



High performance. Delivered.

This article appears in
the February 2010 issue of

Outlook

The journal of
high-performance business

Innovation

Why less is the new more

By Greg Cudahy, James M. Ellis and Paul F. Nunes

Customers continue to demand greater value at ever-lower prices. But for many companies, the ability to produce savings through more traditional cost-cutting measures is nearly exhausted. The solution: Combine cost-cutting initiatives with design and development activities, using cost-driven product and service innovations to create new streams of profitable growth.

• Consulting • Technology • Outsourcing

By now, just about everyone has heard of the handful of shockingly low-cost products available—\$2,500 cars, \$100 laptops and \$20 intra-European airfares. Less well known, yet just as important, is how low-cost thinking is beginning to drive innovation across the entire spectrum of industries, from medical devices to toys to package delivery.

Building in a focus on lowering costs at the early stages of design and development represents a huge opportunity for companies, because this discipline directly addresses what Accenture sees as two long-term shifts in the nature of demand.

The first can be found in the emerging economies of Asia, Africa and Latin America, where more and more people are climbing out of poverty into low-wage households and aspiring to consume a broader range of goods and services—if they are priced within reach.

A second potentially long-term shift in demand is reduced consumer spending and increased frugality in developed markets, where cost-conscious customers are demanding more value at lower prices. At the same time, demographic trends in many developed economies, such as the slowing rate of women entering the workforce, have reduced the growth of household income, driving further reductions in spending.

Yet despite the opportunities, managers too often treat cost reduction and innovation as separate activities. Cost reduction is mainly applied to mature products that have run out of steam, especially during times of economic expansion. Meanwhile, little attention is paid to managing the costs of driving further innovation in new products with enhanced features.

Now, in leaner times, companies can more easily bring a cost focus to the design and development side of

the business, attracting customers through cost-driven innovation. They can look to provide, at one end of the price spectrum, ultra-low-cost but well-designed basic products. Near the high-price end, they can uncover ways of adding new features at minimal cost.

Cost innovators

In the past few years, a number of forward-thinking companies, in the consumer and business-to-business sectors alike, have embraced activities that drive out cost from the earliest design stage of innovation. They have rallied R&D, engineering, production and marketing, as well as functions like procurement and planning, around this cause, expanding their markets and capturing profitable new revenue streams as a result.

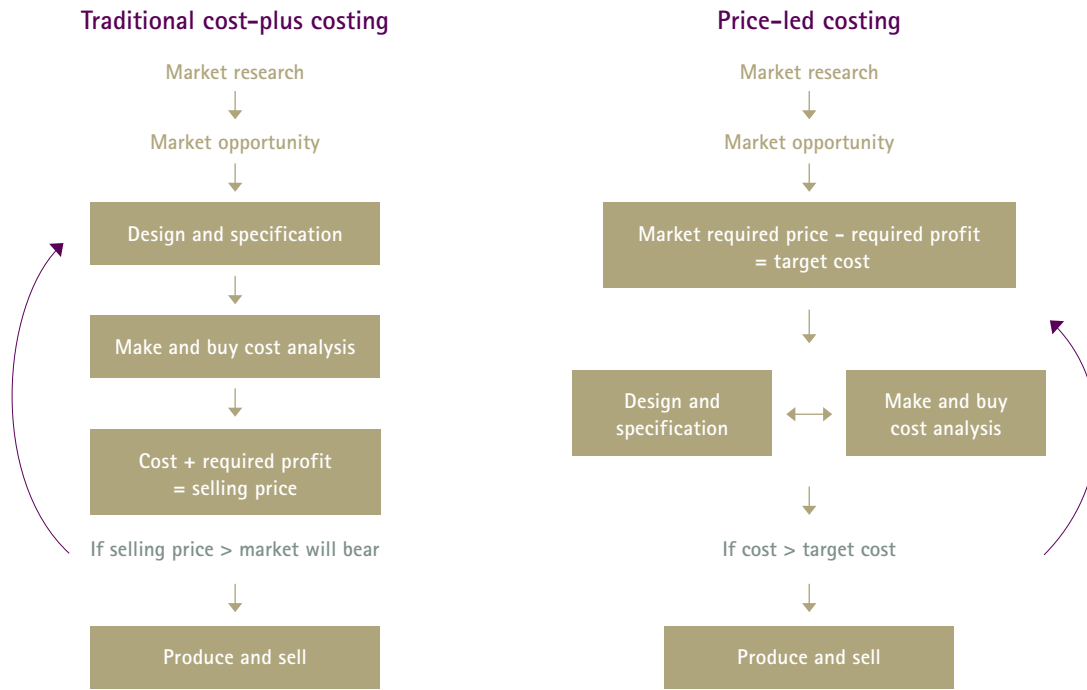
Some of the cost innovators have excelled by starting with a blank sheet and designing an entirely new product. Case in point: the no-frills Nano, which Tata launched in India last year and which it will soon introduce in Europe. Retail price: about \$2,500.

Other innovators have taken products that have been successful in one regional market and, with certain adaptations, transferred them to another. For example, GE Healthcare developed a very small, low-cost electrocardiograph machine for doctors in rural India. By slashing development costs and time to market, the company has been able to offer a similar machine in the United States for \$1,000, a fraction of the cost of existing, larger machines.

The benefits of cost-driven innovation are being applied to higher-end products as well. Hewlett-Packard has become the world's top PC maker in part through a dedicated focus on practical innovation. HP imposes hard metrics on every product to strike the right balance between innovation and price, including

It starts with the customer

Price-led costing starts with a determination of what customers would be willing to pay for a proposed offering. Design, production and suppliers then work together, innovating and compromising to find a solution at or below the target cost that allows for an acceptable profit at the market desired price.



Source: Accenture analysis

the metric of “R&D productivity”— R&D spending on a proposed product as a percentage of the product’s projected gross margin.

Cost-driven innovation can be difficult to nurture in large, established companies, which often fail to explore options if there is a risk of upsetting their current profit margin and business model. Powerful business units organized around regions may resist enterprisewide cost-saving standards. This is why disruptive innovation tends to come from upstarts (think Southwest Airlines Co. and Netflix) and outsiders (think Apple

moving into the music business). Moreover, engineers and managers may have a dated or limited view of what customers really care about, leading to the unnecessary preservation of features.

Yet leading innovators are demonstrating that costs can be radically and sustainably reduced if no product feature or attribute is considered sacrosanct. The experiences of these innovators hold several lessons for managers who want to encourage more cost thinking during their innovation processes. Here are just a few of those lessons.

Rethink design and product line assumptions

Product line extensions and active M&A activity in a company tend to spawn a proliferation of brands, products, components and parts. It's not unusual for an appliance manufacturer, for instance, to offer its products in numerous shades of white and to stock scores of variations of the company logo badge.

When it comes to cutting costs, reducing the number of parts is a good place to start, because it lowers costs from end to end—inventory, raw materials, design effort, assembly time, and service requirements. Indeed, low cost and quality can be compatible rather than tradeoffs.

When one printer maker decided to upgrade its bread-and-butter model, it reduced the number of parts by 60 percent, from 150 to just 60, while also more than doubling the print speed in the bargain. Close collaboration between the designers and the manufacturing staff was essential. “The manufacturing people literally shared the same coffee machine as

the design people,” according to the executive overseeing the project.

Lower-priced products can still turn a profit given sufficiently simple designs and more efficient supply chains. HP laid the groundwork for its recent move into the low end of the PC market—\$298 fully loaded laptops for sale at Walmart—in part by reducing the number of designs used for laptop shells.

At times, designing for costs can mean staying on top of innovations that have already yielded radical price reductions. The automated teller machine transformed retail banking, but one expense—the processing of checks—continued to elude the new business model. Until now. After years of experimenting with evolving ATM technology, Wells Fargo has introduced almost 2,000 new machines in California that feature optical character recognition and faster chips; they can print a receipt with a copy of the check, making customers more confident their deposits won't be lost. The ATMs cut the cost of processing a check by 72 percent.

Give staff the power to circulate new ideas across borders

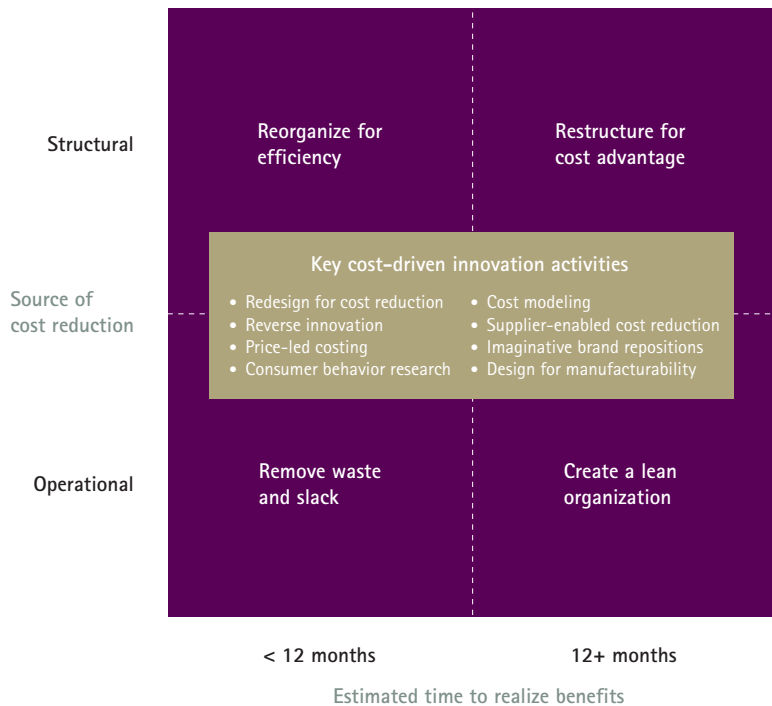
You probably have more people in your company who have thought about how to build cost-effective offerings than you realize, both internally and among suppliers and partners. GE's adaptation of its electrocardiograph machine came about when a project manager who had been doing market testing in China returned to Wisconsin, where she started telling customers about the new device. After a nurse in a nearby clinic said she could use such a machine, the manager told her executive team, which considered the idea

interesting enough to test it through focus groups.

In fact, at GE, local growth teams have the autonomy to develop their own strategies, products, and complete value chain from sourcing to sales and service. They build new offerings from the ground up. Senior executives then work to take those products to other regions, at lower price points than existing products, even at the risk of cannibalizing higher-margin products in rich countries, a process the company calls “reverse innovation.”

Cost-driven innovation

While many cost-reduction strategies are valuable and necessary, cost-driven innovation has the potential to deliver both structural and operational cost improvements in both the near and long terms.



Source: Accenture analysis

Start with a price point customers will love, and then work like crazy to meet it

As C.K. Prahalad, the Paul and Ruth McCracken distinguished university professor of strategy at the Stephen M. Ross School of Business at the University of Michigan, points out, there's gold to be found at the bottom of the pyramid if you get the business model right by targeting and then innovating toward prices a much broader customer base can afford. Successful target costing often starts with an entrepreneur's assessment that the entrenched market leaders have become complacent, and that many customers will flock to a pared-down offering at an audaciously low price. That's the logic behind discount stockbroker Charles Schwab & Co. and Sam Walton's Walmart.

The catch is that a company needs to be able to achieve enough price separation from competitors, and for a long enough period, to make a difference. Otherwise, a price war can cause severe or even mortal damage to the innovator, as it did in the case of PeopleExpress Airlines, one of the early US discount airlines. PeopleExpress's price was lower, but not by quite enough to stave off the larger carriers, which cut their own fares. After several months of price wars destroyed the cash flow needed to service the company's heavy debt load, PeopleExpress was purchased by Texas Air and then merged into Continental.

In the case of truly disruptive cost-driven innovation, the development process usually requires tighter partnerships with suppliers.

Get out there with lifestyle research

Field anthropology—observing how people live, work and use products—can provide rich, granular and reliable information that rarely emerges from formal focus groups. Panasonic Corp. used lifestyle research from local marketing teams in its plans to design a new line of scaled-down TVs, air conditioners and other appliances for low-wage families in emerging markets.

This sort of lifestyle research is not new to Panasonic. For instance, consumers in Vietnam use a lot of ice, so a refrigerator sold there needs a big freezer that can make ice cubes in two hours. But it doesn't need the four to six doors common to refrigerators sold in Japan. By reducing features and localizing design and manufacturing, Panasonic can go head-to-head with local bargain brands.

In Ghana and Morocco, Nokia researchers observed how people share

handsets to listen communally to conversations. Nokia is now providing more powerful speakers in some of its phones for Africa—a feature that is now available in the United States, enabling young people to share phone-based experiences, like viewing YouTube videos.

A more customer-centric approach to cost-driven innovation has caught on even in industries not typically thought of as product innovators. Since the inception of electricity deregulation and market-based pricing, utilities have been embracing smart meters as a way to drive down costs and allow customers to regulate their own electricity consumption. Italian utility Enel, which boasts one of the largest installations of smart meters in the world, spent about €2.2 billion to install the meters; they are now saving the country up to €500 million per year, primarily from operational cost reduction and efficiency improvements.

Embrace sophisticated cost modeling

It's not always easy to understand the cost structure of the components your company uses, whether they're purchased or manufactured in-house. Some data will be available from public sources, such as market prices for commodities. But a more sophisticated supply chain model, which breaks down the cost components into great detail, could involve time-consuming research and discussions with suppliers about their costs—if they are willing to share such information.

A part of successful cost modeling involves paying attention to the product's lifecycle costs to the end user—the sum of all costs from purchase to maintenance to disposal.

Reducing lifecycle costs can yield substantial benefits to customers, although you have to make them aware of those benefits through sustained marketing. In the United States, earning the federal government's Energy Star certification is a good first step for marketing, say, an energy-efficient washing machine. But it's just as important to make it clear to consumers that they will save 19 percent of lifecycle costs—and that those savings add up to more than half the initial purchase price.

Production costs and time to market can also be reduced through the use of computer simulation software. Take the Lego Group. The Danish

toymaker used a simulator early in the production cycle to learn how plastic parts could bend. This tech-

nology minimized the company's need to build molds and physical prototypes.

Harness the creativity of suppliers

The production of most goods and services relies on a network of suppliers. Although network relationships are critical to building low-cost solutions, sometimes those relationships are relatively loose.

That's the case in the mobile phone industry. Mass adoption in emerging markets hinges not just on the ability to produce and market ultra-low-cost handsets. It also depends on the ability to incorporate useful but low-cost software applications.

Myriad Group, which already has software in more than 2 billion phones worldwide, introduced technology that enables the use of small Web-based apps that display weather reports, sports scores and other information directly on the home screen without requiring the user

to search for them. The simplicity of mobile apps is ideal for consumers in emerging markets with little or no Internet experience and access.

In other industries, or in the case of a truly disruptive cost-driven innovation, the development process usually requires tighter partnerships with suppliers. To achieve the Nano's \$2,500 price point, Tata had to draw on the dedicated participation of many suppliers. One such local supplier spent a year developing 32 variants of the Nano's driveshaft before it made its final selection. The supplier enlisted designers from its European branches to make the component lighter and easier to manufacture. In return, Tata helped this and other suppliers find international partners for competitive procurement.

Use existing offerings to serve more segments

It's quite common for one company to serve different customer segments with different brands at different price points. What's trickier, but potentially quite lucrative, is to tweak an existing product for an entirely new segment through cost-driven innovation.

This strategy has great relevance now that many consumers are actively switching to lower-priced brands. Procter & Gamble recently launched Tide Basic, a lower-cost version of Tide detergent that offers an alternative to Tide's premium price and features. And for years, automakers like Volkswagen have been reducing costs by sharing

parts and even whole modules across luxury and mass-market models.

Incremental innovation can highlight other product features besides cost and thus broaden the product's appeal. For many years, Nestlé sold its popular Maggi dried noodles in rural India and Pakistan for 20 cents per serving. In 2008, Nestlé started selling Maggi in Australia and New Zealand, using no oil, less salt and no MSG. In those countries, Maggi noodles are sold on their health attributes as well as their low price.

(Continued on page 9)

Five ways to improve the cost structure

Beyond the traditional techniques for short-term improvement, effective cost management, in any area of business, increasingly relies on five critical imperatives. Combining these five prepares companies for further economic volatility while improving their cost structure, regardless of whether the economy trends up or down. And a focus on cost-driven innovation helps companies to master each of the five.

1. Embed sustainable cost management solutions, taking into consideration the skills and resources likely to be needed in the future. Too many cost-reduction efforts focus on taking down costs that eventually creep back up, such as negotiated lower rates from suppliers. This is especially true when short-term cost methods and weak compliance methods are used. When costs are taken out during the design stage—by creating a design with fewer parts, or by reinventing the offering completely—they are much more likely to stay out.

FedEx is trying several creative approaches to long-term cost management. One is to replace aging aircraft and vans with more fuel-efficient models. Another is to give customers the option of electronically transferring documents to one of their FedEx Office locations for printing; customers can choose to pick up the order or have it shipped the last few miles by truck.

2. Shift predominantly fixed-cost structures to more variable structures. High fixed-cost structures often result from investments that were based on profit-margin assumptions for high-priced goods sold to market segments presumed to be relatively stable. In today's environment, these conditions rarely exist.

Designing low-cost offerings can actually accelerate the shift to variable cost structures, which can accommodate fewer or shorter-term commitments, reduced ownership of assets and pay-as-you-go arrangements. When you design products to be delivered at a fraction of the price of existing offerings, variable cost solutions tend to get built in, because there is less room for error. Low-cost offerings can be quite profitable, especially at high volumes, but their small individual margins mean that fluctuations in demand must be closely managed and inventories need to be very low.

For many years, Dell used a postponement model, collecting payment from the customer before buying and assembling parts for that order (in the wake of the economic downturn, the company has shifted to a different business model). Another way to make costs more variable: adopting cloud computing for certain activities, since the cloud offers pay-as-you-go IT.

3. Insulate the cost structure against the risk of economic volatility, including inflation and stagflation. Managers need to ask whether they are reducing costs enough to hedge against further deterioration of economic conditions. Cost-driven innovation provides a built-in buffer against the vagaries of the economy. Even if incomes and job growth stagnate, and currency fluctuations and inflation wreak havoc, companies that can offer roughly comparable products at much lower prices while preserving margins will maintain an advantage. With sufficient on-the-ground research and product adaptation, they can target emerging markets and more frugal customers regardless of economic conditions.

Innovation that reduces total lifecycle costs for the consumer is one answer. Procter & Gamble targeted energy-conscious consumers when it launched Tide Coldwater in the United States and Ariel Cool Clean in Europe. By 2008, 21 percent of British households were washing in cold water, up from 2 percent in 2002; in Holland, the number shot up to 52 percent from 5 percent of households. If economic conditions deteriorate, cold-water washing will be an even more attractive proposition.

4. Deploy price-led costing to bring design, production and sourcing costs in line with market realities. Starting with a well-grounded understanding of the price the market will bear (a target price versus the cost that will maintain margins) and then designing to meet that price is a great forcing function for cost-driven innovation. Tata Motors Chairman Ratan Tata got the idea for the Nano from watching families traveling precariously on motorcycles and scooters in rural India. The company pegged the car's price at about \$2,500 to attract lower-income families that could afford motorcycles but not cars as traditionally priced.

5. Stress-test cost management strategies to reduce risk. Many cost-reduction approaches are saddled with a low ROI—they may cost almost as much to design and implement as they save. By incorporating cost reduction into the initial design, the savings go from being incremental and at the margins to verifiable and reproducible in every product sold. To achieve those savings, sensitivity analysis across all major variables, to understand how robust the offering is against various market conditions, is critical before launching into full-scale production.

In the notoriously fickle women's fashion industry, two big risks are overproducing clothes that don't sell and not delivering hot-selling items quickly enough. Retailer Zara reduces these risks through its rapid design and testing approach, doing most of its production in-house, responding quickly to reports from its stores about what's selling. The company then distributes clothes to the stores in small batches at the right time. As a result, Zara keeps inventory costs very low and minimizes the opportunity cost of lost sales.

Bring the supply chain deeper into the fold

Because the real costs of innovation often show up mainly in the supply chain, imposing discipline through cost-driven innovation requires the close collaboration of design and supply chain groups, in order to make tough decisions that frequently cut against decades of cultural norms. The case of Lego Group is instructive.

Lego's profitability suffered from 1998 through 2004 in part because its culture of craftsmanship and creativity created enormous supply chain complexity. The company turned out thousands of permutations of its plastic bricks and character figures, with each successive generation of offerings adding more complexity and delivering less profit. Plastic bricks came in more than 100 hues, for example, and pirate figures had 10 types of legs. As Lego's product developers kept seeking new materials, the number of suppliers climbed to more than 11,000.

When Jørgen Vig Knudstorp took the CEO's reins in 2004, he tackled the problem first through a pilot sourcing program that shortened the roster of suppliers to stabilize pricing. Following the success of that program, Lego's chief of product innovation teamed with the supply chain chief on a series of initiatives, such as cutting the color palette in half and reducing the thousands of different figures in production.

The same team also worked to help Lego's designers make more cost-effective choices. For the first time, designers had to follow rules about creating new colors and shapes, and about ordering new materials, with costs clearly shown for each choice. The designers were urged to use existing elements in new ways instead of devising new elements. Thanks in part to supply chain changes and

cost transparency in product development, Lego Group is once again profitable.

Managing the cost of risk

With customers behaving more frugally and looking for value—a shift in demand that shows every indication of being permanent—cost-driven innovation will be spreading to more industries and more markets. Upstart competitors based in emerging markets will accelerate the trend by offering more and more ultra-low-cost products. No industry is immune, and first movers had best prepare for smart counter-moves by their competitors.

To succeed, companies will need to anticipate and manage a variety of risks. Cannibalizing existing products is one of the biggest.

Procter & Gamble agonized over whether and how to launch Tide Basic, for fear of reducing the brand loyalty and emotional connection consumers felt for the original Tide, the most popular detergent in the United States. P&G managed to overcome its concerns by sufficiently differentiating the products, including giving the Basic product yellow packaging instead of Tide's distinctive orange.

Netflix is rapidly extending its business model to video-on-demand, a lower cost-of-delivery option that its competitors are embracing, even though the company recognizes that doing so will reduce its core business of DVD rentals delivered via the mail.

Success is not guaranteed for either company. What's clear, however, is that their managers felt compelled to look for lower-cost alternatives in the face of today's business environment.

For further reading

Innovation strategy: "A matter of focus," this issue, page 38

Innovation in telecommunications: "Open innovation: How to create the right new products, the right way," *Outlook*, October 2009

Innovation in consumer products: "Target practice," *Outlook*, January 2009

Innovation as a business discipline: "How to get the most from your best ideas," *Outlook*, September 2008

For these and other articles on innovation, please visit accenture.com/Outlook

Still, care must be taken. Mark Ritson of the Melbourne Business School in Australia notes that launching a “fighter brand” to fend off low-price competitors while protecting a company’s premium-price offerings has resulted in big collateral losses for many companies. To prevent cannibalization, Ritson says, a company must deliberately lessen the value, appeal and accessibility of its fighter brand to its premium brand’s target customers. The company may also have to innovate to improve the premium brand and strengthen its brand equity. Beyond such costs, the company must also weigh the costs and risks of having management distracted from the core business.

Finally, consider carefully which product features and attributes to change, and which to leave as is. Check and recheck against solid customer research. Customers will notice if you tinker with a trusted product or brand, and it’s hard to undo the damage caused by removing the wrong features or lowering valued service levels.

But by giving customers new products and services that better satisfy their real desires, and by doing so at an extremely attractive price and with a superior cost structure behind the scenes, companies can thrive in an age of frugality.

Sometimes, it seems, less is truly more.

About the authors

Greg Cudahy is the global managing partner of Accenture's Operational Strategy and Strategic Planning Services groups. He has spent more than 25 years in management and technology consulting, specializing in strategy development, capability building and supply chain transformation. Based in Atlanta, Mr. Cudahy was named by *World Trade Magazine* as one of the Top 50 Supply Chain Pioneers.

greg.cudahy@accenture.com

James M. Ellis is the managing director for Accenture's cross-industry Finance Operations group. He has 27 years of experience assisting clients on a broad variety of strategic and operational issues, focusing on dramatic performance improvement and restructuring to achieve transformational change. Mr. Ellis, who has edited two books on transforming the finance function, serves on several advisory boards. He is based in Atlanta.

james.m.ellis@accenture.com

Paul F. Nunes is an executive research fellow and the executive director of research at Accenture's Institute for High Performance in Boston. His work has appeared regularly in *Harvard Business Review* and in numerous other publications, including the *Wall Street Journal* (“Beat the Clock: How Companies Can Use Time to Their Competitive Advantage,” October 2009). He is also the coauthor of *Mass Affluence: 7 New Rules of Marketing to Today's Consumers* (Harvard Business School Press, 2004). In addition, Mr. Nunes is the senior contributing editor for *Outlook*.

paul.f.nunes@accenture.com

Outlook is published by Accenture.
© 2010 Accenture.
All rights reserved.

The views and opinions in this article should not be viewed as professional advice with respect to your business.

Accenture, its logo, and High Performance Delivered are trademarks of Accenture.

The use herein of trademarks that may be owned by others is not an assertion of ownership of such trademarks by Accenture nor intended to imply an association between Accenture and the lawful owners of such trademarks.

For more information about Accenture, please visit www.accenture.com