

I D C C U S T O M E R S P O T L I G H T

IRRI to Reap an ROI Harvest of 193% over the Next Three Years

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Project Summary

Operational efficiency has always been a challenge for budget-conscious, non-profit organizations such as the International Rice Research Institute (IRRI). The need to keep pace with the growing information and communication technology (ICT) requirements of end users, manage an increasingly complex IT environment, and the pressure to implement cost-effective solutions are the fundamental challenges for the organization.

IRRI had to make a necessary transition from "sub-optimal practices" and ineffective computing solutions to ensure greater operational productivity and increase the returns on IT investments.

HP, through its End-User Workplace Solutions (EUWS), provided IRRI with a simple, viable, and cost-effective solution to address these concerns. In its first engagement for example, HP's EUWS enabled IRRI to migrate 561 (from a total of 1,000) of its older desktops into the EUWS with minimal disruption to the day-to-day operations of the Institute.

To validate the business benefits of this approach and to determine the ROI, IDC interviewed both IRRI and HP Philippines and asked a series of questions pertaining to costs and specific IT processes, including associated time and staffing requirements before and after deploying the HP EUWS.

IDC calculated the average ROI, cost reductions, and performance gains made possible by the HP EUWS from the results of the interviews. The cost reductions include the cost savings resulting from the increased efficiency and productivity of users and IT management staff, while the revenue figure includes the cost savings of transferring PC hardware and software costs from an ownership model to a service model. IDC estimates that with a total investment in EUWS of US\$2.25M over three years, IRRI will experience an ROI of 193% (see Table 3).

Solution Snapshot

Organization: International Rice Research Institute (IRRI)

Employees: 1,000

Operational challenge: Implementing a comprehensive IT solution to address the complex requirements of many users, while developing a system that will provide for greater IT flexibility and operational efficiency.

Solution: HP End-User Workplace Solutions (EUWS)

Project duration: 3 years

Project cost: US\$500,000 pa

Benefits: Optimization of the organization's IT resources, reduced downtime, estimated reduction in IT staff time of 34%, and anticipated 50% reduction in printers

Moreover, this study has also identified several resulting benefits of the HP EUWS deployment. Among the notable gains related to cost savings and other indirect benefits are:

- Increased IT productivity and agility
- Improved service delivery (help desk now resolves 80% of problems within 24 hours)
- Migration from Windows 98 to Windows XP platform — IDC estimates that this will reduce IT staff time supporting PCs by 34%
- Reduced downtime (zero downtime since HP Solution)
- Simplification of IT environment

In conclusion, increased operational efficiency brought forth by the HP EUWS has contributed directly to top-line cost savings for IRRRI, as improved efficiency of the IT environment has resulted in less downtime, improved service level offerings, and IT staff capacity. Furthermore, the new IT environment instilled "best practice" models that not only gave IRRRI a more capable computing environment, but likewise freed up valuable IT resources — allowing IRRRI to more effectively collaborate with institutional counterparts and provide its end users with innovative, high-value IT services such as Access Grid and videoconferencing.

Introduction

IRRI is an autonomous, non-profit agricultural research and training organization whose mandate is to find sustainable ways to improve the well-being of present and future generations of rice farmers and consumers (particularly those belonging to low-income groups), while at the same time protect the environment. From an operational perspective, IRRRI's business is essentially rice research; the organization is dedicated to assisting farmers in developing countries produce more food on limited land using less water, less labor, and fewer chemicals. IRRRI achieves this through high levels of cooperation and collaboration — and through memberships in key organizations such as the Consultative Group on International Agricultural Research (CGIAR) network. IRRRI is also a member of several agriculture-focused organizations, which further facilitates global poverty reduction through rice research (see Appendix B for membership information).

While IRRRI does most its research in cooperation with global agricultural research and farming communities, as well as other development institutions of the world's rice-producing nations, various ICT platforms must support much of the Institute's collaborative efforts. Inasmuch as ICT is a key to human

collaboration across borders, IRRI is at the forefront of utilizing technology to optimize the collaborative process within its own location and across related organizations. Although IRRI's core business is agricultural research, it has also been an early adopter of innovations in IT. For example, IRRI was the:

- Second organization in the Philippines with Internet link (1995)
- Second organization in the Philippines with Access Grid (2005)

To improve scientific collaboration with sister institutes in the CGIAR, IRRI installed an Access Grid videoconferencing facility in October 2005. Four of the 15 CGIAR institutes around the world are now connected to advanced research networks such as Internet2, and in IRRI's case, the Asia Pacific Advanced Network (APAN); others are expected to come online in the future. To date, IRRI scientists have had four-way conferences with colleagues in the International Potato Center in Lima Peru, the International Center for the Improvement of Maize and Wheat in Texcoco, Mexico, with whom IRRI has a joint Crop Research Informatics Laboratory, and the International Center for Tropical Agriculture in Cali, Colombia. "There's a lot of common biology, especially in cereals, and a shared interest in use of tools like the Geographic Information Systems (GIS)," says IRRI IT Head Paul O'Nolan. "In the future, IRRI scientists will participate in virtual meetings and conferences convened using the Access Grid. It's a very important tool for scientific collaboration."

IRRI's IT Service Group continues its efforts to optimize the Institute's IT infrastructure and to adopt new solutions that will provide further efficiency to the organization. A transition toward "best practices" standards will be the result of this conscious effort to implement cost-effective and optimal IT solutions. Moreover, the benefits brought forth by the freeing up of valuable IT resources from day-to-day technical considerations such as help desk and technical support will continue to give the IT staff better focus in providing enhanced support to IRRI's researchers and scientists. They, in turn, will be able to concentrate on their core responsibilities — rice research, which is increasingly an information- and, therefore, IT-intensive business, with researchers working with the now fully sequenced rice genome with bioinformatics, proteomics, and other computationally intensive disciplines.

Moving forward, the IT Service Group will continue on the path of consolidation and optimization with Desktop Management Services (including support services), Storage Management Services, and Managed Printer Services, being three of the focus areas that IRRI will further align with the organization's strategic IT initiatives.

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The Challenge

IRRI is a complex IT environment. Because of the nature of the work — research — the 1,000 knowledge workers (including 100 PhD scholars) have demanding requirements for information exchange and support. Moreover, the organization has developed a tradition of "IT freedom" with rather less centralized control over standards processes and policies that one would find in commercial organizations.

Thus, the two-pronged challenge for IRRI is in implementing a comprehensive IT solution that will address the complex requirements of its many users, while at the same time developing a system that will provide for greater IT flexibility and operational efficiency.

Understaffed IT Organization

As with many tax-supported non-profit organizations, IRRI seeks to keep its support budget low. This fiscal discipline resulted in an undermanned IT staff: four IT personnel support 1,000 users or 250 users/IT staff in multiple locations. Organizations of this size and distribution usually average about 130 users/IT staff.

Previously, the relatively modest investments made in IT training made implementing any new initiatives difficult. The somewhat small size of the staff also made it difficult to deliver consistent service levels throughout the organization, which led to additional complexity as individual departments began to develop differing practices and "work-arounds." IRRI is now tackling this situation head-on, taking advantage of its recent and considerable investment in IT training.

Obsolete PCs

In 2002, IRRI suffered funding reductions and underwent a staff retrenchment, laying off about 150 people. In order to allay fears of additional lay-offs, IRRI decided to hold the line on spending in other areas, opting to implement a one-year holiday in IT procurement. Like most spending holidays, the budget was frozen and IRRI had a two-year replacement backlog. At this stage, though IRRI had a few Windows 2000 PCs, 90% of its PCs were still running on Windows 98 and on old hardware.

Furthermore, there were few incentives to dispose of old systems. "Scientists like to keep computers for a rainy day," says O'Nolan. "In fact, there were some disincentives as well." The process for donating the PCs to schools, which was the preferred disposal venue, for example, was cumbersome, time-consuming, and

complicated further with various legal requirements. The disposal process became a major time requirement for the IT staff. As a result, the combination of the moratorium on new systems and the disposal issues with obsolete systems drove widespread reuse of PCs, which then created additional support and asset management headaches.

The already overloaded IT staff now had to support multiple and aged hardware platforms.

Asset Management

Asset management was decentralized, with every organizational unit maintaining its own data, in addition to a central Property and Assets unit, which was also keeping its own reference data. Without a reliable system for tagging and tracking systems, movement of assets to meet changing organizational requirements was very slow. One study showed that it took 48 hours for a system to be tagged. Furthermore, deployment of new systems often caused a cascade of replacements; it was not uncommon for there to be three or four moves of computers down the line.

Compounding matters, many organizational units procured their own applications and customized their images to a significant extent. This scenario not only created compatibility problems, but also became a potential for significant security risks as all PCs were on the same network.

In response to the asset management issues, IRRRI made two previous attempts to automate its asset management system. First, it outsourced the task to a local vendor, but that product did not work and was eventually withdrawn from the market. Then IRRRI deployed a software solution to handle asset management for its computers and software. That was a big improvement, but was still not perfect. IRRRI was effectively trying to roll out its own suite of tools using point solutions, including remote control software. However, the amount of time demanded from an already overworked and undermanned IT staff compounded the issues of do-it-yourself (DIY) integration.

Implementation

In 2002, Paul O'Nolan, IRRRI's Head of IT Services group, initially approached HP (Philippines) to ask about utility storage. He wanted to effectively provide unlimited storage for the organization, as demand for storage always seemed to exceed capacity. His desire was to offer IRRRI scientists as much storage as they wanted, provided they paid for it through a charge-back system. During 2002, utility storage was not yet a service offering in the Philippines.

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However, HP presented its utility service offering called Seat Management to IRRI as an opportunity to simplify its operations. Subsequently, IRRI looked at HP's offering and was satisfied that HP's EUWS could give IRRI a better level of IT service at a competitive price.

Eventually, the strategy evolved to include a complete change of desktop procurement, deployment, management, and support from a capital model to a service model. The approach was to completely assess current desktop support needs, practices, and operations.

Specifically, IRRI intended to improve operational efficiency by implementing the following processes:

- Look at the desktop environment from a total cost of ownership (TCO) or institutional perspective
- Standardize the desktop computing environment and have IT Services provide minimum standards across the board
- Reduce the number of configurations
- Implement "best practices" methodologies/processes in managing the desktop environment
- Outsource some support services if costs similar to historical expenditures and service will improve
- Bundle network storage with computers

HP Solution

As part of the change, the procurement of PCs was opened to three vendors for bidding, and HP was selected as the best overall package. HP's modular solution is made up of the following components, as well as those further described in Table 1:

- Seat Management Solution — for the acquisition of new/replacement hardware
- Desktop Support Services — for the hardware and software support of existing equipment
- Desktop Management Services — for the provision, operation, and management of Altiris desktop management solutions.
- Managed Storage Services — for the supply, support, and maintenance of network-attached storage (NAS) hardware.
- Deployment (new) and disposal (old) services
- Comprehensive hardware and software support "Single-point-of-contact" (SPOC) technical helpdesk

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- Provision of desktop management tools and services
- IT asset inventory management
- 8 x 5 onsite support coverage

Table 1

HP Solutions Products Evaluated

<ul style="list-style-type: none"> • Desktop Solutions
<ul style="list-style-type: none"> • Service Desk Solutions
<ul style="list-style-type: none"> • Imaging and Printing Solutions (replaced 56 photocopiers with 27 HP multifunction devices)
<ul style="list-style-type: none"> • Storage Solutions (network storage)
<ul style="list-style-type: none"> • Others: Managed Solution Services (seat management)
<ul style="list-style-type: none"> • Others: Support Services (help desk)

Source: HP, 2006

Costs for HP's EUWS shown in Figure 1 run at an estimated US\$500,000/year.

Figure 1

HP's End-User Workplace Solutions



Source: HP, 2006

Implementation Challenges

HP had a cumulative requirement of 300 computers (which were either purchased or rented) to be placed under the Seat Management program.

Though that (300) was a larger number than IRRI had ever procured at one time, the fact that the organization delayed procurement or replacements meant that IRRI had effectively two years of accumulated replacements to make. This provided the organization a one-time opportunity to push through with the Seat Management solution. There were however, issues with change that lay ahead.

IRRI is a fairly democratic organization, wherein decisions, including IT-related policies, are required to go through a consultative process. IRRI has an Information Technology Advisory Committee (ITAC) that is a representative body made up of users from a variety of constituencies in the organization and chaired by its Deputy Director General. O'Nolan and HP presented the solution to the ITAC. O'Nolan remarked that, "There were many concerns that this was going to lead to losses of freedom that people traditionally enjoyed. Thus, we needed to run a campaign of persuasion to reassure people that this Seat Management solution was not going to have any adverse impact on the traditional freedoms they enjoyed. Once that body agreed, it was then straightforward to recommend to management that we should proceed with this (HP Seat Management)."

Benefits

The primary benefit to IRRI of HP's EUWS is the optimization of the organization's IT resources, which enabled the IT staff to deliver other rich, high-quality IT services without adding overhead. Thus, the solution has effectively allowed IRRI to exploit new opportunities provided by enhanced operational efficiency, which has resulted in more responsive collaboration across related institutions and a more effective dissemination of rice-related information across its member organizations.

Increased IT Productivity

Given the limited resources of the four IT staff, it was critical to improve IT productivity in order to move forward. One of the issues with outsourcing was the perception that Seat Management was going to become a Trojan horse, and lead to staff reduction in the future. However, the IRRI IT group was understaffed to begin with, so adding additional HP staff combined with automation processes would simply mean that the existing core staff would be able to do

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other things and provide new services. As a result, there were no IT staff cuts. Moreover, HP Seat Management has significantly changed the way IRRI IT staff members spent their time by taking over most of the PC acquisition and deployment tasks and automating some of the operations tasks. Thus, those four staffers were able to focus on higher-level tasks, which contributed to the higher service levels and overall increase in quality of service (QoS), and at the same time, the capacity to add additional services, specifically:

- HP took over hardware configuration and reconfiguration, hardware maintenance, data management, storage planning, backup, and restore.
- With the contract in place, hardware and software evaluation and purchase took much less time.
- Moving the storage platform to NAS automated much of the user administration and provisioning.
- Reducing the requirements in these other areas enabled IT to spend more time in higher value activities, such as threat assessment and security planning, application management (AM), image management, and software deployment and patching.
- Additionally, IT was able to offer real service desk support.

IRRI has used its productivity gains to concentrate on higher-value activities. It is initiating projects it could not do before, such as the Access Grid, videoconferencing, and SharePoint. IRRI has also grown despite labor reductions in 2002, while the IT team has continued to manage increasingly more complex environments in terms of number of applications and solutions. The team is also providing faster turnaround for deployment and support of these applications/solutions.

Now, IRRI's IT resources consist of four IRRI technicians and two full-time HP technicians providing onsite support.

Customer Service: Help Desk — 80% of Problems Are Now Solved Within 24 Hours

With only four IT technicians, IRRI did not provide formal help desk support. The help desk consisted of O'Nolan's secretary handling the 40 or so calls that came in each week. This was not meeting end-user needs, as many users who required support were simply not calling because they knew the response would be inconsistent.

Now, with two HP help desk staff providing 8 x 5 support, calls increased to 300/week, as employees recognized the increase in

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reliable response. In fact, according to IRRI, more than 80% of problems are now resolved within 24 hours, and a majority of those are resolved during the actual call. While comparative statistics were not maintained before the Seat Management implementation, call-handling statistics now can be tracked so the organization can better monitor service levels and tweak its services. Additionally, metrics related to peak load and the impact of deployments could be used to predict changes and prepare for fluctuations in help desk demand.

To provide an equivalent level of service, IRRI would have to add two staff resources, increasing the staff by 50% and adding approximately US\$14,000 to the budget. IDC assumed an average annual salary of US\$7,000/IT support personnel with three years experience.

Best Practices

The other benefit of freeing up IT staff is the enhanced ability to implement best practices. The following initiatives were begun in 2005:

- **PC upgrade.** HP eliminated the old systems and migrated IRRI from older Windows 98 technology to Windows XP. IDC estimates that this migration will reduce IT staff time supporting PCs by 34%.
- **Image reduction.** IRRI is trying to keep one image per configuration and to reduce configurations to three per year. Its goal will be to reduce from 10 configurations to nine. Reducing one configuration will shorten the time to support images by 460 hours/year.
- **Printer consolidation.** IRRI has deployed HP printer management services in conjunction with its Printer Reduction Production program. The strategy has been to migrate from standalone printers to networked group printers with a goal of reducing total printers by 50% from 400 to 200 by late 2007. Again, this will free up time (IDC estimates reducing the time to support printers by 360 full-time equivalent [FTE] hours annually) for the IT staff to focus elsewhere.

Reducing Downtime — Zero Downtime Now Enjoyed by IRRI

Deploying EUWS has reduced downtime in three ways: downtime caused by hardware failure, downtime related to low storage capacity, and the response to downtime.

To provide an equivalent level of service, IRRI would have to add two staff resources, roughly increasing the staff by 50% and adding approximately US\$14,000 to the budget. IDC assumed annual salaries of US\$7,000 for IT staff.

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Its goal will be to reduce from 10 configurations to nine. Reducing one configuration will shorten the time to support images by 460 hours/year.

Previously, spare PC parts were ordered individually as required. IRRI notes that HP maintains better parts storage and can change parts almost immediately. In addition, because HP has total PC responsibility, it has a more complete set of images and has the capability to reimage immediately. Likewise, in the old IT environment, network devices went down several times per year, primarily due to capacity and reliability issues. Now with the HP NAS solution, IRRI is experiencing essentially no downtime. Help desk has also enabled the IT staff to track potential downtime causes and incidents; as a result, the chances of any unforeseen and untoward incidents occurring have been significantly reduced. IT staff now has the tools needed to track, manage, prioritize, escalate, and resolve downtime issues.

Storage Management

IT storage assets were previously undersized. IRRI's storage would get maxed-out in a very short period, prompting the IT team to engage in "guerrilla war" (to shift/move and delete the data). Though no quotas or charge backs have been set, IRRI is continuing to balance growing storage needs while managing capacity. At some point within the next three years, IRRI will move in the direction of information life-cycle management (ILM).

In effect, it does have tiers in place today, but still does not have automatic migration of content from one tier to another. The first tier would be synchronous mirrored storage on the storage area network (SAN), and then mirrored NAS storage and finally, un-mirrored NAS storage.

A year ago, IRRI had 1.5TB in networked storage (NAS). Today that resource has grown by 127% to 3.4TB. In another year, storage is expected to grow another 71% to 5.8TB.

According to O'Nolan, the most important aspect is not that IRRI has made savings on costs in this area, but that it has moved resources from the C: Drive to the network, which significantly reduces the risk of a scientist losing a C: Drive with years of information stored within. Subsequently, O'Nolan remarked that the cost of data loss is very different from saying "a cost savings of 10% on data management."

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The only storage that IRRI has expanded rather than replaced since the HP Solution is the HP NAS solution, and because that storage is prorated, or the capacity is linked to the number of computers, cost is included under the per seat cost.

Had IRRl purchased the NAS storage rather than outsource to HP, the Institute would have also owned the headaches. O'Nolan already experienced the pains of ownership, with delays for replacing failed drives, sometimes even new units, occurring quite frequently.

Previously, IRRl had a few gigabytes of NAS in total, which were prone to failure. These storage devices often lived two years and failed and these same devices often went down several times per year.

Renting PC Clients — US\$2.46M Cost Savings in Three Years

By transferring PC hardware and software costs from an ownership model to a service model, IRRl was able to spread the costs of migrating its desktop environment from Windows 9X to Windows XP over several years. These costs include not only the purchase and deployment of the new PCs and XP OS, but also the disposal of the older systems, which is a time-consuming and difficult task. Using a 12% discount rate, IDC estimates the total benefit over the first three years to be US\$2.46M. Investment over this time is US\$2.25M (US\$0.75M up-front, and US\$0.5M in annual services fees). Thus, in hard costs alone, EUWS produces a definitive and positive return (see Table 2).

Table 2

Benefits Analysis (US\$)

Benefit	Annual Value
IT cost reduction and avoidance (help desk, storage management, reducing images, asset management, printer reduction, and XP deployment)	78,000
Hardware and software capital costs transferred to services	971,000
Researcher productivity	31,500

Source: IDC Research, 2006

"In many organizations, especially those with unpredictable or variable funding, IT is all too often a target for capital budget cuts. The inevitable consequence is stretched life-spans, reliability and compatibility issues, and higher support costs as the infrastructure and services degrade," says O'Nolan. "Shifting away from ownership and capital expenditure toward a subscription approach will help our IT department provide a consistent quality of service over time."

Further, O'Nolan notes that another benefit to IRRI of adopting the HP EUWS is the avoidance of paying software subscriptions for old computers that are no longer in use. Previously, these subscriptions were paid centrally; thus, there was no incentive for organizational units to surrender obsolete PCs. With seat management, IRRI has prevented the accumulation of old computers beyond the planned life of the asset, thereby effectively eliminating the incurred software subscription overheads.

Increased Corporate Agility — Application Deployments in Only One Day

Previously, deploying a new application across 95%+ of the enterprise would take 3–4 weeks, depending on the availability of the researcher/worker and the complexity of the application. Now, this is done almost immediately as long as the user is connected to IRRI's network, either onsite or remotely through the Internet.

Likewise, with the accompanying shift from Windows 98 to Windows XP brought by the EUWS solution, the IT staff has gained administrative control of the institute's desktops, and has negotiated responsible use of delegated administrative privileges in Windows XP across all organizational units. Regardless, the resulting benefit from this change has been that O'Nolan's team now has online information on all its computers and installed applications. The team is also adding workflow solutions to authorize use of administrative privileges for software installation, giving them a much better overview of the network.

Increased Cost Awareness

One of the bigger cultural changes is that users are now aware of the cost of printing. Though some people are still printing on older devices, advanced users are finding benefits in the advanced printing capabilities that they did not have before; they are able to print more conveniently and more quickly. In the previous printing environment, a researcher printing a complex document would often run out of memory on an old printer, or would spend hours trying to get something printed, which is quite frustrating.

In addition to having an increased awareness of printing costs, IRRI staff can now charge back usage to particular projects, whereas in the past there was often a tendency not to recover such costs. This reduces the overhead for IRRI on research projects as well as effecting a higher level of accountability, as all printing and copying on multifunction devices is now charged back to identifiable individuals. They can manage the assignment of costs to projects via an IRRI developed Intranet web application.

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Again, O'Nolan states that this is more of a question of shift and transition from "sub-optimal" practices, excessive diversity, and the cost of dealing with previous inefficient practices.

New Services

IRRI has been able to add new services as part of the move to HP, as the HP Solution is much more focused on the operational rather than the strategic aspects of IRRI. The IT team, for example, is providing new services such as SharePoint document management, which allows IRRI's knowledge workers to have shared views of the same information and other similar collaborative tools. Likewise, the new multifunction peripherals have also provided users additional services such as the ability to scan documents to network storage and to transmit them by email — at no extra cost.

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Summary

IRRI, through the implementation of HP EUWS, has enhanced its progressive IT environment, and has done so without any major disruptions. This has also been accommodated within a historical cost envelope. Moreover, IRRI's IT staff has continued to provide better services to its users without significant increases in cost because HP EUWS has scaled efficiently and effectively. As a result, IRRI has been able to better realign IT initiatives, freeing up valuable resources to do other high-value, ICT-related activities.

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Concretely, HP EUWS has enabled IRRI to migrate to a new PC platform, improve its asset management, expand storage capacity by 50–100% annually, reduce downtime, deploy new services, and implement a robust help desk all without adding IT assets.

IDC estimates that these benefits would have required increasing the IT staff by 142% at an annual cost of US\$18,000. Transferring PC hardware and software costs to services totals US\$2.46M. With a total investment in EUWS of US\$2.25M over three years, IRRI will experience an ROI of 193% (see Table 3).

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Table 3

PC Environment Total Costs With and Without HP End-User Workplace Solutions (US\$M)

	2005	2006	2007	3-Year Average
Before	1.86	2.27	2.67	2.27
After	0.53	1.06	1.59	1.06

Source: IDC, 2006

Lessons Learned

The most significant barrier to outsourcing is changing the culture: operating units felt they "owned" internal components of old computers. With regard to the concept of "ownership," organizational units often cannibalized old computers when finished with them — removing items they had purchased separately, such as CD drives, additional hard drives, and sound cards. The computers would then be handed to the IT staff for the necessary repairs before being donated to the public schools. This previous culture of ownership reflected the lack of understanding by the organizational units of the full cost of the desktops. Increased cost and additional man-hours for example, were required of the IT staff to repair the computers and maintain a wider array of unique computer and software configurations.

Thus, the single biggest issue from a user acceptance perspective may have had little to do with seat management, per se, but more so on the culture and mindset of the users concerning ownership of IT equipment and the corresponding cost responsibilities.

IRRI experienced the following notable benefits in adopting the HP EUWS:

- Outsourcing-enabled adoption of best practices — some were anticipated, such as:
 - Rapid adoption of increased storage capacity
 - Formal service-level agreements (SLAs)
- And some came as a bonus:
 - Reduced hardware and software deployment and management costs — 2005 standard desktop is US\$10/month cheaper than in 2004
 - Helpdesk was a major success and revealed a lot of pent-up demand for support

- Provided a higher level of operational simplicity which results in direct benefits, such as:
 - Outsourcing has allowed IT staff to focus on other high-value IT services
 - Outsourcing allows IRRI to concentrate on its core competencies (scientific research) by allowing its outsourcing partner to concentrate on its core business (provision of IT support and services)

The drive for better operational efficiency led to increases in efficiency and responsiveness once the culture of "owning" became a culture of managing performance and service delivery. IRRI's IT environment, which progressively was supported by EUWS, has seen demonstrable improvements in personal productivity, collaboration, and increased organization responsiveness.

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Future Plans

IRRI will continue to seek to optimize its IT environment. With its IT staff now available to focus on policy and procedures development, implementation, and measurement; and HP services enabling the ongoing support of those policies and providing the technology, IRRI's near-term plans include:

- Continued printer consolidation
- Continued image consolidation
- Additional storage capacity (SAN and NAS)
- Server consolidation (for business continuity and disaster recovery solutions)
- Server virtualization
- Further standardization of IT policies across CGIAR
- Adoption of portal technology
- Expand IRRI implementation of the IT Infrastructure Library (ITIL) of best practices through better management of software assets
- Delivering additional services

The pressure on IRRI's IT team to innovate, do more for less, and better align IT with business is relentless. IRRI's new strategic plan for 2007–2015 for example, includes the provision of equitable access to information and knowledge on rice as one of its main goals. The Institute has acknowledged the significance of ICT in having a powerful role to play in enabling communities of interest around rice and rice science to collaborate and communicate.

Furthermore, IRRI's IT Services unit can more effectively address its strategic challenges when a capable partner such as HP is able to share and carry much of the routine operational burden.

IRRI's corporate IT management has become more dynamic, with its move to manage IT assets as services using HP's EUWS as a means to an end, rather than as a "solution." With a more dynamic corporate IT in place, introducing improvements to the IT environment has become a change management process.

Inline with IRRI's progressive stance on technology usage and adoption, the IT staff will also explore available options with regard to converged mobile devices, and how such devices may be integrated into the current IT environment.

As the IRRI IT environment continues through a near-term period of consolidation and optimization, the IRRI staff will then be able to provide fresh, new IT services to the personnel. Herein lies one of the inherent benefits of outsourcing — it allows an organization to focus on more strategic and new IT applications by entrusting a technology partner to share and manage selected operational IT responsibilities.

IRRI's corporate IT management has become more dynamic, with its move to manage IT assets as services using HP's EUWS as a means to an end, rather than as a "solution."

Appendix A: ROI Methodology

HP designated IDC to interview IRRI, and HP then approved the results of the interview.

To quantify the business benefits of integrated desktop management services, IDC has developed an ROI methodology that measures the total costs of deployment and the sum of the savings achieved. The methodology calculates the ROI in a three-step process:

1. **Ascertain the investment.** The investment made in the purchase and implementation of the solution and the associated training and maintenance costs should be determined. To get an accurate assessment of the investment in deploying HP EUWS, IDC asked for the deployment, setup, upgrade, and maintenance costs, as well as the total cost of associated software and training.
2. **Measure the gains.** Gains in IT staff and user productivity from deploying the solution, as well as the revenue recaptured from reduced downtime, and the cost savings from increased IT staff efficiency and lower capital and operating expenses should be measured.
 - **Productivity savings.** IT staff productivity indicates how effectively IT managers and their staff use their time. Besides reducing operations costs, gains in IT productivity can free up staff to implement new initiatives more rapidly, helping to create a competitive edge.
 - **User productivity.** User productivity is increasingly dependent on service uptime as organizations become progressively more network-centric. When users are unable to access network resources, their productivity may be severely impaired. User productivity also suffers when employees have to wait for help desk support or other IT administrative tasks. Since users often are able to move to other business applications when service interruptions or performance degradations occur, only a small fraction of the potential user impact time is counted toward the final ROI result.
 - **Recaptured revenue.** Higher service availability also contributes to business' top lines because less revenue is lost due to downtime, and potential service penalties are avoided. Additionally, downtime can be costly in terms of diminished customer satisfaction and possible loss of a customer's business.

- **Cost savings.** Costs can also be cut by improving IT staff efficiency, which is a measure of how well the IT management organization can achieve economies of scale and scope of work with its people, tools, and practices. To remain competitive, companies must be able to grow their systems and networks at a faster rate than the IT staff required to support them. Skilled IT professionals continue to be scarce, so companies expect existing staff to take on more work and responsibilities. If IT departments are unable to achieve the required economies of scale and scope, they restrain corporate managers' business decisions and discourage aggressive deployment of technology to gain a competitive advantage.

3. **Calculate the payback period and ROI for the deployed solution.** From the results of the interview, IDC was able to model the total costs and benefits and project the calculations over three years. Then using standard financial calculations we calculated the payback period and rate of return from investing in HP EUWS, as well as the net present value of the benefits. IDC bases its calculations on a number of assumptions:

- Time values are multiplied by burdened salary (salary + 40% for benefits and overhead) to quantify efficiency and manager productivity savings.
- Downtime values are a product of the number of hours of downtime multiplied by the number of users affected.
- The impact of unplanned downtime is quantified in terms of impaired end user productivity and lost revenues.
- Lost productivity is a product of downtime multiplied by burdened salary.
- Lost revenue is a product of downtime multiplied by the average revenue generated per hour.
- The net present value of the three-year savings is calculated by subtracting the amount that would have been realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost.
- Since not every hour of downtime equates to a lost hour of productivity or revenue generation, IDC attributes only a fraction of the result to savings. As part of its survey, IDC asks each company what fraction of downtime hours to use in calculating productivity savings and the reduction in lost revenue. IDC then taxes the revenue at that rate.

Furthermore, because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis, and then subtracts the deployment time from the first-year savings.

Appendix B: The Consultative Group on International Agricultural Research Members

The CGIAR is a strategic alliance of countries, international and regional organizations, and private foundations supporting 15 international agricultural centers that work with the respective national agricultural research systems. Current members include:

- Africa Rice Center (WARDA) (www.warda.org)
- Centro Internacional de Agricultura Tropical (CIAT) (www.ciat.cgiar.org)
- Center for International Forestry Research (CIFOR) (www.cifor.cgiar.org)
- Centro Internacional de Mejoramiento de Maiz y Trigo (CIMMYT) (www.cimmyt.org)
- Centro Internacional de la Papa (CIP) (www.cipotato.org)
- International Center for Agricultural Research in the Dry Areas (ICARDA) (www.icarda.org)
- International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) (www.icrisat.org)
- International Food Policy Research Institute (IFPRI) (www.ifpri.org)
- International Institute of Tropical Agriculture (IITA) (www.iita.org)
- International Livestock Research Institute (ILRI) (www.ilri.cgiar.org)
- International Plant Genetic Resources Institute (IPGRI) (www.ipgri.cgiar.org)
- International Rice Research Institute (IRRI) (www.irri.org)
- International Water Management Institute (IWMI) (www.iwmi.cgiar.org)
- World Agroforestry Center (ICRAF) (www.worldagroforestry.org)
- WorldFish Center (www.worldfishcenter.org)

Additional Memberships

IRRI is also a member of other international research organizations, which focus specifically on studies and promotion of rice as essential component in addressing world hunger and poverty alleviation. Among those organizations are:

- Consortium for Unfavorable Rice Environments (CURE)
(www.irri.org/cure)
- Council for Partnership on Rice Research in Asia (CORRA)
(www.irri.org/corra)
- Irrigated Rice Research Consortium (IRRC) (www.irri.org/irrc)
- International Platform for Saving Water in Rice (IPSWAR)
(www.irri.org/ipswar)
- International Rice Functional Genomics Consortium (IRFGC)
(www.iris.irri.org:8080/IRFGC)
- Poverty Elimination Through Rice Research Assistance (PETRRA) (www.petra-irri.org)

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

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