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Tech Hive Advisory Limited ("Tech Hive") is a technology policy and advisory firm that provides advisory and support services to private and public organisations regarding the intersection between technology, business, and law. We focus on how emerging and disruptive technologies are altering and influencing the traditional way of doing things while acting as an innovation partner to our clients.

Our experience and capability extend across Research and Policy Advisory, Privacy and Data Protection, Data Ethics, Cybersecurity, Start-Up Advisory, and Digital Health. We ensure our advice serves our clients well by having an excellent understanding not only of their business but of the markets in which they operate through accurate policy and legislative development tracking and intelligence.

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The conversation concerning proliferation of technological products and services is increasingly spiralling beyond convenience to considerations for ethics and impact of technology on the society and the people. Although there is no universal definition of Corporate Digital Responsibility (CDR) and Digital Ethics (DE), it entails companies taking responsibility for the manner in which their digital processes, products, and services impact their stakeholders inclusive of employees, supplies, customers, society, and the environment. This strategy for responsible innovation and digitalisation can only be achieved if a company manages the digital transformation in a value-oriented, responsible and ethical manner – and puts the human aspect at the centre of their activities.

This guide points out the benefits and principles of responsible innovation and digitalisation as well as the role of people, process, product and technology. It goes further to elaborate on who bears the responsibility; why companies should implement CDR and Digital Ethics and how it can be achieved.







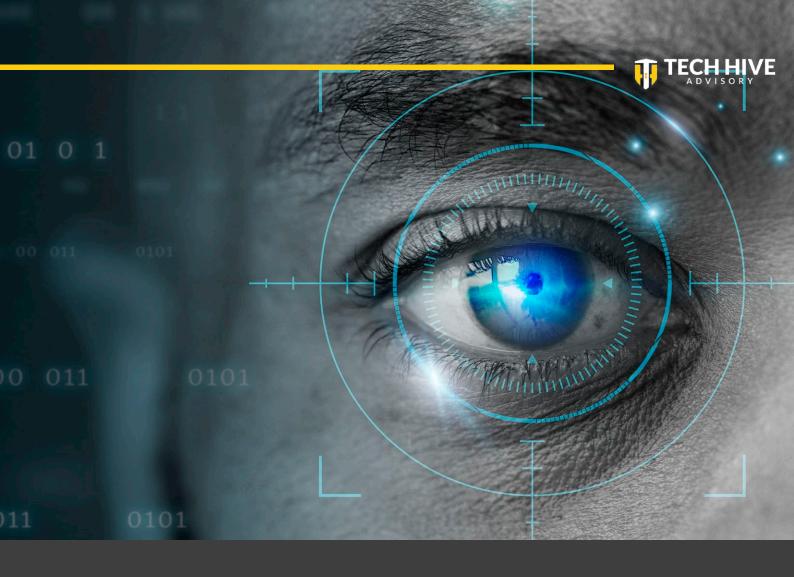
The Principles of Responsible Innovation and Digitalisation

The principles to guide responsible innovation, according to the Office of Science and Technology Policy in the United States (US) Presidency, are:²

- 1. Fostering trust in digital applications since most digital technologies are not easily understood by the public. For them to reach their full potential and adoption, they must win public trust and confidence;
- 2. Providing regulatory guidance for digitalisation because these technologies can solve problems or create new challenges in ways not envisaged by current laws;
- 3. Ensuring public engagement to help build trust and confidence in digital technologies. Scientific evidence from industry experts, the public, the academic community, non-profits, and civil society should back technical decisions;
- 4. Limiting regulatory overreach by considering the costs and risks before considering regulation. The focus should be on flexible, performance-based frameworks, rather than a one-size-fits-all approach;
- 5. Promoting trustworthy applications by factoring in fairness, nondiscrimination, disclosure, transparency, safety, and security when deploying digital technologies; and
- 6. Developing relevant technical standards to provide developers with clear guidelines for designing their systems.

^{1 &#}x27;Corporate Digital Responsibility: How to Balance Digitization and Ethics' (M3 Consultancy)

https://m3consultancy.nl/blog/corporate-digital-responsibility-how-to-balance-digitization-and-ethics accessed 10 May 2021.



Corporate Digital Responsibility and Digital Ethics

Digital products and services are ubiquitous in nature, as such it is the responsibility of every department in the organisation to implement CDR.¹³ Regardless, senior management and leadership are to establish the standard which everyone must follow. Technology companies, programmers, developers and designers, and all other actors are ethically responsible for the digital products they produce and data they collect and process. When it comes to the users of these digital products, they are responsible for their behaviours in the digital world. Users must adequately understand the digital technology to attain digital sovereignty and enable them to handle it in a self-determined manner.¹⁴ Additionally, technology creators and designers should be held accountable for the repercussions that result from its development, operation, effect, assessment, and refinement.

^{13 &#}x27;What Is Corporate Digital Responsibility?' (Mightybytes, 5 November 2020) https://www.mightybytes.com/blog/what-is-corporate-digital-responsibility/ > accessed 10 May 2021.

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Why Should Companies Implement CDR and Digital Ethics?

There are several reasons why companies should implement a workable strategy for CDR and Digital Ethics. These include:

- 1. the increasing concerns from customers and governments about the use and abuse of personal data;
- 2. the impact and challenges of automation and robotics;
- 3. the potential for unethical use of new technologies; and
- 4. digital divide.15

As companies grow exponentially, they become exposed to a broad range of challenges and face digitisation risks which must be addressed.

Implementing CDR gives investors a certain level of confidence in a company and also helps build trust and acceptance of customers and the entire supply chain in digital services and products, thereby benefiting the company's reputation. However, to build such trust and acceptance of customers and the entire supply chain, it is essential that companies communicate their commitment to CDR both internally and externally. The application of CDR and digital ethics aids in shaping the future of companies, boosts their reputation, motivates employees, creates competitive advantages and leaves a positive impact on the company's financial performance. CDR and digital ethics assist to reduce risks and avoid regulatory difficulties while putting data-driven business models and digital products on the market.

Furthermore, implementing CDR and digital ethics aids in the detection of unwanted digital effects. It aids the preparation for upcoming laws and regulations in the digital space, fosters digital inclusion, digital accessibility and facilitates unbiased Artificial Intelligence. Data subjects have control over who gets access to their data, for what purpose it is used, and are aware of the value they are receiving in exchange for providing access through the execution of CDR and digital ethics strategies.

^{15 &#}x27;The Rise of Corporate Digital Responsibility | I-ClO' https://www.i-cio.com/management/best-practice/item/the-rise-of-corporate-digital-responsibility accessed 10 May 2021.

¹⁶ PricewaterhouseCoopers, 'Corporate Digital Responsibility and Digital Ethics' (PwC) https://www.pwc.de/en/sustainability/corporate-digital-responsibility-and-digital-ethics.html > accessed 10 May 2021.

^{17 &#}x27;Corporate Digital Responsibility: The Emerging Barometer of Reputation and Trust' (Allegory Agency, 8 February 2021) https://allegoryagency.co.uk/blog/corporate-digital-responsibility-the-emerging-barometer-of-reputation-and-trust/ accessed 10 May 2021.

^{18 &#}x27;Corporate Digital Responsibility: The Solution to a Difficult Digital Dilemma? | HECimpact | Insights from Research at HEC Lausanne' https://wp.unil.ch/hecimpact/corporate-digital-responsibility-the-solution-to-a-difficult-digital-dilemma/ > accessed 10 May 2021.

^{19 &#}x27;Corporate Digital Responsibility: Principles to Guide Progress' (Atos) https://atos.net/en/blog/corporate-digital-responsibility-principles-guide-progress accessed 10 May 2021.



How to Achieve Sustainable CDR and Digital Ethics Strategies?

Companies aiming to implement sustainable CDR and digital ethics strategies must look internally and make certain enquiries. Some of these include²⁰:

- 1. Is our organisation prepared for upcoming laws and regulations regarding digitisation?
- 2. Are we informed of all the risks that digitisation poses for the business, the employees and society, and what measures are we taking to mitigate those risks?
- 3. Do we risk losing our customers and employees if there is a lack of confidence in new digital business models?
- 4. How do we deal with the economic, social, environmental and ethical implications of our digital transformation?
- 5. Is our digital strategy in line with our corporate values?
- 6. What are the unforeseen effects and consequences of the use and development of new technologies?
- 7. How do we manage the responsible handling of data and technologies within the company and across company boundaries?
- 8. Are our corporate values reflected along the entire supply chain?
- 9. How do we leverage the new opportunities for the benefit of society?
- 10. Can we leverage our digitisation to meet sustainability goals?
- 11. What impact does the digital transformation have on our company's reputation?

CDR can be divided into four categories; Social CDR, Economic, Technological and Environmental CDR. CDR and Digital Ethics can be achieved under the four categories by doing the following stated below²¹ -



Social CDR

- 1. Fostering data protection for employees, customers and other stakeholders.
- 2. Promoting digital diversity and inclusion.
- 3. Pursuing socially ethical practices.

Environmental CDR

- 1. Implementing responsible recycling practices for digital technologies.
- 2. Cultivating responsible disposal practices for digital technologies.
- 3. Following responsible power consumption practices.

Technological CDR

- 1. Ensuring that AI decision-making algorithms are ethical.
- 2. Not producing digital products that could be harmful to society.
- 3. Implementing responsible cybersecurity protection and response practices.
- 4. Validating and discarding data in a responsible manner.

Economic CDR

- 1. Ensuring that outsourcing of work is done in a responsible way.
- 2. Sharing economic benefits of digital work with society e.g. through taxation.
- 3. Respecting data ownership rights e.g. by reducing piracy.



In order to achieve sustainable CDR and digital ethics strategies, companies should have a defined plan and vision board for a digital future. Transformation audits and digital impact assessments should be carried out to determine the current position of the company with regard to digital responsibility. This would help such companies:

- 1. identify where potential risks or roadblocks exist;
- 2. design a fine-tuned and structured framework; and
- 3. plan for the digital technologies to be monitored in a responsible manner.



The plan must include clear and practical guidelines, as this is a critical component of effective, long-term business planning. However, the CDR framework designed should be suitable for the specific requirements and goals of the company. The framework should also stipulate a set of shared values and standards to guide the company on matters relating to digital issues.²²

In establishing the CDR framework, creating elements such as shared values, specific CDR norms, artifacts and behaviours can help in enhancing a company culture that fosters and builds more digitally responsible people.²³ Digital policies should be established as well, since they play a role in the business's performance, and these CDR policies will vary based on the conditions of each organisation. Cybersecurity should be a priority thus short and long-term security goals should be set. Throughout a product life cycle, security updates and future proof solutions should be provided by the supplier of information security solutions.²⁴

The developers and designers of digital technologies must take cognisance of CDR in their designs and this could be done by creating models that collect only the required amount of data necessary for a transaction.²⁵ Dark patterns should not be used to manipulate consumers to make favourable decisions in favour of brands and against the interest of the consumers.²⁶ CDR requirements should be mirrored in proprietary code and algorithms for artificial and technological actors, and companies should guarantee that data is acquired and kept responsibly and securely. Product managers should make sure that their products and services are constantly evaluated for ethical risks. Also, the entire corporate workforce must be trained on corporate digital responsibility and digital ethics to ensure that everyone understands what is expected of them. To ensure that the digital assets generated have a beneficial influence on society, digital inclusion should be prioritized in the development of digital products. In order to achieve CDR, every stakeholder and actor at the company must be considered, including the organization itself, individual actors, artificial/technology actors, institutional/governmental and legal actors, internal information technology system, suppliers, vendor partners, and other affiliated organizations. All stakeholders' demands and concerns should be appropriately addressed, as this will aid in the development of long-term CDR governance.

Additionally, companies need to ensure that their executive team is digitally savvy, since this will make implementing digital ethics and CDR initiatives easier. The board of directors must also be informed about digital technology and remain current with digital developments. IT leadership should be included in CDR strategy discussions so they can work effectively toward a successful CDR strategy.

^{22 &#}x27;Corporate Digital Responsibility: How to Balance Digitization and Ethics' (M3 Consultancy) https://m3consultancy.nl/blog/corporate-digital-responsibility-how-to-balance-digitization-and-ethics accessed 10 May 2021.

^{23 &#}x27;Corporate Digital Responsibility: The Solution to a Difficult Digital Dilemma? | HECimpact | Insights from Research at HEC Lausanne' https://wp.unil.ch/hecimpact/corporate-digital-responsibility-the-solution-to-a-difficult-digital-dilemma accessed 10 May 2021.

^{24 &#}x27;What Is Digital Responsibility? | Advenica' https://advenica.com/en/digital-responsibility > accessed 10 May 2021.

²⁵ Lara Lobschat and others, 'Corporate Digital Responsibility' (2021) 122 Journal of Business Research 875 https://linkinghub.elsevier.com/retrieve/pii/s0148296319305946 > accessed 11 May 2021.

²⁶ Dark Design: Art of deception by design < https://techhiveadvisory.org.ng/wp-content/uploads/2021/08/DARK-DESIGN-TECHHIVE-READYI-1-min.pdf>accessed 11 May 2021





CDR is a nascent discipline. The world is experiencing a period of unprecedented technological advance, providing organisations with the power to radically change society for the better. However this power brings some responsibility – a commitment to operate in a digitally responsible and sustainable manner. Thus, there are no defined or cleared identifiable strategies to adopt and use to measure a sustainable CDR Framework. What we can do is propagate working knowledge and solutions that will become part of a developing/budding body of work and thought leadership.

- 1. A global standard of CDR framework should be created as this would promote the facilitation of sustainable strategies towards achieving CDR and Digital Ethics. By a global standard being created, companies will be prompted to ensure that the digital technologies they create are in accordance with the global standard.
- 2. Technology committees must ensure that they are focused on implementing practical and sustainable strategies and avenues to make CDR and Digital Ethics a culture in their respective companies.
- 3. Companies should ensure they create a CDR and digital ethics office for overseeing and coordinating digital technology to facilitate ethical and sustainable business practices. This office should involve individuals in the various departments (IT, administration, supply chain, etc.) of the company to ensure that CDR is prioritized in all departments.
- 4. Executives should prioritise promoting and improving the CDR culture in their various organisations. This would set the organizational tone for ethical design, development and deployment of technology thereby building more digitally responsible people.
- 5. Companies should analyse their current levels of digital maturity to determine why they want or need to be digitally responsible. Depending on their business model, the drivers and benefits of digital responsibility should be determined. The significance and the competitive advantage of digital responsibility should also be explored.
- 6. As earlier discussed, CDR takes different styles or forms, depending on the sector. Companies should take a deep dive into the future of digital responsibility as it relates to their sector and business model. The goal here is to develop an idea of what an ideal company in the sector with fully developed CDR practices would look like. Comparing this with their current state, companies can determine how to bridge the gap, and the necessary stakeholders to bring on board.



- 7. Companies may also appoint a Chief Digital Responsibility Officer (CDRO) to oversee the changes to be made. Where the company works with AI, they may seek to revise underlying assumptions in the dataset that drives their algorithm, to mitigate or eliminate bias. Where the company seeks to adopt AI technologies in the future or is in the process of doing so, an AI policy can be defined with respect to their domain. Companies should also invest in data security training for their employees to expand the knowledge base of CDR in the organisation.
- 8. CDR should be incorporated into risk management practices of the company so that risks related to CDR are identifiable, managed and monitored.
- 9. In the digital world in particular, responsibility needs to be regarded as a shared undertaking: from the economic sector and policymakers to consumers and representatives of civil society everyone has a contribution to make. What we need is a broad-based alliance spanning all sectors of society.



George Bernard Shaw once said "Science never solves a problem without creating ten more". The benefits of digitization are seen today in healthcare, education, power/energy, environment, civil safety and security, nevertheless the emergence of digitization disrupts society profoundly. Digital transformation as we know it, is predicted to grow on a much larger scale overtime. As such, CDR and DE must be prioritised in organisations in order to prevent the unethical use of new and disrupting technologies, prevent the abuse of personal data, effectively handle the challenges introduced by automation and robotics and bridge the digital divide. To do this, organisations must have a defined plan and vision for a digital future and create sustainable and effective strategies towards achieving CDR and DE.





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