

CASE STUDY 4

Product Transparency Requires a Deeper Look at Factors Behind Scores and Other Performance Criteria Screens

The Durst Organization's three multifamily, mixed-use buildings establish a new set of green building goals

By Amanda Kaminsky, Founder, Building Product Ecosystems LLC, and former Sustainable Construction Manager for the Durst Organization, John Amatruda, RA, LEED Fellow, Principal, Vidaris, Inc., and Bill Walsh, Founder & President, Healthy Building Network

The Durst Organization (TDO) has a long history of developing environmentally responsible office towers and residential buildings that reduce energy and water consumption, incorporate innovative design strategies and technologies, and promote the well-being of their occupants. In 2012, at the onset of developing three new multifamily, mixed-use buildings in New York City, the project consultant team developed a new set of company-specific green building goals for TDO that combined lessons learned from previous green projects with new environmental initiatives.

The new goals included:

- An aggressive emphasis on building occupant and ecological health
- The use of newly defined product transparency data to make informed product selections

The achievement of these goals has necessitated a more integrated process between TDO and our designers, construction teams, and consultants, as well as detailed interactions with various product manufacturers.

One of the first things the team realized was that product transparency integration requires a mix of professional expertise. Collecting and evaluating the new information available through EPDs, HPDs, emissions testing, and other sources require both a robust outreach effort and the technical background to understand the data. The team has subsequently developed an expanded project team that includes TDO's dedicated sustainability project managers, green building consultants with an in-house industrial hygienist (Vidaris), material health research experts (Healthy Building Network), and sustainability project managers at the construction management companies assigned to each project.



Key Strategies For Success

#1: developed an expanded team of experts to achieve procurement goals of selecting products with improved health and sustainability profiles while also meeting critical performance, aesthetic, and cost parameters

#2: identified a set of material types that had the highest potential for health or environmental impacts due to likely exposure and/or scale of application – within each specification section

#3: worked with manufacturers to obtain product transparency resources, with an emphasis on health and environmental product declarations (HPDs and EPDs), emissions testing data, EC REACH reporting, GreenScreen analyses, and Declare or Cradle to Cradle certifications

Key Strategies For Success: Selected products with improved health and sustainability profiles while also meeting other criteria

This expanded team, working in close coordination with the project designers, trade contractors, and product manufacturers, has proven critical in meeting our combined procurement goals: to select products with improved health and sustainability profiles while also meeting critical performance, aesthetic, and cost parameters.

The team started by identifying a set of “focus materials” – material types that had the highest potential for health or environmental impacts due to likely exposure and/or scale of application – within each specification section. Examples range from paints and carpet tiles to kitchen cabinetry, countertops, gypsum wallboard systems, concrete, and duct insulations and sealants.



As products were proposed, the team worked with manufacturers to obtain product transparency resources, with an emphasis on health and environmental product declarations (HPDs and EPDs), emissions testing data, EC REACH reporting, GreenScreen analyses, and Declare or Cradle to Cradle certifications.

Key Strategies For Success: Worked with manufacturers to obtain product transparency resources

For each focus material, the team assembled initial sustainability characteristics based on rating systems, standards, and criteria culled from the team’s knowledge base. These parameters guided the initial materials selections proposed by design teams. As products were proposed, the team worked with manufacturers to obtain product transparency resources, with an emphasis on health and environmental product declarations (HPDs and EPDs), emissions testing data, EC REACH reporting, GreenScreen analyses, and Declare or Cradle to Cradle certifications. This expanded information was then evaluated both to iteratively vet the proposed products and to recalibrate the sustainability characteristics

(which ultimately become integrated into the specifications). The sustainability research was consistently checked against performance and costs to ensure that proposed products were acceptable to all parties.

Data for many products are becoming more available, and in some cases they found enough information to perform a “deep dig” – comparing EPDs on multiple similar products while also using HPD data and/or evaluations from the Healthy Building Network’s Pharos tool and other resources.

Lesson Learned

It’s been somewhat surprising to realize how often the data presents trade-offs that require further team dialogue for careful prioritization. The team found that it’s rare for a product or product type to be clearly superior in all pertinent areas to a competing product. Figure 1, for instance, shows how their assessments of carpet tile backings varied between environmental and health-related profiles. Note that product 1A has higher environmental impacts than products 2A and 2B based on EPD data alone. The product content data, however, indicate that product 1A avoids hazardous compounds more than the other listed options.

These situations require the following approaches:

- Look into the issues behind the data (e.g., what factors cause the products to score higher or lower in the evaluations). A set of preferred-product sustainability criteria often begins to emerge even if an “ideal” product can’t be
- Use other performance criteria as screens to assist in the selection. This requires critical judgments from the whole project team to make selections that best meet integrated performance, health, and environmental goals.

One final issue is how best to communicate the advantages of their decisions. A method they are currently testing is the Avoided Hazards Index, developed by the Healthy Building Network. In this process, the amount of hazardous materials in a given product is quantified based on HPDs or other information. It’s then possible to estimate the quantities of hazardous substances that have been avoided through the informed selection process, compared with one or more alternatives.

