

STARS and GRI: Tools for Campus Greening Strategies and Prioritizations

Gwendolen B. White, Ph.D.¹ and Robert J. Koester, AIA LEED AP²

Abstract

This paper describes a comparative examination of the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines and the Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking, Assessment, and Rating System (STARS). As the dominant sustainability reporting framework used by over 1,300 international businesses and NGOs, the GRI guidelines offer a corporate-based assessment and tracking framework. As the singular consensus-based tool for use by colleges and universities, STARS offers a more academically codified assessment and tracking framework.

The GRI guidelines, which incorporate qualitative and quantitative information, describes an organization's enterprise strategy and operational profile, its management approach, and its performance indicators (using economic, environmental, and social parameters) to highlight its sustainability activities. The STARS framework also uses quantitative and qualitative information to the same end, although it is more fully weighted to include detailed curricular and research activities. Using both GRI and STARS can position an institution to communicate more effectively with its many internal and external constituencies. The following report details the Ball State University experience doing just that and makes clear the value in using both reporting tools to position institutional sustainability efforts on the international stage.

Introduction

This paper uses the Ball State University (BSU) experience to discuss how universities can communicate their institutional sustainability strategies and constituent activities as they monitor their progress using two differing reporting frameworks; GRI and STARS.

The GRI Sustainability Reporting Guidelines (version G3) were developed primarily for corporate use. They were designed to be flexible enough for any type of organization (i.e., profit or nonprofit agency, state or municipal government) of any size. The GRI guidelines incorporate qualitative and

quantitative information to describe an organization's mission-specific strategies and operational profile, its management approaches, and its economic, environmental, and social performance. Developed through an international, consensus-based process by multiple stakeholders (e.g., accountants, investors, NGOs, governments) they are widely used and recognized globally; of the 5,000 companies whose sustainability reports are tracked by Bloomberg LP, the majority are prepared using the GRI guidelines. These companies have discovered substantial cost savings and competitive advantages associated with sustainability-based business practices along with the value of this reporting to external stakeholders.

STARS was developed for academic use and accordingly covers sustainability metrics in education and research (ER); operations (OP); and planning, administration, and engagement (PAE). STARS is invaluable for internal and external stakeholders interested in detailed metrics at various administrative levels. For example, STARS ER credits focus on specific sustainability-related activities in curricular and research programs collected from the various academic and administrative departments in the university. Administrators in each curricular unit and those at higher-levels can use these data to assess, improve, and market the student, faculty, and staff engagement.

¹ Miller College of Business, Ball State University, Muncie, Indiana.

² Center for Energy Research/Education/Service, Ball State University, Muncie, Indiana.

The two systems complement one another in supporting the communication with, and the monitoring by, the many differing stakeholder groups. By using the GRI framework, universities can supplement STARS reporting by describing their sustainability-related commitment and activities in the organization's enterprise strategy, operations profile, and management approaches.

The BSU Experience: GRI Reporting

A faculty-led, six-student team used the GRI Sustainability Reporting Guidelines to produce the GRI Ball State University (BSU) Sustainability Report 2010. To prepare this report, graduate and undergraduate students worked as BSU Building Better Communities (BBC) Fellows. The BBC Fellows program, a hallmark of BSU education, engages interdisciplinary teams of students led by a faculty mentor in on-site, problem-based projects; it is a key part of the BSU strategy for redefining education using the immersive learning experience. The goal of the BBC Fellows program is to provide opportunities for students to apply directly their academic knowledge in real-world settings in Indiana in an effort to encourage them, as graduates, to stay, live, and work in Indiana. The program creates new business connections for students in a wide variety of disciplines, increases the potential for employment in Indiana for these students, and provides professional field experience. The fellows in the STARS/GRI project received concrete benefits from this immersion. When interviewing for internships and/or full time employment, they each reported receiving offers, in part, because of their project participation. In fact, the recruiters talked at length with the fellows about the GRI report content and their experiences in its presentation.

Although the BBC program was originated by BSU, its mission and structure are transferable to other institutions, especially if built around sustainability reporting for the campus. In the BSU program, students earned three hours of course credit in their choice of either an independent study course in their major or a specific immersive learning course in the university college. Although this project was similar to a standard course—with objectives, assessments, and deadlines—the faculty mentor had the

freedom to adapt the course to contend with unexpected events. To facilitate teamwork, students created and signed a team contract to establish group norms for attendance, work quality, and communications. The team and faculty mentor met weekly for planning and problem solving. The students planned many aspects of the report, engaged with university staff for data collection, and designed the layout and content placement for the final document. In principle, a similar sustainability reporting project could be replicated easily in other universities that offer courses in independent study or experiential learning.

The BSU sustainability reporting project was conducted during the fall semester 2010. After the students learned about the GRI Sustainability Reporting Guidelines and the structure of STARS, they planned the report content. Data were collected from interviews with university staff and from the BSU website. The student team wrote the final report, which was edited by two faculty members; the corresponding STARS indicators were referenced throughout. With the approval of Ball State President Jo Ann Gora, it was then submitted for feature on the GRI website and publication on the BSU sustainability webpage.

Once the first GRI report was completed, a second reporting project was conducted during fall semester 2011, resulting in the (GRI) BSU Sustainability Report 2011. This report updated the indicators from the previous year and was expanded from a GRI C-level to an A-level report, which addresses all of the GRI indicators. Organizations select the level of report depending on their stage (beginner vs. advanced) of reporting. In the 2011 report, the BBC Fellows chose A-level to improve on the reporting of the previous year; they expressed the desire to increase the university's transparency regarding environmental, economic, and social impacts.

BSU Provost and Vice President for Academic Affairs, Terry King has acknowledged the importance of these reports for advancing the university's efforts toward sustainability and has expressed interest in getting specific recommendations for improvement. To that end, another immersive learning project is being planned for the fall semester of 2012; this one will involve students in evaluating both reports and

preparing formal recommendations to the provost and is in line with the university's commitment to sustainability and immersive learning. In addition, the 2011 report is being presented for stakeholder feedback to the BSU Council on the Environment (COTE),¹ which is a microcosm of the university's stakeholders (administrators, faculty, students, staff, and community). Feedback from this presentation to COTE will be used for discussions about improvements to the university's sustainability efforts and report content. Additional meetings with alumni boards are being planned to continue the sustainability dialogue between the university and its many stakeholders. This exposure has numerous benefits. Foremost among these is educating the university community and the public about sustainability, with the university as a role model; this is clearly an example of keeping the university's commitments to the Talloires Declaration and the American Colleges and University Presidents' Climate Commitment (ACUPCC).

The BSU Experience: STARS Reporting

Our participation in the development and implementation of STARS was a tremendous benefit for BSU. Knowing from the outset the intent of AASHE to create this tool, having tracked its consensus-based iterations, and understanding the categories of reporting content as well as the specific format for content submission, positioned us to begin weaving the material into our day-to-day operations long before STARS was officially made public. And although those facts are unique to our experience, they emphasize for any institution the importance of taking the time to organize activities that will integrate sustainability deeply within day-to-day practices. In fact, we have come to the realization that STARS is more than an accounting/reporting tool; it can serve as a strategic planning tool as well.

Given the cycling of strategic planning on our campus, we were able to introduce STARS categories as part of a requirement for unit-level sustainability planning that had been written into the 2007-2012 University Strategic Plan. As a consequence, each administrative unit on campus—from the president's office to the vice-presidencies, colleges, departments, centers, and

institutes—was required within a one-year period to bring forward a unit-level sustainability plan. To support this call and facilitate the meeting of this requirement, we prepared template samples of unit-level plans for distribution to the administrative offices. The STARS categories were used to prepare that prototype document. Since the plans were to be coordinated with the five-year cycling of strategic planning, they had been built anticipating an incremental transformation. Once completed, we aggregated the content of those 102 unit-level sustainability plans into a spreadsheet synopsis of campus-wide efforts.

As a complement to the strategic planning work, we were able to enlist the participation of the members of COTE. We asked that the annual member reports for their constituent representation be organized according to the STARS framework. This again facilitated the harvesting of data and the tracking of progress within those represented groups. And finally, in working through COTE we were able to identify champions at all levels of the institution that could facilitate preparation of these materials for the annual COTE membership reports and/or the strategic planning documentation.

Even though our approach was highly integrated with ongoing campus activities, as expected, we encountered resistance in various quarters of the institution. To some extent, this was a product of incomplete communication; without a clear directive or mandate from supervisory levels, and/or without fully explaining the nature of the STARS reporting system and its intent, folks were unsure of their authority to share information, much less anticipate how it would be used. Further, since this was the first effort at compilation, there was considerable uncertainty regarding the time-on-task required and degree of digging needed to pull together the appropriate information. Moreover, as colleagues who are routinely embedded in the day-to-day operations of the institution, many did not necessarily want to be placed in a spotlight. Also, questions were routinely raised about how this information would be used.

We were able to overcome most of these hesitations by explaining more fully the nature of STARS, pointing to the importance of transparency, and highlighting the benefits that can accrue to individual units

as well as the institution as a whole. Part of the assurance we provided was that, in effect, we were already there: We had STARS-structured, unit-level sustainability plans; we had STARS-structured COTE membership reports; and COTE stood ready to help in any way necessary. Moreover, we emphasized that the final sign-off was in the hands of the respective reporting person(s) and/or office(s).

Resource limitations, of course, are another concern on the part of university personnel when asked to complete yet another survey or inventory of sustainability content. To provide some assistance, a graduate assistant was deployed to schedule face-to-face meetings and harvest basic information, in effect, writing the first draft of content for each of the respective interviewees. By capturing such data in the draft, we took some of the burden off the submitting units and were able to correlate more directly the reporting within the structure of STARS.

To this end, we found it helpful to prepare a letter of introduction for the content preparers. We also offered PowerPoint presentations to educate faculty and staff on the purpose of reporting, and we traced the authority for this effort to the legacy of our green campus work (dating back more than 25 years), the numerous activities across campus for which sustainability awards and recognition had been bestowed, and most importantly, our president's signing of the ACUPCC.

The benefits of the STARS reporting format include clarity of criteria; ease of content submission using the interactive PDF uploads to the website; the preview function of the website, which allows for reporting out of the working drafts of the final submission; and the opportunity to review the drafts to determine areas of missing or incomplete information.

In the process of completing the first STARS report, we learned a lot about the strengths of the institution, and we have begun cultivating appropriate internal conversations. Next we can begin to explore how to shore up and flesh out those areas in need of work. At the same time, we have been championing and celebrating the achievement of a solid STARS silver rating, earned because of the participation of so many of our colleagues across campus. In addition, the op-

portunity for benchmarking—which will come about with the move of STARS to a database format—will be particularly appealing in the years to come. Not only will we be able to cross compare our achievements with schools of similar size and scope, but we will be able to identify the models of achievement in those institutions engaged in exemplary practice. Those national and regional comparisons using the standardized, highly transparent, and public documentation will be to everyone's benefit in the long haul.

Finally, the second report submission in 2012 will be much easier because the first report exists. The second submission will be mostly an editing activity. An interesting result of the STARS enterprise is the evident pride of submission at all levels of the institution; some units are now citing this on their own subpages within the university's webpage structure.

The BSU Experience: GRI and STARS—Why Do Both?

Both the GRI and STARS frameworks offer formats that external and internal stakeholders can use for many purposes. On its face, the university primarily is comprised of its on-campus constituents, engaged in the academic culture for which STARS has been structured. However, a more sizeable portion of the university constituency is made up of the alumni and external public communities, many of whom are more accustomed to business-plan modeling and associated metrics, which the GRI serves so well.

By also using GRI sustainability reporting guidelines, universities can take a proactive approach to communicating with stakeholders in a narrative format about their sustainability culture and economic, environmental, and social impacts. Donors and alumni as external stakeholders can benefit from knowledge of the economic impact of sustainability efforts at the university; because many state legislatures have reduced the funding of higher education, universities need to seek alternative funding sources. Universities can demonstrate their financial needs to alumni and donors by providing direct economic indicators, such as revenue types and amounts and this information can inform stakeholders' decisions about future giving. Included in the GRI direct econom-

ic impacts are university expenditures on employee compensation and businesses benefitting directly from employee spending in the local community. The environmental indicators such as emissions, water usage, and waste inform community officials about the university's environmental impacts in the community and what the community and university need to do to diminish these impacts. Town-gown relations can only be improved as universities present publicly their positive and negative impacts. The GRI measure of social impacts, specifically, includes disclosure of engagement with the local community along with assessments and development programs; university community projects add value to the students' experiences and to the community.

By using the STARS framework, detailed metrics for ER, OP, and PAE can be presented. These metrics are designed to demonstrate a university's performance on those sustainability activities that are unique to institutions of higher learning. Universities earn points for their sustainability plans and practices in each of the areas of ER, OP, and PAE. Total point accumulations are indications of effective leadership designated by bronze, silver, gold, and platinum.

Although the GRI guidelines are intended for *any* type of organization, GRI sector supplemental guidelines have been developed for specific industries in which the general guidelines are insufficient to address their unique impacts. There are no GRI supplemental guidelines for higher education, as of yet, but it would be beneficial to have indicators that address specific curricular and program-driven sustainability impacts. As more universities adopt GRI *and* STARS reporting, they can advocate for supplemental GRI indicators that address higher education's unique needs. In fact, the STARS framework could well be adapted as the needed supplement to GRI. As with other industries, the development of additional indicators comes with use and direct involvement in guideline development. The evolution of GRI and STARS will come from their application; their refinement will spring from a broader base of participant experience.

External perceptions are increasingly more relevant to academia because many outside of universities are scrutinizing their performance. Universities and colleges

are now evaluated in myriad ways on their sustainability efforts; examples include the Sustainable Endowments Institute's *College Sustainability Report Card*, the *Sierra Club's America's Coolest Schools*, and The Princeton Review's *Guide to 311² Green Colleges*. Information for these rankings is often obtained by surveys and from school websites. Although, as this article was going to press, these groups announced that they are now working in concert with AASHE STARS to establish a common sharing of data to reduce survey fatigue and work toward a consistency of evaluation metrics. This has taken the form of the newly released Campus Sustainability Data Collector.

Moreover, many states have adopted or are considering performance-based funding (PBF) to allocate funds to their public universities. Although the specific requirements vary from state to state, enhancing transparency and accountability, increasing productivity, and allocating resources efficiently are major components of PBF. Some states, such as Indiana, have tied higher education funding to schools that offer programs in high-demand areas, for example science, technology, engineering, and math (STEM). Environmental research and education are included in STEM areas. As institutions of higher education seek funds to supplant shrinking baseline support, they need to demonstrate and communicate their stewardship of current resources, sustainability-based operating practices, and sustainability-based research and education. Institutions that convey to stakeholders such as state legislators and higher education commissions their impacts and progress toward achieving operational and educational sustainability goals should be in a better position to secure alternative funding.

Economic, environmental, and social impacts are interconnected, and a sustainability report based on GRI guidelines enables stakeholders a view of these impacts for the short and long term. For example, in the GRI report, a statement from the chief officer of the organization presents the key challenges associated with economic, environmental, and social performance and how the organization's vision and strategy are positioned to handle them. With this information, external stakeholders can see the organization's strategic sustainability priorities and plans for confronting the

effects of broader economic, environmental, and social trends.

For universities, the guidelines offer an opportunity to demonstrate to state legislators, education commissions, taxpayers, and students that they are addressing the sustainable use of resources for education, research, and operations. A GRI sustainability report serves to share with internal stakeholders the university's sustainability priorities, plans, and performance, which can be used to educate and unite the campus. Knowledge that the university is engaging in sustainability-related activities in the curriculum, in research, and in operations can give members of the campus community a sense of common purpose in creating a more sustainable university. For staff, it can encourage modeling and/or coordinating sustainability-related initiatives across campus. For faculty, it can encourage interdisciplinary collaborations in research and/or teaching. Universities that are signatories to the Talloires Declaration or the ACUPCC can use GRI and STARS integrally as they progress in their commitment to building more sustainable campuses.

Both the GRI and STARS frameworks communicate a university's narrative without much redundancy. The GRI report disclosures include strategy and analysis, organizational profile, report parameters, governance, and performance indicators. Strategy and analysis involves a statement issued by the organization's most senior decision maker regarding the relevance of sustainability to the organization and its strategies, along with key impacts, risks, and opportunities. Under STARS, similar information can be found in the president's or chancellor's letter of introduction and in the PAE Credit 2, which describes the institution's strategic plan.

The GRI organizational profile, a description of an entity's primary brands, products, and/or services, complements STARS Category 1: Education and Research (ER). These are not redundant disclosures: GRI allows for an overall picture of the organization's services (education and research) while STARS indicators comprise a more in-depth coverage of sustainability in a university's co-curricular education, curriculum offerings, and research involvement.

Under STARS, ER Credit 1 involves co-curricular education and focuses on the

institution's coordination of an ongoing peer-to-peer sustainability outreach and education program for degree-seeking students. ER Credit 2, which covers curriculum, allows the university to earn points if it has developed a definition of sustainability in the curriculum, has identified its sustainability-focused and sustainability-related course offerings, and has made its sustainability course inventory publicly available online. In the research section, a university earns points in ER Credit 15 if it has developed a definition of sustainability research, has identified its sustainability research activities and initiatives, and has made its sustainability research inventory publicly available online.

Governance issues are not reported in the same manner in the two frameworks. Under the GRI report parameters, an organization describes the report period, scope, content, and external assurance policies. For STARS, similar information can be found in the president's letter of introduction. Governance for GRI purposes is the organizational hierarchy with respect to authority, decision making, and oversight. In STARS these items are covered in the sustainability planning credits, PAE 1-5.

Engagement with stakeholders is covered in both frameworks, but in different ways. The GRI framework requires more details about key topics and concerns that have been raised through stakeholder engagement, including how the organization has responded to those key topics and concerns and its reporting of them. STARS addresses engagement with an inquiry into collaborations with outside partners (e.g., government agencies, communities, schools) to advance sustainability in the community in PAE Credit 19, collaborations with other colleges and universities to advance sustainability on campus in PAE Credit 20, and the frequency of taking employee satisfaction surveys in PAE Credit 12. In addition, engagement in STARS is defined as the university's engagement in community service. For example, the institution earns points by measuring the percentage of students who participate in community service in PAE Credit 22 and the number of hours contributed per full-time student in PAE Credit 23.

Economic impacts are one of the three components of sustainability reporting that are evaluated in assessing an organization's

sustainability-related activities. Information about sources of funding and allocation of resources can inform stakeholders such as taxpayers, students, and legislators about how the university stewards its resources. Economic impacts under the GRI framework present an institution's direct and indirect effects, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments. These have significant consequences for local, regional, and state constituents. Employee compensation is a material portion of a university's operating budget; at BSU, this figure is almost 70 percent. Highlighting this impact provides community and statewide stakeholder-specific information about how important the university is to the local economy. These impacts are not addressed in the STARS framework.

Both GRI and STARS cover many of the same environmental topics but in a complementary way. On the surface, it may seem as if using both frameworks is redundant; however, a comparison of a few of the indicators from both systems will alleviate that concern.

The GRI environmental indicators include materials, energy, water, emissions, effluent, waste, biodiversity, products and services, compliance, transport, and overall environmental protection expenditures. These indicators are related to the STARS Category 2: Operations (OP) section on purchasing, dining services, energy, water, climate, waste, and grounds. A comparison of the GRI indicator EN1, materials used by weight or volume, and STARS purchasing credits for food OP Credit 6, computers OP Credit 11, and office paper OP Credit 12 illustrates how they augment one another. GRI reports provide type and quantity of materials purchased while STARS details specific sustainability characteristics of these purchases. For example, in food purchasing OP Credit 6, institutions are rewarded for acquiring food grown and processed within 250 miles, third-party certified (e.g., USDA Certified Organic), or grown on socially responsible farms.

Social impacts under GRI involve human rights, labor practices and decent work, society, and product responsibility. Product responsibility would appear not to be appli-

cable to universities unless they are engaged in the manufacture and resale of tangible products that have safety issues. The GRI indicator PR1 is intended to present information about the reporting organization's assessment of health and safety issues during various stages of a product's life cycle. If this is not applicable, organizations need not report this information.

In the area of human rights, both GRI and STARS have indicators that cover procurement practices and vendors. The percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening are reported in the GRI indicator HR1. In STARS, universities are rewarded for being members of specific organizations; in PAE Credit 25, they earn points for being a member of the Fair Labor Association or Worker Rights Consortium and for signing an agreement to participate in the Designated Suppliers Program.

The two frameworks complement each other in diversity and equity. The labor practices and decent work section in the GRI framework shows the composition of the workforce. The GRI indicators LA1 and LA2 describe not only the total workforce by employment type and employment contract, but also the total number and rate of employee turnover, age group, and gender. Indicator LA13 reports the composition of governance bodies and breakdown of employees by gender, age group, minority group membership, and other indicators of diversity. STARS promotes diversity and equity in the workforce by giving points in PAE Credit 6 for having a committee, office, and/or coordinator tasked by the administration or board of trustees to advise on and implement policies and programs related to diversity and equity on campus.

The BSU Findings

Having worked with both the GRI and STARS reporting frameworks, we can now reflect on our experience and share our insights, the lessons learned, some unique observations, and the new knowledge gained from the use of these tools in academia.

Insights

Rules versus principles. Unfortunately in the context of assessment and evaluation

with emphases on deliverables, the frameworks themselves can be misread as a set of obligations that institutions must meet in an itemized fashion. This can lead to using the frameworks as a blueprint rather than as assessment and facilitation tools and can skew the results. Certainly we must be accountable in all the categories covered, and itemizing elements for which an institution can receive points is a necessary step in the assessment process. But the more valuable dimension of both the GRI and STARS frameworks involves their structure. The more fruitful utility of the systems is found in adopting the categories and using the outline as guiding principles. The systems enable us to reach beyond the conventional three-legged stool description of sustainability (economic, social and environmental) and to address the integrative nature of these measures. In fact, the three-legged stool (or the triple-bottom-line)⁴ correlates to the conventional Venn diagram of three overlapping circles, which was supplanted at another point in the literature with concentric circles positioning the economy within the society within the environment. These illustrations reflect attempts to give structure to complexity, especially that of the institutional operations. Nonetheless, one must remember that these are simply frameworks of categorization and really do not engage the tenets of whole-systems thinking so forcefully presented in the writings of Donella Meadows.⁵ So while using the categories for inventorying is helpful, the higher order challenge is to learn from that information-gathering exercise the ways in which the university operates as a system or a set of systems and the importance of distinguishing symptomatic activity from the structuring of operational behavior. As Meadows notes, "there are many points of entry for interventions in (corporate or university) systems."⁵

Accounting versus reporting. Certainly the two frameworks are organized to facilitate both qualitative and quantitative data acquisition, inventorying of benchmark data, and annotations of achievement. But the true value in such indexing is in framing the purpose of the report presentation of findings. That reporting is not of much use if it simply produces a pat on the back for achievements to date; rather its greatest leverage is if it is used as a stepping stone to future action. The reporting function thus must be seen more as a foundation for planning than as rear-view mirror accounting.

Understanding and action. The inventorying, reporting, and planning that result from employing the GRI and STARS frameworks are of tremendous benefit in shaping future visioning and related actions that can be proscribed. In addition, shaping such actions offers a multilayered opportunity for identifying champions at all levels within the hierarchy of institutional organizations. This also begs the question of the traditional industrial modeling in which a structural tree of reporting upstream comprises the conventional organizational diagram. Such traditional modeling is correlated with the siloed isolation of members of the academic community within its many disciplinary areas. Sustainability by every measure calls for trans-disciplinary understanding and action and requires that we find ways to support lateral engagement. This goes to the core fault of industrial modeling of the organization. As noted in the writings of Peter Senge,⁶ if the university is understood as a learning organization and/or a learning community, then we must find ways to encourage breaking out of the silos and recognizing that the institution is not a static state. In point of fact, it exists as a structural community in a state of dynamic equilibrium. The best modeling of that idea can be seen in the University of Virginia, conceived by Thomas Jefferson as an "academical" village (rather than an industrially-modeled institution of higher education).⁷ Participants would come and go, one year at a time. In fact to this day the students are referred to as first year, second year, rather than freshman, sophomore, etc. Separate from these insights of course are the lessons learned regarding operational practice.

Lessons Learned

Tools for communication. Both GRI and STARS frameworks are tools for institutional communication that enable a more articulated exploration of stakeholder constituency and the role stakeholders play; they enable clarification of the implicit and explicit branding that results from this form of transparent reporting.

Tools for community building. GRI and STARS can catalyze action on the campus and beyond. Whether assembling teams to conduct an assessment, as in our example of the GRI reporting, or reaching out to existing personnel to harvest data, as we did in support of the STARS reporting, a sense of community results, both for those involved

in the actual reporting and those drawing the inferences from the final reports of the institution as an operational organism.

Tools for problem solving. As we learn about gaps or misalignments in meeting the criteria set out in the two frameworks, we are in a position to proactively intervene and facilitate a better alignment with those assessment criteria by meeting concomitant targeted goals.

Observations

Ownership of process. A key challenge in the use of either framework is identifying the ownership of process. Certainly the industrial model of staffing a sustainability office with the charge of creating a report institutionalizes the activity, but it fails to take advantage of the opportunity to distribute ownership through the full fabric of the institution. If the reporting called for in these two frameworks is integral to the conventional academic-year reporting that occurs at every level of the institution, then the ownership of the reporting process is readily distributed. If aligned carefully with the GRI and STARS criteria, it can reinforce and sustain the notion of distributed ownership.

Certainly every constituent of the campus has a different role to play. Students, staff, faculty, and administrators can be involved in the GRI and STARS reporting, but each must be educated about their opportunities for contribution. The PowerPoint briefing sessions we held, the templates we produced, and the interviews we staffed all were designed to reinforce the importance of everyone contributing.

Scaling of impact. The final observation involves the understanding of the university as an operational whole system or system of systems. This positions stakeholders to examine opportunities for short-, mid-range, and long-term strategic moves, and as discussed in the writings of Amory Lovins (see "The Larger Systems View" sidebar), the larger systems view often leads to the breaking of cost barriers and the reframing of opportunities. In our case, the move to district-scale ground-source geothermal heating and cooling resulted from stepping outside the question of straight-up replacement of old boilers with new ones. This move of course is a long-term and large-scale investment but nonetheless will put the institution on sound footing

regarding cost avoidance in the future as carbon-taxing and/or trading comes into the economic mix.

The Larger Systems View

Amory Lovins succinctly explains a larger systems view and a reframing of the energy discussion in his recent book, *Reinventing Fire: Bold Business Solutions for the New Energy Era* (Rocky Mountain Institute, 2011):

If you were to ask most engineers how thick your insulation should be in a very cold place, you'd probably be told, "Just as much as will pay for itself over the years in saved heating fuel." That seems to make sense—you don't want to pay more than it's worth, do you?—but it's wrong, because it leaves out something important. I don't mean the environment, though it leaves that out too. It leaves out the capital cost of the heating system: not just the furnace but the ducts and fans and pipes and pumps and wires and controls and fuel supply that have to be paid for before you can get any heat, and yet none of that is counted in the normal calculation. But when you put in enough superinsulation and superwindows and air-to-air heat exchangers, you don't need the furnace anymore, and these other features cost less to install than a heating system would have cost.

Areas of New Knowledge

Indicators versus benchmarking. The common interest in sustainability reporting is to identify indicators as a means of qualitatively assessing trends in operations. Separate from indicators are the conventions of benchmarking which by tradition involve data sharing among institutions so as to better understand the performance spectrum. For example, universities within our athletic conference routinely share benchmark data on energy use per square foot to index performance. These values normalized against climate get at the core factors of campus energy-use efficiency.

Time-linked data. Another area of new knowledge involves backcasting, forecasting, and sidecasting of data. The backcast-

ing argument comes out of the work of a number of authors who posit the need to determine where the institution wants to be at some future date and then backcasting the steps necessary to get there.

This is distinct from forecasting in which data sets are used to predict trends, as often can be seen in the typical climate action planning wherein universities plot sloped graphs indicating business-as-usual growth with modified slopes indicating percentage reductions. However, the problem with such forecasting is that in generalizing percentage reductions, there is no immediate short-term, mid-term, or long-term understanding of steps to take to get there; nor is there any useful information about the complexity of those steps. For that reason, we've adopted a stair-step modeling of greenhouse gas reduction in five-year increments so as to tie these opportunities for action with the cycling of our strategic planning.

Sidecasting involves the more lateral view of what are seen as problems. The overworked invocation of thinking outside the box applies here. But the really useful invocation is to think laterally—that is, to come at the issues from the side to see them through differing lenses or perspectives and to recast a selected problem from unlikely vantage points.

Recasting strategic planning. Finally, an area of new knowledge involves the use of GRI and STARS to influence strategic planning. In our case, we've integrated STARS with our unit-level five-year strategic planning and hope to bring to bear in the next five-year cycle specific influence from the GRI framework. The integration of sustainability issues into strategic planning across the full spectrum of proposals and actions obviates the more knee-jerk tendency to want to silo the sustainability issue by assigning some office and/or staff the task of "doing sustainability." Certainly GRI and/or STARS reporting, when isolated in this manner, are not nearly as useful as when they are woven into broad-scale strategic planning.

Conclusion

Although both frameworks touch on many of the same topics, they do so in different ways. These examples offer only a small sample of the comparisons that can be made between the frameworks. A more detailed

line-item comparison is provided in tabular form on the BSU website at www.cms.bsu.edu/Academics/CentersandInstitutes/COTE/Sustainability/GRI.aspx Using both frameworks can provide universities a more complete picture of their sustainability plans and practices.

Author Disclosure Statement

No competing financial interests exist.

References

1. The council is comprised of representatives from each of the university's academic colleges and vice presidential areas as well as the student body and Muncie community. COTE provides leadership for initiatives at Ball State University and in the surrounding community to promote the sustainable use of natural resources and the protection of ecological systems that sustain life.
2. This number changes from year to year; for 2012, it will be 322.
3. Harnisch TL. *Performance-Based Funding: A Re-emerging Strategy in Public Higher Education Financing*. American Association of State Colleges and Universities, Washington, D.C. 2010. http://www.congressweb.com/aascu/docfiles/Performance_Funding_AASCU_June2011.pdf (last accessed 1/3/2012).
4. Darden, JA. *Establishing a Triple Bottom Line Strategy: Leading CEOs on Balancing Economic, Environmental, and Social Responsibilities (Inside the Minds)*. Thomson West, Aspatore Books, Boston, 2010.
5. Meadows D. *Thinking in Systems: A Primer*. Chelsea Green Publishing, White River Junction, VT, 2008.
6. Senge P. *The Fifth Discipline: The Art & Practice of the Learning Organization*, rev. ed. Crown Business, New York, NY, 2006.
7. Wilson GW. *Thomas Jefferson's Academic Village: The Creation of an Architectural Masterpiece*, rev. ed. University of Virginia Press, Charlottesville, VA, 2009.

Address correspondence to:
Gwendolen B. White, Ph.D.
Department of Accounting
Miller College of Business
Whitinger Business Building
2000 W. University Avenue
Ball State University
Muncie, IN 47306

E-mail: gwhite@bsu.edu