Chapter 2
Open Source and Bridging the Digital Divide:
A Case Study

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ABSTRACT

This case study involves the adoption of new technologies by a developing nation. The leader of the country, in consultation with an advisory non-profit agency must weigh the benefits and drawbacks of commercial products versus open source/low-cost options. He must also consider ways of remaining sensitive to cultural traditions and norms when introducing these new innovations.

INTRODUCTION

For 10 years, the African nation of Zado was in constant turmoil and suffered extreme civil unrest. Essentially destroyed, the country had to rebuild itself almost entirely. From amongst the turmoil emerged an unexpected leader, Nazir Bunta. After working tirelessly on humanitarian efforts for several years, Bunta was selected as Prime Minister when Zado finally held its first election in a decade. Over the last six years, Prime Minister Bunta has worked hard to rebuild Zado's infrastructure. Hospitals, schools, factories, farms, and many other vitally necessary institutions have been erected and repaired. Humanitarian organizations are working hard to reunite families and re-integrate refugees who fled to neighboring countries during the civil war. Children are once again attending school and the elderly and infirmed are receiving consistent medical care. Programs for job training and retraining are enabling employees to re- enter the work force and help Zado's economy to right itself and thrive. Clean water is available and electricity is rapidly being restored to most regions in the nation. Overall, the quality of life for most Zadorians has improved dramatically.

Now that his nations most basic needs have been taken care of and citizens are beginning to thrive, Prime Minister Bunta can begin to look ahead at his country's future. While Zado has gained economic and political status with the rest of Africa and much of the western world, they are sorely lacking in

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technological ability, equipment and connectivity in general. Being a progressive leader, the Prime Minister realizes the criticality of entering the age of technology, but doesn't quite know how to get there. An intelligent man, Bunta wants to consider his options and enlist the help of informed individuals. Hearing of a non-profit organization, PacemMundus (PacemM.), that has been completing successful work in other parts of Africa, the Prime Minister contacts the main office.

CASE DESRIPTION

PacemMundus is located in central Europe and is co-run by the European Union and the United States. Volunteers and staff come mostly from these two regions and have various levels of education, but a university degree and intensive training with the organization are required by all. While there are many divisions of PacemM., the technology division is one of the fastest growing areas. It's also well-funded through private donations and non-profit divisions of many microchip and computer corporations. Consequently, the tech division has a full complement of qualified staffers and an even larger number of volunteers. One of the full-time staff members who often works with some of the higher-profile clients is Theo Walters. Theo has a Masters Degree in Educational Technology from an accredited university in the United States and has spent several years working for large computer and software corporations. He also taught computer courses part time at his local community college. Approximately five years ago, Theo started a management position at PacemMundus. Since that time, he has worked on technology initiatives with the governments of several countries in Asia and Africa. He recently learned that he was advise Prime Minister Nazir Bunta of Zado and assist in bringing the country's technology infrastructure into the 21st century. The first meeting with Bunta is to be held at the Prime Minister's palace in Muta, Zado's capital city.

Prior to his departure, Theo gathers a team of his best staff to travel to Zado and conduct a needs assessment. In general, the team found that essentially no technology infrastructure exists in Zado. Although cell phones are becoming quite prevalent (exponentially more so than landlines), computer technology is sorely lacking. What did exist before the civil war is now demolished and what is left is out of date. Due to this situation, most of the citizens do not have many tech skills and those who do have them have mostly left the country. While the Prime Minister sees technology and a technology-saavy citizenship as crucial to the continuing growth of Zado, the Zadorians are not as keen. For over a decade, they have been scrambling to simply remain alive and keep their families safe. Now that stability has come to their country, they are finally getting a chance to prosper and enjoy the simple things in life again. While this is difficult and constant work, they relish in the idea of simply getting back to where they were before the war. Becoming technology literate does not figure into that equation. Although progressive, Prime Minister Bunta is not out of touch with his people and has sympathy with their resistance to his new passion. To complicate matters more, Zado is not wealthy. In fact, it is outright poor. Even though the economy is flourishing more each day, there really is no excess to invest in technology and technology training. Zado will need to depend on the generosity of non-profit organizations and charities.

Once he heard his teams report and perceptions, Theo struggled with his recommendations to Prime Minister Bunta. Given that Zado has no money to spare for the technology initiative, Theo knows that the best solution for hardware and software is to use low/no cost and open source products. There is a wealth of open source operating systems and applications which won't cost Zado anything except funding for tech support and training. In addition, $99 laptops are being created and proliferated by a research group in Vermont who received a large grant from the National Sci-