

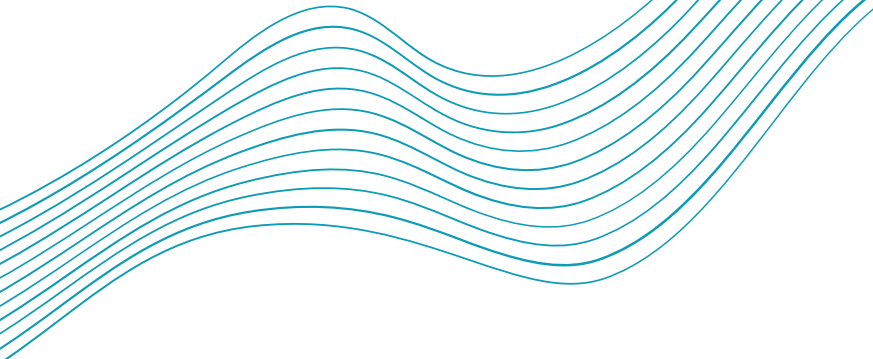


INTERNATIONAL
DEVELOPMENT
INNOVATION
ALLIANCE

THE RESPONSIBLE IMPLEMENTATION OF EMERGING TECH FOR DEVELOPMENT: HOW CAN WE TURN PRINCIPLES INTO PRACTICE?

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**EMERGING
TECHNOLOGIES
WORKING GROUP**



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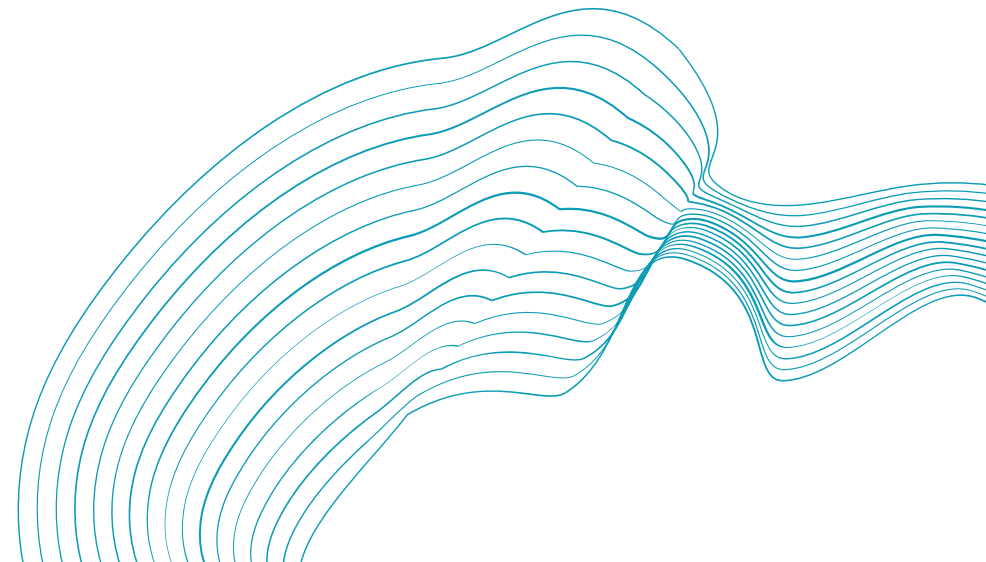




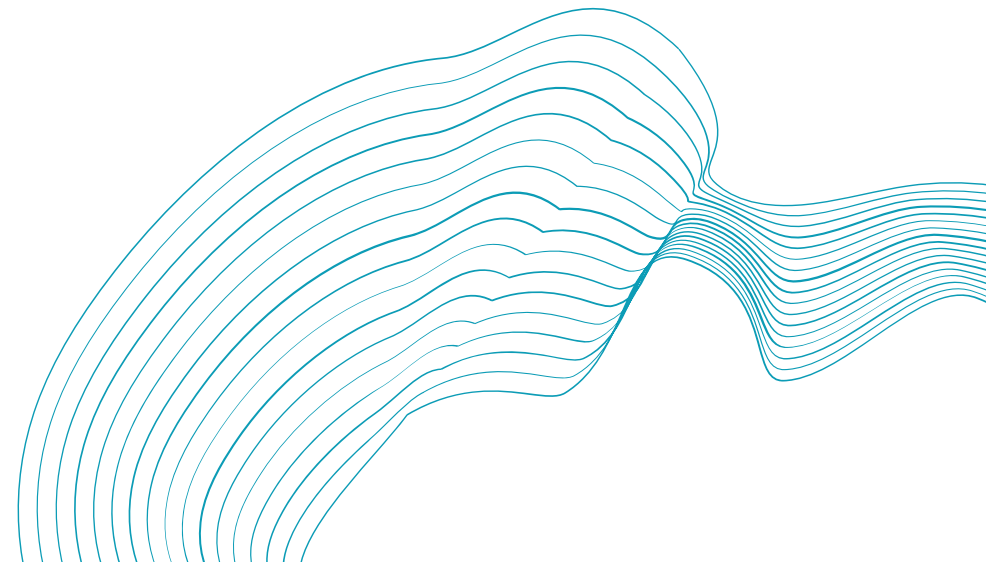
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INTRODUCTION

This report is the product of a multi-stakeholder consultation carried out by the Emerging Technologies Working Group (ETWG) of the International Development Innovation Alliance (IDIA). Over the course of the consultation, from November 2020 - January 2021, 24 interviews were conducted with informants from four different areas: 1) Development agencies, 2) Implementers of emerging technologies for development, 3) Civil society organisations, and 4) Researchers. The main question guiding this research was: *How are IDIA agencies and country-level tech actors applying existing principles and guidelines to support the responsible use of emerging technology, particularly AI within their tech/digital programming?* This paper summarises the key findings of this consultation and posits some open questions to guide further work and future discussions.



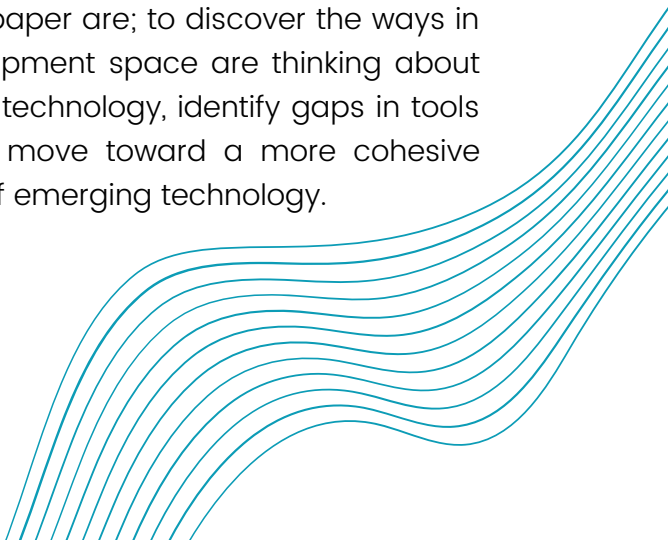


BACKGROUND

Emerging digital technologies such as artificial intelligence, along with the spread of mobile phone ownership, hold great promise in international development. However, there are well-documented risks - around ethics, privacy, security and equity amongst others - in the application of these technologies. Bias in data used to train machine learning algorithms can lead to marginalised groups either being left out or discriminated against, individually-identifiable data can be harvested from without proper consent, poorly trained algorithms that are prematurely deployed can lead to harmful decisions that would not have occurred with human judgement, and digitalization leaves any database vulnerable to malicious cyber attacks.

Therefore, alongside this expanding use of emerging digital technologies, there has been a proliferation of principles and guidelines to ensure responsible use of technology in international development. Prominent examples include the Principles for Digital Development stewarded by DIAL, USAID's "Using Data Responsibly" guidance and tool, OECD's AI Principles, UNESCO's Recommendation on the Ethics of Artificial Intelligence, and the GSMA's AI Ethics Principles. Many of these guidelines and principles are several years old and are widely accepted and endorsed - for example, the Digital Principles have been endorsed by over 200 organizations. The Digital Impact Alliance (DIAL) has an ongoing research agenda into implementing these principles, including applying them as an evaluative methodology, and highlighting case studies of good use.

A question remains as to whether the broader range of existing principles and guidelines for digital development is useful for the intended audiences, applicable by those designing and implementing policies and programmes, and appropriate to local contexts. Key goals of the consultation as well as this paper are; to discover the ways in which actors in the emerging technologies for development space are thinking about and using principles for the ethical implementation of technology, identify gaps in tools and resources that they use to aid their work and move toward a more cohesive understanding of what constitutes a 'responsible' use of emerging technology.



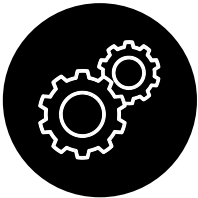
KEY TAKEAWAYS

Below are four key takeaways from the consultation. Further details on the findings along with open questions and recommendations are explored in more detail throughout the rest of the report.



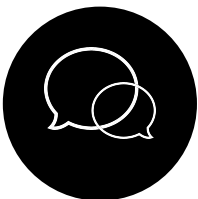
No. 01 – Defining Responsible Use

There is a lack of convergence around what constitutes ‘responsible use’ of emerging technology in a development context. Some advocate for broad definitions which equate responsibility with taking a human rights approach, while others take a narrower framing, resting on the principle of ‘do no harm’. This has important implications for the design of universal principles, approaches to solution design and implementation, as well as monitoring and compliance standards.



No. 02 – Use of Principles

There is a stark difference between how implementers of emerging technologies and development agencies/civil society organisations (CSO’s) in the development space relate to the idea of universal principles. For instance, all development agencies interviewed were aware of and had officially endorsed some set of principles regulating emerging technologies. In contrast, none of the implementing organisations consulted had formally adopted or endorsed any set of principles. Implementers we consulted attributed their lack of support to: the dearth of enforcement behind principles, how ‘high level’ / non context specific they are, as well as practical challenges and costs of implementing them.



No. 03 – Translating Principles to Practice

Development agencies supporting work in this space are still struggling to determine the most effective mechanisms to translate principles into practice. A key challenge they face is that the incentives of key groups (implementers, project teams, governments) are often unaligned with one another, making consensus around roles, expectations and capacity difficult to reach.



No. 04 – Aligning Incentives

Key informants agreed that the field could benefit from; greater alignment amongst development agencies and implementers in terms of the principles that should be prioritised when carrying out this work, safe spaces for sharing of learning and experiences, and greater collaboration with end-users and implementing partners when creating and implementing emerging tech products and projects.

SECTION ONE:

WHAT DO WE MEAN BY 'RESPONSIBLE' USE OF EMERGING TECHNOLOGY?

There is no single codified definition of what constitutes 'responsible use' of emerging technology for development. Consequently, actors in this space have mapped the parameters of the phrase for themselves. The result is that this is a commonly used phrase which is not always commonly understood.

"Using emerging tech 'responsibly' means not being driven by the fact that you have the opportunity to use technology, but that you are using it with a clear understanding of what you're trying to solve by doing it and being intentional about its use."

- Development Agency

In conversation with key informants, there were some similar strands of understanding running through each individual's conception of 'responsible use'. For example, most informants equated responsible usage with questions of suitability - whether an emerging technology should be used in a certain development context.

However, in general there is a lack of convergence amongst those in the development sector on what 'responsibility' really looks like. Some advocate for broad definitions which equate responsibility with taking a human rights approach, the implication being that there must be a strict consideration of the human rights impacts of technology at each stage of its creation - from how it is designed to how it is marketed, sold and used.

"The ethical/responsible use of technology and AI ultimately comes down to how we enable human rights better through technology."

- Civil Society Organisation

In comparison, other definitions rest on a principle of 'do no harm' - an ethical standard which puts a slightly different onus on the creator/implementer than the human rights based framing.

"I would say that the easiest way to describe this is that we want to ensure that we are doing no harm with AI."

- Development Agency

OPEN QUESTIONS

These questions are intended to prompt further reflection around specific aspects of applying principles around the use of emerging technologies. Further, collective exploration of many of these questions would benefit the whole community.

- **In your work, do you have a clear definition of 'responsible use' within the emerging technology for development space?**
- **What might the implications of differing conceptions of this term be?**
- **Do you think that there is a need for more standardised definitions in this space?**

SECTION TWO:

TO WHAT EXTENT ARE GUIDING PRINCIPLES EFFECTIVE IN ENCOURAGING RESPONSIBLE USE?

The uptake of high profile principles on emerging technologies has been extremely high amongst international development agencies and NGOs. The [Principles for Digital Development](#) stewarded by DIAL for instance, have been endorsed by [over 200 organizations](#) since their release in 2012 and all OECD Member states plus key partners signed up to the [Principles on Artificial Intelligence](#) in 2019. However, despite this extremely encouraging uptake, a question remains as to the influence and even utility of guiding principles. In particular, since the design and implementation of emerging technologies does not occur in the vacuum of international development alone, it is also important to consider the extent to which these principles resonate with creators of emerging technology and implementing partners.

“As is true of many small companies, we can’t necessarily afford a highly extensive set of protocols, so are dependent on whoever is paying for the work.”

- Implementer

Our consultation revealed a stark difference in the uptake/endorsement of principles between development agencies and implementers of emerging technology. For instance, all development agencies that we consulted were aware of and had officially endorsed the Principles for Digital Development stewarded by DIAL. In contrast, none of the implementers interviewed were aware of having formally adopted or signed up to any official set of international principles.

When asked about the decision not to use or align themselves with guiding principles, implementers cited the lack of tangible enforcement power behind the principles as a key disincentive, alongside the amount of time, money and energy required to implement and then monitor the implementation of guiding principles. Furthermore, questions were raised regarding the tangible utility of these principles given that they are so broad in nature and lack contextual specificity.

“So you want to do things responsibly, but you don’t want to put up so many barriers that it prevents innovation.”

- Implementer

However, it is not only implementers who hold criticisms of guiding principles. Development agencies, researchers and civil society organisations all press similar concerns, particularly noting the difficulties in balancing the different incentives of development agencies and implementing partners when it comes to putting time and money into living up to ethical recommendations.

“I mean, often it's really about the incentive model, right? Different parties have different reasons to opt in and to contribute. Then it's the gaps between these incentives that often impede on living these principles, because it requires investments and certain buy-in from different stakeholders and that often is not thoughtfully conceptualised from the very beginning.”

- Development Agency

OPEN QUESTIONS

These questions are intended to prompt further reflection around specific aspects of applying principles around the use of emerging technologies. Further, collective exploration of many of these questions would benefit the whole community.

- How can incentives to adopt principles or other ‘responsible’ ways of working be better aligned across different types of partners, from those funding to those implementing emerging technologies?
- What are the dangers/downsides of engagement with principles happening only at certain levels?
- What steps might we take as a development community to align on a common set of principles that we want to adapt into practice?

SECTION THREE:

WHAT STRATEGIES DO ORGANISATIONS USE TO TRY AND PUT PRINCIPLES INTO PRACTICE?

Despite the fact that few organisations interviewed rely on principles that regulate the use of emerging technology for development, those few that do have developed a host of methods and tools to try to ensure responsible implementation - to put principles into practice.

Our consultation surfaced a range of different mechanisms/approaches that are being used to translate principles into practice. They fell broadly into four categories: Internal tools and training, partnership and procurement practices, program development and testing, and monitoring and evaluation.

01 - Internal tools and training

Internal tools, including toolkits, as well as training sessions and workshops are the most common approach taken by informants to encourage the uptake and prioritisation of principles for responsible use. The focus of training was most often on: matching capabilities (getting people comfortable with using AI in their programs), 'asking the right questions' when planning to implement AI and reflecting on ethical implementation using case studies.

Interestingly, many informants relayed that the most valuable element of the training was getting different parts of their organisations together to talk about these issues and start to cultivate an organisation-wide dialogue about how best to use this technology in their work. A further finding is that very few organisations made training and workshops mandatory; however most cited very high turnouts and strong levels of interest. Finally, it is noteworthy that most of the tools developed by development agencies are aimed at an internal audience, very few are developed specifically for local implementing partners.

"What we've tried to do is also produce a lot of information that just illustrates some of the massive risks that you have, and that you need to be aware of then from there we can talk about how to address them collectively."

- Researcher

02 - Partnership and procurement practices

Embedding principles into partnership agreements and procedures through tenders, terms of reference and procurement processes is an extremely popular strategy utilized by development agencies to integrate principles for responsible use into the fine print of their projects. The benefit of this approach is that it creates visibility around an agency's expectations and, in theory, ensures that principles are embedded in decision making processes from the outset.

While development agencies are confident in this strategy, there remains a question around the effectiveness of this approach from an implementer perspective. Those we spoke to were quick to mention the lack of compliance monitoring that occurs between development agencies and their partners 'after the box in the contract is ticked' as a factor limiting the long term effectiveness of this approach.

03 - Program development and testing

Many of those we spoke to referenced the program development and testing phases as important times for thinking through the risks of emerging technologies and embedding measures for ensuring long term ethical implementation into a project's lifespan.

Informants recommended that agencies at this phase of an emerging tech project consider:

Research: Gather feedback on any sensitivities (eg. cultural) that may limit the acceptance of the technology in a certain context and adequately assess the potential for the technical solution to contain inbuilt bias

Risk: Allow for testing to be performed in a safe environment which does not put potential end users at risk

Representation: Ensure that test groups adequately reflect target populations paying special attention to the representation of marginalised groups.

"We've put them [principles for digital development] into actual contract terms and conditions and I think that had an effect, because that pushes partners and suppliers that we are going to work with to actually think, 'we need to know what these are', because they are actually in the contract."

- Development Agency

04 - Monitoring and Evaluation

Self assessments and maturity assessments are popular means through which development agencies and implementers seek to measure compliance with ethical standards in a slightly hands-off way - placing the onus on those contracted to implement the tech, rather than those designing the projects/products. In particular, many organisations are considering the adoption of Human Rights impact assessment tools like this toolkit developed by the Danish Institute for Human Rights.

"We do also now have a self ranking system where each implementer we work with assesses themselves based on a list of criteria, and you have a series of questions about ethics, and privacy, and then at the they get their own score detailing how ethically compliant they are. (...) It is an easy tool for them to understand where they are right now and how they could improve - it's appreciated by the members because it's not an enforcement tool."

- Civil Society Organisation

OPEN QUESTIONS

These questions are intended to prompt further reflection around specific aspects of applying principles around the use of emerging technologies. Further, collective exploration of many of these questions would benefit the whole community.

- Do you know of other examples that exist around the most effective approaches for translating principles into practice? Are there other sectors / contexts that we can learn from?
- What opportunities do you think exist for the Emerging Tech Working Group to share learning around / validate principles that are being applied across organisations?

SECTION FOUR:

WHAT ARE THE MAIN CHALLENGES ORGANISATIONS FACE WHEN ATTEMPTING TO IMPLEMENT EMERGING TECHNOLOGIES IN THE MOST RESPONSIBLE WAY?

Our consultation surfaced an array of different challenges faced by actors implementing emerging technology in development projects. The most commonly referenced challenges were: co-creating processes and products, balancing the incentives of different actors working on an emerging technologies project, and the lack of effective governance of the technology sector.

"I think that due to the nature of our organisation - doing large grants, large, biddings, large tenders, means we are not as agile in terms of technology development as we would really need to be to really build with a user."

- Development Agency

Co-Creation:

The importance of co-creating digital solutions and implementing programs in an inclusive and collaborative manner is widely accepted, however the best ways to do so are still unclear. Throughout the consultation, informants repeatedly highlighted co-creation/collaboration with end-users and marginalised populations as something they would like to do better. In fact, when asked to outline the main challenges development agencies face in implementing emerging technologies 'responsibly', the aspect that was mentioned the most was, designing with the end user and building an equity and inclusion lens into long term programming.

Balancing Incentives:

When it comes to integrating ethical principles into emerging tech projects, many individuals we spoke to cited a misalignment between the incentives of different actors in this space. Most often, this misalignment was strongest between development agencies and their implementing partners. Specifically, implementers felt there was a lack of awareness within the development community regarding the costliness (in both terms of time and finance) of ensuring that projects meet the standards set by digital principles. Of course, all implementers we spoke to believed strongly in the importance of delivering a project ethically, however, there was a clear sense that their donors often do not fully consider the extra burden that ethical compliance checks and high quality project monitoring place on them. This was especially true for those in smaller start-ups who worry about their ability to compete in a global market with tech giants who are under little to no obligation to follow digital principles.

Governance/Enforcement:

An enduring issue for those attempting to enforce digital principles is the lack of tangible enforcement power that lies behind them. There is a strong feeling that the expansion of regulatory enforcement is nowhere close to meeting the need caused by rapid expansion of the technology sector and this unsurprisingly has important ramifications in the tech for development space.

Notably, those interviewed raised concerns about the lack of clarity around due process for when emerging tech projects fail, as well as more specific concerns around appropriate data governance and individual privacy and data rights. With more and more development actors reliant on digital solutions, there needs to be a fierce examination of the durability of associated regulation and overall governance of this space.

“And this is a dog eat dog world unfortunately, that’s how the whole startup ecosystem is celebrated right - who grows the fastest, who is making the most money, whose valuation is the highest.”

~ Implementer

“One of the things that is happening with AI systems right now, is that the ways in which we think about due process - what happens when things go wrong, seem to be extremely unclear. How these systems can be made accountable to the public at large also remains an open question.”

- Researcher

“We follow data privacy standards, and we are compliant with European and US legislation, legislation on data privacy, and so on. But in terms of specific technology standards? We don’t use specific technology standards relating to AI.” ~ Implementer

- Implementer

OPEN QUESTIONS

These questions are intended to prompt further reflection around specific aspects of applying principles around the use of emerging technologies. Further, collective exploration of many of these questions would benefit the whole community.

- What tools and approaches do you think should be developed in order to improve agencies’ ability to co-create processes and products?
- Do you have other examples of deeper engagement between funders and implementing partners?
- What needs to be done to collectively improve the governance and regulation of this space to ensure ethical and responsible growth?



CONCLUSION

Looking ahead, the IDIA Emerging Technologies Working Group (ETWG) will continue to explore the open questions raised throughout this report and more, with a view to contribute to collective learning and encourage greater alignment between actors in the emerging tech for development space.

If you are interested in learning more or getting involved in our work, you can [get in touch here](#). If you have a resource that you would like to share with us, please submit it [here](#) to the [IDIA ETWG Navigator](#), where we collect useful tools and information for those working with emerging technologies in a development context.

