Canadian Manufacturers & Exporters
Manufacturiers et Exportateurs du Canada

MADE IN
Canadian Vision
Global Excellence

CANADIAN MANUFACTURERS AND EXPORTERS 20/20

BUILDING OUR VISION FOR THE FUTURE

The future of manufacturing in Canada

Executive Overview

February 2005

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Canadian Manufacturers & Exporters embarked on our Manufacturing 20/20 initiative to create a blueprint that ensures the future prosperity of Canada's largest business sector. Entering into this landmark consultation, we were overwhelmed by the support of Canadian industry. After 98 meetings involving 2,500 manufacturers and stakeholders in communities across Canada, we heard virtually the same message from Newfoundland to British Columbia – business as usual is not an option.

Change is reshaping our industry, not only in Canada, but around the globe at unprecedented pace. The result is the emergence of a new paradigm of manufacturing where innovation instead of volume drives growth; where global business systems instead of production systems are employed; where companies do business not only across the country, but around the world and where competition is not among companies, but in supply chains.

Welcome the 21st century and the new age of manufacturing and global business. Welcome to the future.

Manufacturing 20/20 is in essence a look into the future, to encapsulate the industry's vision for manufacturing 15 years from now. Our goal is to make Canada the most prosperous country in the Americas by that time. In order to achieve that objective, manufacturers and stakeholders across Canada must identify what is within their power to change, focus clearly on priorities for action, and then follow through by implementing solutions, working together to get the job done. Not only must we preserve our industrial base, but we have to enhance it and further develop our ability as a global competitor. If we stand idle, we will be left behind, threatening our industry, our economy and in essence, our way of life. We can't take anything for granted, especially our future prosperity. We must act now. That's the message in Call To Action, a plan by industry, for industry that acts as a compass as we move into the future. The vision set forth by manufacturers across Canada is one of far-reaching change. It is one of significant challenge. However, it is a vision we must embrace if we wish to sustain and strengthen the wealth creating capacity of the Canadian economy, the vitality of communities across the country, and the living standards of all Canadians. Manufacturers have done much more than define a vision. They have emphasized the need for a coherent and integrated approach to managing change. Manufacturers have affirmed the need for more action rather than more words. They have underlined the urgency of situation, because they are at the forefront of the competition and the change that will transform the Canadian economy over the next 10 to15 years.

Manufacturers understand that governments at all levels have a vital role to play in determining our national future, but they also understand that every sector of society must do its part. That is why they have taken the lead in defining their future, setting stretch goals, and establishing benchmarks for progress in achieving the critical factors that will ensure their business success. Their recommendations for action with regard to leadership, workforce capabilities, innovation, international business, business and financial services, infrastructure, and the business environment involve the active engagement of all Canadians – because we all have a stake in the future of manufacturing in this country.

At Canadian Manufacturers & Exporters, it will be our job to assist Canadian industry on its path towards a secure and prosperous future. We invite all Canadians to join with us in this important mission.

Perrin Beatty,
President and CEO
Canadian Manufacturers & Exporters

ALCAN

February 2005

As Chair of Canadian Manufacturers & Exporters, I am proud to be leading this well-respected business association during one of the most important milestones in its history.

One of the largest privately-run public consultations ever undertaken in Canada, Manufacturing 20/20 has taken a critical look at the engine driving the Canadian economy and identified its strengths, its weaknesses and the critical success factors for the future.

A prosperous manufacturing sector is critical to the well being of Canada and to the improvement of the enviable standard of living that Canadians enjoy.

However, Canadian manufacturers are at a critical crossroads. During our Manufacturing 20/20 consultations, manufacturers from every region of Canada spoke about the challenges that would transform the future of their business: an ageing workforce, the emergence of China as an industrial powerhouse, an intensification of competition in international markets, the appreciation of the Canadian dollar, escalating business costs, increased constraints on the supply of energy, trade and border problems with the United States, an erosion in the quality of Canadian infrastructure, and mounting competition with other countries around the world for investments and product mandates.

How manufacturers will respond to these challenges will fundamentally change the nature of manufacturing in Canada over the next 10-15 years. Manufacturers will have little choice but to be world-class in an era of global competition, global supply chains, and new global market opportunities. Innovation will be key in driving higher value and productivity improvements. International trade and business partnerships will be an integral part of business development. New investments will be needed to keep pace with technological change. New skills will be required in a more knowledge-intensive workplace and time, agility and customer service will be important differentiators of competitive success.

At Alcan, we face many of these issues on a daily basis. We are undertaking initiatives to meet these and other challenges that we face in the more than 60 countries in which we manufacture. It has not been easy and will continue to require focus, dedication and hard work. As a Canadian company, we have learned what it takes to be globally competitive. World-class companies understand that this is "their way of life". Success is the only option.

That 's why Alcan has been a significant supporter of Manufacturing 20/20 since its inception and that's why we will continue to support this initiative as it moves forward.

We must work together now -- rapidly, intelligently and efficiently -- to ensure that manufacturers, stakeholders and governments and all Canadians develop a vision to meet the new competitive challenges of a global marketplace, head-on. We must work together to make our vision a reality.

Collectively, we can and must Canada the economic envy of the world by 2020.

Daniel Gagnier
Chair of CME
Sr. VP, Corporate and External Affairs
Alcan Inc.

RBC Financial Group

February 2005

RBC Financial Group is proud to be a national sponsor of Manufacturing 20/20. Along with the Canadian Manufacturers and Exporters Association (CME), we share a commitment to a proactive, made-in-Canada approach that supports the long-term success of the manufacturing sector.

What's especially important about Manufacturing 20/20 is that it brings together the collective insights and knowledge of the people that work in the industry each day. Their valuable input is critical to help shape the future of manufacturing.

Canada's manufacturing industry is on the cusp of a new era that will redefine this vitally important segment. Leaders of industry, government and other key stakeholder groups have a shared responsibility to work together in creating the conditions necessary to grow successful, world-class companies here in Canada. As a major financial institution in this country, we are committed to working with the CME and with other stakeholders to realize the new vision to help this sector grow and continue to be successful.

This mission is not only critical to business; it is critical to the future prosperity of our country and to the future standard of living of all Canadians. We all have an important stake in the outcome.

Yours truly,

Gordon M. Nixon
President & Chief Executive Officer,
RBC Financial Group

The future of manufacturing in Canada

Introduction

CME's Manufacturing 20/20 initiative has resulted in the most extensive consultations ever undertaken exclusively by the private sector in the history of Canadian industry.

Canadian Manufacturers & Exporters launched *Manufacturing 20/20* in January 2004. The objectives of the initiative were to:

- Develop a long-term vision for manufacturing in Canada based on discussions with CEOs and senior executives from manufacturing companies across the country;
- Consult with a wide range of Canadian manufacturers in order to better understand their concerns with respect to the mounting competitive challenges they are facing in rapidly changing global markets;

- Increase awareness on the part of all Canadians about the importance of manufacturing in Canada and the changes that are redefining the industry in this country and around the world; and,
- Bring manufacturers together with stakeholders from Canada's educational institutions and research centres, labour groups, business and financial services, community organizations and economic development agencies, as well as with officials from all levels of government, to coordinate solutions in response to the issues identified by manufacturers as critical to their future competitive success.

Three documents were prepared as background material for discussion. Each are posted on CME's *Manufacturing 20/20* website at www.cme-mec.ca/mfg2020/index.asp. The discussion papers covered:

- The Economic Importance of Manufacturing in Canada;
- The Challenges facing Canadian Manufacturers; and,
- Global Trends in Manufacturing.

The first phase of *Manufacturing 20/20* consisted of 64 discussion sessions that were organized with manufacturers across Canada. Over 900 senior executives from small, mid-sized, and large manufacturing companies, representing all sectors in the industry, participated in these meetings. The discussions focused on four crucial issues:

- What are the challenges and opportunities that will reshape manufacturing over the next 10 to 15 years?
- What changes are occurring as a result of those challenges and opportunities?
- What will the business of manufacturing look like in Canada 2020? What competitive advantages will there be for Canadian manufacturers?
- What are the critical factors required to ensure future competitive success?

Reports from each of these local sessions with manufacturers can be found on CME's *Manufacturing 20/20* website.

The second phase of the initiative involved a series of 36 community roundtables that were convened across Canada from September 2004 to January 2005. Over 1,800 people participated in these meetings, including manufacturers and executives from other local businesses and financial services companies; educators from local secondary schools, colleges, universities, and skills training organizations; representatives from labour groups and local research centres; officials from economic development agencies and other community organizations; and officials from municipal, provincial, and federal governments, including Members of Parliament, Members of Provincial Legislatures, mayors and local councillors.

The roundtables provided an opportunity to report the issues raised by local manufacturers to community leaders. They provided a forum to discuss initiatives that could be undertaken in support of manufacturing in local communities, and were designed to bring the right community leaders to the table not only to coordinate action, but to get things done.

Manufacturing 20/20 also draws upon two other sources of intelligence to identify those factors reshaping the business of manufacturing across Canada:

- Industry associations representing sub-sectors within manufacturing were asked to provide their views about the future of their respective industries in Canada as well as recommendations for change; and,
- CME's 2004 Management Issues Survey was designed to provide detailed input from a wide range of manufacturers across Canada with respect to the key issues affecting their business. A total of 834 companies participated in the 2004 Survey, making the results statistically accurate within three percentage points 19 times out of 20.

Many of CME's members have taken part in the *Manufacturing 20/20* initiative. However, participation in the local discussions with manufacturers, as well as in the community roundtables, industry association analysis, and 2004 Management Issues Survey, has not been restricted in any way, and has in fact extended well beyond CME's membership. The number and the enthusiasm of the manufacturers and stakeholders who have taken an active role in CME's *Manufacturing 20/20* discussions clearly indicate how important manufacturing is to the future well-being of communities across Canada, as well as their common commitment to ensure future economic prosperity.

Canadian Manufacturers & Exporters (CME) is Canada's largest trade and industry association. Its mandate is to promote the competitiveness of Canadian manufacturers and enable the success of Canadian businesses in world markets.

CME's membership is drawn from all sectors of Canada's manufacturing and exporting community, and from all provinces and territories. Over 85% of CME's members are small- and medium-sized enterprises. The association also represents Canada's leading global enterprises. Together, CME's members account for an estimated 75% of total manufacturing production in Canada and 90% of Canadian exports.

The future of manufacturing in Canada
Executive Overview

The well-being of all Canadians depends on a prosperous economy. Our ability to create wealth generates the jobs and incomes that pay for the goods and services we use as consumers. It allows us to pay for our public services, our health care, education, income and social support systems.

How we create wealth and how that wealth gets distributed within our society are also important factors affecting the quality of life that Canadians enjoy. However, our ability to sustain and improve our standard of living ultimately rests on our capacity to generate new opportunities for Canadians – in other words, to continually grow the Canadian economy. A strong manufacturing sector has been and must continue to be a critical element of Canada's economic success.

In recent years, other countries have been gaining on Canada in terms of their ability to generate economic wealth. Canada has dropped from fifth to ninth most prosperous country in the OECD over the past 15 years. Per capita income levels are now 22% higher in the United States than in Canada.

Other countries have been doing better in raising their economic standard of living because they have found more effective ways of building capital and workforce capabilities, capturing knowledge, and expanding business on a global scale. Canadians must strive to do the same if we are to maintain or improve our standing among the most prosperous nations of the world. The quality of life of every Canadian depends on it.

The challenge for Canadians is to close our per capita income gap with the United States – making Canada the most prosperous country in the Americas by 2020. In order to do that, we must continue to grow the high-value, high-paying activities that are part of the modern business of manufacturing in this country.

All Canadians have a stake in building a more prosperous economy, in sustaining the future of their communities, and in enabling the success of Canadian manufacturers and the expansion of Canadian business in global markets. The opportunities our children will have to enjoy the prosperity and the quality of life that today's generation of Canadians takes for granted depend upon decisions that are urgently needed now. We need to set goals that inspire and challenge us. We need to develop a common sense of purpose that unites all sectors of society in our determination to build a better future. Most of all, we need to demonstrate the sustained will that will allow us to achieve our goals.

What is manufacturing?

Manufacturing is the business of embodying value for customers in tangible goods or products. Today, that value is generated by capturing knowledge – by providing solutions through the right mix of products and services that ensure customer success.

Manufacturing is about making things, but it is also much more than that. Manufacturers no longer see their activities simply in terms of transforming raw materials into components or finished products. Today, manufacturing is a business system encompassing all the activities that are required to deliver products that meet customer needs – a system that extends from research and development, design and engineering, to production, logistics, finance, sales and marketing, and after-sales service. It is a system that extends beyond any single enterprise, across supply chains and business networks that are increasingly global in scope and that incorporate services as well as production activities.

The Importance of Manufacturing in Canada

Current statistics only reflect the performance of companies that are primarily engaged in production activities. Yet, even using this narrow definition of manufacturing, the statistics tell the story of a dynamic sector that has become an even more important part of the Canadian economy over the past 10 years.

Manufacturing is Canada's largest business sector, directly accounting for 18% of all economic activity in the country and providing jobs for 2.3 million Canadians. As a customer for commodities, energy, transportation, and business and financial services, manufacturing makes an even greater indirect contribution to the Canadian economy. Every dollar in manufacturing output generates over three dollars in total economic activity. A prosperous manufacturing sector is critical to Canada's economic future and to improving the standard of living of all Canadians. Over the past decade, manufacturing has been one of Canada's high growth sectors. Driven by success in export markets, manufacturing growth has outpaced the Canadian economy as a whole since 1990. Employment in the sector is near record levels. Manufacturing sales exceeded $560 billion in 2004.

Challenge and Change

Despite the strong growth enjoyed by the industry, Canadian manufacturers are at a critical crossroads.

A number of significant challenges lie ahead – an ageing workforce, the emergence of China as an industrial powerhouse, an intensification of competition in international markets, the appreciation of the Canadian dollar, escalating business costs, increasing constraints on the supply of energy, trade and border problems with the United States, an erosion in the quality of Canadian infrastructure, and mounting competition with other countries around the world for investments and product mandates.

How companies respond to these challenges will fundamentally change the nature of manufacturing in Canada over the next 10 years. Manufacturers will have little choice but to be world-class in a new era of global competition, global supply chains, and new global market opportunities. Innovation will be key in driving higher value and productivity improvements. International trade and business partnerships will be an integral part of business development. New investments will be needed to keep pace with technological change. New skills will be required in a more knowledge-intensive workplace. Time, agility, and customer focus will be important differentiators of competitive success.

Canadian manufacturers are restructuring their businesses in response to the challenges they face in the global marketplace. However, they are not alone. The emergence of new markets and disruptive low-cost competition, the rapid development of new technological capabilities, more demanding customers, a more discerning public, and intense bottom-line pressures are changing the nature of manufacturing around the world.

The business of manufacturing has already undergone extensive change. We are a long way from the world of smoke-stack industries, mass production, heavy machinery, and manual labour that characterized manufacturing in the past. Modern manufacturing is highly automated, heavily dependent on technological knowledge and skills, ever more customized and service oriented, and increasingly integrated in international markets and global supply chains.

The future for manufacturers is one of global customers, global supply chains and business networks, and the potential to source from the best companies, the best technologies, and the best skills from around the world. Growth will be driven by innovation and the ability to respond to rapidly changing customer needs. It will be built on sophisticated information and production technologies with powerful capabilities to revolutionize products, businesses, and production processes. It will require ever-greater degrees of precision and flexibility. And it will need new knowledge and highly skilled people to make it work.

The Future of Manufacturing in Canada

In 2020, Canadian manufacturing will look very different than it does today.

Changes taking place in the global market, new technological capabilities, and the re-organization of manufacturing enterprises will transform all aspects of the business in this country. Across all sectors, manufacturers foresee a future for their industry in Canada that will characterized by:

- A highly-skilled workforce dedicated to competitive excellence;
- A greater degree of product specialization;
- Higher-end production processes and business activities;
- An emphasis on innovation, design, branding, customer service and financing activities;
- Lean business systems;
- Highly automated and flexible production processes;
- Rapid deployment of knowledge in the development and use of innovative products and technologies;
- Flexibility as a competitive advantage;
- The development of new electronic networks;
- Integration in global value chains and business networks; and,
- Business operations on a global scale.

Anchoring the Future

In the global economy of 2020, money, knowledge, and people will be highly mobile.

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 or that Canada will be able to retain, let alone grow, its manufacturing base.

According to manufacturers, the vitality of their industry in Canada will be determined by:

- Capital formation – the basis for business growth.
- Knowledge capture – the ability to control design, branding, and intellectual property, and therefore the returns on innovation;
- Market control – the ability of companies in Canada to "be masters of what customers want" around the world;
- Access to a robust North American and Canadian market, to provide the critical mass or platform for global business development and participation in the global marketplace; and,
- A high-value production base that will in turn attract and retain services, design, and innovation activities.

Critical Success Factors

Canada's manufacturing success will depend on the ability of the industry to restructure in response to the challenges and opportunities that lie ahead.

Manufacturers in Canada will have to be fast, flexible, innovative, reliable, quality- and service-oriented, low cost, and aligned squarely behind the objective of customer success, if they are to compete and grow their businesses in the future. They will demand the same enabling qualities from their suppliers and business partners, as well as from the business environment in which they operate.

Seven factors will be critical to sustaining the competitive success of Canadian manufacturing and achieving the goal of enhanced prosperity for all Canadians:

- **Leadership.** Business strategies, public policies and programs, must be coordinated and aligned to strengthen Canada's economic growth potential in the global markets of the future.

  Canadian manufacturers must take the lead in defining the future of their business. The success of manufacturing in Canada must be viewed as a priority crucial to the economic prosperity and well-being of all Canadians. New business strategies must be developed that can sustain growth in global markets. Public policies and programs must respond to the future requirements of manufacturing in global markets and enable business growth. And, together with their business partners, educational and research institutions, communities, labour groups, and all levels of government, manufacturers must be aligned behind coherent and integrated objectives aimed at enabling businesses to respond to the challenges and opportunities of a global marketplace.

- **Workforce capabilities.** Canada's workforce must be prepared to meet the future requirements of manufacturing.

  Careers in manufacturing must be viewed as attractive opportunities for young people. Employees must possess the basic skills required to work in a responsible, innovative, highly flexible, and internationally networked business environment, and take every advantage to improve their capabilities. Manufacturers must be able to find people with the mix of specialized skills they require. Apprenticeship programs must be updated to meet the changing skills requirements of manufacturing. Manufacturers must invest in continually upgrading the skills and capabilities of their workforce. And, more must be done to encourage manufacturers to collaborate in skills training and pool resources to access expert personnel.

  Canadians must have the opportunity to continually upgrade their skills and capabilities. Canada's businesses must be able to rely on an immigration system that enhances their capability to access the skilled people they need. Canada's immigration system must be employed more effectively to enable economic development. In addition, employment practices must facilitate the attraction and retention of skilled and experienced employees, and the continuous improvement of employee capabilities.

- **Innovation.** Canadian manufacturers must be recognized as the benchmark of the world for innovation, flexibility, and continuous improvement.

Innovation must be an integral part of business strategies aimed at managing change. Lean business principles aimed at perfecting process efficiencies must be applied throughout enterprises and across supply chains. Manufacturers will have to focus on rapid and flexible systems of product and process innovation in order to meet customer needs in new, better, faster, and less expensive ways. Innovation and continuous improvement must be priorities throughout manufacturers' supply chains.

Manufacturers must have ready access to best practice and technological and management expertise from across Canada, as well as from around the world. There must be a greater degree of collaboration among manufacturers in innovative research, design, and product development, sharing best practices, and pooling resources to acquire the expertise they need to implement continuous improvement programs. Strong collaborative ties must be developed between customers and suppliers. A strategic and integrated approach is also needed in building local centres of business excellence based on combining innovation and manufacturing strengths.

Public support for innovation must be driven more by market opportunities for commercial application and less by research agendas or the goal of pushing technology into the marketplace. Research and development activities on the part of universities, colleges, and research centres must respond more effectively to the needs of manufacturers. Research centres must base their activities in areas of the country where they are closest to their industrial customers. And, stronger linkages are needed among manufacturers, universities, colleges, and research centres.

Manufacturers need speedier and easier access to government support programs aimed at enhancing innovation, including the SR&ED tax credit system. The role of technology liaison officers in providing specific advice and building linkages between manufacturers, post-secondary institutions, financial services, and research centres should be expanded. Finally, procurement by governments and public agencies must aim to promote the cost-effective development of new industrial technologies.

- **International business development.** Canadian businesses must have the capacity to operate on a global scale.

There must be a more integrated market framework between Canada and the United States, and within the NAFTA as whole. The Canadian government must make it a strategic priority to maintain and improve access for Canadian businesses in the U.S. market. At the heart of its North American strategy, the Canadian government needs to adopt a "preventative maintenance" approach to potential trade disputes, make the Canada-U.S. border seamless for commerce between the two countries, update the rules of origin requirements of the NAFTA, ensure greater harmonization of regulatory compliance requirements between Canada and the United States, coordinate the enforcement of multilateral trade rules more effectively with its NAFTA partners, and eliminate local procurement preferences and withholding taxes across the NAFTA.

Canada needs a China strategy – a coordinated and integrated approach to respond to the economic challenges and take advantage of the business opportunities posed by China and other rapidly emerging economies like those of India, Russia, and Brazil. We must ensure that multilateral trade rules are effectively enforced, and that health, safety, environmental, and labour standards are improved and enforced in emerging industrial economies. Our trade agreements must ensure that Canadian industrial and services companies can enjoy more secure and open access into major global markets. There must as well be greater coordination and alignment in trade policy, financing services, and support programs across all private and public agencies in Canada aimed at more effectively enabling international trade, investment, intellectual property protection, and business partnerships in emerging economies.

More generally, business strategies and public policies in Canada must move beyond a model in which Canadian companies are simply exporting to, importing from, or investing in other countries. They must focus instead on the requirements of the global enterprise – on businesses, supply chains, or business networks in which all aspects of commercial activity take place concurrently in a number of countries around the world – and on what is necessary to capture the highest economic benefits of that activity for Canadians. Canada's governments, business and financial services, and educational and research institutions must be able to service and support the activities of manufacturers and other businesses that are operating on a global scale. There is also a need for much greater integration and coordination of Canadian trade policy, international development assistance, trade financing, and export and investment promotion services to meet these new business requirements.

- **Business and financial services.** The changing financial and servicing requirements of manufacturing must be met in a cost effective way.

Manufacturers will continue to source the best in services from around the world. However, there will be an advantage in sourcing local services that are customized and competitively priced, and that offer specialized knowledge and expertise. Business and financial services must provide the specialized expertise and customized applications needed by manufacturers that are themselves focusing on more specialized products and knowledge-intensive activities to grow their business.

Suppliers and services to manufacturers need to be fast and flexible, high quality, customized, and competitively priced. Greater collaboration is needed between manufacturers and service providers to ensure alignment along supply chains. Greater coordination is required across the services sector to develop integrated logistics, supply chain, distribution, financing and information management solutions. Smaller companies in particular need customized solutions – and that will require the services industry to adopt lean business practices and mass customization strategies of their own.

Manufacturers must work with financial services providers to enable them to develop a better understanding of the changing processes and risks involved in modern manufacturing. More integrated financial solutions are necessary to meet the growth requirements of manufacturers and businesses operating in markets around the world. Additional sources of debt and equity capital need to be developed. Solutions must be found that provide cost-competitive insurance services for manufacturers, especially with respect to product liability insurance for exporters to the United States.

Canadian companies doing business around the world need services providers with global scope as well. Regulatory restrictions impeding the development of a national market for business and financial services, or the global expansion of Canadian business and financial services, must be eliminated.

- **Infrastructure.** The capacity of Canada's transportation, telecommunications, and energy infrastructure to meet the future requirements of manufacturing and global business must again become a driver of business investment and economic growth.

Manufacturers, other shippers, transportation and logistics companies, together with all levels of government, must develop an integrated logistics strategy for the country to ensure that future shipping needs are met on a just-in-time basis and at competitive costs. Canada's transportation infrastructure must develop the capacity to meet the growing volume of goods traded within North America as well as with Asia and Europe. We must put in place the infrastructure and logistics systems that will enable Canada to become the logistics hub of North America – the preferred point of entry and exit for trade between North America and the growing Asian market. Canada's telecommunications infrastructure needs the capacity and connectivity to support the complex, high-speed, integrated, and globally distributed information systems and communications networks that will be required within manufacturing companies and across supply chains.

A reliable and cost-effective supply of energy must be available to meet the demands of Canadian industry and fuel economic growth.

- **A competitive business environment.** Canada must become the preferred location in North America for businesses to locate, invest, manufacture, export from, employ, and grow.

Governments must make wealth creation a policy priority and recognize the importance of sustaining a prosperous manufacturing sector. Canada requires a more coherent and integrated approach – involving all levels of government – to improve the business environment for manufacturers, and attract and retain manufacturing investments in Canada. There is also a need for better dialogue between business and all levels of government.

The Canadian tax structure must provide manufacturers and other businesses internationally preferred tax treatment for investments in capital assets and new technologies. All levels of government need a coordinated approach to tax policy to ensure that the overall marginal tax rate on capital paid by businesses in Canada is the lowest in North America, and one of the lowest in the world. Tax policies should aim at strengthening investments in innovation and new technologies through accelerated depreciation rates for manufacturing and processing equipment and the provision of a tax credit for new capital investments.

Governments must develop a regulatory environment that assures effective outcomes, with internationally competitive compliance requirements. The principles of "Smart Regulation" have to be adopted and implemented by all levels of government in Canada. Government decision-making and regulatory processes need to be modernized and streamlined. Governments and regulatory bodies must work closely with business to design and implement the most practical and effective means of achieving desired outcomes at the lowest possible compliance costs. Unnecessary red-tape and time delays have to be eliminated, as do overlap, duplication, and inconsistencies across jurisdictions. Lean management processes should be adopted to cut costs and speed up approvals at all levels of government. There must be greater harmonization of regulatory compliance requirements across provinces, and between Canada and our major trading partners, especially the United States. Canada needs to be recognized as the world's leader in "smart" regulation.

Manufacturing must be at the heart of local, provincial, and national economic development strategies. Federal and provincial governments in Canada must develop a more coherent and integrated approach to competing for manufacturing investments. They have to be prepared to leverage business investments in new technologies and other productive capabilities in order to offset the direct incentives and indirect support offered by other governments around the world. A greater focus must also be placed on attracting manufacturing investments into communities, and Canadian municipalities must have the capacity to compete effectively with jurisdictions outside this country that employ local investment incentives. Public investments in training, infrastructure, business financing and support programs must aim at leveraging business investment, particularly in communities outside major urban centres of the country. Communities across Canada must be able to provide top-quality health care, education, social as well as physical infrastructure to attract both business investments and skilled personnel.

A Call to Action

The vision set forth by manufacturers across Canada is one of far-reaching change. It is one of significant challenge. However, it is a vision we must embrace if we wish to sustain and strengthen the wealth creating capacity of the Canadian economy, the vitality of communities across the country, and the living standards of all Canadians.

Manufacturers have done much more than define a vision. They have emphasized the need for a coherent and integrated approach to managing change. Responding to the future challenges of the global marketplace will demand new strategies, and new ways must be found to get things done. Manufacturers have affirmed the need for more action rather than more words. They have underlined the urgency of situation, because they are at the forefront of the competition and the change that will transform the Canadian economy over the next 10 to 15 years.

Manufacturers understand that governments at all levels have a vital role to play in determining our national future, but they also understand that every sector of society must do its part. That is why they have taken the lead in defining their future, setting stretch goals, and establishing benchmarks for progress in achieving the critical factors that will ensure their business success. Their recommendations for action with regard to leadership, workforce capabilities, innovation, international business, business and financial services, infrastructure, and the business environment involve the active engagement of all Canadians – because we all have a stake in the future of manufacturing in this country.

Working Together to Achieve Our Goals

Our goal is to make Canada the most prosperous country in the Americas by 2020.

In order to achieve that objective, manufacturers and stakeholders across Canada must identify what is within their power to change, focus clearly on priorities for action, and then follow through by implementing solutions, working together to get the job done.

To secure their future, **Canada's manufacturers** must:

- Implement new business strategies to compete and grow in global markets;
- Define the future capabilities they will require of their workforce;
- Continually upgrade the capabilities of their workers and the technologies they employ;
- Adopt Lean and other best practices to improve productivity, manage change, and sustain business growth;
- Significantly increase investments in market-driven innovation, product design, engineering, and automation capabilities;
- Master the management of the global supply chains in which they are a part;
- Implement accountable governance systems and responsible health, safety, and environmental management practices; and,
- Partner effectively with other stakeholders and communities to get the job done.

Workers and labour groups have an important role to play in:

- Participating with manufacturers in understanding and responding to the challenges and opportunities of the global marketplace;
- Assisting in managing change and improving the way that work gets done;
- Implementing innovative solutions in the workplace; and,
- Continually upgrading their skills and competencies.

Canada's schools systems, colleges, universities, and training programs have to:

- Prepare students with the knowledge, skills, and practical experience required by a modern manufacturing workforce;
- Ensure that their curricula, apprenticeship and training programs are in line with the changing requirements of manufacturing;
- Continually upgrade teaching capabilities and the practical experience of instructors;
- Develop new programs to assist immigrant workers to fill gaps in their current levels of training and certification; and,
- Customize the delivery of on-site education and skills training, and make programs more accessible for workers and smaller manufacturers.

Research centres and industrial assistance programs must:

- Measure their success less by how much money is being spent than by how well we transfer new techniques and technologies into the marketplace;
- Promote the adoption of best practices by manufacturers;
- Strengthen liaison networks with industry and other centres of research;
- Continually upgrade their research capabilities and services for manufacturers;
- Base their activities in areas of the country where industry is concentrated in order to facilitate knowledge transfer and collaboration with manufacturers; and,
- Provide more customized solutions to address business needs and create new business opportunities for their clients.

Canada's business and financial services sector will successfully meet the needs of manufacturers by:

- Ensuring that their services are fast, flexible, easily accessible, highly effective, customized, and competitively priced;
- Developing integrated solutions to assist their customers improve operating efficiencies, develop innovative products, invest in new technologies, and expand their businesses around the world; and,
- Providing customized solutions, particularly for smaller manufacturers across the country.

Canada's **community leaders and economic development agencies** have to:

- Position manufacturing at the forefront of local economic development plans;
- Be strong advocates for local manufacturing interests;
- Work with governments to ensure that the appropriate physical and social infrastructure to attract investments and skilled workers into their communities; and,
- Facilitate partnerships with manufacturers and other local stakeholders to get the job done.

No government can simply pass a law that will ensure the success of Canadian manufacturing or our future prosperity. However, governments at all levels do have a vital role to play in developing ambitious goals that can help transform Canada over the next 15 years, in encouraging each of the partners to do its part to achieve those goals, and in demonstrating the sustained political will required to stay on course.

In addition, **Local governments** have to:

- Recognize the importance of manufacturing to the prosperity of their local communities;
- Ensure the availability of high quality, competitively priced land and infrastructure;
- Ensure that local taxes and user fees are competitive and do not erode the business investment upon which the prosperity of their communities is based;
- Streamline regulatory approvals;
- Be able to provide the infrastructure and incentives to retain and attract manufacturing investments to their communities; and,
- Partner effectively with business and other stakeholders and governments to get the job done

Provincial governments must:

- Recognize the importance of manufacturing to the economic future of every province and develop a strong understanding of the changes occurring within the industry;
- Ensure that Canada's tax system offers the best environment for manufacturing investments in North America by eliminating capital taxes, sales taxes on equipment and manufacturing inputs, accelerating depreciation for manufacturing equipment, and providing tax credits for investments in new technologies;
- Lower the costs of regulatory compliance by streamlining approvals, reducing red tape, eliminating duplication and inconsistencies in regulations, and harmonizing compliance requirements across Canada, as well as between Canada and the United States;
- Ensure a reliable and cost-competitive supply of energy;
- Ensure that provincial transportation infrastructures are modern and sufficient to meet the needs of a rapidly-growing economy, and enable public-private partnerships and other financing mechanisms for infrastructure development;
- Increase their investments in educational and skills training programs that meet the future needs of manufacturing and global businesses;
- Increase their investments in support of innovation within manufacturing, the transfer of knowledge and technologies from universities and other research centres to industry, and collaborative innovation and training initiatives on the part of manufacturers;
- Compete effectively with the investment incentives offered by American states, and allow municipalities to offer investment incentives in local communities. Provincial and local governments must understand the site selection process being used with respect to potential investment opportunities, provide a competitive investment environment, but avoid encouraging incentive wars; and,
- Partner effectively with business and other stakeholders and governments to get the job done.

Finally, **Canada's Federal Government** must:

- Develop long-term, ambitious, but achievable goals with respect to strengthening the economic prosperity of Canadians, bring to the table each of the partners that will be required to achieve its vision, and demonstrate the political will to succeed;
- Recognize the importance of manufacturing in achieving its public policy objectives and develop a strong understanding of the changes occurring within the sector;
- Ensure that the tax treatment of business provides an investment environment second to none in North America by implementing accelerated depreciation allowances for machinery, equipment, and automated processes used in manufacturing and tax credits for investments in new technologies;
- Lower the costs of regulatory compliance by streamlining approvals, reducing red tape, eliminating duplication and inconsistencies in regulations, and harmonizing compliance requirements across Canada, as well as between Canada and the United States;
- Develop a strategy for using Canada's immigration system as a tool to promote Canada's prosperity, actively recruiting the best and most ambitious people in the world to join us in building a better future;
- Develop a strategy for a renewed North American partnership. Border delays must be eliminated, and trade disputes rapidly resolved. But, the strategy must go beyond lowering existing barriers to trade. Canada needs to secure our position as the most important trading partner of the United States and leverage our relationship to greater advantage both commercially and diplomatically.
- Develop a strategy that promotes the diversification of Canada's trading and investment relationships, by opening markets for, and supporting the activities of, manufacturers and other businesses that are operating on a global scale;
- Increase support for investments in new technology, for the innovation activities and continuous improvement efforts of smaller manufacturers, as well as for collaborative efforts to assist manufacturers improve their competitive capabilities;
- Tie R&D funding more effectively to the commercial needs of industry;
- Increase investment incentives, and improve the focus, flexibility and accessibility of programs linked to innovation, technology implementation, skills enhancement, and environmental sustainability that are essential for winning large-scale manufacturing investments and product mandates;
- Provide the support and enable the partnerships that will be necessary to make Canada the logistics hub of North America and to ensure a reliable and cost competitive supply of energy to power economic growth; and,
- Partner effectively with other stakeholders and governments to get the job done.

All Canadians have to:

- Understand that the power to build a more prosperous future lies in our own hands;
- Recognize the importance of manufacturing to their future economic prosperity and that of their families;
- Be aware of the dynamic and high-paying career opportunities that exist in modern manufacturing;
- Acquire and maintain the world class skills of their chosen field of work; and,
- Hold manufacturers, governments, and other stakeholders accountable for getting the job done.

Taking the Lead

Manufacturing 20/20 has been the most wide-ranging exercise of its kind in Canadian history.

Thousands of stakeholders from across Canada have taken part in developing an ambitious but achievable vision for the future of manufacturing in Canada. However, the most important part of the work lies ahead. We now need to transform the vision presented by manufacturers and communities across Canada into reality.

Building on the success of *Manufacturing 20/20*, **Canadian Manufacturers & Exporters** will:

- Establish Manufacturing Advisory Councils to work with provincial and federal governments to identify priority issues and continue to define the future requirements of the industry;
- Provide annual updates on progress made with respect to the benchmarks of success identified in this report;
- Continue to listen to and speak on behalf of Canadian manufacturers and businesses operating in global markets;
- Work with all levels of government to ensure that manufacturing and international business priorities are effectively addressed;
- Promote and provide tools to make Canadian manufacturers more competitive, including the development of new manufacturing consortia based on lean principles; promote the sharing of best practices in manufacturing and international business across Canadian businesses;
- Collaborate with its network of associations throughout the world to remove impediments to trade and share best practices;
- Coordinate efforts on the part of manufacturers, local schools systems, colleges, universities, business and financial services, labour groups, economic development agencies, and municipal governments in communities across Canada to address the issues raised by local industry;
- Lead an initiative to heighten public awareness about the contribution that manufacturing makes to the quality of life of Canadians and the career opportunities that exist for young people in the industry;
- Help establish a Canadian Manufacturers' Hall of Fame;
- Launch an initiative to improve communication, coordination, and collaboration among manufacturers, secondary schools, colleges and institutes of technology, business and engineering schools, and training organizations across the country;
- Partner with the Aboriginal Workforce Participation Initiative (AWPI) to encourage the entry of aboriginal people into Canada's manufacturing workforce;
- Partner with Canada's community colleges and institutes of technology to launch a certification program in Advanced Manufacturing Management;
- Continue to lead the effort to ensure that the Canada'–US border plan is implemented efficiently and effectively;
- Continue to lead industry efforts to ensure that regulatory reforms are implemented that require Canadian regulators to meet internationally competitive service standards, streamline regulatory procedures, and reduce regulatory compliance costs;
- Partner with Canada's leading business and financial services companies to offer manufacturers and businesses expanding around the world the customized services they require to take advantage of new growth opportunities;
- Take the lead in developing a national logistics strategy, including preparation of a feasibility study to increase the capacity of Canada's west coast ports and associated transportation systems;
- Work with stakeholders to identify the future telecommunications requirements of Canadian manufacturing;
- Continue to work with the Canadian Industrial Program for Energy Conservation (CIPEC) to maximize energy savings on the part of manufacturers across Canada;
- Assist and encourage Canadian businesses to develop new international markets and suppliers for their production;
- Launch a concerted initiative to improve the tax treatment of Canadian manufacturers;
- Work with federal and provincial governments, trade financing organizations, and export support services to ensure that the requirements of manufacturers and other businesses operating on a global basis are effectively met; and,
- Provide its members with a range of new services that will enable them to compete and grow in global markets.

Benchmarks of Success

Only by establishing benchmarks against which to measure our progress can we be confident of achieving Canada's full economic potential.

The criteria that we use to measure success have to tie the achievements that we make with respect to the critical issues identified in this report to or overall objective of making Canada the most prosperous country in the western hemisphere. And, they must be quantifiable in order monitor progress from now to 2020 and beyond.

CME will use the following benchmarks to monitor progress toward meeting our goals:

	Benchmark	Current Status	2020 Objective
Leadership	• Canadian per capita GDP • Value-added in Canadian manufacturing.	> 82% of United States > 18% of Canadian GDP	> 100% of United States > 25% of Canadian GDP
Workforce Capabilities	• Manufacturing workforce under 45 years of age. • Satisfaction levels with basic capabilities of employees. • Ability to find skilled employees. • Investment in formal and informal skills training. • Ability to retain qualified personnel	> 64% of employees > 66% of manufacturers responding to CME's Annual Management Survey > 77% of manufacturers responding to CME's Annual Management Survey > 2.5% of payroll as reported in CME's Annual Management Issues Survey > 80% of manufacturers responding to CME's Annual Management Survey	> 75% of employees > 95% of manufacturers responding to CME's Annual Management Survey > 95% of manufacturers responding to CME's Annual Management Survey > 5% of payroll as reported in CME's Annual Management Issues Survey > 95% of manufacturers responding to CME's Annual Management Survey
Innovation	• Labour productivity in Canada's manufacturing sector • Capital investment by Canadian manufacturers • Labour productivity per dollar of invested capital in manufacturing	> 1.8% average annual growth (1994-2004) > 8% of manufacturing GDP > 87% of United States	> 4% average annual growth (2005-2020) > 16% of manufacturing GDP > 100% of United States
International Business	• Canada's share of the U.S. import market. • Canadian goods and services exports into markets outside the United States • Outward direct investment from Canada • Canada's balance of payments with respect to licenses, royalties, and direct investment earnings.	> 17% of total U.S. imports > 20% of total Canadian exports > 8% average annual growth (1998-2004) > $27 billion deficit	> 20% of total U.S. imports > 30% of total Canadian exports > 16% annual growth (2005-2020) > Surplus

	Benchmark	Current Status	2020 Objective
Business & Financial Services	• Financing business growth. • Financing new product innovation. • Financing process improvements and new technologies.	> 85% of manufacturers responding to CME's Annual Management Issues Survey > 88% of manufacturers responding to CME's Annual Management Issues Survey > 91% of manufacturers responding to CME's Annual Management Issues Survey	> 95% of manufacturers responding to CME's Annual Management Issues Survey > 95% of manufacturers responding to CME's Annual Management Issues Survey > 95% of manufacturers responding to CME's Annual Management Issues Survey
Infrastructure	• Canada as a port of entry and exit for trade with Asia • Efficiency of the Canada-U.S. border. • Cost-effective infrastructure • Canadian businesses and consumers enjoy secure and adequate supplies of all forms of energy.	> 10% of trade between North America and Asian markets > 46% of manufacturers responding to CME's Annual Management Issues Survey are negatively affected by border delays > 18% of manufacturers responding to CME's Annual Management Issues Survey report infrastructure constraints > 24% of manufacturers responding to CME's Annual Management Issues Survey see the reliability of Canada's energy supply as a constraint on future investment.	> 30% of trade between North America and Asian markets > 0% of manufacturers responding to CME's Annual Management Issues Survey are negatively affected by border delays > 0% of manufacturers responding to CME's Annual Management Issues Survey report infrastructure constraints > 0% of manufacturers responding to CME's Annual Management Issues Survey see the reliability of Canada's energy supply as a constraint on future investment.
Business Environment	• Direct investment into Canada • Capital intensity of Canadian manufacturing. • Marginal effective tax rates for manufacturing. • Regulatory processes meet international best practice standards.	> 13% of total direct investment into NAFTA countries > 73% of capital investment levels in U.S. manufacturing > 28.8% marginal tax rate on manufacturing investments > Not reported	> 20% of total direct investment into NAFTA countries > 100% of capital investment levels in U.S. manufacturing > 15% marginal tax rate on manufacturing investments > 100% compliance by federal departments with standards set under 2004 User Fee Act.