

MOBILIZING DEVELOPMENT

The UN Foundation and Vodafone Foundation Technology Partnership

social

success

health

outreach

advocacy

impact

partnerships



**Vodafone
Foundation**



**UNITED NATIONS
FOUNDATION**

About the United Nations Foundation

The United Nations Foundation, a public charity, was created in 1998 with entrepreneur and philanthropist Ted Turner's historic \$1 billion gift to support UN causes and activities. We build and implement public-private partnerships to address the world's most pressing problems and work to broaden support for the UN through advocacy and public outreach. Through our campaigns and partnerships, we connect people, ideas, and resources to help the UN solve global problems. These campaigns focus on reducing child mortality, empowering women and girls, creating a new energy future, securing peace and human rights, and promoting technology innovation to improve health outcomes. These solutions are helping the UN advance the eight global targets known as the Millennium Development Goals (MDGs). For more information, visit www.unfoundation.org.

About the Vodafone Foundation

The Vodafone Foundation invests in the communities in which Vodafone operates and is at the centre of a network of global and local social investment programmes.

Globally, the Foundation makes social investments by funding projects which support disaster relief and preparedness including our Red Alert Programme, through projects which use mobile technology for the benefit of all, and via our unique World of Difference programme.

In countries in which Vodafone operates, social investment is delivered by a unique footprint of 27 Vodafone Foundations and social investment programmes. These programmes are directed and chosen by the Foundation Trustees and receive funding from the Vodafone Foundation in the UK as well as their local Vodafone company.

The Vodafone Foundation received recognition as registered charity number 1089625 from the Charity Commission for England and Wales on 4 December 2001.

About the United Nations Foundation and Vodafone Foundation Technology Partnership

The United Nations Foundation and Vodafone Foundation Technology Partnership was created in 2005 to leverage mobile technology programs to support and

strengthen UN global health and disaster relief work. Its core areas of focus are to: (1) strengthen communications in humanitarian emergencies through capacity building and support for disaster response missions that connect aid workers and the affected community; (2) support the development of mobile health (mHealth) programs that tackle critical public health challenges and improve public health systems, decision-making, and, ultimately, patient outcomes; and (3) promote research and innovation using technology as a tool for international development. The UN Foundation and Vodafone Foundation are founding partners of the mHealth Alliance. www.unfoundation.org/vodafone

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The Value of Private Sector Partnerships with the United Nations by Muhammad Yunus

Worldwide we've seen that small loans can catalyze big change. "Micro-credit" loans to the poor are helping to lift communities out of poverty around the globe, and these programs are getting a big boost with the growing reach of mobile phones.

I believe that today all companies have a responsibility not only to their shareholders, but to the societies they serve. Indeed, developing sustainable practices – such as giving back to local communities and to employees, partners, stakeholders, and the environment – is essential to the long-term success of any corporation. This not only because it is fair, but also because doing so creates stronger societies, which are in turn good for business.

The United Nations is one of the best vehicles to catalyze private sector investments in what we may call social good. As Secretary-General Ban Ki-moon noted in a report by the UN Global Compact Office, the UN's development work "can be viewed as seeking to create the ideal enabling environment within which business can thrive."

In the last decade the UN has made great strides in expanding its capacity to collaborate with partners, starting September 18, 1997, when Ted Turner shocked attendees at the annual dinner of the United Nations Association of the USA by declaring that he was donating one billion dollars to UN causes.

No one had ever made such a gift, and at that time the UN was not even equipped to receive it. In order to administer his gift, Turner set up the United Nations Foundation, a U.S.-based public charity. Simultaneously, UN Secretary-General Kofi Annan created the UN Fund for International Partnerships, paving the way for business to engage with the UN. As a member of the UN Foundation's Board of Directors, I believe in Turner's vision and in the power of marrying private sector expertise with the breadth and reach of the UN's work worldwide.

As a technologist and an entrepreneur, I can attest to the potential of technology to transform communities and, indeed, entire societies. The UN Foundation partnership with the Vodafone Foundation is a striking example of how a successful collaboration can integrate a world-class technology company with UN humanitarian work.

As the largest, and one of the earliest, public-private partnerships connecting the wireless industry with UN humanitarian work, the Technology Partnership spurred innovation within the UN system and showed the private sector how the use of wireless tools for development purposes supports the business of doing good while doing well. It is a model from which both the humanitarian and business communities would benefit, and which I hope will inspire many new business partnerships with the UN in the decades to come.

PROFESSOR MUHAMMAD YUNUS

Founder, Grameen Bank, Nobel Peace Prize Laureate 2006



Foreword by Ted Turner

In 2005 we embarked upon a remarkable journey, launching a first-of-its-kind partnership connecting the world's leading development and humanitarian organization with one of the world's largest mobile operators through the United Nations Foundation and Vodafone Foundation Technology Partnership. It was a meeting of minds, brands and ideas. And it seeded game-changing innovation that continues to reverberate in the two disparate communities, one public sector and one private, which our Partnership united.

We commissioned this final report in our Access to Communications publication series to share this experience, as we believe it is one worth repeating. In addition to highlighting our successes – both those we planned and those we came about unexpectedly – we also wish to share where there are lessons learned. We believe this balanced look at one of the largest public-private partnerships between a technology group and the UN will help set the stage for further collaboration, learning and innovation.

We are grateful to the diverse individuals and communities who joined us on this journey, and who shaped the inputs and outcomes of this remarkable experience. This includes the leadership and staff at the UN agencies, governments, non-profits, social enterprises and universities with whom we partnered; the consultants and monitoring and evaluation groups who helped us ensure our work was measured and strategic; the UN Foundation & Vodafone Foundation Technology Partnership Advisory Committee and staff; and, last but not least, the communities who participated in our programs in the field.

Indeed, it is the communities we aimed to serve who ultimately will show us how best to harness the power of technology to strengthen humanitarian and development work. This has been the mission of our Partnership, but increasingly is a shared mission as the spread of mobile technology enables communities to voice their own needs and become change agents in creating a healthier and more sustainable future.

Sincerely,

TED TURNER

Chairman, UN Foundation

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Foundation

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EXECUTIVE SUMMARY



TIMELINE:
Milestones in the evolution
of the UN approach to
private sector collaboration

TED TURNER'S US \$1 BILLION
DONATION to support of the UN's
causes and activities as well as
creation of the United Nations
Foundation

"TOWARDS GLOBAL PART-
NERSHIPS" PLACED ON
AGENDA OF THE 50TH UN
GENERAL ASSEMBLY and
considered every two years
thereafter

MILLENNIUM DECLARATION

1998

2000

2001

2002

Launch of the UN GLOBAL
COMPACT INITIATIVE

MONTERREY CONSENSUS ON
FINANCING FOR DEVELOP-
MENT

FIRST GUIDELINES ON COOPERA-
TION BETWEEN THE UN AND THE
BUSINESS SECTOR

EARTH SUMMIT JOHANNES-
BURG (Johannesburg Plan or
Implementation)

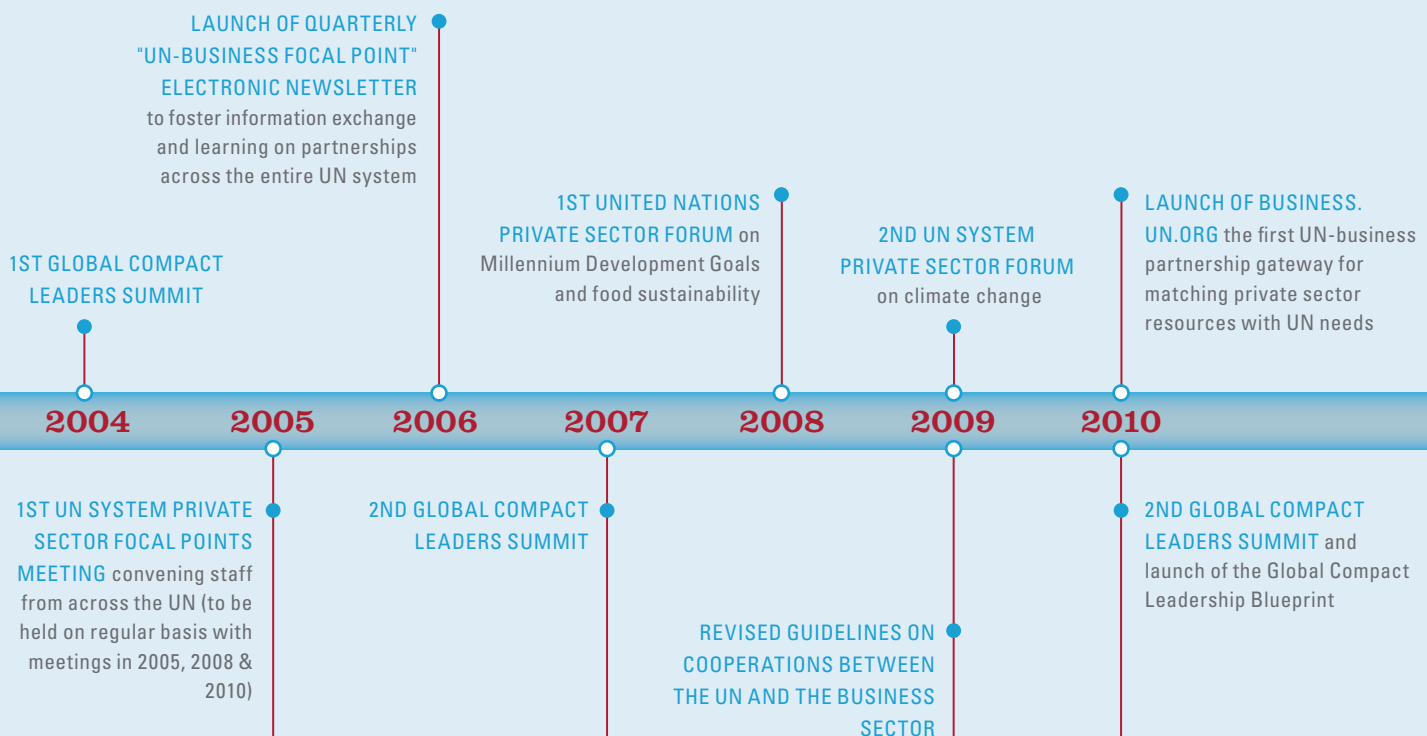
The five-year Technology Partnership between the UN Foundation and the Vodafone Foundation is the product of two profound awakenings. Each is remarkable in its own right, and together they are changing the world.

The first awakening came with the gradual recognition that private enterprises and public sector organizations need not stand in opposition, as had been the prevailing ethic for decades; they could work together, harnessing each other's respective strengths for mutual gain. As the 21st century opened, a flurry of new collaborations saw the UN and private sector companies meet gingerly across the aisle, seeking the best way to marry the rigor and creativity of the marketplace with the legitimacy, inclusiveness, and longer-term perspective of public institutions.

The second awakening came with the global spread of accessible, interconnected, and mobile communications, a phenomenon that began in the 1990s and took off at a speed that exceeded even the most optimistic predictions. The full impact and spillover effects of this radical shift in human connectivity are still being assessed. What is clear is that increased access to communications has a remarkable enabling power.

The UN Foundation and Vodafone Foundation Technology Partnership was one of the first, most high profile, and globally-oriented marriages between private enterprise and the public sector: a merging of two global but disparate brands through an unprecedented experiment that aligned the work of the UN with one of the world's leading mobile operators.

By aligning the private sector and public institutions, the Technology Partnership offers a compelling demonstration of the potential for mobile technology to be used for social good. The partners leveraged their combined expertise and reach to spot trends in the use of technology to meet humanitarian and development needs and charted a course that has connected technologists and humanitarians in novel and lasting ways.



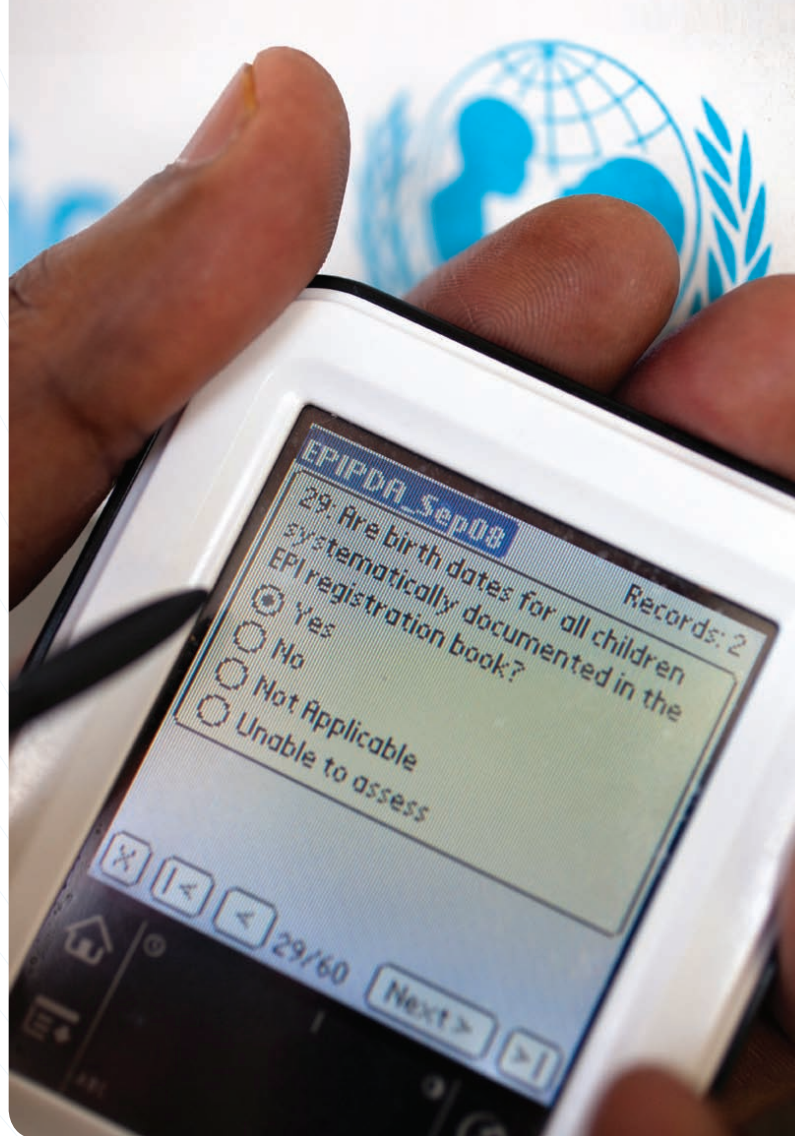
This report charts five years of analyzing how best to combine private and public resources to strengthen humanitarian and development work. The showcase highlights advances in communications during humanitarian crises and the use of mobile communications to meet health needs. It also looks at lessons learned, many of which can apply to other initiatives.

In so doing, it hopes to appeal to multiple audiences. One is the UN and its many agencies: What lessons can be drawn for future partnerships? What best practices can be applied for future collaboration with the private sector?

Another is large corporations seeking to enter the field. What did the Technology Partnership learn in how best to leverage resources and expertise to advance both the common good and the bottom line?

A third audience is smaller scale entrepreneurs, whether nimble non-governmental organizations looking to align their flexibility with the UN's scale and reach or creative social enterprises looking to sync their innovations and long-term commercial ambitions with the work of a large public institution.

And a fourth audience is the donor community: governments, foundations, and private individuals. What is the best way to identify and fund partnership projects, how should one build in effective monitoring, scale, and sustainability, that overused yet under-applied concept?



CREDIT: David Evans

CHAPTER 1: PRIVATE ENTERPRISE, PUBLIC RESPONSIBILITY

explores the landscape of UN-private sector partnerships and why today's communications revolution offers such extraordinary opportunities while acknowledging that technology should not be seen as an end in itself but rather as an enabling tool within an increasingly complex social, political, and economic environment.

CHAPTER 2: THE UN FOUNDATION & VODAFONE TECHNOLOGY PARTNERSHIP - A MEETING OF BRANDS

dives into the creation of the UN Foundation and Vodafone Foundation Technology Partnership itself: how a chance meeting at the right time led to a bold leap of faith, later transforming into a working organization with projects, strategic priorities, and a sense of future as the 5-year partnership comes to an end.



CREDIT: Josh Nesbit

CHAPTER 3: PARTNERSHIP PROGRAMS AND IMPACT & CHAPTER 4: COMMUNICATING IN EMERGENCIES

drill down into the partnership's field based projects, divided into two major areas: mobile health (or mHealth) solutions and emergency communications.

CHAPTER 5: THOUGHT LEADERSHIP

examines the 'thought leadership' aspirations of the Technology Partnership. From the outset, both partners were clear that a crucial part of their work would be not only demonstration by example but the creation, care of, and dissemination of cutting edge research, analysis, and recommendations for a diverse audience of stakeholders engaged in the use of technology for development.

CHAPTER 6: LASTING LEGACY

explores whether and how the Technology Partnership introduced a degree of private sector rigor into the search for two major goals of modern development thinking: scale and sustainability.

CHAPTER 7: CONCLUSIONS

considers themes that throughout the experience of the five year Technology Partnership, focusing on best practices and lessons learned that can serve other public private partnerships well.

About This Report

This report takes a journalistic rather than an academic approach. It aims to pique interest, provoke debate, and explore the ideas that emerged from a groundbreaking relationship. It also hopes both to accentuate the Technology Partnership's many positive results while providing a sense of self-reflection that might benefit other potential partnerships.

Over half a decade of experimentation, the Technology Partnership encountered many challenges and saw a variety of outcomes – some successful, others less so. Some of those outcomes might have been improved by different design, but many were also an unavoidable consequence of a complex world of many players and the fast rate of technological change.

What emerges clearly, however, is a moment of extraordinary and continued opportunity in which both the humanism of the UN and the action-oriented culture of the private sector will be essential. The potential of this cross-sector collaboration is demonstrated by the work of the UN Foundation and Vodafone Foundation. Public-private alliances of this kind require sacrifice and hard work but promise a significant boost to global efforts to improve human wellbeing.

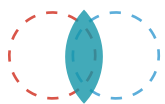
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Foundation

UN Foundation

core competencies

personnel

CHAPTER 1



economic

PRIVATE ENTERPRISE, PUBLIC RESPONSIBILITY

social

political

This chapter explores the landscape of UN-private sector partnerships, and why today's communications revolution offers such extraordinary opportunities, while acknowledging that technology should not be seen as an end in itself but, rather, as an enabling tool within an increasingly complex social, political, and economic environment. It charts the evolution in approach: away from pure philanthropy based on companies providing funds and direction, to a deeper melding of core competencies and personnel. It looks at one of the most important lessons of the past decade – that partnerships require constant, dedicated management – and at the emerging concept of the public-private incubator, whereby a partnership can offer a space for innovators to start-up and experiment, while at the same time maintaining a clear eye on the long-term plan. Finally, it examines current thinking on moving beyond the bilateral relationships of public-private partnerships to issue networks comprising many players creating a center of gravity for research, best practice, and advocacy.

A Mobile Communications Revolution Changes the Landscape

Dr. Joel Selanikio looked over the shoulder of Bernard Wambu as he booted up his laptop. They were in the field in Kenya using the mobile phone application EpiSurveyor to report on and monitor the results of nationwide, twice-yearly children's health campaigns run by the Ministry of Health and UNICEF.

Dr. Selanikio, the co-creator of EpiSurveyor, beamed with pride as he showed Mr. Wambu the data streaming into a central website – data Mr. Wambu and others at clinic sites across the country were inputting through a Nokia 6300 handset, a simple and mobile phone already in use by Health Ministry workers. This 2009 campaign marked the first time cell phones had been used in Kenya to collect health data nationwide. (Previous pilots had used PDAs, or personal digital assistants, which, while mobile, were expensive, UN Foundation and unfamiliar to many health workers and thus more difficult to use, and not online.)

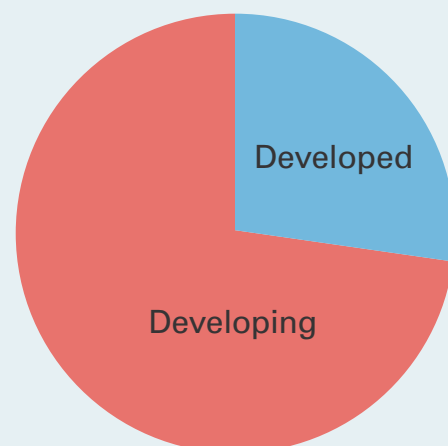
"At this point I am like a proud parent," said Dr. Selanikio, "and I said: 'Bernard, what do you think of this?' But he's not even responding; he's looking with alarm at the data on the screen.

"He said: 'I don't see any data from one province. Give me just a minute,' and picks up his phone. It turns out that Bernard is not just the data collector; he is the supervisor on a national level for this particular piece of the data collection activity.

"Mr. Wambu called the team leader in this area. "What are you doing this morning? ... Aha. ... Well, you can't be collecting data because I would see you collecting data on the website. Well, see that you do."

Dr. Selanikio was thrilled at the exchange. "Think about what this would have been with [the old] paper process. Neither Bernard nor anyone else would have seen the data from this province for weeks. In fact, the data wouldn't have been entered for them to look at and catch the fact that [a key official] decided to take the day off."

2010 mobile cellular subscriptions, by level of development



Total 5.3 billion

SOURCE: ITU

“I actually think that we've turned the corner on the digital divide – not that it's closed but that a gap that seemed to be widening pretty relentlessly is now going to be narrowing in the coming years, and I think narrowing quite quickly. We'll find that it's in business, it's in emergency services, it's in public education, it's in primary health-care, banking, distance learning, scientific communications, entertainment and all the rest, and this will make a very big difference.” –JEFFREY SACHS, Director of Columbia University's Earth Institute³

A revolution in mobile communications has swept the developing world allowing creative, private sector actors to team with UN humanitarian and development programs work with private sector and in-country officials to put powerful new tools in the hands of aid workers and the people they seek to help. The success Dr. Selanikio witnessed in Kenya is just one example of what the UN Foundation and Vodafone Foundation Technology Partnership has sought to foster wherever the UN is at work.



CREDIT: DataDyne

The explosion in mobile telephony

Over the past ten years, the developing world has not only caught up with but overtaken the developed world in the number of mobile telephone users.

According to the ITU, 2011 opened with an estimated 5.3 billion mobile subscriptions worldwide, over 3.5 billion of which were in low- and middle-income countries. Mo-

mobile markets are growing fastest in the developing world, which increased its share from 53% of total mobile subscriptions at the end of 2005 to 73% at the end of 2010. Close to 90% of the world's population now has access to a mobile signal, including 80% of people in rural areas. By the end of 2010 nearly 70% of the population in the developing world had access to a mobile phone.¹

New opportunities

“One of the most transformative aspects of the mobile communications revolution is that it puts individuals at the heart of humanitarian aid and development work,” says Adele Waugaman, Senior Director of the Technology Partnership. “Today many citizens, among them some of the most vulnerable, are able to voice their needs directly. This will fundamentally reshape the way we think about humanitarian and development work.”

With this development has come extraordinary opportunity. A decade ago a major concern among international development policymakers was the information divide; it was said that the African continent had fewer telephone connections than the island of Manhattan. Today's challenge is how to make use of an explosion in connectivity, help reduce poverty, improve economic and political rights, and empower the world's poor.

Putting real-time data to use

To a growing extent, we now have the tools for mobile communications anywhere in the world. The challenge is to continue this trend in order to ensure access for all.² As access to phones and networks has increased, so have mobile applications, allowing us to collect and distribute information as never before.

The quantity of data travelling around the planet is increasing at breakneck speed: The Cisco Global Mobile Data

“Much like the creation of CNN and the 24-hour news cycle forever changed how the news is reported, the mobile phone has revolutionized how, when, and where we communicate with one another. With the growth of broadband and the convergence of telecommunications, computing, and multimedia, this revolution will only intensify.” –TED TURNER AND VITTORIO COLAO⁴

public

private



CREDIT: OCHA/Laura Sala

Traffic Forecast Update predicts that global mobile data traffic will increase 2.6-fold between 2010 and 2015.⁵ Yet, our capacity to understand and use this data has not kept pace. It is one thing to collect the data but a far different challenge to act quickly and intelligently on it.

There is a tendency to think of real-time data collection as similar to the old way of doing things, only faster. But real-time data collecting is more than just faster; it enables processes and responses that are qualitatively different.

One example is the use of EpiSurveyor, cited at the beginning of this chapter, during the Malezi Bora campaign in Kenya. A supervisor was able to notice in real time where a system had broken down and fix the problem before it was too late. Fully using real-time data can lead to different ways of making decisions; for instance, empowering field operatives to act immediately.

Along with real-time data transfer, there has been a growing trend toward making that data transparent, sharing it more widely, and making it increasingly accessible to ordinary people.

This empowers citizens in new ways, allowing them to hold their authorities to account. A famous example was from the UN Dadaab refugee camp when a Somali refugee family sent an SMS to a senior World Food Program official requesting more food. This is just one example of the new communications era for humanitarians, where people who are receiving aid can speak back to decision makers hundreds of miles away – even while an intervention is underway.

Public meets private

This report explores the impact of the communications revolution on programs aiding the developing world, par-

ticularly the evolution of models for partnership between creative, high-tech private sector ventures and humanitarian and development organizations – most significantly the UN – through the UN Foundation. Where these two intersect, we find the underpinnings for the success of Technology Partnership collaboration over the last five years.

On the one hand the UN family, a diverse group of bureaucracies looking to promote international development targets known as the Millennium Development Goals. This family has evolved enormously since the end of the Cold War, becoming more active and action-oriented, but it remains beset by a legacy of slow decision-making and, as an intergovernmental body, has traditionally resisted changes to the status quo. Today, confronted by the communications revolution, the UN recognizes that it must adapt to changing technology to survive. To that end, it has recently spawned a number of initiatives – from the UN Global Pulse⁶ to UNICEF’s Innovation unit⁷ – to stay abreast of developments and, ideally, be part of their vanguard.

On the other hand there are private technology companies – from large corporations to start-ups – who have driven the communications revolution. This group has also evolved and is increasingly concerned by questions of social responsibility, but private companies remain ultimately accountable to shareholders and see an advantage in partnering with different organizations that can help them achieve legitimacy in the markets in which they operate.

Both the UN and private companies have traditionally viewed the other with suspicion. Private sector entrepreneurs stereotypically see the UN as bureaucratic and inefficient, while traditionally the UN has viewed the private sector as self-interested, with little concern for the public good. They speak in different jargon and have diverse organizational traditions.

“There has definitely been a shift in acceptability on both sides. We have moved from the UN as a watchdog against corporate abuse – think of UNICEF and Nestle, or the UN against the pharmas over access to HIV medicines – to a much more possibility-centered approach.” –ROBERT ORR, UN Assistant Secretary-General for Policy Coordination and Strategic Planning

“One of the most transformative aspects of the mobile communications revolution is that it puts people at the heart of the humanitarian aid and development work. Today citizens, among them some of the most vulnerable members of our global society, are able to voice their needs directly to decision makers. This will fundamentally shape the way we think of and provide humanitarian assistance.” –ADELE WAUGAMAN, UN Foundation & Vodafone Foundation Technology Partnership

“Multilateral organizations liked the idea of new money, but with limited capacity they needed to focus on where the ‘big money’ was – the public sector. This was combined with an inherent skepticism of the motivation of business, and a limited view of philanthropy’s impact value,” wrote Michael Madnick, a former Senior Vice President of the UN Foundation and now Deputy Executive Director of the Global Alliance for Improved Nutrition (GAIN), in a paper for the publication Global Philanthropy by the Mercator Fund.⁸

Overcoming barriers to cooperation

At the beginning of the 21st century, the two sides began engaging each other. The UN started to recognize that they needed the energy and financial power of private actors to meet development targets. And the private sector acknowledged that encouraging healthy societies was good for both their bottom line and the image they projected to customers.

Once the need for UN-private-sector cooperation was realized, the question became what should these partnerships look like.

Early on, the focus was on a traditional philanthropic approach: Raise money from the private sector to fund projects. But the UN learned that private-sector financial contributions were often limited, and there was no built-in mechanism to share expertise and know-how. Managing these partnerships required significant ongoing work: establishing the right financial vehicles, building support structures, agreeing on strategic and tactical approaches, effective monitoring, and building in approaches that would make sure the work continued after the partnership ended. “It is highly labor intensive and the transactions costs are very high,” says Mr. Robert Orr, Assistant

Secretary-General for Policy Coordination and Strategic Planning in the UN Secretary-General’s office.

The UN Foundation, established in 1998 with a \$1 billion gift from Ted Turner, made it a primary mission to establish effective ways to broker such alliances, to incubate innovative projects, and to encourage an open culture between the partners. Since it was created, the Foundation has donated over \$1.5 billion – \$695 million from founder Ted Turner and \$825 million more from individuals, corporations, governments, and private charities – to programs that address key global challenges.

A 2010 report by the UN Global Compact – a body looking to encourage shared values between the UN and private companies – charts a decade of this evolving understanding: “As public institutions opened up toward working with business, the private sector became more willing to collaborate,” it said. “This was mainly because it realized that helping address global issues together with the public sector could improve the corporate bottom line.” Drivers included demands for “more corporate social responsibility, the ‘celebrity value’ of association with popular causes, the desire to avoid binding regulations and the ability of the UN to provide widely accepted and endorsed frameworks for action, such as the Millennium Development Goals.”



CREDIT: Conxita Cervantes

From philanthropy to sustainability – with new models

The beginning of the 21st century saw the UN Foundation moving away from project-based grants, toward building networks, transferring know-how, and setting up the conditions for experimental projects to be scaled up and to survive.

An evolving UN approach to involving private companies in public good initiatives

In addition to partnering with the private sector through the UN Foundation, UN agencies have forged partnerships directly with corporations. These partnerships have evolved, as have UN efforts to court and coordinate potential collaborations. The UN's business.un.org website, which is sponsored by the UN Foundation, is bringing a more systematic approach to linking private sector partners with UN needs.

A central lesson is that while many companies are ready to make generous offers during a high-profile crisis, it is difficult to manage new relationships during the heat of the moment, and humanitarian groups are often unable to respond. Far better, officials say, is to develop a structured relationship in advance, such as the emergency communications program supported by the UN Foundation and Vodafone Foundation partnership, so that when crisis hits, everyone can be sure of what is on offer, and what is actually needed.

The UN's Office for the Coordination of Humanitarian Affairs (OCHA) has also worked with the World Economic Forum to create guidelines for these partnerships and match the competencies of the private sector with the UN agencies' priority needs in humanitarian emergencies.¹⁰

Monica Belalcazar, with OCHA's External Relations and Partnerships Section, says "We have learned we need a long term agreement and partnership [which lays out] clear roles and responsibilities, so when there is an emergency we can know what can be deployed." She admits the process can be "cumbersome" – often taking as long as a year – "but it is possible, we are doing it."

Another trend is to try to build relationships between companies and the UN's 'cluster' system, which unites a number of agencies and organizations working in a specific field (water and sanitation, for example, or communications).

An example of this broader approach is being pursued by Stephen Sobhani, who is working with the UN Foundation to bring private sector partners into the UN's Every Woman Every Child Initiative, an umbrella effort bringing together a range of groups to support Millennium Development Goals 4 and 5 related to women's and children's health.¹¹

Mr. Sobhani says it is important to understand that "companies are far more than their products and profits. What

makes a good company successful is a host of processes that make them not just intuitive leaders in the commercial space but potential leaders in the global health space."

He sees great potential in courting a new generation of business leaders, especially in the technology sphere, who are open to engaging in socially beneficial activities but need to be shown where help is most needed.



CREDIT: DataDyne

Raul Zambrano, a senior ICT policy advisor at the UNDP, says it is important to understand partnerships in the information technology sector as "a moving target." "What we are doing could not be done five years ago. Nothing like this has happened in [the] history of humankind; we can reach people who before never had access to any communications."

A crucial feature of the new environment, he says, is the emergence of local entrepreneurs who are creating applications to cater to different development goals and markets. (One vibrant example is in the area of e-agriculture, where applications are being developed to help farmers bring their products to market.) He argues that it is crucial to find ways to link the work done in partnerships with the work done by these much smaller scale actors.

"We need to make the link between local development and national development; there's a huge gap," says Mr. Zambrano. "Local entrepreneurs often don't see what they do as development [...]. That's where we can make a difference; we can act as an interface."

**“Partnerships that unite the public sector, business, and civil society offer the best hope of creating a more sustainable future.”
–UN Secretary General BAN KI-MOON⁹**

“After a decade of experimentation the debate is finally shifting toward demonstrating impact, comparative advantage and scalability,” says a 2010 report by the UN Global Compact, a body which encourages shared values between the UN and private companies. “This involves a new emphasis of quality over quantity, strategic fit among partners, embedding UN values into businesses and markets, ensuring alignment between global and local programs and more and better engagement with small- and medium-sized enterprises.”

As the UN Foundation changed approaches, new models for private-public partnerships emerged. Three important ones are: incubators, direct corporate engagement, and issue networks.

In the first model, a corporate or individual foundation acts as an enterprise incubator, separate from the company’s core business activities but with the flexibility to explore and nurture a promising idea. While fruitful, however, “the big game,” says Mr. Orr, “is the company itself. If the partnership evolves only as far as the foundation you are only getting 10 to 20 percent of your potential.”

An increasing number of partnerships are now seeking direct corporate engagement in which both sides build a large-scale and lasting relationship in line with both the UN and the corporation’s interests. But even well-designed bilateral partnerships can become prey to shifting circumstances. A new trend, therefore, is to expand such relationships to broader based issue networks with many players. The shared objective could be anything from mobile health, to the welfare of children or the global food crisis.

“We have to move to a new model,” says Mr. Orr. “Not project based but program based, with a larger set of actors around a common agenda.”

“The partnership between these two foundations created a safe space for the UN to try new ways of using technology to meet its goals. It nurtured innovation and, ultimately, has helped to change the way the UN does business.” –WILLIAM KENNEDY, UN Fund For International Partnerships



CREDIT: UN Foundation/D. Evans

The partnership between the UN Foundation and the Vodafone Foundation incorporated all three of these models as it moved to apply new technologies to humanitarian and development challenges.

It acted as an incubator, nurturing start-up operators and pointing them toward a more sustainable future. It experimented with a closer alignment of core competencies between the UN Foundation and the Vodafone Foundation through an employee exchange program and discussion of customer engagement programs, thus providing inspiration for new areas of commercial activity. And it spawned an issue network, called the mHealth Alliance, which continues to evolve.

The UN Foundation and Vodafone Foundation alliance came at an auspicious time. The remarkable growth in mobile telephony had opened an exciting new avenue for the UN and private sector entrepreneurs to explore, and the partnership was well-placed to take advantage of this fast growing field.

It also came during a period of growing willingness by the UN and private sector players to engage with each other, leading to an increasingly sophisticated understanding of how that engagement might work.

Yet the partnership faced many challenges as it sought to bridge cultural differences and turn a promising set of ideas into practical action.

The end result was that the partnership found itself leading the pack in efforts to help complex human systems – including governments, UN agencies, NGOs and private companies – come to grips with the technology revolution, leading to a very practical understanding of how difficult that can be.

CREDIT (opposite page): WFP/Gonaives

Chapter: Key Lessons

TECHNOLOGY

- The rise of real-time data is creating new opportunities for both incentives and accountability in development and humanitarian work.
- The technologies most likely to succeed in any development or humanitarian project are those that are already in use.
- The rise in mobile technology has created significant opportunities for improving the way the UN and other groups approach development.

PARTNERSHIP

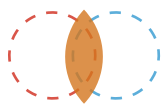
- The UN is increasingly open to in-depth relationships with corporations, and mobile technology offers a rich environment for collaboration.
- Partnerships have moved beyond a pure philanthropic approach to wide-ranging marriages of competence and interest.
- There are many kinds of partnerships, including those which provide a safe space for innovation and those which leverage the core competencies of the participating company.
- There is a growing movement away from bilateral partnerships towards multi-actor issue networks that incorporate a range of participants, from local NGOs and social enterprises to governments, the private sector, and UN agencies.



people

organizations

CHAPTER 2



strategy

THE UN FOUNDATION & VODAFONE FOUNDATION - A MEETING OF BRANDS

projects

future

This chapter dives into the creation of the UN Foundation and Vodafone Foundation Technology Partnership itself: How a chance meeting at the right time led to a bold leap of faith, later transforming into a working organization with projects, strategic priorities, and a sense of future after the five-year partnership came to an end.

UN Foundation

The story of the Technology Partnership begins – as many good stories do – with a meeting of minds.

In 2004, Michael Madnick, then the UN Foundation’s head of global partnerships, was looking for new corporate partners, and Vodafone, the world’s leading mobile operator, was an attractive prospect. He cold-called Charlotte Grezo, then head of Vodafone’s corporate social responsibility arm, who agreed to meet in London.

“She told me: ‘You’re interesting, but we aren’t ready for you yet. Come back in six months.’” Mr. Madnick persevered and half a year later was directed to John Logan, who had taken charge of the recently formed Vodafone Foundation.

Over dinner at the Royal Air Force Club on Picadilly, the two men bonded instantly. “He came out of the business side of Vodafone and had a big-picture outlook,” recalls Mr. Madnick. Mr. Logan was looking for a theme that would tie together the Vodafone Foundation’s work globally and within many countries in a way that was socially useful but which also supported Vodafone’s brand. “Mr. Logan asked: ‘What is my ‘red thread’ [referring to Vodafone’s red branding]?’”

Building a mission

Mr. Madnick knew immediately what that red thread could be.

In 2000, world leaders in New York agreed to an ambitious challenge: to halve poverty by 2015 in a sweeping set of targets known as the Millennium Development Goals (MDGs). And the UN Foundation – launched with Ted Turner’s \$1 billion gift to the UN in 1998 – had made its mission helping the UN reach these goals. What better partner in this endeavor than Vodafone, a leader in the global mobile phone revolution seeking to match its brand in strategic ways to the global fight against poverty?

“The UN was a brand on the scale of Vodafone, and the two were akin in that they could think at the global level, the regional level and, ultimately, at the individual level,” says Mr. Madnick.



Millennium Development Goals

Kathy Calvin, CEO of the UN Foundation – formerly president of the AOL Time Warner Foundation, and Senior Vice President at America Online – agrees the alignment of the UN and Vodafone’s international presence and access was key: “The first thing that made this significant was why both partners entered into it. They were global brands who wanted to partner with a global brand.”

According to Andrew Dunnett, CEO of the Vodafone Foundation: “We were aware of the impact our technology had for good. A relationship with the UN [through the UN Foundation] enabled the potential for scale. It enabled us to find entry points in the UN system to enable our technology to be used in pursuit of UN goals and a focused effort to meet the MDGs. That was the real aspiration.”

However, even the most logical partnerships on paper depend on fortuitous meetings and personal chemistry, and the meeting of minds between Mr. Madnick and Mr. Logan turned out to be crucial. “In a lot of these partnerships, the opportunity for collaboration stems from people

“The fact that there were two strong brands helped to push the agenda. People were willing to listen; they took it seriously right away.” –JUNE SUGIYAMA, Vodafone Americas Foundation

connecting individually and happening to catch people at a time when they are open to new ideas,” Mr. Madnick recalls.

“I was in active business development,” Mr. Madnick says, “Part of our message was: ‘Ted’s money is not what makes us interesting. We’re about large scale problem solving, and we recognize that requires a combination of many different assets.’ Eight years ago people didn’t know what I was talking about. I was trying to find like-minded people who understood the scale of a global operation but with the humility to know that they needed partners.”

Mr. Logan and Mr. Madnick synched and decided to collaborate. Their first move, in 2003, was to develop a \$1 million relationship through the Measles Initiative, a multilateral partnership – in which the UN Foundation was already involved – that aims to reduce global measles mortality through mass vaccination campaigns.

The partnership had the requisite effect: trust was built. In 2004, the two partners were ready to move to the next level.

The launch of the Technology Partnership

In June 2004 in Geneva, the UN Foundation and the Vodafone Foundation announced a five-year partnership agreement worth £15 million with a commitment of £10 million from Vodafone through the Vodafone Foundation and £5 million from the UN Foundation. It was one of the largest deals of its kind in philanthropy.

“The combined reach of the UN Foundation, UN, and Vodafone Foundation brands is unprecedented, and the partnership will aim to share knowledge and expertise to create the maximum positive impact,” the partners said in a joint statement.

According to Mr. Madnick, the news buzzed throughout the philanthropic world: “This was really quite novel and sexy at that time; we received more than 300 job applications from across the planet,” he says.

In 2006, Andrew Dunnett became the new head of the Vodafone Foundation, bringing with him fifteen years’ experience in corporate responsibility, community investment and public affairs, most recently having worked with the UK’s Department of Trade and Industry.

Andrew Dunnett and Kathy Calvin, together with a great team of dedicated staff led initially by Paul Margie with Mitul Shah, then Claire Thwaites and Adele Waugaman, would steer the Technology Partnership through the next five years. They oversaw its evolution from an initial meeting of minds into a significant thought leader in the world of emergency communications, mobile health, and UN-corporate partnerships.



CREDIT: Evan Schneider

An entrepreneurial approach

Foundations use a range of approaches in designing their programs; the Technology Partnership’s initial style was entrepreneurial.

“We had a broad vision that led to the launch with Ted Turner and Vodafone Group CEO Arun Sarin. Then we hired people to figure out exactly what we were going to do,” says Mr. Madnick.

According to Kathy Calvin: “With the partnership we took a slow but thoughtful learning approach. We spent a lot of time on it – exploring with the UN where a partnership like this, with technology involved, would be most useful.”

Measles Initiative

The Measles Initiative, through which the two foundations first collaborated, continued to be a major recipient of investments over the lifetime of the Technology Partnership. Beyond the satisfaction of supporting a good cause, this involvement provided the impetus for the foundations' mobile health program.



CREDIT: UN/Peter Karanja

Better health data collection is one part of the Measles Initiative's broader success story, which counts over 700 million children vaccinated against measles and a 78% reduction in measles deaths worldwide between 2000 and 2008. Measles has been eliminated in the Americas, and may disappear from the WHO Western Pacific region in 2012. Europe and the Mediterranean WHO regions aim to eliminate measles by 2015, and Africa and South East Asia are working toward measles elimination by 2020.

Ms. Gay warns that, as in a marathon, the last push may well prove the hardest. But if funders can stay the course, the Measles Initiative may yet prove to be one of mankind's greatest achievements.

www.measlesinitiative.org

“We didn't want a technology solution that looked for problems to solve. We wanted to find problems that could be solved with a technology solution. Due diligence, research into what the problems were, and analysis of where we could make our maximum impact were all central to our approach.”

Andrew Dunnett adds: “The challenge was to drill down into a number of core areas of activity where we could make a real difference.”

In 2005, two experts were identified to oversee this effort: Mitul Shah and Paul Margie. Over the course of the following year, the duo combed the world looking for the right projects to match with the Technology Partnership's ambitions.

“The idea was to find where mobile technology could be used in support of UN activities,” says Mr. Shah. “We didn't

have a specific sector in mind. We decided to take the first three or four months to conduct an exhaustive landscape study.”

Two areas of practical focus emerged. The first was a field where the UN Foundation was already strong: the mobile collection of health data. That focus could also build on the preexisting partnership between the UN Foundation and Vodafone Foundation on the Measles Initiative. “We wanted to leverage the contacts, the existing work, rather than create a whole new program,” says Mr. Shah.

The 2004 Asia tsunami provided the second area of focus. The crisis had prompted one of the largest multi-country humanitarian responses in history and highlighted a crucial need for better and faster communications to enable aid workers to coordinate and plan in the early hours after an emergency.

“All people are entrepreneurs, but many don’t have the opportunity to find that out.”

–MUHAMMAD YUNUS, Grameen Bank

“The idea of emergency response was on everybody’s mind,” says Mr. Shah, “ UN Foundation was already conducting several activities to support what was going on out there, and the Vodafone Foundation had provided support to a group that rebuilt telecommunications in disasters, a very effective organization called Télécoms Sans Frontières.”



CREDIT: Télécoms Sans Frontières

Matching scale with agility

Once the major focus areas had been identified, Msrs. Margie and Shah established a working model: facilitate partnerships between UN agencies and smaller groups, such as NGOs and social entrepreneurs.

According to Mr. Margie, the idea was to marry the reach and power of the UN with the flexibility and inventiveness of smaller organizations. The UN Foundation and Vodafone Foundation would provide the funding, contacts, and know-how to enable that to happen.

“The idea was to find a small NGO and a UN agency to pair that with,” says Mr. Margie. Thus were born the relationships between TSF and the World Food Program, the UN’s lead hunger relief agency, and DataDyne (a mobile health software company) and the WHO. Both projects are explored in more detail in Chapters 3 and 4.

The United Nations Foundation and Vodafone Foundation played the roles of funder, broker and, as it evolved, incubator, in which their grantees were given a period of time to develop before being encouraged to find their way on

the broader market. As the partnership matured, the notion of sustainability – a future for these projects beyond the lifetime of the partnership – became a major priority.



The partnership as trend setter

The Technology Partnership wanted to do more, however, than simply matching UN agencies with entrepreneurs. The Foundations’ hope was that, by establishing models which showed how public-private alliances could drive innovation and improve development outcomes, other UN agencies and technology companies might see similar opportunities to form their own partnerships.

To promote this model, the Technology Partnership built in a third core area of activity: thought leadership, comprised of a publication series, events, and a dedicated external relations strategy. “The ambition and scope of what we were looking to do was grand,” says Mr. Shah. “We were looking to introduce these ideas in a much larger way.”

The result was a series of defining papers, experts meetings, and considerable media coverage, which eventually led to a major alliance to promote debate and new partnerships in the mobile health field. Chapter 5 explores this work.

Bringing Vodafone closer into the picture

In the earliest days, says Mr. Madnick, the marriage of two global brands – the UN and Vodafone – was considered a major achievement in its own right. But the approach was rooted in a longstanding tradition of philanthropy and corporate social responsibility in which a company would give money but stand back from the actual work done.

“Slowly, it began to dawn on us that Vodafone was sitting on top of the most transformational technology in the world and that mobile phones could have an impact on poverty, health and development worldwide. The financial commitment from Vodafone was, obviously, a big part of this. But as Vodafone showed us, a successful public-private partnership isn’t just about money – it’s also about what a company can do with its employees, its technology, its marketing department, or simply as a door-opener to markets we wouldn’t otherwise know.” –KATHY CALVIN, UN Foundation

Over time, however, a different idea (explored in chapter 1) emerged: The greatest value of a partnership lies not necessarily in the money it puts on the table but in the transfer of skills, market knowledge, and institutional experience.

“Because of the way we organized it, through foundations, we realized we had limited exposure to [Vodafone’s] core business,” says Mr. Madnick. “One of the great changes [...] has been increasingly to integrate the core business into the partnership.”

The connection between the UN Foundation and Vodafone deepened in 2007 with the hire of Vodafone staffer Claire Thwaites as the new head of the partnership.

“Vodafone realized this was an amazing partnership and decided to fill the position with someone from the company,” says Ms. Thwaites. “I thought it was very brave for the UN Foundation to let a corporate in. There was still some unease. No one had formed such a close bond in that way.”

According to Andrew Dunnett, the appointment of Ms. Thwaites “was critical to strengthening the relationship. It enabled a very outcome-oriented focus.”

Over time, Ms. Thwaites’s appointment enabled the [corporate side of Vodafone] to become more involved. Vodafone decided it wanted to integrate its employees in the partnership’s work, spawning the ‘World of Difference’ program with WFP (see chapter 4).

“They became interested in linking in their technologists and other employees; they wanted to make this more core to

the company,” says Kathy Calvin. “It didn’t stay a CSR [corporate and social responsibility] [or] foundation initiative.”

Crossing the culture divide

When Ms. Thwaites took up her post in 2007, she was bombarded with a new world of acronyms. “I spent 14 years getting to know telecom technology acronyms; I now found myself in the UN system having to get up to speed,” she says.

“Even as an employee of a global company, I was struck by the global nature of it all. Dealing with countries from Africa to Asia to South America. It hit home immediately.”



CREDIT: Télécoms Sans Frontière

One of the most important aspects of her work – and the partnership’s work in general – was bridging the differing cultures involved – melding the UN’s broad perspective with the flexibility and inventiveness of NGOs and social entrepreneurs and the corporate focus on profits.

One clear contribution from the corporate side was an insistence on quantifiable deliverables. The Technology Partnership was going to focus on delivering programs with measurable results.

“When I arrived, we nominally became WFP’s leading technology partner,” says Ms. Thwaites. “We tried to introduce more vigor into their 3-year and 5-year plans. You want to see some definition of objectives. We established

“The way to succeed is to double your failure rate.” –THOMAS J. WATSON, SR., IBM founder

some pretty strong deliverables, such as in the training of ICT personnel to be deployed.”

At the same time, the UN perspective helped keep a focus upon longer-term underlying change, a goal that rarely achieves immediate results due to the challenge of human systems and is intrinsically more difficult to measure.

The entrepreneurial tradition within the partnership allowed another perspective: An instructive failure can be as useful to the social good as a beneficial result.

The importance of evaluation

The early introduction of Dalberg, an independent development advisory firm, played an important part in the partnership’s monitoring and evaluation work. Dalberg was hired to conduct a series of assessments, including a capstone report in 2010, which allowed the Technology Partnership to monitor, tweak, and “be brave and pull out if necessary,” says Ms. Thwaites.

“DataDyne, for example, was in 20 countries, but it became clear that in certain countries it wasn’t going to work. We started chopping down.” The challenge of evaluation will be explored in more details in Chapter 3.

Another important focus brought by the greater corporate involvement was the value of long-term scale and sustainability. Ms. Thwaites: “Companies won’t invest anywhere without a long term vision. NGOs can take risks, they are nimble and can test the waters, but when the money runs out, the project often falls over. Scale is important for corporate participation. A company will only really want in on something if it’s for the long term.”

On the other side of the culture divide, Michael Madnick recalls that there were also significant challenges from the

UN: £15 million was one of the largest sums contributed by a partnership of this kind, but the amount remained relatively small compared to the financial resources provided by governments to the UN.

“On the UN side, part of the problem was getting their attention to convince them that this was worth their time,” Madnick said, “to help them understand that business can be a contributor to sustainable outcomes. In the UN Foundation, we saw our role as the positive, proactive bridge to help push the understanding along. This was quite a good case example of the value of brokers who speak [the language of development groups and the private sector].”

The UN Foundation, according to Mr. Margie, fulfilled a crucial translation role: “One side would trust us to tell the other what they were after. We would say what was possible and what wasn’t.”

Vodafone – the Foundation and the Corporation

One question that emerged over the course of the Technology Partnership’s work was the relative value of working with the foundation side of Vodafone as compared to working directly with the corporation.

Yet the UN Foundation’s partnership with the Vodafone Foundation offered something unique: a safe space in which to innovate and experiment without the pressure of immediate market-driven results and with the understanding that not everything would go according to plan. “One of the greatest contributions philanthropy can provide is a place to develop, innovate, and celebrate other people’s ideas,” says Mr. Madnick.

“The real benefit of a foundation is that it provides longevity,” says Andrew Dunnett. “The framework in which you operate is very different from (what we might have seen as part of a corporate) marketing campaign – which by nature is short term.”

The question was how to benefit from that broader perspective without losing sight of corporate concerns. “The main danger is that the UN Foundation and the company drift apart. The crucial thing is to maintain a close relationship,” says Mr. Dunnett.

“We built in evaluation from day one. Corporate partners need more ongoing evaluations, ongoing stories. They are interested in results for 5 years, but also in learning on an annual basis. They are interested in impact. I think (from the UN side) there has been much greater appreciation of the notion of sharing the story, marking progress as you go.” –KATHY CALVIN, UN Foundation

CREDIT (opposite page): UN/Eskinder Debebe

“Every company has to work its way through that firewall,” notes Kathy Calvin. “In the long run, that’s where this whole public private partnership movement has got to go. There needs to be something in every partnership for everybody. Sometimes having it in the commercial interest ensures that the best assets are brought to the table. As long as there is transparency about that, you get the best of everything.”

The evolution of the UN Foundation

The UN Foundation went through its own evolution during the course of the partnership. What began as a more traditionally philanthropic organization – albeit with a clear aim to leverage the resources of the partners – has gained an increasing understanding of its fundamental role as broker and how to go about playing that role effectively.

The Technology Partnership was seminal in clarifying that position: “It was enormously important,” says Kathy Calvin. “We learned a lot about our ability to be in that middle space. It’s a big job to work with big partnerships. You have to really be mindful, making sure you are being innovative and creative. We also didn’t fully appreciate how much we were helping the UN come along in its own learning process.”

Ms. Calvin says the Technology Partnership helped introduce a fundamentally different way of thinking about matching resources to challenges: “We created this partnership in 2004, when the model was ‘we’ll put in x, you put in x, let’s see what we can do.’ Now it’s much more ‘what do we want to get done, and what’s it going to cost?’ It’s a paradigm shift.”

Chapter 2: Key Lessons

TECHNOLOGY

LEAD; DON'T BE LED

- Avoid solution-lead development: Keep the focus on the problems to solve and avoid technological solutions in search of a problem.

PARTNERSHIP

START WELL

- Develop familiarity through an initial engagement that builds trust and goodwill.
- Personal relationships are important in starting up a partnership but so is timing and the relationship between organizations.

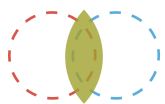
BUILD WELL

- Build in evaluation, sustainability, and an exit strategy from the onset.
- Build in the ability to scale from the onset: This is particularly important for private sector partners who will want to know both what will make a pilot successful but also what will make it scalable?
- Build in diversity from the onset: The Technology Partnership melded the UN Foundation’s experience with the UN’s broad perspective with the inventiveness of NGOs and social entrepreneurs and with Vodafone’s corporate focus on bottom-line results.
- Build in value from the onset: Account for all areas in which a partner may add value. When partnering with corporations, this may mean integrating financial experience, in-kind skills, market intelligence, or hardware and other donations.

partnerships

impact

CHAPTER ③



mHealth

PARTNERSHIP PROGRAMS AND IMPACT

WHO

DataDyne

This chapter explores the Technology Partnership’s incubation of an innovative mobile health (mHealth) project run by the social enterprise DataDyne and the UN World Health Organization (WHO). The project’s successes and failures taught valuable lessons on the opportunities that the communications revolution offers for health systems in the developing world, on the process of scaling up a technology-based development project, and on the appropriate role a public-private partnership like the Technology Partnership can play in fostering such projects.

The global growth of mobile telephony in the developing world offers billions of people not only a chance to catch up with developed world but in some cases to overtake it, leapfrogging over old ways of doing things and embracing a new, faster, more efficient approach to marrying information with action.

The Technology Partnership chose to focus on just two of the many advances born of the communications revolution: mobile health data collection and the establishment of emergency communications. Both illustrate how a partnership can harness technological innovation for public good and offer case studies into what doing so looks like in practice.

This chapter examines health projects undertaken by the UN Foundation and Vodafone Foundation in coordination with the UN Fund for International Partnerships. It explores the Technology Partnership’s mobile health (mHealth) program, which teamed DataDyne, a small but innovative software design group, with the WHO to bring real-time public health data collection to twenty African countries.

“Even the simplest, low-end mobile phone can do so much to improve healthcare in the developing world. Good examples include sending reminder messages to patients’ phones when they have a medical appointment or need a pre-natal check-up. Or using SMS messages to deliver instructions on when and how to take complex medications such as anti-retrovirals or vaccines. It’s such a simple thing to do, and yet it saves millions of dollars – and can help improve and even save the lives of millions of people.”
–DR. HAMADOUN TOURE, ITU Secretary-General¹²



CREDIT: UN Foundation/David Evans

Moving toward scale and sustainability

The Technology Partnership first became involved with mHealth through the Measles Initiative where the partnership asked the question: Can mobile data collection devices improve disease surveillance?

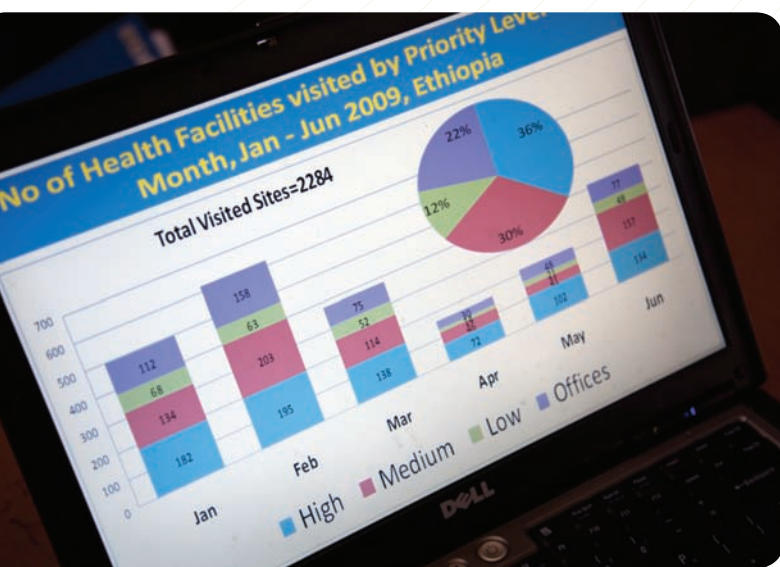
That same question was answered with a resounding “yes” by the DataDyne-WHO partnership with the two foundations, which, under the right conditions, turned in impressive results. Kenya was a particular success, adopting mobile health technology in a variety of settings.¹³

But the proviso – “under the right conditions” – remains crucial. The Technology Partnership’s achievements in mHealth demonstrate how people with the right incentives can achieve remarkable outcomes. They also show, however, that technology is an enabling tool – rather than a solution in itself – and to avoid failure requires an enabling environment that includes underlying infrastructure, user buy-in, and political will.

“In Pakistan, there are 60 million mobile phone subscribers in a population of 160 million. Mobile telephones can help deliver affordable urban health care by serving as diagnostic tools for taking pictures and by their usefulness for writing prescriptions and monitoring the condition of patients in low-income areas.

In short, urban public health needs to be reinvented. The health of emerging-market cities – and countries – demands no less.”
 –SHAUKAT AZIZ, former Prime Minister of Pakistan¹⁴

It is a testament to what has been achieved in the past five years that a debate that started with the question: “Can it be done?” now has shifted to the question: “How can we keep doing it, on a large scale, with more actors involved?” The story of the UN Foundation and Vodafone Foundation’s mHealth work demonstrates how innovative ideas were put into practice and reflects on the work yet to be done.



CREDIT: UN Foundation/David Evans

Mobilizing for public health

Through the relationship the two foundations brokered between WHO and DataDyne, the Technology Partnership played a significant role in bringing mobile electronic disease surveillance to health ministries across Africa. This pioneering effort was perhaps the partnership’s most ambitious project.

When the partners began working together, the idea that health workers might use portable devices to gather and collate information electronically had been discussed but never implemented in any major way in the developing world. Today the partnership and others have shown that – under the right conditions - mobile health data collection not only works but can transform the way health operators in the developing world manage their data. In Kenya, Ethiopia, Ghana, and Senegal, for example, the Ministries of Health have embraced mobile technology. In Kenya, the Ministry has partnered with UNICEF to use mobile phones to conduct exit surveys as part of a nationwide children’s health campaign (see box on page 35).

But the story of this project is not all one of success. In several target countries, the program failed to get off the ground due, in part, to a host of issues: lack of domestic infrastructure and resources, frequent staff changes, and the use of PDAs where mobile phones might have been more appropriate.

These bumps in the road taught lessons about using the right tools in the right places at the right time (the potential of mobile phones was soon realized and addressed), and project designers were reminded that technology is most often an enabling tool, rather than a solution in itself. While better data collection can lead to substantial benefits, it will do so only if there are underlying systems to take advantage of it and a willingness to do so.

In the end, the most significant lesson of this Technology Partnership program was that a good idea can have implications far beyond its original scope. What had been conceived as a tool for the supervision of immunization and disease surveillance has flourished into a system serving thousands of users in a variety of development contexts in 160 countries worldwide.

The birth of the program

In 2004, development experts started exploring the use of modern tools to coordinate to strengthen their work. One such expert, says Andrea Gay, head of children’s health

“This ‘telephone’ has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us.” –WESTERN UNION internal memo, 1876

“From a technology perspective, you didn’t have a situation where 17 years after the invention of the electronic spreadsheet, you found accountants resisting its adoption.

Why is public health the exception? Why do people consistently collect data on paper, despite the many advantages of collecting it electronically?

When you collect information on an electronic device, you’re talking about cutting a year or two off the process.”

–JOEL SELANIKIO, DataDyne

at the UN Foundation, was a dynamic former CDC doctor named Joel Selanikio. “Joel came to talk to me about trying to do more with public health data,” she recalls. “We decided to fund him to develop surveillance software in Kenya.”

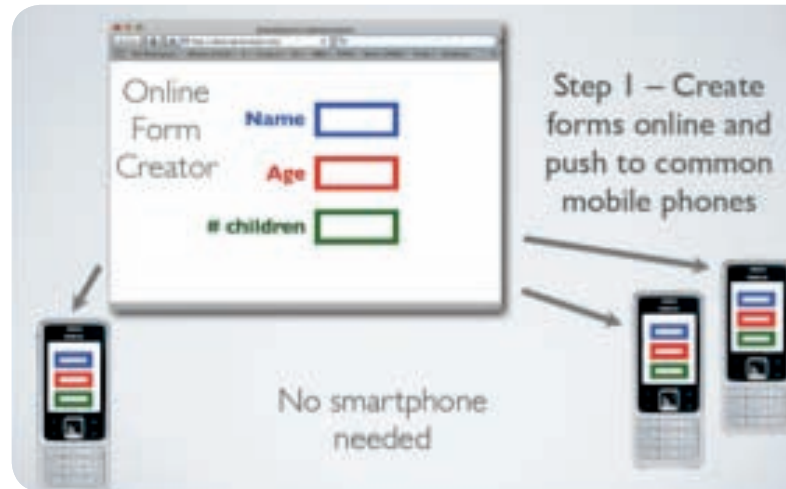
Ms. Gay had just given him a small grant when Paul Margie and Mitul Shah – tasked with identifying projects for the recently formed Technology Partnership – approached her for ideas. She thought immediately of Dr. Selanikio: “I said: ‘This is what you should do with this money.’”

The idea was, at first glance, simple. The Technology Partnership would work with WHO to place software designed by Joel Selanikio’s company, DataDyne, onto Palm Pilots and distribute them to health officials throughout Africa. (Palm, the hardware manufacturer, generously made a one-time donation of hardware to the UN Foundation to support this work.) Field supervisors would be trained and dispatched to electronically monitor the performance of immunization and disease surveillance activities.

“We said: ‘we’ve got some really promising technologies that can revolutionize and make this process [of surveys] much more efficient,’” Dr. Selanikio said of EpiSurveyor, the DataDyne software that is used to enter data onto a mobile device and organize it online, free to users and simple to customize.

And WHO had the perfect champion for the EpiSurveyor: Dr. Balcha Masresha, in charge of measles control activities in the African region. “The WHO had been supporting officers financially and technically to move towards district health facilities on a regular basis; to make visits to stimulate disease reporting for polio, yellow fever, measles, and

so on,” he said. “What we tried to do in this project was to provide the tools and skills on this provincial level in the form of PDA, software, and training, so their work might be facilitated through the smooth capture and transfer of data using hand-held devices.



CREDIT: www.episurveyor.org

“It was pioneering. The small-scale use of PDAs had been tried out in some countries, but this was the first attempt at using mobile health in multiple countries on a nationwide scale.”

EpiSurveyor was appropriate for several reasons. “We found it quite convenient. EpiSurveyor is freeware, so there was no payment involved. Second, technical support from the software developers was assured in the conception of the project. They were with us for the training, the evaluation of the project. That was really important,” said Dr. Masresha. And third, “the EpiSurveyor software is developed more or less to look like freeware that most epidemiologists in this part of the world use regularly, the Epi Info software developed by CDC Atlanta.” Countries could decide exactly what data they wanted and develop their own questionnaires. “Basically, it was self-empowering,” he said, offering local actors the opportunity to make the technology their own.

The project focused on only one limited aspect of immunization support: the collection of supervision data. “Data collection takes place in tens of thousands of service delivery points on a daily basis. Trying to turn that into a mobile health platform is a huge undertaking, and with that goes the need for making sure that quality is assured, that paper tracks are kept, and so forth,” said Dr. Masresha.

“The aim was to look at one particular aspect of how the whole immunization service could be strengthened. We were not trying to replace the existing system. We were providing supervisory support.”



CREDIT: www.episurveyor.org

The project launched in 2007 with pilots in three countries: Kenya, Zambia, and Burkina Faso. The countries were chosen to represent the three WHO AFRO subregions: East and South, Central, and West. The pilots focused on training health workers how to use digital tools instead of pencil and paper as part of routine household surveys undertaken to gather disease surveillance and immunization information. Over the course of 2007–2008, the project expanded to a total of 18 countries.

Challenges

It soon became clear that the project faced substantial challenges. Not all African countries regularly deployed provincial level supervisory officers to the field – an essential part of the design. As a result, Kenya and Zambia took up the pilot relatively easily, but it encountered major problems in Burkina Faso, where the program was dropped.

In addition, as the program expanded, countries diverged widely in their readiness or ability to adopt the technology and expand it beyond surveillance. In Kenya and Senegal, for example, the program has been seen as a great success, but in the Democratic Republic of Congo and Benin, the concept struggled to get off the ground.

According to a WHO progress report, “In the first few months of the introduction of the project, in 13 of the 18 countries, subnational officers made the effort to collect

“We still need to do more to strengthen national data collection systems. It is vital to support the development of complete and accurate civil registration systems that include births, deaths, and causes of death. Every maternal death needs to be counted.”
–MARGARET CHAN, Director-General of WHO.¹⁵

and share data with the national level, with analysis and feedback as well as programmatic action being taken up by the national program. [In] five out of the 18 countries, for different reasons, the project did not take off, and WHO AFRO has not received any evidence of data collection at the operational level.”

It became clear that the project could only work where systems existed to support it. “Soon after the launch in a number of countries, we learned that there were major issues with promoting integrated supervision where it never existed and where there was little funding for supporting the supervisory process,” the report noted.

Nonetheless, says Dr. Masresha, “in terms of the official uptake by policy makers and the people we had to build consensus with at a national level, it was taken up very readily by nearly all of the countries. There was enthusiasm, even though most of the senior staff had fears about their level of proficiency to use the tool.”

One significant challenge, he explained, was scale. Due to resource constraints, the program had started with 20–25 units per country. Those “disappeared in a sea of data collectors, supervisors, and program people,” said Dr. Masresha.



CREDIT: DataDyne

Furthermore, “when people get transferred from one unit to another, when people leave posts, there is a loss of skills, and often a failure to transmit skill. In areas where the project didn’t last, the main issue was because we had too few units, and the staff we trained were not long enough on the ground.”

Another early problem lay in the tools themselves. “Initially there were some software and hardware problems that discouraged people. The initial versions of EpiSurveyor had a number of bugs, and the Palm unit had hardware issues. Many countries reported it was crashing too frequently.” (Subsequent iterations of the software running on PDAs and the move to mobile phones removed these issues.)

The benefits

Where the project worked, however, the benefits were quickly obvious.

“Capture and data entry are automatic, so there was no transition between capturing data and transcribing it into an electronic form. Also, EpiSurveyor goes to lengths to make sure that errors are minimized. That is a huge plus.”

Also, once the length of individual questionnaires was cut down – resorting to multiple questionnaires in some cases – EpiSurveyor crashed much less than it had initially.

Overall, concluded Dr. Masresha, “it proved to be an excellent tool. In terms of showing the validity, the effectiveness, and efficiency of this method of data collection, in at least 9 of the 18 countries, I can assure you there have been documented results, and people are eager to take it on and expand on their own.”

“People on the ground collected all the information required and sent the information to the national level where it was cleaned and analyzed,” said Dr. Masresha. “The questionnaire is designed to prevent the entry of extra zeroes, or the entry of 99 as an age, or skipping the gender of a respondent. Those are the kind of things that the (technology) does to help you make sure everything goes as you would expect.”

–DR. BALCHA MASRESHA, WHO

“Those living in rural areas and those accessing public health facilities can wait weeks or months to consult a specialist. Telemedicine and mHealth afford people the basic right of access to healthcare.”
–JILL FORTUIN, South African Medical Research Council¹⁶

The evolution from PDAs to mobile phones; from desktops to the cloud

Even as the EpiSurveyor program took off, Dr. Selanikio was struck by a revelation: The future of mobile health data collection was not expensive PDAs. Instead, it lay in harnessing the revolution in mobile telephony and Internet access already taking place across the developing world.



CREDIT: DataDyne

“Sometimes technologies appear, and it can take a maddening amount of time before people – even people who are trying to think about them – actually get it in a way that allows them to apply it to their own technology. I was incredibly dense,” he said.

“We found we had 2 problems: one was a hardware problem, and one was a software problem. The hardware problem was that PDAs were not generally available in African capital cities. What that meant was every piece of hardware or replacements parts, had to be brought from the U.S. or Europe. It was an enormous barrier to scale.”

On the software side, the problem was installation: When DataDyne employees did the work, there were no problems, but the target health operators often had difficulty installing the software.

Virus hunters: stopping polio in Kenya

We are on the threshold of eliminating polio from the planet, but in several parts of the world, much hard work remains to be done before the devastating disease can finally be placed in the “eradicated” file.



CREDIT: UN/Chassot

In Kenya in 2007, for example, there had been no cases of polio for nearly two decades. But when refugees fleeing political unrest in neighboring Somalia spilled over its border, Kenya again was confronted with the threat of an epidemic.

The Kenya Expanded Program on Immunizations (KEPI) responded quickly to the crisis with mobile health tools: personal digital assistants (PDAs) loaded with EpiSurveyor software. Titus Kolonge, a health-care officer with KEPI, used EpiSurveyor to trace the path of the virus as it entered Kenya and record who came into contact with the infected refugees. KEPI used this data to target almost 2 million children for vaccination. By

immunizing those in surrounding areas, the polio virus had fewer children to infect and fewer places to hide.

Prior to using EpiSurveyor, health workers collected this sort of data on paper, and final analysis had to wait for thousands of data points from hundreds of individual paper surveys to be entered electronically.

But in the case of a polio outbreak, it is essential to immediately track infected people. “Every minute that goes by, potentially infected people are encountering other potentially infected people, and the pool grows exponentially,” said Dr. Selanikio. By moving data collection from paper to PDA, EpiSurveyor dramatically sped up analysis, reporting, and action.

“This is where a little bit of sharp thinking and a lot of luck came in,” said Dr. Selanikio. “Just as we were trying to determine how to get the millions of dollars required to buy a PDA for every health worker in Africa, I noticed everybody was already carrying a connected mobile computer on their belt – and typically one that was much more powerful. I thought ‘Eureka!’ We’ve just got to program for mobile phones, instead of PDAs.”

Within 8 months, DataDyne completely rewrote EpiSurveyor’s mobile component to run on simple Java-enabled phones, equipment readily available for around \$50 in African capitals.

A similar revelation led to the resolution of the software installation problem. “In 2005, we’d already had ten years of web applications. In Kenya the ministry people had enjoyed at least five years of web service – slow, but it was there: desktops with browsers.”

“I thought to myself, why don’t we take EpiSurveyor’s locally-installed form designer and port that as a web application? Several problems are solved. No one has to install anything. And we don’t have to worry about scaling it, because the minute we put it on the web, it’s going to be available in every single country on earth.”

“eHealth is a platform, which can link together vital statistics, patient data, research information. There is a lot of information in Kenya. We need to share it.” –**DR. ESTHER ARTHUR OGARA, Ministry of Medical Services, Kenya**

“Innovation cannot be mandated or forced on people. It is everywhere, a function of the quality of the people and the environment.” –**DR. VERGHESE KURIEN, father of the “White Revolution” in India**

Partographs in Senegal

The use of partographs in Senegal provides a good example of EpiSurveyor's impact. A partograph, a piece of paper that tracks both maternal and fetal measures taken as a composite, gives a health care practitioner necessary information to make complex decisions while assisting in the birth of a child.



CREDIT: Dalberg Global Development Advisors

According to the development advisory firm Dalberg, based on survey data gathered using EpiSurveyor, health officials identified low partograph usage due to insufficient availability of forms. More forms were distributed to those districts, and over a five month period, the systematic use of partographs in the pilot districts rose to 69%, whereas use of the forms hovered at 55% for non-pilot districts.

The Dalberg report stressed that the customizability of EpiSurveyor engendered a "strong development of ownership among the Ministry of Health and World Health Organization officials," and that "the process of developing the integrated survey served as an organizing framework for departments to work together." Moreover, it noted: "As seen in Senegal, this helped overcome decades of failed attempts to develop a sufficient, integrated survey. The customizability, furthermore, allowed health officials to extend the use of the solution to uses that were not originally envisioned or trained for, such as addressing outbreaks in Kenya."

The result, claimed Dr. Selanikio, was the first Gmail-style web application – available free, no programmers or consultants required – created for international development.

Kenya, already a pioneer in mobile banking through the Safaricom mPESA program, was the first country to adopt EpiSurveyor in its incarnation as a real-time data collection tool.

The future for health ministries – scaling up

According to Dr. Masresha, the Technology Partnership clearly showed that data collection through mobile communication tools can work. The challenge now is time and scale.

The attempt at using PDAs and EpiSurveyor, he says, was "just the tip of the whole iceberg of data needs at country level. We are just scratching the surface of this thing. Immunization service data is generated from nearly 8,000 districts on a daily basis, and unless you empower each and every one of those points to create a system of channeling that data into a central repository, with the needed skills for data analysis and feedback and program action, it will take a long time."

"[The use of EpiSurveyor] helped overcome decades of failed attempts to develop a sufficient integrated survey."

"The willingness is there, the readiness is there. But until we create a critical mass of health professionals who are conversant in the technology and who have seen firsthand the benefits of this approach to data collection, it will remain an elite or pilot kind of activity. We need to continue to sell the advantages that we have seen. We need to publicize and advocate for this approach by documenting the best practices and disseminating them as much as possible."

The evolution of EpiSurveyor

According to Dr. Selanikio, the Technology Partnership, "paid us to develop a mobile data collection system to help the ministries of health and the WHO offices in 20 African countries."

"Let's not forget this is a very novel way of doing things for most of us here. There is always a lag time until people start to accept this as a norm. I don't think we have reached that level yet." –DR. BALCHA MASRESHA, WHO

Mobile applications for community health workers, maternal health design under the mango tree

If Neal Lesh draws one overwhelming lesson from designing applications for community health workers, it is that an automated technology made by the cleverest people in Boston will – in the first instance - almost inevitably be wrong for a village in the developing world. That is why he, and D-Tree, an organization bringing new technologies to front-line health workers, settled upon a simple but powerful mantra: “Design under the Mango Tree.”



CREDIT: D-Tree

“You need to spend a lot of time in the field designing apps,” says Dr. Lesh, looking back on his pioneering work at the Millennium Villages Project (MVP) site near Tabora, Tanzania.

Dr. Lesh introduced the open source CommCare application – and its implications for maternal healthcare, and safe pregnancy – to the Technology Partnership at the Bellagio mHealth conference in 2008. Another benefit: it focused on local software development for local challenges. The Technology Partnership liked it and invested \$92,000 in the project.

What began in Tanzania has since blossomed around the world and is used by 14 public health organizations in eight countries. The concept is simple: A community health worker uses the application on their mobile phone – a handset worth around \$100 – to register newly pregnant women and asks a simple series of questions (designed according to international standards).

On the basis of the answers, the health worker can advocate appropriately healthy behaviors and refer them, where necessary, to appropriate practitioners. The data is uploaded to central servers in Boston and can be used by the implementing organization to make healthcare decisions. The community health workers also undertake follow-up visits, reviewing the steps that each woman has taken in order to assure a safe pregnancy.

“On several occasions, from our office in town, we were able to identify pregnant women experiencing serious danger signs,” D-Tree reports. “Significantly, we learned about this almost as soon as the community health worker did. We were able to quickly respond by notifying the clinic and calling the CHW to escort them to the clinic, ensuring that they got the care they needed.”

While the Tanzania millennium village project itself was not scaled up, the methods established there – including three months of design, three months of refinement, and the subsequent introduction of simple multimedia elements – were used elsewhere in the country and have now translated to projects around the world. CommCare also began close collaboration with UNICEF’s innovation group.

The Technology Partnership’s support, says Dr. Lesh, played an important catalytic role in establishing credibility during the early days of developing mHealth applications. “The field is exploding now,” he says. “We are on the verge of many groups attempting very big trials.”¹⁷

“What we gave them was a data collection system that is now used in 160 countries, by several thousand people worldwide, for the same price. I don’t think they knew that that’s what they were getting. If we had told them that’s what we wanted to build, I don’t think they would have believed us.”

DataDyne created the right tools, made them accessible and easy to use, and they took on a life of their own.

In the eyes of Dr. Selanikio, the Technology Partnership’s greatest contribution was to act as an incubator, giving DataDyne the support it needed to develop EpiSurveyor, enter the market, improve its product’s design, and expand to new areas. He notes, however, that the foundations communications support also was essential – this is explored further in Chapter 5.

“I look on it at as seed funding for what we’ve eventually become,” said Dr Selanikio. “It was enormously significant for us.”

Over the years, EpiSurveyor has scooped up numerous awards attesting to its innovations in healthcare IT. Those include the 2010 FRIDA Award, the 2009 Wall Street Journal Technology Innovation Award, and the 2009 Lemelson-MIT Award for Sustainability – the latter with a cash bonus of \$100,000.

Most recently, the World Bank complemented EpiSurveyor’s performance with a conditional cash transfer program in Guatemala (to encourage mothers to vaccinate their children):

On the adoption of new technology

International development projects tend to follow a pattern: A concept is developed, it is tested in a pilot, it is scaled up to a larger program, it is evaluated, and the results are shared with policy-makers, potential users, and funders.



CREDIT: Frog Design

But according to Joel Selanikio, “That’s not the way technology gets adopted.”

“Fifteen years ago very few people working in public health in developing countries had access to reliable e-mail. Why? Because the way that one got e-mail was that your organization had to purchase some servers, air-conditioned rooms, and an IT staff to run your Microsoft Exchange server.”

“Basically the barriers were too high, and most people just didn’t use e-mail. What that meant was that public health didn’t communicate very well.”

“The way that reliable e-mail has come to all those ministries of health wasn’t by having studies done, it was by companies like Hotmail, Yahoo!, and Google getting rid of all those barriers.”

“They put it on the web, they made it free, and they made it so simple that it didn’t require any programmers or international consultants in order to use it.”

“As a result, people looked at it and said: ‘Wow, this is easy, it’s free, and it helps me a lot. I think I’ll just adopt it.’”

“The use of low-cost mobile phones in conjunction with the free EpiSurveyor software drastically cut costs, while facilitating quality control and improving implementation speed. Thanks to these improvements over traditional methods, the study has already had an important demonstration effect on the adoption of the technology in the country and within the World Bank.”

But no technology can work unless people have the incentives to use it.



CREDIT: DataDyne

“Think of it this way: Google doesn't want to go around trying to convince people that don't want maps to use Google Maps. Instead, it creates a great mapmaking tool, and people who need to create maps gravitate towards the tool,” said Dr. Selanikio.

“Likewise, people who are collecting data on paper gravitate towards using EpiSurveyor – if they've heard of it. Our biggest challenge moving forward is to increase our marketing efforts to make sure that those people have heard of it.”

The future of DataDyne and the legacy of the Technology Partnership's mHealth work are explored in Chapters 5 and 6.



CREDIT: Ken Banks

Select DataDyne Awards

2010 FRIDA Award: DataDyne.org's Mobile Info Platform (MIP) won the award for “initiatives that have contributed the most towards the development of the Information Society in Latin America and the Caribbean.” The DatAgro Project uses MIP to send text messages with information relating to weather conditions, market prices for crops, and innovative agricultural practices to members of the COOPEUMO cooperative in central Chile.

2009 Wall Street Journal Technology Innovation Award: EpiSurveyor was chosen from nearly 500 entries by the editors of the Wall Street Journal in the category of Healthcare IT.

2009 Lemelson-MIT Award for Sustainability: The \$100,000 Lemelson-MIT Award for Sustainability honors inventors whose products or processes impact issues of global relevance.

2009 Fast Company: DataDyne.org and the EpiSurveyor project were honored as one of the 10 Social Enterprises of the Year by Fast Company Magazine.

2008 Stockholm Challenge Award: DataDyne was the health category winner.

CREDIT (opposite page): DataDyne

Chapter 3: Lessons from the Technology Partnership's mHealth Program

TECHNOLOGY

CONSIDER THE USER

- Make technology as simple as possible for the users. Cloud-based applications are easier to use and more scalable than software, which needs to be installed.

CONSIDER THE ENVIRONMENT

- Use tools that people already have access to in their local markets; mobile phones are excellent platforms for IT solutions in the developing world.
- Technology projects that have the most success in scaling are those that lower barriers of access to information. Consider open source and open access. Technology adoption won't be driven by outside parties dropping in new tools but by leveraging open access services like Yahoo! Mail or Gmail that lower the barriers of access to information and services.
- Be patient. There is still the need for more development, health, and humanitarian professionals to become conversant in technology issues.

CONSIDER THE INCENTIVES

- Technology can provide powerful benefits but only with the right incentives to use it.

PARTNERSHIP

ACT AS AN INCUBATOR

- Funders who act as incubators can see results far beyond the scope of any one project.

PROVIDE OVERARCHING STRUCTURE

- Look at data standardization, interoperability, and a reference architecture; there is a need for standardized metrics to evaluate impact and effective aggregators to draw up guidelines, curate information, formulate policy, and advocate for specific frameworks.
- Partnerships with international reach work best. National societies do not have the funding or the moral authority to bring in people, players, stakeholders, and healthcare providers from different countries.

LEARN FROM FAILURE

- In some countries, the infrastructure did not exist to support rolling out a new mHealth tool.
- Bugs with early versions of EpiSurveyor required continuous refinements.

LEARN FROM SUCCESS

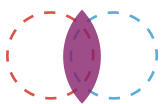
- The Technology Partnership and other actors have shown that, under the right conditions, using mobile communications tools to collect health data not only works but can transform the way health systems do business.



emergencies

lifelines

CHAPTER 4



mHealth

COMMUNICATING IN EMERGENCIES

WHO

DataDyne

This chapter examines the Technology Partnership's programs to improve UN and NGO response to humanitarian crises and explores the partnership's involvement with the World Food Program, the UN's frontline hunger relief agency that also deploys emergency IT teams to disasters at a moment's notice, and Télécoms Sans Frontières, the pioneering emergency communications non-profit that connects relief workers and affected families in the aftermath of humanitarian emergencies. The chapter discusses the lessons learned as the Technology Partnership helped these two organizations establish communications lifelines in emergencies and move toward the creation of standby networks, trained and ready to deal with both the technical and human challenges of a crisis zone.

Supporting the World Food Program

On December 26, 2004, a massive undersea earthquake occurred off the west coast of Sumatra, Indonesia. With a magnitude of 9.1 to 9.3, it was the third largest ever recorded on a seismograph and lasted as long as 10 minutes – causing the entire planet to vibrate.

The sudden rise of the seabed caused a tsunami of staggering proportions, which swamped coastlines from Sri Lanka to Indonesia and the Maldives. The impact cost an estimated 230,000 lives and displaced 1.7 million people, prompting one of the largest international responses in aid history.

Gianluca Bruni, who heads the IT emergency response arm of the World Food Program, acted immediately, contacting a network of responders to head to the affected zone. Over the next two months, he deployed 21 experts to the tsunami affected zone to establish the communications infrastructure essential to manage the intervention.

But by the end of the third month, says Mr. Bruni, things were getting difficult. "I had to pull out 35% of my staff due to health issues, stress, poor hygiene." One early responder, John Bursa, who had been sent to Banda Aceh, told Mr. Bruni after only two weeks: "Our team is starting to fall like flies."

What may have seemed a primarily technical task was actually something far more complex. Before setting up operations, Mr. Bursa found himself building an office out of nothing, even removing bodies and debris to make space. By the time they were ready to put together a communications network, the team was exhausted.¹⁸

CREDIT (opposite page): Télécoms Sans Frontières

"There's absolutely nothing here – except a hot sun and shiny floor tiles," Diane Zhang and Opart Ongwandee, two emergency IT responders sent to Calang, Aceh, wrote in a graphic diary of the experience. "This evening we went from steaming hot to one of the worst storms I've ever seen. Everything around me is wet... the more we clean, the more mud comes in through the rain. We begin to see the red worm in the water after a few days here, it looks harmless, but most of us decided not to shower in this water anymore."



CREDIT: UN/Evan Schneider

Mr. Bruni was profoundly struck by the events. "We are emergency professionals, and we need to give our team the right tools and preparedness mechanisms to be able to face such tragedies and environments." The traditional ad hoc approach to emergency communications deployments – relying on the knowledge

of only a handful of people charging headfirst into the fray – was not sustainable. The tsunami highlighted that the establishment of a crisis telecommunications infrastructure in humanitarian emergencies is far more than a technical activity: It is also a profound challenge of management and knowledge of how to stay safe and healthy in difficult and often dangerous working environments.

Meeting the Partnership

WFP turned to the Technology Partnership. Would it be possible, Mr. Bruni asked, for the foundations to fund a program that would gather the experiences of emergency IT responders, collect them in a compendium of best practices, and then train a network of responders for deployment?

According to Paul Margie, formerly of the Technology Partnership, the request highlighted a profound need that few funders could fill: “I saw that because of how the budget worked, WFP did not have sufficient funding to develop the needed staff skills between emergencies.”

While there was documentation of the lessons learned during each new emergency response, this knowledge was not consistently applied to prepare for the subsequent crises. Moreover, after the 2004 Indian Ocean tsunami, the UN created a global humanitarian cluster system to organize emergency responses into coordinating groups, naming WFP a co-lead of the emergency telecommunications cluster. (WFP now is sole lead.) As the “provider of last resort” of communications access for dozens of humanitarian groups operating on the scenes of major humanitarian crises, it was more important than ever for WFP to institutionalize these lessons learned and prepare the IT experts it would work with for the often harsh working conditions of the field.

The Technology Partnership decided to help. A year-long pilot program was devised for 2007 in which responders would compile their experiences in a knowledge database that would be made broadly available throughout the humanitarian IT community. Initial success led the program to be extended for another three years, starting in 2008, with an investment of \$4.3 million from the partnership and \$1.8 million from WFP.

“We built a compendium which shows how to manage a team in emergencies and deal with challenges like those of the tsunami. And we structured it to benefit the entire humanitarian community,” says Mr. Bruni. **“That was the big achievement of this partnership. Very few organizations outside of the humanitarian community understand the meaning of preparedness.”** The foundations’ support of WFP enabled capacity-building and strengthening of emergency communications preparedness and response through four areas of activity:

1. ICT Humanitarian Emergency Platform

To capture and institutionalize lessons learned in the use of ICTs to respond to humanitarian emergencies, with Technology Partnership funded WFP to create the ICT Humanitarian platform website.¹⁹ It acts as a living hub for guidelines, discussions, stories, contacts, and case studies – a place to turn when looking for answers under pressure, when experts might be otherwise hard to reach.

The hub contains both a public section with general information and a private section with more sensitive information on specific countries. It is currently used by 1,200 people – the core of the emergency telecommunications community – who, as the lead providers of back-up communications systems in humanitarian crises, have impact that is felt throughout the system.



CREDIT: WFP ICT Humanitarian Emergency Platform



CREDIT: WFP/Dane Novarlic

2. Training

Partnership funding also enabled a dedicated training program open to the global community of humanitarian IT first responders. WFP teamed up with the Scuola Superiore Sant'Anna in Pisa and the Italian armed forces to create a semiannual, week-long training course for responders throughout the emergency response system.

The program offers a mix of classroom activities and live action, with participants undergoing intense simulations of frontline environments: coming under fire, negotiating minefields, facing high-stress events.²⁰

“It’s a dynamic experience, teaching you how to survive in extreme environments,” says Mr. Bruni. It also provides an important sense of context. “What does it mean to be a UN or NGO employee? What are your rights? What laws must you follow? What is the nature of your mission? We try to give the broader framework, and then ask: What does that mean to you?”

Equally important, the course offers a chance for professionals to meet in a non-crisis environment, share experiences, and build a sense of community. This has been essential to establishing a network of standby partners; a roster of trained personnel ready to deploy alongside WFP at a moment’s notice.

3. EMMA

To amplify the best practices being compiled and shared through the Humanitarian Emergency Platform web platform, the foundations also funded WFP to build a comput-

TESTIMONIALS FROM NGO PARTICIPANTS

“Great training – it gives you the feeling of a real life situation, when you have to deal with yourself, your colleagues and the environment.” –TAHUIDUR RASHID, UNICEF, Ethiopia

“It’s important for us to meet all together. It’s an opportunity to meet outside of an emergency, get to know each other, make a common language. It will make it easier in the field to work together.” –PETER GREETS, Catholic Relief Services, Kenya

“They managed to give us a sense of what it’s like to actually be in an emergency.” –OLIVER TORMEY, Irish Aid, Ireland

“We get to do things; we don’t just sit and listen to lectures; we actually get to do the exercises and work as teams.” –HENNING CARL BRENOE, WHO, Philippines

erized system to help early telecommunications responders plan more efficiently to meet the dynamic and often fast-changing needs in emergencies. What emerged was EMMA, the emergency management application.

When disaster strikes, the traditional approach is to find one of the few IT professionals with extensive experience to make a rapid assessment. The problem is that when they leave, so goes that knowledge, and their numbers are limited. “There were only five or six experienced responders who could do it like that,” says Mr. Bruni.

EMMA essentially simulates those experts. It asks the user to input a number of assumptions: where the disaster is, how many people are affected, how many responders are expected to arrive. It then produces an estimate for how much equipment is needed and the cost. It is a powerful tool that WFP has used in a variety of emergency deployments to get a response up and running within hours.

4. Rapid Response Fund

The Technology Partnership also provided funds to support rapid start-up operations – money that can be difficult to come by before the official funding for a crisis response

kicks in. In 2010 alone, this funding sent experts to deploy within 24 hours to respond to humanitarian emergencies in South Sudan, Pakistan, Kyrgyzstan, and Haiti.



CREDIT: WFP/Alexander Joe

Making the partnership work; lessons learned

By providing funding to meet WFP's need to strengthen its emergency IT preparedness and response, the Technology Partnership gave WFP much needed resources. By allowing WFP to determine what it needed and to design those tools, the foundations also provided WFP flexibility. The partners also developed resources that could help WFP and the IT response community for years.

At the same time, however, the Technology Partnership was traditionally philanthropic in its approach; involved in the design and monitoring but relatively hands-off when it came to the implementation of the actual program.

Looking back, some have questioned whether it would have made more sense to move from a pure funding model towards the transfer of know-how and expertise, integrating Vodafone more heavily into the structure. The company is, after all, a world leader in establishing communications networks in the developing world and has global reach and extensive experience in challenging environments. One result of this thinking was the 'World of Difference' program, an effort to share Vodafone's technical telecommunications expertise through four Vodafone employees who were placed in various WFP offices for a one year period (see box on page 59). Jorge Olague, a senior partnership manager in WFP's private partnerships division at the time, notes that "the corporate world has

very lean structures; it can be difficult to pluck someone out and assign them." Mr. Olague believes that organizations like the UN Foundation, due to their greater flexibility, can help those placements to take place.

Moving forward, Mr. Bruni is keen to see what more might be done. "Companies like Vodafone, Microsoft, HP, have expertise I cannot go on the market and buy," he says. "That is the value of a partnership."

Telling the story

The Technology Partnership also helped WFP tell its stories. The UN is used to reporting to traditional donors in the language of "situation reports," progress reports, and press releases. To reach a broader audience, WFP revamped its website and gave a voice to the aid workers behind the operations through video blogs, photos, and the use of social media. WFP has evolved into one of the best UN story-tellers, both externally and for an expert audience.

The Technology Partnership helped WFP create an outlet specifically for the voice of ICT emergency responders through the ICT emergency platform website. The ICT emergency platform website alone hosts a wide array of blog posts²¹ from emergency deployments in the Democratic Republic of Congo, Haiti, and Pakistan, as well as through a regular e-newsletter called "Wavelength." People more used to working on the technical side of programs found themselves also telling the stories – and some discovered a surprising talent for it.



CREDIT: WFP/Antonia Parabela

One video, for example, shows the challenges responders faced when conducting an assessment after the Pakistan floods.²² Another tells a story of humanitarian aid workers rushing to Haiti through Panama traffic – an element of the tale often forgotten amid the reports from international disaster scenes on the ground but an integral part of any deployment.²³

These blogs and videos helped demonstrate how telling stories aids internal communication, information sharing, and communication with donors.

Partnering with Télécoms sans Frontières

Five years ago, a dynamic, young NGO called Télécoms Sans Frontières came to the attention of the newly-formed Technology Partnership.

TSF, as it is known, was born in 1998 from a simple observation: During missions responding to crises in the Balkans and in Iraq during the first Gulf War, TSF's founders realized that, in addition to food, medicine, and shelter, victims of disasters had another fundamental need which was not being addressed: to communicate.

By the time TSF met the Technology Partnership, TSF had already deployed to crises across the globe, forging a long-term relationship with the European Commission's aid department, ECHO, in the process.

TSF's initial goal was simple: provide three minute phone-calls to people who found themselves in natural or man-made disasters. But TSF was also adding another string to its bow: supporting the communications infrastructure of other NGOs, local government responders, and even, from time to time, the UN, who had deployed to the same humanitarian crises. "We kept hearing from folks in the field all about TSF," says Paul Margie.

"It was the only organization consistently in the field in the first days, serving the full range of people. They were helping everyone."

TSF's work had attracted support from the Vodafone Foundation even before its partnership with the UN Foundation, but Mr. Margie saw a longer-term strategic opportunity: to marry the nimble creativity of a small NGO with the global reach of UN agencies.



CREDIT: Télécoms Sans Frontières

"We saw that expanding the ability of TSF to work with the UN [by supporting its communications infrastructure] would be a real added benefit," he says. "They already had the infrastructure and the expertise to do that but not the funding and the relationships. We enabled them to create a second and equal focus to their work: helping responders to do their work more effectively and efficiently, because they had better connectivity."

The Technology Partnership initially settled on a \$1.2 million, three-year grant, including a budget to pay for 192 deployment days for a three-person team carrying out TSF's emergency response activities and support for a stronger back office to manage donor relations and publicity work.

Over the next five years, TSF assisted multiple missions (see timeline on page 8–9) and forged deep relationships with UNICEF, OCHA (the UN Office for Coordination of Humanitarian Assistance), and WFP, including official status as a first responder in the UN's telecoms cluster (part of the UN's globally coordinated system to respond to humanitarian crises).

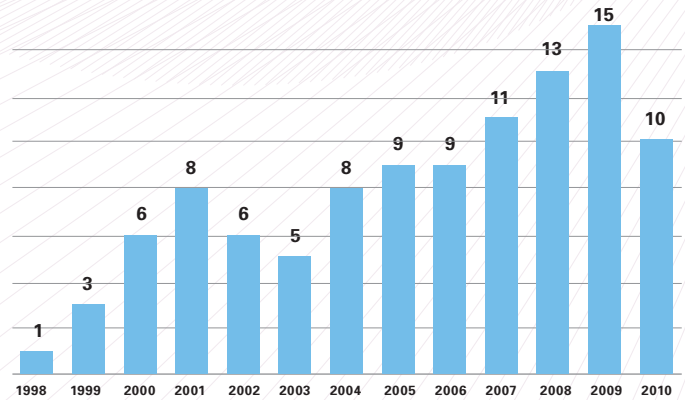
"They took to it very well," says Mr. Margie. "The organization grew, strengthened its deployment basis, and strengthened its training with the UN. Now, in emergencies TSF always establishes multiple response centers used by the other organizations that are assisting victims."

1998 – 2011

1998–2011 TSF Missions

- Missions in 60 countries
- Support to over 570 relief organizations
- Support to hundreds of thousands of people in need
- Average length of 1 deployment: 46 days
- On the ground all year long
- Average number of emergency missions per year: 8
- 4,750 days of deployment
- Number of emergency operations in 2010: 10
 - 8 deployments in emergencies
 - 2 capacity building programs following disasters

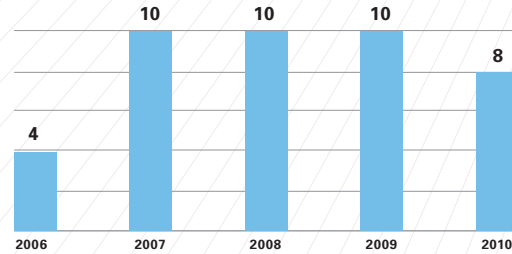
Number of emergency operations per year



2006 – 2011

Missions funded by the Vodafone Foundation and the United Nations Foundation

- TSF deployed to 42 missions across the globe, in 31 locations (see the global list of missions funded by UNF-VF Annex), supporting the victims of disasters and those helping them.
- 905 days of deployment
- Average number of emergency missions per year: 8.5



The impetus for forging a relationship with the UN

According to Jean-François Cazenave, TSF President, TSF always had a mandate “to support the whole of the humanitarian community,” but support from the Technology Partnership that enabled TSF to forge an MOU with UNICEF “allowed us to make that part of our mission official.”

“TSF and OCHA had been wanting this,” says Mr. Margie. “OCHA increasingly wanted to be able to deploy TSF when they activated the [emergency telecommunications] cluster.”

While OCHA had strong strategic thinkers in Geneva, it did not have many of its own telecom assets and saw an opportunity for outsourcing. “OCHA didn’t have as many boots on the ground as WFP or UNICEF, which probably led them to be more comfortable with the idea of working through an NGO. They developed a very close relationship,” continues Mr. Margie.

“When we saw that OCHA, the [other members of the emergency telecommunications] cluster and TSF wanted

to work together but needed additional resources, we thought ‘this is a great opportunity that takes advantage of Vodafone’s funding and marquee power, the UN Foundation’s coordination ability, and relationships within the UN,’” Mr. Margie says.

At the same time, it was clear that TSF valued its independence and did not want to become beholden to the UN. The grant from the Technology Partnership was structured so that the money went directly to TSF, but half was earmarked for use with the UN.

Monique Lanne-Petit, TSF director and co-founder, says the arrangement allowed the organization to partner with the UN while maintaining TSF’s independent character: “It was important for us to be integrated into the UN system. Since 2006, it has been a real partnership. That made a big difference for us as an NGO.”

OCHA and Télécoms Sans Frontières

Jesper Lund, a humanitarian officer with OCHA, says the relationship with TSF “started like a complete coincidence” during the earthquake operations in Bam, Iran in 2003-2004. TSF had arrived on the ground but had no authority from the government to set up humanitarian calling operations. Instead, TSF offered its expertise to the UN to create an Internet café.



CREDIT: Télécoms Sans Frontières

While the United Nations Disaster Assessment and Coordination system had a number of technical partners in Europe and Africa, it needed additional support capacity in Asia and Latin America. UNDAC formally agreed with TSF that it would swiftly deploy in the early phase of a crisis. The relationship blossomed when it became apparent that a highly capable and motivated TSF staff would do this job admirably.

Today, Mr. Lund says, TSF fills a niche, arriving immediately after a crisis and before other agencies can respond. “The advantage of TSF is their speed, their flexibility, their mobility. We just say we need you there, and they pop up. They are very entrepreneurial in finding their way and delivering their services. I have a lot of admiration.”

“They had sensed we were stretched, and that our phones were being used by other agencies,” says Mr. Lund. Even once TSF was ready to begin normal operations, it kept running the Internet café, which had become a gathering point for many NGOs operating in the area. After the crisis, TSF met with OCHA in Geneva to discuss the experience and decided there was an opportunity for a longer-term relationship.

While the United Nations Disaster Assessment and Coordination system had a number of technical partners in Europe and Africa, it needed additional support capacity in Asia and Latin America. UNDAC formally agreed with TSF that it would swiftly

Challenges in building relationships – institutional and cultural

The Technology Partnership calculated that an important way to strengthen TSF’s relationship with the UN would be through a Memorandum of Understanding between each of the main players in the UN’s emergency telecoms cluster: UNICEF, OCHA, and the WFP. (WFP has since become the sole global cluster lead.)

This turned out to be a difficult task. An MOU was reached with UNICEF, but similar efforts with OCHA hit legal problems. “The UN is not built to do these kinds of deals,” says Mr. Margie. And in retrospect, Mr. Margie is no longer sure that creating a formal MOU – his initial instinct as a lawyer – was necessary. “I went in thinking establishing these MOUs was critical. But I don’t know if I saw a big operational difference with the organizations that we had an MOU with, as opposed to the ones we didn’t.”

“The way these things work on the ground is so different from the way they work on paper. The most important

thing is establishing relationships between people on the ground – and that’s about putting people together physically, training them together, and having them trust each other.”



CREDIT: Télécoms Sans Frontières

(UN officials nonetheless say that – while difficult – MOUs are possible to reach and can be extremely helpful in laying out clear responsibilities ahead of a crisis.)

The cluster system also has engendered new forms of cooperation which do not necessarily require a formal bilateral relationship. The telecoms cluster, for example, is debating a more systematic MOU with NGOs or establishing an NGO coordinator in place of multiple bilateral agreements.

According to Jean-François Cazenave of TSF, there are not that many people who work in emergencies, and a strong community had established itself in the field. “The agreements with the UN accelerated a process of getting to know each other, which was already there. The family of emergency responders – whether the UN or NGOs – is small.”

“The difference is that before we had this agreement, people were happy to see us there. Now they know we will be there.”

Haiti response 2010

On January 12, 2010, a 7.0 magnitude earthquake devastated the Haitian capital of Port-au-Prince and outlying regions. More than 200,000 were reported dead, and 1.5 million left homeless.



CREDIT: Télécoms Sans Frontières

From its base in Nicaragua, the first TSF team hit the ground the day after the quake struck. A second team arrived from TSF’s headquarters on January 15.

Within the 48 days of TSF’s mission, 12 trained staff and volunteers with highly sophisticated telecommunications equipment were deployed from France, the U.S., and Nicaragua. Including local staff, 38 people contributed to the provision of TSF’s relief in the field.

With Haiti’s landlines and GSM network down, TSF immediately provided IT support and satellite connections for the humanitarian community based at the airport, as well as launching a humanitarian calling operation for the affected populations.

High-speed connections were set up in strategic coordination centers for UN agencies, the European Commission, local and international NGOs, and local authorities. Phone and Internet connections and wi-fi access points were established.

“During the first days of operations, it was impossible to make a phone call, but a huge number of text messages were being sent by people trapped under the rubble. We unsuccessfully tried to find them with paper maps but ended up using the Web or accessing mapping databases or Google Earth,” says Emese Csete, Head of MapAction, working at the coordination center in the Haiti search and rescue camp.

“The TSF guys worked so hard to keep our Internet up and running, making it run faster and facilitating IT support. We’ve had a really positive working relation with them in all our deployments. I really respect the work they are doing, and the way they are doing it.”

According to Michael Sullivan, ICT officer for OCHA: “TSF, as standby partner, has done an incredible job. They arrived very quickly and provided appropriate services, initially setting a BGAN and two days later a VSAT, which means that connectivity was very good in the very initial part of the response.”



CREDIT: Télécoms Sans Frontières

The evolving partnership with the Vodafone Foundation and Vodafone PLC

The Vodafone Foundation had already been an important TSF partner before the Technology Partnership, but its support was primarily philanthropic and focused on TSF's humanitarian calling program for the affected population (rather than for other responders).

Over time, however, their relationship deepened to the extent that Vodafone PLC is now looking into commercializing a product developed in tandem with TSF (see "instant network" box).

"When we created the partnership, the Vodafone Foundation was very eager to make sure that all of their investments in the humanitarian space were strategic – that they were pointed toward a set of well thought-out goals," says Mr. Margie.

Over the five years, that sense of strategic partnership has grown considerably, away from pure philanthropy to a far closer alignment of core competencies, the provision of hardware, and the transfer of know-how. Vodafone has spent increasing amounts of time with TSF in the field, learning first-hand what the relationship with the UN looked like in practice.

In mid-February 2011, the Vodafone Foundation announced that it would provide core financial support for TSF for the next three years, to the tune of \$1 million total.

But equally significantly, Vodafone the company has committed to providing TSF with equipment and expertise.

Now a board member to TSF, Mr. Margie reports that "The relationship [with Vodafone Foundation] is still a philanthropic one. But separately, Vodafone is directly working with TSF in terms of R&D, to help TSF come up with the next generation of emergency response technologies."



CREDIT: Télécoms Sans Frontières

Vodafone employees have been sent to TSF headquarters to work with technicians to brainstorm what's coming next and to make sure Vodafone's expertise will be used in support.

And the relationship goes both ways. Vodafone is at the cutting edge of technology design, but TSF is very much in the forefront of making that work in extreme circumstances. The marriage of the two is a powerful combination.

Instant Network

In mid-February 2011, the Vodafone Foundation announced that it would provide core financial support for TSF for the next three years.



CREDIT: Télécoms Sans Frontières

“Thanks to its innovative design, the prototype can be packed into three suitcases which can be transported on commercial flights, avoiding the inevitable delays that surround cargo deliveries of bulkier equipment.”

The organizations ran trials of the prototype in a simulated emergency situation in the Pyrenees in Spain and are now evaluating the technology to see how it might be used in real operations.

And the system initially designed for the public good now appears to have potential commercial applications.

“Arising from partnership with TSF over the last 12 months, we have developed a product called Instant Network,” says Andrew Dunnett, head of the Vodafone Foundation. “This came out of TSF’s experience in Haiti, where they felt an instant GSM network would be extremely useful.”

Its primary aim, he says, was philanthropic – it was not designed with the market in mind. But now that it is finding a commercial application, he will be happy to hand the product over to the corporate side.

“We didn’t start Instant Network with a commercial thought. We were purely focused on what we could do following Haiti. That’s where a foundation framework is a very good thing.”

This greater involvement from Vodafone corporate side is a prime example of the evolution in thinking about how public-private partnerships should work – evolving from pure philanthropy towards a much deeper marriage of know-how and expertise. Both sides have found a long-term interest in developing socially useful services at scale.

Equally significant, it announced that Vodafone the company would be on-hand to provide TSF with innovative mobile equipment for use in emergency situations alongside technical expertise from its employees. One of the most intriguing results has been the creation of a prototype “instant network” that can be deployed at the earliest moments of a crisis.

“Vodafone experts, working alongside Huawei at its Mobile Innovation Centre in Madrid, have developed a prototype portable GSM network that can be set up to handle free local calls among relief workers in less than 40 minutes,” the Vodafone Foundation announced. (Huawei is a multinational corporation headquartered in China that manufactures networking and telecoms equipment.)

On the Libya-Tunisia border 2011

In mid-February 2011, a series of anti-government protests in Libya turned into a major conflict between the regime of Muammar Gaddafi and an armed rebellion based in the eastern town of Benghazi.



CREDIT: Télécoms Sans Frontières

Tens of thousands of refugees fled the country; Télécoms Sans Frontières deployed to the transit camp of La Choucha on the border between Tunisia and Libya.

On February 25, TSF began conducting humanitarian calling operations at the camp's entrance, providing more than 33,500 three-minute international phone calls to 25,000 displaced families in the first two months.

The need was significant. One month after its operations began, 70% of the refugees who benefited from TSF's humanitarian calling operations had made no other contact with the outside world since the beginning of the uprising. Two months later, 50% of the calls offered by TSF represented the first contact of displaced people with the outside world.

This assistance went beyond simple phone calls.

"We enabled a group of refugees from Ghana to call their families to tell them that they were still alive. But every day, we saw them near TSF's satellite phones," notes one member of the TSF team. "There isn't a Ghanaian Consulate in Tunis. We decided to contact the Consulate in Algeria. Following that phone call, the Consulate reassured the Ghanaian refugees that they would receive official assistance – which they did. Indeed on March 1, the Representative of the Consul himself came to the transit camp to repatriate his fellow countrymen."

TSF offered its services to other relief agencies, establishing a wi-fi connection using satellite equipment and a wi-fi router. The connection benefits the International Organization for Migration teams, the local authorities, and the medical teams who are helping the refugees in the camp. TSF also provided tech support to IOM and UNHCR (United Nations High Commissioner for Refugees) teams.



CREDIT: Télécoms Sans Frontières

Mobile food vouchers and the Vodafone employee placement program

For the most part, the Vodafone Foundation's contribution to the Technology Partnership was traditionally philanthropic, focused on high-level concept, strategic decision-making, and evaluation.

But the partners decided that there would be considerable value in encouraging more direct engagement between

Vodafone employees and the Technology Partnership's work, both for the humanitarian partner and for the company as it seeks to recruit and retain motivated staff.

As a result, the UN Foundation, Vodafone Foundation, and WFP launched a \$300,000 employee placement program that offered four Vodafone employees the opportunity to work directly with WFP for a year.

One Vodafone employee was Paul McCann, a lead system integrations project manager who worked from 2009-2010 with WFP in Senegal, West Africa and blogged at <http://paulindakar.blogspot.com/>. The following interview captures some of the lessons he learned on the front lines of emergency relief.



Photo courtesy of Paul McCann

What was the highlight of your placement?

While I oversaw about 12 projects during my one year [employee placement], the highlight of my time was working on a disaster relief project in Burkina Faso's capital, Ouagadougou. This was focused on piloting a project that would allow shopkeepers to manage food vouchers through wireless technology. It highlighted the penetration of mobile phones in developing countries and the ability to apply them in different ways for the benefit of communities in the developing world.

What was the key aim of the Mobile Voucher project?²⁴

Around 30,000 people currently receive hologram-imprinted food vouchers in Burkina Faso. Vouchers are exchanged for goods in local grocery stores, and shopkeepers are then reimbursed in cash by the World Food Program once a month. The pilot I was involved in was focused on exploring ways to use wireless technology to make the current system more efficient. Submitting the unique voucher code through a wireless platform, such as SMS, allows for real-time verification and eradicates the possibility of voucher fraud. It also ensures faster compensation for shopkeepers, as the World Food Program would be able

to refund them the next day either by bank transfer or by check. Crucially, it also gives local NGOs information about where and when the vouchers are being used.

What advice would you offer for anyone involved in the program in the future?

Flexibility is key. Before you arrive, you can't begin to anticipate or understand the communities and organizations you are joining. It is a huge learning curve.

Now back in the UK, my experiences in West Africa have definitely given me a different point of view as well as new skills. Being able to make a difference and work abroad was a great opportunity. The only advice I have for anyone thinking of going on this program is: Go for it, it's a fantastic experience!



Photo courtesy of Paul McCann

Chapter 4: Lessons Learned

TECHNOLOGY

PREPARE FOR THE NEXT CRISIS BY LEARNING FROM THE LAST

- On the ICT website, the Technology Partnership helped the WFP build a compendium of shared knowledge, experience, and advice available to the humanitarian community before the next crisis hits.
- These partners also funded and trained teams to deploy quickly to crisis, wherever it occurs.

USE TECHNOLOGY

- The Technology Partnership supported EMMA, a computer system designed to make readily available information about disaster response communications formerly held by only a few IT experts.
- In an emergency response, the rapid deployment of a comprehensive communications system is often the key to long-run success.

PARTNERSHIP

PARTNER TO FILL FUNDING GAPS

- When WFP saw the need for a compendium of best practices for emergency response and teams of trained responders, the Technology Partnership stepped in to provide funding continuity between WFP's disaster-related budget streams.
- The Technology Partnership provided funding and support for emergency rapid response teams that could deploy to crises before official emergency money started to flow.

BE FLEXIBLE

- The Technology Partnership gave the WFP broad latitude in designing programs to fill the knowledge and training gaps that opened between emergency disaster responses.
- The Technology Partnership structured funding for the TSF's collaboration with OCHA to maintain TSF's independence.

REVIEW, REVISE, REPEAT

- Be willing to question even your successes: There were clear benefits to the Technology Partnership's hands-off approach to managing its work with WFP and TSP; however, the success Vodafone had in partnering with TSP suggests that the Technology Partnership may have missed similar opportunities for tech and experience transfer.
- Assessment of partnership projects from outside professionals can help improve program design and identify ways to build in long-term sustainability.



events

experts

CHAPTER 5



communications



THOUGHT LEADERSHIP

advocacy

public outreach

This chapter examines the thought leadership activities of the Technology Partnership which comprised a series of timely papers written by leading experts and events that brought them together. It also included significant communications, advocacy, and public outreach that proved crucial to alerting a wider audience to the profound changes underway. The chapter reviews the most significant products, including landscape studies on mHealth and emergency communications, that have helped define those fields and lay the basis for a remarkable flourishing of the debate. And we examine the pioneering Disaster Relief 2.0 report, which takes an in-depth look at the communications response to the 2010 Haiti earthquake.

The Technology Partnership aspired to more than backing good works with measurable results. It also sought to create a center of gravity and debate around its main areas of exploration – mHealth and emergency communications – through demonstration, studies, and expert meetings, supported by media advocacy work to promote the ideas raised there.

This was work the Technology Partnership was well-placed to do. UN agencies and other humanitarian organizations are often project based – focused upon the moment – and have limited capacity to assess their work from a distance.

The Technology Partnership hired some of the world's leading experts to write a series of papers that planted a flag on emerging new fields and framed discussions for policymakers, offered a starting point for newcomers. The act of researching and writing these reports had a galvanizing effect, as a burgeoning communities of practices settled upon forms of language and agreed upon the predominant challenges that lay ahead.

“This is the stuff everyone was reading in the field,” says Jody Ranck, an eHealth expert currently working with mHealth Alliance to create an online hub of best practices. (See box on Health Unbound, on page 60)

“These papers were incredibly important in showing what’s happening right now; what’s the state of the art, and what are the limitations? In introducing the concept of the value chain, documenting who’s doing what.

“They provided the central language we used for reference in almost any conversation I had about global mHealth

and became the background readings to the field. You can see how often these reports were tweeted and generally discussed. There was simply not that much to compete with them.”

This chapter will examine some of the highlights of that work, much of which remains fresh to this day.



CREDIT: UN Foundation

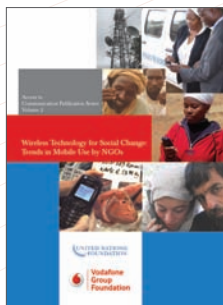
Haiti

Landscape papers



2006: Mobile Banking and Low-Income Customers – Evidence from South Africa | Authors: Gautam Ivatury and Mark Pickens

This study offered a timely alert to one of the more unexpected recent developments in the developing world: mobile banking. Its value is underlined by a growing consensus that mBanking will be crucial to the development of large-scale mHealth solutions.



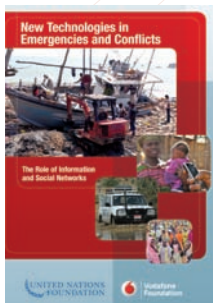
2008: Wireless Technology for Social Change: Trends in Mobile Use by NGOs | Authors: Sheila Kinkade and Katrin Verclas

This review described a wake-up call, which charted the degree to which the mobile phone revolution has become integral to the work of many NGOs in a way that fundamentally changed the way they conduct business, from mobile health to emergency communications to environmental conservation.



2009: mHealth for Development | Author: Vital Wave Consulting

This report marked what many believe to be a seminal moment in the development of mHealth, a technophile's dream on the brink of becoming a reality in many countries of the developing world.



2010: New Technologies in Emergencies and Conflicts – The Role of Information and Social Networks | Authors: Diane Coyle and Patrick Meier

The 2010 earthquake in Haiti galvanized the debate about how to use mobile technologies in a crisis. This paper had already laid much of the groundwork for that debate, both highlighting opportunities in early warning, coordination, and post-crisis recovery and alerting users to the potential pitfalls that come with real-time data.



2011: Health Information as Health Care – The Role of Mobiles in Unlocking Health Data and Wellness | Author: Jody Ranck

Presented to the Mobile World Congress in Barcelona, this discussion paper took a deeper look at the role information technology can play in improving access to quality healthcare information and the steps required to make that happen throughout the information chain.

Communications and advocacy

Making information more widely available to citizens cuts to the heart of the open-source, open-data philosophy of the mobile revolution and has sometimes led to dramatic results.

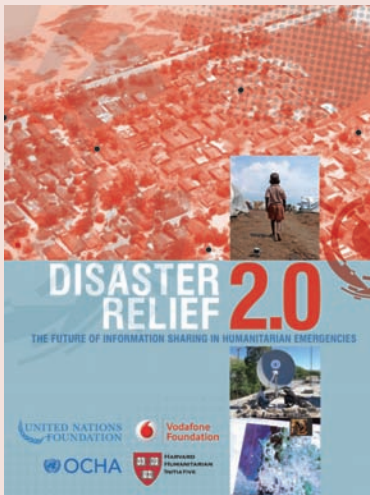
Over its five years, the Technology Partnership devoted considerable resources, both in-house and with external PR consultants, to ensure its work was debated in traditional and new media, sparking lively debates in the blogosphere and social media sites.

Disaster Relief 2.0

On Jan 12, 2010, a magnitude 7 earthquake struck the Caribbean nation of Haiti, destroying large areas of the capital, Port-au-Prince, and beyond, killing hundreds of thousands and leaving 1.5 million people homeless, many in ad hoc displacement camps.

A bewildering array of organizations from different backgrounds, traditions, and philosophies congregated in Port-au-Prince to help.

Less visibly, however, another unprecedented aid effort came together, this one in offices and living rooms across the developed world. The collapse of infrastructure and government (including the UN itself) had left the Haiti response with an enormous “information gap.” Thousands of ordinary citizens outside Haiti “mobilized to aggregate, translate, and plot information provided by Haitians through mobile phones. Hundreds of geospatial information systems experts – through OpenStreetMap – used fresh satellite imagery to rebuild missing maps of Haiti and plot a picture of the changed reality on the ground.



This was a new phenomenon, and the Technology Partnership set out to examine it through a groundbreaking report, Disaster Relief 2.0: The Future of Information Sharing in Humanitarian Emergencies.

Much has been written about this new kind of response, often trumpeting that this technology had revolutionized the aid effort, saved countless lives, and marked an entirely new approach to humanitarianism.

The reality in Haiti was more nuanced. Humanitarians often did not know how to interpret and use new flows of data or know that the data existed at all. “The international humanitarian system was not tooled to handle these two new information fire hoses – one from the disaster-affected community and one from a mobilized swarm of global volunteers,” the report says.

As a result, Disaster Relief 2.0 sets out an ambitious agenda to close that gap in the future, to cross the cultural divide between two previously unlinked communities – humanitarian aid workers and technologists – to optimize technology.

This includes calls for an “API” for the UN...with the core notion being that the UN should partner with volunteer and technical communities to establish a common set of protocols to connect their people, workflows, and data flows.

“This fusion also opens another possibility: the analysis of patterns, trends, and problems based on lessons from previous emergencies. Among UN staff, there is a growing interest in exploring the creation of an ‘information management cluster’ to perform this role.”

The report also calls for a safe or neutral space in which experts can experiment and try out new ideas away from the intensity of an active crisis or the daily requirements of headquarters’ life.

“It is hard to try new ideas when one is being rated for one’s competency,” the report argues, “There must be a place to experiment and fail.”

This helped to generate dozens of articles in some of the world's leading news outlets including the New York Times, Wall Street Journal, Guardian, Independent, Financial Times, Economist, and BBC. Technology Partnership-funded work also was featured in highly-trafficked online technology websites like Boingboing and Slashdot, in leading health outlets such as The Lancet and Global Health magazine, as well as in tech and trade outlets like Fast Company and Wired. The Technology Partnership made regular and early use of social media tools like Twitter, as well.

Adele Waugaman, who led the Technology Partnership from December 2009 through its close in June 2011, initially served as communications director and oversaw much of its public outreach.

“One of the great contributions of this partnership is to shine a spotlight on the critical importance of effective communications in development and humanitarian work – how, in a time of crisis, for example, a mobile signal or internet connection can be a lifeline that enables essential time-sensitive information sharing,” Ms. Waugaman says. “But the smooth flow of essential, accurate, and understandable information is just as important when disasters fade from news headlines. This is equally true for aid workers and developing communities and for the individuals and organizations that support them.”

The impetus for Ted Turner's 1998 \$1 billion donation to the UN Foundation was to establish an advocate for the UN's work, showing Americans and citizens around the world how the UN serves an important role in fighting hunger and disease and supporting peace and security where no single actor would be able to.

“Instead of focusing on traditional activities such as providing food and medicine, the Technology Partnership funded programs ensuring effective communications, whether through mobile data collection devices, the construction of an effective back end for UN communications experts, or through public relations support that has helped our partners get the message out about the importance of their work,” Ms. Waugaman says.

The Technology Partnership's focus on effective communications also associated the Vodafone brand with work showcasing the transformative power of mobile telecommunications technologies for social good. Further, that



CREDIT: UN Foundation

focus provided a stream of information about how the UN was embracing innovation to make its work more effective and efficient, a boon for the work of organizations lobbying for full UN funding on Capitol Hill.

Ms. Waugaman continues: “In the short lifetime of the partnership, we've seen a dramatic shift in human connectivity with more people around the world now connected by mobile devices than not. This, along with the rise of social media and blogging sites, is changing the way we communicate – as individuals, as businesses, as development groups, and as societies. The voice of the individual will fundamentally change humanitarian and development work by providing more and more real-time feedback on what is needed, where, when, how, and why.”

Increasingly, local voices – be they those in disaster-affected communities or those of concerned citizens worldwide – will shape the way aid work is conceptualized and delivered. This trend is explored in the Partnership's Disaster Relief 2.0 report (see box on page 57), which captures the opportunities and challenges associated with the new channel for coordination between humanitarian groups and the broader public that the rise of web access and mobile connectivity has enabled. Notably, the report also contained a glossary of key terms, helping to create a common language between the technology and humanitarian communities, for whom words (“development,” for example) can mean very different things.

The Bellagio meeting

The Technology Partnership didn't rely just on media to pave the way in thought leadership, it also used its convening power to advance discussion of new ideas. One such meeting that proved fruitful in determining future directions for the foundations' mobile health work was a July 2008 meeting in Bellagio, Italy that the Technology Partnership organized in partnership with the Rockefeller Foundation.

For one week, 25 leading lights - academics, industrialists, technologists – in the field of mHealth gathered in Rockefeller's Bellagio Center, by Lake Como in northern Italy, and charted out an ambitious agenda for taking mobile health to the next level, from pilot projects to large scale project implementation and adoption.



CREDIT: UN Foundation

“For the first time everyone in the whole field in mHealth was gathered in one place,” says Claire Thwaites, who headed the Technology Partnership at the time. “It was the first time we all sat together in a room,” says Patricia Mechael, director of strategic application of mobile technology for public health and development at Columbia University’s Earth Institute.

“We were put together in a room, literally for five days,” says Professor Krishnan Ganapathy, an Indian neurosurgeon and president of the Apollo Telemedicine Networking Foundation and the Telemedicine Society of India. “We were locked up there and had nowhere else to go, and nothing else to do than to discuss mHealth. I really think that was the turning point; those five days in Bellagio made a terrific difference not only to me but to all those involved at that meeting.”



CREDIT: UN Foundation

While many players had been exploring the field for a while, attendees say Bellagio put mHealth on the map, identifying mobile solutions as a uniquely vibrant aspect of the more general field of eHealth.

A rich set of background papers and presentations, including a landscape analysis by Brooke Partridge of Vital Wave Consulting, were crucial to marking the mHealth moment and defining the state of play.

The Bellagio meeting also helped crystallize a community from diverse fields, many of whom have stayed in touch to this day.

On a practical level, the meeting also spawned a number of new collaborations, including a maternal healthcare project with ComCare (see box on page 36).

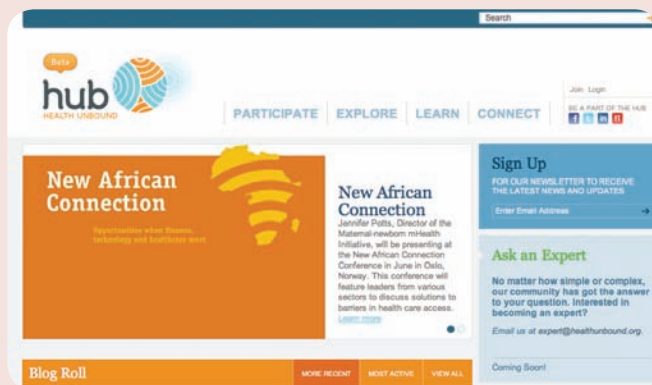
But perhaps the most notable big idea emerged at the end of the session. On the last day, Professor Ganapathy says, participants were asked to suggest what was most needed to move the field forward. What emerged was a call for a new convening body, bringing together mobile operators, health providers, and leading thinkers under one roof.

That idea took form with the launch of the mHealth Alliance, which has attracted thousands of participants to its events (see chapter 5).

Health Unbound (HUB)

A core feature of the mHealth Alliance's work is curating and promoting cutting edge information to be shared within a diverse community of actors.

Central to that is the creation of the HealthUnBound website, currently undergoing a significant redesign to align it with its ambition to become a primary meeting place for people interested in not only mHealth but eHealth as a whole.



Jody Ranck, who has a doctorate in health policy and is leading thought leadership work for the mHealth Alliance, speaks about ambitions for the HUB site in this interview.

The Goal

The last thing we want is an uncoordinated, fragmented global eHealth ecosystem. We know what the result of that is – you get something like the U.S. or EU's health IT infrastructure, which is profoundly dysfunctional, very expensive, and not realizing the full promise of the technology.

The 'HUB' – or HealthUnBound.org – has stepped up to connect everyone in eHealth and mHealth, so we can work collaboratively, surface critical issues that need greater policy attention, find out who's doing what and where, and facilitate greater collaboration.

Developing countries are in a position where they can leapfrog the un-interoperable fragmented systems of the west. They can do this right and transform health systems, if we all get on the same page and have conversations about interoperability, standards, how we are going to assess these tools, and focus on the most critical policy issues.

Audience

Users might include health workers in developing coun-

tries, technology developers, social entrepreneurs, technology policy makers, people interested in monitoring and evaluation, or private sector folks interested in working in developing country contexts.

We want to make it easy for people to find out who's doing what and where. If you need local expertise or technology expertise or policy frameworks or you are doing research, we have a lot of content that's tagged and mapped. We want to make it easy to find the right information and the right people.

Blogs and workspaces

We are launching a blog to keep track of trends and interesting development with guest bloggers and so forth. You will have the ability to follow other users as they blog and post new content or tag new content.

Anyone we allow to use the site can create a workspace around a topic. For example, there are folks interested in 'how do we evaluate?' or 'what are the best evaluation methodologies or standards?' They've created a workspace and invited people from the community to post content, so they can discuss it and share what they know about what's going on.

Online peer review

If another goal is to create an open access peer review journal that is a lot less academic and more nimble, then that gives an opportunity to developing country researchers and practitioners to publish things rather quickly.

“Things are moving so quickly in this space that if you take the usual peer review academic journal route, by the time you publish it, often it's not going to be relevant anymore. So you want something less formal to enable provocative new knowledge to be posted quickly.”

We would have networks of reviewers with short timelines to respond. My inspiration is the Public Library of Science, an open access peer review journal that responds much faster than other publications. We are riffing off that but for a technology space that's moving a lot faster than science does in general.

Making things simple

Thought leadership is assuming the role of translator be-

tween different communities. For example, 99.9 percent of public health trained professionals have never had to negotiate with a telco: how you use SMS. But there are organizations which are developing templates, or frameworks, – ‘Telco Negotiation 101.’ The HUB will be a place where they can post those, disseminate them, and people can [build] off of that.

What I would like to do is not just write white papers but also use visual tools, so people can see the ecosystem: What are the trends and drivers, what are the tools and frameworks for how we work in this space? So if you sit with a minister of health, they can easily understand what are the technology components and how do they fit in.

Technology Salon

A safe space to debate failure

In 2007, Wayan Vota – who, at the time, worked for a technology non-profit program called Geekcorps – decided it was time to bridge the divide between technology geeks and development practitioners.

“I realized that most development practitioners had no clue how to utilize geeks in their programs. I thought ‘How do I get them to understand that geeks have something to offer’, in a client or beneficiary-facing way, rather than just sending us to the internal IT team to reconfigure their server?” he says.

It was an important moment as development professionals were coming to understand that the decade’s flowering of information and communications technology had applications significantly beyond their back offices but weren’t sure how to speak to the people making it happen.

So Mr. Vota created the Technology Salon,²⁵ an experiment in “getting the geeks and the development professionals to talk to each other.” After he started using the UN Foundation’s conference room in Washington, the project came to the attention of Mitul Shah, a member of the team identifying projects for the Technology Partnership.

“He pulled me aside one day and said ‘we have to talk,’” says Mr. Vota. “I thought ‘oh no, we’re going to get kicked out’. In fact, Mr. Shah offered to sponsor the Technology Salon.

Fast forward, and the Technology Salon today hosts monthly events, serving a network of 800 technology experts, non-profit workers, and government development professionals. The meeting is a safe space where a maximum of 25–30 people at a time are free to discuss ideas, make connections, and plot new projects. The participants include senior representatives from the corporate and government worlds, who brainstorm what works and – crucially – what doesn’t, without the fear of repercussions.

“One of our great successes has been the ability to have people talk about their failures. ‘We tried this, it fell over.’ ‘We tried that, it worked but didn’t reach as much as we thought we were going to reach.’”

The reason why people go to the Technology Salon, however, is because deals result from it. Mr. Vota can’t, due to anonymity rules, talk about exactly what deals came about, but he notes that private funding has resulted from meetings and that he is aware of at least \$125 million in new contracts influenced by participation in the Technology Salon.

partnerships

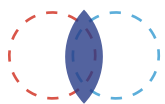
collaborations

CHAPTER 6



RESEARCH • TECHNOLOGY • POLICY

November 8-10, 2010 • Washington, DC



mHealth Alliance

A LASTING LEGACY

DataDyne

Télécoms Sans
Frontières

Chapter 6 examines the mHealth Alliance, which embodies current thinking about the need to move from bilateral partnerships to networks of many actors – from multiple backgrounds – gathered around an issue which needs particular attention. The chapter looks at the longer-term prospects for two of the partnerships’ non-UN collaborators: Télécoms Sans Frontières, for whom the partnership was a primary and thus essential source of funding, and DataDyne, which has ambitions to establish a “freemium” commercial model that can create sustainable revenue for DataDyne while enabling the majority of EpiSurveyor users to receive the service at no cost. Finally, it considers how the work initiated by the Technology Partnership will be carried on by its UN partners, including WHO and WFP.

The mHealth Alliance

By 2009, the Technology Partnership had already begun to achieve one of its major goals: to “call out” the importance of mHealth as a crucial opportunity for public health policy. This happened both through demonstration, such as the work with DataDyne (see chapter 3) and WHO (see chapter 4), and through thought leadership (see chapter 5), such as the Technology Partnership’s widely cited mHealth for Development report.

But the partnership had achieved something equally important: the nurturing of a community of experts who knew each other, talked to each other, and shared a common interest in seeing their ideas come to fruition on a much larger scale. The initial highlight of this community-building took place at the pioneering 2008 conference in the Rockefeller Foundation’s Bellagio Center by Lake Como in northern Italy (discussed in detail in chapter 5).

“At that conference,” says Dr. Patricia Mechael of the Earth Institute, an idea emerged: wouldn’t it be useful to create a coordinating body which could “link industry with what was happening already with NGOs and technology for development groups; to link with academia, to improve the evidence base.” The participants suggested the Alliance be hosted by the UN Foundation.

And so was born the mHealth Alliance, launched in early 2009 at the GSM Association Mobile World Congress. Its founding partners included the UN Foundation, Rockefeller Foundation, and Vodafone Foundation. In 2010, the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), the GSM Association, and HP also joined as found-

ing partners. The mHealth Alliance is the embodiment of an increasingly popular idea in public-private partnership thinking: the creation of a network of people from various backgrounds centered on an issue, which can actively curate information, seek and promote common solutions and standards, and engage in high level advocacy.

It has already hosted two major mHealth Summits with the Foundation for the National Institutes for Health in Washington, with the 2010 event attracting more than 2,500 participants from nearly 50 countries.



CREDIT: Foundation for the National Institutes of Health (FNIH)

“The digital divide is ending not through a burst of civic responsibility, but mainly through market forces.”—JEFFREY SACHS, director of Columbia University’s Earth Institute²⁶



CREDIT: UNICEF/Mark Schaefer

In June 2011, the mHealth Alliance co-hosted with the GSM Association the inaugural GSMA-mHA Mobile Health Summit in Cape Town, South Africa, bringing together leaders from global health and mobile industries in a developing country. The Alliance also has built a web hub – healthunbound.org (see chapter 4) – which aspires to be a preeminent center of information-sharing throughout the community.

David Aylward, the Alliance’s first Executive Director, says the team quickly realized that with so many areas of potential focus, it was important to settle on a few high-return activities.

“The thinking evolved into a focus for the Alliance on two large areas: one is convening and information sharing, and the other is the establishment of models of what mHealth could be, should be, and needs to be,” says Mr. Aylward. He laid out his vision in the following interview:

How would you describe the current moment in mHealth?

We are beyond the individual proof of concept phase, hopefully, although people keep doing a lot of that. What we have not yet gotten to is seeing mHealth as the extension of an integrated digital health system.

Is there still a need to “call out” mHealth as a separate issue?

We won’t succeed if we narrowly use these tools to accomplish in a wireless and digital form what we already do

today, because what we do today is failing. There needs to be a transformational element to this that mobility makes possible. A friend of mine refers to this as distributed health. We have had six decades of consolidating health, bringing people into bigger facilities. What we are talking about here is the opposite.

That really is different, qualitatively and quantitatively. And so I think at least for the next few years it’s useful to think about mHealth, because it makes people get outside of the traditional box.

Where is this most likely to happen?

We’re not sure, but one indicator will be to combine mHealth with other mobile services, specifically mobile payments. In the maternal health area, one of the barriers to going to a hospital to have a baby is that you don’t have the \$30 or \$40 you need to pay the bill. But while people don’t have \$40 in their pocket, they do have the ability to create a “pregnancy account” to save a small amount of money over time using their phones.

Similarly, one of the great inefficiencies of the system is paying your workers. Integrating m-payments into mHealth is a very interesting topic. We have looked to the countries where m-payments have taken off, such as Kenya, the Philippines, Bangladesh.

How will this change existing systems?

What we are able to do is put enough information into the hands of workers on the front line that they can perform real medical functions. We are able to give them diagnostic devices that allow them to diagnose a whole range of illnesses with no formal medical training. And they have computers do it – which make fewer errors.

We have information systems that are able to compare the results from hospital A to hospital B to report whether government doctors show up on time or come at all. This is also profoundly threatening.

One needs to come up with a model that shows how doctors can manage many more patients and come out ahead financially by running an efficient system. Nobody’s really quite done that yet.

The UN Foundation, which hosts the mHealth Alliance, is providing both in-kind and financial support and the Vodafone Foundation, along with the Rockefeller Founda-

Mobile Mamas

May 2011 saw an encouraging demonstration of new partnerships in mHealth with the launch of the Mobile Alliance for Maternal Action (MAMA) – a marriage between the U.S. Agency for International Development (USAID) and the health-care giant Johnson & Johnson – and of which the mHealth Alliance and UN Foundation are supporting partners.

MAMA plans to “harness the power of mobile technology to deliver vital health information to new and expectant mothers,” and expects to mobilize \$10 million for work in three countries – Bangladesh, India and South Africa – over the next three years.



CREDIT: Paul Morogi

www.mobilemamaalliance.org

“If we are going to improve public health across the developing world, our solutions must be focused on reaching the hard to reach with health information they would otherwise not receive,” USAID Administrator Dr. Rajiv Shah said in a statement. “This partnership will harness the power of mobile technology to provide mothers with information about pregnancy, childbirth, and the first year of life, empowering these women to make healthy decisions for themselves and their families.”

“Instead of imagining a world where the health of mothers benefits from mobile phones, we are answering the call today to make it happen,” said Kathy Calvin, the UN Foundation’s CEO.

tion, recently announced the renewal of its support as a founding partner. New support from HP and NORAD, the development arm of the Norwegian government, was announced at the 2010 mHealth Summit in Washington.

The mHealth Alliance will build on and sustain the groundswell of mHealth activity, including the pioneering efforts of the Technology Partnership, and maintain a strong focus on thought leadership and convening by bridging a diverse ecosystem that includes governments, UN and other intergovernmental agencies, non-profits, corporations, academia, and social enterprises.

Its goal – to make quality health information and service as ubiquitous as the mobile phone – is ambitious, and one whose success will hinge on the partnerships it can build along the way.

DataDyne and TSF – A Sustainable Future?

One of the most difficult challenges facing philanthropists is to build in – from the start – a plan for the long-term survival of their projects.

When the Technology Partnership began, it was charting new territory, learning what it could and should be. Over

time, it became clear that one of the partnership’s essential roles was as a kind of non-profit incubator, offering the breathing space for socially entrepreneurial start-ups to develop, but also providing advice and support for them to carry on once the funding ended.

The Future for Télécoms Sans Frontières

In February 2010, the development advisory firm Dalberg warned that despite its successes, TSF faced a challenge: It was heavily reliant on the Technology Partnership for funding, and it needed to develop its fundraising capabilities or create a sustainable revenue model for its services.

To that end, says Paul Margie, former head of the Technology Partnership, one of the partnership’s most significant interventions was to help TSF establish greater capacity for fundraising and public relations.

This support was “essential,” says TSF’s Jean-François Cazenave. “It’s clear that when one is on the ground all the time, it is sometimes to the detriment of your capacity to deal with the press, to perform administrative functions, evaluation, and so forth.”

Monitoring and Evaluation

From the outset, the Technology Partnership aimed not only to deliver tangible results on the ground but to stand back and assess what was working, what needed improvement, and how to ensure its projects would live on.

In 2007, once its main interventions were up and running, it engaged the strategic advisory firm Dalberg Global Development Advisors to assess the effectiveness of flagship projects in mHealth and emergency response. According to Technology Partnership officials, this process was crucial to improving project design over time and to identifying better ways to build in long-term sustainability.

John Stephenson, as associate partner with Dalberg, says that it was important to find the right level of monitoring, to be in control while leaving scope to experiment. The nature of the work – pilots breaking new ground with new technology in challenging parts of the world – required flexibility. Yet the Technology Partnership's core philosophy demanded demonstrable results.

“Monitoring and evaluation frameworks can be extremely burdensome to the partners,” says Mr. Stephenson, “Often time these were pilot projects, in addition to their regular work. You need to make sure that the indicators are few but meaningfully employed.”

The key, says Mr. Stephenson, is to settle upon a clear ‘theory of change’, or vision of the goals to achieve and how to achieve them, and to measure inputs, outputs, outcomes, and impact accurately. “You need to really work with partners, to establish what their theory of change is, the required and necessary inputs (such as software development, capacity building, funding), and what are you looking to get out of that. You need to define what success will look like to you,” he says.

This is often easier said than done. WHO, for example, needed to respect diplomatic requirements for regional balance in Africa even when that conflicted with a strict metric for success. This led to some countries, such as the Democratic Republic of Congo, being chosen where variables such as civil conflict meant success was less likely. Effective reporting also can be challenging in crisis environments where all players are overstretched and overworked.

Nonetheless, Mr. Stephenson believes a more rigorous approach is essential.

“Venture capitalists also take on inordinate amounts of risk, but they always think through the exit or transition strategy. They need to know when they go in how they will recoup their money, whether through an IPO, strategic sale, or management buy-out. They need to know why and how it's going to be taken up independently in a sustained and scaled way,” he notes.

“One of the main lessons you learn as you step back, in structuring these kinds of partnerships, is to incorporate sustainability principles early on. Often the UN does not focus enough attention on financial sustainability; an effort which needs to go beyond just relying on donors if true scale is to be achieved.” The Technology Partnership's decision to engage outside assessment, he says, was imperative to gauge program effectiveness. “They invested in the rigors of monitoring and evaluation three years in, a practice few do rigorously. Foundations almost all get to a point when they say ‘we don't know how it's going to continue on its own.’ Very few build in an exit strategy, but rigorous monitoring and evaluation serves as a fundamental building block by showing if – and how – a program works.”

“The partnership's press work, their name, allowed us to shore up our position, to show the whole world what we were doing – which was essential to developing our image.”

TSF has matured into an organization able to make long-term plans and establish lasting relationships with donors, such as the European Union's humanitarian arm ECHO. While TSF will remain primarily an emergency organization – and is not interested in a service payment model

“Venture capitalists also take on inordinate amounts of risk, but they always think through the exit or transition strategy... One of the main lessons you learn as you step back, in structuring these kinds of partnerships, is to incorporate sustainability principles early on.” –JOHN STEPHENSON

– TSF Director Monique Lanne-Petit says “increasingly we are becoming integrated into longer-term programs and institutional relationships.”

The Vodafone Foundation also recently announced it would continue funding TSF on a bilateral basis, a significant vote of continued confidence. And the UN Foundation announced that it would set aside a matching gift fund for TSF to support its continued emergency preparedness training and coordination with UN agencies in between emergencies – a move it hopes will incentivize TSF to focus a portion of its fundraising efforts on the value it brings to the UN agencies responding in humanitarian crises.

The future for DataDyne

DataDyne’s story is somewhat different. Instead of aiming at donor funding, Joel Selanikio, CEO and co-founder of DataDyne, wants to expand through a commercial freemium-style model, in which enhanced services are sold to large or wealthy organizations in order to subsidize a more basic service to those with fewer resources.

According to Dalberg Global Development Advisors in early 2010, “DataDyne has diversified its potential funding sources, making it relatively more resilient to discontinued funding. The recent groundswell of interest, as well as a recent \$100,000 Lemelson award, puts DataDyne in a strong position to seamlessly manage the transition away from partnership funding.”

That is an encouraging assessment, but the experience of start-ups moving to profitability is rarely seamless, and the next couple of years will be crucial for DataDyne. The market is far from mature. And despite significant progress in demonstrating the long-term viability of the concept, the world has yet to see the kind of large-scale enterprise that would assure longer-term success.

Paul Margie, who helped broker the partnership with DataDyne and now is a Board member to the social enterprise, says that “if DataDyne gets the money to activate the strategy, it will end up being very sustainable.” But Dr. Balcha Masresha of the WHO notes that one of the software’s major attractions for health ministries is precisely that it is free. “I do not think a model where ministries would be required to pay would work as it stands currently.”



CREDIT: UN Foundation

If, or once, the market matures, one can imagine other commercial opportunities. And Dr. Selanikio hopes that big funders will see the value in helping ministries pay for his services and is convinced that moving from donor funding to a commercial model is the way to go: “When you receive grant funding you pay attention to grantors. When you receive funding from users, you pay attention to them.”

He cites an example. To download his software you need to provide an email address. But he discovered that strikingly few of his donors had logged in. This suggested that he was receiving their support not on the basis of the quality of the software per se but on other factors. By contrast, since he started charging some users – such as John Snow Inc. – “when the software doesn’t work, can be improved, they are going to email you morning noon and night until you fix the problem.”

Dr. Selanikio says: “if we can move to a situation with 100 paying users, that would bring in between \$500k and \$1m a year” – more than enough for DataDyne to continue to service the non-paying clients in the developing world.

<p>Totally Free! Yes, Free</p> <ul style="list-style-type: none"> Up to 20 forms 100 questions/form 5,000 uploads per year Store up to 500 records per form online Unlimited data collectors can add data to your forms 	<p>Pro \$5000 per year</p> <ul style="list-style-type: none"> Unlimited forms Unlimited questions/form 10,000 uploads included (.25 per additional upload) Unlimited online storage SMS Data Entry Custom Analysis* 	<p>Enterprise \$10000 per year</p> <p>All Pro features, plus:</p> <ul style="list-style-type: none"> 20,000 uploads included (.20 per additional upload) Open API Access Store data on own server*
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*Additional cost

CREDIT: DataDyne

The Technology Partnership, by funding the development and refinement of EpiSurveyor and brokering a partnership with WHO that enabled EpiSurveyor to be trialed by governments across sub-Saharan Africa, helped DataDyne establish its imprimatur as a leading mHealth social enterprise. And, through its monitoring and evaluation work with Dalberg, the foundations also helped DataDyne think about a transition to a more diversified revenue model. Dr. Selanikio agrees that critical thinking about long-term sustainability is too often missing from development work:

“We talk about sustainability all the time, but I don’t think most people who are talking about it have any idea what they are talking about. Ten years ago you could have looked at the almost unremitting failure of technology for development – year after year of pilots, then dead pilots. But what we have found in the last ten years, with mobile phones and web applications, is that there are techniques that enable us to scale both hardware and software to the poorest people on earth in an obviously sustainable way.”

As the Technology Partnership entered its last year of operations, it shifted its funding of DataDyne from pure operational and programming support to new activities that could help DataDyne expand its offerings. This included the “mHealth Tools 101” series, an online and in-person conference for current and prospective users of mHealth tools.

“We knew from our experience working with governments and UN agencies that there was huge interest in using mobile tools to make health work easier but

a lack of understanding about what those tools were and how they could be applied,” says Adele Waugaman, who led the Technology Partnership through its sunset period. “We saw funding DataDyne to lead these mHealth users’ conferences as an opportunity to support DataDyne as it shifted its revenue model and to make a meaningful contribution by increasing education and awareness about how mHealth tools can strengthen health systems and reach global health goals.”

Innovation with the UN and the legacy of Technology Partnership funding

Since the Technology Partnership launched in 2005, the integration of technology into development projects has increased significantly and many UN agencies now have dedicated teams or strategies that consider how to make use of this opportunity to further their work. For the foundations’ major UN partners, WFP and WHO, this includes continued work with partners on initiatives that leverage ICTs to increase efficiency and effectiveness.

Since WHO first piloted EpiSurveyor in 2006, the mHealth field has progressed tremendously but with uneven results. To begin the process of benchmarking data against which mHealth policymaking could be informed and progress measured, the Technology Partnership and mHealth Alliance partnered with WHO to produce the first comprehensive global survey that looks at how countries are using mobile technology to meet their health goals. The mHealth: New Horizons through Mobile Technologies report, launched at the June 2011 Mobile Health Summit in South Africa, analyzes 14 types of mHealth activity in 112 countries.

WHO and its Global Observatory for eHealth, which commissioned and produced the report, intend to do their part to promote a more integrated and scalable approach to mHealth planning, development, and evaluation. Under consideration at WHO are strategies to create a National eHealth Roadmap Development Toolkit for governments, a framework for the evaluation of mHealth programs, guidance on data privacy and security policy, and a compilation of mHealth best practices.

present

future



CREDIT: David Evans

The rise of mobile and crowd-based technologies also has significantly shifted how ICTs are used in humanitarian emergencies – a topic addressed in two of the Technology Partnership’s reports, including Disaster Relief 2.0 (see box on page 57). The report, financed by the Technology Partnership, commissioned by OCHA and written by a team of experts at Harvard, collected information and opinion from a broad range of humanitarian and technology actors to help map this shifting landscape, drawing attention from the highest ranks of government and UN agencies.

“The challenge is to improve coordination between the structured humanitarian system and the relatively loosely organized volunteer and technical communities,” said UN Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator Valerie Amos in a statement at the time of the report’s launch. “This report illustrates a potential way forward.”

For WFP, taking over sole leadership of the UN’s emergency telecommunications cluster guarantees that it will continue its work at the vanguard of emergency IT preparedness and response. The Vodafone Foundation has announced it will continue to support WFP’s internationally-recognized training program, enabling more first IT responders to gain the skills and simulated experiences that help them prepare for some of the toughest IT assignments around.

The legacy of the Technology Partnership’s investments in WFP’s activities in this space live on through

the continued use of the best practices identified and curricula established through the training program it helped to stand up in Pisa, which subsequently has been adapted and used by WFP staff in a variety of countries including Colombia and Pakistan. Hundreds of IT professionals from UN agencies and other humanitarian groups like the Red Cross, Save the Children, and Oxfam have completed the training program gaining not only potentially life saving skills to handle working in extreme environments but also personal relationships that will enable these aid workers to be more effective partners to one another in the field.



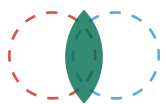
CREDIT: Josh Nesbit

Finally, Technology Partnership funding for the EMMA emergency management software and Humanitarian Emergency Platform website has provided technical tools that can be adapted over time to continue the valuable process of sharing and storing lessons learned and closing the gap Mr. Bruni identified when he first approached the foundations for funding.

UN Foundation

Vodafone
Foundation

CHAPTER 7



context

CONCLUSIONS

lessons

future

The Technology Partnership has been a journey – a journey with a path that has changed significantly over the last five years, both in terms of the context in which the partnership operated and in its understanding of the service it provided. The lessons it learned will inform both the UN Foundation and Vodafone Foundation's future projects and broader thinking about what constitutes effective partnership for the UN.

Certainly, there is no one-size-fits-all template for any partnership; neither is it easy to distill half a decade's worth of activities into a few conclusions. Yet certain themes emerge across the Technology Partnership's diverse activities that proved consistently important.

Foundations and Corporations – Different models of partnership

The UN Foundation and Vodafone Foundation Technology Partnership was, in some regards, an unusual entity. For the most part, it did not constitute the primary player in the work it sponsored but, rather, served as a vehicle through which other partnerships came to be.

Broadly, three approaches emerged:

Core Competencies Curator

For the most part, the Vodafone Foundation provided funding, direction, and ideas. In numerous cases, however, groups the Technology Partnership worked with expressed a desire for a closer alignment with Vodafone the company and its unique expertise as one of the world's largest mobile service providers. Especially in the case of large UN agencies, the money itself – while welcome – remained relatively trivial compared to that of donor governments. Far more valuable was the know-how Vodafone could offer.

But the Vodafone Foundation's ability to make that connection for its partners was restricted by UK law, which requires a separation of a foundation's work from the commercial goals of its parent. Over time, the Technology Partnership found ways to bring Vodafone the company closer to the work being done in its name, as demonstrated through the placement of Vodafone employees with

the WFP (through the World of Difference program), in the parent company's burgeoning relationship with Télécoms Sans Frontières, and through the decision to appoint a Vodafone employee, Claire Thwaites, to head the Technology Partnership from 2007 to 2009. In all cases, this closer alliance of the company's core competencies with the humanitarian work was positive.



CREDIT: Télécom Sans Frontières

Innovation Incubator

The Technology Partnership also played a role that might not have been possible in a more pure market-driven alliance: incubator for social good. The partnership provided a safe space in which others could experiment and innovate without the burden of showing immediate commercial results.

One example was funding for the development of Data-Dyne's EpiSurveyor, which was given the space to evolve from a disease surveillance tracking tool to a generic mobile data collection software with applications far beyond the scope of the original project.

“Success is a lousy teacher. It seduces smart people into thinking they can't lose.”

–Bill Gates



CREDIT: DataDyne

At first glance, this approach to partnership may appear to be at odds with one focused on market-driven outcomes, bringing together corporate and UN partners. The foundation as incubator creates a more freewheeling, safe space and the opportunity to fail with potentially far-reaching results.

As Andrew Dunnett and others pointed out, however, the two approaches can be complementary. One example where the incubation model fed the core competencies model was in the development of Instant Network, a collaboration between Vodafone and TSF. This was made possible by the Vodafone Foundation's more hands-off approach, a gradual building of trust. The end result will be the product of an alliance of core competencies between TSF and Vodafone.

Both models are a step beyond the more traditional concept of corporate social responsibility, in that they help incubate "social good" projects while maintaining a primary focus on longer-term results.

Multi-Stakeholder Issue Networks

The Technology Partnership took a crucial step toward ensuring continued momentum behind the mHealth work it had got off the ground by joining the Rockefeller Foundation in helping to establish the mHealth Alliance. The Alliance, which now counts multiple government agencies, and the GSMA, which represents over 800 mobile operators, among its founding partners, is uniquely positioned to tackle the significant challenges that remain in bringing sustainable mobile health solutions to scale.

Best Practices for Partnerships

Allow Time and Resource to Build a Strong Structure

Effective partnerships are based on good management and a strong organizational foundation. Where will offices be based? How will the partnership monitor its projects? What legal and financial frameworks will be required to set them up? This is never easy. The UN is a highly complex agglomeration of many types of organizations, which can take a long time to react and will sometimes not be able to form the kind of relationship desired. A full year of the Technology Partnership was absorbed in putting structures in place. Future partnerships will do well to dedicate time and resource to putting in place strong management and organizational structures.



CREDIT: UN/Evan Schneider

Support Core Operations

While the total amount of money provided by the Technology Partnership to UN agencies was smaller than that provided by governments, the partnership's flexibility to address fundamental funding gaps gave its donations significantly higher added value. In particular, its readiness to address the less obvious aspects of aid earned it plaudits. This included:

1. Training, preparedness, knowledge management

For most UN agencies, government funding is highly focused on a specific intervention in a specific place, resulting in limited funding for the support mechanisms that are essential to ensuring those interventions work well.



CREDIT: mHealth Alliance

A similar story can be told of corporate donations. When a crisis is on television, the UN is inundated with offers to help. But there are far fewer who support the crucial, but less public, work of knowledge management, disaster preparedness, or training and community building among aid and development professionals.

The consequences can be severe. Expertise assembles for a crisis, then dissipates, leaving aid workers to reinvent the wheel every time a new disaster strikes. Best practice is lost. There are insufficient centers of information and guidance for the exhausted aid worker. Mistakes are repeated time after time.

The Technology Partnership discovered this was often its most valuable contribution: the readiness to help with the less glamorous, less visible side of professional aid work. Future partnerships would do well to consider that supporting core operations may not seem immediately appealing, but many more lives might be saved as a result. The challenge is how to demonstrate that impact – a second point in supporting core operations.

2. Public relations, marketing, communications

Few consider public relations to be part of aid work. But in the information age, providing PR assistance, marketing know-how, and communications support may constitute one of the most valuable forms of assistance that NGOs and UN agencies receive from funding partners.

Traditional aid workers have very little idea how to disseminate ideas – in fact, they often look down on com-

munications as soft and indefinable work compared to the real labor of digging latrines and erecting shelters. But corporations know perfectly well that marketing the product and selling the idea is an integral part of success.

While most aid groups recognize the importance of speaking to donors, they too often fail to grasp the need to communicate with other equally crucial audiences: expert communities, policy makers, local beneficiaries and – especially in the case of large multinational agencies – themselves.

Grantees of the UN Foundation and Vodafone Foundation benefited not just financially but in reputation, by the communications engine that the Technology Partnership provided. The foundations' Access to Communications publication series and broader thought leadership portfolio also are frequently cited as among their most valuable contributions.

In the case of many of its grants, the Technology Partnership funded dedicated communications activities to help its grantees better communicate about their work – in some cases, funding communications specifically to support donor outreach to set grantees on a road to greater sustainability. Future partnerships will benefit by considering this an essential part of making a modern partnership work.



CREDIT: DataDyne

Structure Funding with a View Toward Sustainability and Scale

Philanthropic work has traditionally shown little understanding of what constitutes long-term success, rarely building in the ability for projects to take on a life of their own, move beyond seed funding, and scale up successfully.

Future partnerships need, from the very beginning, to incorporate a clear understanding of the long-term prospects for their collaboration. The aid world is littered with discontinued projects that collapsed as soon as the money dried up. The corporate sector is uniquely placed to teach development workers how to avoid repeating those mistakes.

Establish Clear Metrics

The Technology Partnership was clear it wanted to achieve sustainability from the outset and brought on external evaluators (Dalberg) to help it with that goal. In retrospect, however, Technology Partnership advisory committee members agree more might have been done sooner to hardwire sustainability into the core funding and program design. Future partnerships will benefit from this lesson learned and the



CREDIT: Josh Nesbit

ample design approaches the corporate sector offers to assure long-term project sustainability.

Learn from Failure

When project activities do not meet established metrics, ask why. As demonstrated by the rise of candid idea-sharing forums like the Technology Partnership-hosted Technology Salon, or MobileActive's Fail Faire, there is a rapidly growing market for frank discussions of not only best practices, but also lessons learned. Courage to learn publicly means that others will be less likely to make the same mistakes, transforming a disappointment into a public service.

Engage Individuals

Another crucial theme emerging from the experience of the Technology Partnership is the degree to which mobile technology is moving power away from institutions and toward individuals. Across the world, local communities, small entrepreneurs, and aid beneficiaries are increasingly using mobile communications tools to set their own agendas and directly engage decision-makers.

Most institutions are only just waking up to this potential, which constitutes both a profound opportunity and threat to the status quo. The Technology Partnership itself only began to engage with these ideas to-



CREDIT: Josh Nesbit

wards the end of its life cycle, yet set about exploring their impact. Future partnerships would do well to take note of the increasing rapidity and proximity with which information can be produced and shared and find ways to take advantage of the opportunities this paradigm shift offers.

Cast a wide net by engaging multiple stakeholders

One temptation of a new partnership is to form a close and closed relationship between two players. But there will almost certainly be many other actors in the chosen field, and long-term success will almost certainly require their collaboration further down the line. Multi-actor networks can bring together a broader array of players and expertise – more difficult to manage but often more likely to result in meaningful scale and long-term impact.



CREDIT: Kinwanja

This is not to say all partnerships need to create a fully-fledged alliance from the beginning: It can be easier to find a center of gravity first and then to invite more participants later. But it is certainly worth considering the wider network early on – or, just as importantly, to recognize if one already exists.

Endnotes

- ¹ World Telecommunication/ICT Development Report 2010 (ITU, 2010), page 2
- ² One interesting initiative in this regard is <http://www.mwomen.org/>, a diverse consortium of partners working to improve access to mobile phones for women around the world.
- ³ 2009 interview with AllAfrica.com
- ⁴ New Technologies in Emergencies & Conflicts (December 2009)
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- ⁵ Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2010–2015, February 2011
http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-520862.html
- ⁶ <http://www.unglobalpulse.org/>
- ⁷ <http://unicefinnovation.org/>
- ⁸ http://www.mercatorfund.net/modules/global_philanthropy/book
- ⁹ High Level Meeting on Investment and Partnerships, Istanbul, 2011
- ¹⁰ Humanitarian Relief Initiative
<http://www.schwabfound.org/en/initiatives/HumanitarianReliefInitiative/index.htm>
- ¹¹ <http://www.everywomaneverychild.org/>
- ¹² ITU, 2010
- ¹³ For a comprehensive survey of country-by-country mHealth use, see the mHealth section of “Atlas – eHealth Country Profiles,” published by the WHO Global Observatory for eHealth.
http://www.who.int/goe/publications/ehealth_series_vol1/en/index.html
- ¹⁴ ‘The Health Challenge in Emerging-Market Cities’, 2011, Project Syndicate
- ¹⁵ The Medical News, 2010
- ¹⁶ Steyn, 2010
- ¹⁷ Recent large trials include a 5,000 mobile based reporting system in Punjab, India. On the horizon, notes Lesh, is a national South African HIV testing system (<http://www.mobilethinkers.com/2011/01/mhealth-benefits-no-evidence-%E2%80%93-yet/>) and a potentially very large deployment in Bihar, India.
- ¹⁸ The January 31, 2005 entry is accessible at <http://ictemergency.wfp.org/web/ictepr/tsunami-operation>
- ¹⁹ <http://ictemergency.wfp.org/web/ictepr/home>
- ²⁰ A video can be seen at <http://ictemergency.wfp.org/web/ictepr/it-emergency-management-training>
- ²¹ <http://ictemergency.wfp.org/web/ictepr/field-stories>
- ²² <http://ictemergency.wfp.org/web/ictepr/countries-pakistan>
- ²³ <http://ictemergency.wfp.org/web/ictepr/countries-haiti>
- ²⁴ For more details see <http://paulindakar.blogspot.com/2009/10/food-vouchers.html>
- ²⁵ <http://technologysalon.org/>
- ²⁶ “The Digital War on Poverty,” 2008, Project Syndicate

United Nations Foundation Partnerships



In today's interconnected world,

no one can go it alone. The UN Foundation builds campaigns and partnerships to connect people, ideas, and resources to reduce child mortality, empower women and girls, create a new energy future, secure peace and human rights, and promote technology innovation to improve health outcomes.

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- **Organizational** – Partnerships with member-based organizations such as faith based or civil society, that bring the enthusiasm and passion of millions of concerned global citizens to a particular issue or an innovative campaign.
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- **Programmatic** – Partnerships with UN agencies, NGOs, and government ministries based on a shared program driven vision to increase efficiency of lifesaving on-the-ground work.
- **Financial** – Partnerships with corporations, foundations, and government agencies that jointly invest in sustainable initiatives.

In just over a decade, we have:

- Brokered more than 300 programmatic partnerships;
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- Helped immunize 500 million children;
- Worked with over 40 UN agencies and 100 governments around the world; and
- Provided over \$1.5 billion to the UN system.

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