

Digital Ethics to
Master Complexity
Navigating AI and
Technology

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Foreword

Advances in Artificial Intelligence (AI) are revolutionizing numerous industries, offering unprecedented capabilities and novel opportunities for innovation. From transforming healthcare diagnostics to professional development, supply chain logistics, and the financial landscape, AI is providing businesses with tools and insights that make them more efficient, responsive, and decisive.

In this fast-moving and competitive business environment, harnessing the power of AI and digital technology is no longer an option, but a necessity. However, the digital transformation of business and organizations presents new challenges and complexities that demand executive attention.

As our State of Generative AI in the Enterprise Quarter one report (German cut) states¹, in Germany, the three primary obstacles to AI adoption, as reported by organizations, are lack of technical talent (41%), lack of governance model (30%), and lack of an adoption strategy (29%).

The last two obstacles in particular highlight the importance of a systematic approach for identifying and managing the complexities and challenges of AI and technology. At Deloitte, we believe that digital ethics is a key enabler of successful digital transformation and a cornerstone for systematically addressing the challenges and complexities raised by technology and AI.

Working with partners across all industries, we recognize that an operationalized digital ethics strategy not only helps businesses gain the trust of customers and stakeholders by ensuring the secure and ethical

handling of data and the deployment of technologies and AI, but also prepares organizations for an increasingly complex regulatory landscape. By identifying and managing potential risks at an early stage, leaders can gain a competitive advantage and prevent costly mistakes and reputational damage. What's more, a clear commitment to ethical practices within the digital sphere also effectively engages employees, fostering a culture of trust and accountability.

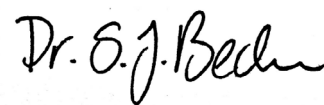
A proactive approach to digital ethics is integral to the success of the digital transformation journey.

There clearly is a need for the strategic advantages digital ethics offers, but business leaders require concrete, practical guidance on how to make digital ethics work for their organizations.

In this study, we outline how business leaders and data and AI executives can build a strategy to operationalize and leverage digital ethics to manage the complexities of digitization and build trust in technology and AI.



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¹ Deloitte, State of Generative AI in the Enterprise Quarter one report – German Cut, 2024

Executive Summary

The unhindered growth of AI and other digital technologies has intensified the need for solid ethical guardrails. The absence of a comprehensive digital ethics framework has the potential to cause significant controversy for organizations by damaging reputations, finances, and trust between customers and stakeholders. This rapid technological transformation makes trustworthiness and reputation more vital than ever.

Digital ethics is a key driver of successful digital transition, systematically addressing the challenges and complexities posed by technology. Digital ethics involves a systematic examination of digital solutions from an ethical viewpoint, assessing the ethical risks and opportunities of digital technologies such as AI. This multifaceted approach identifies, scrutinizes, and manages unintended consequences and stakeholder concerns.

Digital ethics acts as a pivotal guide to the issues that arise while implementing new technologies, bringing order into the

complexity of transformation processes. It deals with the impact on decision-making, product usage, workforce, and reputation. Yet the path to operationalizing digital ethics in organizations proves challenging for most leaders, despite their understanding its necessity.

Organizations can take a wide range of digital ethics actions, such as establishing value-based guidelines, introducing digital ethics boards, and implementing practical tools. But despite the availability of these options and digital ethics becoming a key issue for organizations, there is a capability deficit in its application within business contexts. There are several reasons for this, and the challenges in implementing digital ethics within organizations cover a range of areas: the need for a suitable entry point, closing the gap between values and practice, identifying relevant action fields, securing employee involvement, and setting up effective governance.

A strong C-level commitment is needed to overcome these obstacles. Based on our

experience, the process for operationalizing digital ethics starts with executives taking charge of it, because ethics is not a responsibility that can be handed off. Executives must make digital ethics a part of the agenda, and assign roles and responsibilities while simultaneously allocating adequate resources. Getting the right stakeholders involved requires cultivating an ethical tech mindset as well.

In the generative AI-driven future, the key to trustworthy and therefore successful growth will be to make digital ethics a crucial part of the organization. To stay ahead of the competition, a vast majority of companies has begun testing generative AI technologies, but only a small percentage have formulated specific ethical standards to deal with them. Making the ethical use of generative AI a priority builds trust among customers and partners and to get the most out of generative AI.

“The transformative challenges of today’s evolving tech landscape are vast, but can be navigated with C-level commitment and a solid digital ethics framework.”

Maren Hauptmann, Partner, Portfolio Lead Human Capital



Trust: A Core Differentiator in the Fast-Paced World of Digitalization

The exponential rise of AI has led to its integration into a wide array of use cases that pervade nearly every aspect of our daily lives, including vital domains such as job applications, banking, and healthcare. But as with any transformative technology, the deployment of AI systems can result in unintended consequences. These failures, often imperceptible to non-professionals, require trust in the expertise of AI professionals, and draw a striking analogy to the critical importance of safety procedures in the aviation industry, where trust and reliability over time are paramount.

Learning from real incidents in the past

When we board an aircraft, we inherently trust the safety protocols that protect our life and health. Similarly, in the digital age, our trust is deeply interwoven with the actions that ensure responsible use of technology and data. And both the safety of an airplane and the integrity of a digital system, service, or product are fundamentally reliant on a systematic approach guided by a comprehensive and robust framework. A lapse in airplane safety precautions can lead to a catastrophic event, causing an irreversible breach of trust. Likewise, in the digital sphere, a single digital ethics incident can result in drastic depreciation of user trust.

Considering the increasing number of digital ethics incidents of recent years (monitored by a rising number of civil society institutions such as AlgorithmWatch in

Germany and AI Now Institute in the US), the growing importance of digital ethics becomes strikingly clear. The fast-paced proliferation of AI and other digital technologies has catalyzed the need for robust ethical guardrails. Digital ethics incidents show how the lack of a comprehensive digital ethics framework can result in controversy, reputational and financial damage, and loss of trust among both customers and stakeholders.²

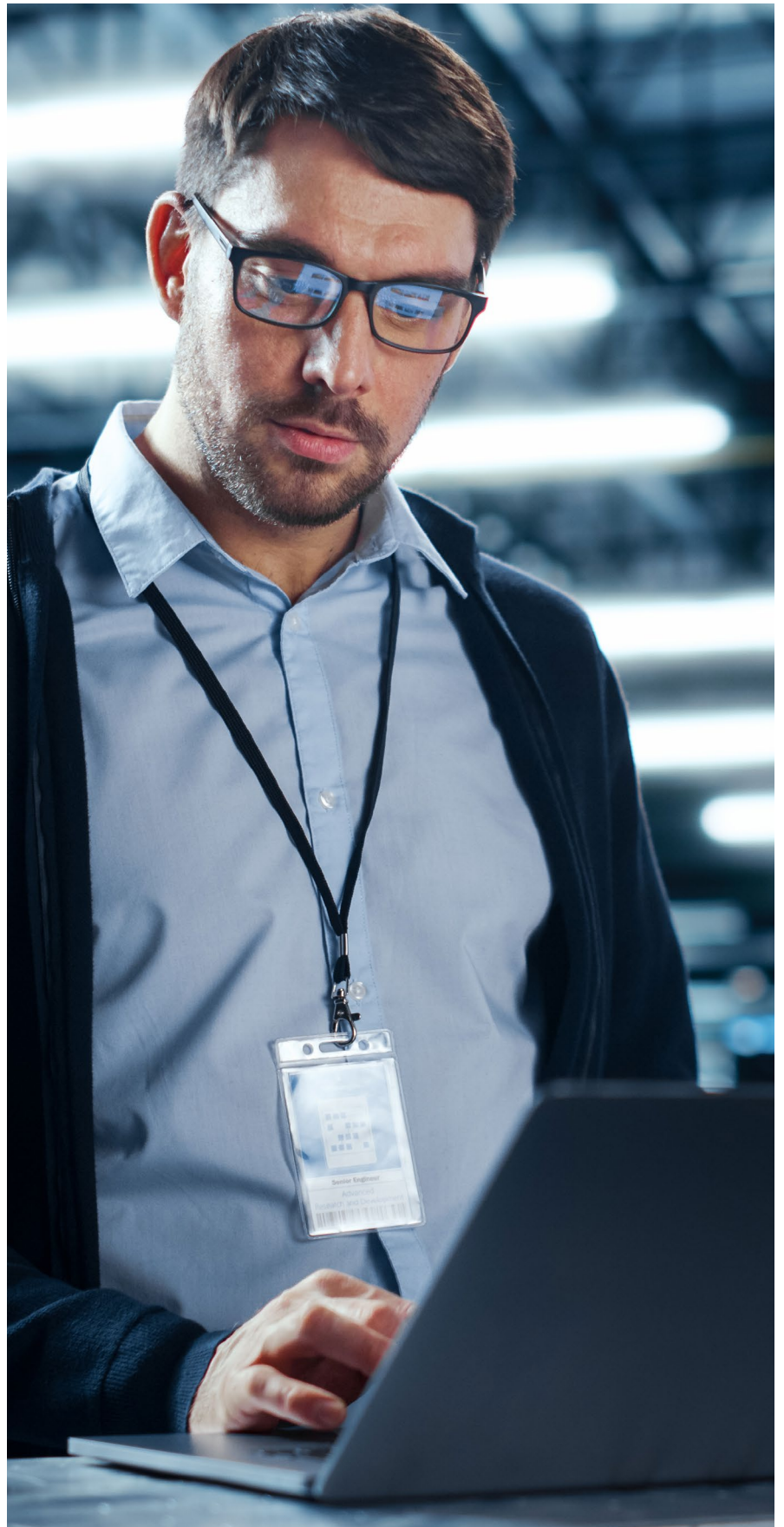
Yet such incidents offer valuable lessons to organizations looking to evolve and improve their products. Each incident provides an opportunity to reassess and tighten existing processes, strategies, and ethical considerations. Businesses can use them to identify potential weaknesses or blind spots in their current systems while gaining a clearer understanding of user demands and ethical expectations. This

leads to product improvement, data policy revision, governance expansion, and enhancement in communication protocols with users. Open acknowledgment and swift resolution of ethical mishaps allows companies to demonstrate their commitment to ethics and engender greater trust among users.

Learning from digital ethics incidents enables organizations not only to refine their products, but to strengthen their reputation as ethically responsible entities in the digital space.



To gain and maintain trust, digital ethics takes a complementary approach to traditional IT security and technical infrastructure. While these elements are certainly critical, digital ethics encompasses a broader perspective. It takes in accountability, fairness, and transparency in the way that digital technologies are developed and deployed. Digital ethics is based on a comprehensive framework that navigates the intersection of technology with societal, legal, and ethical aspects, ensuring a transparent and fair digital landscape and cultivating a sense of responsibility and accountability among organizations by urging them to consider the potential implications and consequences of their digital initiatives.



Trust is the backbone of success

In today's rapidly changing world, trustworthiness and reputation are more important than ever. They are the pillars of resilient, sustainable, and successful organizations in the digital landscape, essential to increasingly complex ecosystems that depend on the availability of high-quality data and user interaction. Trust is often the decisive factor when engaging with digital products³, and customers need to be confident that their data is handled securely, their privacy is respected, and that the organization will act responsibly in case of any issues.

As organizations navigate the digital transformation, employee trust becomes a significant asset. Employees are the driving force behind these transformations, and must have confidence in the digital conduct of the organization. From getting acquainted with new software and capabilities to learning new digital skills, employees must trust that these changes are beneficial to their work and the organization as a whole.

They must also trust in the organization's leadership during this time of fast-paced change, and have faith that the concerns and challenges they encounter during the transition will be addressed promptly and effectively. Trust is the backbone of successful implementation of digital transformation processes, fostering acceptance among employees and streamlining the journey toward a digital future.

But trust also plays a vital role for teams involved in the development of new digital products and services. Developers and

designers must be able to trust in their organization's commitment to ethical digital practices. They need assurance that the products they create will be used responsibly, and not be misused or lead to unintended negative consequences. This fosters a positive work environment where creativity and innovation can thrive, and is a crucial driver in development of useful and responsible digital products. Conversely, unethical behavior or lack of visible attention to ethics can decrease a company's ability to attract and retain talent.⁴

It comes as no surprise that software development professionals have emerged as pioneers in advocating for robust ethical standards while proactively charting their own path. Our in-depth analysis of 91 digital ethical guidelines spanning from 2014 to 2021⁵ reveals that companies operating in software-intensive domains, such as the telecommunications sector and alongside esteemed associations and federations dedicated to fostering excellence in software development and data science, have taken the lead in setting high ethical benchmarks.



Our study "From Corporate Principles to Operationalization: Digital Ethics Guidelines in Europe" analyzes the content and characteristics of publicly available recommendations, guidelines, and principles on the ethical use of data and algorithmic systems.

It showed that since 2016, publication of digital ethics guidelines in Europe has steadily increased. Most ethics guidelines were published in 2018, and 34% of the 91 publications surveyed were published during this period.

Publishers of digital ethics guidelines are primarily non-profit organizations, and 42% of the publications come from this sector. At the same time, companies are the central target group of the guidelines examined, accounting for 56%. This is because it is companies who develop new technologies and establish them in markets. From the publisher perspective, they therefore bear a special responsibility.

Recurring values such as "autonomy", "fairness" and "transparency" can be identified across all documents. The latter comes up most frequently: The value transparency is mentioned in 75% of the publications examined.

Last but not least, 65% of the editors would consider operationalizing digital ethical guidelines. But how integration can be effectively achieved in corporate practice – both strategically and operationally – remains an open question.

³Deloitte, "How enterprise capabilities influence customer trust and behavior", Deloitte Insights Magazine, Issue 31, 2022

⁴Deloitte, "State of Ethics and Trust in Technology, Annual report, Second edition", 2023

⁵idigiT, „Zwischen unternehmenswerten und Operationalisierung – digital-ethischer Umgang mit neuen Technologien“, 2022



Trust thus forms the bedrock of digital transformation

And to build a successful digital future, organizations must earn trust by making digital ethics a priority. Results from the recent State of Digital Trust Report by the Information Systems Audit and Control Association (ISACA)⁶ further highlight the critical importance of digital trust. A substantial majority (84%) of business leaders identified digital trust as being extremely or very important to organizations today, as highlighted by the consequences of the absence of trust:

Findings from the survey show that the benefits of high digital trust include greater availability of more reliable data for decision-making (57%), fewer privacy breaches (56%), stronger customer loyalty (55%), and even higher revenue (27%). However, organizations experiencing low digital trust face severe consequences, including a decline in reputation (63%), increased cybersecurity incidents (59%), more privacy breaches (58%), and loss of customers (56%). Low digital trust was also found to have a direct negative impact on revenue (52%).

This data clearly demonstrates the strategic value of building and maintaining digital trust as an integral constituent of an organization's digital transformation journey. But what can business leaders do to build trust amid rapid change and the complexities of digital transformation?

⁶ISACA, "State of Digital Trust 2023", May 9, 2023

Building Trust and Driving Change through Digital Ethics

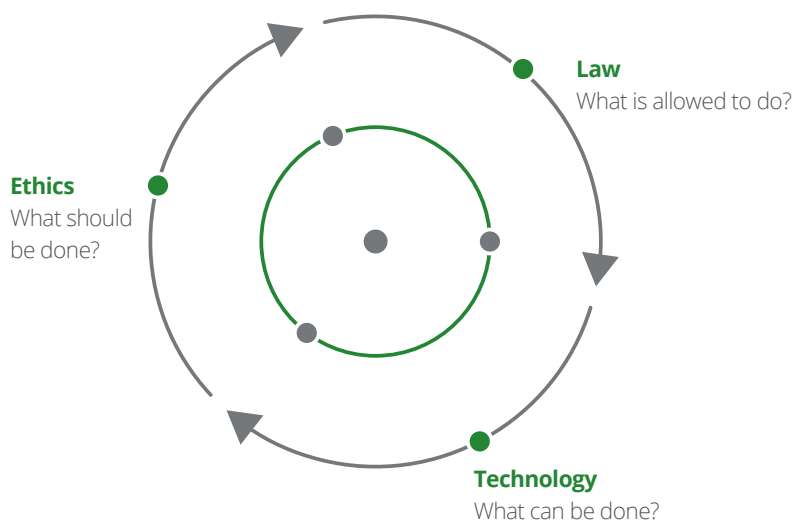
What is digital ethics?

Digital ethics is a systematic, multifaceted approach to examining digital solutions from an ethical perspective. It assesses AI and other digital technologies in terms of their ethical risks and opportunities. Unintended consequences, as well as the concerns and hopes of relevant stakeholders, are actively uncovered, evaluated, and made manageable. The main objective of digital ethics is to enhance positive impact while mitigating negative consequences to create trustworthy digital solutions.

Navigating the growing complexity and uncertainty of digital transformation is a major challenge for leaders, especially when using new technologies like AI. Leaders are oscillating between a technical perspective (What can be done?), a legal perspective (What is allowed?) and an ethical perspective (What should be done?). While there is a critical understanding of the need to address technological and legal considerations with a systematic approach, most leaders struggle when it comes to providing employees with a systematic and informed methodology to address the baseline question of “should” and “how”. This is where digital ethics comes in: Once the technological and legal aspects of implementation have been clarified, it is important to acknowledge

that there are still open questions in the project design. Aspects that remain uncertain within the domain of technology and law can be addressed through an ethical lens. Digital ethics provides the framework to navigate and resolve these outstanding questions by integrating principles and value-based considerations into digital activities. Taking a deep dive into ethical considerations lets organizations align their initiatives with values that promote long-term value creation and prepare for future regulation.

Fig. 1 - In today's competitive business environment, digital ethics is increasingly recognized as a pivotal decision-making tool for leaders to fill in the gray zone between what is allowed and what can be done to gain decisive competitive advantages



Source: Deloitte analysis, 2023

Example: Managing transformation issues

Digital ethics functions as a pivotal guide in the uncertain sphere of technological progression, acting as a crucial pillar of trust-building within organizations. Let's look at an example for a wide-ranging transformation. When planning the implementation of artificial intelligence (AI), either at product or organizational level, leaders grapple with a multitude of issues. These issues arise at various stages, from decision-making to product usage to workforce to reputation, and demonstrate the breadth of areas where digital ethics comes into play.

Decision-making

The promise of AI in organizational practices revolves around enhancing decision-making processes via data-driven insights. This not only reduces reliance on human intuition, it empowers businesses to make more informed, strategic choices. AI is driving new capabilities like predictive analysis and real-time data processing, which provide an unprecedented level of

accuracy in forecasting. This, in turn, enables businesses to proactively anticipate market trends and customer needs, resulting in improved planning efficiency. Furthermore, the power of AI to process vast datasets and unravel complex patterns can expedite decision-making processes significantly, but requires the right setup.

Product usage

Here, the focus is on the users of digital products or services and their behavior. The objective lies in fostering the development of successful products and services. AI, while invoking a set of traditional questions similar to those raised by other digital products and services of the past, also presents wholly unique issues that haven't been confronted before, adding a new layer of complexity to the dialogue.

Workforce

The integration of AI into the workforce will lead to profound transformation. AI has the potential to automate repetitive and mundane tasks, thereby enhancing productivity, reducing human error, and

allowing workers to focus more on the creative, strategic, and interpersonal aspects of their roles. But this shift also poses challenges, since the introduction of AI may lead to the need for reskilling and upskilling initiatives. AI thus stands to revolutionize how we work, but requires proactive action to ensure an inclusive and fair transition into this new era.

Reputation

Another issue involves the organization's image, which can be put at risk by the rash introduction of AI. Hastily implementing AI into organizational processes can lead to reputational risk. For instance, without rigorous testing and scrutiny, AI could produce flawed or inaccurate results, damaging the reputation for quality and reliability. Moreover, if these systems are introduced without robust security and privacy safeguards, breaches in data privacy that corrode customer trust could tarnish the organization's standing. And without an appropriate audit for biases, AI systems could produce outcomes perceived as unfair or discriminatory.



Considering the nature of the issues above and their potential triggers, three key areas of focus emerge in the context of AI implementation. These areas can all be addressed with the help of digital ethics.

- **Technology-inherent uncertainties:**

The use of AI involves navigating a series of potential hazards. Among these risks, bias in AI algorithms stands prominent because it can introduce unfairness and perpetuate societal biases. Another is maintaining high data quality, crucial to enabling accurate and reliable decision-making. Lastly, organizations must be vigilant in addressing programming errors, which can lead to unintended consequences or even exploitation.

- **Organizational readiness:**

Smooth implementation and adoption of AI requires key considerations, including governance, ownership, and organizational design. Ensuring effective governance structures is crucial to mitigating the risks associated with AI, such as data privacy breaches and unethical use of technology. Clear ownership helps to clarify accountability and responsibilities, reducing the potential for conflicts of interest and misaligned objectives. Organizational design that is prepared for responsible AI deployment involves cultivating a culture that prioritizes ethical decision-making, adapts to technological advancement, and proactively manages risks and challenges.

- **Human buy-in:**

The advent of AI systems carries significant implications for the workforce, particularly in the field of HR. Various tasks such as performance management and employee support now benefit from AI assistance, but these advancements raise valid concerns regarding the validation and monitoring processes of these systems. It is crucial to introduce AI-enabled solutions in a way that fosters stakeholder trust.

Leaders need a robust approach to manage these uncertainties as they face intense market pressure to develop and deploy AI applications. Understanding and navigating these uncertainties not only promotes trust within the organization, it fosters confidence with external stakeholders. Adherence to digital ethics thus leads to enhanced credibility and a fortified reputation in the marketplace, creating a cornerstone for the maintenance and enhancement of trust in this era of rapid technological evolution.



Digital ethics...

- ...helps to define how an organization can identify and address AI-inherent uncertainties e.g., by implementing ethical assessment of digital applications.
- ...plays a critical role in establishing effective governance for responsible AI and digital practices. Providing frameworks enables organizations to define clear responsibilities, roles, and processes, helping to create a secure environment for employees and ensuring they can navigate the rapidly changing landscape with confidence. Moreover, digital ethics fosters a vibrant culture where the use of AI applications is seen as a trusted asset that promotes innovation.
- ...provides for comprehensive tool kits that equip employees with the necessary resources to identify and address digital ethics issues in their day-to-day work, particularly in product development, deployment, and usage. These tool kits serve as valuable guides, enabling employees to navigate the complex ethical landscape surrounding emerging technologies. By recognizing the critical role of individuals in upholding ethical standards, digital-ethics tool kits serve as a valuable resource that enhances awareness and accountability, and encourages ethical behavior across the organization.



From Concept to Practice: Overcoming the Operationalization Challenge

Closing the gap with practical action

As described above, digital ethics can provide answers to pressing questions, and supports decision-making in the business context. There are several options for integrating digital ethics into practice at various levels.

A common approach is the establishment of value-based guidelines. As previously mentioned, from 2015 to 2021 there was an increase in the publication of ethical guidelines for data use and AI practices. Notably, about a third of these came from profit-driven companies outlining their own fundamental values.

Digital ethical guidelines act as a bridge by filling the gap between legal regulation and societal and ethical requirements. Many companies leverage digital technologies to optimize their services and processes, but a precise legal framework for many of these technologies and their potential uses remains absent, leading to gray areas. These guidelines are foundational to digital ethical concepts, embodying the values that set the stage for all ensuing action. Such values dictate organization activity. For instance, the “explainability” value asserts that data models relying on reinforcement or unsupervised learning methods should have procedures in place to clarify their workings. This is particularly important as complexities arise with such models. Digital ethical principles and guidelines provide a much-needed orientation

for many companies dealing with technology projects. Value-derived requirements can transition into guiding principles and governance processes for the structuring of digital projects. These principles not only impact operationalization when applied to specific projects using tools and assessments, they also shape corporate culture and internal communication.

“To master the complexity of AI, we need to bridge the gap between principles and practice, with digital ethics being the key to success.”

Dr. Sarah J. Becker, Partner, Lead Digital Ethics

Digital ethics is also embedded at the governance level within an organization. It centers on defining clear roles, decision-making powers and responsibilities for much faster and reliable decision-making. This process aids in managing digital ethical risk and provides employees with a sense of security in case of digital ethical issues. One method of integrating digital ethics into governance is by establishing digital ethics boards. These boards provide a reflective platform for strategic questions from various departments. A board's composition and level of decision-making authority can vary, sometimes acting as a purely advisory body, and sometimes having decision-making powers. Such structures enhance overall governance consistency while increasing the visibility of digital ethical practices, both within and outside the organization.

On a third level, operationalizing digital ethics effectively involves practical tools that render these ethics usable in routine work environments. Digital ethical issues may surface across diverse departments in various situations, and many organizations find it challenging to discern what should be labeled as “critical” from a digital ethics perspective. Digital ethics tools play a crucial part here. These tools, full-fledged for integration into existing workflows, heighten awareness of relevant risks, functioning as aids by directing processes. They are comprised of checklists, standards, assessments, trainings, labels and the like, and implemented either manually, or, in certain instances, automatically within software programs. Comprehensive methodologies are also available for risk assessment and mitigation.

While organizations and individuals recognize the significance of ethical considerations in technology-driven decision-making, the successful operationalization of digital ethics remains a complex challenge. And despite the mainstream recognition of digital ethics as highlighted by Gartner (2022), many digital leaders, including Chief Data Officers and Chief Digital Officers, often lack the strategy, experience, and knowledge required to implement digital ethics within their organizations.

The complexities stem from the fast-paced evolution of technology, broad-ranging impacts on different organizational functions, and the lack of clear regulatory guidelines, among others. This often results in a significant capacity gap that creates a disparity between understanding the importance of digital ethics and effectively implementing them into the business landscape.

Yet despite these hurdles, the potential benefits of operationalizing digital ethics are immense. Digital ethics can foster trust among consumers, encourage responsible innovation, strengthen brand reputation, and provide a competitive advantage. Organizations must build their capabilities to operationalize digital ethics, investing in both technology and human skills.

The following section outlines the most important fields of action.





Critical challenges

The challenges that organizations must overcome in operationalizing digital ethics can be summarized into five approaches at different levels: (1) creating a suitable entry point, (2) bridging the gap between values and practice, (3) identifying relevant fields of action, (4) ensuring employee commitment, (5) establishing effective governance.

1. Creating a suitable entry point

One of the initial challenges of addressing digital ethics is finding the right starting point to lay a strong foundation. This entails developing suitable digital ethical guidelines on multiple purposes. First, these guidelines help companies define what digital ethics means for their specific industry and outline their own approach to ethical considerations. Second, digital ethics guidelines also act as a commitment tool, guiding employees and demonstrating to external stakeholders the principles that steer the organization. It is important to note that there is no one-size-fits-all solution. The challenge lies in aligning existing organizational values with the unique demands of the digital landscape, while also considering the evolving regulatory landscape in specific industries.



2. Bridging the gap between values and practice

The next challenge for companies is to ensure that the guidelines are effectively implemented so that they truly serve as guiding values. This is crucial to avoid erosion of stakeholder trust and prevent the perception of “ethics washing”.⁷ Digital ethics guidelines should be operationalized throughout the organization, employing a range of actions at all levels.

These actions include both the above-mentioned practical tools for day-to-day work and the governance structures that provide guidance. Solutions must be applicable at different stages of projects – from use-case development and design to data collection, testing, deployment, and monitoring – and scrutinizing their specific organizational structures and practices to choose the most relevant set of tools remains a challenge.

“Many of the technological challenges of AI can be managed over time. What remains are questions of digital ethics and organizational hurdles that need clear governance.”

Dr. Björn Bringmann, Managing Director, Deloitte AI Institute

⁷ Becker, S.J., Nemat, A.T., Lucas, S. et al., “A Code of Digital Ethics: laying the foundation for digital ethics in a science and technology company”, *AI & Soc* 38, 2629–2639 (2023). <https://doi.org/10.1007/s00146-021-01376-w>



3. Identifying relevant fields of action

One of the key challenges of digital ethics lies in the identification of relevant application fields. Given their vast scope and the implications, it can be difficult for organizations to pinpoint and prioritize the areas where digital ethics are most applicable. Understanding where digital ethical issues are likely to crop up is crucial to making informed decisions, including where to implement tools and initiate employee training.

This gives rise to questions: What are the specific use cases that are most likely to spawn digital-ethical concerns? Which departments are most likely to encounter these issues? And which use cases demand immediate attention? Answering these questions requires a systematic approach, and the conclusions reached are heavily contingent upon the extent of the organization's digital maturity. Indeed, the greater the level of digitalization in an organization's products and processes, the higher the magnitude of digital ethical risk to address.



4. Ensuring employee commitment

Another challenge is to ensure employee awareness of digital ethics and thereby of the responsible use of digital technologies. Employees play a central role in driving digital transformation, as evidenced by a study in which the majority of organizations identified increased adoption of new technology and digital access as key drivers of change⁸. With digital tools being used across departments, it is essential for every employee to have a basic understanding of digital-ethical issues.

As technology and digital literacy become increasingly important to successful digital transformation⁹, employees working in areas like data analytics, data science, and data engineering are expected to combine knowledge of technical skills with socio-ethical awareness. To support employees, organizations can develop manuals, training programs, and workshops to keep up with the rapid changes in the digital landscape.



5. Establishing effective governance

Digital ethics cannot be treated as a peripheral matter and must be firmly integrated into both the organization and personnel. Its impact on various workflows makes having a dedicated central coordination office beneficial, and also makes assigning ownership of digital ethical actions to the appropriate department and/or individuals important. But finding a solution tailored to an organization's needs can be a challenge, potentially involving the creation of new roles or redefining existing ones.

Likewise and at a more individual level, it is essential to assign responsibilities to employees engaged in core organizational processes. They should be encouraged to act responsibly when using or designing digital technologies, which overlaps with ensuring employee commitment.

In our experience and regardless of the approach chosen, digital ethics requires strong leadership commitment to a comprehensive strategy that is operationalized within individual departments.

These challenges are vast but can be solved with C-level commitment and a solid digital ethics framework.

⁸World Economic Forum, "Future of Jobs Report 2023", May 2023

⁹Ibid.

Getting Started: A Roadmap for Business Leaders to Act with Confidence

The initial approach to digital ethics can vary significantly across organizations, depending on whether it seeks to adopt a proactive stance or respond to specific use cases that have already emerged. Either way, executives are the ones tasked with putting digital ethics into practice. It is important to create a setup that enables people inside the organization to operate accordingly. The following recommendations include key considerations every digital leader needs to be aware of.

Responsibility for digital ethics can't be handed over

It is important to realize that the operationalization of digital ethics is an ongoing process. It requires consistent reinforcement via communication, active demonstration, and regular reviews. Only by embedding these practices into the organization's DNA can businesses ensure adherence to digital ethics and achieve their strategic goals. It must be the executives who kick start digital ethics – it's not going away, and it can't be outsourced.

One of the main challenges in operationalizing digital ethics is that it's not a standalone field but has far-reaching and cross-divisional implications, both explicit and implicit. To navigate this multifaceted landscape, leadership must act as the binding force, bringing together different departments, competencies, and perspectives. Leaders must integrate diverse viewpoints into the decision-making

process by ensuring technical solutions are sensitive to safety and security, developer teams are aware of the diverse implications of AI usage, and marketing teams consider digital ethical factors when using customer data. The fast-paced evolution of technology implies that new digital ethics challenges will continuously emerge, requiring leaders to stay ahead of the latest developments, potential implications, and best practices.

Making digital ethics a part of the organization's agenda

Once the decision for getting started with digital ethics has been made, strong leadership support must signal commitment to employees, partners, clients, and customers. It is the task of executives to make digital ethics a genuine part of an organization's agenda.

One way to do so is by developing a digital ethics strategy that undertakes a digital ethics status quo and maturity analysis within the organization. This entails delving deeply into existing practices, identifying any current ethical risks or challenges, and evaluating the level of maturity of the organization in dealing with digital ethical issues. It also includes identifying different stakeholders and departments that might already be dealing with digital ethics or related fields. By the same token, executives must learn from other's mistakes and use existing AI incident data bases to understand the common challenges they

face. This will allow them to identify the most important fields of action and lay the foundation for a systematic and holistic digital ethics strategy.

Establishing digital ethics principles and guidelines fit for further operationalization is essential to laying the foundation for all subsequent initiatives. These principles serve as the ethical compass for the organization, guiding decision-making and setting standards for behavior in the digital landscape. They may encompass data privacy and security, transparency, accountability, inclusivity, and environmental factors. Operationalized effectively, these principles become the fundamental building blocks upon which all digital ethics activity is constructed and continuously monitored.

They also provide a crucial benchmark against which performance can be measured and evaluated. By explicitly defining what is acceptable and what isn't, principles and guidelines ensure a unified understanding and application of digital ethics, thereby driving an organization-wide culture of digital ethics that permeates every action. Achieving this critical benchmark positions organizations to successfully navigate the complexities presented by the digital world.

Assigning roles and responsibilities and allocating resources

To put principles and guidelines into practice, executives must establish processes aligned with clear roles and responsibilities so that digital ethics actions are implemented across the organization in accordance with the core values and mission of the organization. A target governance structure must ensure the implementation of digital ethics actions across all levels and departmental silos of the organization.

This includes creating a unified approach to digital ethics that aligns with the organization's overarching vision and mission, making digital ethics less of an add-on and more an integral part of organizational culture and identity. This holistic approach helps foster a work environment where digital ethics are woven into the fabric of everyday operations and decision-making processes, making them a natural and reflexive part of the organization's behavior, rather than an externally imposed requirement.

What's more, adequate resources must be allocated so that digital ethics can have an impact. Otherwise, those responsible will struggle to fulfill their tasks, as a study by Stanford University points out. According to the paper, employees in charge of digital ethics often "lack institutional support, rarely made a priority in product development cycles, disincentivized by metrics, and disrupted by the frequent reorganization of teams."¹⁰ Executives must calculate a budget and assign limited decision-making authority.

Creating an ethical tech mindset

It is also important to effectively communicate with the workforce in order to create an ethical tech mindset that fuels all business activities. A big part of applying digital ethics is the development of detailed manuals and comprehensive training programs in the fields of data analytics and AI. These resources should unambiguously delineate the digital ethics principles and values to be adhered to in all related areas, for example from the initial stages of data collection or use-case ideation through to data processing and eventually, data usage and development. This clear articulation of standards and expectations helps prevent ambiguous interpretations and fosters uniform understanding across the entire organization.

This requires regular and targeted training to spread these guidelines across the organization and facilitate the practical application of digital ethics principles. This holistic approach ensures that every individual within the organization understands the standards pertinent to their roles and is equipped to effectively incorporate them into their everyday operations.

This structured approach transforms digital ethics from a restrictive factor to an enabling mechanism. By using digital ethics as a guide right from the ideation stage through to product release, potential ethical pitfalls are proactively addressed, fostering customer and stakeholder trust. This brings digital ethics to the forefront of growth and innovation and allows organizations to explore new digital landscapes with confidence and responsibility, maintaining ethical integrity while reaping the benefits of novel and innovative digital offerings. Digital ethics acts as an enabler, driving responsible innovation and opening up new possibilities for organizations.

Generally, companies who adopt digital ethics should communicate it far and wide. This promotes awareness of their own initiatives and inspires others to embrace digital ethics. The communication strategies in this domain serve multifarious purposes. Firstly, they allow companies to publicly present themselves conveying an image of trustworthiness in handling data and algorithms. Secondly, they boost the visibility of "digital ethics", propelling its discourse. Along with catering to conventional public relations, communication with shareholders and investors remains a significant concern. In such cases, digital ethics reporting can play a vital role. A thorough report detailing a company's engagement in digital ethics helps foster trust among clients and assures shareholders and investors of its commitment to these principles. Even though digital ethics is currently not explicitly included in ESG criteria (although they overlap), it may well be incorporated in the future.

¹⁰Sanna J. Ali, Angèle Christin, Andrew Smart, Riitta Katila, "Walking the Walk of AI Ethics: Organizational Challenges and the Individualization of Risk among Ethics Entrepreneurs", ACM FAccT '23, May 16, 2023

What's next? Ethical Use of Generative AI

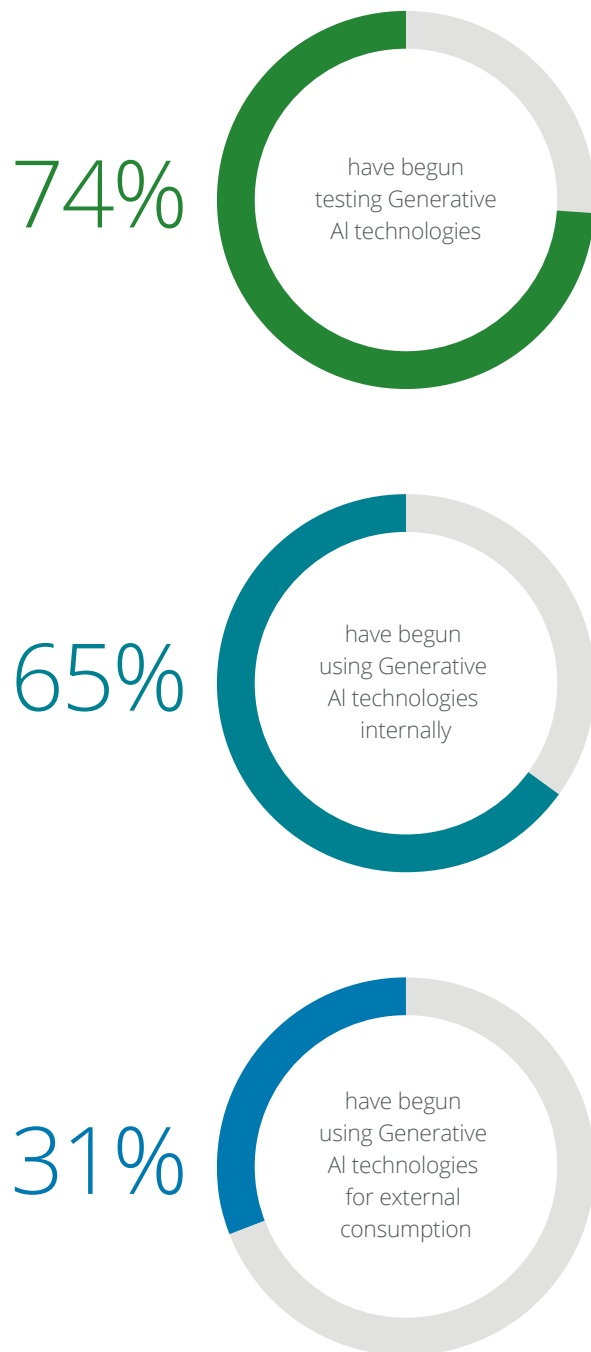
As mentioned in the introduction, the boom in AI applications is contributing to the need for organizations to address digital ethics and digital trust in order to remain competitive. It is already apparent that generative AI in particular acts as an accelerator of these issues since its diverse use cases offer quickly realized opportunities, but also entail risks.

Besides the known limitations of current generative AI models like hallucination, bias, lack of human reasoning and a limited context window, adoption rates are high. According to the second edition of the Deloitte Annual report on the State of Ethics and Trust in Technology, 74 percent of the companies surveyed say that they have begun testing generative AI technology, yet only 11 percent have a specific ethical framework to deal with the issues.

It is crucial for organizations to dig deeper into the ethics surrounding the deployment of generative AI technologies. Effective management of the associated risks and challenges requires well-crafted ethical guidelines. Striking a balance between tapping into the potential of generative AI while navigating the known restrictions is key. For instance, strategies that mitigate the issues of hallucination, bias, insufficient human reasoning, and limited context window should be thoroughly developed and incorporated into ongoing AI practices.

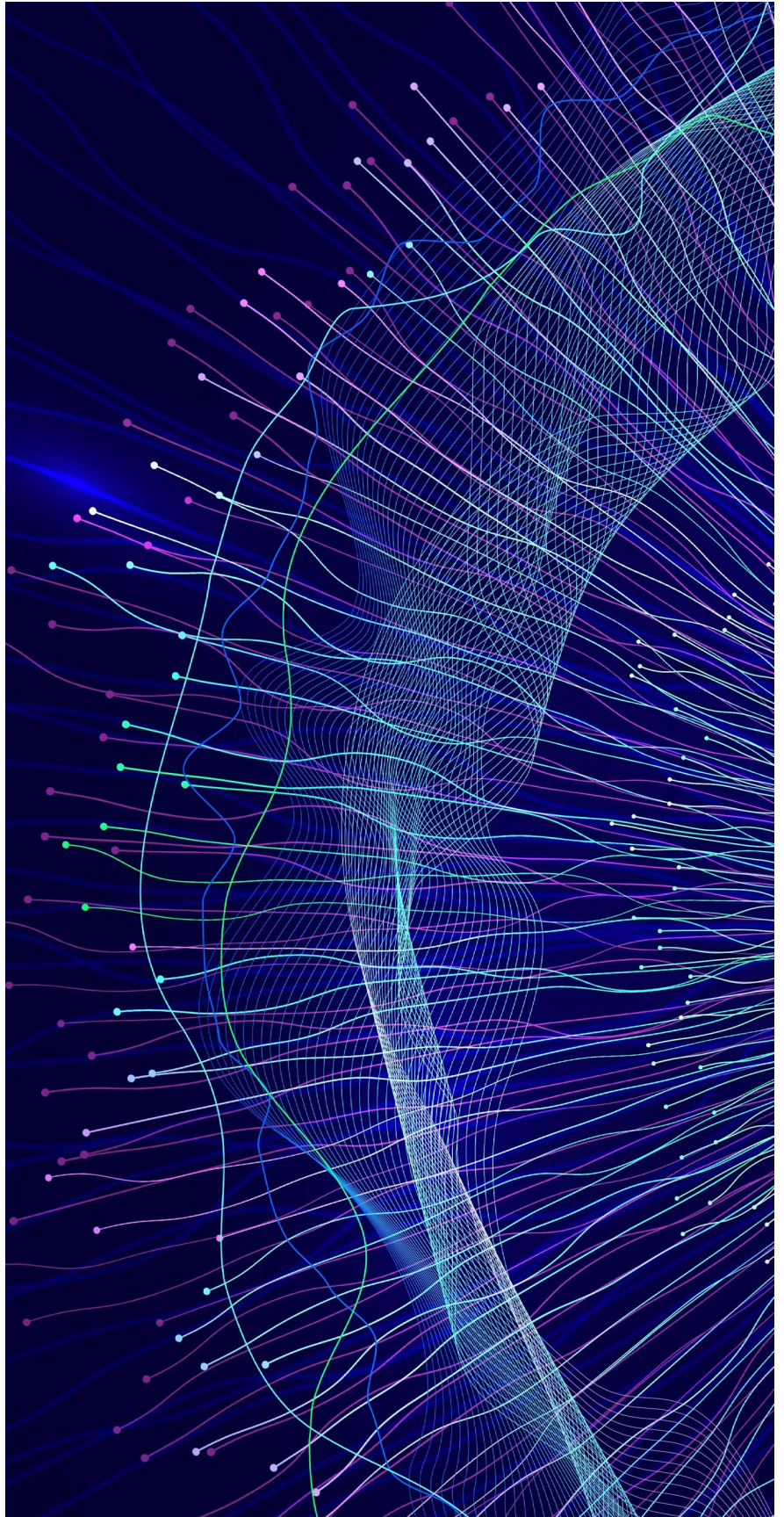
In conclusion, it is evident that generative AI technologies harbor massive potential, but their ethical ramifications cannot be overlooked. To stay competitive while ensuring ethical use, organizations must invest not just in machine learning skills but in their ethical understanding. This will ensure that future advances in generative AI are built on a strong ethical foundation and foster trust among stakeholders.

Fig. 2 – Use of GenAI in the industry, Source: Deloitte, "State of Ethics and Trust in Technology, Annual report, Second edition", 2023



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In conclusion, it is evident that generative AI technologies harbor massive potential, but their ethical ramifications cannot be overlooked. To stay competitive while ensuring ethical use, organizations must invest not just in machine learning skills but in their ethical understanding. This will ensure that future advances in generative AI are built on a strong ethical foundation and foster trust among stakeholders.



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