Mobile for Humanitarian Innovation

Annual Report

March 2022

The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry, and society thrive. Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Services and Solutions, and Outreach. This activity includes advancing policy, tackling today's biggest societal challenges, underpinning the technology and interoperability that make mobile work, and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events.

We invite you to find out more at **gsma.com**.

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GSMA Mobile for Humanitarian Innovation

The GSMA Mobile for Humanitarian Innovation programme works to accelerate the delivery and impact of digital humanitarian assistance. This is achieved by building a learning and research agenda to inform the future of digital humanitarian response, catalysing partnerships and innovation for new digital humanitarian services, advocating for enabling policy environments, monitoring and evaluating performance, disseminating insights and profiling achievements. The programme is supported by the UK Foreign, Commonwealth & Development Office.

Learn more at **www.gsma.com/m4h** or contact us at **m4h@gsma.com**

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Foreword

In 2021, humanitarian needs continued to rise. Challenges such as the COVID-19 pandemic and climate change contributed to this increase, and as we closed the year we looked towards 2022 with 274 million people expected to require humanitarian assistance and protection. Despite this bleak outlook, we were encouraged and inspired to see mobile-enabled digital technology continue to provide tangible solutions and services to those impacted by crisis. Together with our partners and affected communities, we invested in innovation and enabled collaboration to make a tangible difference to those in need of humanitarian assistance.

The GSMA, with the support of the UK's Foreign, Commonwealth & Development Office (FCDO) over the past ten years, has been responding to humanitarian challenges through mobile enabled technology. First, through the GSMA's Disaster Response programme, and since 2017 through the Mobile for Humanitarian Innovation Programme that has reached over 9 million people with improved access to and use of life-enhancing mobile services in humanitarian contexts. As humanitarian assistance becomes increasingly digitised, we are determined to ensure that the transformation is safe, dignified and delivers impact at scale.

This annual report provides an overview of some of our key activities and successes in 2021.

The work of M4H to date has demonstrated that communities affected by natural hazard disasters, food insecurity, conflict, climate change and displacement continue to prioritise digital technology, not only to communicate, seek and share information, but increasingly to access humanitarian assistance. In 2021, we continued to catalyse partnerships between mobile operators and humanitarian partners, invest in innovation through the M4H Innovation Fund, unlock policy barriers with advocacy efforts and craft a learning and research agenda that will shape the future of digital humanitarian response.

At MWC Barcelona, we announced the continuation of our partnership with a further £15.5 million commitment from FCDO. We will continue to use our partnership to enable the power of digital technology to support those affected by humanitarian crises. We are delighted to include input from some of our partners, whose collaboration has been crucial to the impact we describe in this report. We look forward to forging new partnerships and initiatives in 2022 and continuing to address the growing global humanitarian needs, increasing the focus of M4H on prevention, prioritising needs, and protecting people in our humanitarian response.

Kimberly Brown,
Head of GSMA Mobile for Humanitarian Innovation

Magdalena Banasiak,
Head of Technology and Innovation Unit, UK Foreign, Commonwealth and Development Office

"The GSMA is an important stakeholder in the development of policy and advocacy on the importance of communication and information as aid, the role of mobile in communications work and the importance of connectivity for disaster affected communities. OCHA has worked with the GSMA to raise awareness of humanitarian principles, protocols and models of response among mobile phone operators, and to provide advice on preparing for and responding to crises. The GSMA are also key to brokering relationships between humanitarian responders (including specialist communications agencies) and telecommunications companies, sharing best practices for engagement during a crisis and developing guidelines for both parties in working together."

Edem Wosornu, Chief, Response Support Branch, Coordination Division, United Nations Office for the Coordination of Humanitarian Affairs (OCHA)

Introduction

2021 saw the world begin to adjust to a "new normal" with COVID-19 as vaccines were rolled out and the situation began to stabilise, at least in high-income countries. For those affected by humanitarian crises, COVID-19 was just one of many challenges to their lives and livelihoods. Disasters from climate-related hazards, displacement caused by conflict and protracted crises from insecurity or famine, sometimes in combination, remained a stark reality for millions.

Against this backdrop, digital technology, and mobile in particular, played a greater role in the lives of people in crisis and those responding with support, whether local communities, civil society, national governments or international agencies. As the Grand Bargain 2.0 reform process strengthens the international humanitarian system and mobile network operators (MNOs) and the private sector become more engaged in humanitarian action, the transformative power of mobile has never been more important.

Enabling this transformation is the Mobile for Humanitarian Innovation (M4H) programme, a multi-year initiative funded by the UK Foreign, Commonwealth & Development Office (FCDO), the GSMA and its members. In 2021, M4H saw steady demand for its activities, from supporting grant-funded innovations in crisis contexts to providing thought leadership, convening the humanitarian system and the mobile industry, conducting research, gathering evidence and learning from its partners.

This annual report highlights the key activities and progress of M4H in 2021 and sets the stage for the growth and evolution of the programme in 2022. These activities and progress include:

- The M4H Innovation Fund is seeing the significant impact of early, and more recent, investments that have scaled and attracted additional resources.

- M4H Strategic Partnerships projects are being replicated and showing promise to scale up. Portfolio overviews published in 2021 demonstrate the depth and breadth of the investment, impact and collaboration of these projects.

- The research, insights, monitoring and evaluation activities of M4H collected evidence, measured impact, identified trends and developed important tools for the GSMA's MNO members and humanitarian partners alike.

- Policymakers, national authorities and regulators from around the world requested M4H support to review their disaster response policy frameworks, develop National Emergency Telecommunications (NET) Plans and build their capacity to leverage the power of mobile in humanitarian preparedness, response and recovery.

Looking to the future, M4H is developing a programme strategy to harness mobile-enabled technology, including the delivery of aid through cash and voucher assistance (CVA), to tackle some of the world's most pressing humanitarian challenges.

As the M4H programme continues to expand its reach and influence, the team hopes to accelerate efforts to achieve a vision of an inclusive, digitally enabled humanitarian future. In this vision, mobile and digital solutions provide greater access to services, information and choice for people in, or potentially affected by, crisis. The M4H team recognises the need for partnerships and collaboration in pursuing this vision and looks forward to engaging with new and existing partners on this agenda.
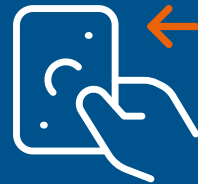
Snapshot of achievements in 2021

Over
9 million
people reached

16
live grant projects
received funding
and support

29
strategic partnerships
created to date

£9m
in crowd-in funding

Over
14k
downloads

28
events

reaching
855
people

Training delivered to
115
policymakers

reaching
19
countries

Key achievements in 2021

Forged **29** strategic partnerships and increased engagement with mobile operators by 66 per cent

The M4H Innovation Fund supported **eight** grantee organisations to successfully complete their projects, with a further **six** grantees expecting to reach their project end-goals in 2022[1]

Crowd-in funding (funding or investments received following the initial GSMA grant) secured by M4H grantees surpassed **£9 million**

Trialled the Connectivity Needs and Usage Assessment (CONUA) toolkit in Niger, Sudan and Uganda

Provided thought leadership through reports on the COVID-19 pandemic and the climate crisis

Advocated for and brokered partnerships with government stakeholders in Kenya, including the telco regulator, to ease policy barriers and increase access to financial services for the most marginalised

Trained **115** policymakers from **19** countries on the role of mobile in humanitarian action including in disaster preparedness, and launched an online mobile money course in which **75** humanitarian agency and MNO staff have enrolled

1   Two grant projects were discontinued due to implementation challenges

"As UNHCR continues to expand its digital inclusion work, ever-important in light of ongoing COVID-related challenges, the GSMA has remained a reliable, responsive and skilled partner. With many shared values and interests, we've sought to build evidence together that helps the sector as a whole navigate the complexities of these emerging challenges where humanitarian innovation plays a vital role. Specifically, the User Perspectives Research Project contributes to this and benefits from the leadership of the GSMA, with UNHCR's support, leaning on the vast expertise and robust research and learning credentials of the GSMA M4H team."

John Warnes, UNHCR Innovation Service

M4H in action

Investing in innovation

In 2021, the M4H Innovation Fund continued to provide funding and support to organisations that are using mobile technology to deliver innovative products and services that respond to humanitarian challenges. The full portfolio of projects supported by the Fund can be found in the Mobile for Humanitarian Innovation Fund Portfolio (2017–2022) report.

M4H has focused on providing continued support to grantee organisations as they roll out their products and services, filling capacity gaps and gleaning lessons and insights from implementation. M4H has provided on-going technical assistance to grantees, including modules on business plans, MNO partnerships and scaling, and has plans to launch a playbook of tools and resources in 2022 that will be available to both grantees and external organisations.

As projects in the Innovation Fund portfolio reach scale, the positive impacts of mobile-enabled innovation are becoming evident and solutions are being replicated and mainstreamed. Despite another challenging year, innovators in the M4H portfolio have worked to pivot and adapt their solutions, responding to new realities and the potential of mobile and digital technologies to address them.

Snapshot Figures

Total crowd-in funding: £9m

Total replications: 6

Portfolio size and geographic spread: 22 grants awarded with projects implementing across 27 countries

6 COVID-19 Adaptation Fund grants awarded for total value of £281,841

Profiles of success stories: grant projects completed in 2021

During the Ahlan Simsim project, a suite of specially designed mobile-based multimedia content was distributed via mobile across Facebook, YouTube and WhatsApp groups

SESAME WORKSHOP

Sesame Workshop's targeted digital campaign is estimated to have reached more than **8 million** unique parents and caregivers

Water ATMs installed during the grant supported efficient access to clean water for more than **3,000** individuals

DRC DANISH REFUGEE COUNCIL

DRC provided digital literacy training to more than **300** Kyaka II camp residents to support continued use of digital facilities

More than **3,400** telehealth consultations were held in the Tharparkar region of Pakistan to strengthen community resilience

NAYAJEEVAN

Naya Jeevan's additional work on mental health provided **75 per cent of women** in the target population with access to services

More than **75,000** people interacted with the CuéntaNos platform during the project

INTERNATIONAL RESCUE COMMITTEE

IRC opened a safe space for LGBTQI+ populations in El Salvador and ran more than **30** virtual emotional support groups

100 per cent of customers in Bidi Bidi and **94 per cent** in Kiziba purchased solar home systems using mobile money, with high levels of repayment proof of the efficacy and impact of the mobile money ecosystem

ALIGHT

The team were able to purchase more kits with the repayment funds, demonstrating the potential for sustainability, and hope to expand the project

The pilot of the British Red Cross **121** project generated and validated **350** digital identities for the most vulnerable populations in Isiolo County, Kenya

BritishRedCross

350 direct cash transfers were successfully made to these community members

9,550 individuals accessed either the MayMay app or the community hotline for information on housing, land and property rights

NRC NORWEGIAN REFUGEE COUNCIL

After finding that many users did not have the skills to use the digital channels of its original project, NRC pivoted to offer digital literacy training through community workshops

More than **20,000** portable battery rentals were provided to more than 1,100 individual customers on a PAYG basis

uhd

The project created income for over **65** lessees earning average commissions of **$5** per day

"From August 2019 to March 2021, the GSMA supported the IRC to help communities in El Salvador and Honduras access vital and lifesaving information and services through its interactive platform CuentaNos.org. Safe spaces, both virtual and physical due to the pandemic, were established in both countries for vulnerable women, girls and members of the LGBTQI+ community. In 2021, thanks to an extra $50,000 grant from the GSMA COVID-19 Adaptation Fund, IRC expanded CuéntaNos to engage indigenous populations in Guatemala and shifted planned safe spaces to become virtual emotional support groups in Honduras and El Salvador. IRC gained valuable implementation experience through the project and has been able to continue programming in all three countries through the support of other donors."

Katherine Susman, El Salvador Deputy Director of Programmes, International Rescue Committee (IRC)

Lessons from the Innovation Fund portfolio

Impact case studies

Impact case studies are being produced for each solution supported by the M4H Innovation Fund to ensure that valuable lessons and outcomes are shared with the mobile and humanitarian sectors.

Lumkani

Lumkani is a South African social enterprise that seeks to address the challenge of fires in urban informal settlements and townships in South Africa and across the globe. Lumkani uses innovative early warning systems (EWS) with low-cost, inclusive insurance products to provide safety and financial security to their clients.

Metrics: 20,182 fire sensors installed, providing protection to more than 66,000 individuals. Insurance cover for property amounted to more than 56 million rand (£2.5 million).

The installation of Lumkani devices has helped households feel safer (reported by 87 per cent of evaluation participants).

Sensors have helped limit the spread of 94 per cent of fire outbreaks.

"The Lumkani device actually woke me to go and check and I saw the fire. I got my children and we got out a small window. If it wasn't for the Lumkani device which woke me up, I would have lost my life."

Service user, male

Mercy Corps CHANTER

Mercy Corps has been working in Haiti since 2010. Their CHANTER platform (Communities in Haiti Access New Technologies for Early Warning/Response) uses SMS and interactive voice response (IVR) technology to deliver a 12-week curriculum on extreme weather preparedness, first response practices and early warning messages. The messages are sent through Viamo's mobile communication platform over Digicel Haiti's mobile network. The messages are tailored based on the recipient's livelihood activity and their location to ensure they receive useful information.

Metrics: 16,672 registered on the CHANTER platform during the grant and **91 per cent said the messages they received were clear**. **Eighty-four per cent stated they took the actions proposed** in the messages.

Lessons: End users found the CHANTER platform relevant and useful. More than 99 per cent of survey respondents felt that the information they received was relevant to them. In-person sensitisation was an effective way to increase engagement with the platform. Building on the lessons learned through the CHANTER project, Mercy Corps has developed five additional projects in partnership with Viamo. These projects aim to reach 2.5 million people across three countries in the Americas. One of these projects is "LAVE", which is using the CHANTER approach to deliver messaging to vulnerable populations in Haiti to reduce the spread of COVID-19. The service has reached more than 2 million people to date.

Building resilience through mobile-enabled solutions: lessons for innovators

To gather evidence of impact and glean insights from what we have learned across the M4H Innovation Fund portfolio, a synthesis review was undertaken on the first five projects. More than 100 pieces of evidence, combined with in-depth interviews with grantees and GSMA staff, produced seven overarching lessons for innovators aiming to create mobile-enabled services and solutions in humanitarian contexts:

1. **Innovators need to build trust with end users,** which is particularly important in humanitarian contexts.

2. **Innovators need to ensure they truly understand the local context**, including prospective service users.

3. **Equitable access is a key consideration** when designing mobile-enabled innovations.

4. **Successful mobile-enabled innovations** often require buy-in from multiple stakeholders whose expectations are aligned.

5. **Partnerships will be successful and sustainable** when they capitalise on their unique strengths.

6. **Innovators need to carefully consider** who will ultimately pay for their mobile-enabled innovation.

7. **Mobile technology introduces unique scale and sustainability considerations** that innovators need to address when designing solutions.

The full synthesis review report provides additional detail, along with examples of successes and challenges in each of these areas.

Another synthesis review of the full portfolio of Innovation Fund projects from 2017 to 2022 will be completed in 2022.

The year ahead

In addition to the direct impact of the solutions supported by the M4H Innovation Fund, the lessons and evidence they generate are critical to the wider humanitarian and technology sectors, providing insights into the ways in which organisations can and are using mobile and digital technologies to transform humanitarian action. In the coming year, the M4H programme will continue to support implementation while also consolidating lessons from across the full portfolio. An evaluation and scoping mission will be undertaken to determine how best to support innovation in the humanitarian sector through catalytic grant funding and technical support in future.

"With the GSMA's support, Sesame Workshop dramatically strengthened Ahlan Simsim's mobile digital footprint and developed new best practices for reaching families. Through a digital, mobile-first campaign that aimed to reach 100,000, we reached 39 million with videos on children's early development, learning through play, empathy, and gender, amassing 56 million views on Facebook and Instagram and over 3.5 million views on YouTube. The research we conducted on this content proved to be invaluable, informing how we can better engage caregivers around the world with essential messages on children's early development."

René Celaya, Managing Director, Ahlan Simsim and VP, Humanitarian Programs, Sesame Workshop

SESAME WORKSHOP

"In 2021, the GSMA Mobile for Humanitarian (M4H) Programme partnered with Safaricom PLC to develop and implement the humanitarian positioning strategy. This was aimed at leveraging mobile technology to map the humanitarian ecosystem and highlight the humanitarian needs, opportunities, and areas for co-creation with other partners. This strategy has opened doors for collaboration with more humanitarian partners and contributed to the creation of innovation roadmap opportunities. The M4H team has brought their vast knowledge in unlocking these opportunities and the support has opened our minds on how best to respond to the humanitarian needs in a more proactive manner."

Idah Gacheri Micheni, Product Manager – Technology For Development, Safaricom PLC

Building and strengthening digital ecosystems

29
strategic partnerships
formed to date

35
humanitarian
organisations engaged

33
projects in total
in the M4H strategic
partnership portfolio

20
MNOs engaged

750k
people impacted
to date

6
fintechs
engaged

9
countries covered
by project
implementation
(Burundi, Eswatini,
Ethiopia, Kenya, Nigeria,
Pakistan, Rwanda, Somalia,
Uganda)

5
other tech
companies
engaged

M4H aims to form and catalyse long-term sustainable partnerships between the mobile industry and the humanitarian/development sector at both the country and global level. The programme acts as an intermediary between MNOs, other digital service providers and the humanitarian/ development community to find sustainable, potentially scalable and commercially viable solutions to the challenges of delivering digital humanitarian assistance.

This means creating and influencing business-to-business (B2B) partnerships between MNOs, digital service providers and the humanitarian ecosystem to adopt and deploy scalable digital solutions in the delivery of humanitarian assistance. This approach has three elements, which are detailed in a 2021 M4H lessons paper, "Building and Strengthening Digital Ecosystems in Humanitarian Contexts":

1. **Developing strategic partnerships**: Recognise the value proposition for MNOs and humanitarian organisations to engage and ensure expectations are aligned.

2. **Shaping an enabling environment**: Understand the necessary conditions for mobile-enabled interventions to be successful, from the regulatory and policy environment to infrastructure (both existing infrastructure and infrastructure that may need to be developed).

3. **Building an ecosystem with users**: Ensure the market is ready (from the perspective of end users) and interventions are tailored to the local context.

Using this approach, M4H has formed **29 partnerships** to date, undertaking **33 projects** in nine countries, primarily in Africa, and has engaged with **20 MNOs** to provide expertise, develop projects and explore future partnerships. This represents a 66 per cent increase in MNO engagement during 2021.

M4H also has several formal and informal partnerships with international humanitarian organisations, which create opportunities for collaboration on both broader policy challenges and specific country and regional initiatives (see Box 1).

Box 1

Global partnerships

The M4H programme has developed and continues to cultivate several partnerships with the headquarters of humanitarian and technical agencies that complement and support country-level operational partnerships. Through formal memoranda of understanding (MOU), as well as informal collaborations, M4H has committed to working more closely with organisations with shared objectives to identify project opportunities and collaborate on global policy challenges.

For example, engagement with UNHCR's global policy work on displaced and disconnected populations was complemented by advocacy and operational initiatives at the country level. In 2021, the GSMA signed an MOU with the International Federation of Red Cross and Red Crescent Societies (IFRC) to accelerate the delivery and impact of digitally enabled humanitarian assistance. This joint effort builds on the complementary assets of the respective networks: the community trust, presence, volunteer base and life-saving services of Red Cross and Red Crescent National Societies, and the GSMA's capacity to mobilise and activate the necessary support of MNOs for coordinated and effective preparedness and response to crisis and emergencies.

M4H participates in the Disaster Connectivity Maps initiative with the International Telecommunication Union (ITU) and the Emergency Telecommunications Cluster (ETC). M4H also continues to develop its collaboration with the UN World Food Programme (WFP) on the use of mobile money for humanitarian assistance.

Other key humanitarian partners for M4H include the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), Mercy Corps, CARE International, International Committee of the Red Cross (ICRC), Food and Agriculture Organization of the United Nations (FAO), United Nations Capital Development Fund (UNCDF), Norwegian Refugee Council (NRC), Danish Refugee Council (DRC), Grameen Foundation, Alight, International Rescue Committee (IRC) and the CALP Network.

These country-level partnership activities fall into three overarching categories:

1. Strengthening foundations

M4H believes it is crucial for organisations to work collaboratively with a shared vision to form sustainable, meaningful partnerships. The programme has built or supported **four consortiums** in Ethiopia, Pakistan, Rwanda and Somalia that, collectively, bring together **29 organisations** – 19 humanitarian organisations and 10 MNOs – to identify key areas in which to collaborate. For example, the Rwanda consortium has focused on digital and financial inclusion through five projects:

• Digitising village savings and loan associations (VSLAs);

• Introducing pay-as-you-go (PAYG) mobile money energy solutions in refugee camps and host communities;

• Improving CVA processes to enable the use of mobile money for humanitarian cash delivery;

• Upskilling displaced populations with digital literacy; and

• Providing a mobile-based training platform for community activists on sexual and gender-based violence (SGBV) in all refugee camps and host communities in Rwanda.

The Pakistan and Somalia consortiums are using maps that overlay locations of mobile money agents with humanitarian CVA programmes to accurately show where mobile money might be feasible. Finally, the Ethiopian Collaborative Cash Delivery (CCD) consortium works to increase the effectiveness, efficiency, reach and collective impact of humanitarian cash programming in Ethiopia.

2. Innovative partnerships

M4H has supported new and innovative partnerships between the mobile industry and humanitarian sector. For example, M4H has collaborated with the MNOs Econet in Burundi, Safaricom in Kenya and Telesom in Somalia to develop business cases and positioning strategies to create and expand partnerships with humanitarian agencies. This has helped the MNOs to design and deliver relevant products and solutions that meet the needs of the humanitarian sector and build the business case for investment by MNOs in digital humanitarian assistance.

M4H has also worked to train and expand the coverage of mobile money agents, who are the backbone of the mobile money distribution channel and serve as ambassadors for MNOs. In Uganda, M4H is working with Alight (formerly known as ARC) to deliver remote humanitarian code of conduct and protection training via IVR to more than 95,000 mobile money agents. This training is especially critical for agents serving vulnerable populations such as refugees who may not be aware of mobile money regulations and customer rights.

M4H has also worked with the Grameen Foundation and MTN Uganda to establish a female and youth mobile money agent network in Bidi Bidi Settlement, Uganda – the second largest refugee camp in the world – to expand financial inclusion.

Finally, M4H has been working with CARE, FAO, Telesom and Golis in Somaliland and Puntland to deploy a voice identification technology that will help organisations verify that the intended recipients of mobile money-enabled CVA actually received the cash assistance. An initial pilot has enabled partners to reduce the operational costs of verifying their clients on the ground, so this approach is being scaled up.

"The partnership between the GSMA and WV Kenya has grown from the design of digital solutions for Village Savings and Loans Associations (VSLA) to projects exploring the use of innovative, community-driven partnerships to roll back the effects of climate change in Kenya. What I have found most exciting about working with the GSMA is their innovative approach to designing programs, their relentless pursuit of solutions that work, and their focus on putting people first. I look forward to continuing this partnership in 2022!"

Maina King'ori, Senior Manager, Disaster Management, World Vision Kenya

3. Growing the digital ecosystem and developing innovative new technology solutions

To reap the benefits of mobile technology, it is essential that users understand and have the skills to navigate mobile-enabled services. Working with Mercy Corps, UNHCR, the Canadian Technical Employment Network (CTEN), Alight, MTN and Airtel in Uganda and Rwanda, M4H has established "digital community centres" as convening points for refugees and host communities to access information and participate in vocational and digital skills training that can lead to employment.

In Kenya, in partnership with World Vision Kenya, Safaricom, Ushahidi, Kenya Flying Labs and Maji Milele, M4H has launched two climate resilience projects that showcase the various ways in which mobile technology can build climate resilience:

- Tana River Climate Change & Livelihoods Restoration Project (T-CLIRP); and

- Kenya Integrated Emergency Response Project (KIERP), which assists in the economic recovery of people affected by climate-related events through the market and mobile-enabled, multipurpose cash assistance interventions.

A variety of new mobile-enabled technology solutions are being deployed for these two projects. For example, M-Pesa for unconditional humanitarian cash transfers, smart meters for water charging (using M-Pesa), land degradation analysis and reseeding of vegetation using drone technology and community feedback using the Ushahidi platform.

The year ahead

In the coming year, M4H will continue creating high-impact partnerships, scaling and replicating existing projects, such as voice ID and digital financial literacy for women from Uganda to Eswatini, and exploring the growing number of ways mobile technology can be used to strengthen climate resilience in the context of complex emergencies.

Shaping and supporting digital humanitarian action

In 2021, the M4H programme strengthened the evidence base and tools needed to support MNOs and humanitarian organisations to deliver high-impact digital humanitarian assistance. These efforts informed and shaped the on-going digitisation of the humanitarian sector, with a focus on three key areas:

- **Influencing and engaging with industry, government and humanitarian stakeholders;**
- **Learning from M4H programme activities; and**
- **Developing practical tools and delivering training.**

Through its dedicated monitoring, evaluation and learning (MEL) activities, research and insights capacity, and its research, analysis and stakeholder engagement activities, M4H has gleaned significant lessons from its portfolio and used these to support the programme and wider sector.

Thought leadership, engagement and influence

M4H identifies priority topics where humanitarian action is grappling with the opportunities and challenges of digitisation. In 2021, the programme demonstrated thought leadership through research and external engagement on the COVID-19 pandemic and the climate crisis.
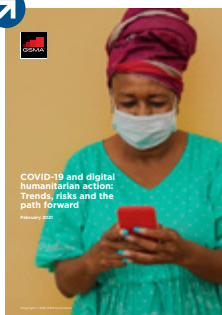
COVID-19 and digital humanitarian action: trends, risks and the path forward

In this report, M4H looked at how partners and grantees in the Innovation Fund portfolio shifted or maintained their services in humanitarian contexts during the COVID-19 pandemic and how MNOs engaged in this process. It also highlights key trends in digital programming that have emerged since the onset of COVID-19.

Through a blog series and event co-organised with the ODI Humanitarian Policy Group, the M4H team contributed reflections and analysis of the impact of COVID-19 on digital humanitarian action.
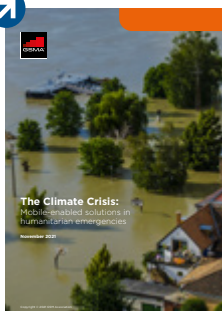
The climate crisis: mobile-enabled solutions in humanitarian emergencies

COP26 was a key global event in 2021, and M4H published a report analysing how its portfolio was aligned with humanitarian responses to the climate crisis. The report detailed various use cases that contributed to climate mitigation, adaptation and resilience, for example, clean energy, early warning of extreme weather events and mobile cash delivery and financial services.

Engaging and influencing industry, government and humanitarian actors

Beyond these specific topics, M4H lessons and expertise have informed engagement with the industry, government and humanitarian stakeholders. Through deeper engagement with key fora and partners, M4H extended its influence and contributed to the shift towards digital solutions.

M4H participated in workshops, conferences and key sector events in 2021, such as Nethope & RightsCon and partner events with ALNAP, the Danish Refugee Council, ITU, WFP, UNDP and UNHCR. The team engaged with academia in the UK and US, with think tanks such as ODI and IIED and with various networks, including CGAP, the CALP Network, Centre for Financial Inclusion, Financial Inclusion Forum, Smart Communities Coalition and the Dignified Storytelling Alliance. M4H has briefed Cash Working Groups in Ethiopia, Burkina Faso, Central African Republic, Burundi, Uganda and the Global Cash Working Group (GCWG). M4H also participated in a Digitharium Digital Dilemmas debate, "Connectivity as Aid", hosted by the ICRC.

M4H messaging was highlighted at GSMA flagship events MWC Barcelona and MWC Africa 2021. The programme hosted two sessions at MWC Barcelona as part of the Ministerial Programme, which aimed to explore the critical convergence of humanitarian assistance and mobile technology, and the power of public-private partnerships in addressing humanitarian needs. Alight, an M4H Innovation Fund grantee, joined a virtual panel discussion at MWC Africa, which explored how the mobile industry, development organisations and local innovators can unite in the pursuit of a resilient Africa where communities not only survive climate shocks and stresses, but thrive in spite of them.

M4H also worked to support, inform and influence government policymakers in humanitarian contexts, for example, by increasing access to SIM cards for refugees, as detailed below.

Learning from and informing the M4H portfolio

Building a sustainable digital ecosystem is crucial for mobile-enabled services to deliver humanitarian assistance. Strategic partnerships between humanitarian organisations and MNOs can create real opportunities to accelerate the development of digital ecosystems and deliver digital humanitarian assistance more effectively. Breakdowns in these partnerships are often the result of misunderstandings that can lead to different expectations and the partnership not living up to its potential.

M4H has two main approaches to facilitating partnerships between MNOs and humanitarian organisations:

- The Strategic Partnerships team catalyses partnerships between MNOs and humanitarian organisations by providing technical advisory support; *and*

- The GSMA Mobile for Humanitarian Innovation Fund catalyses partnerships by providing financial and technical support for mobile-enabled innovations.

These two partnership models provide an opportunity to identify, share and better understand the potential for digital and mobile-enabled solutions in humanitarian contexts. In 2021, the M4H research and monitoring teams digested and synthesised lessons from more than 23 projects in the grantee, advocacy and partnership portfolio, and tracked the progress and impact of every aspect of the M4H programme, including through ecosystem reviews (see Box 2). M4H also supported its partners to build their own capacity in MEL.

Box 2

The contribution of M4H to the humanitarian innovation ecosystem

To understand the impact of the M4H programme at the country level and assess its influence on specific humanitarian innovation ecosystems, the M4H team conducts regular ecosystem reviews. Team members from across M4H workstreams participate in externally facilitated sessions to discuss recent ecosystem changes and the potential contribution of the programme.

The Research People, M4H's MEL partner, recently synthesised and analysed reviews that had been conducted for Jordan, Kenya, Pakistan, Rwanda, Somalia/Somaliland and Uganda. While the results and impact differ by country, the report highlighted four key areas in which M4H is making significant contributions across the portfolio:

1. Identifying and responding to evidence gaps in mobile-enabled innovation;

2. Acting as a cross-sectoral relationship builder, convening and facilitating partnerships between MNOs, the private sector and humanitarian NGOs;

3. Developing guidelines, frameworks and training for MNOs, NGOs and government; and

4. Engaging with communication regulators and government officials to advocate for a more enabling environment.

The review provided a top-level overview of the progress and impact of M4H on each humanitarian innovation ecosystem, as well as an understanding of its wider influence across the portfolio. It also explored the shared challenges and issues facing humanitarian innovation, highlighting common barriers where more systemic change is needed. Together, these insights can be used to identify strategies, approaches and resources that might be useful in the different workstream areas in each country.

Lessons from the M4H portfolio have demonstrated that strategic long-term thinking is needed to build a digital ecosystem that works for everyone. It takes collaboration to address systemic barriers and develop solutions that not only serve the humanitarian sector, but also tackle broader development and societal challenges.

Lessons from the M4H Innovation Fund portfolio

Throughout 2019 and 2020, five mobile-enabled solutions were implemented as part of the inaugural round of the M4H Innovation Fund. These solutions aimed to strengthen the resilience of communities experiencing, or at risk of, crisis. A detailed systematic review of all evidence and documentation generated across the portfolio produced seven overarching lessons for innovators. These lessons fall under three broad, interconnected themes – users and context, partnerships and operating models – and highlighted the importance of end user participation, context and aligning stakeholder expectations.

By looking at the implementation and impact of each solution, the M4H team created case studies that detailed successes and identified key considerations for the future. The collective lessons of these interventions have also been used to guide other innovators in implementing early-stage innovations that leverage the power of mobile technology.

Lessons from the M4H Strategic Partnerships portfolio

The M4H Strategic Partnerships team acts as an intermediary between MNOs, other digital service providers and the humanitarian community, to find sustainable and potentially scalable solutions to the challenges of delivering digital humanitarian assistance. Through a systematic review of the Strategic Partnerships portfolio (that included more than 150 pieces of evidence, 12 in-depth interviews and a workshop), the team identified the building blocks necessary to create and strengthen a digital ecosystem that benefits all stakeholders involved in the preparedness, response and recovery stages of humanitarian assistance.

In addition to the three overarching elements mentioned above – developing strategic partnerships, shaping an enabling environment and building an ecosystem with users – M4H has identified four actionable recommendations to help humanitarian organisations, policymakers, MNOs and other key stakeholders build successful partnerships:

1. Identify shared value and structure partnerships that are beneficial for everyone.

2. Ensure that both partners agree on what they are accountable for and are clear and honest about the details of the project.

3. Eliminating jargon and sector-specific acronyms will make working relationships easier.

4. The strongest partnerships are those that are developed over time.

"Our collaboration on the GSMA's CoNUA Toolkit has been, from beginning to end, a fantastic experience and a great example of innovation in the humanitarian sector. The Toolkit is freely accessible to humanitarians to support their decision making with ground-level evidence. It is easy to contextualise, available in multiple languages, and invites the user to customize it to their project. What is most impressive, however, is the GSMA's ongoing commitment to support the Toolkit, where humanitarians without the technical assessment know-how can count on guidance through the process. We look forward to continuing our partnership with the GSMA in 2022 and beyond."

Lukasz Kruk, REACH

Toolkits and training

The practical toolkits and training that M4H has developed provide operational guidance and accessible tools to enable practitioners and policymakers to address common challenges with the use of digital technology in humanitarian action. In 2021, this focused on assessing connectivity in humanitarian contexts, digitising cash transfers and creating an enabling policy environment to roll out digital approaches effectively (detailed in the next section).

Assessing humanitarian connectivity needs and usage: CONUA toolkit

M4H recognised that in order to scale up the digitisation of humanitarian assistance, better data would be needed on how people in humanitarian contexts access mobile technology. M4H launched and piloted the beta version of the Humanitarian Connectivity Needs and Usage Assessment (CONUA) toolkit in partnership with REACH and with the support of the ETC.

This toolkit helps to expand the evidence base on digital access and needs by providing open source and adaptable tools that humanitarian organisations can use to collect standardised data in any humanitarian context. In 2021, CONUA was trialled in Niger, Sudan and Uganda, and other contexts are under discussion. Based on positive feedback, the toolkit will be revised and translated into multiple languages in 2022 to scale up use.

To better understand the opportunities of, and barriers to, scaling up inclusive digital assistance, M4H launched research in 2021 into how people in humanitarian crises use their mobile phones. Qualitative and quantitative research in 2022 will produce insights from Lebanon, Papua New Guinea and South Sudan.

Scaling up digital cash transfers

As mobile money continues to be deployed in humanitarian contexts as an efficient and dignified means of distributing assistance, M4H has developed practical guidance for MNOs and humanitarian agencies to roll it out effectively and appropriately. This included an online version of the GSMA Mobile Money handbooks and specific guidance for Somalia and Ethiopia on enhancing performance.

Mobile money course:

In 2021, M4H launched two free online training courses to help mobile money providers and humanitarian practitioners understand key considerations in operationalising mobile money-enabled CVA. These courses are based on existing M4H handbooks.

Guidelines for humanitarian cash transfers in Somalia and Ethiopia

In partnership with the Somalia Cash Working Group, M4H commissioned a study on cash transfers in South-Central, Puntland and Somaliland regions to enhance the performance of the humanitarian mobile money sector. M4H contributed to the development of process maps that implementing partners should consider.

M4H also produced a report in partnership with the Collaborative Cash Delivery (CCD) Network in Ethiopia, which explores the context and capability of the mobile money ecosystem to help humanitarian and development actors assess the feasibility of deploying mobile money for CVA programming.

"What an exciting training. I live to implement mobile money by partnering with MNOs and be the builder of the digital ecosystem in my country."

"This is a great course. It promises to deepen my knowledge in humanitarian practice especially in cash and voucher programming."
Mobile money course participants

The year ahead

In 2022, M4H will focus on taking stock of lessons learned, synthesising key findings and refining the strategic direction of the programme.

The programme will also deepen engagement in the areas of connectivity, digital risks, the ethical use of digital approaches and inclusion in digital technology.

"Grameen Foundation has been working closely with the GSMA Mobile for Humanitarian Programme for the past few years on our Refugee Finance programme. M4H's support has been invaluable both as a technical support partner brainstorming solutions and ideas to reach refugee clients, and as a convenor of networks. M4H has helped us establish durable relationships with mobile network operators and other private sector actors, and they helped us convene a broad cross-section of the NGO, private sector and government community for our initial market analysis workshop, assessing the barriers that people in refugee settlements face to accessing financial services and cash transfers in refugee settlements. Now, as our Refugee Finance programming has grown and matured, the GSMA has provided wonderful evaluation and research support to help us evaluate the impact of our work establishing Women and Youth DFS Agents and training refugees in digital financial literacy. I really appreciate how available and collaborative the GSMA team is, and look forward to continuing to collaborate and grow together in the next few years!"

Bindi Jhaveri, Senior Technical Advisor, Financial Services, Grameen Foundation

Promoting an enabling policy environment

M4H's advocacy work in 2021 promoted a more enabling policy environment that supports the delivery and increases the impact of digital humanitarian assistance by:

- **Researching policy barriers facing M4H partners;**

- **Developing and disseminating relevant advocacy messages and policy positions; and**

- **Building the capacity of policymakers and regulators in selected countries.**

Policy research, positions and recommendations

Increasingly, humanitarian organisations, the private sector and governments are working together to mitigate risks, strengthen disaster preparedness and provide logistical assistance in response to humanitarian crises. The mobile industry has become critical to the success of these efforts. In 2021, M4H published "National Emergency Telecommunications Plans: Enablers and Safeguards – A brief evaluation guide for policy practitioners", which provides a policy framework to guide the use of mobile in disaster risk management with step-by-step actions in each phase of the disaster management cycle.

In addition, M4H convened and brokered partnerships with government stakeholders, including Kenya's telco regulator, the Communications Authority and Financial Reporting Centre, to address the policy barriers encountered by the Kenya Red Cross Society while piloting DigID, part of its 121 cash assistance project that relied on digital identities to ensure the most marginalised are included. Persons of concern (PoC) are often left out of humanitarian assistance programmes because they do not meet the Know Your Customer (KYC) requirements to access financial services. The resulting relaxation of KYC requirements was a public policy position worth replicating in similar contexts, and M4H will document the experience and policy perspectives of the initiative in a case study.

Federal Government of Somalia

"Over the past year, the GSMA has contributed to the National Emergency Telecommunication Plan for the Federal Government of Somalia. The National Communications Authority were very pleased for the comments and input that the GSMA has provided on the National Telecommunications Plan which was the first of its kind in Somalia to enable and ensure communications availability during mitigation, preparedness, response, and recovery phases of disaster management. The GSMA input helped us achieve better coordination across all levels of stakeholders in responding to the disasters, as well as vulnerability analysis of the critical telecom/ICT infrastructure and leveraging mobile to provide alerts to citizens. We look forward to collaborating with the GSMA."

Eng. Liban Abdulkarim, Director, Licensing, Compliance and Standards, National Communications Authority of the Federal Government of Somalia

Local, regional and global advocacy

M4H works with government regulators and policymakers to develop more enabling operating environments. For example, in 2021, M4H engaged with Cape Verde's telecommunications regulator, the National Communications Agency, and contributed to a review of the country's draft SIM Registration and Activation Regulations, 2021, which aim to strike a proportionate balance between the special demands in crisis situations, such as the COVID-19 pandemic, and those of vulnerable populations, such as internally displaced people (IDPs) and asylum seekers. M4H also worked with the United Nations International Telecommunication Union's (ITU) Division of Emergency Telecommunications to review the draft National Emergency Telecommunications Plan of the Federal Government of Somalia, which has since obtained approval from cabinet.

The programme also continues to disseminate insights and share best practice in policy at global exhibitions and conferences. M4H participated in Identity Week Asia 2021 to share insights, promote collaborations and offer policy recommendations in support of humanitarian IDs for consideration by governments and national authorities. The panel focused on the integration of humanitarian IDs with host state civil registries to enhance digital financial inclusion and unlock opportunities for refugees. M4H also participated in the Smart Communities Coalition (SCC) 2021 Annual Meeting and shared its experiences with regulatory change in Uganda and the effects on the mobile money ecosystem for refugees. Over 141 participants from 57 SCC member organisations attended.

In addition, the IFRC organised a Dignified Identities in Cash Assistance (DIGID) webinar in which M4H Advocacy participated on a panel themed "Humanitarian Digital Identities: Data Protection, Perceptions of Communities and Implementation in Low Connectivity Areas". M4H shed light on the opportunities and aspirations for mobile-enabled digital IDs and the need to develop a supportive digital identities policy framework. The seminar explored new policy thinking and more effective mobile-enabled identity solutions for vulnerable populations.

Working with MNO members in Uganda, M4H is exploring joint advocacy models with UNCDF, the World Food Programme, Grameen Foundation and UNHCR to engage with the Bank of Uganda on new guidance notes on National Payment Systems, 2021. This engagement would be aimed at seeking clarity in policy and removing the regulatory obstacles facing refugees that want to register as mobile money agents in the settlements. M4H is also working with U-Learn, an FCDO-funded consortium of the Response Innovation Lab and IRC, to identify joint advocacy opportunities to build trust in the mobile ecosystem and increase uptake of digital and financial inclusion services, with a view to provide dedicated support to the Uganda refugee response community.

Building the capacity of policymakers, regulators and governments

M4H delivered its capacity building course,
"Responding to Disasters and Humanitarian Crisis" to two cohorts in 2021, training 115 policymakers from 19 countries that included Bangladesh, Ghana, India, Kenya, Nigeria, Philippines and South Africa. The programme also updated its capacity building course to reflect new insights and trends in the use of mobile in humanitarian contexts. The new course, "The Role of Mobile in Humanitarian Action", was delivered to more than 20 policymakers from the Government of Somaliland. As a follow up, Somaliland's Ministry of Information, Communications and Technology has requested M4H to support the drafting of the country's first national emergency telecommunications policy framework.

The year ahead

In the coming year, M4H plans to work more closely with national and intergovernmental authorities, continue to build their capacities in selected markets, create tools and provide advice to help partners identify regulatory barriers that may negatively impact their ability to launch, market or scale service offerings in the humanitarian space**.**

Looking to the future:
the role of M4H in the changing landscape of humanitarian action and digital technology

In 2021, the work of M4H highlighted the key role the GSMA can play in connecting the mobile industry to the humanitarian system, in practical and responsible ways, to better respond to humanitarian crises. As the landscape of humanitarian action evolves, M4H is continually assessing how to reflect these developments in programming and engagement with the sector. As M4H deepens its partnerships with industry, governments and humanitarian actors, it continues to explore how to best support and influence the evolution and growth of digital ecosystems.

M4H has identified five key trends in digital humanitarian action that can be addressed through mobile-enabled digital assistance:

1. Increased demand for humanitarian cash and voucher assistance

With continued growth in CVA, much remains to be done to shift operations, where appropriate, to deliver dignified digital humanitarian assistance at scale. The shift to the use of mobile-enabled CVA in humanitarian contexts is anchored by a global body of evidence on the benefits of CVA in supporting local economies, increasing the transparency, accountability and efficiency of interventions and, most importantly, enabling clients to make their own decisions based on household need and priorities. A fully functioning digital ecosystem can strengthen the resilience of recipients, including financial resilience when they have access to mobile money, and enhance digital inclusion.

2. Increased frequency and intensity of natural hazard disasters

Climate-related disasters are estimated to double the number of people requiring humanitarian assistance by 2050. The role of mobile-enabled services is a lifeline for disaster-affected communities. The proven operating models and business case for mobile operators (revenue, reputation, competition and influence) puts the GSMA in a unique position to respond to slow and sudden onset disasters.

3. Increasing number of forcibly displaced people

Displaced communities often live without the connectivity and mobile-enabled services that can be lifesaving and lifechanging. The M4H programme, with its experience in quantifying the digital gender and disability gap among refugees and host communities, enabling positive regulatory environments and providing access to essential services, is positioned to address the humanitarian needs of FDPs at scale.

4. Increasing global hunger

Digital solutions through mobile-enabled technology can help tackle the growing humanitarian challenge of food insecurity. Investing in, and building the resilience of, rural communities reduces the risk of food insecurity, and mobile network data can provide localised, granular and accurate data on weather and early warning information, as well as services that support climate-smart agriculture. MNOs working in food-insecure environments are increasingly collaborating with M4H to tackle humanitarian challenges.

5. A climate crisis underway

Digital and mobile-enabled services have a key role to play in addressing the climate crisis. Not only can they help vulnerable communities prepare for and become more resilient to climate risks, but they can also support humanitarian organisations to deliver aid more efficiently and anticipate their response. Climate change impacts the entire humanitarian landscape and, as such, will be an increasingly important cross-cutting and mainstream issue for M4H moving forward.

Over the course of 2021, these trends shaped the sector and how the M4H team thinks about adding value and shaping the future of digital humanitarian action in 2022 and beyond.

There are three core principles that M4H considers critical to all its activities:

1. Digital ethics and data protection

With the acceleration of digitisation, the potential risks to end users of digital assistance are becoming more evident, particularly among vulnerable populations in humanitarian crises. M4H is uniquely positioned to collect evidence and promote best practice and ethical decision-making through public-private partnerships in humanitarian action.

2. Inclusive and dignified aid

M4H advocates for inclusive methods when working with marginalised populations that face intersecting barriers, and is increasingly asked to share evidence and recommendations. Partnerships, research and policy can reduce and prevent exposure to protection risks and help ensure that digitisation does not lead to or perpetuate discrimination, abuse or violence. The programme will work with MNOs and humanitarian partners to foster inclusive and dignified humanitarian action across its portfolio.

3. Localised and accountable assistance

The M4H programme will continue to promote digital humanitarian assistance as a tool that puts power in the hands of communities affected by humanitarian crises. By engaging users as partners when crafting new programming, MNOs and humanitarian organisations will better understand the barriers to inclusion and address them appropriately.
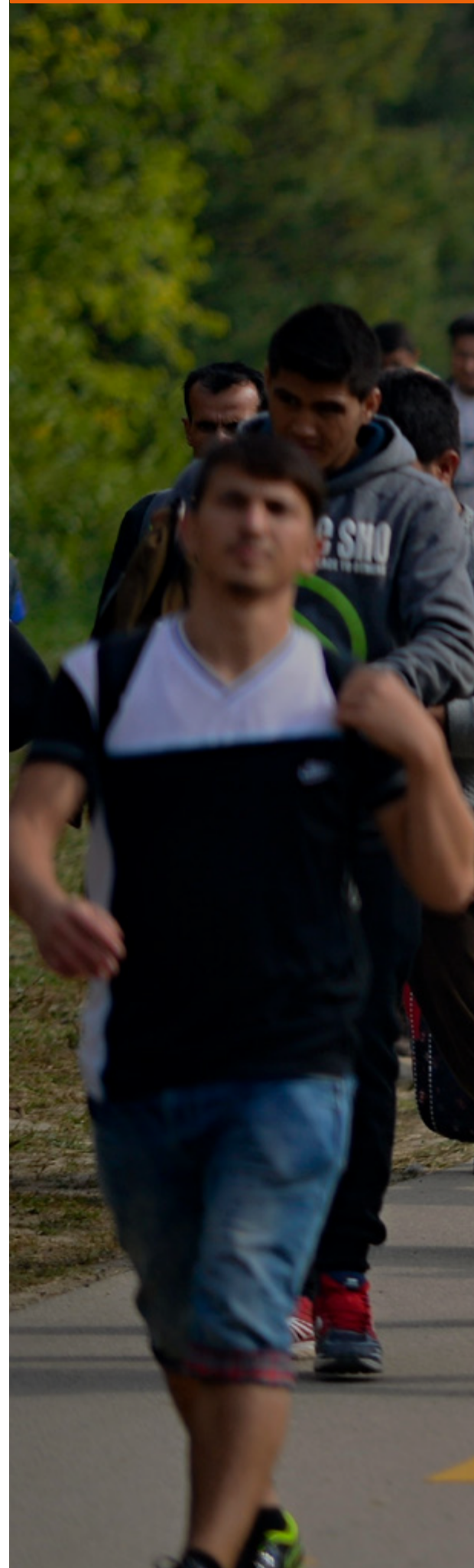
These trends and principles underpin the M4H programme's pursuit of a dignified digital ecosystem in humanitarian contexts. Armed with the lessons from its partnerships and projects in 2021, M4H will work to magnify its impact and extend its influence in 2022 and beyond.

The M4H programme welcomes the opportunity to connect with new stakeholders and deepen existing relationships.

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For more information, please visit the
GSMA website at www.gsma.com