

Digital Ethics: breaking down complexity to enable practical action

WHITEPAPER





Introduction

Organisations of all kinds are transforming and being transformed by digital technology, responding to strong and ever-changing market pressure and the continual emergence of new technologies. They are making huge investments in critical digital infrastructure and reshaping business models.

Technology has had wide-reaching positive effects on people and society: finding new cures for diseases and amplifying their reach across populations, connecting people with friends and family thousands of miles away, and allowing businesses to scale in ways that would previously have been impossible.

However, the downsides of digital technology are also becoming increasingly clear. Technology is not inherently good or bad, but its ability to amplify and accelerate change of all kinds impels us to take responsibility for managing its impact. The complexity of technology means that unintended consequences are difficult to anticipate and plan for, and

legislation is failing to keep pace. Today, we are faced with historically big challenges – from feeding more than 7 billion people to fighting economic disparity. Digital technology will have a role to play in solving these problems, but we will only be truly successful if we change the way we build and use it, putting ethical values at the centre of our work.

Digital technology has already changed the way we work, live and play forever. It is now more evident than ever that it is also changing whole societies and institutions, and it is progressively taking over our lives and changing how we think about our most important relationships. The technologies that are driving the biggest changes are owned by an ever-smaller number of companies, giving these players disproportionate power in markets and society. Meanwhile, national and international legal systems are struggling to keep up with appropriate regulation. Key pillars of society – democratic institutions, and a free, accountable and trustworthy media – are under threat.

Growing awareness of potential consequences is resulting not just in fear, but in demand for action

More than a decade into the full digital revolution, we can see evidence of both the benefits and the unintended consequences of the technology we use today, as well as the potential for more serious problems in the future. Meanwhile, the public is increasingly aware of related issues such as economic disparity, environmental degradation, and political instability. The seemingly unstoppable proliferation of digital technology is raising fears and eroding trust in businesses and institutions of all kinds – and people are starting to demand action.

High profile cases like Cambridge Analytica have cast a light on unexpected ways that digital technology can impact our lives and society. The market is also responding – Facebook shares fell more than 24% within 10 days of the public reports, temporarily losing around \$134bn in market value in the process¹. While policymakers race to catch up with citizens' expectations of ethical digital practices, businesses have strong incentives to start designing solutions that reflect these values.

Digital Ethics is not just about AI

Much of the discussion about trustworthy and ethical digital technology has been focused on AI and the impact it might have on society in the future. However, there are critical challenges concerning all technology that we have to start addressing today. For years before AI entered the mainstream, technology was affecting workers and jobs, had implications for

diversity & accessibility, and was generating unforeseen levels of emissions which impacted the environment. As all organisations become digital organisations, we must all prepare for new questions and challenges, unique to the technology we use and the domain we apply it to, to ensure that all technology aligns with our human and ethical values.

We must all prepare for new questions and challenges.



Sopra Steria's Vision & Principles

At Sopra Steria, we want to use technology as a force for good, contributing to a positive future and improving people's lives

Sopra Steria is a European leader in digital transformation with over 46,500 employees across 25 countries. We are trusted by leading private and public organisations to deliver successful transformation programmes that address their most complex and critical business challenges. Our comprehensive understanding of technologies, combined with our firmly-grounded ethical principles – as demonstrated by our robust Sustainability and CR credentials – have also made us a leader and natural partner in the Digital Ethics debate.

We are working to move from the philosophical to the practical, collaborating with a range of stakeholders and industry groups to shape a better future, while helping organisations navigate the challenges of Digital Ethics today, leading to better business outcomes now.

We promote and embed the following five principles:

1 Digital Ethics is not just about technology, it is about people and trust

Although the challenges discussed here arise from technology, Digital Ethics is about making changes within organisations to protect people and ensure healthy societies and economies. For organisations of all kinds, managing the ethical issues arising from digital technology is a way to build and sustain trust with stakeholders, which in turn creates value. In the Digital Age, trust is becoming a precious asset, a differentiator and a unique selling point.

2 Legal compliance is necessary but not sufficient

Organisations cannot use compliance with the law as the benchmark for good practice. When it comes to Digital Ethics, national and international regulation has not kept pace with technology and the technology market. Consumer demands are pushing the pace of change, and organisations will have to respond quickly to survive.

3 Digital Ethics must be considered throughout the technology and business lifecycle

Organisations must move from relegating ethics to single departments (e.g. CSR or Legal) and relying solely on policy to drive change. Making Digital Ethics a truly integrated way of working will yield better technology solutions, improve brand reputation, engage clients, employees, and regulators, and help to future-proof the organisation.

On the business side, Digital Ethics should be integrated into strategy, planning, governance, responsibility & accountability, risk management, and culture.

On the technology side, we work to embed Digital Ethics principles from design, to resourcing, to implementation, to iteration and retirement.

4 There is no one-size-fits-all approach

Every organisation has to take action appropriate for its industry, strategy, values, culture, geography and risk approach.

We help to navigate the challenges, not impose our answers. Our consultants are trained to facilitate and inform discussions with clients, putting big questions into their unique contexts to empower our clients to make the right decisions.

5 Practical action on ethics drives better outcomes and creates business value

The topic of Digital Ethics can seem overwhelming or esoteric, but there are practical actions that any organisation can and should take.

We bring the theoretical into reality by assessing the risks and opportunities of different kinds of Digital Ethics concerns, according to seven categories.

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Understanding Digital Ethics

Sopra Steria has mapped Digital Ethics considerations to seven categories in order to enable organisations to understand, evaluate and take action.



Societal impact

Public sentiment has shifted greatly towards ethical business practices, and there is increasing scrutiny on technology businesses from regulators, the public, consumers and even their own employees to act on social issues. With the power that technology brings, it's imperative that an organisation takes action to ensure not only its own profitability, but that it builds a better society, towards the common good. We are already seeing organisations hold back technology which could be used for dangerous means, highlighting the complexity of ensuring a positive societal impact.²

Organisations can begin to measure the impact they are having on people and society by asking questions such as:

- ▶ **What are the potential implications of a digital technology on society in the short-, medium- and long-term?**
- ▶ **What can we do to preserve human agency and autonomy? What is the role of human judgement and intuition in a world where more decisions are automated?**
- ▶ **Who gets to experience the benefits of the digital solution? The employees, the supply chain, the wider community?**
- ▶ **How might technology bias decisions? What impact might this have at societal level?**



Displacement, skills & work

Technology has the potential to create new and interesting careers, and to enable people to live more fulfilling lives. However, digital technology has been changing how we work, the kinds of jobs available, and how work is valued and remunerated for decades. The transition to the new world of work is accelerating as companies undergo digital transformation, and this is raising fear. This category asks what the impact of digital technology will be on an organisation's own workforce and the wider world of work, for example:

- ▶ **If work will be automated or otherwise made more efficient by using digital technology, and the result is that fewer people are needed to do that work, what will happen to the people who are displaced?**
- ▶ **What impact will automation have on the economic divide and economic mobility? What is the impact within a company, on a region, or across a nation?**
- ▶ **What is the impact of digital technology on quality of life at work? Are workers less engaged or less collaborative because of reduced human interaction? Do their jobs require lower skill levels?**
- ▶ **What interventions can an organisation take to ensure financial sustainability amongst individuals and families, and economic sustainability in communities and economies? How do we balance financial sustainability with quality of life?**
- ▶ **Are there digital technologies that can eliminate the need for humans to undertake dangerous or menial work? And if so, what are our plans for the people in those jobs?**
- ▶ **How do we address global, national and regional digital skills gaps, and prepare future generations for new kinds of work that give them opportunities for social mobility?**



Fairness, equality, diversity & accessibility

Digital technologies can be used to create a more diverse and inclusive world. By connecting more people together more than ever before using digital technologies, we can expand the access to services across the globe and improve empathy through shared experiences.

To ensure this greater inclusion and accessibility, however, we must not reinforce and amplify human bias in a digital platform, or introducing new types of bias unique to the technology (for example, datasets that use unreliable, biased data, or facial recognition technology that doesn't recognise certain kinds of people). Special care and attention must be taken towards vulnerable persons and those that are likely to be left behind by technology, and we must work to break down barriers rather than introduce new ones. Furthermore, mitigating technology's ability to exclude is not enough – organisations must take action to actively empower marginalised groups.

This category examines diversity and inclusion issues in digital technology from several angles:

- ▶ **How do diversity considerations in the market assessment of a new product/service affect product outcomes?**
- ▶ **How does the diversity of development teams impact product/service outcomes?**
- ▶ **How are inclusive datasets and diversity in testing used to validate performance and identify problems?**
- ▶ **What positive impact can your business have on education, training, return-to-work or other programs which may have a positive impact on workforce diversity and digital inclusion?**
- ▶ **If users are negatively impacted by a technology, how do organisations ensure that they are fairly compensated?**



Privacy

Digital services are typically fed and improved by access to data which may be personal to an individual. However, the costs of mishandling personal information can be considerable – Alphabet, the parent company of Google, was fined €50m for “lack of transparency, inadequate information and lack of valid consent regarding ads personalisation”³. Our society values privacy, so we must achieve a balance between utility and individual privacy. We must consider:

- ▶ **Do we need this data? Is it critical to running our service?**
- ▶ **What would the personal fallout be if the data were leaked?**
- ▶ **Are users able to opt out of sharing particular elements of data whilst still receiving equal access to the service?**
- ▶ **What do organisations do with unwanted knowledge or data about their technology users when it poses an ethical dilemma?**



Transparency

Digital solutions offer the potential to provide services more quickly and effectively than ever before, and to a greater number of people. However, reducing or removing human-to-human interaction may make it more difficult for users to understand what they are agreeing to and how decisions are made. Organisations will have to address this as users demand more transparency, and lawmakers slowly catch up – Gartner predicts that by 2021, legislation will require that 100% of conversational assistant applications ('chat bots') identify themselves as non-human entities⁴.

Moreover, digital services often mask the ethical responsibility for a given act, and create networks of 'distributed responsibility'.⁵ To ensure transparency over decision-making and the reversibility of outcomes that impact humans, organisations will have to address the assignment of responsibility for their digital technology. We ask:

- ▶ **Are users able to understand what they're agreeing to? Do they understand how they should use a service, what data they're providing, how it is processed and what impact it may have?**
- ▶ **Is there clarity in the ways their engagement with the service impacts the product they receive?**
- ▶ **Do they understand how decisions/outcomes are reached? Who is responsible for these decisions and can they be reversed?**



Safety

Digital technology comes with new and sometimes increased threats to people, businesses and national security. Our attention to safety is heightened as technology typically reduces human touch points, where risks can be spotted and mitigated quickly. We must consider:

- ▶ **Are we able to adequately monitor and protect vulnerable persons in a digital environment (e.g. children/the elderly)?**
- ▶ **Are users given the opportunity to understand the security risks of using a service?**
- ▶ **Is this technology safe to make widely available?**
- ▶ **Is there a human fall-back?**



Environmental sustainability

Digital technology has the potential to help solve some of the world's biggest challenges, such as climate change, air and water pollution, and resource shortages. But it can have environmental costs too, in the forms of resource consumption and depletion, earth and water pollution, and its own energy and carbon footprint. As organisations become more digital, we must consider:

- ▶ **What is the true environmental cost of this technology if it is widely adopted?**
- ▶ **What are the hidden environmental costs, such as service or disposal?**
- ▶ **Does this technology help or hinder the world's fight against climate change and environmental degradation?**

⁴Gartner, Predicts 2019: Digital Ethics, Policy and Governance Are Key to Success with Artificial Intelligence, 2018.

⁵Ess, C. Digital Media Ethics. Cambridge, UK: Policy Press, 2014

Digital Ethics by design



Simply having an understanding of what Digital Ethics is, and what it comprises, is no longer enough. Organisations must take tangible steps to ensure that the development, implementation and use of digital technology is maximising the benefits to all society and the wider environment.

Using the following design principles, organisations can begin to embed a culture of Digital Ethics across their workplace, and ensure a better future for everyone. These should inform the approach that organisations take to all types of design – be it business design, service design, or the adoption of new tools and technologies.

- 1 Decisions about the use of technology should ensure that potential risks are proportional to the benefits of the desired outcome.
- 2 Transparency should be the default approach to sharing information with users, with consideration of how information might be used to influence users at the centre of data-sharing decisions.
- 3 Decisions about technology should not be influenced by the personal interests of the individuals or groups creating it.
- 4 Organisations must strive to anticipate the potential negative impacts of a technology.
- 5 The implementation of technology should always ensure the protection and security of all society.
- 6 All decisions relating to the development of technology should be subject to rigorous ethical evaluation through the establishment of a methodology and KPIs.
- 7 All those involved in the development, implementation or use of a technology must take responsibility for the choices they take and the consequences they incur.
- 8 Should a technology result in negative consequences, these should be mitigated where possible and compensated for.

Get in touch

For more information about our Digital Ethics consultancy services please contact our Digital Ethics specialist consultants:



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About Sopra Steria

Sopra Steria is a European leader in digital transformation providing one of the most comprehensive portfolios of end to end service offerings on the market: Consulting, Systems Integration, Software Development, Infrastructure Management and Business Process Services. Sopra Steria is trusted by leading private and public organisations to deliver successful transformation programmes that address their most complex and critical business challenges. Combining added value, innovation and high-quality services, Sopra Steria enables its customers to make the best use of information technology. With 45,000 employees in 25 countries, Sopra Steria generated revenue of €4.1 billion in 2018.

Sopra Steria Group (SOP) is listed on Euronext Paris (Compartment A) - ISIN: FR0000050809

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