Information and Communication Technology Division

Update on the context and trends

Various global events have had profound impact on our operational environment. These include the continuing COVID-19 pandemic, the war in Ukraine, refugee and migrant emergencies, and the global economic downturn. These - and others - have negatively impacted children and families in all regions, deepening inequalities, especially with regards to access to quality education and healthcare, and further disadvantaging children from poor families, ethnic and migrant communities, and those living with disabilities. Despite these challenges and thanks to determined efforts, regions are actively discovering ways to claw back the development and well-being of children, which continues to erode in many parts of the world.

Within the MENA region, over 100 million people currently require humanitarian assistance, of which about half are children. Active hostilities, protracted conflicts, and crippling political tensions in Iran, Lebanon, Libya, Palestine, Sudan, Syria, Tunisia, and Yemen, are putting the lives and well-being of children at constant risk, with the largest populations of refugees and internally displaced persons in the world residing in the region. In response to this evolving context, the regional office continues to prioritize the accelerators established in 2020. These accelerators aim to address the specific challenges facing children in the region, including improving primary healthcare, addressing violence against children and adolescents, improving learning and skills development, making national social protection systems child-friendly, and responding to the climate crisis and water scarcity. To support these goals, the ICT function ensures that countries have optimal access to enterprise solutions and services across different member states. Programme teams are also supported in exploring and assessing appropriate technology through the Technology for Development- T4D- governance framework, including the technology playbook, INVENT, and ICTD project management procedures.

The ESA region is witnessing an increasing capacity in T4D and digital innovations, exemplified by the over 600 digital and other innovation initiatives registered in the INVENT platform in 2022, high telecommunications growth rates, pioneering mobile money services, and some of the world's highest growth rates by GDP, with many countries in or approaching a humanitarian development nexus. Over the next four years, focus will be on reversing the socio-economic impacts of COVID-19 on children and adolescents and closing the gaps in achieving child-related Sustainable Development Goals (SDGs) targets, as well as building partnerships and mobilizing attention around child rights and gender equality, especially for the most vulnerable children and adolescents, including those with disabilities. Investing in and adopting new or improved technologies, including digital public goods (DPGs), will be a key strategic consideration moving forward.

The initiative to address the digital divide in South Asia, with a focus on closing the gender digital divide in particular, is gaining momentum in the region. The effort is being spearheaded by the RD, with the T4D section leading the charge in collaboration with Gender, Education, and Partnership sections. In 2022, country offices committed to identifying and implementing at least one concrete solution in their respective countries to tackle the issue. Additionally, representatives pledged to assess T4D/digital transformation capacity, update INVENT with digital interventions in COs, and establish digital transformation governance processes. The need to bridge the digital divide is especially pressing in a region that remains the most unequal and violent in the world, with recurrent and complicated humanitarian crises. Only 23.6% of child-related SDG metrics in South Asia are on track for 2030, highlighting the urgent need for action.

Meanwhile, West and Central Africa (WCA) is projected to experience steep growth over the next few

decades. However, the central Sahel region, which is one of the fastest-growing humanitarian crises globally, is among the most vulnerable and climate change-impacted regions. Spillover from the Sahel crisis is now affecting several neighboring coastal countries. UNICEF's Children Climate Risk Index indicates that 16 out of 24 countries in the WCA region are among the 30 countries with the highest climate change risk for children. Furthermore, the situation is exacerbated by an increasing number of people who describe their circumstances as "living on the edge," facing high intensity, frequency, and interdependency of shocks. Despite these challenges, the region is working towards eight "Key Results for Children," with T4D being a crucial cross-sectoral accelerator strategy. However, access to connectivity remains a significant challenge for digital transformation in the region. With projected steep population growth, it is crucial to address these challenges urgently to ensure the well-being and development of children in West and Central Africa.

Finally, an internal development impacting our operational environment is the ICTD-led formulation of digital transformation as a key change strategy for UNICEF, in accordance with the new UNICEF Strategic Plan, 2022–2025. In addition, the ED endorsed OneDigital initiative was also developed by ICTD to strengthen digital governance, both strategically and financially, specifically with the digital transformation programme in mind. This initiative which encompasses people, processes and technology also aims to integrate UNICEF efforts in enterprise Architecture, information and cyber security, digital governance and oversight across the organization.

Major contributions and drivers of results

ICT and T4D teams have been instrumental in launching digital transformation across various regions. In West and Central Africa (WCA), the RMT-approved WCARO Governance Framework has successfully steered resources towards digital transformation through the 7% Thematic Fund and large-scale private sector engagements. The T4D team has expanded, providing Digital Transformation focused problem-solving training for ICT managers, including Design Thinking Training of Trainers for 24 countries. The team has also increased bottom-up co-creation initiatives with country offices.

In East Asia and the Pacific (EAPR), the T4D team has established a strong partnership with DAPM and has seen growth of the Frontier Data Tech Hub. InForm scale-up and progressive handover to DAPM have been implemented, with four peer reviews and four planned ICT upscaling. Creation of P3 business analyst posts in EAPRO, GoJ grant for digital health - $9m (2022) +$9m (2023) (with 10m for other regions), Technology Playbook, ICT & Digital Innovation Operating Model (IDIOM), Digital Public Infrastructure (DPI) and Digital Public Goods (DPGs) have been established. The first Salesforce go-live in EAP (Thailand) and establishment of a regional support process for future rollouts (Malaysia, Indonesia, Philippines in 2023) have been implemented, and support has been provided to ASEAN and the RO CP team with the organization of the inaugural ASEAN ICT Forum on Child Online Protection.

During the reporting period, the regional ICT and T4D teams in ECARO provided ongoing support to strengthen programme results according to the regional and global ICT and T4D strategies at both regional and country levels. In 2022, the regional ICT/T4D function oversaw and provided technical support, guidance, and capacity building to deliver programme and operations results by leveraging UNICEF's core digital solutions as well as innovative digital solutions for programmes. This included providing ICT support to emergency responses in Ukraine and refugee-hosting countries, migrating most country offices in ECAR to CloudOne and MS TEAMS telephony, implementing Qualys network vulnerability software in all ECAR countries to enhance information security, and supporting various digital solutions for different results areas.

Some of the digital solutions supported include digital systems for immunization programmes and

supply chains, telemedicine for enhancing care efficiency and quality, LearnECD online learning platform for continuous professional development of ECD professionals, Bebbo interactive mobile app for parents of young children, digitalization of child protection case management systems, and the regional USupport platform for linking youth/adolescents with counsellors and psychologists to address common mental health issues.

In the ESA region, COs are reimagining a post-COVID world by accelerating efforts on the transformation and changing role of the core ICT function, as well as responding to the increased demand for T4D and Digital Innovations in programmes, operations, and fundraising. The investment in and adoption of new or improved technology and support for scaling of key digital public goods (DPGs) are central to meeting the needs of COs. ESAR's 21 country offices promoted child rights through strategies that transform gender and social norms, build the evidence base and its use in advocacy, promote partnerships, and respond robustly to crises, with regional stakeholders encouraged to advance child rights at scale.

ICT is slated to drive digital transformation in the MENA region, enabling effective work modalities for staff and supporting digitally enabled programmes. Highlights of ICT contributions include the migration of 15 countries to CloudOne and 15 VSAT sites to Marlink, completion of migration from Skype to MS Teams Telephony for all sites, and innovative approaches to overcoming operational challenges in emergencies and other contexts, with obsolete technologies replaced with emerging LEO satellite services (Starlink). Information sessions have been held with senior management, programme and operations colleagues, and other stakeholders to explore and implement digitally enabled solutions. Support has been provided to the MENA Voices of Change programme, strengthening evidence generation, meaningful community engagement and participation, and protection from exploitation and abuse using digitally enabled platforms.

Meanwhile, in ROSA, under the regional accelerator of the digital divide, a task force led by ICT4D with Gender, Education, and Partnership teams has been established. Terms of reference for P4 ICT positions in Afghanistan and Pakistan have been revised to focus on capacity building for T4D in the country offices, and a T4D Specialist NOC position has been created and recruited in ROSA.

The T4D function in LACRO has been supporting country offices in integrating digital innovations into their programmes through the development of strategies, staffing, capacity building, technical support, and internal and external knowledge sharing. There has been a growing recognition of the need for a strategic shift towards digital transformation to support the effectiveness of programmes across a range of goal areas. Several high-visibility initiatives in health, child protection, education, and climate change have emerged from the region since 2021, with support from the T4D or ICT functions, including Puentes Digitales in Uruguay, Commcare deployment in Jamaica, and Primero and the Odyssey in Guatemala.

The Division's BRM teams have worked closely with internal clients and stakeholders to help identify, initiate, execute and deliver several high-value projects. The teams have led and coordinated the development of four new initiatives, including Conflict of Interest and Financial Disclosure System (CIFDS) 2.0, Operations and Admin Services System, Grants Management Process Re-Design, and Advanced Financial Closure Project. They have managed project initiation, provided guidance, intervention and resolutions in product lifecycle management.

One of the major contributions of ICTD has been to enable digital fundraising, which has driven growth in new markets. ICTD has played an important role in streamlining integrations of payment gateways, donation portals, SES Digital Platform, and a reporting platform, standardizing technical integrations, data migration, and core functionality in Salesforce. This has enabled enhanced fundraising, increasing operational efficiency, and improved risk posture to meet PCI standards. ICTD has also improved the capability in public sector fundraising processes by implementing new modules

in UNISON to capture pipelines in PPD HQ and fund remittance management in PFP. ICTD has contributed to automation of management reports to support decision-making and more real-time analytics on funding projection and pipelines. As part of PCI compliance, ICTD has improved PCI risk exposure in Serbia, Bulgaria, China, and India with the elimination of sensitive cardholder data from their environment. ICTD has also extended standardized security-compliant infrastructure architecture for use by field offices as well as formulated guidance.

Optimal business relationship and Product Lifecycle Management (PLM) best practices have helped deliver results in 40 digital initiatives, including UNICEF's Global Accessibility Helpdesk, HOPE, Primero, Host X sites, OOI Support, Learning Passport, and NutriDash 3.0. For OOI projects such as INVENT and GIGA, PLM best practices have made products more sustainable and ready to scale. For the Learning Passport, ICTD has coordinated interactions with the product team, LP offline capabilities have been developed by SCS, production support has been provided, while LP online has reached 2 million subscribers. For NutriDash 3.0, PLM best practices have been applied, advice on product roadmap has been given, and data collection has been made easier, more accurate, and more frequent.

Under UNICEF's new 2022-2025 Strategic Plan, ICTD has led and supported the business partners in digitizing multiple programme functions. The work planning module in RAM 3.0 allows all UNICEF offices to digitize the process of developing, implementing, and amending workplans. Core Standard Indicators (CSI) were introduced as a core set of country-level standard indicators, which generates the data required for global reporting. In 2022, the CSI module was used for the first time instead of the Strategic Monitoring Questions (SMQs) platform to collect data for reporting on UNICEF's global results and commitments outlined in the UNICEF Strategic Plan 2022-2025 results framework. A new electronic programme document (ePD) and partnership management system has been developed to digitize and improve collaboration between UNICEF and Civil Society Organization (CSO) partners when developing new programme interventions. The Field Monitoring Module has digitized data collection and analysis to inform adaptive management practices and keep track of programmatic visits and their findings. Knowledge@UNICEF is a new digital platform for external knowledge exchange, and CPX is a digital platform to support country programme planning. The Real-Time Data initiative aims to elevate UNICEF as a real-time data-driven organization by providing integrated, rapid, risk-informed responses to complex humanitarian situations.

In 2022, ICTD's DCOE contributions include product management, production of tools and guidance, and partnerships. On product management, the RapidPro working group was established to sponsor and champion UNICEF's digital messaging efforts and its advantages in achieving results for children. Oky illustrates digital design that meets the realities of adolescent girls and young women, an important target audience for UNICEF and partners who aim to close the gender digital divide and to leverage digital technology for the well-being and results for children and gender equality. The Digital Resilience Assessment Tool is still being developed and is aimed at improving data protection, responsible use of data and cybersecurity of digital products. CRVS Toolkits, guidance on how to deploy digital CRVS systems, was developed in close collaboration with the Child Protection team. The Djenga tool, a framework to assess and improve the maturity of digital products. As for partnerships, DCOE provided technical advisory to UNICEF's partnership with Airtel, that aims to connect children to the internet in 13 countries on the African continent, represented UNICEF in the Africa consultations for the Global Digital Compact co-organized by the SG's Envoy on Technology, established partnerships with key donors and foundations in the digital development ecosystem, and produced communication and advocacy about UNICEF's digital work, for example in the Digital Public Goods Alliance annual ecosystem report.

Lessons Learned and Innovations

The increasing use of digital technologies in programming has highlighted the need for stronger governance measures to ensure the effective implementation and management of these tools. As digital technologies become more pervasive, we must ensure that programming initiatives are aligned with our strategic goals, and that we have the necessary structures and processes in place to mitigate potential risks. Furthermore, the creation of three geographical locations presents certain challenges in managing teams. With dispersed teams, communication and collaboration can become more difficult, and coordination of efforts may require additional resources and effort. Therefore, effective governance frameworks are essential in ensuring that teams are aligned and working towards common goals, regardless of their physical location. With robust governance frameworks, clear communication channels are emphasized, with clearly defined roles and responsibilities, as well as standardized processes.

In 2022, ICTD's DCOE learned that dedicated institutional resources and funding are needed to advance digital programming at HQ, and RO/CO level to achieve sustainability and scale to deliver results for children. There is strong demand for more guidance and tools on how to develop and scale digital solutions from an ICT/technical perspective. Need for cross-sectoral collaboration in T4D: When it comes to our support to government digital systems, in areas such as health, social policy, protection, interoperability is increasingly recognized as critical for success. To this end, more collaboration between different teams related to T4D might be beneficial.

For ICTD's BRM teams, getting involved as early as possible in PLM stages, including clear governance, roles and processes is needed. Leverage SD's PCM to streamline engagement with ICT LTA vendors. Reflect ICTD capacity limitation in project plans (buffering and parallel tasks). Also, while there has been good progress made as part of SES initiative, addressing local market specific challenges in addressing diversity and maturity of local service providers continues to hinder rapid scale up. While for UNISON, change management to drive adoption and integration with VISON has been identified as key opportunities to be explored. PCI compliance. Resource constraints and competing organization priorities in both business and ICTD caused delays of project execution and delivery. A lesson learnt was to factor in all known and possible resource constraints from the very beginning of the project, and strengthen governance, change management and risk management throughout the project life cycle. Ensure optimal synergies and collaboration across projects has become more and more important given the integrated nature of business processes and information systems. Also mentioned were funding constraints, staff turnover due to HQE initiative, teams in multiple time-zones, and data center migration as factors that resulted in delays.

For ESAR, in ICT: Lack of CBO guidance but urgency for KCO to move forward for being a pilot country. Able to use bandwidth from ICT human resources to support T4D. Collaboration with the Staff Development (Learning) Committee on knowledge sharing sessions on important ICT topics including cyber security, ECM etc. Ease of transition to post-pandemic work modality. For T4D, positive mindset on the potential impact of DX. Additional capacity/staffing within programme sections (RO and CO) are moving things forward. Sustainable support to the region. If there's a big project coming, need to specifically prioritize our time to manage or identify a project manager. Funding and processes are not always flexible enough for the new ideas that we have. In Yoma: Need to fully integrate with ecosystem partners and increase seamless experience for users. Benefit of leveraging U-report to reach users. Need for token with universal redemption options.

In ECAR, inadequate capacity at COs for DX in programme, limited financial resources for digital solutions at RO and CO level posed challenges in deploying and scaling up digital solutions and providing timely support to increasing number of digital solutions. There were additional challenges when providing on-site technical support for new locations. These were established rapidly to scale UNICEF's response and intervention in refugee hosting countries, that lacked local ICT capacity

(Poland, Czech, Slovakia).

In EAPR, the end of ORE funds means we need to make funding for DX more sustainable and institutionalized. Unsustainable and risky capacity growth based on short term funding: too much time spent on consultant recruitment + recurring institutional knowledge loss. Misaligned resources/accountability: Overdependency on Digital Health/COVID-19 funds. We are not equipped for fundraising and building partnerships - and very little help is given from PFP/PPD. Securing sustainable funding for expanding RO core functions is crucial. CO-level DX capacity: still not at tipping point. DX still insufficiently integrated in programme planning and evaluation processes. No way to formally measure impact, T4D KM: INVENT and keeping INVENT updated. All cloud migrations complete and resulting simplifications of BCPs.

In WCAR, high diversity in capacity levels across the region means the need for a different level of hands-on support when engaging with Country Offices, tailored to their specific needs. Last-mile connectivity and the digital divide between hard-to-reach areas vs the urban set-up are still massive challenges in this region that need to be considered when ideating, planning, and deploying solutions.

In MENA region, lack of appropriate guidance on legal, data protection and data security considerations for digitally enabled projects lead to challenges in deploying and scaling these solutions, delays in programme delivery and loss of credibility with government and development partners. Limited human resource at RO to provide timely support in exploration, deployment and scaling of digitally enabled solutions for programmes. Involvement of ICT and/or T4D personnel from the start of a supported project is crucial to the success of the project (or at least to getting faster, more effective results).

In LACR, the digital transformation should be supported through investment in staffing, capacity building and the development of a "culture" of digital innovation. Bold action is needed to address gaps and leverage programmatic funds, with well-funded digital strategies and plans to bring about change. We should also develop strategic partnerships and relationships with private sector players for leveraging connectivity, infrastructures, and to increase our technical capacity for data analytics and research.