Unleashing Technology to Advance Social and Economic Development

A perspective from Microsoft Community Affairs

Converging Devices, Software and Services

Technology can be an amazing tool for social and economic development. It can help people get a better education, learn new skills to earn a living wage, or start a business. It also can enable organizations to meet community needs by broadening access to healthcare, education, micro-banking and other essential services.

One of the most significant advances in information technology (IT) today is the growing connectivity among smart devices—computers, mobile phones and even televisions. With the widespread penetration of mobile phones and other handheld devices that connect to the Web, nearly 4 billion people worldwide now have some level of access to computing. Increasingly powerful and feature-rich software applications are emerging to run these intelligent and interconnected mobile computing devices. At the same time, the Internet continues to mature as a gateway for "cloud computing," in which remote datacenters host data and serve applications over the Web for use across a broad spectrum of devices and IT systems.
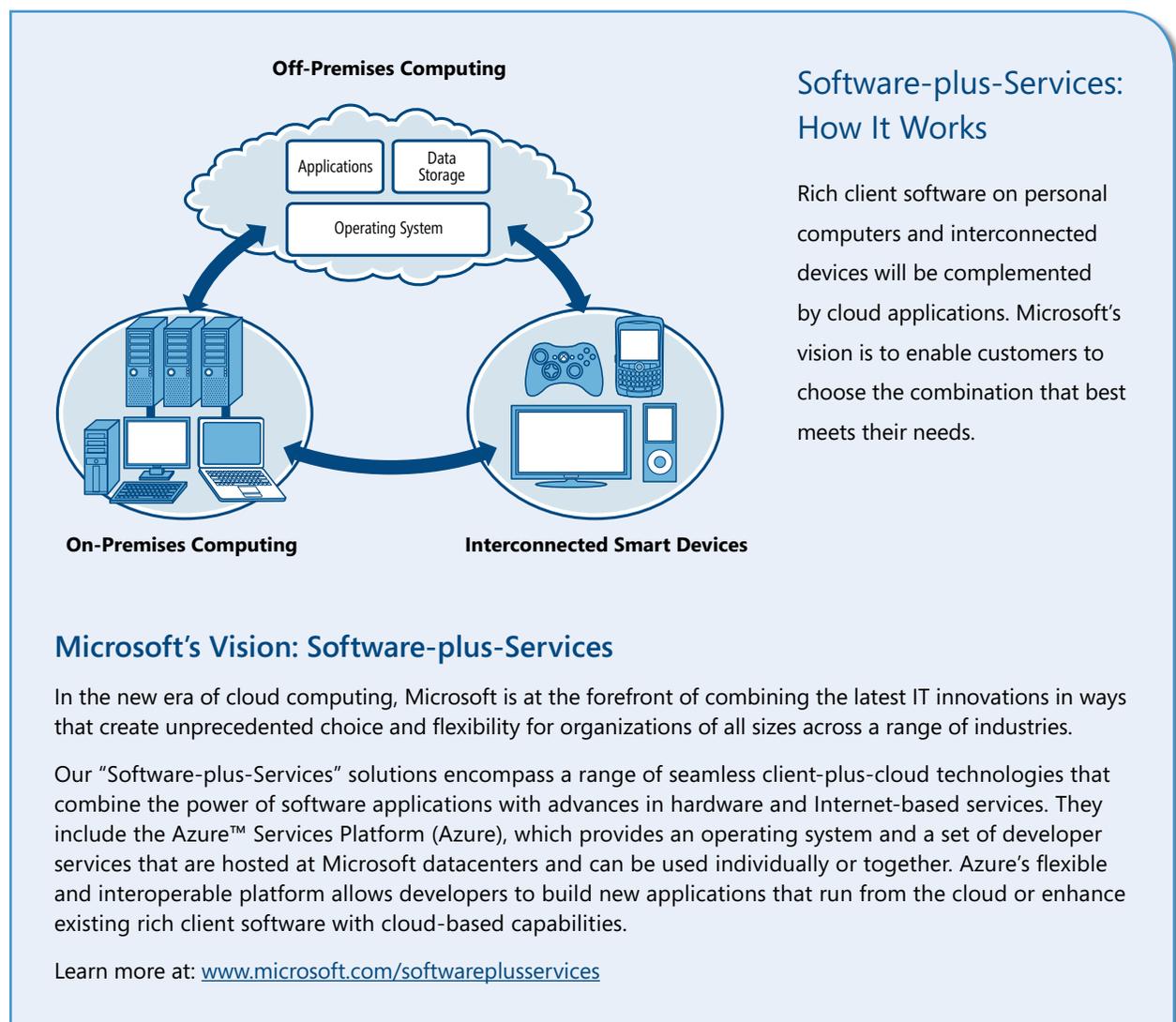
The convergence of device connectivity, software innovation and cloud-based services is enabling a greater number of people and organizations around the world to access information and communicate and collaborate in more powerful ways. The computational capabilities and data access that people can achieve today through a mobile phone or netbook PC exceed what was possible five years ago using high-end computers and sophisticated network-based software managed in a server room. Five years from now, we will all be using our phones, computers, televisions and other devices to collaborate, share and work even more seamlessly.

This new computing paradigm supports an improved and integrated user experience across all devices. It offers great potential to improve how we all work, but even more significant promise for non-governmental organizations (NGOs) to manage their operations more effectively, deliver a broader array of services and achieve a greater impact in the communities they serve.

However, bringing the benefits of this new experience to the NGO and nonprofit community will require support and resources from the private sector, governments, foundations and development agencies.

"Constructive Disruption" with Cloud Technologies

Many nonprofits have already embraced technology to help improve their productivity and overcome their constant struggle to do more with less. For example, technology enables electronic data entry in place of multiple handwritten copies and facilitates communication among teams. It also enables groups to work together much more efficiently on projects, sharing data and assessing the efficacy of their programs. Moreover, technology also can be a disruptive force that opens exciting opportunities and avenues for nonprofits to better achieve their missions and accelerate their impact. This "constructive disruption" of traditional business, delivery, information and networking models is already under way, as the upcoming examples illustrate.

Off-Premises Computing

Applications

Data Storage

Operating System

On-Premises Computing

Interconnected Smart Devices

Software-plus-Services: How It Works

Rich client software on personal computers and interconnected devices will be complemented by cloud applications. Microsoft's vision is to enable customers to choose the combination that best meets their needs.

Microsoft's Vision: Software-plus-Services

In the new era of cloud computing, Microsoft is at the forefront of combining the latest IT innovations in ways that create unprecedented choice and flexibility for organizations of all sizes across a range of industries.

Our "Software-plus-Services" solutions encompass a range of seamless client-plus-cloud technologies that combine the power of software applications with advances in hardware and Internet-based services. They include the Azure™ Services Platform (Azure), which provides an operating system and a set of developer services that are hosted at Microsoft datacenters and can be used individually or together. Azure's flexible and interoperable platform allows developers to build new applications that run from the cloud or enhance existing rich client software with cloud-based capabilities.

Learn more at: www.microsoft.com/softwareplusservices

New Business Models

Kiva (www.kiva.org), a person-to-person micro-lending Web site founded in 2005, uses the Internet to facilitate small loans from individual lenders to hundreds of thousands of entrepreneurs in 49 countries. Through technology, Kiva is facilitating one-to-one connections that were previously prohibitively expensive and is thereby helping alleviate poverty. Similarly, other nonprofit "microgiving" intermediaries such as HopeMongers (www.hopemongers.org), See Your Impact (www.seeyourimpact.org) and Jolkona Foundation (www.jolkona.org) are embodying new efforts to create one-on-one online connections between donor and beneficiary. Through the Web, a donor can provide direct financial support and the beneficiary can share the resulting benefits via video and photographic updates delivered to the donor's home, office or mobile device. The important innovation here is the ability for small NGOs to quickly and seamlessly upload photographs and videos of their beneficiaries by using inexpensive mobile devices.

In Kenya, mobile communications provider Safaricom has launched a micro-banking service for its M-PESA mobile customers who do not have a bank account. The M-PESA service allows users to deposit cash at a local mobile agent office, send money to other mobile phone users via text message—even if they are not Safaricom customers—and withdraw cash at another local agent. This innovative private-sector solution is allowing a large number of poor people in Kenya to save and send money, turning the traditional banking model on its head. In response, governments are scrambling to develop policies that could either promote such efforts or restrict them. Clearly, this is an area of both opportunity and concern for nonprofits that are in the microfinance and micro-banking space.

New Delivery Models

Many communities, especially in impoverished and remote locations, lack sufficient healthcare services. Over the past several years, increased use of telecommunications and information technologies in the delivery of clinical care has helped bridge this gap. However, the cost of equipment to undertake these telemedicine efforts is still very high. Through cloud-based services delivered on intelligent devices, organizations are finding new ways to extend the reach of healthcare and reduce its costs. A team led by M.B. Srinivas of the International Institute of Information Technology in Hyderabad, India, is working on a battery-powered diagnostic device, costing less than US$100, which can monitor a patient's heart rate, blood pressure and oxygen levels. This device can send the information through a cell phone to a physician hundreds of miles away who can then offer expert diagnostic and treatment advice to the local health care provider. As these types of life-saving technologies grow more accessible, development organizations will need to be prepared to adopt and take advantage of the new delivery models.

ADPP in Mozambique is an NGO that has partnered with the government to establish a college to train teachers for rural schools. In this vast country, where more than 80 percent of the population is in rural environments, providing information to teachers is a challenge. ADPP is using 4,000 thin-client devices with a server to create a digital library for teachers and students to use from remote locations. Teachers also can go to district centers in rural areas to access the digital library for preparing their lesson plans.

We will continue to see innovative uses of cloud computing technology for scaling up government, education and healthcare services, extending service delivery models and helping organizations achieve broader impact.

New Information Exchange Models
Effective collaboration is critical in emergency situations that require multiple nonprofits and development agencies to work side by side. This need is driving the creation of new models of collecting and sharing information via the cloud. Shortly after Cyclone Nargis struck Myanmar in May 2008, the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) created a Web-based collaboration portal for aid workers in the region that enabled more than 100 humanitarian relief and development organizations to communicate, analyze information and manage resources. Using e-mail, texting and basic Web connectivity on a mobile phone or other mobile device, aid workers in remote or heavily damaged areas were able to view content, create alerts, file reports, participate in discussion forums and update other information on the portal.

This is a powerful example of the cloud's capacity to help NGOs narrow the gap between the IT infrastructure at their headquarters offices in the developed world and the more remote locations where their employees, and the people they serve, are often working with limited Internet bandwidth or PC access.

New Networking Models
Social networks such as Twitter, Facebook and YouTube keep many of us connected to a continuous stream of information. NGOs and others in the development community are also seeking to effectively use these powerful tools for social change. An interesting example is Causes, a Facebook application that allows people and organizations to mobilize support for a social or political cause through the network.

Microsoft services such as Windows® Azure (www.microsoft.com/azure/windowsazure.mspx), Windows Live™ (www.windowslive.com) and the Microsoft Web Platform (www.microsoft.com/web) can provide a simple way for volunteers to tap into their passion and skills while lowering

the technical barriers and overhead for organizations that need skilled volunteers. The ability to access an updated database that links volunteers to need becomes crucial in emergency situations where need can be met effectively by trained and competent volunteers. Cloud-based computing approaches can make these links far more effectively.

Supporting NGO Adoption of New Models for Social Change

As more examples emerge of innovative technologies and new models for social change, the challenge for NGOs, nonprofits and foundations is how to be involved in shaping these solutions and take advantage of them for development.

For more than two decades, Microsoft has worked with NGOs and nonprofits worldwide to help them use innovative technologies to maximize their organizational impact and pursue their mission. However, it will take time and preparation for nonprofit organizations to achieve the full benefits of convergence between devices, software and cloud-based services. In our view, investments in four key focus areas are necessary in order to help the NGO and nonprofit sectors effectively use client-plus-cloud technologies in their operations:

- **TECHNOLOGY INNOVATION.** Ensuring that existing and emerging technologies are relevant, affordable and accessible for NGOs globally

- **IT CAPACITY BUILDING AND THE PARTNER ECOSYSTEM.** Supporting both nonprofit and for-profit partnerships and programs that facilitate greater access to IT services, support and training for the NGO community to fully optimize converging technologies

- **DEVELOPER COMMUNITY SUPPORT.** Motivating and supporting IT developers to pursue innovation specifically for the needs of the nonprofit community

- **SOCIAL NETWORKING.** Forming a community of technology users dedicated to working together, learning from each other and exchanging information to develop best practices that can benefit the entire NGO and nonprofit sector

Microsoft's Commitment to Social and Economic Development

Microsoft is committed to playing a major role in each of these investment areas. Our strategy is built around ensuring access to stable and secure technology for NGOs, optimizing the delivery of IT solutions to this sector, and helping NGOs to transform their operations through innovative and appropriate use of technology. This approach allows us to offer a comprehensive set of services, products and tools that are relevant to the NGO and nonprofit community.

Technology Innovation
Microsoft donated more than US$400 million worth of software to over 30,000 NGOs and nonprofits globally in the past year to help them establish a stable and secure IT platform. We also recognize that NGOs and nonprofits might need specialized tools or customization in order to reap the benefits of innovation. Our product development efforts include a focus on creating relevance and value for this community. We are working to support innovative applications of existing Microsoft technologies to help make them more relevant, affordable and accessible to the NGO sector.

Microsoft Dynamics® CRM Online (www.microsoft.com/online/dynamics-crm-online.mspx), a Web-based customer relationship management solution, includes robust tools for donor management and fundraising activities. We have also built a number of nonprofit-specific templates that can be used with both Dynamics CRM Online and organizations' on-premises systems to help minimize the amount of start-up time and customization that is sometimes required in a CRM deployment.

The Microsoft Business Productivity Online Suite (BPOS) (www.microsoft.com/online/business-productivity.mspx) provides nonprofits with online access to Microsoft® Office tools for e-mail and calendaring (Office Exchange), collaboration (Office SharePoint®), instant messaging and communication services (Office Communications Server), and remote meeting capability (Office Live Meeting). We host BPOS in our data centers, providing nonprofits the full functionality and benefits of each product without the need to install, maintain and update this software on their own.

OneApp (www.microsoft.com/oneapp) is online software that expands the capability of "feature phones"— mobile phones commonly found in emerging markets that are capable of running some applications but lack the capabilities of smartphones—to send messages, make financial transactions and find information. OneApp also serves as a platform for developing new mobile applications. This affords a tremendous opportunity for making richer features and functionality available to mobile phone users around the world, including NGO staff members working in underserved and emerging markets.

Particularly in rural areas, Microsoft is working to maximize technology access and guide sustainable and scalable approaches to shared computing environments. Through our Shared Access computing programs, we work with NGOs to provide PCs that enable communities to gain access to technology and information. Our nonprofit partners in this effort include thousands of telecenters, Internet cafés, libraries and schools.

IT Capacity Building and the Partner Ecosystem
Over the last 10 years, Microsoft has worked with several key global and regional NGOs to deliver scalable IT services to the larger nonprofit community. This effort has included supporting more than 30,000 nonprofits with IT services, support and training.

Microsoft's partnerships with NGOs such as NPower, TechSoup and telecentre.org have helped increase IT know-how and organizational capacity among nonprofits globally. Still, the challenges of understanding, implementing and sustaining complex IT solutions loom large in the NGO community.

We are striving to address these challenges with organizations such as NetHope, a consortium of 25 leading nonprofits engaged in humanitarian relief and development issues worldwide. Working with NetHope partners such as Save the Children, CARE, Oxfam International, the Nature Conservancy, World Vision and Ashoka, we continue to explore innovative uses of our technologies such as Microsoft Office SharePoint Server. We are also working with these and other development organizations on customized uses of OneApp that are relevant for different geographies and circumstances.

Another of Microsoft's successful capacity-building programs for nonprofits is NGO Connection Days, which we have held in more than 50 locations around the world since 2008. Each NGO Connection Days event brings together local IT partners, nonprofit leaders and industry experts to share information, best practices and guidance for nonprofits to help them use technology more effectively.

Developer Community Support

Encouraging the developer community to create innovative technologies that address societal needs is a key to strengthening the NGO and nonprofit sector. Imagine Cup, Microsoft's annual technology development competition for students from around the world, challenges participants to create software solutions that address a specific societal need—ranging from education to healthcare to the environment. Starting with the 2009 Imagine Cup, participants have been encouraged to draw inspiration from the United Nations Millennium Development Goals. More than 300,000 students from over 100 countries participated in the 2009 Imagine Cup challenge; winning entries included solutions designed to improve software accessibility for the blind, increase food production, and improve access to healthcare in remote areas.

Another Microsoft-sponsored competition, Develop Without Borders, focuses on creating innovative Microsoft Office tools that address the needs of nonprofits. In 2009, we also partnered with TechSoup's NetSquared program on a "challenge" to identify and recognize top mobile technology solutions for social change. Winning entries included a healthcare diagnostics tool, a phone-based advocacy tool for poor and rural communities and a text-messaging service to support children at risk of violence.

Social Networking

The immediacy and influence of online social networking make it a powerful force in supporting NGO efforts to improve services and operational capacity. To that end, Microsoft recently launched the NGO Connection Web site (www.microsoft.com/ngo) as an online community where NGOs can easily locate technology resources that are geared to their specific needs and learn from one another's success stories. Across the company, we are increasing our use of social networking tools to help guide Microsoft product development, stay more closely attuned to the NGO community, broaden access to valuable information and foster collaboration among nonprofits. We are also working to help NGOs better understand how they can utilize social media to reach their constituents and beneficiaries.

Collaborating to Harness the Power of Technology

It is clear that technological advances will lead to improved user experiences and networks, and that information will grow more readily available across a wider range of Web-enabled screens. The question is how nonprofits, NGOs and others in the development community can work together with technology providers and the broader business community to innovate and effectively harness the power of technology.

The promise of next-generation computing is that users can have experiences that combine the rich capabilities of software with the power of Internet services on a range of intelligent and interconnected devices, regardless of location. Cloud innovation will continue to grow more important as people increasingly move beyond the PC screen as their sole—or even primary—means of accessing the Web, data and software applications along with voice communications. Using cloud-based solutions can also help organizations better balance their IT management so they can focus more time and energy on their mission and program delivery.

This new computing paradigm presents rich potential for NGOs and nonprofits to improve their productivity and effectiveness. However, the real opportunity is when nonprofits—with their vast grassroots reach—and technology solution providers collaborate to harness the full intellectual capacity of all who are seeking to effect social and economic change.

New business models will need to emerge if we are to effectively serve all of the people in need despite limitations on available resources. We must find new and better ways to connect social and economic change-making organizations. We must continue to promote new avenues for these organizations to develop their ideas and solutions. And we must support these organizations in scaling up their services to achieve greater social and economic impact.

Technology adoption is critical—not for technology's sake, but as a tool for organizations to use to their advantage. It is not just about efficiency, but also about changing organizational approaches and discovering innovation. Technology can play a key role in helping NGOs reinvent themselves or continue doing what they do now—but far more effectively and efficiently.

It is easy to get overwhelmed by the number of technology solutions that are out there. Again, there is an opportunity for organizations to partner with others and learn by example how to self-innovate.

We are at a crucial juncture where the business and funding communities involved in development must act as visionaries and as partners with NGOs and nonprofits. We must work together to translate the disruptive and promising opportunities offered by new technological capabilities into economic and social change.

Beyond embracing technology, those in the development community also must:

BE INNOVATIVE. We cannot just continue doing business the old way.

BE RELEVANT. Nonprofits are increasingly expected to help solve big problems. We need to embrace this role.

BE VISIBLE. Show that we are engaged, accessible and involved with people, issues and the community.

BE TRANSPARENT. We must become much more open in our decision-making process and share results effectively.

BE COLLABORATIVE. Cross-sector collaboration is becoming more and more critical in effectively reaching the individuals and organizations that need our help the most.

BE RISK TAKERS. Learn from past failures; seek innovative partnerships with social entrepreneurs and businesses to move into fields that traditional philanthropy cannot reach on its own.

View a short video about how an NGO is using Cloud Technologies:
http://www.microsoft.com/video/en/us/details/9ce6266d-463f-47df-ae51-c0347a7fd62b

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