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FEATURE

Ethical technology use in the Fourth Industrial Revolution

CEO leadership needed

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C-suite executives deploying 4IR technologies have a tough ethical terrain to navigate. Putting in place a policy for ethical usage of technology could benefit their businesses—and society.

LEADERS ARE INCREASINGLY demonstrating that they want their organizations to do *well* by doing *good*, and with reason. Doing good can be good for business, especially in an intensifying economic, social, and political milieu that is challenging organizations to reinvent themselves as social enterprises.[1]

Deloitte Global CEO Punit Renjen's *Success personified in the Fourth Industrial Revolution* report, released at the World Economic Forum conference in Davos, Switzerland, earlier this year highlights that leaders are putting a greater focus than ever on advancing society through their technology efforts.[2] In fact, leaders rated "societal impact" (including income inequality, diversity, and the environment) as the No.1 factor in assessing their organization's annual performance, ahead of financial performance, customer experience, and employee satisfaction. This view manifests in their actions as well—more than 73 percent of the surveyed organizations have developed or changed a product in the past year to generate positive societal impact through Fourth Industrial Revolution (4IR) technologies.

But as organizations strive to take society forward with 4IR solutions, they are often confronted with a host of ethical issues, which can have societal as well as business ramifications. Examples of ethical "missteps" by companies abound in the media these days. One issue highlighted in the news regularly is that of data privacy, and it has left consumers understandably worried about how their data is captured, saved, and used.[3] Another emerging threat is algorithmic bias, where biased data manifests itself in biased recommendations, but we're yet to fully understand the ramifications of algorithmic bias.[4] Even lack of inclusivity in technology design can negatively impact consumers, as seen in some smart city designs where people in wheelchairs are unable to access eye-level retina scanners as they require the person to be standing.[5]

These ethical issues, and others, have led to product recalls, public backlash, and/or lost revenue for companies. In this technologically and ethically complex environment, organizational values matter more than ever. If leaders don't formulate and implement policies on the ethical usage of technology, it will likely become difficult for them to navigate the Fourth Industrial Revolution. More importantly, it could inhibit innovation and financial growth at their companies.

Our survey data from this year's study reinforces the link between ethics and organizational growth (see the sidebar, "Methodology"), providing further rationale for why companies should care about ethically using 4IR technologies. The study found a positive correlation between organizations that strongly consider the ethics of 4IR technologies and company growth rates (figure 1). For instance, in organizations that are witnessing low growth (up to 5 percent growth), just 27 percent of the respondents indicated that they are strongly considering the ethical ramifications of these technologies. By contrast, more than half (55 percent) of the respondents from companies growing at a rate of 10 percent or more are highly concerned about ethical considerations.

FIGURE 1

High-growth organizations are more concerned about ethics than low-growth ones

To what extent do you agree that your organization is highly concerned with ethically using 4IR technologies?

■ Strongly disagree   ■ Disagree   ■ Agree   ■ Strongly agree

Percentage of respondents
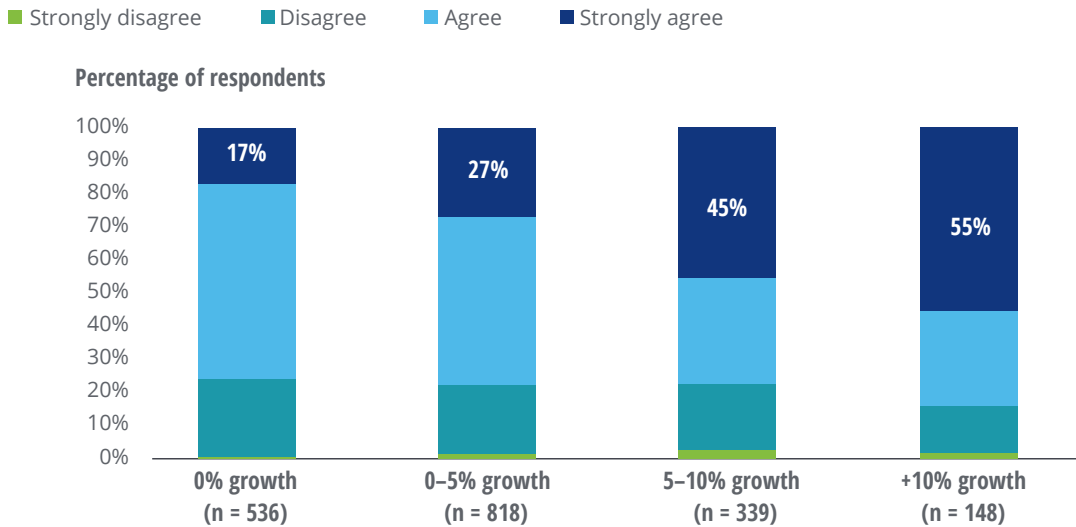
Source: Deloitte analysis of the *Success personified* report.

METHODOLOGY

This research is an extension of the *Success personified in the Fourth Industrial Revolution* report, which is based on a survey of 2,042 global executives and public sector leaders conducted by Forbes Insights in June-August 2018.[6] Survey respondents represented 19 countries from the Americas, Asia, and Europe and came from all major industry sectors. All survey respondents were C-level executives and senior public sector leaders, including CEOs/presidents, COOs, CFOs, CMOs, CIOs, and CTOs. All the executives represented organizations with a revenue of US$1 billion or more, with half (50.1 percent) coming from organizations with more than US$5 billion in revenue. Sixty-five percent of the public sector leaders represented organizations and agencies with budgets of US$500 million or more.

Ethical concerns don't always translate into action

Most executives responding to our survey were concerned about ethical usage of 4IR technologies. More than 30 percent of the respondents strongly agreed that their organizations are highly concerned about ethical technology usage and another 50 percent indicated a moderate concern. Yet when it comes to action, this number dropped significantly—just 12 percent of the respondents strongly agreed that their companies are actively exploring related policies or already have them in place.

So, what's preventing leaders' ethical concerns from being translated into ethically driven actions? The answer may lie in the dynamics of the C-suite. Our survey found that concern over ethically using 4IR technologies is not consistent across the organization (figure 2). Starting at the top of the C-suite, only 15 percent of CEOs and presidents expressed

strong concern about ethical technology usage (considerably less than the 30 percent average across the C-suite). The chief information officer (CIO), a role often charged with managing these technologies, averaged only 16 percent.
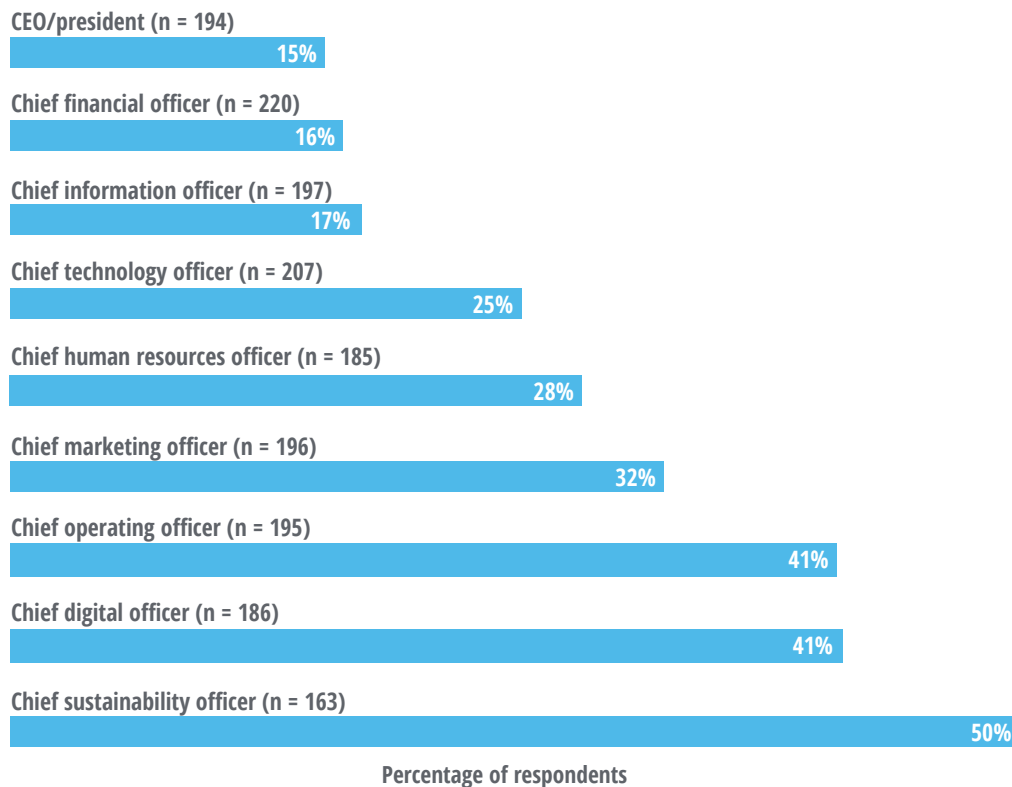
Contrast this with roles like the chief sustainability officer (CSO) and the chief operating officer (COO) who indicated strong ethical concerns at 50 percent and 41 percent respectively, and a clear disconnect emerges between the CEO/CIO's line of thought and that of the CSO/COO. Given that reputation and social impact are critical aspects of the CSO's role, executives in this role are more likely to care about ethics. The COO, who oversees enterprise-wide operations, is likely to be more aware of how work is executed and, therefore, have greater awareness of potential ethical issues.

However, those with more influence on the 4IR strategy—the CEO and to a lesser degree, the CIO—seem to be disproportionately swaying organizational policy. Only 12 percent of the organizations whose executives were surveyed have policies in place or are actively exploring the implementation of policies (tracking closer to the level of concern conveyed by the CEO and CIO) on ethical usage of technology.

FIGURE 2

Percentage of C-level executives (by role) strongly concerned about ethical technology usage

CEO/president (n = 194)
15%

Chief financial officer (n = 220)
16%

Chief information officer (n = 197)
17%

Chief technology officer (n = 207)
25%

Chief human resources officer (n = 185)
28%

Chief marketing officer (n = 196)
32%

Chief operating officer (n = 195)
41%

Chief digital officer (n = 186)
41%

Chief sustainability officer (n = 163)
50%

Percentage of respondents

Source: Deloitte analysis of the *Success personified* report.

Extending ethical thinking across the organization

While 4IR technologies offer immense opportunities, they also bring many ethical challenges as they're poised to transform the way we live, work, and interact with each other. As a result, leaders at the helm of companies looking to benefit from these technologies need to navigate a complex ethical environment. Organizations could benefit from ensuring that proper policies are in place and are adhered to. The following steps can help leaders move forward in this direction:

- **Set the tone at the top:** If the CEO doesn't consider ethics a priority, it will likely be difficult to get the rest of the organization to do so. Not only should the CEO emphasize the importance of ethical considerations in the usage of technology, they should also encourage other members of the C-suite to express their concerns. The CSO and COO, by virtue of their roles, have a unique line of sight into the importance of ethics in supporting growth initiatives. This knowledge sharing between the CSO and COO and the rest of the C-suite can empower executives in the organization to tailor their solutions with ethics as a top-of-mind design consideration.

- **Cultivate an ethical culture:** Ethics is not only an issue for C-level executives to consider, but it is also of prime importance to an entire organization. It starts with clearly messaging ethical policies and guidelines—and leading by example—but it also includes giving your workforce a voice in the discussion. As senior executives work out strategies to integrate these technologies into every facet of the workforce, it's important that they provide other employees with avenues to express ethical concerns about their usage.

- **Iterate the policy:** 4IR technologies are rapidly changing, and accordingly, policy too should change. Just as government regulation is trying to keep pace with autonomous vehicles and smart cities, organizations should establish constant touch points to ensure that their ethical policies keep pace with the rapidly changing technology environment.

For CEOs and other C-level executives, integrating the ethical considerations of employees across the organization and other stakeholders into their day-to-day operations also makes good financial sense. The organizations that set the tone at the top are the ones that are likely to be best positioned to help their businesses—and society—flourish.

Endnotes

1. Erica Volini et al., *Leading the social enterprise—Reinvent with a human focus*, Deloitte Insights, April 11, 2019.

2. Punit Renjen, *Success personified in the Fourth Industrial Revolution: Four leadership personas for an era of change and uncertainty*, Deloitte Insights, January 19, 2019.

3. Monica Nickelsburg, "'Huge awakening' in data privacy drives big growth for Seattle startup Integris," GeekWire, April 1, 2019.

4. Vyacheslav Polonski, "Mitigating algorithmic bias in predictive justice: 4 design principles for AI fairness," Towards Data Science, November 24, 2018.

5. Memoori, "Current smart city planning is increasing the divides in urban population," August 29, 2018.

6. Ibid.

Acknowledgment

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