

Canadian Plastics

LEADER OF THE YEAR

Westbridge
PET's
Dave
Birkby

PLUS:
**CANPLAST
AWARDS**



NPE2009 PREVIEW

What to expect

HOT RUNNERS

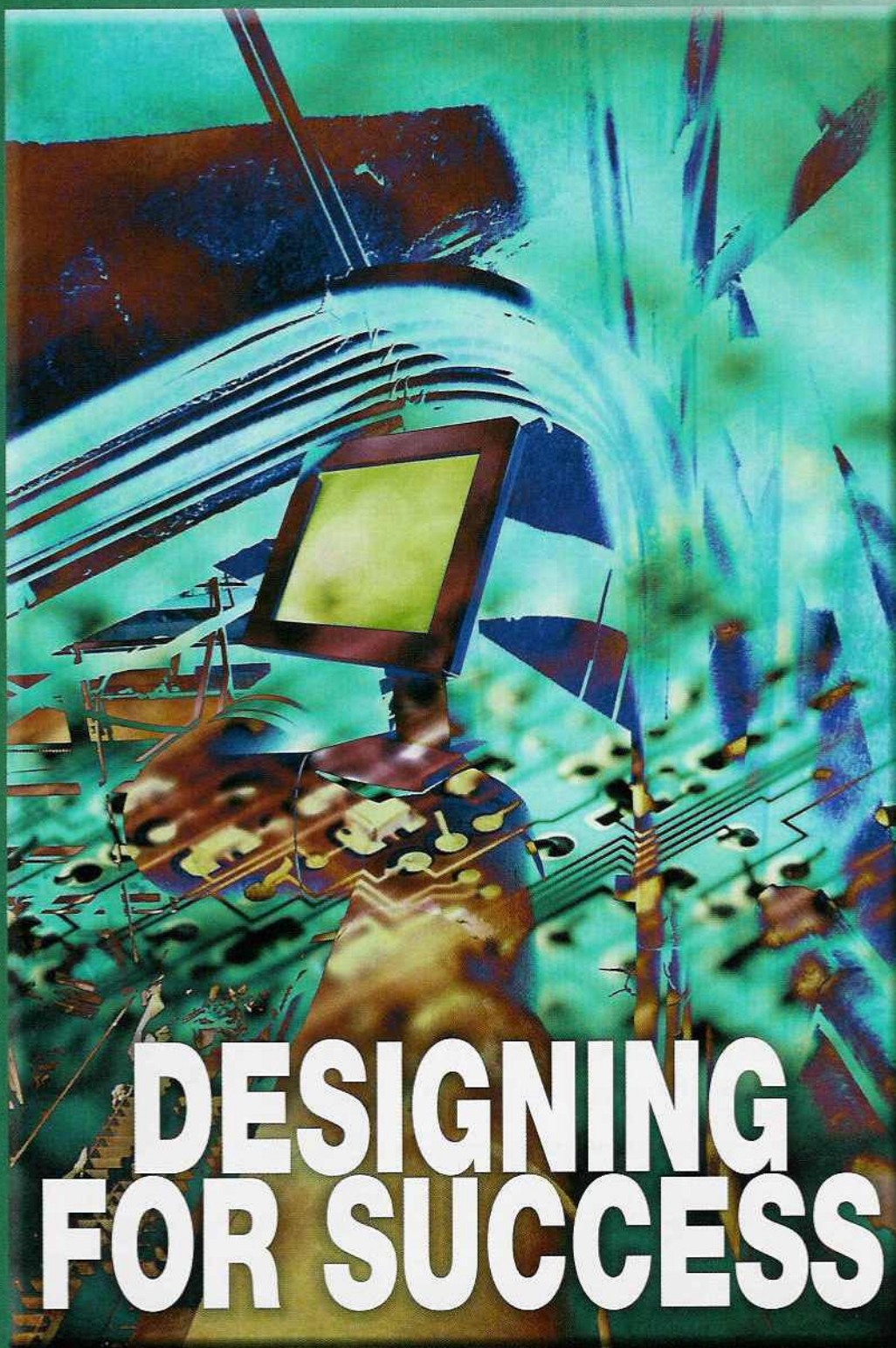
The benefits
of unitized
systems

CHILLERS & TCUs

New & cool

PRODUCT DESIGN

How the right
look can sell
your stuff



DESIGNING FOR SUCCESS

When it comes to crafting products that stand out from the competition, too many plastics manufacturers in Canada are flying — and designing — blind. But it doesn't have to be this way. There's a slew of industrial design firms out there ready to help take your product design to a new level.

By Umair Abdul, assistant editor

Ask a Canadian manufacturer about the key to his business's success, and they will easily come up with a number of reasons: the efficiency of the production, the quality of the finished product, or even the competence of the sales staff. Chances are, though, that "good design" will hardly ever make the shortlist.

However, more brand owners are finding that a well-designed product is the make-it-or-break-it factor in an increasingly saturated market. In recent years, industrial designers argue, product design has taken a front seat when it comes to capturing the public's imagination — and, in turn, a larger part of the market.

"I think it's safe to say that we've experienced a global 'design boom' in the last several years," said Sandro Zaccolo, head of Sandro Zaccolo Industrial Design Inc.

Industry leaders point to companies like Umbra Concept Store, firms that place a strong emphasis on design and engineering. A design studio with graphic artists, industrial designers and engineers are at the heart of the Umbra's head office, focused on new product design. The company also uses computer-assisted design (CAD), and a prototyping lab to breathe life into its new product concepts.

Despite the availability of such companies as these, however, most designers maintain that Canada lags behind other industrialized countries when it comes to cutting-edge products. "Unfortunately, the reality is that Canada has very little design-cultured companies such as

Umbra, Bombardier, and MEGA Brands, compared to other nations such as Italy, Sweden, Japan and South Korea," said Aldo Balatti, the principal and design engineer director, plastic applications specialist for Evolve Design Solutions, Inc. "Also, let's not ignore the fact that many industrialized countries have government design programs to help their companies with R&D, innovation and design. Unfortunately, Canada cancelled its Canadian design program in early 1980s."

"INDUSTRIAL WHAT"?

Nearly every brand owner, in the plastics industry and elsewhere, could benefit from the services of an industrial designer, but designers are mostly used on projects aimed at consumer use.

"An OEM for an under-the-hood part won't care about finding an aesthetic designer," said Doug Clark, president of DC Design. "But if you're making a product that's going to sit on a desk, and is looked at constantly, this can be visibly appealing to someone."

Outside of that, the possibilities are endless. Industrial designers are brought in to work on a range of products, covering many different sectors.

"To date, we haven't been commissioned by many automotive and packaging groups," said Sandro Zaccolo. "We've been busy the last several years with safety products, consumer products, equipment, household goods and a range of hardware."

The word "design" may bring images of fashion designers and interior decorators

to mind for many people, but an industrial designer's role goes far beyond the aesthetic. In addition to making a product aesthetically appealing and in keeping with the latest styling trends, industrial designers also ensure that the product is structurally well-designed and easy to produce. Also, with consumer products, designers have to take other use factors into consideration when designing a product.

"Typically, manufacturers work closely with mechanical engineers and marketing people who don't necessarily possess industrial design training and skills," Zaccolo continued. "As creative problem-solvers with a good base knowledge of manufacturing and materials, we plug various other components into the design formula, which may include ergonomic human factors, consideration for proper disposal or breakdown of a product after its life cycle, and perceived quality in addition to the engineering quality."

Essentially, a good industrial designer's job is to marry design appeal with function, and help a company create a utilitarian product with mass appeal. Aldo Balatti uses the example of Apple's iPod MP3 players, which feature a sleek design, but also have a functional interface and user experience that set them apart from competing products.

WORKING WITH PLASTICS

For plastics manufacturers looking to take advantage of design opportunities, it's important to find a designer with experi-

DESIGN EXAMPLE: Evolve Design Solutions' hearing aid



Evolve Design Solutions was chosen to design a compact and ergonomic plastic wireless handheld remote control for hearing instruments, manufactured by Smart Control. "The main objective was to create an innovative and distinctive new design which would appeal to an older group of end-users," said Aldo Balatti. "Since low eyesight, loss of fingertip sensation, and arthritis are common factors associated with the end-users' age group, the design had to incorporate tactile elastomeric user interface

touch areas, a large button keypad, colour and graphics contrast, as well as an illuminated keypad."

The Smart Control housing components utilized a new decorative plastic resin system called EF technology from Sabic Innovative Plastics. "The user interface touch areas are produced by inserting the top housing in a mold and overmolding the elastomeric substrate onto the plastic housing," Balatti continued.

DESIGN EXAMPLE:

Sandro Zaccolo Industrial Design's construction hardhat



"We have an on-going project with an occupational safety equipment manufacturer, for whom we developed a new construction hardhat," said Sandro Zaccolo.

The shell was designed to convey a new styling within a very traditional end-user group, predominately the construction worker. "We introduced a slight duck-bill into the front visor in order to work with the ventilation we were incorporating for summer use," he explained. "The shell had

very pleasing, hard-edged lines which were both styling cues and geometry to reinforce the shell structure, while also contributing to the product's ability to deflect falling construction tools, and help to route rain water away from face and help provide sun protection."

The company also incorporated a ratchet adjustment mechanism with a contoured pad fitting the rear of the head, and dial ergonomics for the glove-covered hand.

ence with molding environments.

"Generally, we get involved with the plastic processors and suppliers as early as possible, for review and discussion of the part design regarding its design features, mold design, ease of moldability, cooling and ejection, as well as material selection and post-operations," said Balatti, who noted that his expertise in injection molded part engineering and development has been gained with over 500 parts.

According to Balatti, plastics industry professionals looking to bring an industrial designer into the fold should ensure that the firm has a sound knowledge and experience with plastic materials selection, plastic part design and engineering and tooling design.

Additionally, Sandro Zaccolo suggests that that manufacturers look for a strong sense of methodology. At his firm, for instance, the product design process is

broken into four seamless phases.

Overall, designers note that perhaps the most important decision is to get someone involved with the project in the early stages. Doug Clark noted that a good designer, who is well-versed in plastics, and uses prototyping or CAD, could identify immediate structural improvements that can result in significant cost savings.

"A lot of times, the cost-saving alteration can be wall thickness changes, or increasing

ALBA INNOVATIVE SOLUTIONS

Babyplast



Micro Precision Molding Machines



Add On Injection Unit



Vertical



ALBA ENTERPRISES, INC.

Quick Knockout Couplers
5 Sizes Up to 5000 Ton Machines



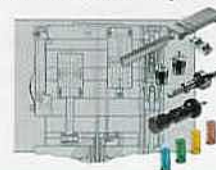
THERMOPLAY

Hot Runner Systems
Pin Point, Valve Gate, Multi Gate,
Hot Edge Gate,
Stack Molds



STRACK®
NORMALIEN

Mold Components
Slide Elements, Latch Systems, Etc.



VEGA

Hydraulic Cylinders
Locking Cylinders



10260 Indiana Court, Rancho Cucamonga, CA 91730 • Tel: 909.941.0600 • 800.432.6653 • Fax: 909.941.0190
Email: alba@albaent.com • Website: www.albaent.com

drafts, or adding more ribs if the product feels too flexible," he explained. "That one minor change performed at the CAD stage can cost multiple thousands of dollars if it has to be made to the actual tool design."

BREAKING THE MOLD

Clark noted that an industrial designer can get involved in a project that is "anywhere from an existing part that is being redesigned, to sketches on a napkin." Designers are also often approached by manufacturers or inventors who have a concept, but need the services of someone who is industrially-proficient enough to execute the design, he continued.

But Clark also noted that manufacturers with an innovative idea that they want to bring to market should be aware of new and competing products that are probably available. "New product designs can often be a tough sell, because there's already too much junk on the market already," he said. "By that measure, it can be hard to bring a new design to market unless you've got something that is absolutely extraordinary," he said.

And while it may indeed be tough sell, industrial designers can often help plastics industry professionals turn their concepts into reality. Sandro Zaccolo is himself a great example of someone who took an idea and turned it into a viable, market-ready product. In addition to his industrial design services, Zaccolo is the co-founder and VP of design at Effbe International Inc., a new design manufacturing company that has started a line of garbage and recycling products. According to Zaccolo, he used his background as an industrial designer to create an innovative floating bin bracket. Much like floating shelves, the floating bin bracket mounts on a wall and is designed to organize standard blue recycling bins on a wall. The ABS-molded part can support up to 50 lbs., while only requiring one wall stud as a main anchoring point. The product is now being sold through Canada's Lee Valley Tools, a woodworking and hardware supplier.

For a plastics product manufacturer, partnering with an industrial designer on a new project offers the real possibility of creating an innovative product made from advanced materials. "I don't think most

consumers realize the number of good Canadian designs on the market," Zaccolo said. He pointed to several clients who have used strong design to forge ahead and blaze their own path. One of them, a racing bicycle manufacturer, has designed one of the best frames in the world, according to Zaccolo. Another, a supplier of golf and fishing equipment, is presently making

a fishing rod with a biopolymer made of extracted carrot fibres.

CPL

RESOURCE LIST

DC Design (Campbellville, Ont.); www.dcdesign.ca; 905-854-3747
Evolve Design Solutions Inc. (Ottawa, Ont.); www.evolve-designsolutions.com; 613-482-9626
Sandro Zaccolo Industrial Design, Inc. (Toronto); www.szid.ca; 416-364-1039

We help your great ideas be great products.

POLYOLEFINS

POLYSTYRENE

PLEXIGLAS®

FUNCTIONAL POLYMERS

ENGINEERING POLYMERS

PVC

FUNCTIONAL ADDITIVES

With smoother, more aesthetic materials, more reliable and solid products and more cost effective and innovative solutions, your ideas can become a reality, limited only by your imagination. As an expert in polymers, Arkema brings the best in innovation to your creativity. With the use of research and production methods at the cutting edge of technology and a presence in international markets, Arkema is able to put the most complete range of services and solutions at your disposal.

Imagine, Create, Innovate...

With Arkema your great ideas become great products.

EXPLORE THE POSSIBILITIES.



Arkema Canada
 700 Third Line, Oakville ON, Canada L6J 5A3
polymers.canada@arkema.com

1-800-567-5726
www.arkema.com www.arkema.ca

ARKEMA
 The world is our inspiration