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## **Digital Responsibility**

Leveraging data and digital technologies has transformative impact potential to address some of the most pressing societal challenges such as climate change, biodiversity loss, and sustainability. However, the ubiquity and power of digital technologies requires that creators and users act responsibly to ensure they are utilised in an ethical way that reflects values such as safety, fairness and inclusion, transparency, and privacy. In this context, digital responsibility requires that ethics issues be considered, monitored and managed across the full life cycle of a digital asset or system:

- **Design** Ethical issues should be considered during the design and creation of a digital asset or system. This could include consideration of ethical issues relating to, for example: the collection/selection of data to create a dataset to ensure it is representative, design of a data model to predict behaviour/preferences while respecting privacy, development of a digital technology and how it communicates with other systems to ensure security, or the design of an algorithm to ensure it is fair and understandable.
- Implementation Following design and creation, ethical considerations should also be taken into account during the operation and/or implementation of a digital asset or system. This will be closely related to the previous and is concerned with the processing of the outputs from the creation stage to make decisions and perform actions.
- Impact The decisions, actions and effects arising from the creation or operation of a digital
  asset or system should be broadly considered from the perspective of as many stakeholders
  as possible and reflect both intended and unintended consequences. It is important that
  appropriate approaches to monitoring and assessing the effect of digital assets/systems is
  created and managed as part of the development life cycle.
- **Development** Following the deployment of any digital asset/system (and potentially following the monitoring of its impact) it will be inevitable that the system will be further developed, adapted or updated. It is important that ethical considerations relating to digital assets/systems extends to all stage of its life cycle and should be reflected in terms of how an asset or system is assessed to perform against its objectives and, based on this, how it is proposed to be further developed or evolved. This is particularly important in the context of adaptive or learning systems (e.g., machine learning algorithms) or systems that are open and enable collaborative development.

Applications submitted to challenge calls under the National Challenge Fund should consider the ethical issues associated with digital assets or systems proposed and ensure that appropriate measures are considered to identify, monitor and manage risks across the full life cycle of the digital asset or system.