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Jeff Omelchuck and Wayne Rifer from the Green Electronics Council Product Stewardship in the Real World: Why the new EPEAT standard for electronics has been so successful



Jeff Omelchuck, GEC Director and EPEAT Program Manager—Jeff is the Director of the Green Electronics Council. He has extensive experience as the Managing Principal of International Quality Associates, Inc., a private consultancy helping clients design, implement, and improve formal management systems and achieve registration to ISO 9001, ISO 14001, and similar standards. Through IQA he has filled interim executive management positions and managed dozens of complex projects, often in the electronics industry. Jeff is an RABQSA certified Lead Auditor and Skill Examiner and conducts certification audits for two internationally accredited registrars. Prior to founding IQA,

Jeff spent the first 10 years of his career in the electronics industry in positions generally spanning product development and manufacturing operations in the Silicon Valley and then the Silicon Forest of Oregon. Jeff received an MS in Management Science and Engineering from Stanford University and a BS in Industrial Engineering from Montana State.

Wayne Rifer, EPEAT Program - Stakeholder Processes Manager—Wayne has provided environmental consulting to public and private sector clients for over 25 years with a focus on integrated waste management. In 2000 he was one of the early initiators of product stewardship in the electronics sector with a focus on multi-stakeholder solution-oriented processes. Under an EPA grant he managed the Western Electronic Product Stewardship Initiative (WEPSI), a regional stakeholder dialogue, that had two major objectives: 1) to address the need to establish recycling programs for electronic products at the end of their useful life and 2) to promote improved environmental design through market-place incentives. The first objective resulted in Wayne's participant as a negotiator in the National Electronic Product Stewardship Initiative (NEPSI), a stakeholder negotiation that sought to develop a national system for the management of end-of-life electronics. Following the closure of NEPSI, he has continued to work with industry to find solutions to this as-yet unsolved challenge on the state level. The second objective resulted in the initiation of the project to develop the Electronic Product Environmental Assessment Tool (EPEAT). Wayne served as the project manager of EPEAT through the multi-stakeholder development and implementation process, and is now a member of the GEC team.



Darcy: The success of the new EPEAT (Electronic Product Environmental Assessment Tool) standard for electronics has truly been remarkable. Tell us a little about the Green Electronics Council and EPEAT.

Jeff: GEC is a nonprofit that was founded on the model of the Green Building Council. We tried to cause the same change in the electronics industry that LEED caused in the building industry. We focused on electronics because it's part of the solution but also part of the problem. With better information technologies, it may help us solve some

of the world's problems but at the same time, the industry is extraordinarily resource intensive and impactful. It's both a key to our future and a source of challenges. So it was a ripe and interesting area. So we worked first to create a measurement tool like LEED for electronics and then the Green Electronics Council was formed to manage that standard.

Darcy: So is the focus just green or are there also social criteria?

Jeff: Really, to be honest, EPEAT is almost exclusively focused on environmental issues. But it may not always be so. These criteria are set by stakeholders and one day it may hopefully integrate the social side of sustainability too. But for now, in its first incarnation, it's environmental.

Darcy: You've had astounding success. Not only has this changed the industry in the US. The EPEAT system is now being used around the world. I saw some impressive statistics about how much energy alone this standard may have saved. Tell us more about your results.

Jeff: Yes, it's been remarkably successful, perhaps more so than any of us imagined.

Darcy: Yeah, it's amazing what a couple guys in the Pacific Northwest can make happen.

Jeff: Yeah, a couple guys and a few thousand of our friends and colleagues around the world who supported us in remarkable ways. It was the right product at the right time.

Darcy: Wayne, you were involved in early efforts to apply product stewardship principles to the electronics industry. Some of the early efforts appeared to fail. But yet EPEAT emerged Phoenix-like from the ashes of those early efforts. Tell us how this evolved. It was a very long journey to get here.

Wayne: EPEAT grew out of several previous efforts that began around the turn of the Millennium. The inspiration came largely from local governments that were looking at manufacturers to take responsibility for their products at the end of life. Electronics were one of the first products to get this scrutiny.

Darcy: Sure, they looked at all this waste coming down the pipe, headed for their landfills, filled with heavy metals, and decided they didn't want to have to pay for and manage all that waste.

Wayne: Yes, that's right. Though not the largest portion of the solid waste stream, it is the fastest growing segment and it's a technical waste stream with some hazardous materials. Europe led the way with the WEEE Declaration requiring manufacturers to take back basically anything with a cord at the end of its useful life. In this country, when we started to take the issue seriously, the national effort was called NEPSI, the National Electronic Product Stewardship Initiative. It was brought together to address the end-of-life issue, specifically to create a funding system for the recycling of electronic components. It involved

manufacturers, NGOs, recyclers, etc. About 45 of us sat around a table for 1.5 and then 3 years. It was not successful. We could not develop a consensus around how to do this.

Darcy: What were the major roadblocks?

Wayne: Now, looking back, of course everyone has different opinions. This was one of our early efforts in the US toward Product Stewardship. Europe solved this problem through regulation. Government basically demanded that this happen.

Darcy: But that approach wouldn't be so popular here.

Wayne: Not only would it not have been popular, it would not have worked. We wouldn't have gotten the support of Congress or the Administration. With NEPSI, though, we could never get past each constituent's own stakeholder interest. They didn't share a common mission. Everyone fought for their particular view and personal benefit. It's not the way to get consensus. In particular the manufacturers could not come to agreement amongst themselves about how the waste should be handled and paid for. So we had to walk away from the dialog.

Since that time, it's been left to the states. Now 12 states have passed laws that basically do the equivalent, and soon 6 or 8 new state programs will be coming on line in January 2009.

Darcy: Isn't that industry's greatest nightmare to have every state do its own thing?

Wayne: Yes, that's true but that was their choice. It was more important to them to win their own way than to pass something that would put the country on a path to a national solution.

Jeff: A different way to say it is that it is indeed a nightmare but not their worst nightmare. They chose it quite consciously.

Wayne: Consciously but perhaps not intentionally. There are some slight glimmers recently that there might be renewed interest in a national solution, but I still don't have a lot of faith in that because all the old positions are still being voiced.

Darcy: So what made EPEAT work when NEPSI didn't?

Wayne: As I said, NEPSI was based on product stewardship. Product stewardship advocates are interested in both recycling at the end of life but also in creating better, more environmentally friendly designs. If the manufacturers have to pay

for or take responsibility for the end-of-life management then they will take better care to design products that are easy to take apart and recycle, with fewer hazardous materials. In NEPSI, we started to realize that the financing of the end of life system would only have a peripheral impact and it did little to affect the design of the products. We had a parallel process in the West called WEPSI that involved many of the same people, and we started to wonder how we could create a market-based system to improve the design of products. They decided what was needed was an objective yardstick to measure how sustainable electronics were. That was the basis of EPEAT. Because it was to be a stakeholder process, the US EPA (Environmental Protection Agency) really liked the idea and funded several years of its development

EPEAT really has one key principle that has resulted in its success: everything is a consensus of the stakeholders. They decide what the environmental criteria will be, what the process will be, how the claims will be verified, etc. The stakeholders are a wide group: manufacturers, NGOs, purchasers, government, recyclers etc. EPEAT was well designed to achieve consensus. And in point of fact, we were also probably very lucky. The time was right where stakeholders who were willing to set aside their personal interests and compromise to develop a shared set of standards. They all looked at it and endorsed it. It wasn't exactly what any one of them would have liked but collectively they all signed onto it.

Darcy: It sounds like two things happened. One was a move to front-of-the-pipe solutions instead of end-of-pipe recycling, an important concept in pollution prevention and sustainability. The second was that you developed a process that was well-facilitated to ensure consensus could be reached.

Wayne: Yes, that's exactly right. In the NEPSI process, there were several points at which representatives were told to go back to their stakeholder groups to determine their position. Anytime you have a process like that, where people come with entrenched positions, you may as well start over because you've lost.

Darcy: That's a standard negotiation principle, focus on interests, not positions. That shouldn't have been a surprise!

Wayne: But in EPEAT, everyone stayed in the room together. They had to find a common solution.

Darcy: Wasn't it also really important that the Federal Government directed all agencies to buy at least 95 percent of their computers qualifying for EPEAT? It seems that helped a little too.

Jeff: Without question, that was a huge help. But we were able to bring people to the table before we had the Big Carrot. EPEAT was developed without that certainty. It wasn't a coincidence. The Government liked that all the stakeholders were at the table and were seeking consensus. People came together because they had problems to solve. The purchasers and manufacturers and recyclers and NGO's all wanted solutions. Because they all supported it, especially the ones that would normally oppose the solution, that made it easy for the US Government to support this system. And EPA continues to support this effort by providing staffing, as much as one full-time-equivalent staff member.

EPA also provided a start-up grant to get us going and most significantly, they worked with the Federal Government to require EPEAT. This made it easy for the manufacturers to support this. This support came in two ways. In 2007 President Bush signed an executive order requiring all agencies buy EPEAT registered products where possible. And then in December 2007 there was a Federal Acquisition Regulation ruling, a purchasing law that codified that executive order.

Darcy: EPEAT has manufacturers register their products and it's directed for institutional purchasers, not the rest of us. It's not an eco-label. Why did you go this way?

Wayne: This was a decision, like everything, of the stakeholders. Some originally wanted a pre-certified label system where products would all be tested beforehand and the manufacturers wanted a self-declaration system that would be based on whatever they said about their products. We ended up with a hybrid, something fairly unique.

High-tech products change so fast and are so configurable (for example, who makes them) that testing each product before listing would really slow the process down and also be very costly. Everyone recognized that that was a real problem.

So we ended up with an after-market verification system where manufacturers register their products (self-declaration) based on the yardstick that was developed and then afterward, there is a verification sampling that is done to verify these claims. The

results of these audits are made public through the website. Of course, this accountability helps to keep the claims in line with performance. Running that process, we rely a lot on tips of what to look for. One of our major sources is manufacturers giving us tips about their competitors.

Darcy: So you're using competitive self-interest to help police the system after it was built by consensus. Brilliant! There are levels of performance, right?

Wayne: EPEAT is structured on three levels: meeting the required criteria gets you registered as Bronze. Then there are points products can earn for Silver or Gold. When we started there were no Gold products and now there are over a hundred of them, out of over 800 on the Registry. EPEAT is a base: you have to be at least that good if you want to sell to government and large institutions in the US. But the Silver and Gold levels give manufacturers a way of differentiate their product, showcasing their better environmental performance.

Darcy: Is there a plan or intention, as there is with LEED, to keep increasing the bar?

Wayne: EPEAT is based on an ANSI accredited standard, a national and independent standard. It is routine process for them to update these standards. So yes, we plan on a three year cycle, the standard will be updated so that Gold continues to be a struggle, but at the same time at Bronze, we deliver enough products that qualify to offer the buyers choice.

Jeff: I'd like to amplify a few points Wayne made that are critical. One challenge with eco-labels is if you set the bar too low, it's not a mark of leadership but if you set the bar too high, there aren't enough products that qualify. It's a challenge to set the bar at the right level so it moves the market and you have to revise the bar frequently to keep up with the changing market.

Darcy: And it's a binary thing, you either have it or you don't.

Jeff: Yes. If that's the case, then once you've met the standard, why get better? So I think the structure of EPEAT with Bronze, Silver and Gold is masterful. It's not unique; LEED did it too. It creates enough registered products so that governmental agencies can use it. If there is only one product that qualifies in a product category, they can't use the standard. But at the same time, it provides a way to recognize

performance that goes above the bar and it creates incentives for greater performance. And it lets us update the standard relatively infrequently in a very fast moving industry.

I also wanted to address your earlier question about why we focused on institutional purchasers, those who buy large numbers of computers under large purchase contracts. This is fundamentally different than how retail customers like you and me buy computers walking into a store. These institutional purchasers can build lots of things into the contract. These people don't like eco-labels; there are too many labels and brand names; it's too hard for them to manage. So in EPEAT, it works for them to have a registry. But it's not an ideal system for consumers and small business. They just research a few computers and go into the store or online to buy one.

Darcy: But I as a consumer can use EPEAT. I can go onto your site and see whether the computer I'm thinking about qualifies, right?

Jeff: Yes, absolutely. We're also making some changes to make it easier for consumers and institutional purchasers to identify EPEAT products. A number of websites are now indicating which products are EPEAT registered. For example, if you go to TechDepot, Office Depot's IT sales website, you'll see the registration status. It's also on SoftChoice, and may soon be on Microsoft and Yahoo sites too. We're still working on other relationships to improve this.

Darcy: You started out with standards for computers and monitors. Since you're focusing on institutional purchasers, do you also have standards for mainframes and servers? It seems the industry is going full circle. We started with mainframes and dumb terminals. Then everyone got desktop computers. Now there seems to be a shift back to maybe not completely dumb terminals but things like applications and storage kept on servers. Are you keeping up with that trend? And what other products are you planning to work on next?

Wayne: Just like everything, this goes back to the stakeholders. IEEE is the group that owns the standard. We convened working groups to decide what additional products to take on. We're going to start soon with imaging devices (printers, multifunction devices, etc.). We'll have a unique standard for that and then the registry will likely be

part of EPEAT. After that, the two top candidates are television sets and servers.

Darcy: It's too bad with the switch to digital TV in this country in 2009 that you didn't already have a standard for them. You're a little behind the curve on that. Doesn't the standard on monitors work on TVs?

Jeff: (laughing): All good questions!

Wayne: Well, it does and that's one of the options we're considering.

Jeff: I'd like to make a point to the ISSP audience. It's been a challenge with the TV manufacturers to identify when the right time would be to create a standard. They are generally not convinced that the consumer marketplace would reward them for a producing green TVs. But the power of EPEAT is purchasing power. So we'd really appreciate the support of ISSP members to push their own organizations to specify and ask for environmentally preferable electronic products. This helps build the market.

Darcy: I guess I would caution the manufacturers against waiting for the customers to tell them to go this way. Just look at General Motors versus Toyota. This reluctance seems to be based on the assumption that building to EPEAT standards would necessarily cost more. Is there a cost differential between EPEAT registered products and ones that aren't?

Jeff: It's really hard to say. The electronic manufacturers say, no, sort of. But it's hard to say because they don't make two models that sit side by side on the shelf. They make one that meets EPEAT. The TV manufacturers say that doing all this would take time and money, and they are not convinced that the consumers would care. Unlike with computers where about 60 percent are bought by organizations, TVs are largely purchased by consumers. And only a small fraction of them are thought to be willing to pay more for green products.

Darcy: And we don't think our legislature will force them to do it.

Jeff: That's a certainty. And so that's why it's important to express your interest. You create a market for it.

Darcy: So EPEAT has been wildly successful—more so than I think any of us could have expected. You've shifted the

attention of the entire industry. EPEAT and GEC are potentially a model for other industries to do something similar. So what are your top three tips for someone else trying to follow this approach to product stewardship?

Wayne: In fact, our success has spawned interest. There are already groups that are planning to do this. I should have said earlier that the organization that incubated EPEAT and managed all the stakeholder process was the Zero Waste Alliance. And ZWA is now working closely with the Outdoor Industry Association. The group includes companies that make apparel and equipment for hiking and other outdoor sports. They'll call it an eco-index because their industry is different from the electronics industry. I've talked to them and they are excited about EPEAT. There are other industries that are already going along the same path.

The most important thing you have to do first is to understand the dynamics of the industry. How does the business model work and what is the nature of their products? What are the environmental impacts? What is their relationship with regulatory bodies? All of this points to whether they'd be interested in pursuing a process like this, who would need to be involved, and what approach would be most useful. There isn't a single right answer here, but these questions should guide you to the right answers for that industry.

Second, the empowerment of stakeholders is key. Most eco-labels are built by an organization. Sometimes it's a governmental agency; the German government created Blue Angel and the US government created Energy Star and defined Organic. In other cases, it's been a private, usually an NGO organization like the Forest Stewardship Council or the Food Alliance. While they may solicit input from the stakeholders, they make the decisions themselves. But with the EPEAT process, we empowered the stakeholders to figure it out. And I do recommend that approach. It gained EPEAT credibility.

Darcy: And I'm assuming that one of the tricks there is to get all the stakeholders involved, not just the manufacturers, so that you don't have the fox guarding the hen house.

Wayne: Yes, that's absolutely correct. EPEAT came out of the balance of stakeholder interests and sometimes conflicts between those interests. You can't just put the responsibility with industry, or

government, or environmental groups. This is a different kind of thing. It requires industry's participation to be successful and the best way to get that is to engage them. Plus it requires the involvement of the other groups too.

Jeff: And it goes without saying, that this is often not people's first instinct, to reach out to adversaries to work cooperatively to build a system. But that's probably the most important lesson. You do need to reach out to those parties that are critical. Don't view it as a tool to manipulate them—government manipulating industry or the other way around. You have to engage them collectively in solving the problem together.

Wayne: That's exactly right. I've had several people suggest to me that we'd have gotten a better result if we'd just had the environmental groups design the standard, that we might have had a tougher one. And in some ways, I'd agree. But that approach would not have engaged and gotten the support of industry, where they are now hustling around trying to meet or beat the standard. Is your goal to create the purest standard or is your goal to affect the environmental design of products—quickly? And then Darcy, as you suggested, you have an opportunity to adjust the standard as you move forward.

Jeff: I heard an African proverb recently that tells me a lot about the success of EPEAT. They say, "If you want to move fast, travel alone. If you want to travel far, travel in a group." I think that's a remarkable insight. There are a number of times with EPEAT when we get frustrated with the rate of progress. With all the elaborate politics and conflicting interests, it can take a long time to agree on something, even a decision that seems so simple. It takes a massive investment in stakeholder relations, but because of it, it's achieved so much more and in some ways, we moved faster.

Darcy: I think it's so exciting what you have accomplished from this process you cooked up. You've shifted the entire industry worldwide. So hats off to you both.

Wayne: Well, it's hats off to *all* the stakeholders who participated, and especially to industry that willingly stepped forward to solve this problem. And hats off too to EPA for being willing to support the process so strongly and not to be the boss, to be willing to

follow the way the stakeholders decided. This is a unique response from government.

For more information about EPEAT and the Green Electronics Council, go to www.greenelectronicscouncil.org.

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