Leveraging CIO Expertise to Create Social Value: Novartis’ SMS for Life Initiative

By leveraging their information management knowledge, leadership skills and working relationships with external IT companies, CIOs are in a unique position to help a company achieve its social responsibility objectives. We describe “SMS for Life,” a CIO-led initiative at Novartis, a Swiss pharmaceuticals and healthcare company. SMS for Life is a mobile phone-based solution to a severe antimalarial drug “stock out” problem that saves many lives in rural Africa. Other IT executives can learn lessons from this initiative.1,2

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The Role of CIOs in Corporate Social Responsibility Initiatives

Corporate Social Responsibility (CSR) has evolved in both theory and practice over the past 60 years.3 In the 1980s, Peter Drucker referred not only to the compatibility between profitability and social responsibility, but also to the idea that a corporation ought to convert its social responsibilities into business opportunities.4 In the 1990s, CSR evolved into corporate citizenship and embraced not only economic and legal obligations, but also ethical and philanthropic responsibilities to employees, customers and the communities that the company served. During the last decade, CSR has also been linked to corporate sustainability, which emphasizes long-term sustainability that goes beyond environmental and “green” responsibilities. Corporate sustainability embraces social sustainability by contributing to the lives of people in the communities that a company serves worldwide.5

1 Carol Brown and William Kettinger are the accepting senior editors for this article.
2 An earlier version of this article was the First Place Winner in the SIM 2012 Paper Awards Competition. The authors would like to thank the SIM Paper Awards Panel for their review of the paper.
In this article, we focus on how CIOs and other IT leaders can directly help their companies achieve their social responsibilities through a combination of their unique professional skills and expertise. They have deep knowledge of managing information, IT and processes, broad internal contacts with and knowledge across their businesses, and strong working relationships with diverse IT suppliers and other businesses in the industries their companies serve. To highlight this CIO role and the significant contributions that it can make to the company's CSR efforts, we describe a CIO-led collaborative initiative in Novartis (a global pharmaceuticals and healthcare company based in Basel, Switzerland). The initiative, called SMS for Life, saves lives by supporting governments in sub-Saharan Africa to solve the problem of "stock outs" of drugs used to treat malaria in local and regional health facilities.

We first describe the origins and motivations of the SMS for Life project, and the collaborative approach used to design the solution and launch the pilot project in the regions of Tanzania. Following the successful pilot, we describe how SMS for Life was extended throughout Tanzania and to other sub-Saharan countries. We also describe the challenges of institutionalizing the project into the corporation as a social intervention and platform with strong business innovation and growth opportunities. Finally, we identify the lessons that CIOs and IT managers in other companies and industries can learn from this Novartis initiative. These lessons will enable them to leverage their unique process, information, technology and people expertise to pursue CSR initiatives that can create high social value as well as business innovations for their companies and industries.

The Fight Against Malaria

Every day, more than 1,600 people die from malaria, of whom 90% are in Africa and 85% are children under five. Malaria is a public health problem in over 100 countries worldwide, inhabited by over 2 billion people. About 85% of the 300 to 500 million cases annually occur in Africa and over 40% of the world's children live in countries in which malaria is endemic.

The best available treatment for *P. falciparum* malaria—and the only one recommended by the World Health Organization (WHO)—is artemisinin-based combination therapy (ACT). This therapy contains the basic compound artemisinin, which is isolated from an herb used in Chinese traditional medicine, before being chemically modified and combined with other drugs, for example lumefantrine. ACT is very effective when used within 24 hours of malaria symptoms occurring.

Novartis AG is the major producer of ACTs in the world. In 2001, the company started the Malaria Initiative to produce and distribute a treatment called Coartem on a not-for-profit basis. By 2012, the company had produced and distributed over 500 million treatments. The key institution in the fight against malaria is the Roll Back Malaria (RBM) Partnership. RBM was founded in 1998 by the WHO, the United Nations Development Program, the United Nations Children's Fund and the World Bank with the purpose of providing a coordinated global response to malaria.

To help Novartis IT employees better understand the company's role in fighting malaria, Jim Barrington, then Corporate CIO, invited Silvio Gabriel, EVP, Novartis Malaria Initiatives, to speak at his annual Novartis IT Conference in Basel in June 2006. Gabriel talked about the problem of malaria and the existence of Coartem, which cured over 95% of cases after only three days of therapy. He also highlighted the unacceptable death statistics in Africa and the huge problem of matching patients with the pills. “Stock-outs” in rural health facilities, the point of care where patients receive drugs, is a major problem and cause of deaths. At that time, African countries found it difficult to accurately forecast their future drug needs. This resulted in Novartis receiving emergency orders, which disrupted production planning and meant orders had to be shipped by air. Coartem cannot be manufactured to stock because it has a 24-month shelf life, with a guarantee of a minimum 18 months left from the time it is delivered.

Recognizing that IT could help solve the in-country supply-chain problem, Barrington asked René Ziegler, head of Novartis Global IT Governance and Operations, to travel to Zambia to assess the situation. Ziegler met with the Zambian Ministry of Health and visited

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6 http://www.rollbackmalaria.org/docs/AMD/RBM_Background.doc.
medical stores, hospitals and dispensaries to learn about the healthcare system, particularly the drug distribution processes, consumption reporting and needs forecasting, as well as the available technology and telecommunications. He confirmed that the stock-out problem was huge, that there was no consistent forecasting and consumption reporting in place, and that ordering was paper-based and sporadic. Despite the growing use of mobile phones, he also concluded that there was no currently available technology pervasive enough to address the problem at that time.

The SMS for Life Project

Initiating the Project

In March 2008, Barrington found another opportunity to explore the stock-out issue further in a joint IMD (International Institute for Management Development)-Novartis executive development program called IT Excellence (ITX). Gabriel once again made an inspiring presentation, and several of the participants were motivated to form a voluntary ITX project team to tackle the problem. They went back to their home countries and continued working on the project remotely. However, as they all had other work commitments, the resources and time available for the project were limited.

At around this time, Ziegler and Barrington concluded that SMS7 cell phone technology was the only viable IT solution for the rugged African environment. Given his pending retirement, Barrington had the opportunity to focus his time on special projects for the next 12 months—and he persuaded his boss Raymond Breu, then Novartis's CFO, to sponsor him to work on the stock-out problem. According to Barrington:

“He [Raymond Breu] was very skeptical: it required funding, it was highly political and I would get caught up in bureaucracy. But he said: Fine, try it and we will see.”

Enlisting Key Partners

In January 2009, Barrington set to work preparing the project proposal—which he named “SMS for Life” —to present to Professor Awa Marie Coll-Seck, executive director of RBM. His idea was to establish a partnership project under the leadership of RBM. He recognized that taking ownership of the project away from Novartis would give him credibility and legitimacy when bringing other partners on board.

While waiting for RBM to commit, Barrington started selling the idea to potential corporate partners based on the proposed project governance. The original concept was that each selected partner would undertake to provide skilled resources and a financial contribution of approximately $200,000. This would provide a project team of five or six skilled people and an overall budget of $1 million to $1.2 million.

By the first steering committee meeting in April 2009, he had secured the funding and resources from Novartis. IBM had agreed to provide a project manager and to the use of LotusLive project management software, and Vodafone had committed to participate and cover all the costs of developing the software, for which it would hire an external software house, MatsSoft Ltd,8 and the costs of implementing the pilot. Google had agreed to provide resources to support the development of the mapping component. Barrington had also started to look for a potential country in which to pilot the project. He had two on his list, Tanzania and Zambia, and started to talk to their Ministries of Health. He chose Tanzania for the pilot of SMS for Life.

Setting up a Steering Committee

In early April 2008, Professor Coll-Seck agreed that RBM would support the project and to personally chair the steering committee. Other members of the committee, from a broad range of backgrounds, were:

- Dr. Alex Mwita, Tanzania National Malaria Control Program (NMCP) manager
- Dr. Desmond Chavasse, PSI9 vice president and Global Malaria Control director
- Professor Marcel Tanner, director of the Swiss Tropical Institute

8 MatsSoft had previously worked with Vodafone on developing an SMS-based banking solution.
9 PSI provides malaria control support to national ministries of health in over 30 countries around the world, tailoring its programs to the environment in each location.
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- Professor Klaus Leisinger, CEO of the Novartis Foundation for Sustainable Development
- Silvio Gabriel, EVP of Novartis Malaria Initiatives
- Jim Barrington, who became the SMS for Life program director.

The initial concept of obtaining donations from several partner companies changed to having fewer partners, each of which would finance their own involvement in the project, which eliminated the need for a central project budget.

With IBM, Vodafone and Novartis on board, the work on designing the system solution and preparing for the pilot began. In May 2008, three part-time project members from Novartis joined a project manager from Vodafone and a project manager from IBM on a three-week field trip to Tanzania to meet with National Malaria Control Program (NMCP) representatives on the ground. The NMCP would be the main owner and user of the SMS for Life solution in Tanzania. The team visited hospitals, health centers, dispensaries and warehouses in the three districts that the NMCP had chosen to participate in the pilot: Lindi Rural, Kigoma Rural and Ulanga.

These three districts covered a population of over 1.2 million people in 226 villages served by 129 health facilities. They were chosen because their situations were representative of the country as a whole and were supplied from different zonal medical stores. Malaria was the most common cause of death in these three regions and there were no other pilots running at the same time, which might have skewed the results of the pilot. Lindi Rural represented an “average” district in Tanzania; Ulanga was one of the top 10 most difficult districts to work in because of its remoteness, staff shortages and skill levels; and Kigoma Rural was so large that the zonal medical store was a one-day drive away from the main town, Kigoma, and the furthest health facility was a 12-hour boat trip away.

The team explained the pilot to all stakeholders, discussed the draft solution with them, and obtained their agreement to participate. The team also met with two non-government organizations (NGOs)\textsuperscript{10} that worked in Tanzania and understood the health system well, so they could benefit from their experience.

Based on the inputs from all stakeholders, the team modified the project, which gave a high degree of certainty that the designed solution would work. Once the team returned, MatsSoft started to develop the system.

Over the summer of 2009, the team focused all its efforts on getting ready to launch the pilot in Tanzania. It prepared training sessions in both English and Swahili for health workers from the 129 health facilities, printed training materials (including wall posters), and designed and ordered branded T-shirts with the logos of RBM and the other partners. It also prepared a project website that was hosted on the RBM website. The SMS/mobile phone system, the web-based reporting system and Google mapping were readied and tested.

Launch of the Pilot in Tanzania

On August 5, 2009, the second steering committee meeting took place. It endorsed the start of the pilot in Tanzania.

The first training sessions took place at the end of September and on October 1 the pilot was launched in the first district, Lindi Rural. It was subsequently launched in Ulanga on October 15 and Kigoma Rural on October 22. The pilot ran for 21 weeks to cover two quarterly order and delivery cycles.

The pilot had three objectives:

1. To demonstrate that visibility of stock levels will prompt action to reduce stock-outs and thus improve access to antimalarial drugs.
2. To demonstrate that a data-gathering infrastructure can be made available using simple tools that can be used by people in the most remote locations.
3. To demonstrate the effectiveness of a public-private partnership model.

The Pilot System and Process

Using text messaging, the Internet, a back-end application and Google mapping, the pilot system automatically sent an SMS text message to the mobile phones of registered public health facility workers on a weekly basis asking for their current stock levels (see Figure 1). The responses were collected and stored centrally in a database, accessible via a website. The relevant

\textsuperscript{10} The Mennonite Economic Development Association (MEDA) and PSI Social Marketing and Communications for Health (PSI).
data was summarized in reports and delivered via the Internet, mobile phones and email to key health staff at all levels. The information provided enabled them to take appropriate actions to resolve important healthcare problems based on up-to-date information.

Every Thursday at 14:00, the pilot system sent a stock request message to all the registered mobile phones. The health facility workers counted their stocks of quinine injectables and four different dosages of malaria medicine and sent back a text message with the stock counts, as shown in Figure 2. To ensure the maximum response rate, a free phone number was established and the costs were covered by the pilot.

On Friday at 14:00, the SMS pilot system sent an automatic reminder message to all health facility workers who had not yet responded. At 17:00, the system sent a credit of 1,500 Tanzanian shillings (the usual top-up amount) to all mobile phones that had submitted a stock-level SMS message. Late messages were accepted but no credit awarded. The mobile phone credit was an incentive to motivate health workers to send the message on time and also to recognize the tasks they had to perform for the pilot in addition to their normal workload. Because health workers

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**Figure 1: How SMS Technology, the Internet and Google Maps Help to Avoid Stock-Outs at the Health Facility Level**

**Figure 2: SMS Stock Levels and Interpretation**

- Y4: Yellow, for babies 5-15 kg: 4 boxes
- B3: Blue, for children 15-25 kg: 3 boxes
- R0: Red, for children 25-35 kg: 0 boxes
- G2: Green, for children above 35 kg and adults: 2 boxes
- Q99: Quinine injectables: 99 vials
would be using their personal phones, the credit was for their personal use.

Every Monday at 8:00 am, the pilot system sent an automatic message to the district medical officer indicating the health facilities that had not sent a message and the details of all health facilities with a stock-out. The web-based reporting tool enabled access to the data through a secure reporting website, available via the Internet or BlackBerry mobile phones. It allowed the users, namely the NMCP district and central management employees, to view the current and historical stock levels at both the health-facility and the district levels. It displayed the locations of the facilities on Google maps, showed the SMS message-sending statistics, including any errors, and indicated the web-reporting usage statistics—e.g., how many times the web tool was accessed.

Each district appointed one person to take the lead in driving corrective actions resulting from the stock-level visibility. This person was given a BlackBerry to access the system, and was responsible for assisting workers experiencing difficulties and for ordering and distributing medicines in response to the stock-outs.

The project team monitored the pilot in two ways. It reviewed the online information available daily through the web application. In addition, for the duration of the pilot, team members conducted surveillance visits to 116 out of the 129 pilot health facilities to check the accuracy of the stock counting. In total, the team spent over 370 person days on the ground supporting the pilot. These follow-up visits were very important for the health care workers’ perception of the project and its significance.

The pilot’s progress and initial results were discussed at the third steering committee meeting, held on December 17, 2009. Committee members also discussed handing over the pilot to the Ministry of Health in 2010 and the possible implementation of the solution in other African countries.

Pilot Results

By the time the pilot concluded at the end of February 2010, all three objectives had been fulfilled. The SMS for Life application provided, for the first time ever, reliable weekly stock information about stocks of antimalarial medicines in the health facilities. This enabled the district management to act on the information and reduce or eliminate the stock-outs. At the beginning of the pilot, all three districts had high stock-out rates of one or more of the five drugs. During the pilot, the stock-outs of all drugs were reduced from 57% to 0% in Lindi Rural, from 87% to 30% in Ulanga and from 93% to 47% in Kigoma Rural. At the beginning of the pilot, 26% of the facilities had no antimalarial medicine of any type; this figure was reduced to 0.8% by the end, almost full availability.

The average response rate over the 21 weeks across all three pilot districts was 95%, and the data accuracy rate was 94%. The average usage of the system per user group was more than once per day. The pilot results far exceeded the team’s and the steering committee’s expectations.

The project team wrote the following in its final report of the pilot:

“The SMS for Life pilot created a unique public-private partnership model that enabled the problem to be precisely identified and a technical solution to be designed, built and implemented in three rural districts in Tanzania in about one year. In the end, no formal budget, legal contracts or memorandums of understanding were developed between any of the partners. This model also made it easier, faster and more efficient to obtain results, bypassing the often lengthy and difficult approval process for project funding allocation and transfer.”

The pilot results and recommendations were formally presented and the final report handed over to the Minister of Health, Professor David Mwakyusa, in Dar es Salaam on World Malaria Day, April 25, 2010. Based on this report, the Minister of Health requested that the SMS for Life project be rolled out to all 5,099 health facilities throughout Tanzania as soon as possible.

Rolling out SMS for Life Throughout Tanzania

Barrington’s focus now shifted to assisting the Minister of Health in rolling out SMS for Life throughout Tanzania. The good news was that he had support at the highest levels of the Tanzanian government; the bad news was that the country

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12 World Malaria Day was declared in 2007 by the World Health Assembly after Africa Malaria Day, which was adopted in Abuja at the African Summit on Malaria in 2000.
could not fund the roll-out to all 5,099 public health facilities. Thus, in spring 2010, Barrington faced two challenges.

First, he had to find $850,000 to fund the country-wide roll-out plus the first year’s operations costs. He first approached Medicines for Malaria Venture (MMV), the NGO that had worked with Novartis on the development and launch of the Coartem Dispersible for children. MMV agreed to provide $300,000 and management support for the roll-out. He also applied to the Swiss government through the Swiss Agency for Development and Cooperation (SDC), which agreed to provide the remaining $550,000. To simplify the administration of the funds, Barrington asked MMV to act as the conduit for and controller of both sources of funding. MMV signed a contract with the SDC for the fund management and a second contract with Vodafone for its services in Tanzania.

The second challenge was to determine who would provide on-the-ground training and implementation services for the 131 health districts and 5,099 health facilities in Tanzania. Barrington assessed the capabilities of two potential service providers—MEDA (Mennonite Economic Development Association) and PSI. He selected PSI because it already had managers, staff and other resources, such as trucks, in all 21 Tanzanian health regions and could provide ongoing support and training for medical staff in each district. MMV contracted directly with PSI for the provision of its services.

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However, the launch of the Tanzania-wide roll-out was delayed from September 2010 to February 2011 due to changes in key roles in the country. The Minister for Health changed following national elections and there was also a change of the national head of the Malaria program. Both of the previous incumbents were strong supporters of the SMS for Life program. Both of the previous incumbents were strong supporters of the SMS for Life program.

In the end, Barrington trained the 21 PSI regional trainers, and PSI launched the first district-level training for the full country roll-out in Tanzania on February 9, 2011. By November 2011, SMS for Life was deployed in all the 5,099 health facilities in 131 districts nationwide. Concurrent with the nationwide roll-out of SMS for Life in Tanzania for antimalarial drugs, the Novartis Foundation expressed interest in tracking the distribution and availability of leprosy and TB treatments in Tanzania. It funded a pilot project that covered 12 districts and over 500 health facilities, and a possible national roll-out is under discussion with the Leprosy and TB divisions of the Tanzanian Ministry of Health.

Changes in the Functionality of the SMS for Life System

Two major changes in the functionality of the SMS for Life system were implemented for the Tanzania-wide roll-out. First, the system was made 100% mobile and not reliant on local use of the Internet for assigning mobile phone IDs, registering health workers and managing training functions.

The second change involved developing a Wireless Access Protocol (WAP) mobile version of the system and providing each of the 131 districts with a smartphone to overcome the lack of Internet availability at many district headquarters.

These additional capabilities simplified training on the SMS for Life system and made reporting entirely mobile. This guaranteed that all district medical officers would have easy access to the weekly stock information and enhanced management information on forecasting disease and treatment levels throughout Tanzania.

Rolling Out SMS for Life in Other African Countries

Barrington’s original 12-month project contract with Novartis was completed with the submission of the final report on the Tanzanian pilot in April 2010. Given the success of the pilot in Tanzania and the request for a full nationwide roll-out, Novartis extended his contract first to December 2010, and subsequently to December 2011. Once the roll-out in Tanzania had been completed, he turned his attention to other sub-Saharan countries.

Figure 3 provides an overview of how SMS for Life is being extended to other countries. A three-step process is being used to launch pilots in each country. Step one involves completing a detailed one-week visit to the target country to meet all stakeholders and scope the pilot project. Step two focuses on defining in detail the pilot project. Step three involves acquiring the funds for a six-month pilot project.

As the SMS for Life program began to grow, additional software vendors (Greenmash and Minoxysys) were added to ensure competitive pricing for the countries involved, and Barrington
worked with them to help them develop the SMS for Life process on their platforms.

**Internal and External Support and Recognition for SMS for Life**

Since April 2010, the SMS for Life project has continued to receive support from several Novartis organizations. The Novartis Foundation provided funds to pilot the expansion in Tanzania to cover the monitoring and distribution of treatments for leprosy and TB. The Foundation also funded the expansion of SMS for Life to cover blood products for women in childbirth in regional hospitals in Ghana. Novartis also largely funded the pilot in Kenya.

The Novartis Pharmaceuticals and International IT divisions supported the part-time work of 17 employees on SMS for Life for periods ranging from one week to one month. Additionally, Novartis Canada instituted an annual employee competition where the winner is fully funded to spend one month working in Africa on the SMS for Life project. These internal employee programs are a crucial source of funded and skilled resources to the project.

In 2011 and 2012, SMS for Life was featured on the Novartis corporate website. Discussions of SMS for Life were also included in the 2011 Annual Report and in presentations and speeches by the Chairman of Novartis, Dr. Daniel Vasella, and the CEO, Josep Jimenez.

SMS for Life has also been recognized externally and has won several prestigious global awards (see Figure 4) as well as featuring prominently in the international media. An external communications agency estimated the total audience reached out to about the project in 2011 was over 215 million people.

Both Barrington and Ziegler were retirees on annual part-time (70%) contracts supporting what was becoming a large-scale Novartis-led initiative. As a consequence, in April 2012, Barrington instigated a meeting with Rob James, the current Group CIO, and Mary LeBlanc, the CIO of the Pharmaceuticals Division. He proposed that the Novartis IT organization take ownership of the SMS for Life processes and systems and provide services back to Novartis Malaria Initiatives plus other interested Novartis business areas. In August 2012, an agreement was reached with LeBlanc whereby Pharmaceuticals IT would take ownership and full responsibility for the system.

**Lessons Learned for CIOs**

In SMS for Life, responsible leadership, corporate social responsibility and business innovation came together to improve healthcare
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Figure 4: Awards and Recognition for Novartis’ SMS for Life Project

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<tr>
<th>Award</th>
<th>Description</th>
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<tr>
<td>2011 Wall Street Journal (WSJ) Technology Innovation Award in</td>
<td>SMS for Life was awarded the 21st Century Achievement Award in the Innovation IT category of the 2012 Computerworld Honors Program. This award recognizes organizations that promote and advance the public welfare, benefit society and change the world for the better through a visionary application of IT.</td>
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<tr>
<td>Healthcare IT category. This award recognizes game-changing innovations</td>
<td>SMS for Life won the 2012 Ethical Corporation Award for Best Corporate/NGO Partnership. This award recognizes collaborations that have resulted in measurable outcomes and tangible benefits for society.</td>
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<tr>
<td>that break with conventional ideas or processes, go beyond marginal</td>
<td>At the 2011 mHealth Summit, SMS for Life was honored with a catalytic grant from The Innovation Working Group, part of the UN Secretary-General’s Every Woman Every Child effort, and the mHealth Alliance. The grant, funded by the Norwegian Agency for Development Cooperation (Norad), is one of eight grants designed to identify and foster innovative uses of mobile technology to advance maternal and newborn health, with a special focus on growing programs with sustainable financing models and early indications of impact.</td>
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<td>improvements and have a wide impact in their field.</td>
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for patients in need. Based on this experience, we believe that there are important lessons to be learned by CIOs and IT managers across companies in various industries in which there is a strong corporate commitment to CSR, especially for projects involving developing countries.

1. Build on Your Experience and Expertise as a CIO to Lead CSR Initiatives in Your Company

The skills, training, experience, process and information management knowledge, and internal contacts with customers and external contacts with vendors, place CIOs and other IT managers in a unique position to take the lead on solving major societal problems, forming partnerships, and defining, developing and implementing high-quality solutions.

CIOs and many experienced IT managers have three types of knowledge that can be very useful in CSR projects like SMS for Life. First, their understanding of business operations and processes across the value chain provides a unique perspective on potential opportunities to engage in CSR initiatives that other managers in the business may not see. Second, they have experience in defining business problems in terms of information management, process mapping and IT deployment. They are skilled in exploiting the interdependence of these areas of expertise to solve business problems both internally and externally with suppliers and customers. Third, they have experience in project management and the disciplines of developing and delivering solutions on time, on budget and with the required functionality for systems to work.

This unique combination of competencies is often missing in CSR initiatives that fail to execute pilots successfully, or fail to transition from pilot to full-scale roll-out or fail to scale up in multiple and diverse country settings.

2. Forming a Private-Public Partnership is Key to Resolving Long-Standing Problems in Developing Countries

No single public or private organization has all the skills required to solve major societal problems. Harnessing the tremendous skill base that exists in multiple private sector corporations and forming partnerships is the only way to resolve long-standing problems in developing countries. CIOs have networks both personally and professionally on which to build relationships with private, public and NGO organizations to bring new ideas to bear on pressing social problems that their companies can help solve.

3. Set Ambitious CSR Goals with Clear, Time-Bound Commitments and an Agreed Exit Plan for Partners

Setting a high-value CSR project goal within a challenging time frame, and limiting the team to only the specific and required skills, will force...
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focus, eliminate bureaucracy and barriers, speed decisions and generate a high-performing team with a passion that gives it the capability to achieve anything. In addition, allowing partners to control their own resources and budget, completing the project within one budget year and guaranteeing an exit after that year will make it easier for large corporations to commit and participate. There are many companies that could improve the quality of people’s lives in emerging markets where the goals can be directly linked to CSR projects to which CIOs and IT managers can contribute their expertise. Examples include improving education and healthcare, ensuring clean water supplies, and supporting agriculture, housing and social networking. Knowing that a team is saving lives and improving the quality of life in emerging markets can motivate the performance of team members and partners and build high trust in developing relationships.

4. Develop a Stakeholder Network that Adds Credibility and Visibility to the CSR Project

Establishing a very strong, credible steering committee of globally recognized experts, makes it easier to access countries, partners and funding. The SMS for Life steering committee brought together diverse, globally recognized experts and organizations from the public and private sectors, academia and NGOs who could add credibility and make resources like funds and expertise available to diverse country roll-outs. Taking the time and effort to achieve the active participation and contributions of these diverse experts and organizations through the steering committee provided the SMS for Life project team with the branding and recognition by public health ministers in Tanzania and other countries.

5. Design a Scalable, Sustainable and Commercially Viable Solution that Will Work Within the Constraints of the Target Environment

CSR solutions must be professionally developed to enterprise-strength standards, fully scalable, sustainable and commercially viable. CIOs know how to do this. Too many developing world projects fail because they cannot scale, have not been developed to industry strength standards or are not designed within the constraints of the social and physical environment in which a project has to operate. Before designing SMS for Life, the team spoke with remote health workers, pharmacists, district medical officers, nurses, district and regional hospital staff, ministry staff, medical stores and other NGOs working in the target country.

6. Place all Complexity Where it Can Be Managed Best

A CSR project should focus intensely on allowing only value-adding functionality that directly solves the problem at hand; no “nice to haves” should be permitted. The project team should ensure that all complexity is placed where it can be managed best—e.g., in the cloud—to keep local in-country complexity to the minimum. The SMS for Life project placed specific emphasis on motivating the local clinic nurses by keeping the collection and updating of stock-level information as simple and clear as possible. This approach enhanced the accuracy and timeliness of stock-level reporting through simplifying the user interface and information management required from people with limited education and literacy in rural health clinics.

7. Don’t Underestimate the Value that Today’s IT Professionals Place on Participating in CSR Initiatives

A key learning of SMS for Life was the willingness of IT professionals to volunteer their time to contribute to the effort. Novartis’ Group CIO was fully committed to giving high-performing managers the opportunity to be part of the SMS for Life experience for a week or month at a time. The result was higher loyalty to the company and the IT organization, and an early exposure to CSR in the career paths of younger and high-potential professionals. The exposure of IT professionals and managers to the value of CSR initiatives early in their careers provides both the motivation and the confidence to contribute to further such initiatives as they mature in their experience and expertise.
8. CSR Projects Require Significant Commitment and Time from Leaders and Participants, which Should Not be “Add-Ons” to their Workload

Another key lesson of SMS for Life is that it could not have been done by volunteers in their “spare time” above their normal workload. CIOs and IT managers must make sure that they plan to allocate their time or that of their staff to CSR initiatives as part of their workload. Otherwise, full-time staff and managers will not be able to devote the time and attention to sustaining their contributions to such projects.

Concluding Comments

The SMS for Life initiative is an outstanding example of entrepreneurship, innovation and personal risk-taking by a CIO and IT managers to find practical solutions to pressing social concerns that are consistent with the vision and business strategies of a global, diversified pharmaceutical and healthcare company. This case study shows how the unique and significant technical, managerial and leaderships skills that a CIO gathers throughout a career, together with the strong internal cross-functional relationships developed within a corporation and the strong and deep relationships with external vendors, can be harnessed to solve an important social problem. CIOs and retiring CIOs in all industries should seek opportunities to take ownership of initiatives designed to create substantial social value in a way that makes a difference in communities consistent with the vision and strategy of their companies.

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