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A know-who directory for the CGIAR: what do users think?[1]

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Introduction

Sustainable development requires a holistic approach and mutual learning that involves comparing different experiences and knowledge. But sharing expertise is difficult when experts are dispersed geographically, culturally and by subject-matter domain.

A prime example of an institution facing this challenge is the Consultative Group on International Agricultural Research (CGIAR, www.cgiar.org). The CGIAR is a network of 15 independent centres that have some 8,500 scientists and staff stationed at more than 100 offices across the developing countries of Africa, Asia and Latin America. These centres work with a broad range of national and international partners in the public and private sectors and civil society to help reduce poverty, hunger and environmental degradation through sustainable agricultural development.

The three-month pilot study reported here examined the initial reactions of more than 170 CGIAR experts to an Internet-based 'know-who directory'. The purpose of a know-who directory is to help experts identify and exchange expertise with colleagues on relevant topics. This study focused on issues that would affect voluntary uptake of the directory by staff. The short time frame of the study did not allow realisation of the ultimate benefits expected from increased knowledge sharing (KS) through a know-who directory, such as increases in work efficiency and effectiveness, and the application of valuable new ideas resulting in impact towards CGIAR objectives.

In recent years, the CGIAR has recognised the need to improve knowledge sharing across its centres, and it has initiated exploratory activities[2]. In October 2001, the CGIAR's Organisational Change Programme[3] invited centre representatives interested in KS, referred to as 'KS champions', to a strategy workshop in Rome. The KS champions concluded that the dispersed structure and complex agenda of the CGIAR resulted in many staff simply not knowing who knows what. The group was intrigued by the potential of the Internet as a means to link these experts through a directory system analogous to the yellow pages of a telephone book.

But the idea of a know-who directory on the Internet raised many questions. Would technology or web access be a barrier? Would staff be willing to make themselves available to a large peer group around the world through such an impersonal medium? Would they have concerns about time commitments or privacy? Would they share knowledge or withhold it, for fear of giving away their intellectual property and competitive advantage? What would motivate them to be more willing to share their expertise?

To explore such questions, the KS champions recommended the study reported in this paper.

When the idea of testing a know-who directory was tabled, the consistent reaction from CGIAR leaders was that anything that could bring staff closer together would be valuable at this stage in the CGIAR's development.

Study process and methods

The know-who technology platform used in the pilot study

The choice of technology platform was influenced by the example of British Petroleum Corporation (BP), well known as one of the early adopters of KS in the corporate world (Collison 2001). BP developed and implemented the Sigma Connect know-who directory, currently offered by Addept Computer Services Ltd. in the UK (http://www.addept-solutions.com/esolution.aspx?CGID=63). The present study arranged to test Sigma Connect during April-June 2002. Sigma Connect allows implementing organisations to customise its appearance and content for their own purposes; the CGIAR version was dubbed 'CG Connect'.

Participation in the study

Participation was open to any CGIAR staff member assigned an @cgiar Internet e-mail box by a centre. Centres usually issue @cgiar e-mail boxes to staff that have reached mid- to upper technical or professional levels in the organisation and need to communicate internationally. This group of about 5,000 is most likely to derive value from international knowledge sharing.

Since this was a pilot trial, a smaller sample from within the total population of 5,000 was needed. E-mail invitations were issued selectively to individuals (such as coordinators of cross-centre task forces, projects and programmes) whose functions were presumed to require significant knowledge sharing. The KS champions also shared the invitation within their centres. The Directors General of all centres were informed and invited, and several relayed the invitation to their entire staff with encouragement to participate. CG Connect was also customised to accept close partners, when invited by CGIAR project coordinators.

Participation was voluntary. No high-profile campaign, top-management advocacy or rewards/disincentives were applied.

Since participation was voluntary and cross-centre groups were especially targeted by invitation, this CGIAR sub-sample may be biased in favour of individuals that have a more urgent need for or inclination towards knowledge sharing. This approach was taken rather than a random sample of the entire CGIAR population, because the survey intended to be forward looking to help inform the CGIAR's KS strategy and investment. It was believed that feedback from groups that were already grappling with KS problems and needs would be the most valuable in foreseeing the potential of the know-who directory and the challenges that might lie ahead.

Survey responses

User's impressions were gathered through surveys carried out using the SurveyMonkey online web service (www.surveymonkey.com) and e-mail.

Feedback was sought both from those who had participated in the know-who pilot study, hereafter referred to as the 'try-it' group (214 individuals), as well as those who had been invited but had not participated, called the 'no-try' group (134 individuals). The no-try group was included in order to understand factors that might inhibit staff from joining in KS initiatives in the future. The number of individuals who responded to the survey was higher in the try-it group (54%, or 115 people), although the response rate in the no-try group was still an acceptable 41%, or 55 individuals (including 14 who responded by e-mail because of lack of access to the Worldwide Web).

External partners (non-CGIAR staff) comprised 18% of the try-it respondents and 38% of the no-try respondents. For each of the two surveys, a filtering of the results by the internal versus external criterion yielded similar trends; therefore, CGIAR and external partner responses are pooled in the discussion that follows.

The try-it group was asked 20 questions about the rationale and importance of an Internet know-who directory, their impressions about CG Connect's performance, its design appeal, ease of use and related matters. Since the no-try group had not experienced CG Connect, and to increase the likelihood of a response from this presumably less-committed group, they were asked only four questions focusing on their reasons for not participating.

The response rate appeared large enough to reflect the prevailing views of the groups sampled. For example, the second week's input by try-it respondents largely paralleled the views of the first week (57 responses were received in the first week, and 42 in the second). The same consistency was observed in the later-arriving responses to the no-try survey. This consistency suggests that the views are representative of the larger population of CGIAR staff who are involved in cross-centre and knowledge sharing activities.

Is a know-who application needed in the CGIAR?

The survey began by asking whether an Internet know-who directory would be important for the CGIAR. Of the try-it group, 73% answered yes; 25% said it would be useful but not important; and 2% said it was not really necessary. The same question was posed to the no-try group. In response, 60% felt that a know-who directory would be important; 35% thought it may be useful but not that important; and 5% thought it unnecessary. Thus, a clear majority of both groups saw value in a know-who directory for the CGIAR.

Is staff willing to tell others about themselves?

The first step in participating in the know-who directory was to fill in a personal web page, which described interests, expertise, contact details and other information, including a photograph. The time needed to complete a personal profile was 10-15 minutes (assuming a digital photo was readily available). A total of 222 people entered the CG Connect web portal during the pilot study. Of these, the following percentages carried out one or more of these tasks: 56% chose their expertise areas from the pre-loaded list of 'knowledge taxonomy' keywords; 45% described their expertise in their own words in a free-form essay; and 32% included their photograph.

Why didn't many of those who tried CG Connect fully complete their profiles? When the try-it group was asked this question, the predominant response was lack of time (68% of those who responded to this question, or 52 people). One fifth (22%) said they felt that some of the information asked for was not of the right type. Relatively few (6%) reported technical difficulties, most commonly with uploading their photo; and 6% expressed some concern about privacy as a reason for not fully completing their profiles.

Similarly, for the no-try group, lack of time, not a lack of priority, emerged as the prime difficulty (49%). 'Low priority for my time' was chosen by only 15% of the no-try respondents. Ten percent did not recall hearing about the trial. Login difficulties (16%) and problems with web access (14%) were also cited.

Reasons for not sharing knowledge

Experiences in other organisations have indicated a number of factors that constrain KS. Survey participants were queried about those factors and were also given the opportunity to describe their own reasons.

In response, 61% offered at least one reason:

- Half of those who did feel inhibitions (51%) indicated that they feared losing too much time due to being overwhelmed with requests for their expertise;
- Next in importance was a perceived lack of incentives in the CGIAR to motivate or reward efforts to share knowledge (37% of those who cited one or more inhibitions);
- Uncertainty about the credibility of others' claims of expertise (9%); and
- A worry that giving away one's expertise would reduce one's competitive advantage (4%).

Voluntary or not?

A crucial question that arose during the pilot study was how to gain critical mass when participation is totally voluntary. It became a chicken-and-egg issue. In order to be convinced to fill in their expert profiles, staff wanted first to see large numbers of other experts already represented inside. Yet the only way to get large numbers inside a know-who directory is for individuals to fill in their own profiles.

> *Connect may well have nurtured the culture in which it thrived.*
>
> Chris Collison, in an e-mail to the Learning-to-Fly Yahoo Group in October 2001, explaining how Connect both enabled and encouraged voluntary, self-motivated KS at British Petroleum.

Some organisations take a compulsory approach to their expert databases for this reason. But others argue that KS can only be encouraged, not mandated. This may be particularly true in a research environment such as the CGIAR, where most staff come from an academic background in which intellectual independence is cherished. This voluntary KS view is strongly held by the BP knowledge management team that designed Sigma Connect (Collison 2001). Though they do not view technology as a substitute for face-to-face interaction to share knowledge, they believe that the voluntary design helps staff realise that KS must be driven by those who hold the knowledge – in other words, by themselves.

In the present study, try-it participants were ambivalent about the voluntary/non-voluntary choice. Forty-six percent felt that participation should remain wholly voluntary, while 48% felt that at least some of the information should be mandatory, leaving the more subjective information as voluntary. Only 6% felt that a fully compulsory approach should be taken.

Include external partners?
The CGIAR views partnerships as fundamental to its work and its partners as an extension of its own expertise and knowledge base. The inclusion of partners in CG Connect caused some to wonder about privacy risks, however, and about the criteria by which outsiders would be chosen for inclusion. Yet another worry was that including partners would create an open-ended environment, where thousands of additional accounts would need to be created and managed at high cost.

In the brief experience of this pilot, none of those difficulties materialised. Partners entered the system more slowly and in lower numbers than did staff. And the privacy issue turned out not to be a major concern for most survey respondents (see below).

There was, however, some difficulty in deciding how to restrict participation to 'close, active partners'. One criterion suggested was that no one should be found within the CG Connect community who was not personally known to at least one senior CGIAR staff member. This staff member would be indicated as sponsor on the partner's profile.

Security and privacy
Different centres had different institutional views about security risks of staff profiles on the Internet. Some had already made staff profiles publicly available on their own corporate web sites (which existed before this pilot study), while others did not.

Although CG Connect was accessed through the Internet, it was not available to the general public. A password was needed to enter the system. Additionally, all information was encrypted in transit using secure socket layer technology and 128-bit encryption.

Security of their CG Connect profiles did not turn out to be a major concern for the majority of respondents. Seventy-six percent were comfortable with the way CG Connect handled the security issue, although 19% expressed a moderate concern. Only 5% expressed a significant concern. Since the system was voluntary, staff were free to leave out any information they felt uncomfortable in sharing, such as addresses, phone numbers and photographs.

Can users conveniently access a web application?
If CGIAR staff and close partners, who work in some of the poorest and most remote areas of the developing world, have difficulty accessing the Internet, this could significantly inhibit the effectiveness of a web-based know-who directory. But the survey found this problem to be minor. Within the try-it group, 96% said they could easily access the web when they wanted to. In a separate question, 96% considered their Internet connection to be either fast (54%) or at least average (42%) in speed. And 81% appeared satisfied with the download speed of CG Connect web pages,

compared to other web pages; another 15% even considered them as relatively fast to download.

Of course, people who had difficult or no access to the web would have been unlikely to participate either in the pilot study or in the web survey. While web access is not universal, most institutions these days do provide e-mail access to their principal staff. The no-try group was asked to respond by e-mail if they were unable to participate in the survey due to lack of web access. Out of 55 total no-try responses (41 via the web survey plus 14 by e-mail), only 9% (five individuals) cited difficulty in accessing the web as the constraint. Thus, even within the no-try group, a lack of web access did not appear to be a major limitation to participation.

Most CGIAR centres and centre offices are upgrading their Internet connections as local infrastructure, time and funds permit. National partners may find this to be a greater constraint, although Internet access and speed seem likely to improve over time. Thus, it appears that web access is already a practical reality for the majority of the CGIAR community, and the trend is toward wider access over time.

A related constraint is that staff may become less active in using a facility that requires them to visit a web site. CGIAR staff (like those of other organisations) receives large amounts of e-mail and have grown accustomed to respond to messages in their inbox rather than seek information on the web. A know-who directory would be more effective if it also reached staff by e-mail, so their attention would be drawn to it during the course of daily business.

Conclusions and recommendations

A major conclusion of this study is that a large majority of CGIAR staff engaged in cross-centre projects believe that a know-who directory is important. It is particularly interesting that even staff who chose not to participate in the study (the no-try group) mostly held this view. This conclusion is key because, for a voluntary know-who directory to succeed, users must see value in their participation.

Implementing a know-who directory

Whilst acknowledging the value of participation, staff also pointed out some reservations. The combination of lack of time to fill out the personal profile, worries about being flooded with too many requests for their expertise and a dearth of incentives to share knowledge seemed to be the most significant inhibitors.

The large number of survey responses indicating ‘lack of time’ as the main constraint to fully completing their expertise profiles, even though this only required about 15 minutes, warrants further reflection. CGIAR employees, like those in many other organisations feel overloaded with work. They are constantly weighing one priority against another, setting many important tasks aside so they can complete those that are most urgent at the moment.

Leadership and impact: essential for success

The cultural transformation of any large institution takes time and top management commitment. Leaders must explain why KS and a know-who directory are important,

and treat participation as a core job responsibility with accountability and incentive mechanisms, such as annual appraisals, awards, prestige assignments and other motivational methods.

To be sustained, a know-who directory will have to show tangible benefits within a few years. Once staff become active knowledge sharers, it is likely that expertise shared across continents and projects will yield benefits that will more than justify the effort.

> *A decade ago, you used to keep your ideas to yourself at GE. Now, you're rewarded for how many ideas you exchange. We have changed the behavior system and the evaluation system.*
>
> Jack Welch, former CEO of the world's largest corporation, General Electric, quoted in Slater (1999).

Concrete evidence of benefits from KS were not measurable during this short three-month pilot study, because the expertise base was still relatively small (approximately 200 individuals out of a potential 5,000). Once a know-who system is adopted on a permanent basis and participation increased to include a majority of CGIAR professional staff, its impact could be investigated by asking participants after a few years whether and how the service had helped them form connections that led to significant on-the-job results.

A fully populated, actively used know-who directory would be expected to make cross-centre KS and collaboration easier and more effective. Project teams would be formed more quickly from a broader choice of experts and benefit from a wider range of advice, gaining insights more quickly and solving problems more expeditiously. There would be less 're-inventing of the wheel' and more original innovation. New staff would find their learning curve accelerated significantly, no longer requiring many years to build collegial networks. Accelerating the spread of a KS culture across the CGIAR would also contribute to greater cross-centre integration and cohesion – an objective that leaders of the CGIAR avidly seek, as is the case in many globally dispersed organisations.[4]

References

Collison, C. and G. Parcell (2001) *Learning to fly* Capstone Publishing: Oxford

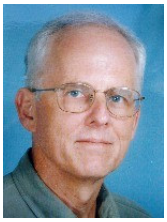
Slater, R. (1999) *Jack Welch and the GE way* McGraw-Hill: New York

Abstract

The CGIAR's agricultural research-for-development agenda is broad and complex, but the geographical and institutional dispersion of staff and partners constrains knowledge sharing. The Internet could help them find relevant experts and contact them to share knowledge. To test this idea, a web-based know-who directory system was tried by 214 staff and partners during April-June 2002. Participants were asked to fill in online profiles describing their interests, expertise and contact details and including a photograph. When asked for their impressions through a follow-up questionnaire, 73% of 170 respondents said that a know-who directory was important for the CGIAR; 25% said it was useful but not important; and 2% said it was not necessary. When asked about any reluctance to share knowledge, 39% indicated no reluctance. Of the remaining 61%, half identified a fear of time lost responding to

requests for help; 37% saw no rewards/incentives for sharing; 9% said they would be unsure of other's expertise based merely on a web profile; and 4% feared losing their competitive advantage by giving away knowledge. Few expressed concerns about security and privacy. The results suggest that a CGIAR know-who directory would succeed if encouraged by top management, treated as a priority, articulated effectively to reassure staff about their concerns and supported through modest incentives.

About the author



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Endnotes

[1,3] This study was made possible through the generous support of the Ford Foundation through the Organisational Change Programme (OCP) of Training Resources Group International (TRG), under the auspices of the CGIAR centre directors subcommittee on information technology.

[2] In late 2002, the CGIAR launched its cross-centre ICT-KM (Information and Communication Technology—Knowledge Management) Programme (http://ictkm.cgiar.org/index.html), which is fostering numerous cross-centre KS activities. This built upon earlier knowledge management activities catalyzed by OCP through support from the Ford Foundation. OCP facilitated awareness-raising events, team-building exercises and pilot studies (http://www.trg-inc.com/orgchange/knowledge.htm).

[4] The CGIAR has not implemented CG Connect as described in Mark Winslow's article. Nonetheless, a feature called 'staff directory' is included in the software that the CGIAR has recently selected to serve as the platform for its new Virtual Resources Centre, or Internet site. And it is expected that this feature will accomplish much the same functions as CG Connect.