An Interview With Chad Holliday, (Former) CEO & Chairman, DuPont
The Relationship Between Sustainability Education and Business

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This interview with former DuPont CEO and chairman, and current Bank of America chairman, Chad Holliday, describes how business and university education can support one another and collaborate to nurture understanding and performance in the area of sustainability. Recommendations are presented based on Mr. Holliday’s insight gained through various leadership roles and in building relationships with over 50 universities around the world.

The purpose of this interview on Saturday, June 20, 2009, was to capture some of Chad Holliday’s insight from the nexus of sustainability education and business. In the last 10 years, sustainability has been percolating and gaining traction within the field of education (BGP, 2009). In the last 3 years there has been a sharp increase in the need for more sustainability education. This is due to the new demands placed on business, including the global economic recession, increased demand for energy, concern about global warming, and the realization within markets that inevitably the finite fossil fuels taken for granted will need to be replaced by renewable resources out of necessity (Charan, 2009; Council on Competitiveness, 2009; Friedman, 2008).

In 2010 Mr. Holliday received various appointments due to his ability to lead organizations with integrity, alignment to sustainability principles, and regard for fiduciary responsibility. This year, he was nominated as Bank of America chairman of the board. At the request of Congress, he is heading a National Academies year-long review of what the federal government can do to help ensure the long-term health of the nation’s research universities. In conjunction with his contribution to advising future direction for government investment, he is a member of the American Energy Innovation Council, which seeks to increase government and private sector investment in energy research and development. In addition, he is currently on the boards of John Deere, C2HMHill, World Wildlife Fund, and Shell.

Mr. Holliday worked for DuPont for 38 years. In his last 20 there he focused on sustainability in terms of both operations and providing products and services. This included an emphasis on reducing DuPont’s environment footprint, as well as its customers’ environmental footprints. From 1998 to 2008, he served as DuPont CEO. From 1999 to 2009, he served as DuPont’s chairman of the board. Despite having an office in the C-suite, he considers himself an engineer first, who strives for efficiency and high performance throughout an organization’s systems, structures and processes. From 2001 to 2002, he served as chairman for the World Business Council for Sustainable Development, comprised of over 160 organizations from over 30 different countries that share best practices related to sustainable business practices and challenges. In 2002, Mr. Holliday coauthored a book on sustainability with Schmeidheiny and Watts, titled, Walking the Talk: The Business Case for Sustainable Development. He has had a close association with...
a number of nongovernment organizations, such as the Environmental Defense and World Resources Institutes. He is currently on an advisory committee for the National Geographic Foundation, which focuses on education of people in the United States, mainly children, about the importance of understanding geography and what it means, which is strongly tied to the sustainability issue. He is a current board member of Climate Works, a foundation that is funded to support the reduction of greenhouse gases with the objective of keeping climate change to less than two degrees.

Since many of the cases described in this interview focus on DuPont, some background on DuPont is described here. In 2009, DuPont operated in over 70 countries with over 60 thousand employees yielding $30 1/2 billion in revenue. DuPont was founded in 1802 near Wilmington, DE by E. I. du Pont (DuPont, 2009b). The first product made by DuPont was gunpowder. Over the last 2 centuries, DuPont became one of the world’s largest chemical companies, with products including polymers (neoprene, synthetic rubber, nylon), Dacron, Nomex, Lycra, Tyvek, and Kevlar (Chandler, 1962). In 1981 DuPont acquired Conoco, the petroleum and natural gas producer. Eighteen years later in 1999, Conoco was sold as part of DuPont’s cleaner living initiative (Kinnane, 2002). DuPont’s journey from producing explosives, then polymers, into the wide array of sustainability-focused products represents a fundamental shift in the science applied to create these products. Pre-1990, nearly 100% of DuPont’s products were chemical-based. By 2009, 30% of DuPont’s products were biologically based, while 70% were chemical-based. This shift in product base has occurred in tandem with a reduced environmental footprint and reduction in GHGs of 72% from 1990 to 2008 (DuPont, 2009a) and, with the concurrent shift in company culture, is characterized as sustainability (Holli day, 2001; Holliday, Schmeidheiny, & Watts, 2002). What set DuPont apart from many competitors was trailblazing early innovation in various industries, committing to increasing internal/operational efficiency, and dedication to delivering products and services that make its customers more sustainable.

The author of this interview, Dr. Scot Holliday, is the son of interviewee, Chad Holliday. Recently the author defended his doctoral dissertation at George Washington University. In his research, he examined the role of organizational change in sustainability. DuPont was used as a case study for his dissertation research. Currently, Dr. Holliday works as an organizational change management consultant at Accenture, where he focuses on shepherding organizations through large-scale change.

**SUSTAINABILITY OVERVIEW**

**How did DuPont get involved in sustainability?**

DuPont has always been involved in sustainability one way or another since the company was first started over 200 years ago. In the mid-1980s there was an increased focus on sustainability, due to DuPont having been singled out as a major contributor to ozone layer depletion. The Environmental Protection Agency and Greenpeace made public statements that made us at DuPont feel uncomfortable, even though DuPont was not the largest polluter in quantity of materials released. The negative publicity and realization that DuPont needed to reduce its impact on the environment is what caused DuPont’s tipping point toward sustainability.

**How did DuPont contribute to sustainability in terms of the entire industrial sector, chemical industry, agricultural, medicine, biotech and similar areas?**

DuPont is seen as a role model to most companies in these industries. Businesses and individuals look at what DuPont does in these industries as an indication of growth areas. I was just talking with Senator John Kerry 2 days ago. He was asking me to come participate in conversations with some of his fellow senators. He was looking to DuPont and General Electric, as part of a small handful of companies that are acknowledged as leaders and are broadly respected. In another example, I was in the Philippines during the early part of this week for a high-level dialogue on climate change sponsored by the Asian Development Bank. It was very clear that DuPont was seen as a real leader at the event. Government officials, NGOs and university affiliates were very anxious to learn what we have done.

**SYNERGY BETWEEN SUSTAINABILITY EDUCATION AND BUSINESS**

**How can environmental, social, and economic sustainability be integrated so that students and employees (including leaders), learn to understand and appreciate the relationships among these phenomena?**

The field of education needs to educate at two levels, first at the principle level or concept level, relating to what is necessary for sustainability,
and second at the very practical level, the simple things that organizations should be doing as they go about their work. I think there is a big opportunity within various types of organizations—government, education, commercial organizations—to see what steps they can take that will be good for their business and good for the environment. Sustainability is beginning to be taught in schools, although not extensively.

Education is a broad field. Companies do a lot of education internally, although we need to be able to put the “triple bottom-line” in perspective. That is what is missed. Some people see sustainability as a trade off between the owners or shareholders and the community. In DuPont we have never looked at it that way. We look at it from the stakeholders’ point of view, including the enterprise, employees, customers, the community, and others.

How can business students and employees effectively learn to appreciate the diversity of sustainability-related scientific opinions, without being stymied into indecision and inaction due to the multiplicity of considerations?

When one is talking about the model for the environment it is very complex. I think your question is a very good one because it reflects the reality that we are all faced with. There is so much uncertainty that people could argue the science both ways (for or against action) that it is a good reason for no action. What strikes me is I am currently working with the National Academy of Sciences and the National Academy of Engineering around a recommendation to Congress on America’s climate choices and we had a major summit in Washington, D.C.—in March of 2009, where we had various people making presentations on data relating to what we need to do about climate change. The very day of our summit a full-page ad was released in The Washington Post and The Wall Street Journal with 70 so-called scientists signing the declaration stating there is no need to deal with the climate change issue and that it is a hoax. These contradicting cases give you a feel for the diversity of opinion that can come out, and that was pretty dramatic. Students and employees need to understand both points of view—then decide based on empirical evidence what factors and issues are most relevant to their business(s) or career(s). It is important to make the distinction between ideas based on science-based research versus unfounded opinions.

How can both the recruitment and placement of business and sustainability students be enhanced at bachelors, master’s, executive and doctoral levels for business education?

Education is not about separate courses related to sustainability. Integrating sustainability into education is more a matter of including sustainability in every course. This does not mean you should not have a few courses around this topic. The goal is to really teach people what they have to do in the context of the field or business they work in.

How can the management side of a company connect with science and the universities?

At DuPont we do it all the time, so it is hard to give a summary. DuPont specifically connects with universities through joint research projects. We have university professors come to DuPont and give lectures to our people. Another way we connect is through summer interns or part-time students who work with us and build connections that way. It is so much part of the fabric of what we do at DuPont it is hard to think about not doing it. DuPont is connected to over 50 universities worldwide. For example, we have relationships with five universities in China right now.

Do you ever have leaders from DuPont go to universities to help direct the university—have professors come to DuPont to learn what DuPont does, or have people from DuPont gone to speak or meet at universities to try and influence them more directly or even learn from them?

Yes, we do that frequently. It is probably more them coming to us than us going to them, although we do both. For example, we have donated a lot of our intellectual property that we were not going to commercialize, and rather than have it just atrophy, letting the patents expire, we wanted to give those ideas to universities. We found that they did not have the capability and the systems sometimes to actually look at the commercialization process. As a result we have someone that is assigned as a mentor or a coach to universities to help them understand how to commercialize their technology and receive real money for it.

What are some pitfalls to avoid in connecting science and business at a university and as a company?

It is about being very clear about who owns the intellectual property rights. When you do collabo-
rate, sometimes there can be confusion because neither side knows what you are going to find. Usually you find something unexpected. As a result there can be intellectual property rights issues. Who owns the technology becomes gray, and that can cause major issues between the business and university. One must predetermine how these issues will be handled.

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INNOVATIVE TEACHING AND TRAINING TECHNIQUES

How can executives learn from one another, and, on the same note, how do DuPont’s leaders teach each other?

One thing DuPont does related to the environment is to have a sustainability review with every business annually. These reviews last a half day. A team from our central sustainability and environmental enhancement group goes out and meets with the business team. The business team takes them through their plan, and then they ask a lot of questions about considerations and who they are working with for support from the NGO’s perspective. This is also an opportunity for knowledge sharing. Leaders from various lines of business will note ideas from other lines of business. If an idea can be applied in a particular business, where it is has yet to be applied, the information will be passed on.

How do you teach leadership at DuPont?

There are many ways leadership is taught at DuPont. Here are a couple of examples. We had a partnership with the Wharton Business School, University of Pennsylvania, McKinsey, and dozens of other institutions. DuPont has created something called Knowledge Intensity University where we go in and do projects business by business to make sure that we understand all the knowledge around our offering and not just the product offering. We have a formal 2-3 week training course for new managers. This course is oriented toward professionals in a field who will be managing or supervising other people. Some of the content includes fundamental legal obligations you have, how to set goals, and how to get people on board for teamwork.

Do you typically do that 2-3 week training at DuPont or at universities?

We have a central coordination of training, so we’re not developing three programs that all do the same thing. When you use them and how you use them is very much a local decision. We have a Learning Center that is associated with Hotel DuPont in Wilmington, DE. It is a series of about 15 training rooms.

How can the often technically complex topics of energy conservation, climate change, biodiversity, and similar more natural science-based subjects be most effectively presented to business students or employees who have not been exposed to or have even purposefully avoided these vital topics in their past educational efforts?

There are a number of people that just really do not understand the climate change issue. The biggest thing we can do to enact positive action toward climate change is fundamental education in our everyday lives. There are everyday tools that can be used to help increase the prevalence of sustainability education. Two very different tools that could be used to increase knowledge related to climate change issues are television and religion. Television impacts all our lives and shapes our views. Climate change could be built into everyday conversations during popular television shows ranging from sitcoms, to detective shows. Rather than focus on the radical aspects of climate change it will be more useful to discuss more mainstream issues, such as financial, legal, or health impacts related to climate change. Then one day when those television viewers go to a university, they will think about climate change very differently than current students do. A second area is around religion. Religions could somehow include more education related to climate change. Then fundamentally when you show up to the university, you are going to have a different set of questions and have a different set of interests.
What techniques inside and outside the classroom (e.g., lectures, discussions, site visits, guest speakers, simulations, case studies, video, projects, and on-line activities) have proved successful in developing sustainability awareness, knowledge, and skills in business students or employees?

I think the best way to do that is—is by doing practical hands-on work in real business situations rather than just studying theoretical perspectives or doing make-believe cases. What we would like to do is give people the training, and then have them apply it to a real-world business problem right away and it is much more effective.

How can one company teach another company how to enhance their management’s ability to cope with issues related to sustainability? How does this interaction differ in partnerships, versus working with competitors, versus working with customers?

The World Business Council of Sustainable Development (WBCSD) that we talked about earlier is clearly one way to do that. At WBCSD companies are teaching other companies and people from one industry how to work together for a solution and then we see how that solution can be applied with another company. For example if we complete a major sustainability related in the cement industry, next we should ask, how can what we learned apply to transportation or the forestry industry?

How does this interaction differ in partnerships working with competitors versus working with customers and trying to teach them about dealing with sustainability issues?

Of course with competitors you have antitrust issues, and you have to be extremely careful that you are only talking to competitors about what is proper under the law of every country where you are operating. Having said that, there can be a lot of best practices around the environment that could be passed between competitors, and should be—you just have to do it in the proper way. When you are working with your customers, as a part of your overall solution that you are providing you cannot deal with sustainable answers unless they are in the total systems context as the question implies.

ROLE OF EDUCATION IN ADVANCEMENT IN BUSINESS

How can those who’ve been engaged in sustainability education or training and development best receive acknowledgment for those experiences you know and—such as you know, their role in the organization, their career development, or promotion decisions?

They have to accomplish something. Credit should not be given for simply attending a training class. People who receive the training must apply that training to real problems or real opportunities the organization has. When you solve those problems and get those solutions, then you should receive the credit.

At what stage in a business person’s career is education most valuable?

Every stage. I think the idea of getting all your formal education at the first year of your career and then be kind of “catch as catch can” the rest of your career is kind of ludicrous. For example students could come back every 5 years for ‘x’ number of weeks and every 10 years for every ‘x’ number of weeks, in order to keep being refreshed.

How do you think educational needs differ beginning, midstream, or tail-end of a person’s career?

They vary a lot, but one is the technology keeps advancing so it is hard to say exactly what somebody needs. And if you went back 30 years ago and talked about the use of the internet and cloud-computing and some of the things that are getting to be pretty commonplace today you would—you never would have even thought about those being—a need for training, yet they are critical today, so I do not think you can predict exactly what it will be, but it gives you a feel.

What academic programs have business people focused on at DuPont in order to advance their understanding in leadership in terms of sustainability?

We do not really have a particular university that we’re partnered with in what we are doing and it’s much more I think around understanding the science. As a result most of the academic programs relate to science and engineering as opposed to something else.
INDIVIDUAL ROLES IN SUSTAINABILITY EDUCATION

What role can and should executives, managers, human resource personnel, and consultants play in sustainability education in the workplace?

It is unique to each individual company depending on what they are doing, although getting a really good definition of sustainability and what understanding sustainability means to your organization is critical. And then all those stakeholder roles you described should buy into that same definition—and be able to explain to any employee why that’s important for the overall success of the organization.

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What roles can and should university presidents and provosts, deans and department chairs play in advancing sustainability education in academia?

The key thing they must do is really understand what is relevant to education needed today, and be sure not to talk in jargon. I was at one major university a couple of months ago and this professor was talking about CSR, which is corporate social responsibility. He was talking to a group of business leaders. One of the people in the room asked me, “Well, what is CSR?” I explained it to him. And he said well—you know I had no idea that that was CSR. The professor took it for granted that everyone knew the jargon, which I think is a very easy trap to fall into.

What would you say are the best practices you know in terms of university presidents and even to other leaders in advancing sustainability education?

You need to practice yourself. You need to be sure that you know your organization is actually—practicing sustainability. I would do it in more than just a few showy ways. Instead I would do it by really looking at the total greenhouse gas impact for the organization. This isn’t just a one off project, such as avoiding using plastic bags. It’s more about deep change looking at what’s going on with the systems, structures and processes at the university.

Sustainability is becoming much more common today than it was 10 years ago, although I think every university president that I have ever seen would say the right words around sustainability. They would say, “Okay, we care about your sustainability, we are working on that, it is important to the university” and so forth. Although is it what they spend their time on and put effort into, and would their students and faculty say that sustainability is very important to them?

How would you recommend encouraging university presidents, and you know, deans of schools within universities to be more involved in sustainability education?

I think university presidents and deans of schools have to raise money to keep their organization alive and successful. I believe you show them how a real focus on sustainability can help attract funds and resources either from governments or individuals, and I think they will get more interested in it.

CURRICULUM IN SUSTAINABILITY EDUCATION

What sustainability topics are most important to address in business curriculum or organizational training from the perspective of both business and society?

There are some fundamental principles and dynamics related to sustainability that need to take place first. For example, some people would say getting an electric car is good for the environment. Although when you plug in to charge it if that electricity is generated from a dirty coal plant, you are not helping the environment much more than using an SUV that gets eight miles to the gallon. Understanding some fundamental dynamics about reducing our carbon footprint is a critical first step.

How do you think the importance of topics for business curriculum for training at a company differ by region, culture, country or level of education?

A lot of people, particularly here in the United States, actually end up living and working in the region where they get their education—it’s probably more than people realize—and don’t really move around that much. I think education about the particular needs and opportunities in that region are important. For example, the Nicholas Institute at Duke University has a southern regional focus. They have put together a series of networks
in some of the southern states including Georgia, North Carolina, and Tennessee. One issue they have examined recently relates to what they need to be doing in terms of renewable energy, such as solar or wind power.

What programs do you recommend for executive education?

A first step is understanding this issue of climate change and really getting a sense of what is the science, why is there a need to take action, and what's the fact and fiction about what climate change is really driving and what it may be driving so you understand that and so executives or leaders of any kind can stand up and talk about the subject. They need to understand it and have value for it. And then they need to look at those fundamental steps that tend to get us moving in the right direction. Also, there are a number of things you can do that are good economically. A real education is needed clearly based on the commercial technology today or practices today. If you adopt that you will make money for your company and you'll do something good for your environment, and people must know what those are and have confidence in them so they will want to implement them.

How can the long-standing business topics of innovation, entrepreneurship, globalization, competition, and collaboration be effectively integrated with sustainability topics into business-and-sustainability curricula? How can sustainability be integrated throughout the MBA and BBA curricula and/or organizational training and development programs?

That is a big subject. To paraphrase, the question you are basically asking is “how can we integrate sustainability into education?” The opposite question is more important—where we examine integrating all these key fields into sustainability topics by determining what each of these fields means to sustainability.

One thing to consider is when you work through sustainability examples, those topics you described can be used for sustainability and vice versa. Make the examples real and relevant using actual examples that you could go back to and use again. If you ask people to define sustainability, you will get a lot of different definitions. You should start with how we should define sustainability in this context, so people know what to think about it.

CONNECTING THEORY AND PRACTICE

What role has increasing the numbers of sustainability and management-related theories, models and frameworks served in forming business in sustainability education?

You almost have to look at each individual framework and ask what role it has played. I think if you look at the current time, we are in the middle of the worst recession in decades. It is very easy for business people to get very focused on surviving through this and missing the opportunities that are available and the hazards that can come by not having a stable organization. I believe the best way to deal with your question is this: “How do people consider solving these problems in a sustainable way while dealing with the economic crisis?”

Can you think of an example of how a particular industry is either just trying to survive and maybe even some opportunities that they could be missing around sustainability that you’ve heard of in conversations or you’ve thought of?

An example in the process industry is energy conservation. Generally there are very good projects that will save energy and get a reasonable return, but if you’re worried about making the payroll, you’re not going to invest in an energy conservation project that’s going to pay off over 30 years. That’s the balance you’ve got to take into account.

If the models and theories have been applied successfully that is how you teach them—you would say, okay, well here is the model and here are the practical applications that have been used and here is the result that was generated from accomplishing that. There is a quote and I don’t remember exactly what he said, but the former Prime Minister of South Korea that I was with this week, said that theory sets direction, but practice changes the world. That is not exactly what he said, although that was the thrust of it.

SPECIFIC NEEDS OF SECTORS/INDUSTRIES

How can sustainability as an education topic be used to identify the similarities and differences among sectors with government and nonprofit and also between industries?

I would just do it with a simple matrix where you would list the sectors on one axis and the sustainability topics on another axis. Then you would do use correspondence circles (aka Harvey Balls) filled in 25% or 50% or 100% as needed. Very simple
visuals where people can see where the link is across-sectors work.

**How can businesses collaborate with other sectors toward sustainability education?**

I think the reason they will do that is because it’s in their own interests. For example, in DuPont, we collaborate with our customers who are in different industries, but we hope they will buy more materials from us, and we think it will be more successful and so we collaterally share our best practices with our customers and we also ask our suppliers to do it with us too.

**One of the benefits of collaborating and helping in other sectors would one way or another eventually help DuPont sell more products, but are there any specific ways that collaboration with government and nonprofit can help sustainability in education?**

Oh sure. What I have seen over and over is that if a for-profit and not-for-profit organization get together and look at a topic, they will find a much better answer than if they had examined the issue separately. For example, nanotechnology, the science of very small stuff, is only an emerging technology that DuPont has a few commercial applications for. Although my guess is that in 10 years we will have hundreds if not thousands of applications for it. But there are issues around safety. As a result we partnered with the Environmental Defense Fund, a major NGO, to write a safety protocol for use of nanotechnology. Because we wrote it together, it is much better and than it would have been if either one of us did it alone. It has turned out to be a role model that I know the U.S. EPA is now looking at to see if they can adopt as is or with minor modifications.

**MEDIA AND MARKETING**

**How can we get more sustainability education to executives?**

The media is a great example. The media is really doing a major disservice by not putting these topics in more perspectives and not making them much more mainstream in what they are doing. Universities can influence the media through programs such as communication or journalism. Scare tactics really take things out of context and can do a tremendous amount of harm. Universities could be a great sounding board for what’s right and what’s not. Some of the current scare tactics in the media are ineffective. More subtle, mainstream messaging is needed related to sustainability.

**Do you think that new ways of accessing information for executives are needed?**

I think they’re available today. Most executives, especially the younger ones, are using it very effectively. I was struck, when I heard Colin Powell, former secretary of state, make a presentation to a group of sustainability leaders. It was The World Business Council for Sustainable Development meeting in Washington. In his talk he said that historically he would have turned the task of creating his speech over to a big staff, to review all the facts. He said that in this case he just went on Google and did it himself. The reality is that now with search engines and similar capabilities you can do work much quicker. That is hard to compare with the technology of 20 years ago.

**What do you think are the barriers to executives receiving sustainability and education or in terms of either technology or other factors?**

People in business are very busy today, they’re stretched. They do not have any time to waste. You have got to get it down to where it uses their time effectively. That means in some cases avoiding travel may be needed to save time. Education can be achieved by live webcam, recorded on-line videos or a similar means. You’ve got to take into account the entire time required for an education, and participants have got to see the education is going to make a difference. Nice-to-know-stuff just doesn’t cut it anymore. Information relevant to real-world business and sustainability issues is needed.

**What sources of new information are available and what media are most useful to provide students or employees a well-rounded sustainability or learning experience?**

I think they are all good, but what’s the most useful is to be able to know that it’s a balanced, trusted source. You are bombarded with so much, I read it and it sounds good, but it turns out I don’t know if it’s true or not. I would like to know where I could get the “Good Housekeeping seal of approval” where I know what they are telling me is right. When the National Academies of Science, Engineering and Medicine, put out a report, you know it’s right. There may be a lot of other speculation and it might be right too, but you know whatever they say you can . . . take it to the bank—it’s been
peer reviewed and checked so many different ways. The importance of valid and reliable empirical research needs to be communicated.

**DuPont has customers in over 200 countries, employees in over 70 countries, and customers around the world—how has globalization affected DuPont’s ability to manage the capability around sustainability?**

The slogan that hits me the best in thinking about this topic is, “think locally, resource globally.” You’ve got to meet the needs of the customer locally whether it’s in the Philippines, Australia, or Germany. You have to be looking at what they need, and where you source that from. Be it a knowledge offering or material product offering or intellectual property offering, it should come from the most competitive place in the world. If you keep those two things accounted for you can be successful.

**How do you know when you have that extra edge where you are going to save money in a sustainable way?**

We do that in a lot of different ways. Fundamentally our Six Sigma training, which we do across the entire company, serves this purpose. It is about how to analyze problems and take out waste in the system and that’s a very, very extensive program of what we call “green belts” and “black belts” and it’s just one example. Understanding where waste is in the system and how to meet customer needs better is integrated into almost all of our training. We have training in marketing, value chain analysis, and various other areas.

**CONCLUDING THOUGHTS**

**How did the challenges of reducing DuPont’s environmental footprint change and differ from year to year over the last decade?**

Oh tremendously. When they first started, more than a decade ago, it was all around reducing our direct impact—what comes out of our plants and what comes out through the distribution of our products. Now if you look at our goals for 2015, they are much more around what we’re doing for our customers, looking at our products not just operations. We’ve doubled our research toward making sustainable products. In the past we would have just been thinking about what we were doing to clean up our own operations.

**Are there any other last thoughts you have or recommendations on how education can work with business better?**

If I could wave a magic wand for education, I would say it needs to get ongoing training and development because the field is moving so fast. It needs to be interactive and across the web by video or something, where you don’t have to have people traveling these long distances to come in for an in-class session, but it’s not just “go read an article.” There is somewhere in between, and I would really think about a different concept of that because this whole area is moving so quick that you are just not going to be able to train at one point in time and do it. It is a big opportunity for the educators to seize on.

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Chad Holliday is the chairman of the board of Bank of America. He earned his B.S. in Industrial Engineering from the University of Tennessee, and received two honorary doctorates, one from Washington College and another from Polytechnic Institute of New York University. His research focus is sustainability as it relates to energy.

Scot Holliday is an organizational change management consultant at Accenture. He received his EdD in human resource development from George Washington University. His research interests are organizational change and sustainability.