



# Digital Development Training Landscape and Needs Assessment

Phase I Report

## Acknowledgments

### Training Landscape & Needs Assessment -- Principles for Digital Development

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# Glossary

## Term

CoP	Community of Practice
CRS	Catholic Relief Services
DAI	Development Alternatives International
DHIRT	Digital Health Investment Review Tool
DHIS	District Health Information System
DIAL	Digital Impact Alliance
DPAC	Digital Principles Advisory Council
DP	Digital Principles
GSMA	Global System for Mobile Communications Association
ICT	Information & Communications Technologies
ICT4D	Information & Communication Technologies for Development
IFRC	International Federation of the Red Cross and Red Crescent Societies
INGO	International Non-Governmental Organization
KII	Key Information Interviews
LMS	Learning Management Systems
MOOC	Massive Open Online Course
NGO	Non-Governmental Organization
ROI	Return on Investment
SDG	Sustainable Development Goal
SIDA	Swedish International Development Cooperation Agency
ToT	Training of Trainers
USAID	United States Agency for International Development
WHO	World Health Organization



Design with the User



Understand the Existing Ecosystem



Design for Scale



Build for Sustainability



Be Data Driven



User Open Standards, Open Data,  
Open Source, and Open Innovation



Reuse and Improve



Address Privacy & Security



Be Collaborative

# Executive Summary

## Purpose

This landscape study provides research-driven insights on what stakeholders want from future Principles for Digital Development (Digital Principles) training regarding content and delivery. Its objective is to determine the greatest training needs and opportunities for building capacity among digital practitioners to understand and use the Digital Principles.

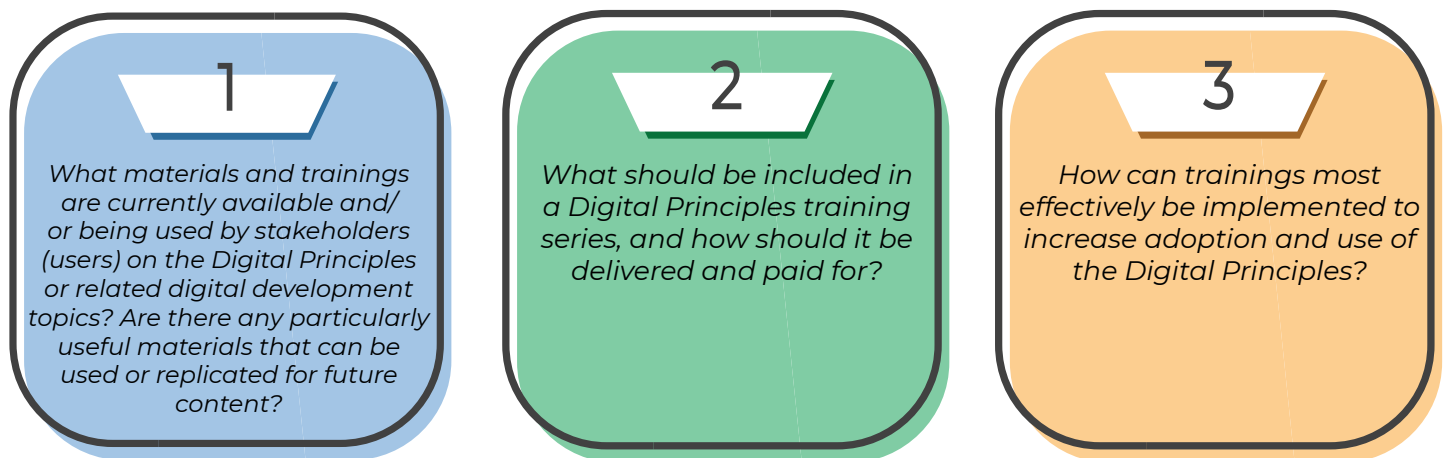
## Background

Despite the rapid advances in digital technologies around the globe and the promise those advances hold for transforming lives for the better, many countries have yet to realize the full benefits of the digital economy. In 2017, USAID announced that “significant barriers still remain, largely as a result of policy and legal frameworks that have not kept pace with innovation, market failures that limit access, and a development community that seems slow to adapt to the rapid pace of change and near ubiquity of digital technologies” (USAID 2017).

The Digital Impact Alliance (DIAL) was established by donors that wanted to address these challenges. Its aim is to enable the delivery of digital services to the most vulnerable in hopes of creating a more inclusive digital society (DIAL, 2019). One of DIAL’s key strategies is to focus on the promotion of the Digital Principles, a set of nine living guidelines “designed to help digital development practitioners integrate established best practices into technology-enabled programs” (Principles for Digital Development, 2019). Since becoming steward of the Digital Principles in 2016, DIAL has not only delivered tremendous growth in the number of endorsers of the Digital Principles, it has overseen the development of new resources and materials to help the digital development community embrace and apply these key concepts.

## Methodology

Three key questions guided the research for this landscape study:



The team conducted a desk review of the available literature, key informant interviews (KIIs) with a variety of digital development stakeholders, and an online survey directed at a wider audience. A total of 57 KIIs and 198 online survey responses were used in the analysis. The team coded and analyzed the KII notes and open-ended survey responses by research question and theme and analyzed the quantitative survey data for descriptive characteristics by research question.

## Findings & Conclusions

### Research Question 1

*What materials and trainings are currently available and/or being used by stakeholders (users) on the Digital Principles or related digital development topics? Are there any particularly useful materials that can be used or replicated for future content?*

### Findings

Some stakeholders said that their organizations run trainings on digital development and use the Digital Principles as a framework to address topics like data security and user design. Other organizations provide staff orientations in lieu of specific training on the Digital Principles. Only 10.5% of survey respondents (and very few key informants) reported that they conducted internal trainings exclusively on the Digital Principles. No specific curricula emerged that could be immediately repurposed for future DIAL-related trainings. However, a few online survey respondents indicated that they would share case studies and examples with DIAL for the purpose of creating trainings that are based on practical, diverse and real-world examples.

The interviews and survey revealed that organizations approach staff digital development in different ways. Some organizations attempt to reach all staff members, while others rely on more knowledgeable staff—either self-identified or specifically trained staff—to support their digital programming and provide digital leadership. Most large International Non-Governmental Organizations (INGOs) and donors reported having extensive internal professional development programs and training expertise on digital development.

### Conclusions

- » Overall, there were few materials available that could be directly used or replicated for future training. While there was some training taking place among stakeholders, it was either integrated into broader, organization-specific digital content or proprietary.
- » The Digital Principles were generally a key feature in most organizations' approach to digital development and digital training.
- » Only a handful of organizations ran internal training on the Digital Principles, and most of it was on digital development more broadly and/or was tailored to the specific organization.
- » There were no examples of scalable training.

“Benefits of the internal training included: “Exposing people to the ideas—developing more of a shared language—using it as a touchstone as we work with teams to try to build the Principles into proposals, projects and other initiatives.”

(Survey Respondent)



*Digital Principles 101 Training at GIZ in Eschborn, Germany*

## Findings

There were many differing points of view on training content, delivery, credentialing and cost. One common theme among all respondents was the need for any training to be practical and filled with real-world examples from a range of sectors.

## Content

Most stakeholders agreed that training on the fundamentals of the Digital Principles would be useful. They indicated that, at a minimum, there should be a short basics course that covers all the Digital Principles. However, survey findings on the need for a single, comprehensive training were less conclusive. Respondents ranked the idea of a tailored training slightly more favorably than a one-size-fits-all type of Digital Principles training.

## Delivery

In general, most agreed that some type of blended approach—combining online training, cohort groups and in-person workshops—would ensure understanding of content while still allowing for contextualized interpretation of the Digital Principles and information exchange. Some key informants felt very strongly that any Digital Principles training should use a virtual/online platform to achieve scale. Many others insisted that no online experience could convey the subtleties required to truly understand the Digital Principles and how to apply them.

Key informants provided specific training delivery suggestions, such as the need for “just-in-time” approaches—training that coincides with upcoming projects—so that learners can immediately apply the new information in practice. Some said that course information should be broken into specific, bite-sized modules or sessions that learners may find more practical. Others indicated that establishing a knowledge baseline through pre-training assessments could help inform specific training focus areas, and a post-training assessment could help determine training effectiveness and follow-up training requirements.



When asked about who might develop or host training, most preferred having a third-party, external trainer well-versed in the subject. However, some mentioned that a training-of-trainers (ToT) approach would be acceptable for field offices. DIAL and TechChange were frequently suggested as trainers, along with a few others (see Figure 10). There were also suggestions about making the training available through multiple platforms and networks, including humanitarian networks like Kaya, a global learning platform for the humanitarian sector.

Many key informants mentioned the need to use training videos as opposed to a traditional slide-based format. One INGO training specialist noted that “watching someone talking to you versus watching PowerPoint slides is a big trend in the space. It is powerful to connect with a person, even virtually...especially diverse people. This enables you to subtitle and provide different languages.”

## Cost

There was general but not universal agreement that some cost to support training on the Digital Principles would be acceptable. Some survey respondents noted that people tend to value paid trainings more than those that are free.

Survey respondents differed widely on the question of cost and availability of funding to pay for the training. Those from low- and middle-income countries (LMICs) or from smaller organizations were most likely to say no funding was available. According to the survey, 36.7% said there was no funding available for training. Of the 63.2% of survey respondents who could pay, 47.3% said they could pay less than \$100, 38.4% could pay between \$100 and \$400, and 14.3% could pay \$400 or more (see Figure 11).

Many key informants, especially from larger INGOs and donor organizations, indicated that internal professional development resources were available for staff training. Field implementers and social entrepreneurs noted fewer resources to pay for training. When asked whether they personally would be willing to pay, only 4% of survey respondents “strongly agreed” that they would pay, and nearly 50% (mostly for-profits and nonprofits in the Global North, see Figure D-6) said they “disagreed” or “strongly disagreed” that they would pay.

## Certification

Most informants and survey respondents agreed on the usefulness of a Digital Principles certification or credentialing process through trainings (see Figure 12). However, a couple of key informants noted that they did not perceive any benefit from a certificate program, with one donor saying that it would be an unnecessary bureaucratic hurdle for implementers, and another donor saying they would not likely value it when hiring staff. Other stakeholders, particularly implementers and field staff, saw it as a useful avenue to encourage an industry standard and help organizations strategically move towards greater digital competencies.

## Conclusions

- » The combination of a Digital Principles basics course with additional, more in-depth course options delivered in a tailored (user- and/or sector-specific) or module style was the preferred training format.
- » Online training was seen as more scalable, accessible and affordable for basic training, with supplemental in-person training advisable to help further discussion and the exchange of experiences among peers (i.e., a blended training approach).
- » Implementers, donors and possibly local government officials were key user groups identified for trainings that could be tailored to their role.
- » A third-party trainer approach for the Digital Principles would be useful if trainers are diverse (both in experience and demographics) and come from a well-vetted source or were validated by professionals who deeply understand the Digital Principles.
- » A ToT model is useful to bring external training back to the organization, where it can be contextualized and scaled.
- » There were mixed perspectives on the utility of a certificate program, but many felt it would contribute to establishing industry standards and promoting professional development in the digital sphere.
- » Many of those participating in this research said they have some resources to pay for training, but there are some important groups that do not have this funding, particularly smaller for-profits, nonprofits and startups in LMICs.

### Research Question 3

*How can trainings most effectively be implemented to increase adoption and use of the Digital Principles?*

Survey respondents reported that more time for interactive training with access to contextualized examples and more consistent follow-up after training would increase use and adoption of the Digital Principles.

The interviews and survey uncovered a series of enablers and barriers to effective Digital Principles training.

#### Enablers

Creating cohorts of trainers through a ToT model was a popular approach for achieving scale and developing a well-informed community supportive of the Digital Principles. Many survey respondents highlighted the importance of having community support for trainers, trainees and organizational leadership to ensure actual adoption of the Digital Principles.

Several donors and INGO key informants reported that they are developing new digital strategies or digitally dedicated objectives informed by the Digital Principles as part of their broader organizational strategies. Many also mentioned the use of digitally savvy staff members and/or digital “champions” to promote the Digital Principles in their organization’s work and incorporate them into the organization’s core values.

#### Barriers

Many survey respondents identified barriers to adopting and implementing the Digital Principles. In some cases, the lack of digital skills and competencies was a barrier, particularly in addressing specific Digital Principles like “Use Open Standards, Open Data, Open Source and Open Innovation” and “Address Privacy and Security.” Another barrier mentioned most frequently was the time and money needed to appropriately incorporate the Digital Principles, especially “Design With the User” and “Understand the Existing Ecosystem.”

There was a sense among respondents that while they might support the Digital Principles in theory, they still do not have funding mechanisms and procurement processes that fully incorporate or require their use. As one respondent said, “If it’s not required...what’s the point?”

Key informants said they don’t know how to measure whether they are adequately using the Digital Principles. They suggested metrics or tools to help organizations understand their progress towards incorporating and achieving the Digital Principles, such as the Digital Principles Maturity Matrix for Program/Proposal Evaluation or USAID’s Digital Health Investment Review Tool (DHIRT). These tools would help support organizational adoption of the Digital Principles and ensure accountability. Other respondents suggested that these tools could be used to conduct an analysis of the return on investment (ROI) for using the Digital Principles to help make the case to implementers and donors about the true value of devoting time and resources to following the Digital Principles

#### Conclusions:

- » Establishing a community beyond the training (e.g., online community of practice, informal WhatsApp groups, Slack channels, peer mentorship programs and especially ToT cohorts) and solidifying an organizational strategy on the Digital Principles are key to ensuring their adoption.
- » The greatest barriers to adoption and use of the Digital Principles include time and financial constraints. Many claimed this resulted from donors not understanding the true costs associated with following the Digital Principles.
- » The lack of a mandate or requirement from donors to use the Digital Principles was a common frustration.

Training and resources for tracking the use of the Digital Principles in organizations and projects were desired by survey respondents. Tracking and measuring outputs that showcase the true benefit and return on investment from using the Digital Principles may encourage greater financing of training. .

Peers are certainly helpful here. Having a community to bounce ideas off and talk to is very important when trying to adopt a new practice—especially technology.

(Implementer)



*Digital Principles Advisory Council Meeting in Kampala, Uganda*

## Recommendations

- 1 | DIAL should review all the existing training and resource materials in order to reuse and improve content and incorporate real examples from implementers. There is a large amount of potential content already in use that is relevant to future training development, including content on DIAL's own website. Sector-specific case studies will be especially important to help learners grasp concepts within their own field. Local language materials should also be sought out and included. Donors are interested and willing to engage and support the development of content.
- 2 | DIAL should consider a blended learning approach that combines online and in-person or cohort training. There is a compelling need for scalability, as well as contextualization and tailoring of information, which can be achieved via a combination of online courses, some in-person training, and a ToT approach.
- 3 | DIAL should consider a nominal, sliding-scale fee for training to increase perceived value and engagement in the process. Many respondents felt that training for the Digital Principles was valuable and should be priced on a sliding scale that ensures accessibility to the trainings among a wide audience. DIAL should consider producing content under a Creative Commons license to ensure access.
- 4 | If DIAL pursues tailored training, it should focus on developing materials for at least two types of participants (donors and implementers) and consider a separate course tailored to local government participants. There was consensus on the need for trainings for donors to address whether expectations for grantees to adhere to the Digital Principles were in any way in conflict with the reality of their funding mechanisms and procurement processes. A training for implementers should focus on the basics and tradeoffs associated with applying the Digital Principles. DIAL should also continue to try to reach local government officials to engage them in training and outreach and determine their need for a specific approach.
- 5 | DIAL should consider developing a dashboard to help organizations visualize their level of adoption of the Digital Principles. Because there is no incentive or requirement to train staff and no way to track or measure training, the level of adoption varies. Using training participation as one metric to measure adoption could increase both the level of adoption and the uptake of training. Tools for evaluating the use of the Digital Principles throughout an organization would be another potential approach.
- 6 | DIAL should leverage existing opportunities for training and work with organizations that are well known in the digital training space. Attaching training opportunities to existing digital meetings (ICT4D, MERL Tech, the Digital Health Forum, etc.) could enhance opportunities for individuals likely to be trainers for their organization. DIAL should also engage with other well-known training groups in the digital space, such as TechChange, Digital Frontiers, the Digital Health Leadership program, Community Academy for Health and others. Convincing these organizations to incorporate the Digital Principles into their work could serve as a scaling mechanism—increasing knowledge, acceptance and adoption of the Digital Principles.

## Context

Rapid advancements in digital technologies around the globe have revolutionized communication and data collection but have not yet achieved transformative scale, nor have their benefits been equally distributed. The Global System for Mobile Communications Association (GSMA) reported that 5.1 billion people—67% of the global population—were subscribed to mobile services at the end of 2018, showing that the connectivity gap is getting smaller. GSMA estimated that over the next seven years, 1.4 billion people will begin using the mobile internet (GSMA, 2019).

Despite this growth and the promise it holds, many countries and people have yet to realize the full benefits of the digital economy. A group of donors active in the digital space—Swedish International Development Cooperation Agency (Sida), the Bill & Melinda Gates Foundation, and USAID—established the Digital Impact Alliance to “unlock markets to deliver digital services to the most vulnerable, working with partners to overcome these challenges, so that together we can create a more inclusive digital society” (DIAL, 2019). DIAL’s internal and external research identified an ongoing need for capacity building for implementers and donors to achieve these goals.

“We can ‘train’ people to tick the boxes, but if we actually want digital development to follow these Principles, then everyone needs to be educated and needs to learn, and that includes everybody.”  
(Training Specialist)

In 2016, DIAL became steward of the Digital Principles, uniquely positioning the organization as a neutral facilitator of and convener on the Digital Principles. In this role, DIAL can provide leadership and support, problem solve, and further the Digital Principles’ evolution and expansion by collecting and sharing evidence from all perspectives in the digital ecosystem. Since taking on stewardship of the Digital Principles, DIAL has significantly increased the number of endorsers of the Digital Principles, developed a polished new website with a wide-ranging set of implementer-focused resources (e.g., toolkits, guides and case studies), released a Twitter handle, launched new

materials through live events in several countries, re-energized the Digital Principles Community of Practice, and created an animated video demonstrating the Digital Principles.

DIAL’s internal draft State of the Principles for Digital Development report detailed DIAL’s current plan for the Digital Principles, including continuing the refinement of a Digital Principles 101 training and maturity matrix tool. In response to continued requests from the digital development community for training opportunities on implementing the Digital Principles, DIAL commissioned this report to explore the state of training curricula related to the Digital Principles and the needs and potential for a Digital Principles certification program (Nelson, 2019).

Figure 1: Pop-up banner from the Digital Principles online toolkit



## Training Landscape

The research team conducted a search for peer-reviewed or scholarly publications on the Principles for Digital Development but found only one evaluation specifically addressing the Digital Principles (Vota, 2018). It also found 138 references to the Digital Principles, including journal articles, conference proceedings and industry literature. A broader search for training related to the Principles for Digital Development yielded several blog posts referencing application of the Digital Principles (Eason, Hassani and Lord-Biggers, 2019; Roggemann, 2016; Worley, 2019). The search also found references to training materials, such as the TechChange-developed resources available on the Digital Principles website and materials related to the ICT4D conference events. No real examples of training specifically on the Digital Principles were found.

A summary report on insights from a 2015 year-long community discussion of the Digital Principles noted that Sida and USAID had both conducted internal trainings on the Digital Principles (Waugaman, 2016), but no evidence of this training was available online in 2019. Similarly, no online materials were referenced in either DIAL's draft State of the Principles for Digital Development Report (Nelson, 2019) or the Report on Donor Organizations & the Principles for Digital Development: A Landscape Assessment and Gap Analysis (Haßler et al., 2018a). Research revealed that Development Alternatives International (DAI) conducted Digital Principles-focused training internally and independently. DAI shared its 2016 training approach and results in online blogs and a workshop. TechChange addressed the Digital Principles by including them in courses such as Technology for Monitoring and Evaluation. DIAL later commissioned TechChange to develop an animated video on the Digital Principles and co-create a new suite of tools and resources designed for donors (Hulse, 2018).

While this search found few actual Digital Principles-focused training courses, other related digital training was found. For example, there was a vast amount of literature, guidance and training around data privacy, including comprehensive and interactive training modules from Oxfam (Hastie & O'Donnell, 2017) and the International Federation of Red Cross and Red Crescent Societies (IFRC, 2018). A wide range of resources—courses, websites, books and videos—for user-centered design, data analytics, collaborative/participatory methods and much more were also found.

Additionally, the research found a considerable number of courses and trainings on ICT4D, which incorporate elements of the Digital Principles, though not explicitly. For general ICT4D content, there are many university-based courses and even master's degree and Ph.D.-level programs. Organizations with ICT4D-related resources, such as NetHope (2014; Bothwell, Fruchterman, McMahon, Woodman and Wittemyer, 2015) and Catholic Relief Services (CRS), provide public access to webinars, manuals, guidance and more.<sup>1</sup> Training in the monitoring and evaluation-specific applications of ICT4D is also available through organizations such as EvalPartners (ICT for Monitoring & Evaluation Course, 2018) and TechChange. A great deal of ICT-related training is available through the World Bank Open Learning Campus and the SDG Academy, which offers a course entitled "Tech for Good: The Role of ICT in Achieving the SDGs." Annex A offers a list of other ICT4D-related trainings, with format and cost information, found through this search.

## Current Training Approaches and Platforms

The Digital Principles are part of an ongoing effort by development practitioners to share knowledge and support continuous learning around technology and development. Skills required to understand and implement the Digital Principles are cross-sectional and may originate from a range of sources, including the tech sector, the humanitarian sector, the traditional development sector, educational institutes, and emergent learning platforms and hubs.

### Internet

The internet has opened new learning pathways via open and online platforms—from online content to participatory virtual environments. University instructors have shared their course materials and teaching ideas online, expanding learning opportunities and resources worldwide (Bonk, C.J. 2009). According to the online job site Glassdoor, many firms relaxed the requirement for a four-year degree because many talented applicants for tech-based positions were self-taught or educated outside of traditional academic institutions (Forrest, 2019). TechChange, for example, developed a learning platform specializing in delivering professional development and training courses largely dedicated to ICT-related topics. These online, customized, high-quality digital classes cost about \$400 for a four-week course. In general, there is an increased use and recognition of online learning for technology.

\*Current listings for ICT4D courses are available on the International Network for Postgraduate Students in the area of ICT4D (IPID) website at <http://groupspaces.com/ipid/pages/ict4d-courses>, and on the ICTology website at [https://ictology.net/wiki/index.php?title=ICT4D\\_Online\\_Courses](https://ictology.net/wiki/index.php?title=ICT4D_Online_Courses).

<sup>1</sup>A list of ICT4D webinars, trainings and events can be accessed via the NetHope Solutions Center website at <https://solutionscenter.nethope.org/resources/initiatives/ict4d-webinar-series>, and the CRS website at <https://www.crs.org/our-work-overseas/ict4d>.

## Development-Sector Training

While not specific to the Digital Principles or even digital development, there are many pathways and sources for training in topics commonly required of development and aid workers, including project management, security, and monitoring and evaluation. Humentum, for example, developed Project Management for Development Professionals (PMD Pro), a training and certification that's been adopted by many development agencies. It offers free self-study guides and materials, fee-based in-person workshops and e-learning courses, practice exams, and a low-cost certification test (less than \$50). Table 1 shows a partial list of providers of standard training in the development and humanitarian sectors. Some offer strictly in-person trainings, while others also offer virtual, e-learning or self-study programs. Many, but not

**Table 1: Providers of Online Development-Sector Training**

Organization	Website	Format	Fee Structure
Humentum	<a href="http://humentum.org/training">humentum.org/training</a>	<ul style="list-style-type: none"> <li>eLearning</li> <li>2 &amp; 3 day workshops</li> <li>webinars</li> </ul>	<ul style="list-style-type: none"> <li>\$175 - \$500</li> <li>\$800 - \$2,000</li> <li>free</li> </ul>
IMA International	<a href="http://imainternational.com/training">imainternational.com/training</a>	<ul style="list-style-type: none"> <li>1 - 2 week in-person trainings</li> <li>3 week certificate programs</li> </ul>	<ul style="list-style-type: none"> <li>1 week: \$2,500</li> <li>2 weeks: \$4,200</li> <li>3 weeks: \$6,000</li> </ul>
INTRAC	<a href="http://intrac.org/how-we-work/training/">intrac.org/how-we-work/training/</a>	<ul style="list-style-type: none"> <li>Online (6 weeks)</li> <li>In-person (5 days)</li> </ul>	<ul style="list-style-type: none"> <li>\$895</li> <li>\$1,670</li> </ul>
Kaya	<a href="http://kayaconnect.org">kayaconnect.org</a>	<ul style="list-style-type: none"> <li>eLearning</li> </ul>	<ul style="list-style-type: none"> <li>Free</li> </ul>
RedR UK	<a href="http://redr.org.uk/Training-Learning2">redr.org.uk/Training-Learning<sup>2</sup></a>	<ul style="list-style-type: none"> <li>3-day in-person trainings</li> <li>5-day in-person trainings</li> <li>More in-depth certification and master's level courses</li> </ul>	<ul style="list-style-type: none"> <li>\$300 - \$1,000</li> <li>\$900 - \$1,200</li> </ul>
Relief Web	<a href="http://reliefweb.int/training">reliefweb.int/training</a>	Not a provider but a source for information about trainings in the humanitarian sector	
United Nations Institute for Training & Research	<a href="http://unitar.org">unitar.org</a>	<ul style="list-style-type: none"> <li>eLearning</li> <li>Blended (5 days, 35 days)</li> <li>Face-to-face</li> </ul>	<ul style="list-style-type: none"> <li>0 - \$800</li> <li>\$800</li> <li>\$2,800 - \$3,800</li> <li>0 - \$2,000 (varies)</li> </ul>
USAID / K4Health	<a href="https://www.globalhealthlearning.org/courses">https://www.globalhealthlearning.org/courses</a>	<ul style="list-style-type: none"> <li>Online courses &amp; certificate programs</li> </ul>	<ul style="list-style-type: none"> <li>Free</li> </ul>

<sup>2</sup>Note that RedR UK has an information management course under development.



*Pictured left to right: Members of the Digital Principles Advisory Council at the first in-person meeting in Kampala, Uganda, 2019*

## Universities

Higher education has assumed unprecedented importance in preparing people for the digitally powered economy and in creating new knowledge (Altbach, 2004). As such, it is reasonable to consider institutions of higher education a potentially effective distribution channel for training in the Digital Principles, particularly for those newly joining the development and humanitarian sectors. “Universities function as neutral conveners, assemblers of talent, and unmatched idea factories—places where great minds focus on problem solving and advancing societal and economic well-being” (Crow 2014). As the pace and complexity of our global society increase exponentially, there is an urgent need to realign the design and infrastructure of education with the needs of those it serves.

## MOOCs

Massive Open Online Courses (MOOCs), which offer free and open registration, a publicly shared curriculum, and open-ended outcomes (McAulay, Stewart and Siemens, 2010) are growing substantially in both developed and developing countries (Marshall, 2016). Partly because of the open-ended outcomes of MOOCs and partly because of their relative newness, there is not yet a substantial body of literature on their learning analytics, especially related to their use in developing countries. Reviewers have found significantly higher drop-out and noncompletion rates for MOOCs than for more traditional educational courses (Murray, 2019), and recent studies show participants from developing countries are only half as likely to complete MOOCs as those in the Global North (Ma and Lee, 2018).

In 2014, the University of Pennsylvania hosted an international conference entitled, “Potential at the Bottom of the Pyramid: MOOCs4D,” where participants discussed issues of inclusion, digital access, peer engagement, accreditation, and, most notably, cultural relevance in MOOCs. According to a conference report: “Early attempts at merely translating existing content or having local professors give lessons on

foreign concepts is insufficient. In MOOCs4D, more emphasis needs to be placed on providing a truly culturally appropriate environment, developed in collaboration with local experts, so learners can better engage with the content.” (University of Pennsylvania, 2014). Data from both developed and developing countries shows that the users of MOOCs are disproportionately elite, young and male, and access in developing contexts is restricted by a lack of resources and infrastructure. Conference reports warned that if such limits were not seriously addressed, MOOCs “have the potential to widen inequality in developing countries, providing more for already advantaged, and little for the rest.” (Castillo, Lee, Zahra, and Wagner, 2015).

There appears to have been little progress on the global MOOCs4D movement since 2015. Currently, the best-known global MOOCs, (e.g., Coursera, Udacity and Udemy) are all from the Global North and offer little content relevant to the humanitarian and development sector. Still, the MOOC concept has persisted and continued to expand in and to developing countries, both independently and through North-South collaborations. The Kayaconnect humanitarian training platform has adopted the MOOC approach for its Humanitarian Leadership Academy and recently launched a Monitoring and Evaluation MOOC in collaboration with Humentum. Other training providers like IDEO and Acumen are achieving massive scale using MOOC trainings that engage global learners on topics relevant to the Digital Principles (e.g., human-centered design, impact analysis and scaling for impact). GIZ’s Global Campus 21 learning platform recently received an e-Learning award for a MOOC on land degradation. It claims more than 6,000 participants have completed one of the five MOOCs offered by the Global Campus to date, including GIZ staff and grantees (GIZ, 2019). The line between eLearning platforms and MOOCs may be increasingly blurred.

## Hubs

ICT hubs, where technology-oriented individuals gather and collaborate, nurture high-tech skills such as software engineering, design and development. According to a study by the Moringa School, ICT hubs play an important role in sensitizing and introducing people to new technologies. According to its survey of IT professionals and entrepreneurs, business and tech communities were reported to be their greatest source of professional development, which includes training, skills development and career guidance (Youth Impact Labs, 2019).

## Complementary Programs

Several complementary program providers work to bridge the existing technology skills gap in the industry through language-specific, technical skills courses that match the needs of the job market. Technology training companies, like Laboratoria, Andela, Gebeya, Nairobi Design Institute’s Moringa School, and AkiraChix, have created and invested in short programs to train and develop local talent into world-class software developers, designers and data scientists outside of the traditional academic institutions. Most of these complementary programs take place in person, with supported content offered online to their students.

## Future of Training

While this study focused on training in technology, recognizing the substantial influence of technology on training is crucial. A plenary speech at this year’s ICT4D conference highlighted mobile-ready training opportunities as one of the biggest game-changers in the development industry, enabling individuals to choose where to access their learning and democratizing the process (Musoke, 2019).

Although online, remote training seems appropriate in this context and the best approach for achieving scale with equity, there are still voices that suggest face-to-face training opportunities are critical for understanding the nuance and variability of this subject matter and for creating the kind of community necessary for organizations to collectively implement the Digital Principles. Blended approaches, including combinations of self-study materials, a program of study with colleagues, and a professional development program for small cohorts, were recommended in a 2018 report to DIAL (Haßler et al., 2018a).



## Research Objectives

The goal of this study was to produce research-driven insights on what stakeholders want to see in Digital Principles training and suggestions on the most useful methods for delivering this training, particularly for those working at the field level. Phase 1 of the project, which is the focus of this report, involved research to determine existing types of Digital Principles training available and identification of additional training needs and interests. Phase 2 involved aggregating practical insights from a training provider perspective, which included conducting ideation workshops to test how best to address the Digital Principles in online or blended trainings. These findings are available separately.

The objectives of this research were to determine the greatest training needs and opportunities for building capacity among digital practitioners to understand and use the Digital Principles.

## Methodology

The research team summarized the scope of work for this project into three key research questions:

1. What materials and trainings are currently available and/or being used by stakeholders (users) on the Digital Principles or related digital development topics? Are there any particularly useful materials that can be used or replicated for future content?
2. What should be included in a Digital Principles training series, and how should it be delivered and paid for?
3. How can trainings most effectively be implemented to increase adoption and use of the Digital Principles?

### Approach

The process began with a desk review. Abbreviated results from this review were presented in the context section of this report. The findings and conclusions from the desk review informed the development of instruments for key informant interviews and an online survey.

## Data Collection

The research protocol highlighted two primary qualitative and quantitative data collection approaches: KIIs and an online survey. Please see Annex B for a copy of the data collection tools.

### Key Informant Interviews

The research team developed individual interview guides for each of the planned types of interviewees in the research. The questions were developed to answer the research questions and the interviews were predominantly conducted remotely. See Annex C for a list of the key informant interviewees.

### Online Survey

The research team developed an online survey to complement the KIIs and to reach a potentially wider audience with basic questions about training and the Digital Principles. The survey targeted organizations that endorsed the Digital Principles, the Digital Principles Community of Practice (DP-COP), and the wider development community.

## Sampling

The team had a target to conduct a minimum of 50 interviews to ensure appropriate demographic balance of individuals from the field, thought leaders, training specialists and endorsers of the Digital Principles. A total of 57 key informant interviews were conducted. The research team sent the online survey to the endorsers mailing list, posted requests to complete the survey in LinkedIn interest groups and advertised the survey on social media (Twitter and LinkedIn). There was a total of 198 respondents. The respondent groups by type are depicted in Figure 2. Additional information about the sampling is available in Table D1 in Annex D. Most of the respondents were from the Global North and Africa. See Annex D, figures D-1 through D-7, for more detailed information.

**Figure 2: Breakdown of Key Informant Interviewees by Stakeholder Group**

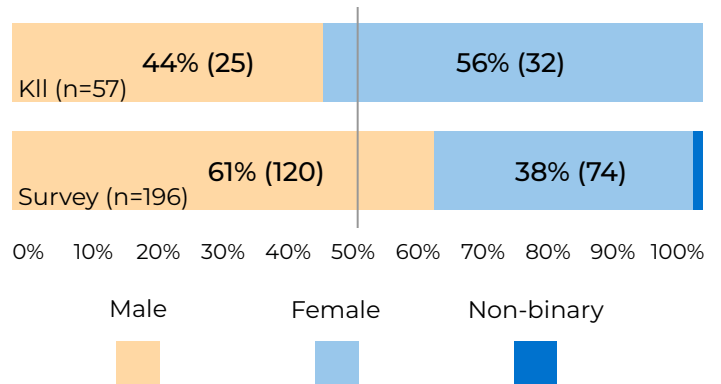


## Data Analysis

Every effort was made to identify a diverse group of key informants, balancing male and female voices and reaching people from diverse geographic locales. In the KIIs, 56% of the informants were female, and among survey respondents, 38% were female (Figure 3).

For the survey, only a few respondents (4%) were unaware of the Digital Principles. A total of 54% of survey respondents reported being “very familiar” with the Digital Principles. A total of 61% of survey respondents said their organization endorsed the Digital Principles, but 29% said their organization had not. The remaining 10% of respondents did not know their organization’s status regarding the Digital Principles.

**Figure 3: Gender Composition of Research Participants**



## Limitations

**The Echo Chamber** – Outreach for both the KIIs and online survey was limited to known channels of communication and networks, which are recognized as potential echo chambers, meaning they are made up of people who have similar beliefs and opinions and may reinforce existing views. There may not be sufficient diversity of participation in these channels. The results from the online survey, which reached a wider population, may serve to partially mitigate this.

**Missing Voices** – Finding donor program officers—those closest to program implementation—was particularly difficult. However, high-level donor representatives were well represented and well researched by DIAL in the past. The biggest challenge was getting input from government officials so we could better understand their needs. Many other respondents (e.g., donors, thought leaders and implementers) noted that government officials are a critical audience for this content.

# Findings & Conclusions

## Research Question 1

What materials and trainings are currently available and/or being used by stakeholders (users) on the Digital Principles or related digital development topics? Are there any particularly useful materials that can be used or replicated for future content?

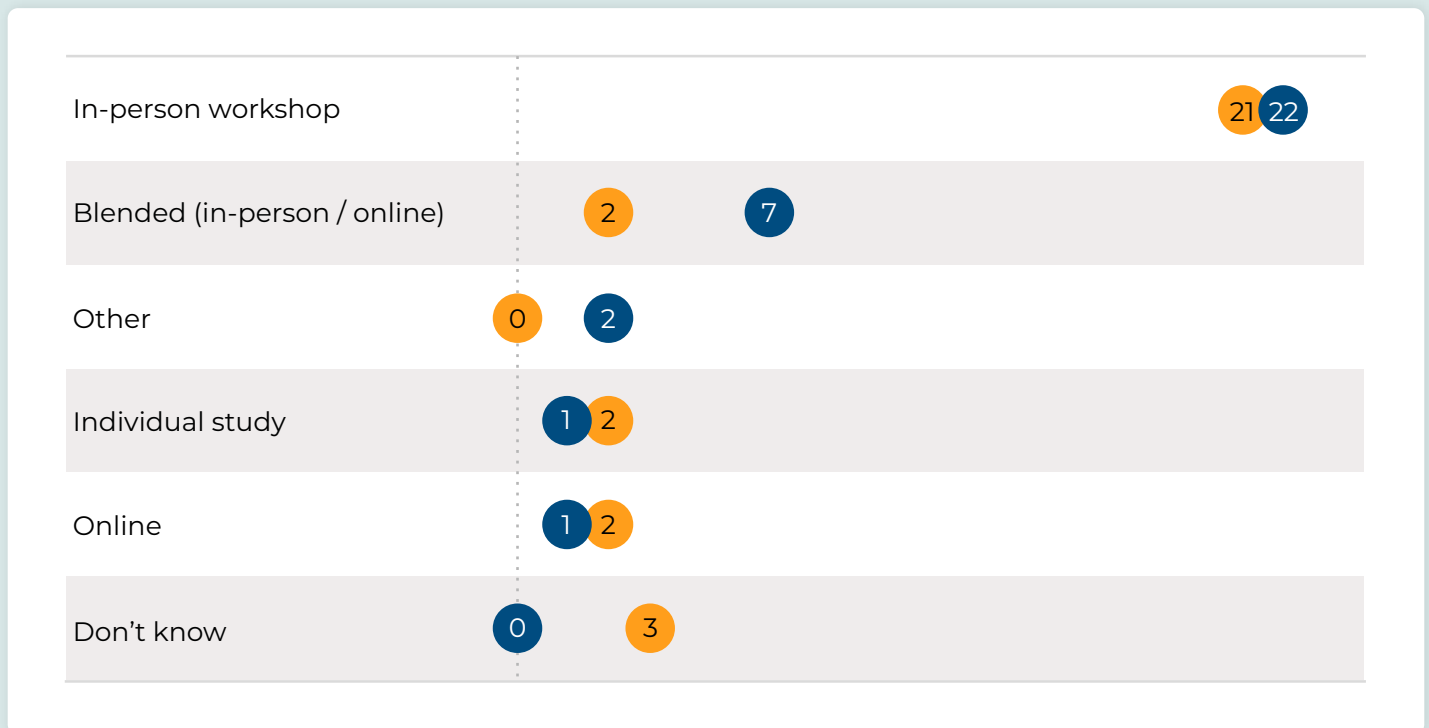
### Findings

#### Existing Training and Training Resources

Most participants noted that they already incorporate the Digital Principles into their work, though many reported that they do not explicitly categorize their work as driven by the Digital Principles, nor do they formally train on them. Others use the Digital Principles to help introduce and frame training on broader digital content. For example, some have developed formal and informal materials and training to address elements of the Digital Principles. However, these trainings are not labeled as trainings about the Digital Principles, but rather are trainings for field staff on related topics, such as how to be data driven, how to design with the user and context in mind, and how to assess the level of risk of different platforms for data security. A few respondents who received training on the Digital Principles characterized the approach as an orientation to the Digital Principles rather than as a formal training on them.

The online survey included direct questions on whether respondents' organizations had (a) implemented internal training on the Digital Principles (Internal DP), or (b) supported attending external training on the Digital Principles (External DP), which is illustrated in Figure 4. Of the 198 respondents, 21 (10.6%) held internal Digital Principles trainings and 22 (11.1%) were supported to attend external Digital Principles trainings. Nine survey respondents reported having training materials that they could share.

Figure 4: Reported Training on the Digital Principles



External trainings on DP



Internal trainings on DP



Of the key informants who conducted formal internal trainings on the Digital Principles, most said that the curricula were highly customized for the specific organization or their clients. None of the informants had a curriculum they could share, as they were considered proprietary. However, many did offer to share other types of content, such as case studies and exercises.

Even before the Digital Principles were developed, we used the Principles. In many ways, they are common sense; maybe 90% we were already routinely doing.  
(Implementer)

In order to train their organizations on Digital Principles, some informants said they worked with TechChange to develop their own organizational training on digital development or participated in TechChange workshops, including Digital Principles-focused trainings. Several key informants mentioned using the DIAL online tools and website, including Digital Principles-specific resources and case studies, the advocacy toolkit, and facilitation materials to provide orientation to staff or to include in their training. Other related digital development training and tools—such as USAID’s Principles for Donor Alignment in Digital Health, Bond’s Digital Skills Program, SIMLab’s Context Analysis Framework, and USAID’s Digital Health Investment Review Tool—were also noted as useful.

A couple of respondents mentioned accessing information about the Digital Principles through tech conferences like ICT4D, where DIAL hosted a Digital Principles-focused training and piloted new tools. While these conferences often took place in the Global South, they were mainly organized by agencies from the Global North. Most of the key informants who mentioned accessing or attending training related to the Digital Principles were from the Global North. Few from the Global South reported participating.

“We need to be reminded that most of our staff globally are from the countries where we operate, so when we think about barriers to tech—connectivity, access, skills and capacities—the same applies to the people in the organization. They need to have the skills, be aware of the threats, etc.

It needs to be relevant to them, too, and you target this better when you approach IT and T4D together, with a single organization strategy” (ICT4D Director—INGO)

Regarding training opportunities in general, some participants discussed the extensive professional development and training resources and expertise available to them—particularly representatives from large INGOs, multilateral organizations and donor agencies. Internal libraries and repositories of courses, including those at universities, academies and extensive Learning Management Systems (LMS), were mentioned as typical resources for these larger organizations. Staff working at these organizations often had dedicated funding and expectations for continuous learning.

#### *Training Audience and Approach*

Survey respondents described different approaches to training on the Digital Principles and digital development. Some focused on training a cadre of headquarters-based experts who use the Digital Principles as a guidepost in their tech support for field teams. Others, especially headquarters staff and training specialists, reported using a training-of-trainers model. The ToT approach involved experts providing in-depth training and support to staff, who then provided training to others, particularly in field offices. At least one INGO reported treating all global staff as needing education and training to become what they call “digital citizens.” They used the Digital Principles extensively in this education and training.

We need to be reminded that most of our staff globally are from the countries where we operate, so when we think about barriers to tech—connectivity, access, skills and capacities—the same applies to the people in the organization. They need to have the skills, be aware of the threats, etc. It needs to be relevant to them, too, and you target this better when you approach IT and T4D together, with a single organization strategy  
(ICT4D Director—INGO)

Some respondents described a distinction between the internally facing use of technology for organizational purposes and the externally facing use of technology for delivery of services to program beneficiaries. Two large organizations (one donor and one INGO) noted their agency-wide digital strategies combined these two approaches, while one donor described a complete firewall between the two strategies. Other respondents noted that the lines often blur between these two categorizations or they do not recognize a distinction at all.

There are current global initiatives and massive investments in bringing “internal-facing tech” to the NGO world—from NetHope’s Digital Transformation initiative and focus on large INGOs to TechSoup’s approach to improving small NGOs’ tech and software skills. Regardless of the approach, there is a surge of interest in hiring or upskilling more digitally savvy staff to build the next generation of digital citizens. Although the Digital Principles were developed with a focus on digital solutions benefitting end users, they often serve a broader purpose for organizations and their use of ICT in this space.

## Conclusions

- » The Digital Principles were almost always a key feature in organizations’ approach to digital development. The approaches to training on digital topics and organizational strategies for digital development varied greatly.
- » Only a handful of organizations conducted internal training on the Digital Principles. Most of the internal trainings did not focus exclusively on Digital Principles but addressed digital development and other development strategies and frameworks more broadly.
- » No examples of scalable training were available. Existing tools and materials for in-person and online training could help inform the future Digital Principles training. However, most organizations tailored the training so specifically to their needs that they may not be scalable, or they may be considered proprietary. Some organizations may be able to provide specific use cases and case studies to supplement the Digital Principles training content.
- » The majority agreed that training on the fundamentals of the Digital Principles would be useful. Some donors expressed interest in being part of the development of this training.
- » Most large INGOs and donors had extensive internal professional development programs, considerable expertise in training and awareness of what best fits their organizational cultures.

## Research Question 2

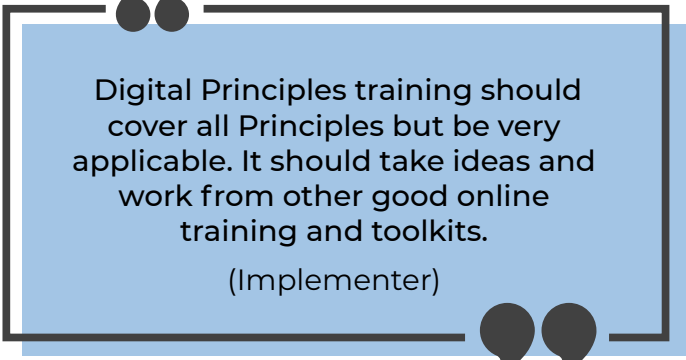
*What should be included in a Digital Principles training series, and how should it be delivered and paid for?*

### Findings

This research question covered training content, training delivery and method, providers, cost, and credentialing or certification.

#### *Training Content – Depth*

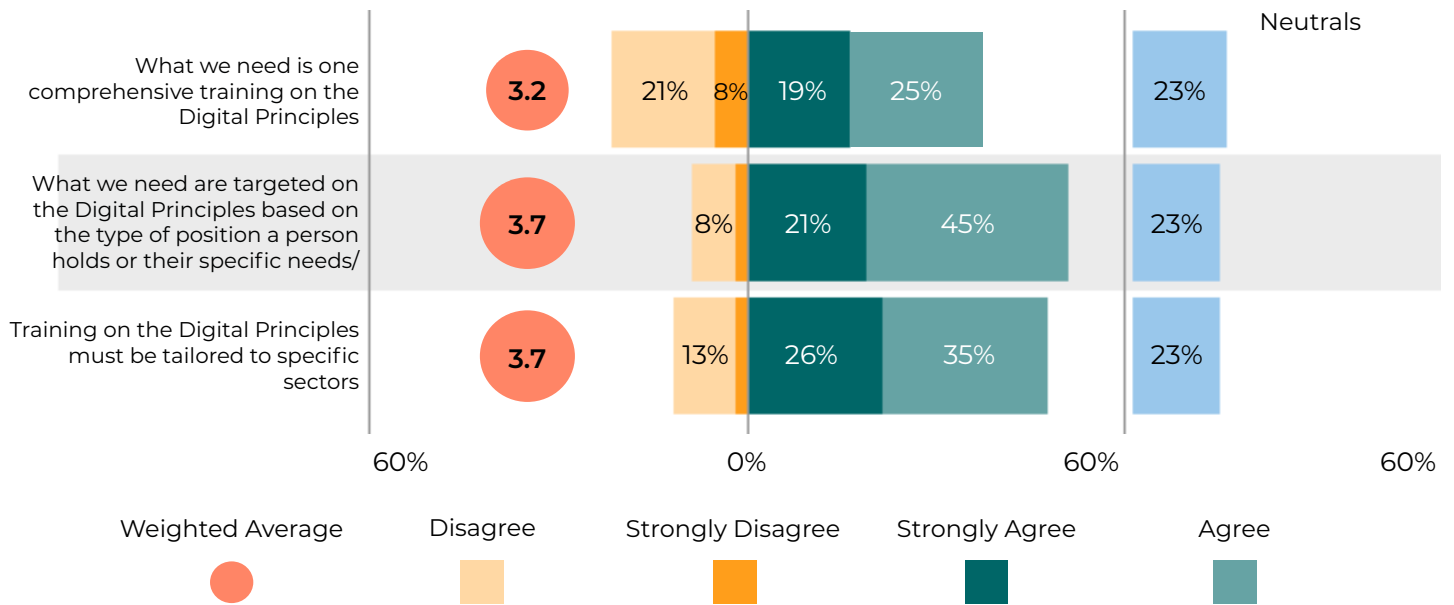
In general, most key informants thought that there should be, at a minimum, a quick, basic course that covers all the Principles. Survey respondents (44%) felt that a general training would be appropriate, and 25% of respondents were neutral on how the training should be targeted (Figure 5).



Digital Principles training should cover all Principles but be very applicable. It should take ideas and work from other good online training and toolkits.

(Implementer)

**Figure 5: Perspectives on Training Content and Targeting**



Some survey respondents said that the training should be divided into modules, so individuals can pick and choose which Digital Principles to focus on. One respondent noted that offering just some of the Digital Principles in a training was a “slippery slope,” because they go together as a whole.

Most key informants reported needing a more in-depth, follow-up training to the basics course that provides more details on some or all of the Digital Principles and how they should be applied.

#### Training Content – Tailor by Position

More than 60% of survey respondents agreed or strongly agreed that training should be targeted based on a person’s position or specific needs (Figure 5). Several key informants noted that training should be tailored to levels within their own organizations. For example:

- Digital Citizens would be at the base of a pyramid of Digital Maturity, with Digital Advocates the middle tier and Digital Experts at the top. The intention of this model is not for everyone to move up the levels, but rather training should support the needs at each level. (Thought leader/INGO)
- Level 1: Upper management, Level 2: Program operations (mid/senior level), Level 3: Wider community (IT specialists to platform users). Again, training should be tailored to each level. (Thought leader/ INGO)

Other key informants felt that training should be customized based on the specific user or audience, such as donor, implementer, leadership, program

manager, field staff, etc. Several informants mentioned that donors require training the most, as they may not realize the steps necessary for truly executing the Digital Principles, and they have a huge influence on implementers’ adoption and use of the Principles. Creating unique, tailored training for donors and implementers seemed most important to informants. However, some felt that while it may be important to distinguish how the Digital Principles apply to different positions in different ways, it is still vital to include a variety of users—regardless of position—at the same training to learn about each other’s role in implementing the Digital Principles.

Government officials were also mentioned as a distinct audience, though few could be identified for KIIs. One donor representative noted that line ministries may need the Digital Principles training most but understand it least: “They don’t use the language of the Digital Principles, but there’s such a push from government line ministries to want systems that are sustainable, and made to meet their needs, in an integrated way throughout a project—not siloed digital tools outside the ministry.” Interestingly, among the online survey respondents who identified as “Government (non-donor),” not all were familiar with the Digital Principles, but all nine agreed or strongly agreed that they “would value being recognized as an ‘expert’ in the Digital Principles.”

#### Training Content – Topics and Exercises

One common theme among all respondents was the need for any training to be practical and filled with real-world examples from a range of sectors.

Of key informants who felt training on the Digital Principles should be tailored, many felt it should be tailored by sector, with sector-specific case studies, activities and examples (e.g., Donor Investment Principles for Digital Health). But many others felt that the Digital Principles are so universal, they should apply to all sectors, and it would be better just to use a range of examples and case studies from different sectors to promote relevance and contextual understanding.



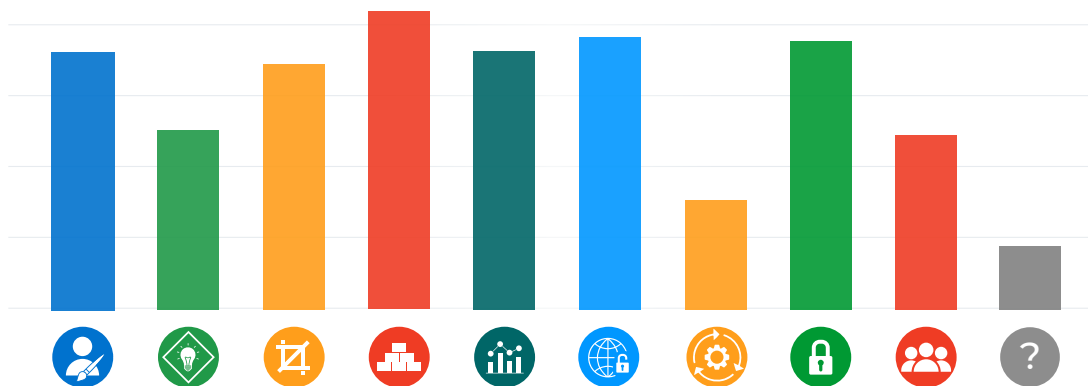
*Participants of the 101 Digital Principles Workshop in Stockholm, Sweden.*

“These case studies should not even necessarily be cut and dry ‘successes’ or ‘failures,’ but rather depict the real-life experiences of weighing options and making tough decisions when trying to effectively use the Digital Principles: ‘you can’t do any of these things to perfection.’ Like, you can’t show that we did absolutely everything that could ever possibly be done to Design With the User, for example. Because the whole time you have to make trade-offs and decisions... So, we need the materials to go through scenarios where there isn’t a ‘right’ answer. Those scenarios are hard to write, but they are the kind of resource that is very valuable if you can provide it.”

(Training Specialist)

Nearly all key informants mentioned that interactive exercises, such as walking through case studies of Digital Principles in use—both successes and failures—were essential. One suggested crowd-sourcing a collection of examples and housing them on a database accessible to trainers and users of the Digital Principles. Some wanted exercises on specific areas that were especially challenging and deserving of more in-depth focus. For example, a number of INGO survey respondents mentioned needing more examples of “Use Open Source” and “Address Privacy and Security,” whereas those in more technical roles (software engineers or those focused on IT) noted a need for exercises on “Design With the User” and “Understand the Existing Ecosystem.”

**Figure 6: Which Digital Principles Need the Most Support?**



The online survey asked respondents to identify the three Digital Principles they most needed help in implementing (Figure 6). The most frequent responses were 1) Build for Sustainability, 2) Use Open Standards, and 3) Address Privacy and Security.

Some key informants mentioned that the training should include information on how to incorporate the Digital Principles into organizations’ processes and procedures. Most respondents, on the other hand, said that while this would be ideal, customizing a training to this degree, given how varied each organization’s processes are, would not be scalable. Several informants felt that guidance on steps to take to further adopt or operationalize the Digital Principles in their institutional strategies or processes, or tips on change management, would be valuable.



In addition to organizational integration, some mentioned the importance of training on the Digital Principles within the context of other key principles of development work, including the SDGs; the High-level Panel on Digital Cooperation’s recommendations; and gender, social inclusion and ethical principles.

Some expressed frustration that “not all Principles can always be met.” Key informants desired training that recognizes the tensions that exist across the Digital Principles and helps ensure that people understand that the Digital Principles are not an “all-or-nothing” proposition. One thought leader expressed frustration that people still see the Digital Principles as a “checklist” of things that they must do, rather than as guardrails for thinking about what is relevant and what is not. This informant noted how important it is to use the Digital Principles to help deepen thinking about a program and to determine what is appropriate when, such as considering trade-offs like scale vs. user-centered design or openness vs. privacy.

“The way the Digital Principles are designed, you’re supposed to be thinking about whether they are relevant—asking questions like, does this investment need to scale? You can consider a Principle and discard it. You won’t do all of them equally... having people wrestling with the more heuristic aspects of the Digital Principles would be a critical part of a training, so people know there’s not a right answer—it’s all trade-offs.”  
 (Training Specialist)

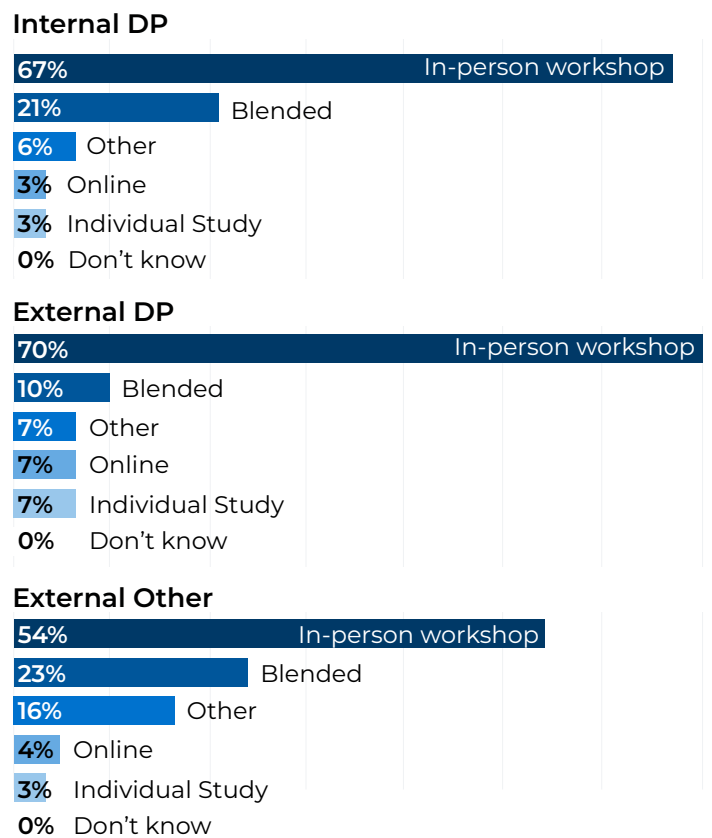
*Training Delivery Method and Type*

Most survey respondents who reported taking Digital Principles-related trainings said that they attended in-person workshops. Figure 7 shows the various types of trainings respondents reported taking, including whether they were taken internally at their organization (Internal DP) or externally with a third-party trainer (External DP). Additionally, it shows whether respondents received external trainings on other digital topics (External Other). Most respondents attended in-person workshops, though online trainings were more common with non-Digital Principles training, and a blended approach was most commonly used in internal Digital Principles trainings.

Among key informants, some were quite firm that an online training—particularly for a generic, introductory training—was the right approach for various reasons:

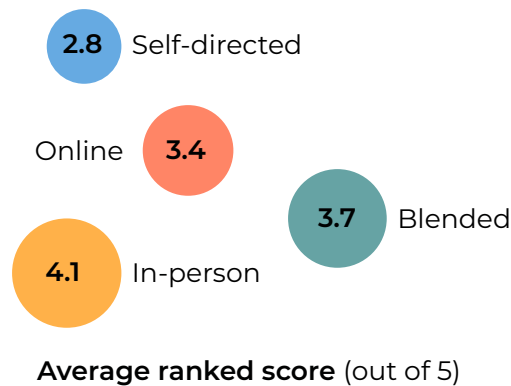
- » Many noted that online training is the only way to achieve scale and reach everyone who should be reached.
- » Online training promotes accessibility and (potentially) affordability.
- » Online training can provide a consistent industry standard.
- » An online approach positions the user in a larger community of participants to improve information exchange.
- » One respondent noted the need for the development sector to consider its “carbon footprint” responsibility.

**Figure 7: Comparison of Training Formats**



However, when asked what type of training they felt was most useful for gaining critical skills, survey respondents reported that in-person training was the most helpful, followed by blended, followed by online. Self-directed training ranked the lowest (Figure 8). One training specialist even noted that despite their platform’s pivot to more virtual learning, people still request—and pay for—in-person, face-to-face workshops.

## Figure 8: What Types of Training Do You Find Most Helpful for Acquiring Critical Skills?



Several key informants were firm that the in-person approach was necessary, partly because of logistical concerns like connectivity, but also because they felt it was a better mode for engaging staff, building a sense of community and sharing experiences. They also reported that in-person approaches provided the opportunity for contextualizing content for the organization and/or the local context. One donor noted that for the training to be impactful and reach people where they live and work, it needed to be locally relevant.

To marry these perspectives, many were in favor of a blended approach to training, where some of it would be done online—preferably in a time-bound cohort that still manages to create dialogue, engagement and a sense of community among participants. Many mentioned that a basics course could be offered online and then an in-person meetup could offer a deeper dive into some Digital Principles and include facilitated discussions around what was learned, as well as additional exercises. Some said that a ToT model would be best suited for the in-person sessions, especially for field staff, as it would ensure that future content was truly tailored for the specific context.

A small but diverse number of key informants noted the value of “just-in-time” approaches to training delivery. They advocated that information should be delivered in “bite-size” pieces that people can digest and immediately apply in their work. To deliver these “just-in-time” trainings, many people advocated for the use of videos in trainings rather than a traditional slide-based architecture.

Watching someone talking to you, versus watching PowerPoint slides, is a big trend in the space. It is powerful to connect with a person, even virtually... especially diverse people. This enables you to subtitle and provide different languages.

(INGO Training Specialist)

The challenge is how to move from the words, the language, the voices that we use in the donor/Global North...and if these Principles are important, and I think they are, being able to shape the language and have it tie to how people describe their own personal challenges and environments.... Some bridging mechanisms we haven't quite nailed.

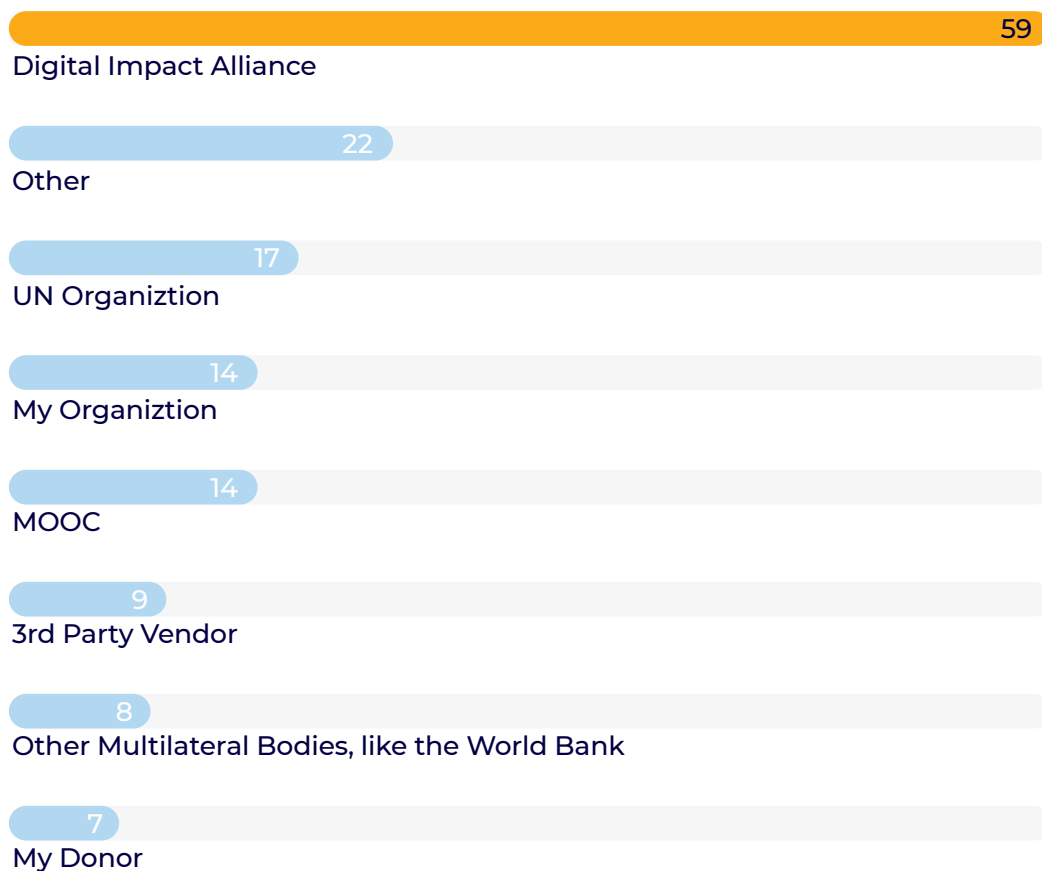
(Donor Program Officer)

## Training Provider

For those survey respondents who reported participating in external trainings on the Digital Principles, nearly half (n=22) stated that TechChange or DIAL, or a combination of the two, were the training providers. Others included eKitabu, Gartner, CRS, FHI, Google Africa/SDGs Abuja Nigeria and Faraja Nyalandu – Shule Direct Tanzania. When asked who should host any future training on the Digital Principles, most of the respondents answered DIAL (Figure 9). One key informant said “DIAL itself would be a good organization to provide training for the Digital Principles. They have funding and capacity and developed them.”

Several survey respondents noted the need for this training to remain a public good, be freely available to many, and developed through a Creative Commons license. They also noted that if a delivery platform were specialized through a provider, the content should be available for everyone to use and build on as appropriate.

**Figure 9: Who Should Host Digital Principles Training?**



Several key informants suggested a training model where specialized subcontractors across the world could support the delivery of the training, like Tableau’s model or the DHIS model. An INGO training specialist spoke of new “flex” training tools being offered by Humentum and based on the Curatr platform that allows for more flexible, customizable trainings with content that can be generated by respondents through training participation.

Other important points made by survey respondents included interest in training offered in more languages and training for field-staff by culturally competent trainers. Some of the key languages mentioned included Spanish, French, Arabic and Portuguese. Respondents also called for more diversity among trainers in both experience and demographics.

**As an ICT4D startup founder, I would value training that is practical, field-oriented, full of case studies, and can empower me to take the ethos of the training to my nonprofit partners/clients. There is no such training now on digital development for ICT4D startups, who often the bulk of the time are responsible for creating and deploying the solutions in the field.**

(Survey Respondent)

Some respondents mentioned that trainers who lead the training in the field should be different than those who lead it at headquarters. A training specialist explained, “People [at headquarters] want trainers with relevant experience. They want professional trainers...but the field will not necessarily want it like that. For a central office/HQ coming to administer training in the field, it may be useful to work through existing digital, local champions in-country.”

Several key informants mentioned a preference for an external trainer, whether because of a lack of internal capacity or a need for greater legitimacy. One explained, “We would prefer a third party provided training—it is more accepted than a colleague.”

### Training Cost

There was a wide range of opinions among the

key informants regarding funding for a Digital Principles training, including how much money is typically available to staff for professional development. In general, many informants noted cost as a major barrier to training. They said that the lower the cost of the training, the more likely they would be willing to pay for it out of their organizations’ budgets. Others reported that for implementers, it was difficult to pay for training unless it was included as a line item in their program budget and approved by their funder.

The survey responses showed that the majority (63.2%) felt there was at least some funding available for such a training (Figure 10). For those who attended other types of external trainings (n=96), 60% said their employer or organization paid for it, 19% paid for it themselves, 15% said there was no cost for the training, and 6% selected “other.”

Many key informants argued that a Digital Principles training should be a free public good accessible to all. Others felt that there should be a cost to the training so that people valued it. Several informants suggested a reasonable training cost in the \$100-\$200 range, which was not too far off from the survey findings. It was noted that \$100-\$200 can often be approved by managers without requiring higher-level approvals.

Notably, in-person training often requires travel and more time and resources, and, therefore, is not as easily funded. Some noted that offering in-person training around existing ICT4D events (e.g., ICT4D conference, MERTech, Digital Health Forum) or government meetings would be cost-effective and helpful. One training specialist described a model where funders pay for cohorts of grantees to receive training. Another noted that despite the vast number of free online training resources they make available for interested parties, they are still hired to do many in-person training events and workshops around the world.

**Figure 10: What would You or Your Organization Be Willing to Pay for This Training?**

Non-profit (North America, Europe, HQ) (57)	3	14	25	15
For-profit (North America, Europe, HQ) (35)	2	12	10	11
Non-profit (LMIC) (23)	1	1	8	13
Other (12)	2	3	2	5
Donor (11)	3	2	2	4
Social entrepreneur/start-up (11)	1	2	3	5
For-profit (LMIC) (10)	0	3	1	6
Multilateral organization (10)	2	3	1	4
Government (non-donor) (8)	2	3	1	2
	(16)	(43)	(53)	(65)
	More than \$400 USD/person	Between \$100-\$400 USD/person	Less than \$100 USD/person	No funding available

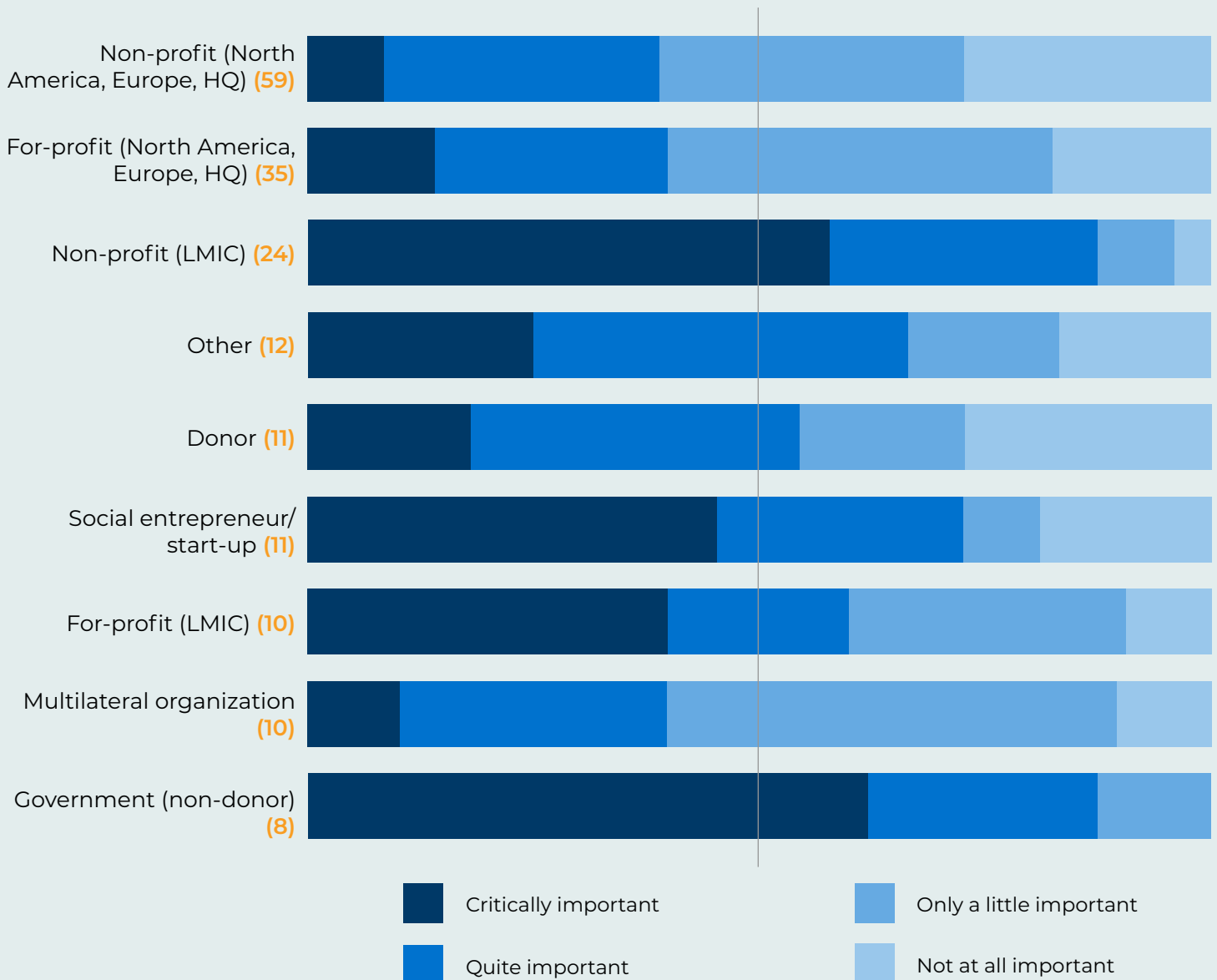
## Training Credentialing

Some survey respondents and key informants were firmly in favor of credentialing or certificate programs for the Digital Principles, and some were quite firmly against. This was corroborated in the TechChange ideation workshops in Nairobi and Washington, D.C.

According to the survey, 23% of those who attended a Digital Principles training received a certificate, whereas 48% of trainees attending other digital training received none. Figure 11 illustrates how important such certification is to survey respondents. It shows the variation across organization types, with those organizations in the Global South feeling much more strongly about certification than those in the Global North, which mostly represented headquarters offices.

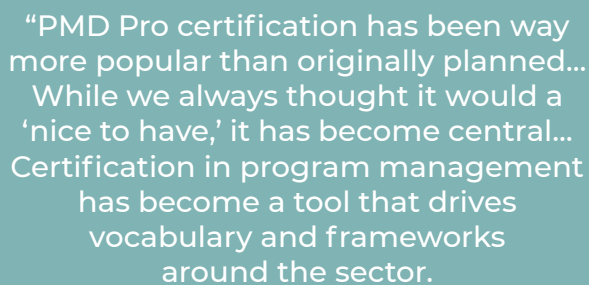
At least one donor respondent felt that the certificate was an unnecessary bureaucratic product that could be a barrier for some. Another donor noted it could be a hurdle for those seeking funding if donors started requesting certification of grantees. One donor program officer said they wouldn't hire based on certification in the Digital Principles, while other donors were more positive about the idea, with at least two noting that they are thinking about doing an internal certification.

**Figure 11: How Important is Certification in Training on the Digital Principles?**



At least two INGOs said the Humentum model for program management training and certification was useful. A training specialist commented that although certification was not an initial goal for promoting their program management training, it has driven the popularization of PMD Pro as an industry standard, with 25,000 people now having taken the certification test.

Among program implementers, there was generally a positive response to this type of certification for setting an industry standard. Some felt that if the training had a credentialing process, especially one endorsed by the sector, it could encourage more people to take the course, particularly field staff. Most mentioned that if there were a certificate program, it would need to be reflective of more advanced levels of the training and/or verification of applying the skills learned, as opposed to the simple completion of a basic introductory course to the Digital Principles. One INGO plans to provide certification for staff trained as “digital citizens,” which is inclusive of the Digital Principles and broadly applicable to all staff.



“PMD Pro certification has been way more popular than originally planned... While we always thought it would a ‘nice to have,’ it has become central... Certification in program management has become a tool that drives vocabulary and frameworks around the sector.

(Training Specialist)

## Conclusions

- » There were many differing points of view on training content, delivery, credentialing and cost. One common theme among all respondents and informants was the need for any training to be practical and filled with real-world examples from a range of sectors. As such, training should include many case studies and examples from multiple sectors. Examples should be realistic and showcase the challenges associated with executing development projects while attempting to execute the Digital Principles.
- » Respondents and informants largely agreed that it will be useful to have a basic Digital Principles course, as well as additional, more tailored and detailed course options.
- » A scalable, accessible and affordable option would be an online training for the Digital Principles, but it would also be helpful to have supplemental, in-person, blended approach training for the sake of increasing discussion and exchanging experiences with other peers.
- » Key user groups that may need individualized training would be implementers and donors, and possibly government officials.
- » A third-party trainer approach for the Digital Principles would be acceptable so long as trainers were diverse both in experience and demographics and came from well-vetted sources or validated by professionals who deeply understand the Digital Principles. A ToT model can help take an external training back to the organization where it can be contextualized.
- » My concern would be around the trainers themselves. We would want to see that they were expert, culturally acceptable, and made an effort to include people of all abilities in the training.” (Thought Leader/Endorser)
- » A certificate program was not universally deemed useful, but many said it could contribute to establishing industry standards and promoting professional development in the digital sphere.
- » The majority of respondents felt there was some funding available for training, but there are important populations that may not have access. Several respondents noted the desire for DIAL to provide training as a public good and that DIAL should “do its best” to maintain access for all.

“My concern would be around the trainers themselves. We would want to see that they were expert, culturally acceptable, and made an effort to include people of all abilities in the training.”

(Thought Leader/Endorser)

### Research Question 3

*How can trainings most effectively be implemented to increase adoption and use of the Digital Principles?*

#### Findings

This question explores some key elements for ensuring the successful implementation of a Digital Principles training. The findings highlight the barriers and enablers associated with applying the Digital Principles in project implementation after and in response to a Digital Principles training.

The results are broken into several subsections. The first subsection explores whether trainees feel that a Digital Principles training is relevant and critical to their work. The second subsection explores ways that respondents feel trainings have successfully enabled follow-through and support of learnings post training, including suggestions for improvement. The last subsection highlights the barriers respondents feel they face when looking to adopt and use the Digital Principles.

#### *Interest in and Relevance of a Digital Principles Training*

Survey respondents ranked themselves from “Strongly Agree” to “Strongly Disagree” for a series of opinion statements. A few of these statements are presented in Figure 12 below. Overall, a high percentage of respondents reported that understanding how to use the Digital Principles was critical for their work and that they would value being recognized as a “Digital Principles Expert.”

Government respondents ranked “believing the Digital Principles to be critical to their work” the highest of all respondent types. In general, survey respondents from government and for-profits based in LMICs valued the label of “expert” in the Digital Principles the most.

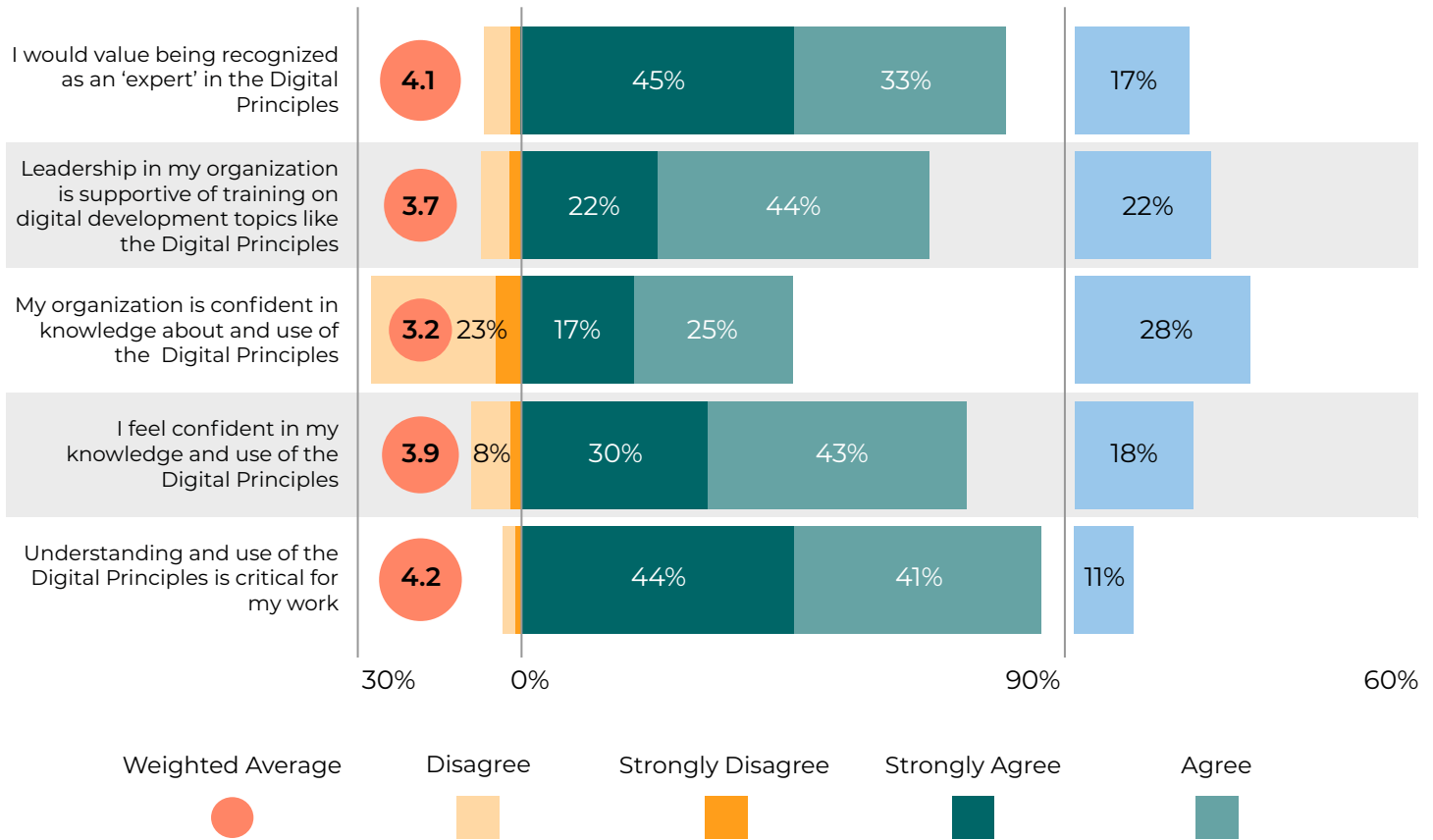
There was also a high level of confidence in respondents’ knowledge and use of the Digital Principles. Donors felt most confident in their ability to implement the Digital Principles, whereas stakeholders in the government, multilaterals and “other” category rated their organizations as having the lowest capacity to implement the Digital Principles. It is notable that respondents rated their confidence in their organizations’ ability to implement the Digital Principles much lower than they rated themselves.

Generally, respondents reported that their leadership was supportive of training on the Digital Principles. Nonprofits from LMICs and social entrepreneurs ranked “leadership support for training on the Digital Principles” highest.

Annex D has additional charts that disaggregate these and other statements by stakeholder group.



**Figure 12: Perceptions About the Digital Principles**



*Enablers to Implementing a Digital Principles Training and Digital Principles in Practice*

More than 93% of survey respondents who attended external trainings found them to be somewhat or very valuable. Of these respondents, most mentioned that the biggest benefit of the training was less about skill building and more about developing a shared understanding of the Digital Principles. They said the training had an important role in clarifying the vision and purpose of the Digital Principles by using a shared language to describe them, including how they may be integrated and applied into existing and future work.

When asked to offer suggestions on how past trainings could be improved, respondents consistently cited the need for more dedicated time for it. There was also a call for training materials to be made more accessible, with several suggestions for online and/or virtual training. An important suggestion that was mentioned often was to ensure that there was follow-up after the training to emphasize an action-oriented approach. For example, participants cited several useful strategies for connecting peers and enabling continued engagement post training, including mentoring, online communities of practice and post-training Q&A forums. Respondents noted that these strategies, when used appropriately, can aid the adoption of the Digital Principles.

Some respondents talked about training in terms of change management and the broader organizational strategies that need to accompany any training. Several donors and INGO staff were in the process of creating new digital strategies or digitally dedicated objectives as part of broader organizational strategies.

Many informants mentioned that “champions” are necessary—particularly at field sites—to encourage adoption of the Digital Principles. INGOs and donors alike used terms like “digital advocates,” “digital champions,” and “digital ninjas” to describe those who promote the Digital Principles. A few also mentioned that Chiefs of Party have a strong influence in getting field offices to not only go to the training, but also to implement the Digital Principles in their work. An INGO training specialist noted that engaging leadership could encourage buy-in and increase the relevance and likelihood of follow-through post training. Others also noted that if leadership is on board with the Digital Principles, it helps to trickle down to the rest of the

Without a champion in every country, it's difficult to get the attention of the field teams around the Digital Principles. We need marketing collateral to promote questions and discussion, reference in workplace and meetings...

(Thought Leader)

organization

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A common theme in interviews was an interest in mechanisms to promote accountability for adopting and practicing the Digital Principles. Informants mentioned a desire to know what is expected and what is “good enough” in terms of implementing the Digital Principles. Some noted an interest in tools to track individual and institutional progress around the use of the Digital Principles in their work, positing that if there were such mechanisms, more people would use them and “more donors could see how investment in integrating the Digital Principles into the work leads to specific outputs.” Respondents noted several tools that are already being used in some contexts to measure adoption of the Digital Principles. For example, USAID’s Digital Health Investment Review Tool enables donors to ask the right questions to understand whether a digital health project used the Digital Principles appropriately. While this was developed for digital health programs, there is a sector-agnostic version of it currently being tested at USAID. TechChange has also helped DIAL create a Digital Principles Maturity Matrix for donors. Other examples include a Monitoring and Evaluation Framework for technology programs developed by SIMLab

that emphasizes use of the Digital Principles as evaluative criteria (SIMLab, 2018), and an evaluation of the iHRIS software platform using an information audit built around the Digital Principles (Vota, 2018).

“You might ask how managers monitor conformance to the Digital Principles, particularly senior management. I don’t know if people have thought about that in detail, but there would need to be some training available for how to monitor if you are achieving that cultural shift.”

(Training Specialist)

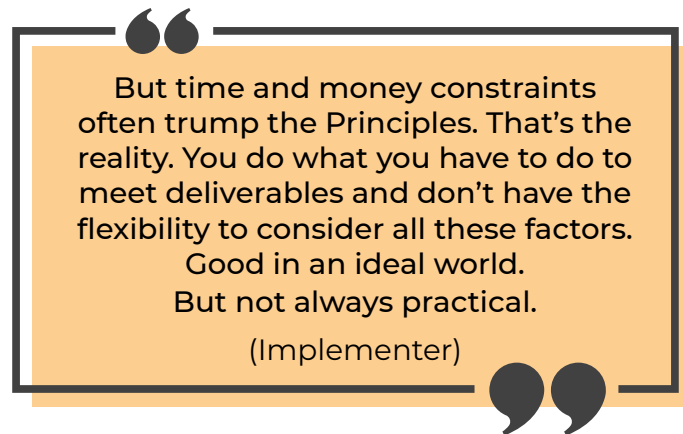
### *Barriers to Implementing a Digital Principles Training and Digital Principles in Practice*

When asked about the challenges to conducting or attending training on the Digital Principles, survey respondents reported that finding the time to attend the training was the greatest challenge, more for internal trainings than external trainings. Challenges for external trainings included funding, generating interest, and finding trainers and curricula. Quality of the training was noted as a challenge by a few respondents, but only for external training. Quality of internal training was not addressed. (See Figure D-7 for a detailed breakdown of survey responses to questions on challenges to training.)

Respondents frequently referenced institutional barriers to implementing the Digital Principles, which often centered on the time and resources required to implement them as intended. For example, many respondents expressed how the principle, “Design With the User,” implies that considerable time is spent consulting with users, testing and prototyping tools. Many respondents felt they lacked the time, budget and support needed to implement it well. Additionally, some respondents noted the lack of donor mandates on the use of the Digital Principles. One respondent stated: “If it’s not required, and goes against how they work and fund, what’s the point?” Many implementers also felt that one of the biggest barriers is donors’ lack of understanding of the finances and time required to adequately execute the Digital Principles.

## Conclusions

- Implementers identified time and financial constraints as the most significant barriers to the use and adoption of the Digital Principles. Many claimed that the lack of financial support was caused by a misperception on the part of donors as to the true costs of applying them.
- Having leadership support and local champions to focus attention on the Digital Principles is key to ensuring their adoption.
- Having a clear and specific organizational strategy on the Digital Principles is key to ensuring their adoption and use.
- Using metrics to track progress on the Digital Principles will hold more team members accountable for using them in their work and may be a way that donors and organizational leadership can better capture the utility of the Principles for Digital Development.



## Recommendations

The following are recommendations across all three research questions deemed most relevant to the summative presentation of this research project.

1. **DIAL should review all the existing training and resource materials in order to reuse and improve content and incorporate real examples from implementers.**

There is a large amount of potential content already in use that is relevant to future training development, including content on DIAL's own website. Sector-specific case studies will be especially important to help learners grasp concepts within their own field. Local language materials should also be sought out and included. Donors are interested in and willing to engage and support the development of content.

2. **DIAL should consider a blended learning approach that combines online and in-person or cohort training.**

There is a compelling need for scalability as well as contextualization and tailoring of information, which can be achieved via a combination of online courses, some in-person training and a ToT approach.

3. **DIAL should consider a nominal, sliding-scale fee for training to increase perceived value and engagement in the process.**

Many respondents felt that training for the Digital Principles was valuable and should be priced on a sliding scale that ensures accessibility to the trainings among a wide audience. DIAL should consider producing content under a Creative Commons license to ensure access.

4. **If DIAL pursues tailored training, it should focus on developing materials for at least two types of participants (donors and implementers) and consider a separate course tailored to local government participants.**

There was consensus on the need for trainings for donors to address whether expectations for grantees to adhere to the Digital Principles were in any way in conflict with the reality of their funding mechanisms and procurement processes. A training for implementers should focus on the basics and

tradeoffs associated with applying the Digital Principles. DIAL should also continue to try to reach local government officials to engage them in training and outreach and determine their need for a specific approach.

**5. DIAL should consider developing a dashboard to help organizations visualize their level of adoption of the Digital Principles.**

Because there is no incentive or requirement to train staff and no way to track or measure training, the level of adoption varies. Using training participation as one metric to measure adoption could increase both the level of adoption and the uptake of training. Tools for evaluating the use of the Digital Principles throughout an organization would be another potential approach.

**6. DIAL should leverage existing opportunities for training and work with organizations that are well known in the digital training space.**

Attaching training opportunities to existing digital meetings (e.g., ICT4D, MERL Tech, the Digital Health Forum) could enhance opportunities for individuals likely to be trainers for their organization. DIAL should also engage with other well-known training groups in the digital space, such as TechChange, Digital Frontiers, the Digital Health Leadership program, Community Academy for Health and others. Convincing these organization to incorporate the Digital Principles into their work could serve as a scaling mechanism—increasing knowledge, acceptance and adoption of the Digital Principles.



*101 Digital Principles training attendees in Dar Es Salaam, Tanzania discuss the intersection between the Digital Principles and Sustainable Development Goals.*

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## Annex A: ICT4D-Related Courses and Training Sites

Name	Host	Description	Details
<a href="#">APCICT Virtual Academy</a>	UNESCAP	eLearning essential trainings, including ICT4D training to achieve SDGs	Free and open to public
<a href="#">ICT for Development</a>	Pan African Institute for Entrepreneurship & Community Development	More ICT skills than ICT4D, but interesting	About \$100
<a href="#">ICT for Development and Social Good</a>	University of Turin, ONG2.0 network and Consoft Sistemi Group, based on the long-term online training course ICT Innovation for Development	Effective planning, development, implementation and management of ICT4D initiatives in many different sectors, such as data collection and visualization, health, agriculture, environment, human rights and emergencies	Cost unknown, online master's program featuring live webinars and interactive web training with real-time and face-to-face meetings, with the opportunity for interaction between students and lecturers in the online classroom
<a href="#">ICT4D course</a>	Young Professionals for Agricultural Development	Online course	12 modules, 90 minutes each, 1,000 euros for the whole course
<a href="#">Integrating Gender Into ICT</a>	USAID	How to integrate gender and ICT into programming, a guide for USAID staff and implementing partners	Free online articulate course
<a href="#">Msc ICTs for Development</a>	Virtual University of Uganda	Use of digital innovation technologies to provide both theoretical and practical proficiency for international and social development	\$250 per course, 10 courses
<a href="#">SDG Academy</a>	UN Sustainable Development Solutions Network	MOOC – Range of courses on sustainable development, globalization, climate change, and Tech for Good: The Role of ICT in Achieving the SDGs	10 weeks, 3-5 hours per week Free Cost of certificate
<a href="#">Technology for Monitoring &amp; Evaluation Diploma</a>	TechChange	Technology for Monitoring and Evaluation including ICT	\$995, 3 online courses
<a href="#">Training Course for ICT for M&amp;E</a>	PCDN Network	Building skills and strategies to better collect, manage, analyze and visualize data using a variety of tech tools	\$1,100, in-person training



# Annex B. Interview and Survey Guides

## A: Research Protocol – Interview Guide

### Purpose

Clear Outcomes is conducting a training needs assessment for the Digital Impact Alliance (DIAL), stewards of the Principles for Digital Development since 2016, to better understand the need and potential for training on the Principles for Digital Development. Our purpose in meeting with you today is to understand your experiences with the Principles, training, best practices, lessons learned and recommendations in order to inform future implementation of Digital Principles training.

### Procedures

If you agree to participate, we will ask you a series of questions taking about 60 minutes of your time. With your permission, your answers will be audio recorded using a digital recorder. We can stop the recording at any time. The recordings will not be shared with DIAL but will be used to create interview notes. Once the notes are filed, we will destroy the audio recording.

### Risks/Benefits

There is minimal risk involved in your participation in this interview. The questions will not involve sensitive or personal information, and you can refuse to answer any question. Although this assessment may not benefit you personally, we hope that our results will add to the knowledge about strengthening the Digital Principles and other related programs.

### Voluntary Participation

Participation in this interview is completely voluntary. You do not have to agree to participate in this assessment and you may change your mind and stop at any time.

### Confidentiality

Anything you tell us is confidential and the interview notes from this assessment will be kept private. The team will share your name in the final report as a person who was consulted, but nothing you say will be personally attributed to you in any documentation or reports that result from this interview.

If you have any questions or concerns about this evaluation, you may contact the project director for Clear Outcomes, Dr. Kerry Bruce, at [kbruce@clearoutcomes.net](mailto:kbruce@clearoutcomes.net).

Do you have any questions before we begin?

Do you agree to have the interview recorded?

If they say yes, begin the recording and ask the participant: “Do you consent to participate in this interview?” Capture the recorded answer as evidence of consent.

### Questions for Thought Leaders (Endorsers of the Principles)

1. How does your organization use the Principles for Digital Development?

- a. Probe: With what kind of programming?
- b. Probe: HQ to field penetration?

2. How does your organization use technology in your interventions [not for day-to-day operational function, but for programmatic and service delivery]?

- a. Are they designing new tech? Using off-the-shelf tech?

- b. How does your organization train staff to engage with technology now?
- c. How much of a priority is ICT4D strategy and digital skills for staff?

**3. In terms of this kind of technology program and service delivery-related digital tools, what is important for people in your organization to learn about right now?**

- a. How do the Principles relate to these priorities?
- b. How could Digital Principles training address this need, if at all?

**4. How do you train existing and new staff on the Principles?**

- a. Probe: Have you developed training or orientation materials? If yes, why did you develop your own materials? Are you happy with the quality of them? Could you share them with us?
- b. Probe: If no, what materials did you use and from what source? Are you happy with the quality of them?
- c. What type of staff get oriented/trained in your organization?
- d. Are there other digital development topics that you have developed or accessed training around? What are they, and from what sources?
- e. How do you see the Principles helping promote skills in technology among staff? Do you think they should be skilled before getting trained on the Principles?

**5. In your ideal world, how would training on the Principles be offered? What would be most effective for your organization?**

- a. What should the training focus on and what needs to be included in the training?
- b. Should there be different levels or phases of training? Who would they be offered to in your organization?
- c. What format should the training take (in person, online, self-study, facilitated, digital)? Why?
- d. What should the training cost? How could it be funded at your organization?
- e. What effect will cost of the training have on attendance at the training in your organization?
- f. Who would you look to provide this kind of training? [Possibilities include DIAL, UN, NetHope, Humentum, MOOCs, universities, local providers, etc.]
- g. Would you favor this as a professional certification for staff?

**6. What specifically should be included in a Digital Principles training series?**

- a. Should trainings be offered that are solely focused on how to implement the Digital Principles, or are users interested in compliance, information on how to integrate the Principles into processes and procedures, etc.?
- b. Should trainings cover all the Principles together, or have separate opt-in and opt-out modules for specific Principles?

**7. What successful business models do you know of for training development and services?**

**8. In what specific ways have you adopted or embedded the Principles within your organization, if at all?**

- a. If adopted, what factors facilitated adoption? Why? Were there particular actors who were key?
- b. If adopted, what role did training play in adoption and use of the Principles?
- c. If not adopted, what factors limit adoption and why? Were there particular actors who blocked adoption?
- d. If not adopted, what role did training play in failure to adopt and use the Principles?

**9. What are the major challenges to increasing the adoption of the Principles in your organization?**

**10. What are the greatest needs/gaps around the use of the Digital Principles that future courses can address?**

- a. Probe: What trends or concerns in the sector regarding digital development, or professional development, or other areas should we be aware of and that we should address?

11. Is there anything else you want to share about training and the Digital Principles?

12. (optional) Do you know of other stakeholders—especially project managers or officers, or local entrepreneurs—working directly with ICT projects in the field whom we should talk to about this topic?

## Questions for Thought Leaders (for broader industry perspective)

1. Research both anecdotal and quantifiable continue to tell us that lack of training and capacity are huge barriers to good digital development and adoption/use of the Digital Principles. Do you agree, and why or why not?
2. Some see learning about the Digital Principles as an entrée to enhanced digital literacy, and some see digital literacy as a prerequisite for tackling the Principles. What do you think? What training have you seen or do you know about in any of these areas?
3. What are some approaches to global capacity needs in the development sector that you have seen work (program management, gender, grants management, security, child exploitation, etc.)?
  - a. How have those been approached, and through what training mechanisms and providers?
  - b. Could you imagine training around the Digital Principles reaching critical mass in similar ways? Why or why not?
4. In terms of technology related to service delivery (ICT4D), what is important for people in your organization to learn about right now?
  - a. How do the Principles relate to these priorities?
  - b. How could Digital Principles training address this need if at all?
5. How have you adopted the Principles within your organization, if at all?
  - a. If adopted, what factors facilitated adoption? Why? Were there particular actors who were key?
  - b. If adopted, what role did training play in adoption and use of the Principles?
  - c. If not adopted, what factors limit adoption and why? Were there particular actors who blocked adoption?
  - d. If not adopted, what role did training play in failure to adopt and use the Principles?
6. What are the major challenges to increasing the adoption of the Principles in this sector?
7. What would you like to see available for training in the Digital Principles? What type of training?
  - a. One overall training for the whole of the set
  - b. Targeted principles by module
  - c. Tailored to specific sectors
8. Should training be offered that is solely focused on how to implement the Digital Principles, or are users interested in compliance (i.e., information on how to integrate the Principles into processes and procedures, etc.)?
9. What is the best method of delivery for training in general (full online courses, in-seat courses or workshops, LMS platforms, just-in-time learning, a blend, others)? Would this apply to the Principles?
10. How important do you think being skilled in digital development is for this sector?
  - a. Do you think professional certification in the Digital Principles would be useful or compelling for staff or organizations to invest in? Or is simple training sufficient?
  - b. What do you think it would take to get a novice trained and knowledgeable enough to engage in projects that involve technology?
  - c. Should or would organizations provide or pay for this training? How does it rate as a priority compared to other skills they need?
  - d. Would it be better for your organization to provide this training or an external trainer or vendor that sets an industry standard? Why?
11. What successful business models do you know of for training development and services?
12. What are the greatest needs/gaps around the use of the Digital Principles that future training or courses can address? What trends or concerns should we be aware of and consider?

13. Is there anything else you want to share about training and the Digital Principles?

14. (optional) Do you know of other stakeholders—especially project managers or officers, or local entrepreneurs—working directly with ICT projects in the field whom we should talk to about this topic?

## Questions for Users (Implementers, Government Representatives, Social Entrepreneurs)

1. Can you tell me a little bit about yourself and your role in your organization?
2. Are you familiar with the Digital Principles, and if so, how? If not, describe how you use digital technology in your work. (If not appropriate, discontinue interview.)
  - a. [If NOT familiar, stop and explain the Principles and their purpose.]
3. Where have you gained most of your knowledge of the Principles or digital development in general (training, websites, university, resources, people, etc.)?
4. What are—or would be—the biggest challenges to implementing these Principles in your work? Does your organization support or promote use of the Principles? How?
5. Where do you go for developing more skills or assistance in using the Principles?
  - a. For other digital development skills?
6. What is the best method of delivery for training in general, (full online courses, in-seat courses or workshops, LMS platforms, just-in-time learning, a blend, others)? Would this apply to the Principles?
  - a. Probe: Give an example of how you have used one or more of these methods and think about how successful it was or wasn't.
7. What type of training on the Principles would you need or recommend in terms of content (all of the principles and overview in one session, different courses/modules for different Principles, sector-specific training, etc.)?
  - a. Do different people in your organization need different types of training/content?
  - b. What languages are necessary?
  - c. Do they need to be just on how to use the Principles, or do we need some on how to integrate them into organizational processes/structures?
8. Implementers: How important do you think being skilled in digital development is for your career? What kind of digital skills or literacy is needed?  
Social Entrepreneurs: How important do you think understanding the Digital Principles might be for your work, considering their role among donors and development implementers?
  - a. How much time would you give (one hour, one to two days, one week, more than one month, etc.)
  - b. Would you pay for training or a professional certification in digital development or the Digital Principles?
  - c. How much would you be willing to pay?
  - d. Would your organization provide/pay for this training?
  - e. Would it be better for your organization to develop and provide this training or for an external trainer or industry standard source? Why?
  - f. Would it make a difference to your current or future role to be an “expert” in this topic, either the Principles as a whole, or perhaps one specific principle? Would a Principles-focused training help you achieve this?
9. How does training affect the uptake of new ideas and practices in your organization or your experience?
  - a. Is there a culture of training to introduce new ideas?
  - b. How is training followed up on to ensure uptake or provide support?
  - c. How does orientation for new people ensure use of standards like the Principles?
10. Is there anything else you want to share about training in general or the Digital Principles in particular?
11. (optional) Do you know of other people like you—especially project managers or officers, or local entrepreneurs—working directly with ICT projects in the field whom we should talk to about this topic?

## Questions for Training Specialists

1. Can you tell me a little bit about yourself and your organization?
2. Are you familiar with the Digital Principles and, if so, how?
  - a. Have you been involved in training related to the Digital Principles? Please explain. Can you share any of the materials?
  - b. If not the Digital Principles, what type of training have you been involved with?
3. In your experience, how do members of an organization learn best? What are some of the most successful training initiatives you have seen work at scale?
4. In your experience, how does training affect how organizations adopt and use standards like the Digital Principles? What makes a training effective and what makes a difference?
5. To what extent are different levels of training important for different types of users?
  - a. Are there any guidelines on how many different levels might be needed or appropriate?
  - b. Are there any guidelines for organizations to assess their staff readiness for adopting a new standard or process?
6. What types of training have you been involved with (online vs. in-person, LMS, short-term vs. long-term, certificate vs. completion vs. audit, required vs. voluntary, in-house vs. third-party, etc.)? How do you decide what is the best choice? How do other organizations decide?
7. Can you talk a little about the differences between short one- to three-hour courses and full-day or multiple-day trainings in terms of outcomes? What about other methods or approaches to training, such as in person vs. remote? What do you feel the industry looks for today?
8. Are there any third-party training providers or platforms that are especially reputable and effective in this sector? Where do people most often look for industry standard training and certifications?
  - a. What qualities would users (or organizations) likely look for in a third-party training provider or source?
  - b. How would you imagine training for the Digital Principles being offered?
9. How can new employee orientation (rather than one-off training) be used as an effective way of communicating organizational practice or a tool for organizational change?
10. Are there other ways to help people (colleagues, staff, employees, etc.) to learn and develop skills?
11. Can you talk about your experience with the effect of price on training for the individual and the organization? Does professional certification or credentialing make a difference?
12. What successful business models do you know of for training development and services?
13. What would you recommend to an organization that was planning to develop training materials and curricula for something like the Digital Principles?
  - a. What are the greatest needs/gaps around the use of the Digital Principles that future training or courses can address?
  - b. What trends in the training or development sectors should we be aware of and consider?
14. Is there anything else you want to share about training in general or the Digital Principles in particular?
15. (optional) Do you know of other people whom we should talk to about this topic?

## Online Survey for Digital Principles Endorsers and COP Members

Clear Outcomes is conducting a training needs assessment for the Digital Impact Alliance (DIAL), stewards of the Principles for Digital Development since 2016, to better understand the need and potential for training on the Principles for Digital Development. This survey is designed to help us understand your experiences with the Principles, training and best practices in order to inform future training opportunities.

If you agree to participate in this survey, we will ask you a series of questions taking about 10 minutes of your time. The questions will not involve sensitive or personal information, and you can refuse to answer any question. Although this assessment may not benefit you personally, we hope that our results will add to the knowledge about strengthening the Digital Principles and about what users need to help them gain critical skills in this sector. Anything you tell us is confidential, and we will not share your personal information.

(For more information on the Principles, see [digitalprinciples.org](https://digitalprinciples.org))

If you agree to participate, please click next. If you are unable to answer any of the questions, please leave them blank and move to the next.

### 1. Please select the gender you identify with:

- a. Female
- b. Male
- c. Non-binary
- d. Do not wish to disclose

### 2. What geographic region do you work in?

- a. Global/multiple
- b. Mostly Africa
- c. Mostly Asia
- d. Mostly South America
- e. Mostly Middle East
- f. Mostly North America

### 3. What type of organization do you represent?

- a. Donor
- b. Nonprofit North America/Europe or HQ based
- c. Nonprofit LMIC based or field based
- d. For profit North America/Europe or HQ based
- e. For profit LMIC based or field based
- f. Social entrepreneur/local startup
- g. Funder
- h. Government (non-donor)
- i. Multilateral organization
- j. Other (specify)

### 4. What size is your organization?

- a. Less than 10
- b. 10-100
- c. 100-1,000
- d. More than 1,000

### 5. What is your role in your organization?

- a. Primarily technology/IT/ICT4D



- b. Primarily project management
- c. Primarily management/senior management
- d. Primarily monitoring and evaluation
- e. Owner/CEO
- f. Other (specify)

**6. How familiar are you with the Principles for Digital Development? (See [digitalprinciples.org](http://digitalprinciples.org) for more information.)**

- a. Very familiar
- b. Somewhat familiar
- c. Not at all familiar

**7. Has your organization endorsed the Principles?**

- a. Yes (go to 8)
- b. No (go to 9)
- c. I don't know (go to 8)

**8. Has your organization done any internal training for your staff on the Principles?**

- a. Yes (go to 8a)
- b. No (go to 9)
- c. Not sure (go to 9)

**8a. Were the materials/curriculum used for the training developed internally or were they existing, external sources?**

- a. Used/developed our own materials
- b. Used existing materials
- c. Hybrid—adapted other materials for our purpose

**8b. If you developed or adapted materials, would you be willing to share your organization's materials/curriculum with us?**

- a. Yes (Please provide email address for follow-up.)
- b. No/not sure—didn't develop

**8c. What form did the training take?**

- a. In-person workshop
- b. Online
- c. Blended—in person/online
- d. Individual study
- e. Other (specify)

**8d. How long was the training?**

\_\_\_ hours, days

**8e. What were the top three benefits to you or your organization coming from this training?**

- a. Open response
- b. Open response
- c. Open response

**8f. What were the top three challenges to conducting the training for your organization?**

- a. Finances/money to support the training
- b. Participant time to attend the training

- c. Generating interest in the training
- d. Finding trainers/curricula for the training
- e. Language of the materials/training
- f. Connectivity
- g. Other (please describe)
- h. Don't know

**8g. If your organization were to do this training again, what would you do to make the training more effective (format, content, length)?**

- a. Open response

**9. Has your organization supported you or other staff to attend any external training on the Digital Principles?**

- a. Yes
- b. No (go to 10)
- c. Not sure (go to 10)

**9a. What kind of training was it?**

- a. In-person workshop
- b. Online
- c. Blended—in person/online
- d. Individual study
- e. Other (specify)
- f. Don't know

**9b. How long was the training?**

\_\_\_ hours, \_\_\_ days

**9c. Who was the provider of the training?**

- a. Open response

**9d. Did it result in any certificate or credential?**

- a. Yes
- b. No
- c. Not sure

**9e. What were the top three benefits to you or your organization from supporting you or other staff for training?**

- 1. Open response
- 2. Open response
- 3. Open response

**9f. What were the top three challenges to this training being beneficial for you or your organization?**

- a. Finances/money to support the training
- b. Participant time to attend the training
- c. Finding trainers/curricula for the training
- d. Language of the materials/training
- e. Connectivity
- f. Quality of the training
- g. Other (please describe)
- h. Don't know

9g. If you were to attend or send staff for this training again, what would you do to make the training more effective (format, content, length)?

- a. Open response

10. If training on the Digital Principles were available from a reputable provider, do you or your organization have funding (professional development, organizational or other funds) to pay for staff to attend? If yes, what might you be able to pay? If you or your organization would not have funding to attend, select no funding.

- a. Less than US \$100/person
- b. Between US \$100 and US \$400/person
- c. More than US \$400/person
- d. No funding available

11. How important is it to you that this training result in some type of professional credential?

- a. Critically important
- b. Quite important
- c. Only a little important
- d. Not at all important

12. Have you participated in any other external training during the past year?

- a. Yes (go to 12a)
- b. No (go to 13)

12A. What kind of external training?

- a. In-person workshop
- b. Online
- c. Blended—in person/online
- d. Individual study
- e. Other (specify)

12B. Who paid for the training?

- a. Paid myself
- b. My employer/organization paid
- c. There was no cost
- d. Comment\_\_\_\_\_

12C. Did the training result in a professional certification?

- a. Yes
- b. No

12D. How valuable was the training you participated in?

- a. Very valuable
- b. Somewhat valuable
- c. Neutral
- d. Not very valuable
- e. Not at all valuable

13. In general, what types of training do you find most helpful for acquiring critical skills [can we order from most to least?]

- a. Online

- b. In person
- c. Blended
- d. Self directed
- e. Other

14. Of the nine Principles, can you tell us which you feel you or your organization needs the most help with implementing? (Select up to three.) [provide link to [digitalprinciples.org](http://digitalprinciples.org) to understand what each Principle represents]

- a. Design With the User
- b. Understand the Ecosystem
- c. Design for Scale
- d. Build for Sustainability
- e. Be Data Driven
- f. Use Open Standards, Open Data, Open Source and Open Innovation
- g. Reuse and Improve
- h. Address Privacy and Security
- i. Be Collaborative
- j. Don't Know/Not Sure

15. Beyond the Digital Principles themselves, what training do you or your organization need to be able to effectively implement the Principles?

16. Who should host or provide training on the Digital Principles?

- a. United Nations organization
- b. Other multilateral bodies like World Bank
- c. My donor
- d. Digital Impact Alliance
- e. My organization
- f. Third-party vendor/service provider
- g. MOOC (Coursera, edx, Udemy, etc.)
- h. Other (please specify)

Please explain your selection (open response)

17. Please give us your opinion on the following statements.

Statement	Strongly Agree	Agree	Neutral	Disagree	No Opinion
a. Understanding and use of the Digital Principles is critical for my work (Demographic)					
b. I feel confident in my knowledge and use of the Digital Principles (Demographic)					
c. My organization is confident in knowledge about and use of the Digital Principles (Demographic)					
d. What we need is one comprehensive training on the Digital Principles					
e. What we need is targeted training on the Digital Principles based on the type of position a person holds or their specific needs/interests					
f. Training on the Digital Principles must be tailored to specific sectors					
g. Online training for the Digital Principles would be best					
h. In-person training for the Digital Principles would be best					
i. I would be willing to personally pay for training on the Digital Principles					
j. My organization would be willing to pay for training on the Digital Principles					
k. Training is an effective method for people in my organization to gain skills and apply new standards or practices					

l. Leadership in my organization is supportive of training on digital development topics like the Digital Principles					
m. Training on the Digital Principles should be available in languages besides English					
n. I would value being recognized as an "expert" in the Digital Principles					

18. What would be the best way for us to let you and others know about training opportunities on the Digital Principles? (select 1)

- a. Email
- b. LinkedIn announcements
- c. Twitter
- d. Facebook
- e. Listservs and mailing lists (ICT4D newsletters, Pelican Group etc.)
- f. Announcements on the Digital Principles website

19. What other comments do you have about your personal training and professional development experiences and preferences.

Thank you for your time!

## Annex C: Key Informant List

Name	Organization	Stakeholder Group
<b>Tim Wood</b> Senior Program Officer	Bill & Melinda Gates Foundation	Thought Leaders
<b>Andrea Gardezabal</b> Monitoring & Evaluation Specialist	CGIAR Colombia/Mexico	Implementer Program Managers
<b>Hillary Eason</b> Manager, Knowledge, Innovation, and Technology	Chemonics	Thought Leaders
<b>Erica Layer</b> CEO	D-Tree International	Thought Leaders
<b>Karin Lion</b> Vice President of Strategy	Digital Green	Implementer Program Managers
<b>Jonathan Jackson</b> CEO	Dimagi	Implementer Program Managers
<b>Becky Faith</b> IDS	IDS	Training Specialists
<b>Lillian Nduati</b> Chair, Advisory Council	Independent	Thought Leaders
<b>Channe Suy Lan</b> Managing Director	InSTEDD	Thought Leaders
<b>Amanda Fagerblom</b> Program Officer - Latin America	Internews	Implementer Program Managers
<b>Jian Teng</b> Program Officer, ICT in Education	UNESCO Bangkok	Implementer Program Managers
<b>Andy Dearden</b> Professor of Interactive Systems Design	University of Sheffield	Training Specialists
<b>Maeghan Orton</b> Technical Consultant	World Health Organization	Implementer Program Managers
<b>Kaitlyn Scott</b> Program Manager - Somali Cash Consortium	Concern Worldwide	Implementer Program Managers
<b>Steve Hellen</b> Director of ICT4D	CRS	Thought Leaders
<b>Kristen Roggeman</b> Senior Manager, Digital Partnerships & Insights, Center for Digital Acceleration	DAI Global Health	Implementer Program Managers
<b>Adele Waugaman</b> Senior Advisor, Digital Health, Center for Accelerating Innovation & Impact	Global Health Bureau USAID	Donor Program Officer

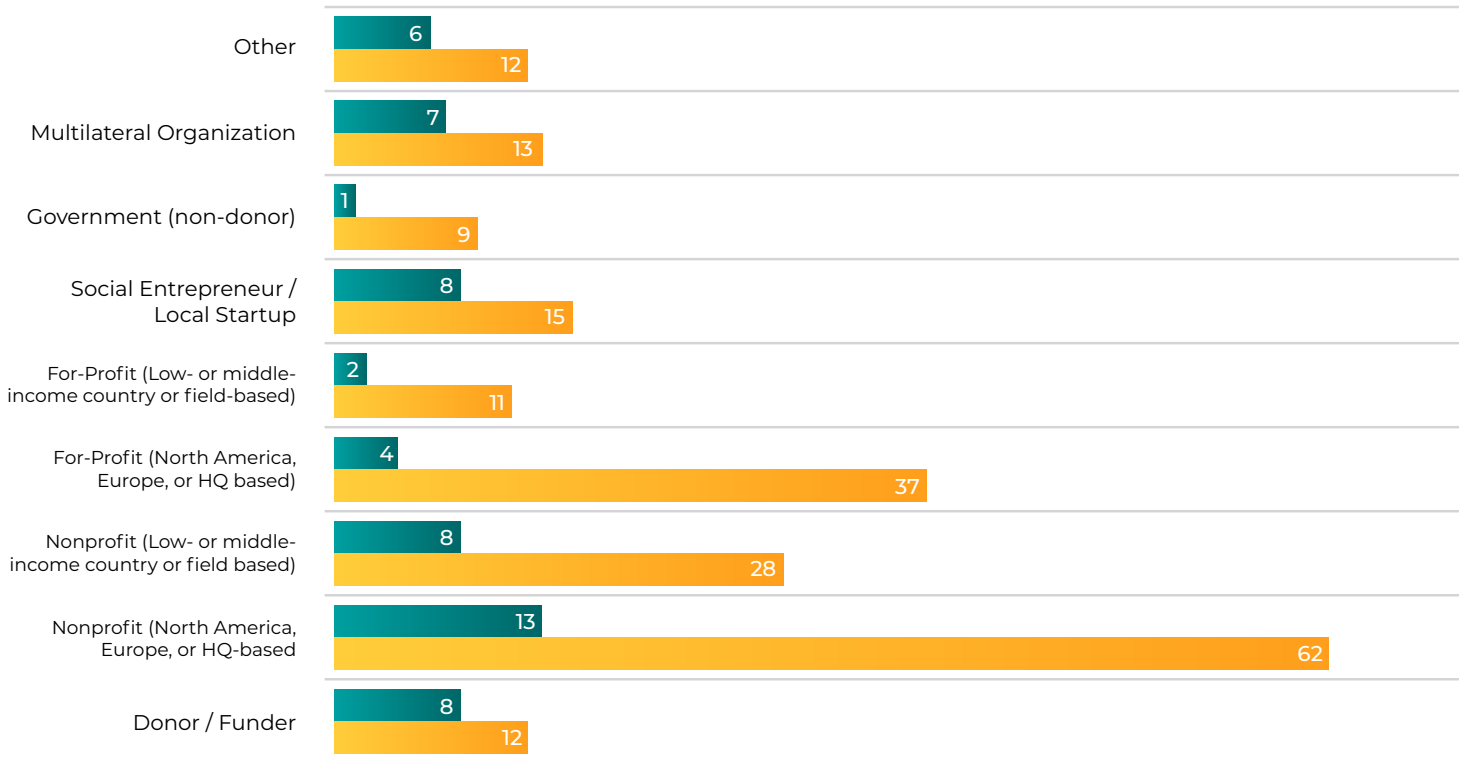
Name	Organization	Stakeholder Group
<b>John Cropper</b> Head, Program & Project Management	Humentum	Training Specialists
<b>Andrea Ulrich</b> Consultant (formerly with IADB)	IADB	Implementer Program Managers
<b>Josh Mandell</b> Business Development Executive	IBM	DPAC Members
<b>Meghann Rhynard-Geil</b> Senior Advisor, Technology for Development	Mercy Corps	Implementer Program Managers
<b>Jesus Melendez Vicente</b> Acting Director for T4D	Mercy Corps	Thought Leaders
<b>Lisa Garland</b> Senior Director of Program Management	Mercy Corps	Training Specialists
<b>Lesley-Anne Long</b> Consultant, Strategist	RSA, formerly PATH	Thought Leaders
<b>Chris Worman</b> Vice President, Alliances & Program Development	Tech Soup	Training Specialists
<b>Jaclyn Carlsen</b> ICT Policy Advisor	USAID	DPAC Members
<b>John O'Bryan</b> Knowledge & Insights Lead, Center for Digital Development	USAID	Thought Leaders
<b>Michel Rogy</b> Practice Manager of the Digital Development Global Practice	World Bank	Thought Leaders
<b>Wairimu Muturu</b> Digital Lead	Afrobarometer	Implementer Program Managers
<b>Jessica Colaco</b> CEO	Brave Venture Labs	Local Entrepreneurs
<b>Nivi Sharma</b> COO	BRCK	Local Entrepreneurs
<b>Ousmane Ly</b> Digital Health Advisor	PATH (West Africa)	Implementer Program Managers
<b>Anne Patterson</b> Senior Manager, Communications & Digital Engagement	Digital Opportunity Trust (DOT)	Thought Leaders
<b>Tony Vetter</b> VP Strategy Development	Digital Opportunity Trust (DOT)	Thought Leaders
<b>Sam Rich</b> CEO	E-Limu	Local Entrepreneurs
<b>Eva Kuchenga</b> COO	Herdy Fresh	Local Entrepreneurs



Name	Organization	Stakeholder Group
<b>Nekesa Were</b> Executive Director	iHub	Thought Leaders
<b>Anne Salim</b> VP Product Development	Longhorn Publishers	Implementer Program Managers
<b>Ruby Au</b> CEO	Lumen Labs	Local Entrepreneurs
<b>Kadondi Kasera</b> Head Public Health Emergency Operation Center	Ministry of Health - Kenya	Local Government Officials
<b>Wes Chege</b> Product Manager	OkHI	Implementer Program Managers
<b>Peter Njunguna</b> ICT4D Manager	Plan Kenya	Implementer Program Managers
<b>Kirui Kennedy</b> CEO	Tanasuk Africa	Local Entrepreneurs
<b>Pontus Westerberg</b> Program Officer	UN Habitat	Implementer Program Managers
<b>Moses Rono</b> ICT Officer (Technology for Development)	UNICEF	Implementer Program Managers
<b>Angela Oduor</b> Executive Director	Ushahidi	Local Entrepreneurs
<b>Mekebib Tadesse</b> Founder	Chat.et	Local Entrepreneurs
<b>Walid Abu Saifan</b> Technology & Curriculum Advisor	DOT Lebanon	Implementer Program Managers
<b>Gabi Mamon</b> Digital Products Advisor	BOND	Training Specialists
<b>Lee Thomas</b> Digital Service Lead	DFID	Donor Program Officers
<b>Andrew Toth</b> Digital Policy Advisor	DFID	Donor Program Officers
<b>Nora Lindstrom</b> Global Coordinator for Digital Development	Plan International	Thought Leaders
<b>Jerome Chemin</b> Digital Communications Specialist	UN University	Training Specialists
<b>Wayan Vota</b> Director of Digital Health	Intrahealth	Thought Leaders
<b>Melissa MacEwen</b> Project Manager	Chatham House	Thought Leaders
<b>Anne Doose</b> Senior Specialist Digital Skills & Literacy	GIZ	Training Specialists

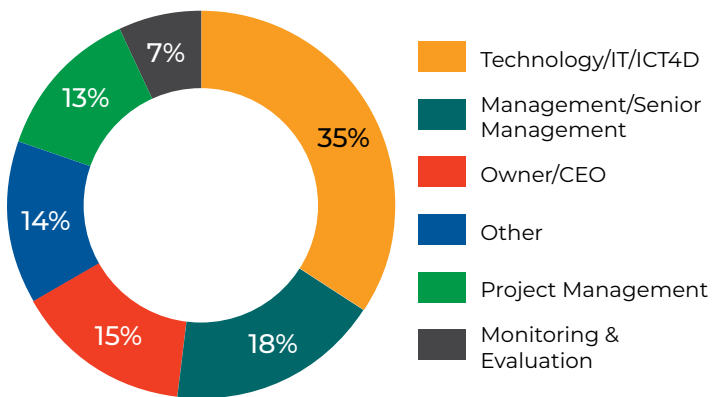
## Annex D: Additional Data

**Figure D-1: Organizational Breakdown of KIIs (n=57) & Survey Respondents (n=198)**



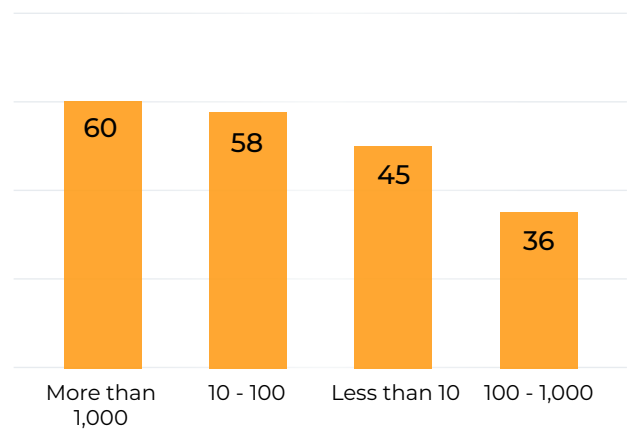
**Figure D-2: Primary Role**

What is your role in the organization? (n=200)

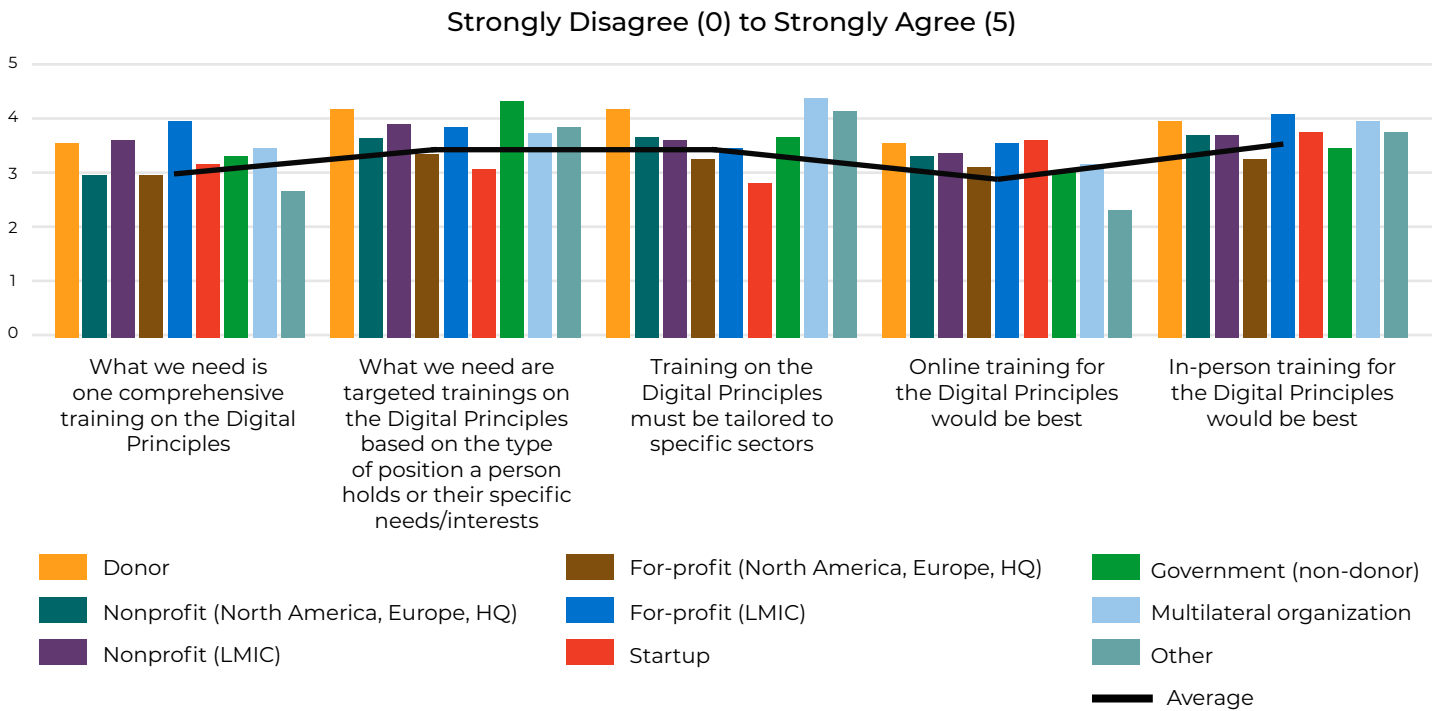


**Figure D-3: Organization Size**

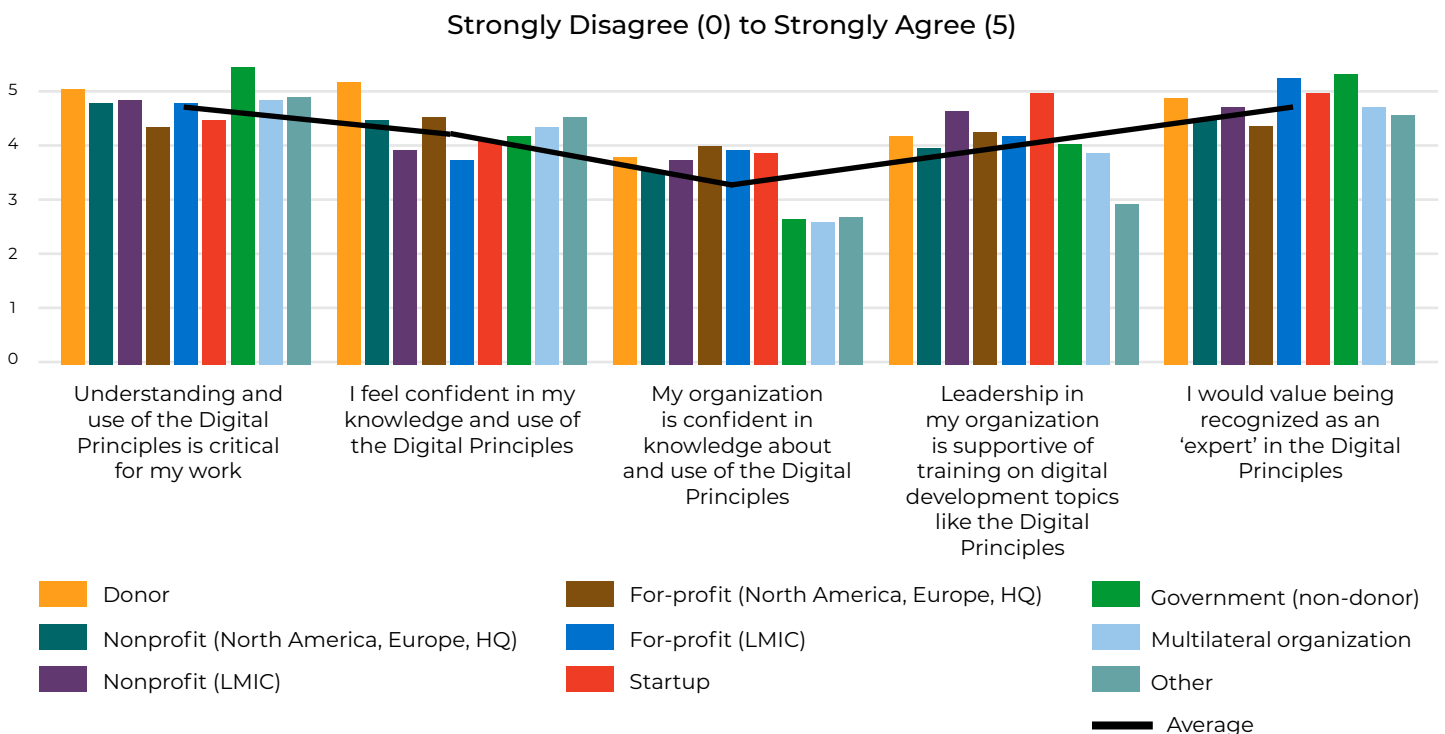
What size is your organization? (n=200)



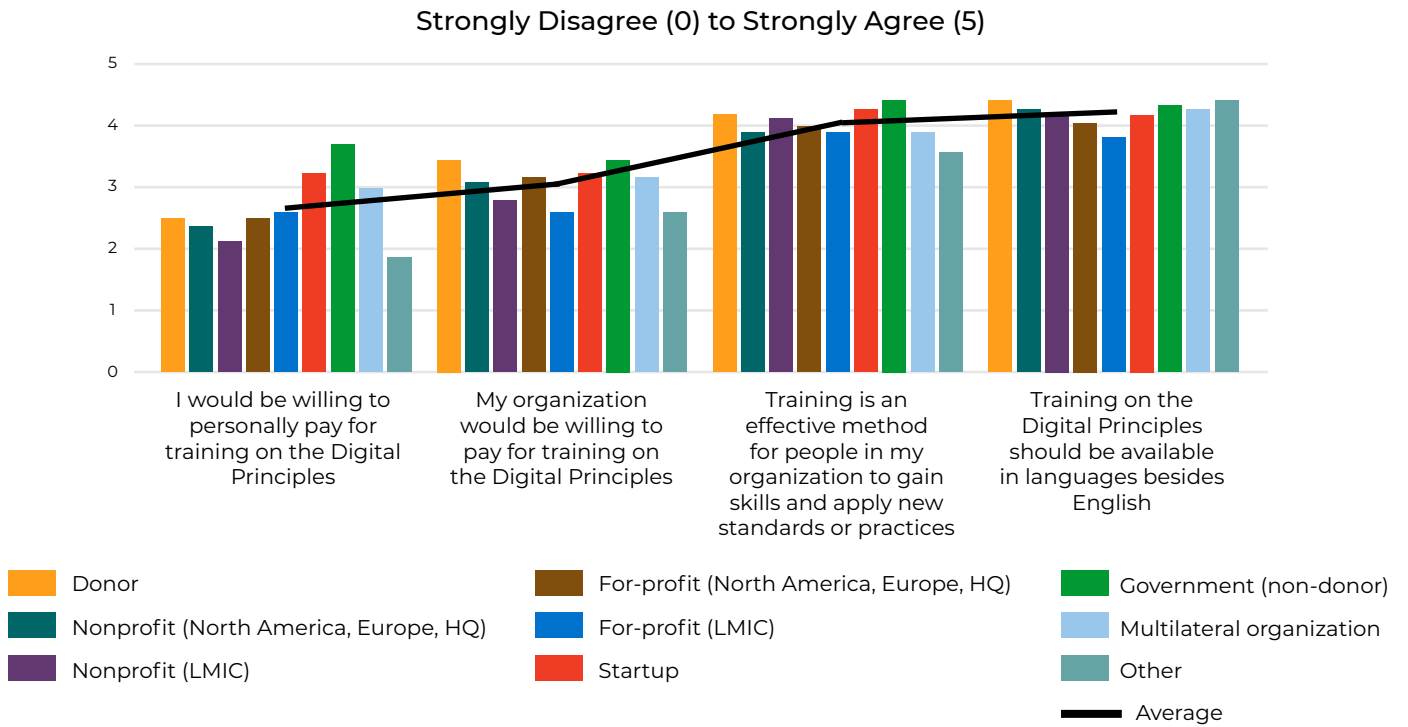
**Figure D-4: Statement of Agreement on Training Preferences and Perceptions, by Stakeholder Group**



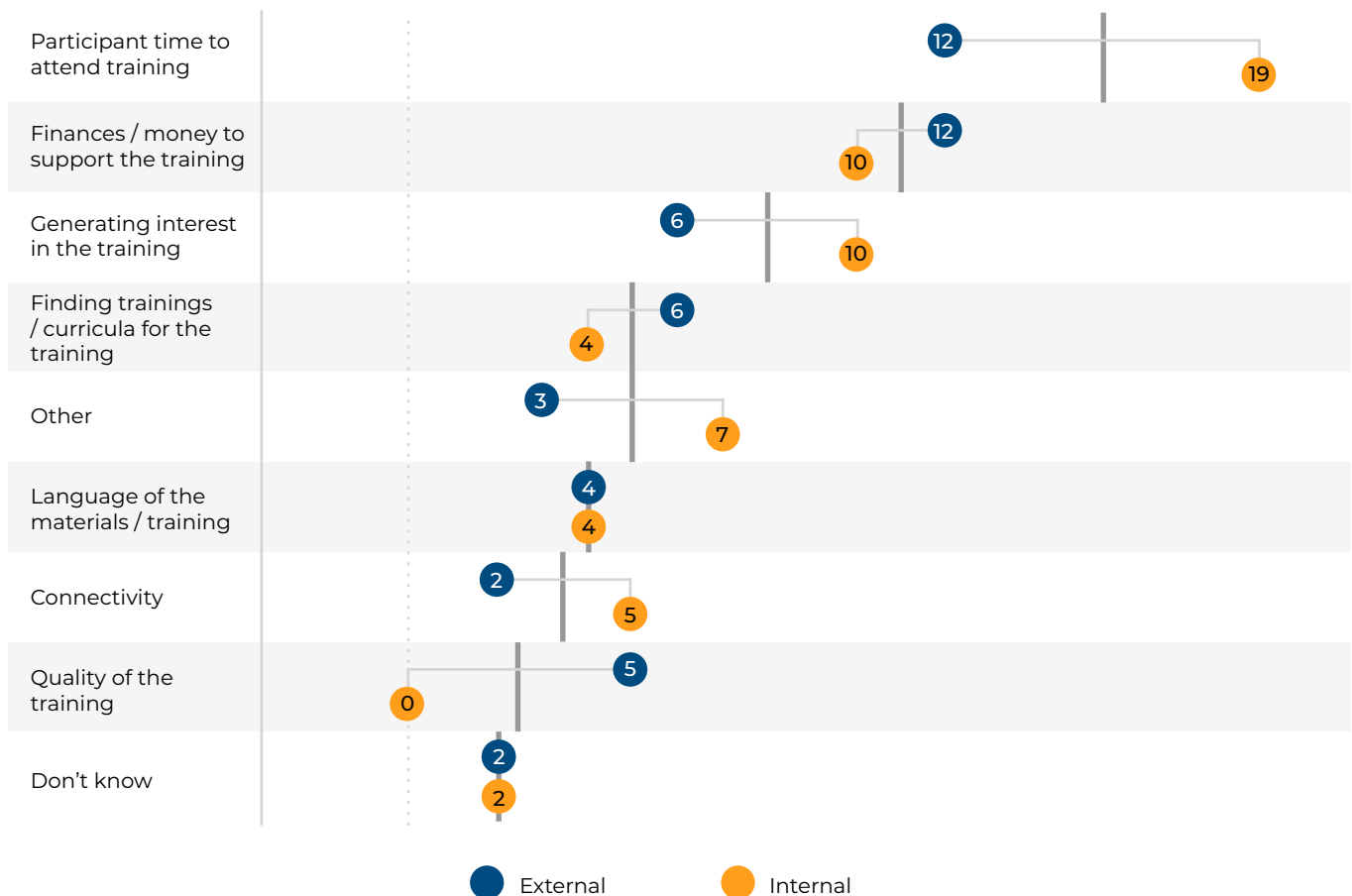
**Figure D-5: Statement of Agreement on Training Perceptions and Perceptions, by Stakeholder Group**



**Figure D-6: Statement of Agreement on Training and Payment, by stakeholder group**



**Figure D-7: Challenges to Conducting and Attending Digital Principles Training**



## Annex E: Clear Outcomes Research Team

Dr. Kerry Bruce, project director, is a technology and global development professional. As the CEO of Clear Outcomes, a small woman-owned business, she is responsible for the quality and technical direction of all work. Prior to establishing Clear Outcomes, she served as the executive vice president at Social Impact, where she was responsible for coordinating technical divisions, providing thought leadership, and promoting and institutionalizing new and evidence-based best practices for a 200-person evaluation firm that conducts more than 75 performance and impact evaluations each year. Prior to Social Impact, Dr. Bruce was the senior director of Global Health and Monitoring, Evaluation Research and Learning for Pact, where she participated in the startup of MERLTech. Dr. Bruce is also a member of the adjunct faculty at Georgetown University in the International Health Department, where she teaches courses in mHealth. She publishes regularly in peer-reviewed journals, in books and on social media. She holds a D.P.H. from the University of North Carolina, an M.P.H. from Johns Hopkins University and an M.A. in geography from the University of British Columbia.

Barbara Willett, team leader, is an M&E specialist with more than 15 years of experience in the development and humanitarian sector. She served as director of monitoring, evaluation and learning (MEL) teams at American Red Cross and Mercy Corps and was the director of evaluation at the Digital Impact Alliance, where she led the baseline study on the digital ecosystem, which was published in late 2018. Her experience at DIAL informs her interest in and understanding of this project. Willett has been involved in the intersection of MEL and technology for many years, developing data management systems at project and enterprise levels, helping organize and presenting at MERLTech, promoting the Digital Principles, guest lecturing for TechChange, practicing human-centered design methods for data system development, developing resources and knowledge products for practitioners while at Mercy Corps, and facilitating integration of information management and MEL at the American Red Cross. She is experienced in quantitative and qualitative methods in the United States and the developing world.

Judith Owigar, team member, is passionate about initiatives involving youth, women and all things technology. She is an experienced Kenya-based entrepreneur who is the founder of JuaKali Workforce, an online micro-jobs platform that connects young people to short-term jobs in Kenya's informal sector, and a founder of AkiraChix Association, a nonprofit that seeks to increase the number of African women who create technological solutions within their communities. She has worked in the UN-Habitat as an ICT consultant for the Urban Basic Services Branch, advising on projects that incorporate ICT solutions to address urban challenges. Owigar holds an M.A. in applied computing and a degree in computer science from the University of Nairobi. For her master's thesis, she wrote and published a paper that documented a user-centric evaluation of the usability of Kenyan government online services (the case of iTax). She is an award-winning entrepreneur and experienced public speaker. She sat on a panel with President Barack Obama of the United States and President Uhuru Kenyatta of Kenya at the Global Entrepreneurship Summit.

Ariel Frankel, team member, has an M.P.H. from Johns Hopkins, specializing in international health: social and behavioral interventions. She is skilled in both quantitative and qualitative research. She has worked in academia and consulting, as well as for local and international NGOs in the United States, Israel and Kenya. Frankel has worked as a researcher and program analyst for Social Impact for more than three years and has done consulting projects for Johns Hopkins and USAID (Global Development Lab). She managed both the implementation and experimental evaluation of a decision aid app called MyPlan in the urban slums of Nairobi. Frankel is a passionate and collaborative leader with experience at the clinical and community levels in addressing health disparities with vulnerable and at-risk populations. She is interested in how technology can be applied in the public health space as a catalyst for addressing disparities in thoughtful and effective ways that take the user and their context into account.

Christine Hooyman is a senior program manager with Clear Outcomes. She is a global health professional with more than nine years of experience in program management, international development and health programming implementation. She has extensive fieldwork experience in Kenya, Nigeria, Rwanda, South Sudan and Tanzania. Hooyman cemented her passion for global health work during her undergraduate studies, where she spent a semester in Nairobi working alongside a community-based organization providing HIV care in informal settlements. She served as a community health volunteer in southern Rwanda with the United States Peace Corps. In partnership with a rural health center, she developed training curricula for more than 120 community health workers, covering reproductive health, HIV/AIDS, family planning, nutrition and child health. Hooyman holds an M.P.H. from Emory University and a B.A. in globalization. She served as principal investigator for a qualitative study on support groups for men living with HIV, in addition to conducting strategic and policy work with the Centers for Disease Control.