



Trendlines: Digital ethics

It's time to act. Here's how.

Executive summary

You need to be proactive on digital ethics now or jeopardize the loyalty of your customers and employees.

Every organization is at risk of a public digital ethics issue due to the broad use of new technologies, including AI, robotics and the internet of things, and their potential for unintended consequences. You need to be proactive on digital ethics now or jeopardize the loyalty of your customers and employees.

Just as security is on every boardroom agenda, digital ethics will get there too, and quickly. Leading organizations are increasingly addressing the topic and early results show brand and financial benefits. For example, [the world's most ethical companies](#) outperform the large-cap sector over five years.

Taking action means establishing guiding principles and making them transparent internally and externally, creating playbooks, providing training, and participating in public discussion and advocacy. Most importantly, it means enabling employees with best practices and tools to build ethics-by-design into their work.

This report defines digital ethics and highlights the benefits of doing ethics right and the costs of falling short. It looks at what companies are doing about digital ethics and how you can start taking action. It's the latest in the [Avanade Trendlines](#) series on emerging trends that impact the design, innovation and technology choices of large organizations.



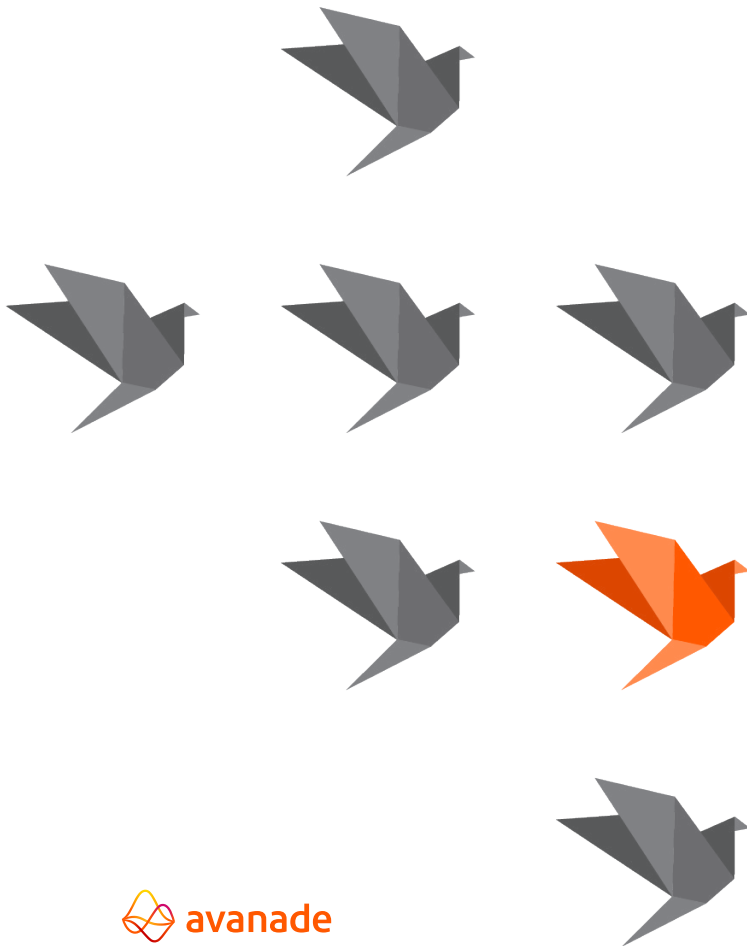
Digital ethics is fundamentally about building customer and employee trust.

The value of getting digital ethics right

Most organizations consider digital ethics as part of managing risk and compliance, but that's only part of the story. Digital ethics is broader and includes building customer and employee trust. Organizations that establish a trust relationship are seeing positive business benefits from getting ethics right. The world's most ethical companies outperform the large-cap sector over five years by 14.4% and over three years by 10.5%, according to [research by Ethisphere](#), which considers ethical behavior generally. While Ethisphere does not call out digital ethics, common themes from the companies it measures can be applied to digital ethics as well: broad-reaching ethics and compliance programs, heavy investment in frontline managers, and building diverse and inclusive workplaces.

A reputation for ethics and ethical behavior is increasingly becoming a factor in brand management, and in attracting and retaining both customers and employees. Already, two-thirds of employees expect prospective employers to join them in acting on social issues, [according to one study](#).

Executives know they need to incorporate digital ethics into their businesses. In recent Avanade research of C-level executives and IT and business decision-makers, 82% agreed that digital ethics is the foundation of successful AI. But companies don't think they've done enough. Most (81%) lack complete confidence that their organizations are adequately prepared to address ethical issues related to AI, robotics and similar technologies.



Every organization needs to consider digital ethics when seeking to engage with customers or to use their data.

Growing challenges

About nine years ago, [a few airlines began to enable passengers to pick seatmates based on common interests](#) listed in their Facebook accounts, or to identify acquaintances on the same plane. It was all opt-in and not unethical but seemed to go right up to the “creepy vs. cool” line since many customers found it an unexpected intrusion on their privacy. Most of the airlines that tried “social seating” have since abandoned it.

Since then, the pace of ethics issues has accelerated, including exposures at [Samsung](#), [Vizio](#) and [Microsoft](#). In 2018 came Facebook and Cambridge Analytica and recently [Google’s Nest](#) and the hidden microphone. In response to these kinds of issues, Salesforce recently appointed one of the first chief ethics officers. Today, every organization needs to consider digital ethics when seeking to engage with customers or to use their data.

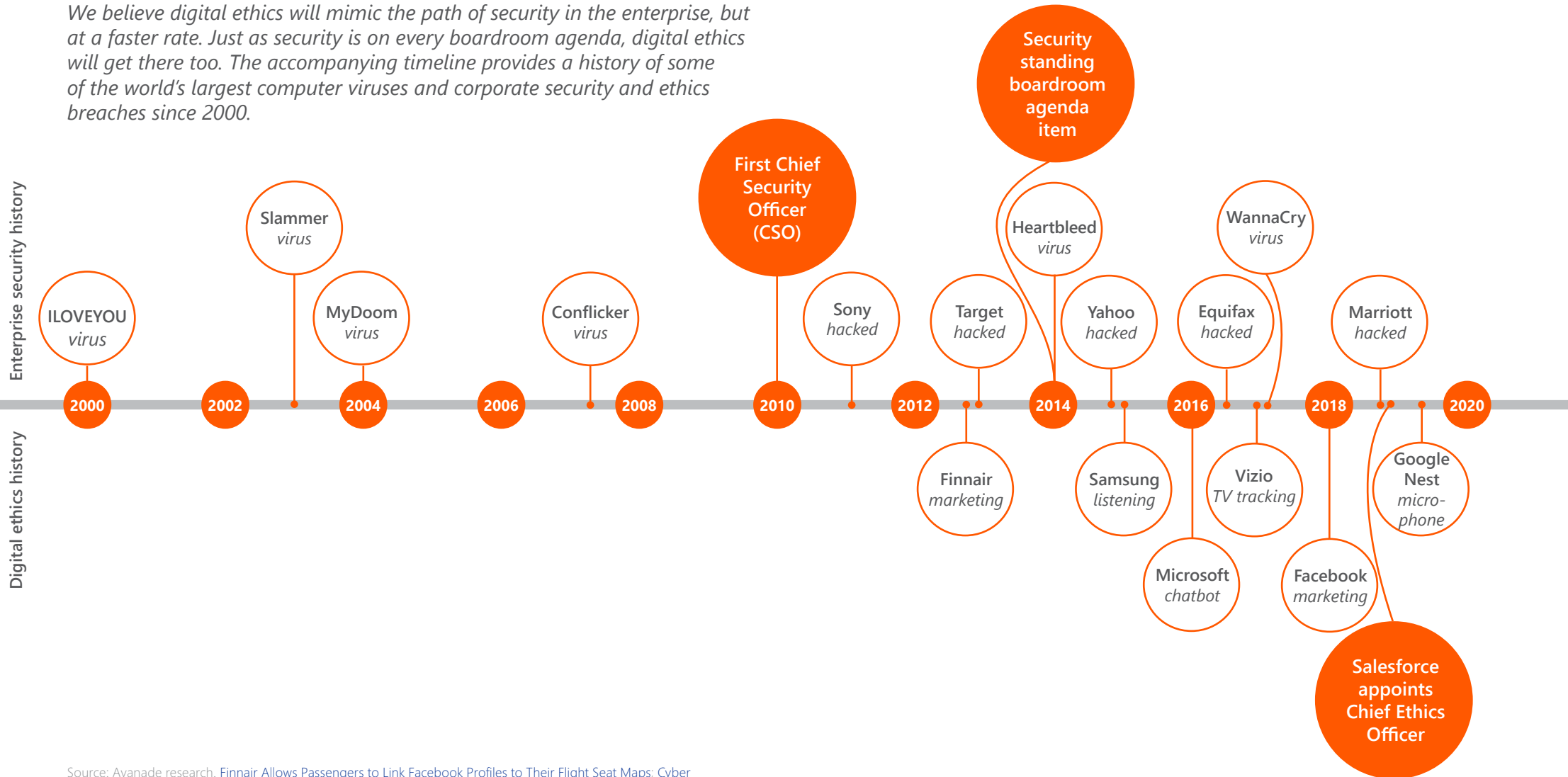
Unethical behavior has been around as long as, well, behavior. But what’s different now is the abundance of ethical challenges that arise in the digital sphere simply because what we *can* do – thanks to the broad use of technology, in particular AI, the internet of things, robotics, global networks, fast-growing databases, data analytics and more – has expanded faster than any consensus on what we *should* do. Too much technology can lead to an abuse of trust.

“I’m humbled by how nascent the science of AI is,” says [Fei-Fei Li, co-director of Stanford University’s Human-Centered AI Institute](#). “It is the science of only 60 years. Compared to classic sciences that are making human life better every day – physics, chemistry, biology – there’s a long, long way to go for AI to realize its potential to help people. With proper guidance AI will make life better. But without it, the technology stands to widen the wealth divide even further, make tech even more exclusive, and reinforce biases we’ve spent generations trying to overcome.”



Digital ethics has become a pressing priority even faster than security

We believe digital ethics will mimic the path of security in the enterprise, but at a faster rate. Just as security is on every boardroom agenda, digital ethics will get there too. The accompanying timeline provides a history of some of the world's largest computer viruses and corporate security and ethics breaches since 2000.



Source: Avanade research. [Finnair Allows Passengers to Link Facebook Profiles to Their Flight Seat Maps](#); [Cyber Security is now a Boardroom Agenda](#); [The 18 biggest data breaches of the 21st century](#)

Digital ethics goes beyond compliance to also encompass risk management, product development, marketing, brand and reputation management, corporate citizenship and more.

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Definitions — and ethical boundaries

Getting digital ethics right starts with a comprehensive definition. Gartner defines digital ethics as a system of values and moral principles for the conduct of digital interactions among businesses, people and technologies.¹ This is much more than a matter of eliminating bias in algorithms and includes, for example, responsibility toward employees in the face of automation. As companies gain access to more intimate personal data, including employee productivity and data from wearables, business leaders will need to make increasingly difficult decisions that involve ethical considerations.

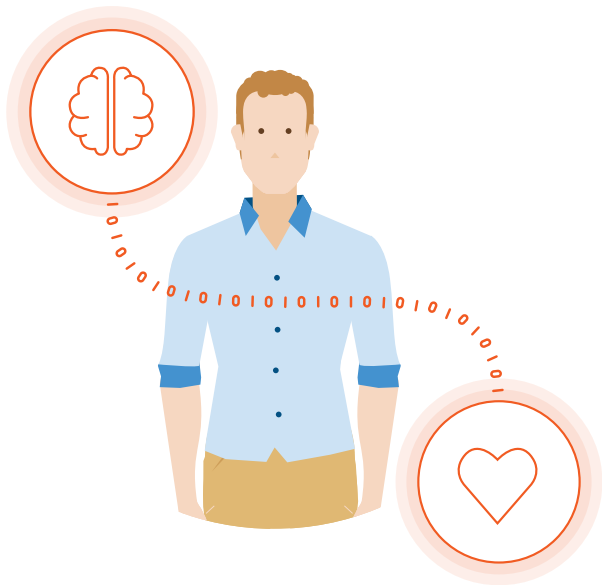
Digital ethics goes beyond compliance to also encompass risk management, product development, marketing, brand and reputation management, corporate citizenship and more. Designers and engineers need to design products according to company ethics frameworks and playbooks that explicitly define ethical values and principles.

Marketing needs to think about how digital products are described, positioned and promoted. And companies need to think beyond the intended use of digital products to unintended uses with negative consequences. If organizations buy and implement third-party technology, they need to think through how that technology reflects their values, as well as the values of their customers, employees and communities.

Sometimes those beliefs won't align. That's when it's most important for companies to be transparent and to take a stand, so customers and employees can make informed responses. That's what [Clarifai](#) did in deciding to continue to provide advanced AI technologies to the U.S. military despite opposition from employees. Its position: "After careful consideration, we determined that the goal for our contribution to Project Maven – to save the lives of soldiers and civilians alike – is unequivocally aligned with our mission." Clear – but costly; the company lost several key employees as a result.

¹ Gartner webinar, "Digital Ethics: When Saying Sorry Is Not Enough," February 23, 2016

Making digital ethics principles public offers a high level of visibility and accountability.



Leaders are acting

Spurred by these concerns, leading companies are moving ahead with digital ethics programs. Some playbooks on digital ethics exist from organizations like Microsoft and the [European Commission](#). In addition, companies are beginning to look at examples from health care, such as institutional review boards (IRBs), which provide ethical and regulatory oversight of research that involves human subjects. The general success of IRBs shows that this type of governing body is the right model. Here are a few examples of approaches companies are taking today:

- Microsoft created an ethical review board and plans to conduct [an ethics review](#) when it builds new products and services. Executives also continually speak out on the need for corporate responsibility.
- AXA funded a separate research division on responsible AI.
- Walmart folded digital ethics into its overall ethics and compliance program under innovation.
- Axon created an [AI and Policing Technology Ethics Board](#) to provide guidance and principles on the development of its AI products and services.

- [Design Vanguard](#), a group of head designers from Fortune 500 companies, developed a designer pledge similar to the [Agile Manifesto](#) for software development.

Organizations are beginning to join ethics consortiums, including the [Partnership on AI](#), and to collaborate with universities to help guide their thinking. While these groups are not the right format for governing bodies, they are beginning to form best practices that companies can use. At Avanade, we participated in a series of digital ethics summits that included Fortune 500 companies, universities and governments, resulting in this simple prioritized guide for designers and developers:

1. Build trust with users
2. Maximize effectiveness and efficiency
3. Make transparent and consensual use of data
4. Minimize harm
5. Share learnings

While the principles being developed across organizations will not solve all digital ethics problems, they can provide support for a company's core business values and culture. Making these principles public offers a high level of visibility and accountability – necessary for building and maintaining trusted relationships with customers and employees alike.

Make difficult product development choices and be transparent about the ethical principles that drive them.

Make an ethics playbook readily accessible and find ways and reasons to direct employees to it on a continual basis.

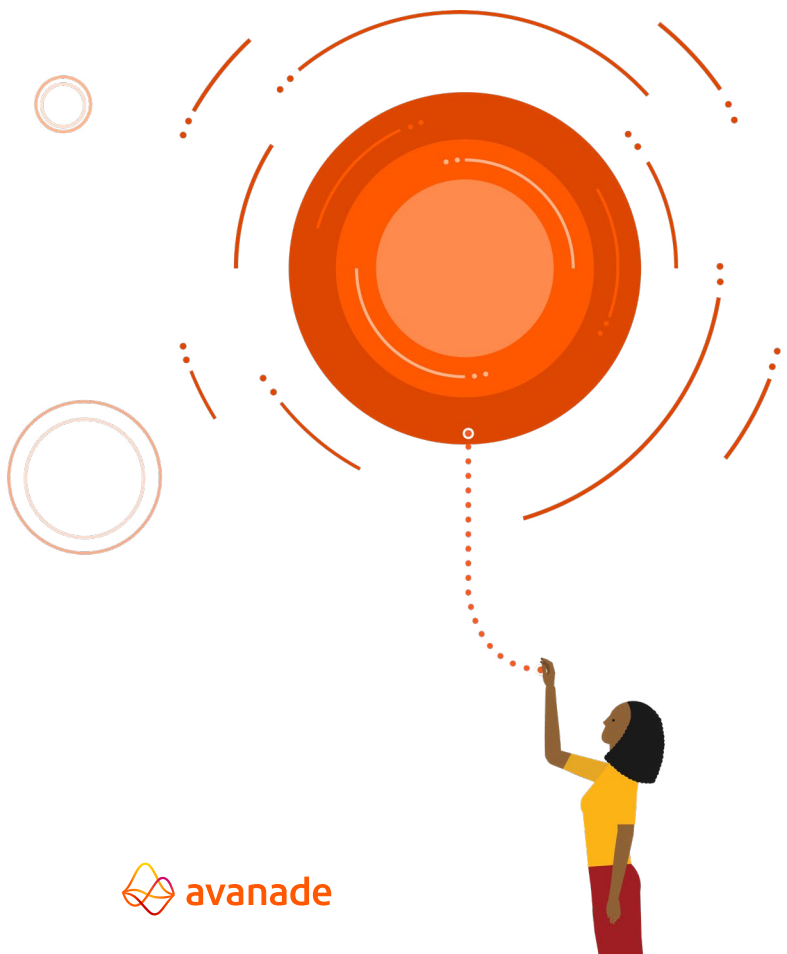
What to do now

There is no single guide to digital ethics, but there are steps organizations can take today. Here are three foundational components that every organization needs:

- **Make difficult product development choices** and be transparent about the ethical principles that drive them. Think beyond the boundaries of your enterprise. Require partners, suppliers and contractors to abide by the same digital ethics framework that you apply to your own company, much as you now require them to adhere to your other legal and compliance policies.
- **Implement ethics-by-design** for product design and risk management programs. Ensure proactive communication both about potential ethical

problems and about how to manage actual problems when they occur. This approach provides employees with a common ethical direction as they design and build new products, services and experiences. Make an ethics playbook readily accessible and find ways and reasons to direct employees to it on a continual basis.

- **Speak out.** Join a forum in your industry or community to share and learn about best practices to implement in your organization. Speak up about your company's public policy recommendations regarding digital ethics. For example, [Microsoft's president and chief legal officer, Brad Smith, has advocated publicly](#) for new laws to help companies address digital ethics.



Implementing digital ethics is a change-management process; treat it like one, with multiple forms of training, incentives and reinforcement of behavioral change.

What to do next

Once you have these basics in place, we recommend additional actions, including:

- **Hire ethics hackers to drive digital ethics efforts.** Ethics hackers can help you identify the social risks of your new services and technologies. Much as traditional hackers identify security vulnerabilities, ethics hackers might identify bias in AI algorithms. Similarly, ethics reviewers might work with designers and software engineers to test and validate algorithms, data sources and requirements for bias.
- **Launch an inclusive ethics change program** to educate employees about their evolving roles. Cultivate the trust and openness that are needed within the organization for new processes and behaviors related to digital ethics to take root. Implementing digital ethics is a change-management process; treat it like one, with multiple forms of training, incentives and reinforcement of behavioral change.

- **Provide the tools employees need** to ensure they're making the right ethical choices. You already have compliance and risk management tools – include them and build out a toolset beyond them, such as one that reviews and keeps track of AI algorithms with potential data bias.



Digital ethics needs to be the responsibility of everyone in a company.



Questions to get you started

Steering committees, advisory councils and centers of excellence are great, but digital ethics needs to be the responsibility of everyone in a company. Exactly how digital ethics plays out as an employee's responsibility depends, of course, on the employee's role. Here are cross-industry questions we use to help clients develop digital ethics frameworks and implementations. We start with these before getting into specific industry and market questions.

Organizational values and governance: Do your organization's values address ethical behaviors? Does your organization's ethics agenda cover technologies and innovations?

Data sources and use: Do you know where all your data comes from and how you'll use what you collect? Have you studied and understood possible sources of bias in your data and insights?

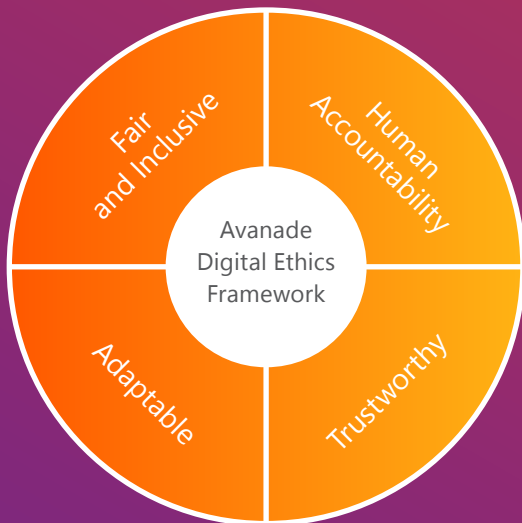
Product innovation and ethics-by-design: Are your product teams made up of diverse backgrounds and opinions that will help identify bias and ethical issues at the earliest stage of design? Do you have a data ethics impact-assessment capability to know how to respond to ethics issues? Can you shut down software if an ethics lapse is exposed?

Employee stakeholders and internal enablement: Do employees have access to routine training on digital and algorithm-based technologies? Do they know how to engage with and manage those technologies ethically?

Customer stakeholders and external transparency: How frequently are digital ethics best practices and customer expectations assessed? In the event of unintended consequences, how are customers and employees alerted?

How Avanade does digital ethics

At Avanade, we created a global cross-functional digital ethics task force, which developed and now guides the application of the company's digital ethics framework, with decisions ultimately being made by our Ethics and Compliance Council. This framework has four components.



Fair and inclusive: Bias in digital systems like AI needs to be identified and expunged so that systems make the same recommendations for everyone with similar characteristics or qualifications. The solutions must address human needs and experiences through design practices that anticipate barriers in products or environments that unintentionally exclude people.

Human accountability: People who design and deploy digital systems must be accountable for how those systems operate. [John Donovan](#), CEO of AT&T Communications, recently noted that “everything that is launched, algorithmically, robotically is owned by a human being.” It’s about building trust, minimizing harm and ensuring human intervention at each significant milestone in the innovation process as a checkpoint for every key action determined by an algorithm.

Trustworthy: A digital system must operate with the consent of the people whose data it uses and about whom it makes or recommends decisions – and that consent must be informed. That is, people must be provided with contextual information to understand how systems operate and make the decisions that affect them, so they can identify potential bias, errors and unintended outcomes.

Adaptable: Digital systems must be designed and tested to ensure that they respond safely to unanticipated situations and do not evolve in ways that are inconsistent with the original expectations. For example, if computer software is used to screen resumes, it’s important that the application does not automatically screen out valid candidates. Like other cloud technologies, systems like AI must comply with privacy laws that regulate the collection, use, storage and protection of data, including personal information.

Beyond the ethics framework, our task force has several goals, which include incorporating digital ethics into employee training and implementing a permanent governance model.

Stay informed

Implementing digital ethics is a key trend we see affecting organizations. [Contact us](#) to help you take action with your ethics journey, including advice on ethics frameworks and governance models. For more information about digital ethics and other trends that will impact you and your business over the next 12 to 18 months, visit us at [Avanade Trendlines](#).



References

Adobe, "[The Ethics of Persuasion](#)," August 17, 2018

AI Now Institute, "[After a Year of Tech Scandals, Our 10 Recommendations for AI](#)," December 6, 2018

BBC, "[Now you can pick the perfect plane seatmate](#)," January 29, 2016

CIO, "[Security crashes the boardroom party](#)," March 30, 2015

CNBC, "[If you have a smart TV, take a closer look at your privacy settings](#)," March 9, 2017

Edelman, "[2019 Edelman Trust Barometer](#)," January 20, 2019

Ethisphere, "[Ethisphere Recognizes 128 World's Most Ethical Companies for 2019](#)," February 26, 2019

European Commission, "[Ethics guidelines for trustworthy AI](#)," April 8, 2019

Fast Company, "[Despite a surge of tech activism, Clarifai plans to push further into government work](#)," December 6, 2018

Fortune, "[Brainstorm Design 2019: The Ethics of Design](#)," March 6, 2019

Geekwire, "[Microsoft will be adding AI ethics to its standard checklist for product release](#)," March 25, 2019

[IF Data Permissions Catalogue](#), "An evolving collection of design patterns for sharing data"

IndustryWeek, "[Being Ethical Has Its Perks: World's Most Ethical Companies](#)," February 26, 2019

Institute for the Future, "[Ethical OS: a guide to anticipating the future impact of today's technology](#)"

MIT Technology Review, "[Why Microsoft Accidentally Unleashed a Neo-Nazi Sexbot](#)," March 24, 2016

Nature, "[The ethics of computer science: this researcher has a controversial proposal](#)," July 26, 2018

The New York Times, "[Is Ethical A.I. Even Possible?](#)" March 1, 2019

Reuters, "[Amazon scraps secret AI recruiting tool that showed bias against women](#)," October 9, 2018

Slate, "[When Is Technology Too Dangerous to Release to the Public?](#)" February 22, 2019

Software Development Times, "[IEEE releases first version of ethics guidelines for automation and intelligent systems](#)," March 25, 2019

The Verge, "[Most smart TVs are tracking you — Vizio just got caught](#)," February 7, 2017

The Washington Post, "[Google failed to notify customers it put microphones in Nest security systems](#)," February 20, 2019

Wired, "[Fei-Fei Li's quest to make AI better for humanity](#)," November 13, 2018

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