

Canada's manufacturing sector - a cornerstone of our national economy that accounts for 18% of all economic activity and employs 2.3 million Canadians - is at a critical juncture. **THE QUESTION: How may Canadian manufacturers not only survive, but prosper, in an increasingly competitive global economy?** □ The answer depends largely on how rapidly and effectively our manufacturers adapt to changing market realities and deal with issues including the impact of the stronger Canadian dollar, increasing competition from Asia, changing patterns of customer demand, a shortage of skilled personnel, challenges in commercializing new products and more.

CROSSROADS

BY RANDALL ANTHONY MANG

The hurdles facing Canadian manufacturers are many and they are complex. Yet, experts including members of Canadian Manufacturers & Exporters (CME) - Canada's largest manufacturing trade association and authority - are confident that continuing prosperity is tenable. Sustaining it, however, will require shifts in business and government thinking.

Over the past 12 months, CME has surveyed its members from coast to coast, gathering views to formulate a vision for Canadian competitiveness.

The result is Manufacturing 20/20, an industry report that addresses key challenges with action plans to help Canadian companies continue to succeed. This week, CME brass, government officials and others are gathered in Ottawa to discuss the report and further advance Canada's manufacturing agenda.

CME president and CEO Perrin Beatty says, "Manufacturers have little choice but to be world-class in this new era of global competition, supply chains and market opportunities."

He notes that the business of manufacturing has already undergone extensive change. "We are a long way from the heavy machinery and manual labour that characterized manufacturing in the past."

Daniel Gagnier, chair of CME and senior vice president of Alcan - one of only a handful of Canadian firms of world-class, multinational stature - agrees, "Manufacturing is not about smoke stacks and assembly lines anymore."

He says modern manufacturing encompasses the entire business cycle - responding to customer needs with innovative, cost-effective



PHOTOS: CME

Canadian manufacturers positioning themselves for long-term success are staking their futures on innovation and modern business processes.

solutions produced and marketed to world-class standards.

"It requires investing in research and development to continuously improve products and processes, and building international trade and business partnerships to achieve global supply chain efficiencies and export success. Time, agility and customer service are increasingly important differentiators of competitive success," says Mr. Gagnier.

Mr. Beatty says Canada is not alone in its quest, and must compete alongside other industrialized nations dealing with the emergence of new markets and disruptive low-cost competition, the rapid development of new technological capabilities,

demanding customers and publics, and intense bottom-line pressures.

Export Development Canada chief economist Stephen Poloz says competing in the world today requires an integrative trade model. "Trade is triangular, or even more multi-dimensional than that," he says. "Trade is a tool that spans supply and sales. It requires integrated investments in foreign economies and foreign partners investing in Canada."

As a result, Mr. Poloz believes that bilateral investment and free trade agreements, financial intermediation, market information and assistance supplied by trade com-

missioners are critical for success.

Minister of Industry David Emerson acknowledges that supportive policy is part of the solution. "If we want world-class companies, Canada is going to have to regulate smarter and better than anyone."

He says this means delivering outcomes Canadians want and expect, with the least amount of economic drag and disruption, regulatory overlap, conflict and inefficiency between departments and between governments.

"Clearly, this is a challenge that reaches beyond Industry Canada and must include industry input and advice," says Mr. Emerson.

Perrin Beatty cautions, "Our

existing assets - our resources, our skilled workforce, our proximity to the United States, our political, legal, and fiscal regimes - will help, but they can no longer guarantee our economic prosperity nor that Canada will be able to retain, let alone grow, its manufacturing base."

Mr. Poloz says, "I have every reason to believe that in 2020 we will still have an important and vibrant manufacturing sector. But I also expect it will be smaller - as a share of our economy - and yet produce more stuff than it does today."

He says this paradox will occur as certain aspects of manufacturing move offshore. He notes, for example, that 60 per cent of China's

exports are produced by non-Chinese multinationals. "Conversely, in the U.S., 48 per cent of imports are a result of U.S. companies importing from U.S. offshore operations."

Meanwhile, Mr. Poloz expects domestic output and competitiveness will increase through automation, streamlined business processes and specialization in key areas of advanced manufacturing.

In addition to examples of global leaders like Alcan, the future of Canadian manufacturing is found in companies like London, Ontario-based Purifics ES Inc., a manufacturer of customized environmental water and air treatment solutions.

Purifics, which employs eight, is small, but it thinks and acts like a multinational. Company president Brian Butters says, "We're engineers. We don't offer commodity (low-cost, low-margin) solutions. We design and build turnkey systems that solve our customers' problems."

Mr. Butters makes it sound easy, but Purifics' approach is sophisticated. The company sells into North American, European, Pacific Rim and South American markets through partnerships with local engineering firms. It sources materials and components from around the world and employs monetary strategies to offset the affects of fluctuating currencies. Purifics also spends 15 per cent of its revenues on research and development, and protects its intellectual property through patents, proprietary know-how and tightly controlled product assembly and testing in Canada.

"We see lots of opportunity. We look at the framework set by the world - the tone for delivery, price, quality and solutions. We find ways to meet or exceed expectations. The manufacturing follows. That's how we sustain our manufacturing capability." ■

Addressing the skills gap

BY SUE SHERLOCK

For Canada's manufacturing sector to grow and be profitable and inventive depends largely on one factor - a skilled workforce.

However, there are signs that skills shortages are threatening this sector. According to a Canadian

Manufacturers & Exporters 2003 membership survey, over 40 per cent of CME members reported that a lack of skilled workers was holding back business performance and growth.

According to Shirley Seward, CEO of the independent Canadian

See **Skills gap** CME2

Innovation, a new mantra for competitiveness

BY TED DAVIS

Canadian manufacturers must dedicate themselves to more research and development of advanced technologies to remain competitive in the changing world market, say experts.

Mamdouh Shoukri, vice-presi-

dent, research and international affairs at McMaster University in Hamilton, says Canada already does more manufacturing R&D per capita than any other developed nation. But, he adds, a renewed emphasis on manufacturing innovation in Canada is necessary, given global economic trends.

"Manufacturing companies are

moving to other parts of the world, and jobs are disappearing," said Mr. Shoukri. "R&D will have a significant role in renewing this sector."

He says much of that research can be sourced from Canadian universities, which perform close to 30 per cent of Canada's total R&D, versus 17 per cent for the other G7 countries.

Companies such as Microsoft Canada also help drive innovation by providing software that enhances manufacturers' productivity efficiencies.

"It is important for manufacturers in Canada to realize maximum operational efficiencies in order to

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