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Digital Ethics

Ethical 'now' for a resilient 'next'

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Content

A leading educational institution has been working on its historical data on admissions to understand admission patterns and see if they can develop a model. This data model will train a system to augment the decisions made by the administrators on potential candidates to attract and retain the best talent. The model also looks at including data on dropouts during the course, so they can identify such candidates in advance and put them through counselling sessions. One of the main challenges the institution has is to eliminate any bias that the data might introduce in the system on admission criteria. As the data is more than a 100 years old, it also includes times when certain students were denied admission based on their gender or race.

As this is an ethical dilemma, the university has appointed a special team to parse the data and ensure that these historical social biases do not enter the new system.

Introducing digital ethics

Digital ethics are inter-personal, social, organisational, national norms that govern how people/digital users should conduct and behave in the digital world. It is a paradigm in which digital transformation is immune to the moral biases of those running the transformation. It also means that we do not allow machines to discriminate and upturn the ethical values in our society. Digital ethics works both ways from humans to machines and from machines to humans.

We need to look at the issue of digital ethics from the following four angles:

Areas of discussion

The impact of technology
This includes how technology is changing the way we do business, interact, and live. In this current technological era, many decisions are taken with inputs from artificial intelligence and other automated decision-making systems, especially in cases where structured data for decision-making was available.

This data was used to train smart algorithms to replicate human decision-making processes. There is a possibility that human biases involved in the decision-making process were transferred to the machines, which is one of the biggest concern areas in digital ethics, today.

Industry best practices of technology ethics
As is clear from the leading educational institution example, it is very important to put controls to prevent ethical biases, which can contaminate data used to train digital models. These best practices may include keeping in mind the source of the data, prevailing socio-economic conditions at that time, fields of data that might introduce ethical biases, and creating a multi-disciplinary committee to review these digital programmes.

Role of organisations in propagating technology ethics
How are organisations working both internally and within the ecosystem to propagate the system of ethics for digital transformation? Most organisations might start from within, and they would ultimately have to create an ecosystem to ensure that the industry is following best practices when it comes to digital ethics.

Risks emerging from digital ethics
If there are ethical biases in the digital model, there is a fear of risks emerging from reputational loss and operational risks. Organisations would need to derive a framework for digital ethics. They must ensure that current ethical practices and policies governing the organisation are applied to the framework, to ensure a holistic view of ethics governing their digital initiatives.

Why is a discussion on digital ethics important?

Today, digital transformation is the biggest driver of growth for organisations. Organisations are continuously focusing on implementing strategies for a better customer experience, operational efficiency, employee engagement, and new business models.

In this paradigm, there is focus on people, processes, and technologies. While the growth in technology is unprecedented, what is interesting is how the change in processes and people has ensured that organisations get the most out of their investments.

Ethical management of this process affects autonomy and honour/dignity/respect of people in the digital world. As the boundaries between the digital and the real world continue to blur, this turn will have a huge impact on the real world of a person.

Let us say that **Bank A** decides to use machine learning to decide who is accepted for a loan. The machine learning will need training on a data set, which could be historical data or user created data. If, historically, the bank has denied loans to a certain category of people, the same bias would carry forward to the machine. So essentially, we have transferred our bias to the system and now the system would deny loans to that certain category of people. If we use a user to create the data to train the system, he might introduce this bias himself to ensure that certain category of people was denied loans. Both these cases fall under the purview of digital ethics.

In a recent speech[1], Masayoshi Son of Softbank said that in the near future the earth would be co-inhabited by humans and machines. We may soon see a world with 10 billion people and 10 billion robots. This, in other terms, is singularity, where each robot is connected to another robot. In that context, this becomes even more important as we may end up transferring our local biases to the machines. Those biases will permanently render some individuals outside the purview of services and facilities rendered by these robots.

1 Amie Tsang and Michael J. de la Merced, "Masayoshi Son warns of the singularity", CNBC

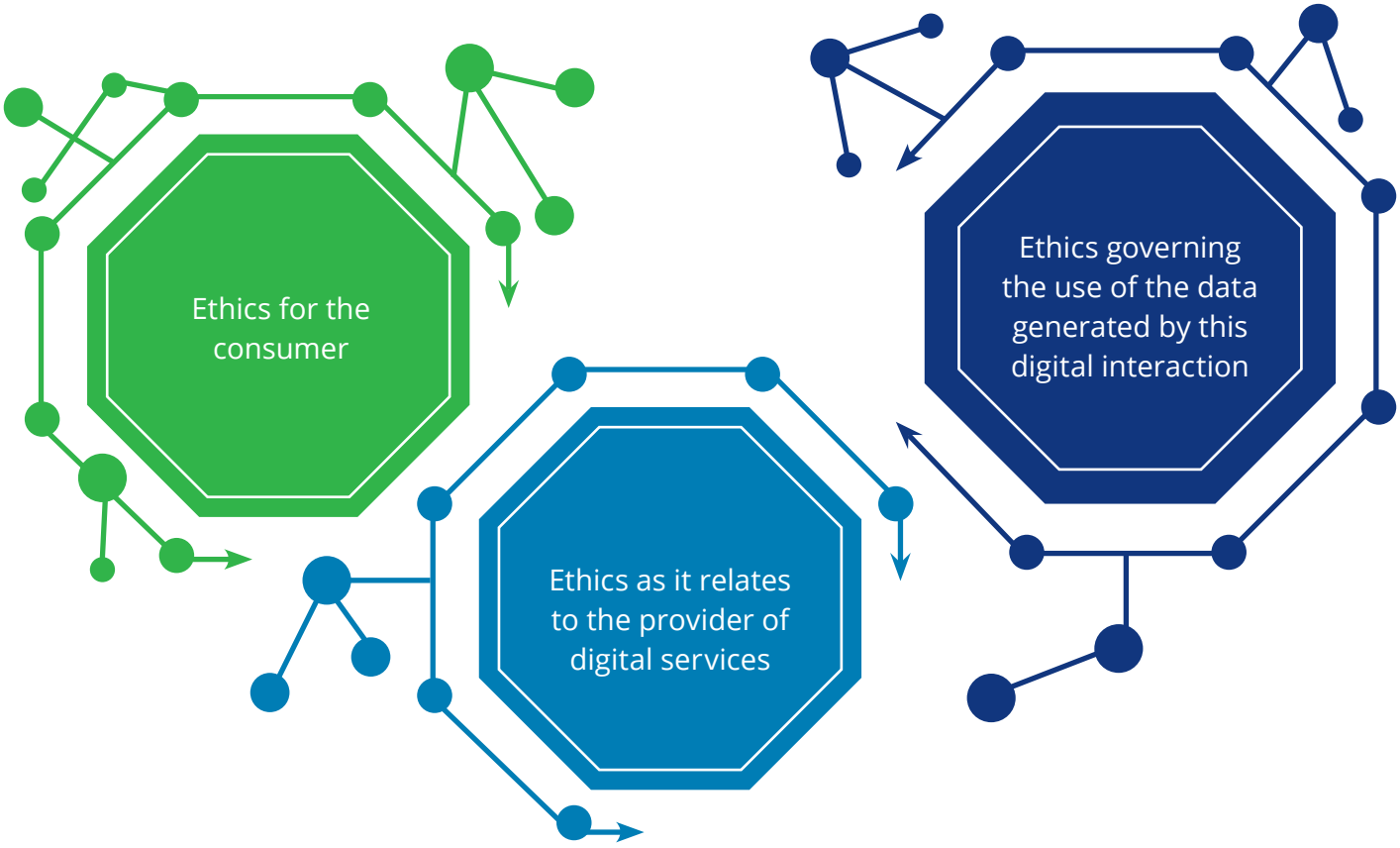
Boundaries for digital ethics

A simple cookie in a mobile application or website gives the application administrator enormous power. This data is often misused for various reasons, such as profiling individuals, selling their data to other organisations, or propagating illegal activities.

A good example is of cab aggregator services. Based on the user behaviour and travel pattern, the cab aggregator is able to provide a great user experience. However, of late it seems that this is only to ensure that more is extracted out of the customer, especially if the profile shows that he or she is not averse to using cabs with a higher charge. Therefore, even if a cheaper option is available it would not be available to the user, as he or she has already shown his or her preference for using higher value cabs.

Now, this example clearly explains an ethical grey area. Using a larger cab (while it increases revenue) results in a higher cost for the customer, society, and environment.

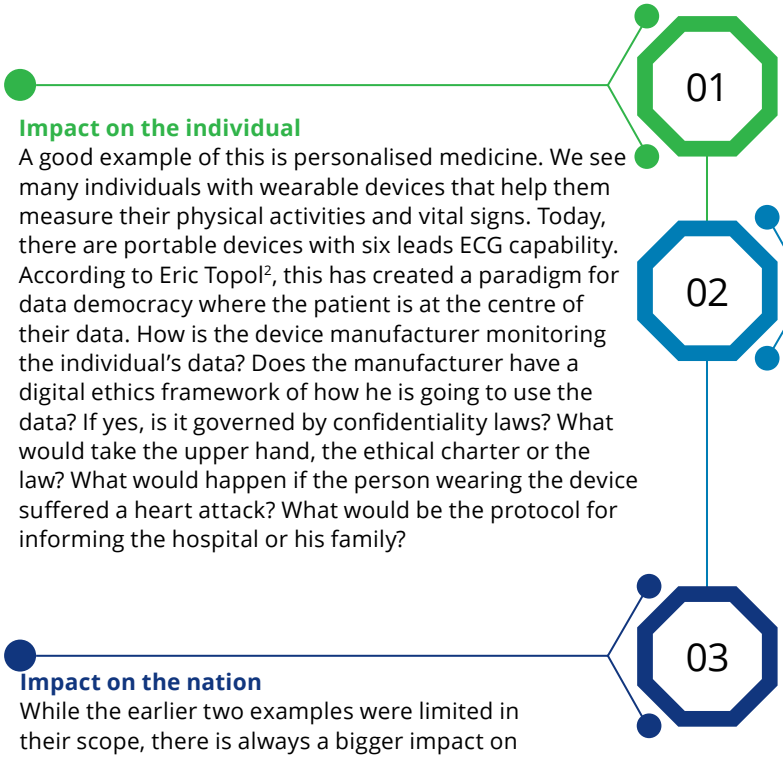
The boundaries for digital ethics exist at the following three levels:



Organisations would need a moral code of conduct inside their digital policies to address the areas of concern and develop a fine balance to ensure that boundaries are clearly laid out.

Impact of digital ethics

We believe that digital ethics is addressed at the following three levels:



Impact on the individual

A good example of this is personalised medicine. We see many individuals with wearable devices that help them measure their physical activities and vital signs. Today, there are portable devices with six leads ECG capability. According to Eric Topol[2], this has created a paradigm for data democracy where the patient is at the centre of their data. How is the device manufacturer monitoring the individual's data? Does the manufacturer have a digital ethics framework of how he is going to use the data? If yes, is it governed by confidentiality laws? What would take the upper hand, the ethical charter or the law? What would happen if the person wearing the device suffered a heart attack? What would be the protocol for informing the hospital or his family?

Impact on the nation

While the earlier two examples were limited in their scope, there is always a bigger impact on the nation when it comes to larger programmes. A good example is the 'Smart Cities Programme', where data was collected from all public utilities. In Vishakhapatnam, civic authorities can identify the levels of garbage in the bins across the city using sensors, which allows them to map the route accordingly. This is a good example of using digital for route optimisation, but unless the data is protected, anonymised, and treated in real-time the authorities will continue to be biased amongst various regions in the city. As this data is available nationally, it has the tendency to skew national numbers as well.

Impact on society

Let us take the example of social media. Today, news travels fast and social media is a useful tool to monitor the situation of natural disasters. However, it is also used to spread fake news. This is where the ethical management of digital media comes into play. What framework do media and other organisations have to ensure that the reported news is true and original? While citizen journalism is on the rise, how can citizens be educated on the importance of digital ethics and consent before they report unverified content and create sensationalism?

At a certain university, a machine-learning algorithm was introduced to select students in the initial screening processes. Due to their rising applications, this was considered a milestone for this university. The board felt that academic staff needed technological support to reduce their burden and simultaneously skim through the applications to ensure that only the best were admitted to the university. Surprisingly, the number of women candidates shortlisted by the algorithm were way lower than male candidates. It was also lower than the number of women who had enrolled in the previous year. This was an area of concern for the university. The university then went back and examined the criteria of selection.

Due to the lack of a digital ethics framework, the designers of the algorithm did not factor in the adjustments to be made to the historical data. The university had been a male-only institution for a very long time. Though this had changed around 40 years ago, the historical data used for the algorithm was almost 100 years old and created a scenario where fewer women were shortlisted. The university admitted its error and formed an ethics committee to review the project and remove inherent biases from their data.

2 Eric J. Topol, "The Patient Will See You Now: The Future of Medicine is in Your Hands"

Key recommendations for introducing digital ethics

Governments worldwide have realised that managing digital ethics is key to making the most out of digital investments.

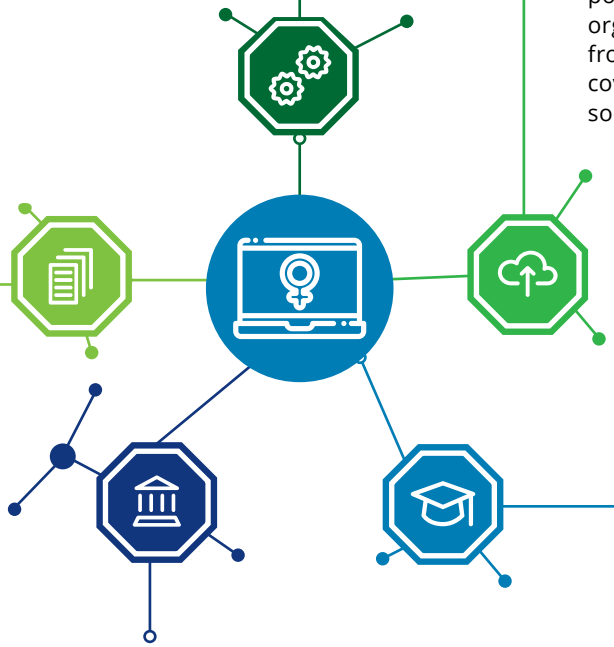
The European Union has started creating a list of digital ethics recommendations that it would like organisations and governments in EU to abide by[3]. They have clearly stated that digital ethics is not an add-on, but an integral part of governance for any digital programme. They have started putting together an expert committee of 52 professionals from organisations, such as Google, SAP, Bayer, Santander, etc.

The Australian Government is working on a similar policy to ensure that AI and digital are developed and deployed responsibly.

Some of our recommendations from this perspective include the following:

Create a committee for digital ethics
The committee should be a cross-functional team with business, technology, and community experts whose objective is to address all ethical concerns. This committee should roll into the organisation's ethics committee, which would form the overall framework for ethics in the organisation.

Draft the policy on digital ethics
While drafting the policy on digital ethics, it is important to cover all digital programmes. Like the digital risk framework, the digital ethics policy should draw heavily from the organisation's vision and mission and from risk policies. The policy should cover the impact at an individual, society, market, and national level.



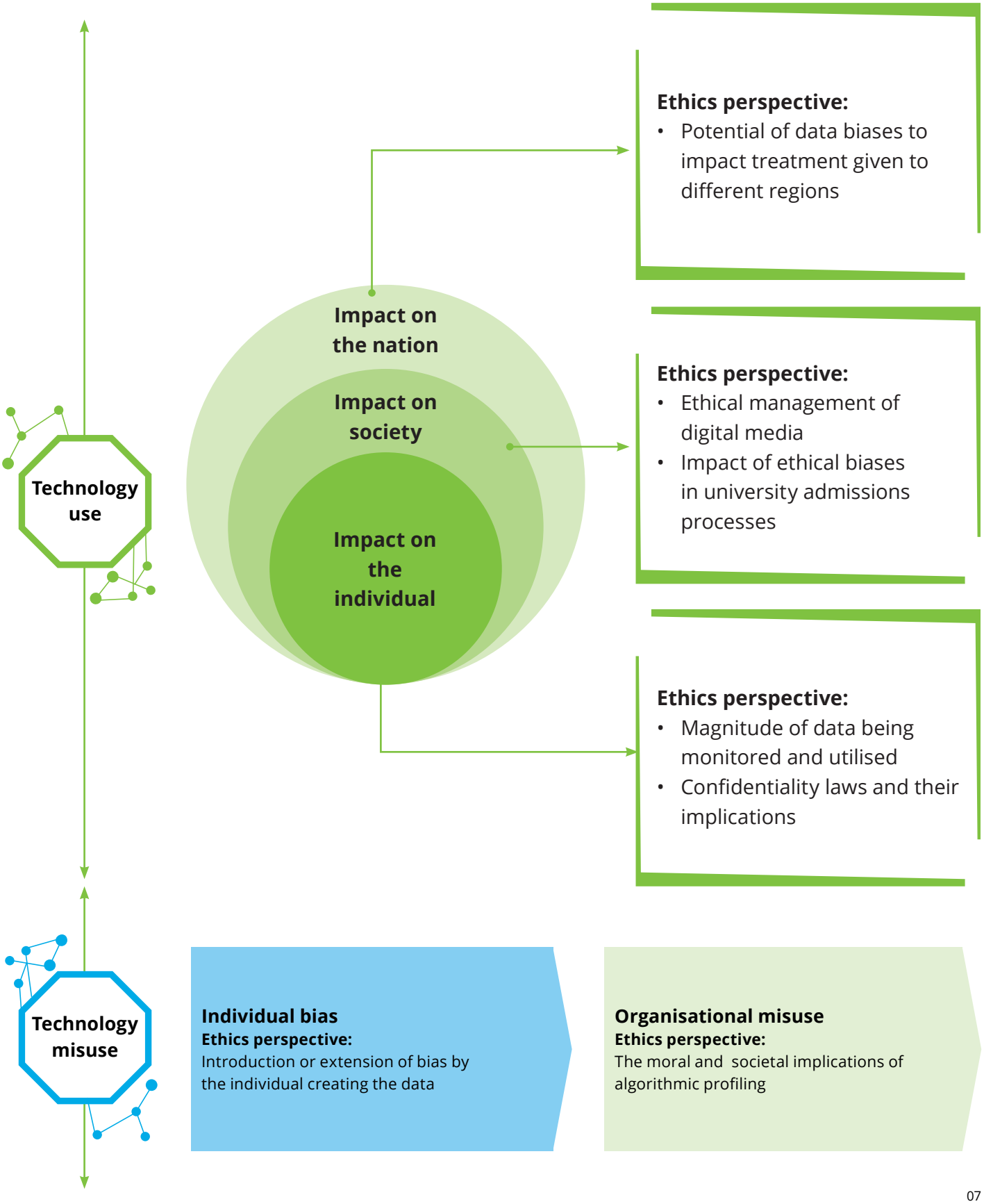
Ensure adherence
All digital projects need to be covered and assessed from the digital ethics perspective.

Emphasise on ethics
Make ethics an important part of the digital governance of all projects.

Impart education
Ensure that teams are constantly educated on the need for the right ethics and constant reinforcement and assessment of the individuals themselves is conducted.

3 Foo Yun Chee, "AI must be accountable, EU says as it sets ethical guidelines", Reuters

To summarise, let's look at the image below. The technology misuse, both from an individual as well an organisational bias is important to be identified and understood.



Connect with us

Anthony Crasto
President, Risk Advisory
Deloitte India
acrasto@deloitte.com

Abhijit Katkar
Partner, Risk Advisory
Deloitte India
akatkar@deloitte.com

Kamaljit Chawla
Leader – Cyber Operate
Risk Advisory, Deloitte India
kamaljitc@deloitte.com

Tarun Kaura
Leader - Cyber Advisory
Risk Advisory, Deloitte India
tkaura@deloitte.com

Vishal Jain
Partner, Risk Advisory
Deloitte India
jainvishal@deloitte.com

Deloitte.