

A Near-Term, Human-Based Approach to Capturing and Disseminating Program Knowledge in the Nonprofit Community

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I: Introduction

In the fall of 2001, a team of people led by Dr. Diana Woolis, a Founder of Knowledge in the Public Interest, approached me seeking advice about how artificial intelligence technology might be applied to the delivery of services by community-based organizations. Already aware of computer technology for payroll management, fund raising and the like, their interest was in program content – capturing insights related to the actual delivery of services. Their concern was that established grant reporting and evaluation techniques generally fail to deliver the insights that would be of greatest use to practitioners, and they sought technology that might be used to capture valuable information and transform it into accessible, actionable knowledge that could be put to practical use. In particular, they were interested in:

- ✓ How existing information contained in grant reports could benefit from automation in its collection and particularly in its dissemination to a broader audience.
- ✓ How other types of information resulting from observation and experience could be collected and shared quickly so that timely, relevant data would reach practitioners who need it.
- ✓ How the collection and dissemination process could be transformed into a dialogue rather than a one way broadcast.
- ✓ How the relevant information available on the Internet might be found in the vast sea of irrelevant data.
- ✓ How to cull through volumes of report and other documents to assimilate data, extract knowledge and communicate the knowledge precisely to the people who need it, in a form they can easily digest.

Unfortunately, the current and near term prospects for artificial intelligence hold little hope for the kind of automated analysis of vast quantities of “storied” data that would be so welcome not only in the nonprofit sector but in the economy as a whole. However, far simpler technology already exists that may address many of the underlying issues raised by Knowledge in the Public Interest and the nonprofit sector.

This paper explores the near-term feasibility of providing technological and *organizational* support for the use of knowledge assets that result from service delivery and policy implementation in the nonprofit sector. It posits that the key to near-term progress is not to invent new artificial intelligence technology for the public sector. Rather, the key is to apply existing technology and human resources in a new way. In particular, progress can be made using the new generation of collaborative workspace tools now entering the market in conjunction with a new type of knowledge worker, a worker who aids nonprofit practitioners in gathering, organizing and distilling content.

II: The Status Quo

Nonprofits already know how to increase productivity through the use of e-mail, and most are mastering the use of database management systems to track programs, clients, contributors, and the like. And many foundations have appealing web sites that present their missions, list the programs they fund and encourage qualified organizations to apply for grants. Online applications for grants and online grant reporting are in process. The technologies to support these activities have been used in business for several years now, so their introduction in the nonprofit sector should be relatively smooth.

But the story of what actually goes on in programs is missing from the current picture. Few foundations and community-based organizations digitally capture the goals of a particular program or project, or list locations, staff contacts and the like. Materials such as detailed field guides and training manuals, designed to codify experience and serve as a roadmap for others, are often too “weighty” to travel far, and the pieces and protocols within them that might have broad applicability are rarely highlighted and distributed.

Grant reports and scholarly publications do address “the story” to some extent. But grant reports are available to only a few readers and in many cases go largely unread. Published accounts of programs and projects are only available months or years after the fact. Most troublesome, however, is that no one is systematically recording the observations that arise as practitioners carry out their work in the field. On any given day a hypothesis is being tested, found wanting and being adapted. Trial and error, observation, reflection and adaptation give rise to learning. There needs to be a way to gather these lessons learned in the field, distill them and make them available for use by others.

III: Finding a Place for the Real Story

The reason why “the story” doesn’t get recorded is that it doesn’t fit in a conventional database. The very nature of storied data is that it is rich and varied and dies when forced into a monolithic structure. And the full story arrives in many pieces – a grant application, a field note, a photograph, a journal entry, an e-mail exchange, an evaluation report. Getting the story requires

- ✓ having a central place for collecting the many bits and pieces.
- ✓ making it easy for everyone involved to contribute to the collection.
- ✓ giving appropriate parties ready access to anything in the collection that may make their job easier.
- ✓ keeping the collection organized and structured.
- ✓ providing summaries and distillations.

Collaborative tools already in the market can help make this possible. They can provide a “place” to hold the storied data, and they can be used to link front-line practitioners with area experts who can help distill raw information into a more useable form. Here is how it can work:

- As a project is begun, a small team creates a central “place” or “work site” where information about a project can be stored and shared. The set-up team includes technical people who know how to create such a site in cyber space, and area experts from the nonprofit sector who are deeply experienced in program management and understand how information for a particular type of project might best be organized. The site is created using some sort of collaboration tool, and is accessible to authorized people over the Internet.
- Multiple interested parties have access to the site. Those with core access include
 - Practitioners working on the project
 - Foundation people, including the program manager and grants manager
 - Landscapers

The *landscapers*, drawn from the ranks of experienced nonprofit professionals, are mission-area experts whose job it is to help keep the site organized. They are not directly involved in the project as practitioners, so they are not under pressure to deliver services. The task of these knowledge workers is to review, organize, analyze and distill materials delivered to the site by others, and to relate activity on the project to events in the broader community.

- At the outset, the set-up team organizes all the original documents about the project and places them at the site. For example, the site may initially hold: the original grant application, the PowerPoint slides used to sell the project to the foundation, a mission statement, a directory of the practitioners doing work on the project, pointers to the various contact people at the supporting foundation, maps to the project locations, etc.
- The site should include discussion areas and forums in which practitioners exchange concerns and ideas with each other, with the foundation, with the landscapers, and perhaps with members of the wider community.
- As the project gets under way, the participants can visit the site to find any of the original project or program documents. If they see that any of these are out of date, they may revise them.
- Participants, especially the practitioners, are encouraged to add new documents, including grant reports, site visit reports, financial reports, training manuals, protocols, field guides, evaluations, journals, photographs of project activities, audio and video clips and more.
- The site should include a safe place for each practitioner to record a journal or to keep copies of e-mails that come up in the natural course of work on the project. These can provide the raw data for later analysis.
- As material accumulates, the landscapers (and others as they have time) can reorganize the content of the site to make it easier to find relevant information. They may also add content of their own, which helps to distill the information contained in other documents at the site. And, especially if they are working as landscapers for other sites for similar projects, they may make links between this site and sites of related projects, building bridges between practitioners and the wider community.

The collaborative tools enable practitioners to capture information that heretofore would never be recorded and that would evaporate with turnover. Given access to this primary data, landscapers can supply the human intelligence for analysis and organization that purely machine-based approaches so lack. Working together, the practitioners and landscapers can build work sites that capture much of what goes on in a program. The new tools provide the means to gather and organize the information, and the infrastructure to communicate it instantly to a wider community using the power of the Internet.

A rough schematic of the players and the tools is shown in Figure 1. The tools create the foundation for a web site that becomes the gathering place for the circle of people interested in the program. The site technology enables the creation of a social circle connecting foundations, practitioners, landscapers, technicians and the larger community. Practitioners and the foundation collectively are the primary “customers” and “suppliers” of the site. The landscapers and the technicians act as facilitators of the site, providing technical expertise and subject-area expertise to keep the site organized. The wider community has access to those portions of the site made available to the general public.

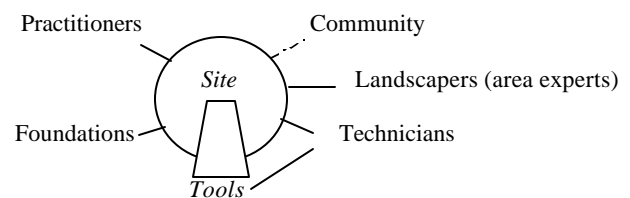


Figure 1: The Relationships between Participants, Site and Tools

IV: Technology Requirements

Any technology introduced into the nonprofit sector must live within the sector’s constraints. When evaluating tools to create a “place” to capture the program story, it is essential to consider the following:

Ease of Use: Complex software applications that require considerable training and frequent use to achieve proficiency are unrealistic. New software should draw on skills that are already widely present in the nonprofit sector – such as the ability to navigate a web site, to compose documents in a word processor, and to send and receiving e-mail. To require additional skills is to ask for trouble.

Adaptability: The nonprofit sector delivers widely varied services and at diverse scales. A solution for capturing sector knowledge must be able to adapt to anything from a single soup kitchen in a church basement to a multi-state, multi-site, employment-training program for substance abusers. The practitioners must be able, with little or no technical assistance, to adapt the software to meet their evolving needs.

Security: The vast majority of community-based organizations have clients to whom they deliver services. The privacy of these individuals must be protected while the cumulative experience of clients must also be captured.

The willingness of field practitioners to share information among themselves and with funders will turn on their confidence in the privacy of the exchange. If field practitioners are expected to share their failures as well as their successes – and often so much more can be learned from failures than from successes – they must be provided with a “safe” environment in which practitioners know that what they share will be viewed only by sympathetic eyes.

Security is a sister of efficiency. The bane of both grantors and grantees is the constant demand for data and information from different quarters. It is critical that users be able to reuse material for different audiences. However, this is only feasible if content that is not to be shared is reliably insulated.

Integration into Workday: Field practitioners are sure to reject any new technology that creates extra work or encroaches on their time without providing an immediate tangible offsetting benefit to them. Software for capturing the project and program story must be designed to fit easily into the workday of users. It must be a substitute for work already being done and/or a clear enhancement to day-to-day operations resulting in an experience of both increased efficiency and value.

Example 1: If grant reports are to be placed on a web site by practitioners, any requirement for other types of delivery of the report should be dropped.

Example 2: Funders readily acknowledge that one of the most ardent and frequent requests made of them by their grantees is for contact with other grantees facing similar issues and challenges. Cyberspace is a logical arena in which to orchestrate such contact, being a cost-effective substitute for face-to-face meetings or telephone exchanges.

Integration with Other Software: Another aspect of integration is the ability of the software to integrate into the existing systems and databases of both foundations and grantees. If it can’t “talk” to generic and customized software already in use or to be developed in the future then it will under serve its purpose because critical insights and knowledge emerge as often from intelligent connections as they do from new data.

Systems for managing program content will likely be Internet based, and web browsers will likely serve as the principal application used to communicate with the system. It is important that the program management software be capable with most popular browsers, and not be restricted to the offerings of a single vendor.

Coverage of Document Types: Program content software needs to be able to connect with all digital “documents” related to a program or project, from budgets and slide shows, to field guides, to audio and video clips. It must also connect easily with generic and customized database applications that are germane to a program or project.

Organization and Search: As program content grows over time, users need the ability to organize and reorganize content under management. Search and retrieval capabilities must be powerful and well thought out. Paradoxically, as the amount of data under management grows over time, the material becomes richer and richer as it becomes harder and harder to find. The abilities to reorganize and to search intelligently through the data are crucial for sustaining growth.

Cost: Not only does the cost of the software have to be manageable in recognition of the perennial under funding of the sector (and particularly the historic bias against allocating funds for infrastructure), but also the benefit may depend on wide usage. Cost cannot discourage this. Expensive software purchased on a per-machine basis is a poor way to serve this sector. Web-based software is preferable particularly if one license is allowed to cover any number of users.

V: The Product and Vendor Universe

With almost any important problem, there will be many people arriving at the same insights at about the same time, but with different approaches and without great awareness of each other. This is certainly the case in the problem of getting a handle on the knowledge generated within an organization or community, as dozens of vendors are offering partial solutions. Rather than attempt to survey the universe of products and vendors in this paper, the author would direct the reader’s attention to *Supporting Communities of Practice: a Survey of Community-oriented Technologies* by Etienne Wenger and available at <http://www.ewenger.com/tech/index.htm>.

Wenger’s 65-page paper provides a wealth of information about products (over 75 are listed) that address various aspects of the problem, along with keen insights into the nature of the problem itself.

One theme missing in Wenger’s paper is the notion of an information worker whose job it is to help members of a community distill insights from the chatter of chat rooms, discussion groups, e-mails, journals and similar informal, conversational exchanges. The introduction of “landscapers” can go a long way toward bridging the gaps between the capabilities of the existing technology surveyed by Wenger and the needs of the nonprofit community.

Nonprofits see a role for a knowledge broker—someone who can routinely sift and sort through all the available information and give them the most relevant and valuable nuggets. PEW report

VI: Summary

Knowledge about how programs and policies work, what’s important, and why is sitting in the heads of program officers, researchers, those who implement policy, and field practitioners in community-based organizations nation wide. Today knowledge related to the actual delivery of services in the nonprofit sector goes largely uncaptured and undissemated. In the near term, there is little hope that fully automated technologies will assimilate data, extract knowledge and communicate the knowledge to the people who need it. However, real progress in capturing the storied data behind projects and programs can be made by using existing knowledge tools, which can provide a “place” to capture and share the experiences in the field. These tools will work best when used in combination with a new type of knowledge worker whose job it is to help organize and distill project data and documents contributed by others. To be successful, any new technology introduced to capture project knowledge must be easy for practitioners to use, must fit into their workday, and must provide them with near-term tangible benefits.