MAKING MAJOR RETAIL ESTABLISHMENTS SUSTAINABLE: THE CASE OF THE MALL AT ROBINSON

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INTRODUCTION

This case serves as a leadership example of what is initially possible for existing mall retail establishments regarding sustainability. The discussion consists of a case study of how a multidisciplinary team of Pittsburgh-regional experts conducted a comprehensive analysis using a systems approach [1] to identify and provide recommendations for sustainable business solutions to benefit a large retail shopping mall in the Pittsburgh Region, The Mall at Robinson. The convening organization for this project was Sustainable Pittsburgh. Findings from the assessment include solutions that will save or make money and increase the mall's effectiveness and resource efficiency. Other impacts include recommendations for becoming better stewards of the environment and community and increasing the mall's public profile. The project approach has been to focus on opportunities for continuous improvement where the interests of people, business, and environment meet.

Many people think of shopping malls as entities that are counter to the goals and values typically associated with sustainable practices. There are many reasons for this position. Malls are usually constructed on greenfield sites in exurban areas where sprawling growth typically takes place, usually without any efforts to embrace LEED certification standards. Malls rarely offer convenient public transportation access and therefore are dependent upon and perpetuate a car-based culture, with corresponding environmental and social impacts. They are associated with a culture of consumption, in effect anchor points for large amounts of throughput of materials and energy. And there are also many other reasons [2].

However, given the pervasiveness of shopping malls and their extensive roles in retail commercial activities, malls are also huge opportunities to demonstrate the benefits of embracing a more sustainable approach in their operations. Reacting only to the negative environmental perceptions of these important economic centers (instead of engaging with this sector to help redirect the current operational practices out of a sense of ideological purity) ignores a tremendous need and overlooks a strategic leveraging point. The potential scale of improvements through the introduction of simple changes to operational practices should not be overlooked. Of course, everyone would like to see new mall construction embrace the highest LEED standards and that sprawl be reduced. Such action is one strategy in a multi-pronged approach. What about the huge number of existing malls built over the last 30–40 years?

The scale is in some ways staggering. By the end of 2006, there were 48,695 malls in the United States. That translates to approximately two malls for every 10,000 people. Shopping malls are a major force in the retail economy. As a sector, malls are the venue for over $1.3 trillion in sales for 2006. That translates to approximately $4970 per person. In average state GDP terms, the economic activity at malls accounts for $0.13 for every $1.00 on average for that state's GDP [3].

Pennsylvania, the state in which this project took place, has 1800 malls (ninth in the U.S.). That translates to approximately 1.5 malls for every person (36th in the U.S.). Economic activity in these malls was $59.8 Billion in sales (seventh in the U.S.), which breaks down to approximately $4810 per person and $0.13 of every $1.00 of state GDP (28th in the U.S.) [3].

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A tremendous number of new malls are added every year in the U.S. For example, in the late 1980s, nearly 2,000 new malls were added per year. As Figure 1 shows, this number declined over the period of the early 1990's, but has settled to a number of approximately 1,000 new malls per year since that period. Beginning around 1997, the rate of adding new malls has ranged between 1.5%–2.0% *per year* [3]. These statistics and trends clearly point to a need to engage this sector to embrace LEED standards for new construction. However, the situation also points to the potential opportunities to make major improvements regarding the practice and promotion of sustainability in this sector's operations.

Engagement with the mall retail sector can also be seen as a necessity not only from the perspective of materials flows, energy usage, and operational impact, but also from its strategic position as the site where operational activities come together in one meeting point. From a supply chain perspective, malls represent the handoff point between what consumers want and what the market provides them. Signals to suppliers travel upward through the chain based on the choices that consumers make. In addition, new ideas enter the minds of consumers through the methods of offering and presenting new consumer items. Currently, little information regarding sustainability of products and processes has entered this point of commerce. The opportunities to pursue a new market strategy for malls by supporting the introduction of new products [4], by providing educational opportunities to shoppers about sustainability, and by providing stronger connections with community through a sustainability and corporate social responsibility lens all provide strategic opportunities [5] for property management firms who operate and manage this important retail sector.

ORIGINS OF THE PROJECT

Beth Edwards, General Manager of The Mall at Robinson, owned by Forest City Enterprises, became interested in sustainability as a core value around the year 2001 when Forest City was finishing its redeveloping of Denver's former Stapleton Airport into a mixed reuse project using concepts such as energy efficiency. By late 2003, Ms. Edwards began surveying the Pittsburgh-regional expertise in the area of sustainability to launch an initiative in this market.

The Mall at Robinson opened in October 2001 and consists of 872,000 square feet of retail space for 120 shops. The facility is located ten miles west of downtown Pittsburgh off of a major interstate highway that connects the city to Greater Pittsburgh International Airport. Approximately 80,000 cars travel per day on this interstate near the Mall at Robinson's location. The anchor tenants are Macy's, J.C. Penney, Sears, and Dick's Sporting Goods [6].

At about this same time, Court Gould, Executive Director of Sustainable Pittsburgh, had completed a feasibility study to assess the potential for uniting the region's wealth of knowledge and expertise in a range of sustainability-related areas. This study recommended choosing a pilot project as a means to pull together a team of regional consultants in sustainability.

What emerged from conversations between these two leaders was an opportunity to apply this regional expertise to a challenge: finding ways to help The Mall at Robinson become a more sustainable enterprise.

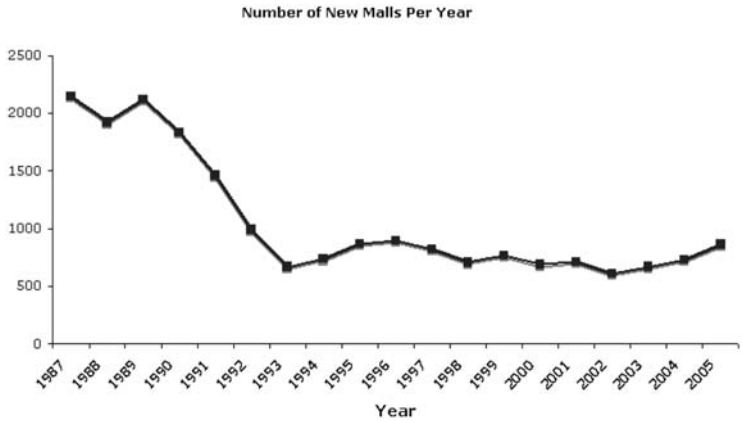

FIGURE 1. Number New Malls Added Per Year, 1987–2005 [3].

The project proceeded in two phases. The first phase involved assembling the team of regional sustainability experts, under the mantra of Sustainable Business Solutions (SBS) and then having them visit The Mall at Robinson to assess potential areas worthy of a more detailed investigation. These initial opportunities were presented to The Mall at Robinson leadership personnel for review. The team consisted of a highly interdisciplinary team of regional consultants who pooled their expertise in order to provide a broader, more comprehensive, systems-based approach rather than their prior efforts at consulting in only their specific domain areas. The desired outcome was to look for improvements related to their own areas of expertise and also to find synergies in the places where their areas of expertise intersected.

The areas of expertise and corresponding organizations and individuals were as follows:

- Benchmarking – AtKisson Inc.
- Energy – Wozniak & Associates
- Wind energy – Community Energy, Inc.
- Solar energy – Solar Power Energy
- Storm water management – 3 Rivers Wet Weather, Inc.
- Wildlife habitat – Wildlife Habitat Council
- Conservation easements – Allegheny Land Trust
- Transportation – Airport Corridor Transportation Assoc.
- Green purchasing – In the Loop, Inc.
- Waste and recycling – Pennsylvania Resources Council
- Communications – 501(c)(3)[2]
- Systems integration – Matthew Mehalik, University of Pittsburgh Engineering
- LEED EB – Green Building Alliance

After it became clear that significant opportunities existed, the Sustainable Pittsburgh team further interacted with The Mall at Robinson personnel on procedures, practices, and facilities in order to propose courses of action relating to sustainability. The recommendations used a three-tiered framework:

- Tier 1: "Easy Money" – changes that saved money or generated revenue with a short payback period
- Tier 2: "Higher Reach" – changes that brought substantial benefit to the environment and community, enhancing the Mall's public profile, at no net economic cost to the Mall over a medium-length payback period
- Tier 3: "Principled Leadership" – changes that were visionary and costly in traditional economic terms, but may be more feasible in the near future. This feasibility stemmed from changes in technologies and markets or were worth investing in the short term because of their environmental and community benefits and because of the enhanced leadership profile that they offered.

These tiers related to how immediate the financial payback would be from implementing a particular recommendation and how much risk and effort would be required on the part of The Mall at Robinson. The tiers outlined a vision, against which future actions could be integrated regarding the Mall's identity with respect to sustainability. The multidimensional approach focused on finding solutions in the following areas of analysis:

Cost Savings In every operational dimension, the focus was on offering solutions that offered some form of reduction of costs, both short-term and long term. This focus provided an immediate and tangible benefit for the Mall at Robinson to realize some of the benefits from their investment in conducting a sustainability assessment.

Energy Issues Every opportunity to reduce the facility's use of energy was examined. Such an examination included both interior and exterior aspects of the facility. In addition, the team looked for ways to substitute more sustainable forms of energy for the typical coal-based electricity and petroleum-based transportation sources found in the facility.

Materials Reduction and Reuse The team studied the facility's use of source materials such as packaging, shipping, and office materials in an attempt to minimize the need for unnecessary materials and to promote multiple uses of materials that do make their way into the operational facility.

Waste Streams The team performed an audit of the waste streams associated with the operations of the mall in order to discover the different types of wastes generated, their quantities, and the methods that waste materials were collected, recycled, or disposed.

Site Usage The focus was on how stormwater was managed, the effects of the parking lot on stormwater management, and on the heat island effect associated with the pavement.

Building The building itself was examined from the perspective of LEED certification guidelines. The emphasis was not on getting the building to be certified under LEED standards, but to use the LEED standards as a tool to help move the facility along for as many opportunities toward better environmental performance as was possible. The review was taking place after the facility was already operational and was planned without LEED guidelines. In addition, at that time the LEED-EB certification system was not developed to the point where it was feasible for use in this project.

Suppliers The operation of the mall facility required the supply of many different products and services, and an analysis of these suppliers and their networks offered the potential opportunity to change some of the supplier relationships to favor those who supported green alternatives for their supplies.

Transportation Although the clear majority of shoppers at this facility traveled by car, there were access points to public transportation, a local bicycle trail, sidewalks, and hiking trails. The opportunities for improving some of these linkages were examined. In addition, site access from both the transportation and disability accessibility were included in the analysis.

Tenants Perhaps the most difficult aspect of the operations of the facility was that each tenant is contracted separately, and each has a specific lease, so the opportunity to enact policies that easily can be adopted by all tenants was limited; however, the team examined opportunities where tenants would have the possibility for voluntarily participating in some of the suggested operational changes and for ways of influencing major tenants in order to engage them.

Legal The team needed to come to terms with certain legal dimensions of the project, especially in the areas of how purchasing and operational servicing agreements were constructed. These agreements pointed to what was easier and what was more difficult to change in various time frames for the facility.

Market Recognition The project built off of a then-recently-completed market survey that showed a small but growing interest in sustainability of mall shoppers. The team further explored the potential for shifts in market trends.

Corporate Identity and Strategy Even though Forest City had embraced a sustainability model for its Stapleton Airport reuse development, the company as a whole was still looking for models for how its existing property portfolio could also help reinforce sustainability notions. From a more local perspective, the Mall at Robinson was looking for ways to differentiate itself from the numerous other shopping malls and districts in the Pittsburgh area. The team looked for ways to frame potential opportunities to help these corporate strategy possibilities.

Communication A plan for educating the facility's tenants and shoppers was necessary so that any initiatives that were adopted would have an impact without disrupting fragile relationships with these constituents. In addition, a plan for communicating developments to the community at large through local media was also part of the analysis.

Cultural Change Finally, in order for any proposed changes to succeed over time in the operations of the mall, the team examined some of the ways that the Mall at Robinson's operations were likely to change. Suggestions for short-term changes as well as longer-term practices were included in the analysis.

The assessment team adopted a set of key teamwork factors that they believed important for the project. Cooperation and openness were maintained throughout the project. A view that the value from the project would be greater than the sum of the individual, separate efforts maintained focus on the synergies and integrated solutions for the client. In addition, openness in sharing ideas also existed between the client and the analysis team so that both entities recognized that the final recommendations would be based upon the best and most available sources of information to the extent that confidentiality would permit. Finally, some of the values associated with the Toyota

Production System were adopted, namely, that the sustainability assessment was a form of innovation that would signal how the client would be leading the industry, how it would create a sense of competition to stay ahead, how it would create new markets, and how the process would drive access to new knowledge.

RESULTS AND DISCUSSION

Tier 1: Easy Money

The project produced some major short-term cost savings and access to "easy money" solutions. First and foremost, an audit of the energy system showed an immediate potential savings of $23,110 in the first year of operational changes. This figure consists of savings on top of any costs associated with implementing the operational changes. The savings accrued from several sources. By replacing bulbs with high efficiency compact fluorescents and by turning off lights in non-public operational areas when not needed, by turning off fans, vending machines, and nighttime lighting when the facility is closed, there existed the potential to save $5,310. Adding controls to lighting, fans, and heaters, and by implementing power factor corrections, the facility could save $17,800 in the first year. The savings would be even greater in subsequent years because of the elimination of the cost of implementation from future years. These changes were calculated to prevent the emission of 107,400 pounds of CO_2 into the atmosphere.

It was determined that the facility could switch its operations in a cost-neutral scenario to cleaning products, office supplies, trash bags, and other operational items by switching to a vendor who supplied such items. The main recommendations involved institutionalizing a green purchasing program, which included: 1) adopting a general environmentally friendly purchasing policy; 2) adopting a green cleaning policy; 3) continuing to purchase recycled office supplies and green cleaning materials and substitute the office supply products that are cheaper or cost the same; 4) working with a trash bag manufacturer to offer a recycled content option at comparable cost; 5) building contractor incentives to seek green products and materials when parking lots require refurbishment; and 6) post signs to mark and explain various related changes. The identification of green suppliers who provided cost-competitive estimates for these changes demonstrated that this could happen essentially for free for the mall.

Another freebie was instituting a recycling program using donated recycling bins, as shown in Figure 2, for beverages (plastic bottles and cans). The bins were provided by local beverage suppliers and included signage so that this switch became a no-cost way to promote the image of the establishment.

Tier 2: Higher Reach

Other dimensions of savings from waste prevention showed significant possibilities for savings; however, the effort and up-front costs for implementing this program required more effort to access these cost savings. A comprehensive waste audit showed that the mall could save $17,600 annually after an initial set of one-time costs of $11,000 for the first year. The savings amounted to the diverting of waste items to a vendor who provided market price values for some of the materials. The savings for corrugated cardboard included 104 tons/year at $75/ton = $7,800/year. Office paper savings included 35 tons/yr at $130/ton = $4,550/year. Mixed paper savings included $1,925/year, and savings from magazines were $3,325/year.

FIGURE 2. Recycling Container.

FIGURE 3. Recycling Bin.

Costs included the necessity to purchase bins (Figure 3), craft and distribute the policy changes, and signage. Most significant was the cost of renegotiating the waste contract so that the waste stream could be separated and shipped to the different recycling vendors for the different materials. These costs added up to $11,000 for the first year, but effectively disappeared in subsequent years. The total savings = avoided disposal costs + income from the resale of recyclables – costs to implement and manage = $6,600 the first year and $17,600/year each year thereafter.

Tier 3: Principled Leadership

The team also identified several areas that over time would accrue economic benefits to the Mall at Robinson through monetary paybacks, although most of the benefits from the items identified in this tier accrued in the form of the ability to demonstrate leadership and craft an identity associated with a sustainable vision. One such recommendation was the setting of a conservation easement on the undeveloped areas of the property, an area that at the time already had a significant number of trees and natural habitat conditions. The cost of this easement was approximately $10,000, and the benefits included a small reduction in property taxes as well as the crafting of a stewardship vision for the enterprise.

The team recommended the installation of a pollinator garden with signage in the parking lot area and converting the parking lot raised island planters to recess swales to allow the natural watering of vegetation and storm water reduction. This cost approximately $8,000 in exchange for a visible marker of stewardship vision.

In terms of public access, the team recommended signage to help users of public transport to recognize their proximity to the mall so that they could consider walking to the mall the 1/4 mile distance from the bus stop. The team also recommended: 1) continuing to work with Allegheny County Transit Authority to promote use of a community shuttle; 2) designating parking lot spaces for alternative fuel vehicles; 3) designating parking lot spaces for carpool vehicles; 4) enhancing pedestrian crosswalks with painted markings from Mall entrances, through the parking lot and connecting to the sidewalks along Robinson Town Center Blvd.; and 5) neutralizing the climate impacts of the Mall Shuttle bus by purchasing credits to offset emissions.

The team recommended that the Mall at Robinson purchase 15% of its energy through wind energy generators. This was calculated to cost approximately $15,000. Finally, the team recommended that the facility pursue LEED-EB certification at a cost of approximately $10,000. These latter two items would further be noteworthy in terms of helping to change the identity of the mall to one that strongly values a more sustainable vision for its practice.

Total Payback

The key evaluation question concerning this initiative is "was it worth it?" The most direct answer to this question in business terms involves calculating the payback for the investment of fees. The cost of the assessment was $22,210 for the team of consultants. The easy money savings were $23,110. The higher reach savings were $6,600. It was assumed that the Mall at Robinson would not implement any of the principled leadership initiatives in the first year. The payback for this initiative was therefore $22,210/yr / ($23,110/yr + $6,600/yr) * 12 months/yr = 9 months. Annual savings after start-up costs totaled at least $40,710 per year. As a client, The Mall at Robinson was very pleased by their investment.

SUMMARY AND CONCLUSIONS

The Mall at Robinson is in the process of implementing several of these recommendations. Within the past six months, the Mall has begun to assemble an internal team as well as a corporate-wide director of sustainability. The Mall has switched to a green

purchasing program, and by February 2007 has transitioned all of its paper products, trash bags, cleaning supplies, and custodial consumables to green-friendly products and services. It has instituted a recycling program using bins donated by Coca Cola. The Mall has been integral for Forest City's launching of an Intranet site in order to share its advances companywide. The mall has posted signage and designed office products, such as cup holders and paper clips using post-consumer recycled waste options. Cost savings and longer-termed initiatives are forthcoming as more recommendations are integrated into operations. The Mall management's commitment to implementing recommendations and adopting sustainability in decision making is also having impact on the Mall's supply chain, as vendors strive to meet the Mall's expectations for performance and products.

As part of the recycling initiatives, cardboard compactors were installed throughout the service courts of the property to collect mall management's and tenants' cardboard. An average of 6.5 tons is collected monthly reducing landfill by approximately 78 tons annually. An average of 60 palletts is delivered annually to an organic recycling facility that turns them into mulch, and the unused telephone books delivered to the center are donated to the Butler Catholic School to recycle as a fundraiser earning them $.50 per book. The mall management office purchases recycled paper and recycles their ink-jet cartridges. Containers are placed in the food court service areas for the collection of grease by-products generated by food court vendors. These containers are emptied monthly, and the waste product is recycled into animal feed products. The grease waste that is dumped into the drain systems as a result of food preparation by the food court tenants is separated by large underground grease interceptors that filter grease waste out of the drain water prior to dumping it into the municipal sewer system. Theses interceptors are treated four times a year with a bioaugmentation product that reduces the amount of grease waste through digestion by specially adapted microorganisms. The remaining grease waste is pumped out four times a year and hauled away for recycling. The mall is currently looking into a local farmer that will use the grease to create diesel fuel, thus creating a closed loop.

The Mall management staff also worked with Abitibi Consolidated, Inc. to place a paper recycling bin on the property (Figure 3). The recycling bin is provided at no charge and the tonnage collected is turned into cash that is donated to a local charity of choice, The American Cancer Society. Through August 2006 the mall has collected 4 tons of paper generating approximately $20 for the American Cancer Society. The program is still in the beginning stages, but the goal is to open the paper recycling to tenants and consumers. The program is full-circle; all materials collected through the program are sorted at their processing centers and are created into 100% recycled paper.

The housekeeping contractor uses all low environmental impact cleaning products, thereby improving the air quality, creating a healthier facility for tenants and employees, and reducing water and air pollution. This also reduces waste with concentrated products and recyclable packaging. Paper products for the restrooms (toilet paper and paper towels) were recently converted to 100% recycled material. Maintenance has also converted to green-friendly products. All of the rock salt used for the parking lot is treated with a liquid deicing product which is recycled from agricultural processing industries and then blended with liquid magnesium chloride. When mixed together, they are completely biodegradable and environmentally friendly. A premixed granular product is also used for sidewalk deicing and is made with the same process utilizing a blend of salt, recycled agricultural by-products, and magnesium chloride. The product is also biodegradable and no more corrosive than distilled water. Interior landscaping is accomplished through the use of environmentally safe, biodegradable chemical treatments approved for use in connection with the general public and food preparation areas, therefore improving the air quality and reducing sick days for employees. The housekeeping contractor now uses green-friendly products and low-VOC paints throughout. Energy efficiencies include conversion of the accent lighting to neon, exit lighting to LED functions, and changing incandescent lighting in the common area to fluorescents.

The Mall at Robinson teamed up with the National Aviary, the Boy Scouts, and the Cub Scouts to host a bluebird and bat box building event in the Summer of 2007. As shown in Figure 4, the Boy Scouts built bat boxes, while the Cub Scouts constructed bluebird nesting houses. Experts from the National Aviary provided an educational presentation

and lent a helping hand. Bats help to create a healthy environment for people by eating a tremendous number of insects, carrying pollen from one plant to another, and spreading the seeds of many plants that are valuable to humans. Bluebirds are influential to our ecosystem. These birds help to reduce the use of harmful pesticides by feeding on insects. Unfortunately, both bat and bluebird populations are declining as a result of human neglect and habitat destruction.

The Mall at Robinson is also integrating new measurement tools and strategies in order to begin to assess whether the payoffs from the initiatives are in fact what was expected. To date, this data has not been thoroughly analyzed in a way that accounts for changes in shopping traffic and total sales, although a rough calculation has demonstrated some savings in terms of energy usage. The exact figures are in the process of being tabulated.

Perhaps the greatest outcome from this initiative is the way the management team at the Mall at Robinson has embraced some of the stewardship and innovation dimensions of the assessment by exercising its power to convene people around environmental causes (Figure 5). The Mall at Robinson has initiated a greater degree of interaction with the Pittsburgh community with regard to environmental initiatives. After the completion of the assessment, the Mall at Robinson's management has served as a meeting place for community initiatives. The mall has served as host for events in November 2006 and 2007 that promote recycling. The November 2006 event occurred in honor of "America Recycles Day" for which individuals had the opportunity to drop off mixed paper (junk mail, magazines, catalogs, newspapers, phonebooks, and office paper), corrugated cardboard, ink and toner cartridges, and cell phones for recycling. As part of the celebration, everyone dropping off recyclables was eligible to win gift certificates, coupons, and other prizes from local stores. The November 2007 event focused on providing a venue for hard-to-recycle items, such as appliances containing freon; computer monitors, processors, laptops, keyboards, and mice; VCRs; CD players; stereos; copiers; fax machines; printers; and cell phones. Other items such as ink cartridges, paper and cardboard were also accepted. The events were co-managed by the Pennsylvania Resources Council, a nonprofit watchdog group that ensured that the recycling of these products occurred responsibly. These events were clearly sparked by some of the ideas that came out of the sustainability audit; however, none of these issues was specifically called for in the audit itself, save the communication dimension that promoted outreach. It is clear that the auditing process provided enough of a source of new ideas that engaged the management of the mall in a mode of innovation so that it created and assembled some of its own initiatives based upon

FIGURE 4. Bat and Bluebird Habitat Event.

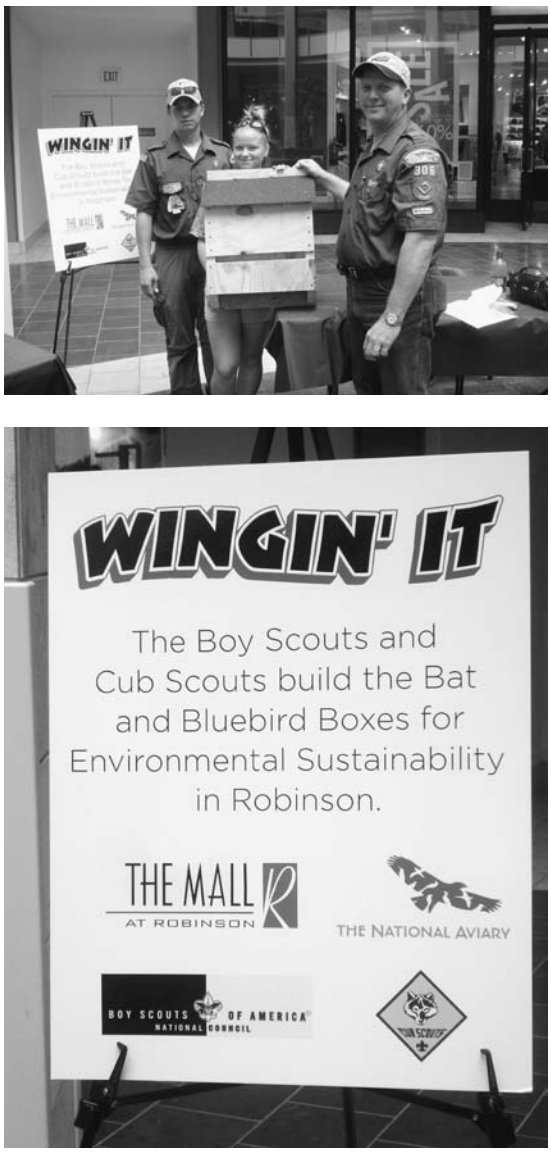

FIGURE 5. Sign Denoting Sustainability Projects of the Mall at Robinson.

newly discovered goals and strategic choices. Such outcomes are difficult to measure for detailed evaluation purposes in the short term. A longer-termed perspective on the frequency and impact of such initiatives will be crucial to examine how much lasting cultural practice changes in fact do occur.

The Mall at Robinson also joined forces with the PA National Guard and The Greater Pennsylvania Regional Council of Carpenters to celebrate Earth Day by helping to rebuild parts of the Montour Trail, a rails-to-trails bike trail that was damaged in spring storm weather. The trail runs adjacent to the mall and increasingly serves as a meeting place for cyclists.

The Mall at Robinson has also received coverage in the *Pittsburgh Post Gazette* [7, 8] for its environmental initiatives. Coverage has highlighted the difficulties of introducing initiatives so that an economical yet substantive set of initiatives can be introduced without making it appear that the goals are merely greenwashing of the company's image and navigating the restrictions of having a widely diverse set of tenants and clientele.

Next steps for the Mall at Robinson include disseminating its lessons learned throughout the Forest City Enterprises properties Intranet site that has been created for sustainable initiatives, developing an information infrastructure around sustainability issues to share knowledge/techniques, and working with vendors and tenants to promote sustainability.

For the consulting team that completed this assessment, some of the lessons learned include recognizing that sustainability involves more than an environmental audit but an opportunity to explore the core values of an organization. Such future efforts need to include other dimensions including human resource policies, providing tools in order to measure more precisely the savings associated with an initiative, and finding ways of pressing for changes that permeate the value chain of a complex entity such as a mall. Finally, the team needs to develop measurement strategies to capture the value of these innovation-related initiatives. Although these dimensions are difficult to evaluate, they do serve as the beginning markers for a change in culture that can lead to larger outcomes.

Finally, this initiative has attempted to document a first attempt at engaging an important but neglected sector of the economy from the perspective of sustainability: retail shopping malls. The effort has demonstrated that such initiatives as energy savings, green purchasing, recycling, and waste stream auditing and management provide significant savings and constitute cost savings opportunities that are within easy reach of most shopping malls. Such savings have the opportunity to leverage more longer-term culture changes toward a stewardship operational perspective. In addition, the opportunities to engage with the community around sustainability issues provide establishments a vehicle to differentiate themselves from other establishments in the same regional market niche, and the chance to create connections to the larger web of these important commercial anchors in our economy.

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