A Recipe for INFORMATION

Take one part each of business drivers, opportunity moments and collaboration.

In the January/February issue of *Foundation News & Commentary*, a case study described the fictitious Fair City Foundation's struggles with information integration. Faced with board pressure to implement a balanced scorecard performance management tool (see sidebar, p. 60), foundation staff quickly discovered that relevant information was stored in disparate information systems within the foundation and that there was no easy way to get those systems to talk to each other. This isolation of critical information resulted in several problems: Staff members spent a lot of time looking for information in different databases, and information that was updated in one database was frequently not updated in another. The lack of coordination led to mistakes and periodic embarrassment for the foundation. As a result, staff morale and productivity were beginning to suffer.

This article addresses information—or data—integration in greater detail by exploring how foundations are addressing this issue, as well as how other sectors and industries are tackling the problem.

Information Integration in Foundations

Fair City Foundation's trouble with piecemeal information systems consuming staff time, presenting technological problems and creating costs in the effort to pull together accurate and meaningful information for decisionmaking is not unique. Joe Baker, executive director of the Nonprofit Technology Enterprise Network (N-TEN), reports, "We are seeing a lot of interest from nonprofits facing problems around data. Most of our regional conferences [last] year had a session on data standards."

As with the Fair City Foundation, foundation interest in performance measurement and evaluation is exposing the deficiencies of current information technology systems. Evaluation is inherently a data collection and reporting process. Thus, as more foundations seek to understand their own effectiveness and that of their grantees, foundation leaders are frustrated by the limitations of existing technology. When organizations made initial investments in grants management, accounting and donor management systems, the data and reporting needs of today's measurement-focused management were outside the original technology's scope.

Performance measurement has been an informal priority for much of the Rasmuson Foundation's history. In the coming year, the foundation plans to launch an online grant application and reporting process that reflects the organization's desire to improve its measurement of grantee, as well as foundation, outcomes. "We have been talking about evaluation ever since the foundation brought on staff," says Chief Administrative Officer Jeff Clark. "But, we have been careful. We don't want to be haphazard and it is very costly—costly for the foundation staff and costly for the grantees. We will be collecting a lot of data. How do we turn it into something meaningful for the board?"

The challenge of managing data and providing actionable reports on foundation performance is very familiar to

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Integration

the Robert Wood Johnson Foundation (RWJF). For the past ten years, RWJF has been a pioneer in adopting a balanced scorecard. However, it continues to struggle to find adequate technology to support the data collection and reporting necessitated by that scorecard. "We need to be careful so that the process is not driven by the technology and that the technology supports the process," explains Research Officer Kelly Hunt. Currently, RWJF uses a manual process to gather all of the information needed for the scorecard. "It's very complicated—figuring out what's wanted by multiple audiences—staff, management, etc.," Hunt continues. "We're just starting to look at software that would create a centralized platform to collect and store data for the scorecard process."

Helen Davis Pitcher, evaluation officer at the William Penn Foundation, reports a similar struggle to find the appropriate technology solution to support the foundation's quest for performance data. "Our biggest challenges are making sure that the findings are utilized and understanding what we're learning—how to make the best use of the data," Pitcher says. Similar to the Robert Wood Johnson Foundation, the foundation manually aggregates grantee data. Ideally, Pitcher would like to see the foundation develop a database that will allow staff to analyze data across programs and grants.

Information Integration Elsewhere

Many industries share the same pressures foundations face in terms of measuring and managing performance, keeping information current, saving time and money, and avoiding duplication of information and costly mistakes. According to a recent article in *Baseline* (www.baselinemag.com), a leading publication focused on IT management, of the top five technology projects for all businesses, application integration was deemed "most critical," with companies planning to invest an average of $12.1 million in systems integration.

Other sectors have developed a wide range of solutions, ranging from developing a sector-wide standard to a few organizations banding together to create common systems that can exchange data, to a single organization creating a custom software application to pull all the relevant data from different systems and display it in a single interface.

On one end of the spectrum lies the creation of a data standard, an emerging trend in which organizations collaborate to tackle a shared challenge and create a standard that allows pieces of information to be read the same way by different software applications, provided they all use the standard. The airline industry, for example, has a standard called AICC that enables all online learning modules (courses, lectures, tests, etc.) to be available to all users, regardless of what software they are using, provided that both the learning module and the software have been developed using the AICC standard.

In some cases, the marketplace sets the standard. For new software products to work with Microsoft products (which have a significant market share), developers have to create software that is compliant with structures and definitions set by Microsoft.

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On the other end of the spectrum, many companies, from financial services to consumer packaged goods, have bought or built a software application that serves essentially as a meta-application. It collects data from disparate sources within an organization and manipulates it so different pieces of data can coexist and be presented as cohesive information. This approach does not require replacing the old systems, but using software that understands the old systems and can extract and transform information from them in ways that work to the company's advantage.

If other sectors share similar pressures for information integration and have developed solutions, why do good solutions seem to elude foundations? Integration solutions often evolve over many years. In addition, our research shows three environmental elements that need to be in place to allow integration solutions to take root:

■ ***A compelling business driver.*** Government regulation or market forces require an organization or sector to invest in information integration. Sarbanes-Oxley is a current example.

■ ***Opportunity moments.*** A sector is facing a significant challenge or crisis that creates a powerful opportunity for change. For example, the September 11, 2001, terrorist attacks forced intelligence agencies to be more proactive about sharing information. Y2K forced a change in data standards for dates.

■ ***Intra-sector collaboration and coordination.*** The move toward integration required many organizations—competitors, suppliers, governments—to work together to identify and adopt a solution.

The following case study on the U.S. Department of Education provides one example of how all of those factors came together.

Studying the Department of Education

Information integration is not new to the U.S. Department of Education (ED). "Federal efforts

Balanced Scorecard: **Definition of a Management Tool**

The balanced scorecard is a tool to help managers measure organizational performance. The concept, conceived in the mid-1990s by Harvard professor Robert Kaplan and consultant David Norton, is used by managers in the business, government and nonprofit sectors. According to Kaplan and Norton, "The Balanced Scorecard translates an organization's mission and strategy into a comprehensive set of performance measures that provide the framework for a strategic measurement and management system."

Many in the public sector like the scorecard because it gives equal weight to financial and nonfinancial performance measures. In addition to financial metrics, the scorecard facilitates the articulation and measurement of other factors, such as customer and staff satisfaction, innovation and process improvement, and operational efficiency.

The Robert Wood Johnson Foundation, which has been using a balanced scorecard for the past ten years, measures organizational performance along four dimensions: program development, program impact, capital (financial and human) and customer service. Within each dimension, specific short-, intermediate- and long-term performance indicators are tracked. Collecting data for the scorecard is a multi-month process that culminates with an annual scorecard presented to the foundation's board of directors every June.

"Developing a performance measurement process is a continuous cycle that doesn't have an end point," explains RWJF Senior Research Officer Kelly Hunt. "It took us a long time to come up with the 'right' metrics and I'm not convinced that we're there. How do you know when you're done? How do you measure impact? It's like finding a needle in a haystack."

to reduce the duplication of data collections, improve the quality of data and establish federal-state partnerships have been going on for more than a decade," reports Patrick Sherrill, project manager of EDFacts, an agency-wide information improvement initiative. Although led by a federal government agency, EDFacts is a collaborative effort among ED, state education agencies and industry partners to improve the quality and timeliness of education information.

ED realized that data are only as good as when they are first generated and collected at the school level where education takes place. Data about achievement and performance statistics, school characteristics, demographics and program financial information flow up through the "education data pipeline" to districts, then to states, then to ED for purposes of oversight for program funding.

Along the way, many different stakeholders access, manage, use, interpret or analyze this data using various systems that have evolved from paper-based to computer systems during the past two decades. According to Sherrill, this resulted in an "ad hoc system of silos replete with duplication and error."

Given that the agency had tried for decades to instill data standards, 2002 was an opportunity moment. Although not required under No Child Left Behind (NCLB), EDFacts was proposed at the same time by the incoming Bush administration. NCLB accelerated efforts to make public education more data-driven and evidence-based. Thus, in 2002, ED made a $44 million, three-year investment in piloting a strategic and systemic approach to the challenge of information sharing.

The pilot, now referred to as EDFacts, resulted in a coordinated effort to achieve information integration on two fronts: vertical—from school, to state, to ED; and horizontal—from all actors in the education sector. To support the vertical data flow, EDFacts has established standard defini-

Data Standards: Three Examples

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The nonprofit and public sectors have a handful of recent examples of initiatives to develop common data standards. Data standards allow data to be shared between multiple software systems, provided that the systems recognize the standard. Here is a profile of some of the better known efforts:

Electronic Data in Nonprofits (EDIN) was an initiative led by Independent Sector, along with a number of other sector organizations (download the final report at www.independentsector.org/edin/index.html). Among other things, it resulted in those organizations and the IRS creating standards for electronic filing of 990s. The IRS now has a data standard that it shares with accounting software developers, so that nonprofit accounting software can be built to share information seamlessly with e-filing systems to save time and reduce errors in filing 990s.

OPX Consortium was a short-lived, vendor-led standards initiative in the nonprofit sector. It was spearheaded by three technology companies that provide services to nonprofit organizations: Blackbaud, Charitableway.com and MyAssociation.com. In 2000, the consortium co-developed a nonprofit data exchange protocol, the Open Philanthropy eXchange (OPX). The goal was to create a technological standard that defined the various data that are common to nonprofit organizations so that the same data could be used by multiple systems. Some critics argued that a closed group of vendors developing a specification was really a guise for open standards. Because the OPX effort was largely vendor driven, it was perhaps premature. According to Joe Baker, executive director of N-TEN, the standards effort did not receive much support or pressure from nonprofits and foundations, who were not yet focused on integration problems. (See www.nten.org/other.)

The Association Data Standards Consortium (ADSC), founded in 2003 by 19 association professionals, is charged with identifying and developing data standards that facilitate seamless, efficient electronic data exchange and integration among the software applications used by associations. Once the founding core team agreed on the mission and guiding principles, membership was opened to the public and relevant vendors were encouraged to participate. This standards body has been careful not to reinvent the wheel by modeling existing frameworks. Its first priority for standardization has been membership-related data—first name, last name, address1, address2, etc.—as those are core to member-centric organizations. A user committee looking at associations' needs has grown up around this initiative, and there is some overlap with the needs of nonmember-based nonprofit and philanthropic organizations. (See www.adsc.org.)

tions for more than 140 common types of education data, such as school name, address and phone number; descriptive information about students and staff, including demographics; and fiscal data, including revenues and current expenditures. EDFacts took the vertical flow one step further by creating an electronic system, the Education Data Exchange Network (EDEN), which consolidates K-12 information collected from states, districts and schools and stores it in a central data repository.

Horizontal integration is accomplished through partnerships with stakeholders in the technology industry that realized the rapid growth in software for the education market—absent standards for inter-software communication—would hamper schools' options for improving and upgrading their data capabilities over time. The Schools Interoperability Framework Association (SIFA, www.sifinfo.org), a nonprofit membership organization composed of the creators and users of school technology, developed a set of platform-independent, vendor-neutral rules and definitions for sharing education data that is compatible with EDFacts data definitions and systems.

The SIFA project also resulted in the Zone Integration Server that allows different software applications to communicate with each other at the school district level by acting as a hub that manages the rules of interaction—access, routing and security within the system. Currently there are 56 products from 46 companies that comply with SIFA rules.

In the case of both vertical and horizontal integration, standards ensure that data about students and schools are consistent when they are transferred between many different stakeholders as they move through the education data pipeline, within a single school or across the sector.

Though initially driven by a legislative mandate, the mounting success of the EDFacts initiative can be attributed to the increased awareness of the benefits—improved educational information and decisionmaking and reduced paperwork and duplicative data collection. Even within ED, Sherrill reports that different departments "have come to recognize that their data benefits other programs and that they benefit from the required data that other programs collect. When combined, the sum is much greater than the parts."

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The Right Stuff

Can the lessons from the EDFacts case be applied to philanthropy? How does the current environment in the philanthropic sector compare?

Compelling business driver. With increased pressures to spend fewer dollars on administration and more dollars on supporting the public good, one could argue that the efficiency gain promised by information integration is a compelling business driver. Foundations must take the lead in using IT to measure performance at the program, organization and sector-wide levels, and not allow suppliers and vendors to define solutions.

Opportunity moment. The demand for grantmaker dollars continues to grow as government funds decline, the number of nonprofits continues to grow and social needs outpace available services. At the same time, federal legislation such as Sarbanes-Oxley and the actions by the Senate Finance Committee focus attention on sector performance and accountability.

Intra-sector coordination. There is no shortage of mechanisms to support collaboration among foundations, technology vendors and nonprofit grantees. Affinity groups, such as the Technology Affinity Group, Grantmakers for Effective Organizations and the Innovation Funders Group, in addition to local and national infrastructure organizations, such as the regional associations of grantmakers, the Council on Foundations and Independent Sector, provide multiple forums and formats for everybody to come together, exchange ideas, mobilize and collaborate.

First Things First

Time will tell if and how the philanthropic sector will foster a sector-wide solution to the information integration challenge. Nonetheless, a single organization can take some practical steps to ease those challenges. Consider the following:

Designate a team to be responsible for information integration. The team could develop internal data standards (e.g., grantee contact information) and processes (e.g., ways to measure grantee performance). Team members would also provide expertise and knowledge about the organization's data formats and serve as the standards police (e.g., no new software can be purchased without team sign-off).

Trends in Nonprofit Software Development

Software serving specific philanthropic sector needs has flourished in the last five years and has grown not only in number of options but also in complexity. Two websites that catalog software and application service providers (ASPs) catering to nonprofit users—www.nonprofitmatrix.com and www.idealware.org—drive home this point. The Nonprofit Matrix "is an online directory and guide to selecting and integrating dot-coms (commercial service providers of components such as donation processing, giving portals, affinity shopping and more) into a nonprofit organization's Web and Internet strategies." Idealware provides product comparisons, recommendations and articles about software of interest to nonprofits. Here the nonprofit software consumer can find niche applications that run the gamut from strategic planning to case management to fundraising.

Trends in software development and innovation in the nonprofit sector have complemented the emergence of mega-companies that provide all-in-one software and technology solutions for the sector (Kintera, Blackbaud and GetActive, to name a few) and accompanying consolidation and acquisition.

As noted in the Fair City Foundation case study, the proliferation of software products does not always make life easier for foundation or nonprofit staff. "Most of these systems are either closed systems or systems that allow customer access only through proprietary interfaces and data formats," according to Tim Neill, COO of Q-Industries, a boutique technology solutions provider based in Washington, DC.

Adopt best practices. Find out what your peers are doing. What data are they capturing from their grantees and how are they using them to measure their grantmaking impact? What information systems and data standards are they using? Look internally as well. Seek out data management and reporting practices that work well at the department level that could be implemented across the organization.

Secure stakeholder buy-in. Consider the impact that your data collection efforts, the adoption of standards or the investment in technology may have on grantees, as well as foundation staff. Seek their feedback and involvement in your efforts early on and throughout the initiative.

Foster strategic partnerships with your technology vendors. Although many foundations feel that software development is neither their mission nor their core competency, avoiding the issue of technology adoption is not the solution. Foundations must remember that their business needs and their instrumental role in financing nonprofits' social change work are the key determinants of what their information systems will look like. Given that the nonprofit software market is in the midst of rapid growth and innovation, the wisest approach is to use systems that are best suited to adaptation, extension and integration. Work with your vendors to make small adjustments that address the areas of greatest pain and pilot developments that help management make decisions.

Information integration requires commitment. Information integration requires a long-term commitment and a willingness to invest considerable human and financial resources. Nonetheless, the return on investment is clear. Your grantmaking will function at a higher level and have a more substantive, lasting impact.

Data must be translated. Meaningful information can inform decisionmaking. As in other markets, a free flow of data should help—not hinder—competition in the marketplace of ideas and innovation in technology solutions for the nonprofit sector. Data integration is the first step in achieving business intelligence or social knowledge in the nonprofit sector. FN&C

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