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# Fit *for* Business

*Precor is already known for its excellent fitness equipment and is now becoming known for excellence in manufacturing, too. Operations vice president Bill Dixon gives Ruari McCallion a good workout.*

It's well known that the human body was not designed for sitting in cars, attending meetings, and slouching in front of the TV with a six-pack in one hand and a remote control in the other. The Creator had in mind activities that, today, we would regard as unacceptable: chasing after wild animals, bringing them down, dragging carcasses back home, and then spending long afternoons tending crops in the fields. A lack of physical activity creates health problems, across the US and the entire developed world. Back in the early days of civilization, you could live to a reasonable age without ever encountering obesity or diabetes, and I don't believe they had a word in Ancient Egyptian for "furred" arteries. Today, heart problems and the consequences of sugar, salt, and fat-rich diets lead to lives that are less fulfilling than they could be. Given the shortage in our cities of saber-toothed tigers and woolly mammoths to hunt, we have to make up for our lack of physical activity in other ways—and the chief of these is a good, supervised workout in the gym. Although the thought of exercise is off-putting for many, the feeling of well-being after a session makes it (almost) worth it.

Our whole being reacts positively: skin tone improves, our eyes shine more clearly, muscles feel toned, our brains are alert, and even the colors of the everyday world are a bit brighter. With rewards like that, it's little surprise that personal fitness has moved a long way from its early cult status to a mainstream activity, nor that the supply of training equipment is now a multi-billion dollar industry.

Precor is a leading company in the design and supply of fitness machinery. It's a brand name that features some of the most widely used training equipment in both home and commercial gyms. That their equipment is bought by gyms all over the world reflects the advanced design that has been Precor's hallmark since its foundation. It's been breaking new ground since 1983, when industrial designer David Smith launched his 610 rowing machine. Based on an adjustable hydraulic piston system, the 610 was refreshingly simple and became a huge success: it was awarded Consumer Product of the Year in 1983 by the Aluminum Extruder Society of America.

"Precor is known as a company of firsts," said President Paul Byrne. "We introduced the first semi-recumbent

cycling machine and the first stair climber for home use, both in 1987. We designed and manufactured the first pre-programmed treadmills ever seen and were the first to incorporate microprocessor-based electronics into our equipment. We're very proud to have earned a reputation as an innovator in the fitness industry, with products that have a better feel than anyone else's." The company's latest innovation is the EFX Elliptical Cross-Trainer, which exercises with a no-impact running motion. "The EFX is a very hot product," operations VP Bill Dixon said. "People with foot, knee, and hip injuries can use it without aggravating their injuries."

Ergonomics has been a focus of interest for Precor since it was established. Well-designed machines that are comfortable and intuitive in use are more likely to be used. Equipment that helps the user to make the most of their workout session means that effort will be focused on the right areas, rather than wasting energy—and designs like the EFX cross trainer keep stress injuries to a minimum, also. Whether in the home—the company's original marketplace—or in the commercial gym,

it's all part of Precor's commitment to help people get moving.

Precor's head office is in Seattle, Washington, and it has five production facilities in the area, including Woodinville and Bothell, Washington. It works with more than 300 specialty fitness dealers in the US and is represented in over 100 countries worldwide. With revenues ranging from \$150-\$200 million, it's one of the largest manufacturers of fitness equipment in the world. In 1999, Precor and its parent company, Premark, were acquired by Illinois Tool Works Inc., a *Fortune* 500 company. The acquisition was very good for Precor, as many of its manufacturing processes were from another age. ITW has introduced contemporary techniques and given its subsidiary a thorough industrial workout to make it fit for the 21st century.

"The company was trying to do everything," Dixon said. "It was totally vertically integrated, doing a lot of stuff, and technology was passing it by. For example, our printed circuit boards (PCBs) were through-hole, rather than surface-mounted: we outsourced PCB manufacture to a local company, which has surface-mount technology. We're concentrating on the areas we do best, our core business—design, assembly, shipping, and service." Precor is now a world away from where it was three years ago and is a case study of what can be achieved in a short time. To appreciate how far it has come, it's worth checking out the realities in 1999.

"On-time shipments were at 42%. We had over 3,000 suppliers—but 80% of supplies came from fewer than 80. Headcount was 952, and we had high employee turnover: if parts weren't delivered on time, the entire workforce was sent home." Time spent at home meant money lost, so it wasn't surprising to find that staff looked for employment that offered more regular hours. The picture now is of a lean, efficient plant, with high levels of employee, supplier, and customer satisfaction. "On-time shipments are at 91%, and inventory is

down 40%. We have 242 inventory suppliers and get 80% from 40 of them. Headcount is now at 456, and warranty claims are down by 57%." The reduced headcount has not impacted on production: total output at the five remaining plants (there were seven, previously) is actually higher than it was in 1999—production on a labor-intensive line has been outsourced to a plant in Taiwan—and revenues have improved. The reduction in warranty claims alone is measured in millions of dollars, and the waste involved in training employees who then leave for more regular pay has been slashed. Transformation is an over-used word, but nothing else describes Precor's progress. I asked Bill Dixon how it had been achieved.

"Precor has been restructured on the ITW model: ITW is a very large company, and it's considered one of the world's 100 best-managed companies, according to *Industry Week*," he said. The key ITW philosophies that have been applied at

even the smallest purchase, we've empowered our employees by giving them credit cards: instead of getting a lot of two-dollar invoices, we get one credit card bill. That 42% on-time delivery figure in 1999 led to a lot of service calls: getting on-time shipment and delivery right has meant we've reduced the background noise and can get on with our job."

Attitudes have been turned on their heads. Defect acceptance is out: zero defects is the goal. Quality is no longer a result of the inspection and warranty claims process—it's thought out, designed in, and built-in. Fault rectification isn't someone else's job—the line must be stopped if there is



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Precor include: the 80/20 rule, the critical few versus the trivial many; USA, understand, simplify, automate; PLS, product line simplification; business simplification; gathering data; and measuring service first and profits second. "Customer service is our number one priority, and the whole business is organized around giving first-class service. We've engaged in business simplification and have looked at everything. We looked at how many invoices we were paying. Instead of requiring an order form for

a problem. Higher quality does not mean higher cost, it's free if the product is made right the first time. The negatives were by no means unique to the old methods at Precor: they're typical of the way that many American companies have been managed in the past, but it is worth noting that ITW believes that "companies that invest proactively in employees' development tend to thrive." "The 17 members of the cell making the EFX cross trainer have been trained to work at 80% of the ►

stations,” said Bill Setter, commercial division director of operations and manufacturing engineering. “Employees have monthly sales meetings that focus on improving processes, on “identifying the Herbie” (the little fat guy in the troop who holds up the Boy Scouts’ hike). We identify where the hold-up is in the process and work on making it go faster.” Does it work in practice? “We’ve reduced direct labor costs by around 25% through robotics and simplified assembly processes. We’re investing in processes, not inventory.”

Precor now believes that suppliers are not adversaries, they’re trusted members of the team. The process of reducing the supplier base from over 3,000 to 242 was not, necessarily, as painful as it might at first appear: the

majority of them were getting very little in the way of orders from the company. A request for a price quotation would usually not result in work, and gaining one order was no guarantee of getting the next, which means the incentive for service was not there. The reduced supplier base is much more involved.

“We’re working more closely with our suppliers on design: they have access to current drawings, and they get e-mail notifications of any changes. They can enter through the Web site and monitor at the highest level—they access their part number and see our monthly requirement forecasts over the next twelve months. We’re operating MRD (market rate of demand) on deliveries, which is purely replacing inventory that goes out of the door,” purchasing director Steve

Klingerman explained. In return for helping the company to work leaner, achieve better quality, and operate JIT MRD delivery schedules, Precor’s key suppliers—the 20% who supply 80% of inventory—now have longer-term contracts and more volume. What’s more, they get paid when the assembly process is complete, rather than having to wait until an overloaded payables department can wade through a mess of two-dollar invoices.

Precor has warmed up, stretched its muscles, and is extending its reach into the global marketplace. It’s launching a new line for the retail market and a self-powered cross trainer, with no electrical points, for commercial gyms. As a leaner, fitter operation itself, it’s ready to help the world become a place that’s fit for life. ●



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