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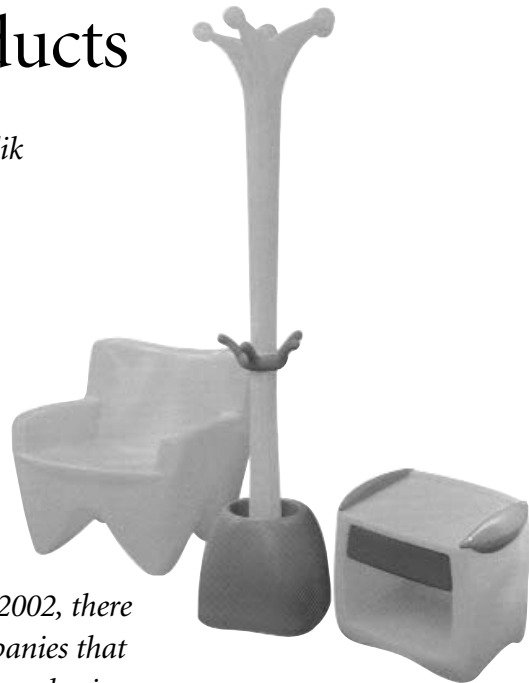
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Design Experience: Transforming Fragile Ideas Into Innovative Products

by Bruce Wood, Geraldo Pougy, and Gisele Raulik

*T*ransplanting a Scottish model, in 2001 the Centro de Design do Paraná, in Brazil, initiated grants to underwrite the hiring of industrial designers. Bruce Wood, Geraldo Pougy, and Gisele Raulik describe how the goal was, within an 18-month timeframe, to exhibit 20 promising production prototypes. By August 2002, there were 41 prototypes on display and 40 local companies that could literally see the potential of design to improve business.



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In the competitive worldwide market, the growth and survival of companies are issues that also concern governments. National economies are strictly dependent on a strong trade sector. In this field, design can be a key tool in the development of competitive goods and services.

However, there is a scenario of resistance from companies facing the risks of investment in new product development. For this reason, countries are becoming aware of the need for mechanisms to promote design practice and to improve design activity in local companies.

Brazil's Centro de Design do Paraná was established in 1999 to provide support for local industries and companies interested in using design for the development of innovative products. Its partnership with a Scottish initiative called the Glasgow Collection has been greatly beneficial and, in fact, resulted in a design program called Criação Paraná (Parana Creations).

Its success proves that it is possible to adopt the same methodology and adapt it to different political and economic situations. This requires, however, several critical factors, and it is these factors we hope to address in this article.

The Centro de Design do Paraná

The nonprofit Centro de Design do Paraná is based in Curitiba, the capital of Brazil's southern state of Paraná. The organization was created as a strategic project inside the Paraná Institute of Technology and, during the first three years, had no more than four people developing pilot projects funded through public money.

As with any new project, the founders faced many challenges in the early stages. Because they felt it was critical to keep their focus and to avoid being sidetracked, they set up three principles to be used as guidelines for their work:

1. *Demand-led action.* Instead of working to compel industries to accept an idea for which they feel no attraction, the organization would focus on identifying companies that were motivated to invest in design and develop innovative products.
2. *No in-house design projects.* The Centro would not compete with operating design consultancies, but instead would help companies to identify, select, and manage design resources. Its role is "to make the wheel of design go 'round."
3. *International references.* The Centro would work to identify the most interesting developments in international design and bring them to the knowledge of the Brazilian design community, as well as to related industries.

All these principles were closely related to a major concern: to build the credibility of the Centro de Design among local industries. Because its focus was "to foster the use of design by industries," the organization decided to be committed, first of all, to the commercial success

of those industries that sought support. It intended its primary service to be one of offering design advice and practical information—how to identify opportunities, how to select a design consultancy, how to set up a design contract and manage a design project—and they planned these services to be performed and delivered with transparency and no personal bias.

During the early stages of its relationships with the companies it was supporting, the Centro de Design operated with a somewhat impersonal and formal attitude. However, as each project began to take shape, a strong rapport between the Centro and its clients grew. This rapport is vital for helping companies to become more open to the use of innovative process. The Centro de Design believes that one of the best ways to encourage companies to use design is to make available services that allow companies to experience the process of innovation. One example is the Ideas Workshop, which gathers the internal staff, sales agents, and clients of an SME together to generate ideas and explore new opportunities.

Scotland Comes to Brazil

In March 2000, Centro de Design do Paraná organized its first international seminar, which showcased a presentation of the Glasgow Collection sponsored by the British Council. The city of Glasgow had recently been voted the UK city of Architecture and Design 1999—a prestigious award for a city that had been known more for its industry than for its design. However, Glasgow had always had a rich cultural

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Case Studies—The Glasgow Collection



HIGHWAY SERVICE WALL
This modular unit, developed by Tony Walker Interiors (TWI), was designed to create flexible working environments. The system can house telecommunications, information technology systems, and power grids, enabling "walls" to be positioned and configured as appropriate to clients' dynamic needs. TWI, which has a strong market position in office furniture and interiors, had seen the

opportunity to move into this market, but needed the extra assistance with design, management of innovation, and manufacturing. The company realized it was in fact dealing with a whole new set of conditions that would require it to control many more of the processes between manufacturing and the marketplace.

TWI designed and developed this product in such a way that owning the manufacturing resource or assembly resource was not required. Its relationship with suppliers allowed the company to fill orders by having all the components delivered to the customer's location, where the final assembly would take place. Once the appropriate business links had been developed and quality and cost factors had been determined, the product could be actively sold.

A close relationship between TWI and its suppliers was developed in order to effectively manage design, quality, cost, and logistics, and this was key to the success of the project. The suppliers were carefully selected so that most of them were within an hour's drive from the company. This approach resulted in a nimble and effective business model that led to significant business; the first order placed, by a high-profile high-tech company, represented a sale in excess of £1 million. This success rapidly spread around the industry, raising further the profile for the company, as well as for the product.

Moreover, this product line is only part of a portfolio of offerings that TWI now sees as critical to its survival.

and historical heritage, and over the past dozen years it had mounted several large-scale cultural events and had been voted the European Capital of Culture in 1990. The Architecture and Design award was also an acknowledgment of work that had already been done by the city's creative industries to create new futures and opportunities for Glasgow.

The Glasgow Development Agency (GDA) had always had a long-standing interest in Glasgow's creative industries, believing them to

represent much potential for future benefit. In 1997, the GDA outlined a project in which those interests could be realized. A fund was made available to be utilized exclusively for new product design development; it would be managed by a team of people external to the agency but acting on their behalf and in their best interests.

GDA also set some targets. First, they hoped to develop 45 new prototype products over two-and-a-half years. Of those 45, they intended that at least 15 should achieve full-scale commercial viability. All these targets had to be achieved within the city of Glasgow; hence the name, Glasgow Collection.

At the end of the two-and-a-half years, the Glasgow Collection included 51 successful new projects, of which 23 were in full-scale manufacture and selling to an international marketplace. Moreover, the Collection and the products within it had won 27 national and international design awards.

A Partnership Is Launched

In March 2000, the Centro de Design had just started working as an advisory service, and it saw in the Glasgow Collection the potential of such a large-scale program. It was evident to the organization that practical advice and stimulus could create a "movement" of companies toward innovation.

Although on the face of it, there seemed to be little in common between Curitiba and Glasgow, Brazil and the UK, it seemed to the Centro de Design that it might be able to replicate the methodology used for the Glasgow Collection. However, it was evident that much attention would have to be given to the way in which the Scottish organization had set up its program.

The Glasgow Operation

Previous projects attempted by the GDA in this area had met with only limited success. The Glasgow Collection, it turned out, was the result of an entirely new methodology.

First of all, a small and dedicated team of professionally knowledgeable individuals was established to manage the GDA's fund. The team was also expected to inspire and engage interested parties—design schools and universities, design companies, retailers, manufacturers, banks, and any organization that might offer some input—to report back to

the GDA on fiscal matters, and in general to raise the profile of design. The members of the team were design professionals who had significant experience in the working environment. This ensured a deep understanding of the main issues to be faced and the skills to deal with pressures on future projects, which would likely stretch the limits and culture of the companies involved, though they would aim for results that were eminently achievable.

This team developed methodology and systems that:

- Minimized bureaucracy so as not to stifle creativity
- Moved funding efficiently and effectively
- Traced all funding and project development
- Reported back to the GDA in an appropriate and timely manner
- Could be easily communicated to the creative industries and other industries in a manner that would develop a high rate of early adopters

The projects themselves varied in scale, scope, and technologies. The Glasgow Collection endeavored to match appropriate designers and design resources to all the projects, and design resources were often matched, as well, to resources such as manufacturing capability and marketplace.

The Criação Paraná

For the Brazilian team, the most attractive aspect of the Scottish program was “the power of the example.” In a business environment in which copying is a common way of developing new products, the idea of taking a group of SMEs across the blurred road from an original idea to a fully working prototype seemed a strategic opportunity.

The “power of example” is important where theoretical explanations are useless. There have been many projects and missions that evangelize and theorize about the importance of design. This methodology recognizes all that has gone before and applies it to the real situation. The essence of the process is that there is a tangible output—the products—and they function as the power of example. When the products are successful, they function as a much more efficient argument than any seminar could ever be. In this way, motivated and visionary companies can spur more timid companies to see the benefits

Case Studies—The Glasgow Collection

FIRST AID KIT

Wallace Cameron (WC) is established in the marketplace as a manufacturer and supplier of commercial and domestic first aid kits. This sector of the marketplace, however, had become commoditized, and the company was under constant attack from other internationally based operators, who were beating it on cost. This position had become untenable for WC, which could not continue to compete on these terms given the economic position of its home base in the UK and the comparatively low-cost base of its competition.

WC therefore planned to go “up market” by sourcing a better product and supplying it for a higher price. Initial marketing investigations suggested this would offer some opportunities. Realizing that it had discovered a market niche for higher-value, better-designed products that no other company was supplying, WC embarked on a design and development program that would result in a new product that it could own, manufacture, and sell.

The resulting product was launched in 1999, after significant capital investment. It was extremely successful, and the demand increased rapidly, making it possible to offer first-aid kits in different sizes and colors and targeting more-specific markets (automobiles and laboratories, for instance). The product range won a Millennium Product Award (UK), which boosted the profile of the company and products.

WC now has a new market niche that it designed for itself while also designing its way out of a cost-cutting market. In order to keep its new market position, the company has also recently established a new in-house design team to manage and design new product introductions and enhancements.



and realize the opportunities of design.

The Paraná State government supported the idea immediately, but would not offer money directly to the companies. So Centro de Design do Paraná looked to the support of other institutions. The National Service for the Development of SMEs (SEBRAE), agreed to offer financial support for up to 70 percent of the design consultancy fees, and the Bank for the South's Economic Development (BRDE) would

Case Studies—Criação Paraná



JOKER CHILDREN'S FURNITURE
 Founded in December 1996, Freso Ltda. was created with the purpose of manufacturing rotomolded tanks for agricultural sprayers. Having a greater production capacity than was being used, the company decided to diversify its product line. In 1999, the Centro de Design do Paraná advised the company in the development of a new rotomolded plastic toy collection. This association resulted in the company's decision to employ a designer in the creation of new products.

In 2002, aiming to take part in the Criação Paraná program, Freso Ltda. decided to invest in a line of furniture for children. The requirements defined for this line were innovative image, exclusive shape, final product quality, user safety, and a competitive price.

Although the company had already worked with some designers in previous projects, it decided to look for others. With Centro de Design's help, they began collecting proposals and ended up hiring the services of ParaDesign. A strong rapport was established almost immediately as both company and designers embraced the challenge of creating products that could promote their image in the national Brazilian market.

The result was a furniture trio called Joker, which fulfilled the company's requirements and soon began to garner design awards and raise the company's profile in the marketplace. Clearly, the success of this project resulted from a new awareness of the benefits of design.

sponsor the promotional material. The Paraná Institute of Technology, which houses Centro de Design, and the Federation of Industries (FIEP) completed a partnership agreement supporting the program that was signed in January 2001. The team agreed on a goal: to develop 20 prototypes and be able to exhibit them by August 2002.

The Criação Paraná Operation

In order to achieve this goal, team members visited 242 companies, of which 47 agreed to join the program. Each company signed a Term of Commitment, which outlined the kind of support the company would get and in turn stipulated that the company would provide a fully operational prototype for exhibition.

Except for a few that already had internal design teams, each company had to select a

design consultancy to work with. This stage was crucial and required the expertise of the Centro de Design in helping the companies define requirements for their projects, write briefings, and select the design teams. The Centro de Design was able to put companies in touch with a range of designers and to organize visits to design offices. It is important to say, however, that the final decisions were made by the companies themselves.

Once projects were under way, Centro de Design advisors were able to offer creative input, brainstorming sessions, updated information (new technologies, for instance) and workshops, as well as technical advice.

As had the Scottish program, the Brazilian version featured a panel of consultants staffed with members of supporting organizations, as well as with distinguished advisors. For its part, the Centro de Design promoted meetings that sustained companies' motivation. The owners of the companies involved, along with the designers, were encouraged to join such events. The Centro de Design intended this as a way to enhance rapport among the project team.

The Criação Paraná also offered participants a day of intensive sessions with the renowned Brazilian consultants Lincoln Seragini and Eloi Zanetti. Another workshop, with Jane Pritchard of IDEO London, was offered for company managers and designers involved in the projects.

By the time the program came to an end in 2002, many companies had become familiar with such terms as user-centered design, blue-sky sessions, and prototyping. The August exhibition included 41 prototypes developed by 40 local companies. For 12 of these participants, this was the first time they had used an external design consultancy. For nine small furniture industries, it was a first attempt at industrial production.

Conclusion

In the short term, demonstration projects of design capability are useful in both the national and international arenas to develop a profile for the region they support. From our observations of the Glasgow Collection, as well as from the Criação Paraná project, it is clear that government schemes can be developed in the area of creativity and innovation. The methodology has already traveled from Glasgow to Paraná and is

also being extended to other parts of the UK. In Brazil, funds from federal agencies have already been earmarked for Criação Paraná 2, as well as to replicate it as a model for a national program. However, there are a few caveats. The products developed by these projects all offer opportunities for future economic benefit—to the company and to the region. Nevertheless, it is important to note that these companies and their products will need continued support in a variety of ways if they are to realize their full potential. A project like Criação Paraná or the Glasgow Collection requires an approach based on long-term thinking. Despite the short-term wins, the real overall benefits for SMEs will accrue over time. It takes time for design to have a significant impact on company culture, and it takes time to establish the image of a whole region as visionary and innovative.

It is interesting to note that the economic positions of Brazil and the UK are very different, with huge differences in histories and aspirations. Nonetheless, the two regions were able to achieve remarkably similar benefits from these projects even while adapting them to local conditions and factors. Importantly, this highlights the need for such projects to act at the tactical, as well as the strategic, level if they are to be successful. ■

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Case Studies—Criação Paraná

CISCO SKATE

Shape, truck, and wheels are the three basic components of a skateboard. In Brazil, teenagers often buy them separately. Imported skates of better quality and design are very expensive in Brazil, where local industry produces good shapes but less robust wheels and trucks.

These considerations led Flying Skateboard to identify a new market niche. Until then, the company produced shapes for other brands. Their idea was to manufacture all three parts and thus occupy a vacant space in the top market at affordable prices.

Flying Skateboard approached the Centro de Design hoping to work with designer—and skateboarder—Fabrício Costa, who soon had a design for a product the company called the Cisco Skate.

The shape required materials research and much testing of traction, flexion, and force. Several prototypes were then built. The truck was developed in aluminum, with a new design aimed at improved performance. The polyurethane base improved fixation and created a sliding area, in addition to better aesthetics.

The wheel has a double component, with a nylon core and a polyurethane external cover. The wheel is narrower to create less friction with the ground, ideal for street skating. Analyses and lab tests were required to determine the best density for the polyurethane.

Now that the skateboard has been launched, Flying Skateboard has spun off a subsidiary company to commercialize the component parts of the skate under the new brand, Cisco. The board has been the most successful of these individual components; there are plans to capitalize on it with a new range of models. The company is looking for a new supplier for the truck, which is being tested for compliance to new international markets. Now, Flying Skateboard is ready to prove that with technology and good design, it is possible to create high-quality products at an extremely competitive price.

