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ratan tata: india's design leader

by gita piramal

Design is the Future

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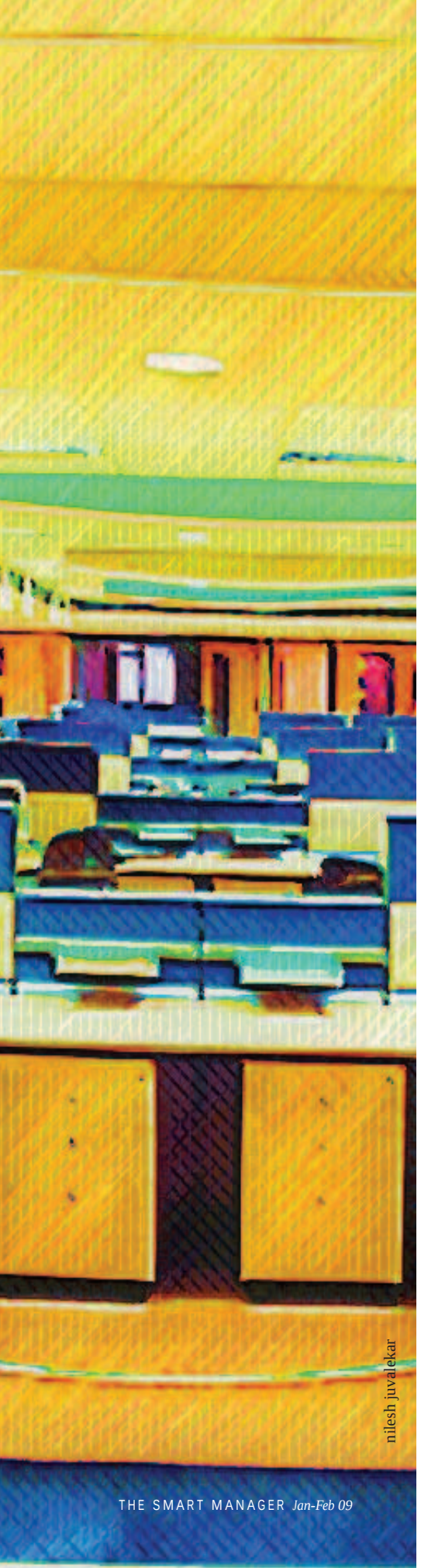
design at ergo

Ergo, India's premier office furniture manufacturer, puts design at the heart of its business and has developed sophisticated processes for customer-led design

A pioneer who introduced the concept of factory-made office furniture systems (OFS) into India, Ergo has built a successful business by selling the idea of well designed, well made, benefit-rich modern modular office furniture to CEOs and architects. The company uses a mix of outside and internal design talent.

Initially all concepts were introduced by award winning international external designers. Since 2006 there has been a greater emphasis on strengthening internal design capabilities. In 2005, the internal team won its first award: the NID-Business World Design Excellence Award for its Totem range, the first for an office furniture company.

Unusually, the design process originates in the sales team which listens to customers, and develops a concept together with internal designers based on customers' perceived needs.



nilesh juvalekar

at Ergo, DESIGNING *takes place at four* LEVELS*: concept,* CUSTOMIZATION*, design engineering, and CAD/CAM* SUPPORT

Once top management has okayed the need for a new system and allocated a budget, sales and design collaborate to refine the basic concept. Senior managers from different departments then guide the internal design team and specialist engineers through the entire design chain until the concept becomes part of mainstream manufacturing.

key elements of ergo's design strategy

Because of this, the company has developed sophisticated in-house techniques for evaluating the potential of particular concepts and for preserving the internal design team's original intent (based on customer needs) from drawing to mass production. Key elements of this capability include:

- alignment of corporate strategy with design strategy
- listening to customers and converting subtle hints into a concept
- assessing the potential of new designs through sophisticated analyses of market size and manufacturing costs
- ensuring that the final design meets strict environmental norms
- skilled design engineers who act as intermediaries between designers and manufacturing
- developing total design, right up to final installation stage
- willingness to maintain a large product portfolio and to market test designs for extended periods

At Ergo, designing takes place at four levels: concept, customization, design engineering, and CAD/CAM support for its customers.

Ergo operates in a highly competitive market where freshness is important to sales, and where customers are extremely demanding in terms of the manufacturing quality of products. As orders vary hugely in terms of value and size, its supply chain is under continual pressure. Raw materials such as aluminium profiles, particle boards and hardware components for example can be purchased locally or imported: the decision for each order requires delicately balancing costs with timelines, availability with value engineering besides a host of other such inter-related decisions.

innovation

In addition to offering one of the world's largest ranges of office furniture products to customers, Ergo has a relentless determination to offer American quality at Chinese prices for its customers, backed by full adherence to environmental norms of the global office furniture industry.

meet the team

Besides working with leading and award winning design firms based in Australia and the UK, Ergo has a strong internal design team composed of conceptual designers, adaptive designers, designers who specialize in customization, design engineers and CAD/CAM technicians. Total strength is 48 designers, technicians and associates located in Nagpur and across the country.

ergo's history

Launched by the Piramals in 1992, Ergo worked with Australia's Chris Sykes to create a new market under the Element brand. Replacing the friendly neighbourhood carpenter was a tough job initially. It took a while for CEOs, managers and even architects to accept the significant advantages of factory-made office furniture, let alone the concept of systems. However by the beginning of the new millennium, the idea was firmly established even if OFS sales formed a fraction of the total office furniture market. During this decade, several new players entered the market. Competitors from Malaysia and China further opened up the market in early 2000. However Ergo continued to be the leader and an aspirational brand.

design is at the HEART *of Ergo's corporate* STRATEGY: YESTERDAY, *today and in the* FUTURE

Interestingly, advances in information technology provided a boost to the fledgling industry. India's new IT firms (both Indian and MNCs) quickly placed orders on Ergo because of Element's impressive integrated wire management design solutions. Banks and financial services firms followed suit. As more and more companies began building their IT backbones, the OFS industry finally took off. In 2004, Ergo enhanced its manufacturing capacity, by spreading over an extra 50,000 square meters of space over and above the original 33,600 square meters

These events were followed by another trend: the globalization of Indian companies, a result of several macro-economic factors. In the early 2000s, the Indian government liberalized the rules on foreign exchange, making it far easier for local companies to buy companies outside India. Ergo followed its customers, and executed jobs in Europe and the Middle East.

And in 2007, when the retail revolution began, Ergo quickly launched its shop fitting division. Its willingness to listen to customers combined with internal design capabilities strengthened in the mid-2000s enabled Ergo to establish a clear leadership position in this sector within a year. Achievements such as wining orders in the telecom sector against experienced global competitors bolstered the company's morale.

evolution of design at ergo

design process evolution

Ergo launched with only one designer, Chris Sykes. Gradually Ergo expanded the design team. Adaptors were needed to tweak element for Indian conditions both in terms of materials - this was in the 1990s, when India was just beginning to open up, imports were not allowed, and many of the raw materials and components embedded in Sykes' designs were simply not available. His designs also needed tweaking because Indian requirements are very different from American ones: the Indian physique is smaller, requiring lower height worktops for example. The larger amount of paper work in the typical Indian office requires more storage space. And Indians look for higher levels of durability than is normally worked into international design.

The task of recruiting local designers was made more difficult by the shortage of design schools.

Gradually however a design department came together. First came the design engineers who could translate design concepts into drawings that manufacturing could use. Then came the CAD/CAM technicians. This was an important step as architects, so far familiar only with carpenters, had to be educated about how to use modular office furniture systems for their clients. Ergo recruited CAD/CAM technicians to support architects willing to give the new system a trial.

Ergo entered the third phase of its design history when the first concept designer was recruited internally. Today Ergo works with young external product designers, a step which requires a greater degree of management sophistication.

organizational position & influence of design in ergo

Design is at the heart of Ergo's corporate strategy: yesterday, today and in the future. In the past, design was the pillar on which the company was established. In the future, design will provide the competitive edge needed for survival and growth in a business where the product has become commoditized.

design capability building

Ergo believes that success in the OFS business lies in the quality of the installed office delivered to the customer at his or her location. This makes it essential to build end-to-end capability from understanding a customer's needs to handing over a comfortable work experience or pleasure at work.

Ergo's design studio in its Nagpur factory aims to provide solutions to customers in terms of ergonomics, space optimization and timely execution. CAD teams located at

the design PROCESS *at Ergo is an elegant* MIX *of formal* ACTIVITIES *and informal* INTERACTIONS

Ahmedabad, Bangalore, Chennai, Delhi, Hyderabad, Kolkata, Mumbai and Pune facilitate quick response, supported by the centralized team at Nagpur who have a repository of hundreds of solutions executed in the past sixteen years. Moreover, in-house developed software for layout designing gives tremendous flexibility in terms of experimenting with different solutions and finishes.

The full fledged design studio is supported by a prototyping shop, a tool room and an excellent vendor base. They convert customer needs into reality through speedy product development and manufacturing.

For standard as well as customized products, Ergo has a test laboratory which simulates life cycle behavior through "Accelerated Life Cycle Testing". For example, if a designer plans to use a particular hinge, the component is tested in the lab for the number of times a cabinet shutter using this hinge can be opened and shut. Typically the Ergo standard is 80,000 cycles. The test lab therefore assures proven designs within a remarkably short period of time.

One of the hardest aspects of design is to make sure that the end result exactly matches the customer's brief. This task is even harder to achieve in an office fit out with multiple decision makers such as the CEO, the facility manager, the architect, and the firm's employees. In a typical project, decisions related to the office furniture requirement change frequently, from the wood finish to the fabric design, to the number of workstations required. It is very important to maintain documented clarity of information at every stage.

Layout drawings, bills of material, despatch documents or product specifications: every bit of information on a project is captured and exchanged completely on-line through a robust IT infrastructure and a home grown ERP system.

market

With one of the largest ranges of modular office furniture in the world, Ergo manufactures partition, tile and pole based office furniture systems as well as conference tables, storages, desks, caddies and pedestals. The shop fitting business is carried out under the ErgoPOP brand.

status

Some statistics about Ergo:

- 12.8 million square feet of office space furnished since inception
- 300,000 workstations supplied in the last five years
- 2,000 locations serviced annually
- 44 cities outside India where Ergo (both systems and shop fittings) can be seen.

the ergo design process

The design process at Ergo is an elegant mix of formal activities and informal interactions. It follows the guidelines of ISO 9000:2000 and evolves through team knowledge and experience gained from previous product developments and customer feedback. Some of the activities described below take place sequentially, others happen in parallel.

- typically the concept originator is sales. Ideas trickle upwards from the sales force who obtain ideas through listening to customers. The head of sales then prepares the product brief.
- there are formal Design Review Meetings where a multi-functional team comprising of the heads of manufacturing, sales, marketing and design meet monthly to brainstorm over the design concept or customization.
- a study of local and international designs is undertaken. Both the design as well as the sales team conduct research on competitors (local and international) to benchmark the new design.
- once sales approves the first prototype, estimates are

Ergo's PRODUCTS *have always been* ENVIRONMENTALLY *friendly as its* MODULAR *office furniture systems can be* RECYCLED *easily*

drawn up of the capital investment required for new parts, tooling, specific process machines etc. A parallel process of quality planning for overall assessment of product features, quality requirement, special tools, processes and skills required gives a cross functional feedback.

- in the next stage, drawings are released for the development of parts and tooling in the correct sequence keeping a strict watch over timelines. All newly developed components are individually checked and validated against their respective matching parts. Once all parts are ready, the complete product is assembled to demonstrate the various configurations likely to be offered in the market. At this stage the product also undergoes "Accelerated Life Cycle Testing" and anticipated use and abuse by users .
- the quality planning meeting at this stage takes a complete feedback of all respective functions to address appropriate corrections.
- the next stage is selecting a beta site in order to obtain complete feedback of product behavior including manufacturing, installation and user experience.
- the product is then handed over to marketing for preparation of product launch, brochures, architect visits to the factory for actual demonstrations; and to manufacturing for full production.

The typical time taken for product development varies from six months to twelve months.

ergo case study: the green connect

the business requirement

By design, Ergo's products have always been environmentally friendly as its modular office furniture systems can be recycled easily. Moreover, components can be used and reused multiple times over a period of at least a decade. The factory had early in its history introduced the idea of water recycling, and energy conservation was a continuous priority in every manufacturing process.

However, a change in leadership in December 2006 brought a new focus within Ergo on the need to be even more conscious of the environment.

discover

All through 2007, Ergoites brainstormed within and outside the newly constituted leadership team, at the branches and in the manufacturing plants about how Ergo could convert an aspiration into a reality. Gradually the debate narrowed down to a single question: can design help reduce waste? Clearly some out-of-the-box thinking was required. Members of the leadership team fanned out in their quest for solutions, and discovered several thought provoking ideas in unlikely places.

- listening to customers :Today, green certification is a must for many of Ergo's customers, be it to obtain PE funding, secure orders from government agencies, or in the case of several IT firms, for winning orders from international firms. Such customers were keen that Ergo offer green certification for its products, which would then be converted into points which they could add to their own certification
- listening to the board : Ergo's board of directors were amongst the earliest to point out the advantages of going green, and freely shared their own experiences
- learning from China : One of the first steps Rakesh Kapoor did after taking over as Ergo's Managing Director in June 2007 was to understand the Chinese office furniture industry. Fact finding trips were made by several multi-functional Ergo teams to Chinese factories. One fact which jumped out was the extremely low level of wastage in Chinese manufacturing. Chinese benchmarks which did not affect Ergo's quality standards were quickly accepted as a challenge by Ergo's design team
- learning from the experience of others : Perhaps the most advanced OFS firm in the world in terms of its environment

friendly products is USA's Herman Miller. Ergo met up with the consultant who had worked with Herman Miller on green projects. In addition, a lot of useful data was collected using the Internet and networking with firms in non-compete businesses.

■ BIFMA : The clearest direction about the way forward however came during a BIFMA meeting in Tampa (Florida, USA). OFS makers from across the world met together to freeze the parameters for a 'green' certification award for the office furniture business. Highly detailed, the BIFMA standard is similar to LEED certification used by the construction industry. Ergo represented the Indian experience and point of view.

Though many leads were unearthed during this exploratory period, equally it quickly became clear that Ergo would need to innovate and develop its own, unique solutions to the challenge. 'Green' manufacturing was just too new an area globally, with no established benchmarks.

define

It was a hectic period of discovery. Several ideas were tossed around, and over two dozen projects launched. Significantly, the best results came from myriad small improvements in design. There was no single blockbuster breakthrough. Collectively however these small changes enabled an impressive improvement. The way in which an existing system, Connect 50, was redesigned illustrates the key role design played in Ergo's greening.

The first step was to define objectives. Five were adopted:

01 incorporating life cycle thinking in the design process
02 improving material utilization
03 increasing recycled content and recyclability in materials used
04 improving water efficiency
05 improving the durability of product

The Connect 50 frame assembly has several components: two vertical channels, one top rail, one bottom rail, two horizontal pipe assemblies and one transom rail. With an average production of 5,000 frames per month, Ergo was consuming nearly 8,500 kgs of steel. The design is now changed where a horizontal steel pipe is replaced by a wooden member derived from waste generated during the manufacturing of other prime components. This new wooden frame would typically earlier have been disposed off as solid waste.

The new design reduced wastage in wood consumption, replaced steel by wood which is a renewable source of material, and also improved the earlier design through better structural rigidity and dimensional stability.

deliver

The quick - and visible - small successes combined with new learnings energized Ergo. Looking for ways to become 'greener' by preventing waste is becoming a habit at all levels and all locations. Meanwhile the design team continues to lead the effort through continuous improvement in product design.

evaluation

Consumers, mostly large corporates (Indian as well as MNCs) are always keen on eco friendly products. However these products come at a price and that restricts their usage. At Ergo the challenge was not just to have eco friendly products but also be competitive in the market.

Design innovations lead to improved efficiencies which ultimately lead us to be in a position to offer the same at prices which consumers have found attractive. In the process, these products have become our mainline items and not niche. The benefits have been availed by almost all our customers . At Ergo we feel this is the true sign of design success where we have managed to exceed customer expectations and in the process helped protect the environment we live in. ■

To find out more about Ergo, visit www.ergo.in

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