IDC
Analyze the Future

I D C C A S E S T U D Y

Smart IT Solutions Free the International Rice Research Institute To Focus on Alleviating World Hunger

June 2005

Sponsored by: HP

Situation Overview

The International Rice Research Institute (IRRI) is an autonomous, non-profit agricultural research and training center established in 1960 by the Ford and Rockefeller foundations in cooperation with the Philippine government.

Headquartered in the Philippines, IRRI is the leading rice research and training institute in the world. IRRI's main mission is to increase rice productivity through breeding programs for high-yielding varieties, and to distribute these to farmers in rice-producing countries. It is focused on improving the well-being of present and future generations of rice farmers and consumers, particularly those with low incomes, while preserving natural resources.

The organization now employs about 1,030 scientific and support staff, roughly 85% of whom are Filipinos. Approximately 135 senior scientists are recruited internationally, of whom just over half are from developing countries such as Bangladesh, Thailand, Indonesia, Sri Lanka, India, Cambodia, Malaysia, and the Philippines.

So far, more than 13,000 researchers and rice industry personnel have been trained at the institute, with another 2,700 taking part in IRRI's collaborative in-country courses. Many of these people have now advanced to senior positions and play a key role in ensuring the food security of their nations.

IRRI's scientific research has had a major impact on the world in helping to alleviate hunger. Rice scientists at the institute developed the first semi-dwarf breeding lines for rice in the mid-1960s. The high yields and rapid farmer adoption of the new grain varieties helped trigger the Green Revolution.

Since then, rice scientists have been able to develop new strains of rice that have ever-improving resistance to major insects and diseases. This helps farmers by reducing their dependence on harmful and expensive agrochemicals. Rice scientists have also developed strains that mature faster, are of better quality, or are able to tolerate different environmental conditions to help farmers maintain yields even under difficult circumstances.

The Challenge

As a major research and training institute, IRRI depends heavily on computing power. Hundreds of scientists at IRRI depend on desktops or laptops to do their work. The laptops are particularly important for scientists and researchers involved in fieldwork in rice growing areas throughout Asia. In addition, researchers also need scientific workstations to analyze scientific data.

IRRI's network complexity stems also from having several sister institutes hosted on its network (an additional 80 staff), plus having to provide connectivity to its training school, residential housing complex and guesthouse, as well as for visiting scientists, PhD students, and those conducting post-doctoral research at the institute. In all, IRRI's IT department manages hundreds of computers offsite and has to communicate in many languages to meet the needs of all of its onsite and external users.

Previously, IRRI had a very heterogeneous environment of laptops, desktops and scientific workstations. It had over 800 desktops and laptops, mainly purchased in small batches at different times, and with many different configurations. In addition, it had numerous computers attached to instruments and special purpose devices. As a non-profit organization, IRRI has to spend its money very carefully, so while they do buy new machines when necessary, old machines must also be maintained and used for as long as possible.

This policy extends the life of the desktops and laptops, but increases the overall total cost of ownership (TCO) due to the costs involved in maintaining legacy computers, and because of the complexity of the entire computing environment. Obviously, just supporting many numerous models and configurations is a major headache. Apart from support, asset management was also an issue because of the sheer diversity of IRRI's computing resources.

As an international organization with the right to import free of duties and taxes, IRRI used to purchase directly from a well-known manufacturer that makes the desktops in Asia, but outside of the Philippines. IRRI was unhappy with the service provided by the supplier of their desktops because the supplier had outsourced its support to a local reseller with limited capability.

IRRI also used to buy laptops from a Japanese manufacturer that made them in the Philippines, but which had to be bought in the U.S. because the models sold in the Philippines did not include modems. Laptop procurement was particularly problematic. It was project driven, and faced problems such as product variations, shipping delays, and even components going missing.

Another major problem that IRRI faced was hardware maintenance. For example, a laptop was out of commission for six months because it had to be shipped to the U.S. for repair, which required three months to turnaround, and, upon being fixed, the fault recurred almost immediately, resulting in an additional three-month wait for a replacement part to be shipped to the Philippines for local maintenance. The entire procurement, support, and management process was tedious, complex, and inefficient.

The Solution

IRRI decided that it needed a more efficient, less complex way of handling all of its computing needs. It called for a tender, which was won by HP.

HP offered its Desktop Lifecycle Solutions to help IRRI with its IT problems. With Desktop Lifecycle Solutions, HP aims to help companies simplify the provisioning, support, and management of any access device or printer, while providing office workers with secure access to corporate information, email, Internet, and printer services. HP designed Desktop Lifecycle Solutions to reduce the complexity and costs associated with IT management.

IRRI eventually decided to replace over 500 computers with HP desktops, laptops and scientific workstations, all managed under a subscription utility service that includes a combination of leased computers and bundled services. IRRI felt confident that this approach would assure guaranteed levels of service and best practices, as well as predictable monthly costs.

This migration constituted about 70% of all its hardware. Under the contract, HP also provides multivendor desktop support for the remaining 30% of the hardware that IRRI would continue to own. To maintain all of this hardware, HP provides helpdesk service, onsite repair, and a comprehensive asset management solution. Under a utility service contract, HP also handles the deployment, implementation and management of a storage system for IRRI.

To handle the changeover, HP sent staff to the IRRI campus to manage migration to the new computers. To help in the migration, each desktop was given some storage that was mirrored on HP network attached storage (NAS) appliances deployed in two datacenters.

According to Paul O'Nolan, Head, IT Services, IRRI, those things that HP was responsible for went without a hitch. Not a single file was lost and no complaints of any kind were received. For most people, migration took under two hours.

The actual migration was relatively painless, because IRRI invested time and resources in getting buy-in from its scientists and researchers early on. The IT department arranged for presentations to explain how the new system would work, and also prepared a frequently asked questions (FAQ) document. Users were initially wary, with many scientists believing that a new system would lessen the freedom they traditionally benefited from owing to customized configurations. Eventually, through IRRI's migration education initiatives, the IT department successfully proposed a single supported configuration with higher specifications at little additional outlay. According to O'Nolan, IRRI users are now happy with the outcome.

The Result

As a result of moving to HP's Desktop Lifecycle Solutions, IRRI's IT department is now able to focus on helping its users in research, rather than on tasks such as trying to solve printing problems. According to O'Nolan, by choosing HP's Desktop Lifecycle Solutions for PCs, IRRI loses the headaches of ownership while gaining access to best practices, and the freedom to concentrate on strategically more important things than servicing commodity products.

Specifically, IRRI no longer has to deal with desktop support for its users, whether or not the desktop in question is an HP machine. HP's multivendor desktop support takes care of all issues. For the 800 machines that are under the program, over 500 of which were newly provided by HP, HP is also responsible for hardware failure, and will replace and fix those machines onsite.

IRRI's asset management has also simplified. Previously, it had to manage over 700 machines. Now, because it owns much fewer desktops and laptops, asset management of those becomes easier. HP, on the other hand, handles the asset management of the majority of the machines used at IRRI.

According to O'Nolan, the cost of migrating to HP's Desktop Lifecycle Solution has remained broadly the same as managing everything internally. However, IRRI now spends more on service instead of hardware. As a result, its hardware problems have diminished and service levels have improved.

The improvement in terms of service to IRRI's users can be seen in how the helpdesk is now run. Previously, IRRI's helpdesk consisted of the IT Department secretary. She would take trouble calls from users, and would then route the calls to the relevant staff. As the department secretary, she had other responsibilities; handling helpdesk calls was just one of her many priorities.

Now, IRRI's helpdesk has two HP staff working full-time. The volume of calls has gone up to over 300 calls per week, not because there are more problems, but because IRRI's users are actually finding that the helpdesk is able to help them. As O'Nolan notes, when people get through immediately, every time, they will call more often. Most calls are resolved over the phone or remotely.

IRRI's IT department has a single point of accountability, which makes management easy. And because so many resources have been liberated, the department now has breathing room to focus on implementing its ITIL, the IT Infrastructure Library (of best practices).

IRRI believes that, while there might not appear to be cost savings, for the same amount of money it used to spend, it is getting more. It is getting better desktop support for its users, and its IT department is able to engage in more value-added tasks.

According to O'Nolan, his only regret is not undertaking desktop lifecycle solutions earlier.

The Future

To other companies in search of similar solutions, O'Nolan advises: "Look at your total cost of ownership and how well you've implemented best practices. An external review will help identify high indirect costs and less good practices that you need to think about attacking.

“If your environment is complex, if the wheels grind too slowly, if too much time is spent on accounting, just cut the knot and get out of the business of, in effect, competing with suppliers who can operate utility services more efficiently."

IRRI has just awarded a contract for managed printing and copying services to HP. And as a result of its positive experience of outsourcing to HP, IRRI is carefully considering whether owning servers, storage and network infrastructure makes sense for the organization, or if it would be more suitable for it to outsource. Among the services it is looking to outsource are: printing and imaging infrastructure, storage, servers, and network upgrading. HP is in the running for all these different opportunities.

Summary of HP's End User Workplace Solutions

IDC has studied the market in Asia/Pacific, which reveals HP as one of the leading IT service providers. In 2004, HP made significant investments to upgrade its portfolio of services targeted at helping its customers address the person-level support for enterprise IT users. Under the banner End User Workplace Solutions (EUWS), IDC finds that HP has been creative in bringing together the three axes of user productivity: device and application, technical expertise, and investment horizon. These axes are addressed in a holistic package that includes:

- Device and application support comprising of desktop, mobility, messaging and collaboration, as well as imaging and printing
- Technical expertise addressed by way of help desk solutions
- Investment concerns managed through HP's financial services

IDC Asia/Pacific, 80 Anson Road, #38-00, Singapore 079970 P.65.6226.0330 F.65.6220.6116 www.idc.com.