executive management satisfied that its composition, diversity and structure reduces the risk of group-think or missing opportunities for long-term growth or new threats to the company's business model?
- Does the company's sustainability reporting provide sufficient insight into its nonfinancial activities related to ESG matters? Is it sufficiently focused on the "ESG criteria" that institutional investors and asset managers following the industry use?

Help those displaced by technology through training to improve people's lives. Retraining and reskilling the workforce to fill open computing jobs is an opportunity to regain trust. As the workforce is marginalized through technological advances, the question arises as to how the industry and education and training infrastructure are being positioned to help people make the transition to the new jobs of the digital economy.[6]

According to a McKinsey report,[7] by 2030 as many as 375 million workers (about 14 percent of the global workforce) may need to switch occupational categories as digitization, automation and advances in AI take hold and disrupt the world of work. Needless to say, the impact on people's lives and the adjustment they must make in transitioning to the digital economy will be overwhelming if the market is unprepared. McKinsey analogizes the forthcoming shift to the large-scale transition from an agrarian society to manufacturing, which occurred early in the 20th century in North America and Europe, and more recently in China, requiring initiatives on the scale of the Marshall Plan.[8]

Retraining and reskilling is an all-hands-on-deck endeavor requiring a cooperative effort of the highest order involving the industry, companies deploying digitization and automation tools, higher education, public and private schools, and the public sector. How that will happen is more of a discussion point at this time rather than a concrete series of coordinated actionable initiatives. A catalyst for action is needed as public spending on labor-force training has declined at a steady pace for years in many countries, corporate training budgets remain under pressure, the traditional education model is not noted for undergoing rapid change, and political discourse is constrained by myopic short-termism.

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A challenge for many companies is obtaining clarity as to how automation and digitization will affect future skills requirements. That makes it difficult for them to gauge the nature, extent and timing of the change in skill sets and, without that, next to impossible to ascertain the specific gaps that will exist if resources aren't committed now to address the problem. This dilemma complicates the ROI calculations needed to justify making investments. A McKinsey study indicates that 42 percent of executives in the United States, 24 percent in Europe and 31 percent in the rest of the world admit they currently lack this necessary understanding, thus creating the hesitancy to invest.[9]

But this can change. Many executives recognize the need to address potential skills gaps related to automation and digitization within their workforces and acknowledge that it is a priority for their companies to invest

[6] "How the Tech Industry Can Restore Trust," World Economic Forum, 2018: www.weforum.org/agenda/2018/01/how-the-tech-industry-can-restore-trust/.

[7] "Jobs Lost, Jobs Gained: What the Future of Work Will Mean for Jobs, Skills, and Wages," by James Manyika, Susan Lund, et al., McKinsey, November 2017, available at www.mckinsey.com/featured-insights/future-of-organizations-and-work/jobs-lost-jobs-gained-what-the-future-of-work-will-mean-for-jobs-skills-and-wages.

[8] "Retraining and Reskilling Workers in the Age of Automation," by Pablo Illanes, Susan Lund, et al., McKinsey, January 2018, available at www.mckinsey.com/featured-insights/future-of-organizations-and-work/retraining-and-reskilling-workers-in-the-age-of-automation.

[9] Ibid.

more.[10] To that end, it wouldn't hurt for the tech industry to assist in taking the lead. This is not without precedent. Concerned with sustaining its mainframe business over a decade ago given the loss of retiring mainframe engineers to support its business, IBM reached out to universities to advocate for mainframe courses and offered support. Today, after investing over US$10 million during the first decade of the program, more than 1,000 schools in 70 countries participate in IBM's academic initiative for mainframe education.[11] While this relates to IBM's business and not its customers, proactive outreach of this nature is the kind of out-of-box thinking needed.

Obviously, tech can't solve all of the problems society faces as the digital revolution unfolds, but given the pace of technological change, it is vital that end-user companies have the skills to deploy and manage the digitization, automation, AI and other technologies they choose to exploit. This is a potent source of new jobs in the digital economy, and it is in the interest of tech companies, their customers, higher and secondary education systems, and the public sector to seize the initiative. At stake is the trust and respect to which the tech industry aspires in the marketplace and the sustainability of profitability and growth.

Ask Yourself:

- Has the company given thought to the role it should take in addressing the retraining and reskilling challenge that lies ahead over the next 10 years? For example, can the company take steps to assist its customers with better understanding how the technology it offers will change the skill requirements they need to exploit and manage it effectively?
- Should the company play a leadership role in engaging multiple stakeholders and providing a catalyst for cooperative action?

Manage brand image and reputation. In today's era of lightning-quick social media sharing, brand protection has become increasingly important — and far more challenging — for tech companies. The relentless tide of cyber threats and an ever-changing threat landscape have increased the exposure to brand image and reputation hits. The expanding use of social media and mobile applications by customers and employees has made it all too easy for outsiders to acquire and misrepresent personal and proprietary information. In the face of these realities, including expanding public disclosures of data leaks and breaches, many tech companies are examining how they interact with other organizations and how they safeguard against breaches.

On the cyber-risk front, it is important for tech companies to recognize that the customer and financial data they handle are not the only targets for hackers. An organization's intellectual property (IP) can be even more valuable to some threat actors, including nation-states. The loss or theft of IP could not only undermine a company's ability to compete, but also damage its brand and reputation in unanticipated ways.

Without question, loss or theft of any type of high-value data can have lasting, negative effects on an organization from both operational and brand perspectives. Everything negative that happens to a company and becomes public can cause brand damage —

[10] Ibid.

[11] "What Is the IBM Academic Initiative?" IBM, 2014: http://slidegur.com/doc/1220300/what-is-the-ibm-academic-initiative%3F; see also www-01.ibm.com/common/ssi/cgi-bin/ssialias?htmlfid=ZSL03445USEN.

and cyber breaches and loss of IP are among the fastest ways for this damage to occur. Given these considerations, management and the board must work together to manage the brand and make brand protection one of the company's top priorities.

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Senior management should take the lead in deciding what type of interaction they would like from the board and define how they want to involve the board in the brand protection process. And if they haven't done that, then the board should waste no time in asking for their input. As there are many risks to consider with respect to brand image, risk management is an important skill from a branding standpoint because severe unmitigated risks could lead to events that can erode the value of a brand if there are persistent headlines of a high-profile crisis. We've mentioned data breaches. Other examples of such risks include warranty recalls, pervasive quality failures, corruption violations, serious financial restatements, and reputation-damaging practices disclosed upstream in the supply chain as well as downstream involving channel partners and the ultimate consumers and end users.

Failure to align the organization's brand identity with how it delivers value to the marketplace and appeals to customers can erode its value over time. Likewise, failure to live up to the company's brand promises — both explicit and implicit — can be just as lethal. By contrast, building trust in the marketplace, as previously discussed, can build the value of the brand.

Ask Yourself:

- Do the board and senior management think strategically about branding and brand management? Is the organization's brand identity aligned with how it differentiates itself from competitors in delivering value to customers and society? Is the contribution of branding to shareholder value measured? Do the board and senior management provide sufficient oversight of the risks that could impair the company's brand image significantly?
- Are the board and executive management focused on the appropriate fundamentals for enhancing and preserving the enterprise's reputation? Does the risk assessment process source significant threats to the company's reputation and brand image and identify areas requiring consideration of response plans to improve preparedness and rapid response to high-impact, high-velocity and high-persistence scenarios?
- Is there adequate focus on the critical enterprise risks that could impair the tech company's reputation if not managed effectively? Does management apprise the board on a timely basis of significant changes in the enterprise's risk profile, and is there a process for identifying emerging risks?

Closing

Future success in the technology industry will require not only innovative products and services, but also deep understanding and effective management of emerging risks and heightened market expectations. There was a day and time when issues and concerns involving the tech industry were brushed aside with the old cliché of "competition, innovation and consumer choice is the solution to every problem." As we discussed in the first installment of this four-part series, the world has changed. And with change comes opportunity.

The last three installments of this series have presented several key considerations in the form of 10 ideas for technology industry board members and senior executives to consider as they focus on addressing the business realities the industry faces. These ideas support a point of view that the responsible technology firm of the future will be as adept at corporate governance, social responsibility, risk management and compliance as it is at technical innovation and delivery.

10 Ideas for Tech Leaders to Consider

Corporate Governance and Regulatory Compliance

1. Build and manage a strong corporate governance operation.
2. Manage conduct at the top and culture across the organization.
3. Prepare for increased government scrutiny.

Market Forces

4. Maximize the company's innovative potential within the confines of social responsibility.
5. Pay attention to emerging risks.
6. Better position risk management and compliance within the organization and adopt a compliance framework.

Corporate Social Responsibility

7. Increase diversity and measure the improvement.
8. Monitor evolving stakeholder expectations, particularly around social responsibility.
9. Help those displaced by technology through training to improve people's lives.
10. Manage brand image and reputation.

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