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UTC/Carrier R-410A “Puron” Refrigerant

R-410A is the leading non-ozone depleting refrigerant for residential air conditioning systems. Several suppliers sell units that contain R-410A. Carrier has incorporated R-410A into their residential units since 1996, and in 1998 trademarked the use of R-410A in its residential units as “Puron.” Carrier uses Puron only in its high-end, most efficient units; other less-efficient and cheaper units contain not Puron, but compounds called HCFCs, which still cause ozone depletion, but not to the extent of their precursor, CFCs. The company made this transition in its residential units eight years ahead of the schedule mandated by the Montreal Protocol.

What we can all learn from this case:

- **Get out ahead of competition.** UTC/Carrier weighed in favor of an aggressive phase-out of CFCs under the Montreal Protocol. In doing so, they raised the bar in their industry. (They bet that competitors would delay introducing non-ozone depleting products until required to do so, and that they would in fact be able to develop a suitable alternative.)
- **Link environmental benefits to quality/ primary customer benefits.** R-410A is only available on high efficiency units. (Medium and low efficiency units use HCFC-22, an intermediate refrigerant due to be phased out in 2010*.) R410A thus helps to differentiate the higher end units by providing a unique benefit in addition to environmental ones: the units containing it will still be able to be serviced after 2010 when a mandated phase-out occurs for the interim refrigerant (which is still used by competitors.) In addition, servicing of R-410A units is not as expensive as those containing ozone-depleting compounds. Thus R-410A is bundled into a total package of benefits which help to justify the premium price: high efficiency, doesn't deplete the ozone layer, is serviceable far into the future, and costs less to maintain.
- **Make green your own.** Green benefits can oftentimes become generic within an industry (for example, the ENERGY STAR® label on computers). Although R-410A is sold and marketed generically from a number of suppliers, Carrier has trademarked its use as Puron in residential air conditioners.
- **Work pro-actively with stakeholders. Some of Carrier's stakeholder initiatives include:**
 - Working with U.S. EPA ENERGY STAR® program to certify the energy efficiency of the units and reassure customers about product performance.
 - Serving as a founding member of the U.S. Green Building Council, a trade association that helps to promote green building technologies.
 - Educating its the dealer sales force about R-410A's role in ozone layer depletion and the Montreal Protocol so they can communicate related benefits to customers.
 - Winning the US EPA's Stratospheric Ozone Protection Award, and using that in its marketing.

* This differentiation did not result in backlash from advocates, i.e. those who might ask why Carrier didn't do this with all their products.

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UTC, Pratt & Whitney's Ultra High Pressure Water (UHPW) Jet

Ultra High Pressure Water (UHPW) jet equipment was developed for Pratt & Whitney's internal use to clean or remove paint coatings from the surface of aerospace equipment. The UHPW technology uses a proprietary nozzle that ejects water at very high pressures. The water is recycled in the process. The UHPW technology is being marketed through Specialty Materials and Services (a new UTC division created to market environmentally preferable technologies) to a variety of industries on the basis of improved quality, cost, and turnaround time over traditional solvent-based resurfacing.

Environmental benefits include: no airborne particles, no chemicals, no wastewater generated as effluent, waste solids can be compacted or recycled, no base metal removal (thereby extending life of component, and allowing continuing recycling of used engine components). Because they currently difficult to quantify, the environmental benefits are now incorporated into the sale as "a marketing aside." However, Pratt & Whitney does use them to target companies they know are reducing their waste streams. Pratt & Whitney is also developing opportunities in the remanufacturing market, and is garnering support from advocates for alternative solutions to toxic chemicals on an ad-hoc basis.

Results to date include:

- Internal UTC award for innovation
- Recognition from EPA and NASA for waste reduction and reduced use of ozone-depleting substances.

Future plans may include:

- Quantification of environmental benefits
- A trade article
- The potential to link this technology to corporate image.

What we call can learn from this case:

- Environmental technology can reinforce overall quality; although primary benefits that may be more important to the sale than environment should be stressed.
- Companies with an interest in green represent a new market opportunities.
- Environmental benefits need to be quantified for maximum impact

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Nike PVC-Free Footwear

PVC-free soccer cleats were developed as part of a corporate goal to phase out PVC from all of Nike's footwear by 2002. Soccer cleats were chosen because they were the biggest technical challenge, and hence the most difficult for competitors to match. The higher cost of goods was passed on to consumers.

Nike attempted to educate consumers and retailers by adding a "PVC-free" hangtag to the product, which directed customers to more detailed information on their web site (<http://www.Nike.com/nikebiz/nikebiz.jhtml?page=27&cat=sustainable>), and providing pocket information cards for retail and sales personnel. In some cases, however, the hangtags were removed by retailers who didn't want them interfering with the shoe display aesthetics.

On the positive results side, Greenpeace praised the effort publicly on its website, and the project has strong support among management and employees. Ninety-nine percent of Nike's footwear products are now PVC-free. Nike set up a survey to get feedback from consumers about the PVC-free effort. They found that once customers heard about Nike's efforts, 25 percent said they would alter their decision to buy the Nike product versus another product. The 25 percent is dramatic, considering that usually 10 percent is thought to be a great success. **On the problematic side**, Nike experienced a backlash from the vinyl industry, which lobbied Nike (unsuccessfully) to rethink their decision on PVC. Managing the relationship with vinyl suppliers, which continue to supply PVC for other Nike products (such as for sports equipment), has been delicate.

Nike learned several things from this effort:

- **Messages about environmental benefits need to show how the customer is benefited personally and directly.** Information must be factual, brief, and compelling.
- **Sustainability initiatives can create a positive "halo" for the corporate image.** When more in-depth communication was provided to customers by in-store spokespersons, customers' opinion of Nike improved nineteen percent. The PVC effort is also included in Nike's Corporate Responsibility report, and was featured in an internal Earth Day celebration. Additional publicity efforts are on hold until the Kasky Case (CA) is resolved at the U.S. Supreme Court level in April 2003.)
- **Sustainability benefits need a context.** By preemptively educating consumers about the environmental and health benefits of one's broad sustainability vision, a path is made for individual initiatives.

Some questions we have:

- Are there opportunities to work with other companies who are willing to talk about PVC-free in their own brands?
- Are there any opportunities to work positively with Greenpeace and other NGOs to help promote the removal of the PVC?

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Nike Certified Organic Cotton Initiative

In Fall 2002 Nike launched a lines of women's clothing: "Nike Organics," a six piece collection of active sportswear (with the same styling as conventional garments) made of 100 percent organic cotton. The company has also made a commitment to achieve a goal of five percent organic cotton blended into all Nike cotton garments—the "Nike Organic Cotton Blended Program." A five to fifteen percent premium was charged for 100 percent organic products; the blended products were cost neutral.

The objectives of the initiative were to: demonstrate commitment to organic cotton and sustainability to retailers and consumers, and safeguard long term business position by designing out things that have long term cost to human health and environment. **The long-term goals of the initiative** are to expand the number of 95 to 100 percent organic cotton products offered globally, and support and expand the global organic cotton market.

The target audience for Nike Organics is "Fitness minded women," which was chosen because women are primary apparel purchasers, and possess a strong affinity for social and environmental causes. Nike's advertising is focused on the overall Nike brand, not on individual products, and marketing support for the 100 percent Organic line consisted primarily of retail Point of Purchase display materials; hang tags and neck tags carrying a newly created Nike Sustainable Product Mark, with a link to web site; a content label indicating presence of organic content; and a press release aimed at generating write-ups in consumer publications. The Nike Organic blended product is communicated only via the Nike web site.

Stakeholders included Industry competitors (Patagonia, Norm Thompson, and others who share best practices around organic fiber, and materials sourcing); the Organic Trade Association; the Sustainable Cotton Project; the Organic Cotton Exchange (for which Nike was a founding member); and the Organic Cotton Certifiers/Accreditors association.

Results: By the summer of 2003, organic cotton is expected to represent just over 2.5% of Nike's overall cotton use. Some mens' garments are 100 percent organic, and a children's line is being introduced in Europe. Sales figures for Fall 2002 Nike Organics collection are not yet available for external publication. The initiative has won awards internally and from external organizations. Competitors actively seek input on how to implement their own programs.

Some Outstanding Questions to Ask Regarding Nike's Organic Cotton Initiative:

- Do green products need to look green or different? (Nike's merchandisers expected the fabric to look different from conventional cotton.)
- How much is enough? (Nike only promoted the 3-5% initiative on its website, not in hangtags because they thought the website was the best forum to explain why they weren't doing more than 5% at this time.)

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Plug Power Natural Gas Prime Power Fuel Cell Technology Demonstration Unit

Plug Power's standalone natural gas powered units use fuel cells to provide cleanly generated distributed power for off-grid energy supply and energy backup. Benefits include: low emissions, low noise, high efficiency, and high quality power. The fuel cell technology is well suited to take advantage of opportunities created in various states, including New York and California, for distributed power generation.

Plug targets indirect (not direct to end user) applications within early niche markets, especially those customers that stand to gain the most from promising early-stage technology. Because of the fuel cell's environmental benefits, Plug Power is able to take advantage of opportunities among utilities and government entities that fund projects for renewable power. Representative customers include: the Army Corps of Engineers (for portable energy devices); a large electric power utility (that is having difficulty siting new fossil fuel generating plants); and a Telecom company (for backup power units for mandated 911 service). Plug Power has won various certifications and awards that have given them a marketing advantage.

Some of Plug's customers do some green marketing to their own customers, and they rely on Plug Power's data to support their environmental claims.

Plug is working with various stakeholders to help shape the landscape at the federal and state levels. They lead an industry-wide consortium known as Fuel Cell Advocates, and they are also active in the European Union via a strategic partner.

Results to date include Plug being able to achieved sales goals in 2002, and importantly, achieve a high rate of customer satisfaction.

What we can all learn from this case:

- Take advantage of opportunities brought about by green concerns **to introduce new technologies.**
- **Follow the green money**, e.g., New York State Energy Research and Development Authority helps to fund efforts for electric utilities to bring on sources of clean energy.
- **Set appropriate customer expectations.** Because of the newness of the technology, Plug Power is careful to work with customers who are willing to work with them. They position their products as "Technology Demonstration Unit."

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Unilever Washright Campaign

Washright is a Pan-European campaign aimed at reducing impacts associated with clothes washing. It consists of various improvements in the industry manufacturers' energy and materials use, and CO₂ emissions, and a campaign educating consumers about how to reduce environmental impacts on their end. The campaign is being conducted by AISE, the European trade association of laundry detergent manufacturers. It has been running since 1996. To reach the mainstream customer, the campaign makes use of television commercials, a Washright product label, and a website.

Developed in response to EC's Fifth Environmental Action Programme, **the campaign's objectives** are to combat the negative environmental image of detergents; demonstrate industry commitment to environmental stewardship (and avoid industry regulation); and to engage customers in reducing negative environmental impacts where they occur the most—during product use. Companies who subscribe to the AISE Code and agree to its voluntary code of commitments can carry the Washright panel on their products. In 1998, to comply with the code, Unilever launched their new washing tablet product simultaneously with the Washright campaign.

Results have been positive. Ninety percent of European detergent makers carry the Washright logo. Seventy percent of European households were reached, and consumers rate the campaign "good" to "excellent." Fifty percent of consumers remembered the campaign, which is a very high figure. The table below shows some of the campaign's results:

	Campaign Targets	2002 Results
Energy consumption in use	5% reduction per load	5% reduction per load
Detergent tonnage	10% reduction per capita	-7.9% per capita, -16% per wash
Packaging tonnage	10% reduction per capita	-6.7% per capita, -14.9% per wash
Poor biodegradables tonnage	10% reduction per capita	-23.7 per capita, -30.4% per wash

The campaign has helped to create a positive credibility "halo" for the industry and for Unilever. Unilever predicts that in the long run, consumers will expect to see the Washright logo in much the same way that they expect the recycling logo on products; it's a negative in the customer's mind if the product *doesn't* have the logo.

Unilever specifically has achieved most of their seven targets, and they plan to continue with the campaign because they still have annual targets for reduction of packaging, CO₂ and energy. We did not discuss results about the success of the tablet launch.

What Can We All Learn from this case/Questions to Ask

- To what extent should other industries worldwide be considering responsible consumption of their products by their consumers?

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Unilever MSC/Sustainable Fisheries Initiative

In 1997, in conjunction with the World Wildlife Fund, a global conservation organization, Unilever established the Marine Stewardship Council (MSC) as an independent not for profit that accredits certifiers of sustainable fisheries.

The objective of the effort is to help Unilever achieve a corporate goal of purchasing all fish from sustainable fisheries by 2005. This effort is consistent with Unilever's image for corporate social responsibility, responsible governance, and a high degree of "transparency." Given the customer desire for quality, Unilever expects to achieve a competitive advantage in the long term. No price premium is charged for the sustainably sourced fish.

Consumers are informed that their packaged fish products were sourced sustainably through the Marine Stewardship Council logo, information on packaging, and a website

Positive results have been achieved to date. Specifically, over 100 major seafood processors, traders, retailers have pledged support. Over 30 fisheries have applied to be assessed against MSC standards. And 100 seafood products across 9 countries carry MSC label. By the end of 2001, Unilever had 5% of its supply chain MSC-certified. However, Unilever expects to face problems because they do not expect that they will achieve their target of having 25% of their fish certified by 2005 due to the difficult and slow process of certification. There is no evidence yet of any commercial impact.

What We Can All Learn from Unilever's Marine Stewardship Council Initiative

- NGOs can provide invaluable expertise, credibility and global reach.
- There is a need to speak to consumers in clear, compelling language. As of February 2002*, Unilever was still trying to come up with language with which to describe the sustainable fisheries initiative to consumers in compelling, easy to understand terms. (*Conversation with Christine Drury Feb 2002).

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Harley-Davidson Product Durability

Harley-Davidson is engaged in activities that were not initially intended as (or even thought of as) moving towards more sustainable business practice, but have indeed had that impact. Harley designs and manufactures their bikes so that owners can personalize and upgrade them over time. The emotional attachment that results yields bikes that owners don't want to part with.

This practice of promoting and supporting the enduring quality of their products relates to a vision and design philosophy related to dream fulfillment—and runs throughout the company. The classic look, sound, and feel of a Harley-Davidson motorcycle garners emotional attachment and owner bonding (a personality extension). The enduring physical nature of the bikes enables the customer to link to the heritage and tradition of motorcycling. Styling cues remain the same over time for individual products.

Materials and components are selected and designed with an eye toward service and repair. The company supplies parts and service for older units back to 1916. Harley-Davidson also offers an engine remanufacturing program so new motors are obtained at reasonable cost and kept out of landfills.

Results Achieved: When traded in, Harley-Davidson bikes are frequently worth more than new ones. Over time many become collector bikes and increase in value.

Harley does not promote the sustainability benefits of their bikes or manufacturing processes to customers. Their Functional Leadership Group is currently trying to formulate a strategy for internal communication. They do not feel that communicating with customers would be helpful. They are asking such questions as, “What would have to happen for us to want to talk about it? (Under what conditions is it something we'd do for a competitive advantage?) And then what would we say?”

What we can learn from this case/Questions to ask

- **Some business practices are inherently sustainable.** Businesses can make money promoting extended use of their products and supporting aftermarket and related services (as opposed to designing for obsolescence, for example.)
- How does a company talk about sustainability practices that they were doing for other reasons? Are there some brands that cannot benefit from talking about sustainability benefits?
- Is it possible to talk about sustainability benefits with some stakeholders, e.g., investors and not others, e.g., customers?