PERSPECTIVES

2011 ANNUAL MAGAZINE

Funding Canada's Aging Municipal Infrastructure

The Importance of keeping up with our aging Municipal Infrastructure

The Covernment's Role In Funding Infrastructure

Defining the roles of our Governments for infrastructure funding across Canada

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A Publication of the Manitoba Heavy
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Chairman's Message — Barry Arnason



As my last year of Chair of the MHCA, I would first like to thank our members and supporters during my two years as Board Chair. It has been a rewarding and challenging experience, and an experience I would recommend to anyone in our industry.

You'll see throughout this year's Perspectives many timely and important topics. As an industry we should be proud of the work we have achieved and will continue to achieve as the years roll by. The stimulus funding may be ending, but we have lots of work left to do in our Province and across Canada to catch up to the infrastructure deficit we have. I certainly look forward to doing and seeing more great work across our Province and country.

I am also pleased at the work the MHCA has done over the past year. As you may have noticed, we've gone through a rebranding process that has just been completed in time for this year's magazine, with a new MHCA logo on our cover this year. We also are using the new tagline "groundbreaking", which I think sums up really well our Association as a whole.

The MHCA Safety Program, now re-named the *WorkSafely* program, is focused on better serving their clients and making sure they all achieve their COR certification and continue to ensure everyone goes home safely at the end of the work day.

I'd like to offer a special thank to my fellow members of the MHCA Board of Directors for their commitment and support during my tenure as Chair, as well as all of our members, supporters, and the MHCA staff.

Here's to another fantastic year for our industry!





President's Message — Chris Lorenc



I am excited and pleased to see our 2011 *Perspectives* annual magazine has covered many thought provoking issues which are impacting our industry today.

This year we wanted challenge the reader, to thinking about what issues are important in our industry today and beyond.

I invite you to read the many interesting articles, ranging from how we can fund municipal infrastructure, the challenges we face in the industry, and how we can continue the momentum of having infrastructure funding a key issue in Government post-stimulus.

At the MHCA, we are also excited about our re-branding initiative (see the article on page 44) that has taken the better part of a year and is continuing as a work in progress into 2011 which will make our Association feeling refreshed, modern and exciting to all of our stakeholders.

We're also excited about our safety program, now called *WorkSafely*, which is committed to better serving our clients, achieving their COR status, and continuing on a path to excellence in safety in our industry.

Special thanks goes to the support of our contributors and, most importantly, our advertisers whose investment allows the distribution of *Perspectives* across Canada to senior public and private policy makers, Members of Parliament and of legislatures, City Councilors, key public sector administrators, university and public libraries, purchasers of construction services, the broad construction and related industries in Canada, students of public policy and those interested in industry Perspectives as communicated through our publication.

As always, we look for improvement and so if you have any suggestions, I welcome them directly to my email address which is clorenc@mhca.mb.ca

Enjoy the read and enjoy Perspectives 2011.

Chiabres.

PERSPECTIVES *

A Publication of the Manitoba Heavy Construction Association • 2011 Annual Magazine



Funding Canada's Aging Municipal Infrastructure

FCM President Hans Cunningham discusses the need for a long-term plan to upgrade our aging municipal infrastructure across Canada.



Roles & Responsibilities of Government in Funding Municipal Infrastructure

Enid Slack proposes what roles each level of government has to ensure proper funding of municipal infrastructure.



CentrePort Canada — A Year in Review

CentrePort CEO Diane Gray gives a year in review on CentrePort, which had many accomplishments and exciting news over the past year.



Manitoba Construction Career Projections

Manitoba Construction Sector Council Executive Director Taras Luchak reviews the role his organization plays in helping acheive a solid career in the industry.

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MUNICIPAL INFRASTRUCTURE CHALLENGE CALLS FOR LONG-TERM PLAN

"In today's interdependent world of trade and security, modern, smart infrastructure is not a luxury, it is a necessity."

Finance Minster Jim Flaherty, speaking to the Canadian Urban Transit Association in 2006.



HANS CUNNINGHAM

MINISTER FLAHERTY WAS RIGHT. For Canada to prosper in the global economy, our cities and communities need the infrastructure, transportation networks and quality of life to compete for new jobs, talent and investment.

We don't have the infrastructure, at least not yet. And although we're making progress, the infrastructure in our cities and communities still shows the damage caused by decades of under-investment.

Our biggest cities are choked by traffic congestion, with commute times longer than those of New York. London and even

Los Angeles.

Rural Canada, which produces half of our exports, is struggling to provide the infrastructure and services to retain its population. The challenge is even greater in the North, where small and remote communities face high infrastructure costs with only small populations to pay for them.

Northern Canada is also feeling the brunt of climate change, where warming temperatures are melting the permafrost beneath many structures. The cost of protecting vulnerable buildings in the Northwest Territories alone will be at least \$230 million—\$5,000 for every person in the territory.

Communities across the country are facing their own climaterelated challenges as they scramble to adapt their infrastructure to withstand extreme weather, from heavy rains and flooding to high temperatures and drought.

That's why the Federation of Canadian Municipalities (FCM) has been campaigning for the past 20 years to get federal help to repair and upgrade Canada's municipal infrastructure. Now, faced with government deficits that will constrain government spending for some years to come, it's time to assess our progress and plan next steps.

The story so far

The history of this long campaign is one of slow but steady progress.

Deficit cutting in the 1990s led the federal government to slash its transfers to provincial and territorial governments, which led them to cut budgets and offload responsibilities to municipal governments.

Municipalities, already short of money due to their reliance on our out-of-date property tax system, had to choose between raising property taxes, cutting local services, or postponing infrastructure repair, maintenance and upgrading. Most communities had to settle for some combination of all three, but nowhere was the cash crunch more evident than in local infrastructure. The result was a national municipal infrastructure deficit pegged at \$123-billion.

That infrastructure deficit burdens our economy, stresses our environment, damages our competitiveness, and degrades our quality of life.

Responding to calls by FCM and municipal governments across the country, the federal government began taking action to help repair Canada's aging municipal infrastructure.

Successive governments delivered: the full refund of the GST in 2004; the \$2-billion gas tax transfer in 2005; and the seven-year Building Canada Fund in 2007. All have helped to offset the damage done by decades of under investment.

Then came the financial meltdown and the recession. The federal Economic Action Plan, initiated in 2009, became the largest-ever federal investment in municipal infrastructure.

During the past 18 months more than 13,000 stimulus projects have put tens of thousands of Canadians to work and helped Canada avoid the worst of the global economic crisis. It also helped municipalities make badly needed repairs to roads, bridges and water systems.

This stimulus spending has been welcome, as is the new spirit of cooperation and partnership between the municipal governments and the federal government.

But although it has helped slow the growth of the municipal infrastructure deficit, it has not been enough to repair the damage caused by decades of under investment. It also left the federal government with a sizeable deficit that will limit new spending.

The way forward

Now, as the federal government looks to reduce its deficit, our goal is two-fold: (1) to protect the progress we've made toward restoring the municipal infrastructure that supports our communities; (2) to work with the federal government to develop a long-term plan to eliminate the municipal infrastructure deficit, then maintain our municipal infrastructure long term.

We know there will likely not be new money for municipal infrastructure in the near future; we understand the need for deficit reduction. But we also know that the need to repair, maintain and upgrade our infrastructure will not go away.

In fact, if we return to neglecting infrastructure in the name of deficit reduction, we will repeat the mistakes of the 1990s and leave future generations with an even bigger bill for infrastructure.

According to a recent report by the Residential and Civil Construction Alliance of Ontario, under investment in infrastructure over the next 50 years will slow economic growth, reduce business profitability by up to 20 per cent, and cost the average Canadian now entering the workforce up to \$51,000 in reduced wages over their career

We know that Canadians care about local infrastructure and services and don't want the federal government to balance its books by offloading services and costs to municipal taxpayers.

A January 2010 survey of 2,000 Canadians found that 96 per cent want the federal government to maintain or increase its funding for local infrastructure. An overwhelming number believe that local infrastructure is among the most important areas to protect from federal spending cuts, second only to health care.

Infrastructure investments are the foundation for all economic activity, and infrastructure financing is a long-term financial undertaking.

While we may need to contain spending, doing nothing is not an option. We must use this time to devise a plan to eliminate the municipal infrastructure deficit and then maintain our municipal infrastructure so future generations don't have the same problem.

There are signs the federal government wants to continue working with municipalities even as it sets out to reduce its deficit. Last year's federal budget confirmed that the \$2-billion per year federal Gas Tax Fund, which invests in municipal infrastructure, will be safe from all future budget cuts.

And just this summer, federal Environment Minister Jim Prentice initiated talks with FCM on how to pay for billions of dollars in upgrades to municipal wastewater-infrastructure needed to meet new federal standards.

The need for a long-term plan

As the federal government pointed out in 2006: "Federal investments in infrastructure are significant, but this funding needs to be put on a long-term track to allow for long-term planning, especially given the time spans involved in planning and building major infrastructure projects."

Once again, we agree. Infrastructure investments are the foundation for all economic activity, and infrastructure financing is a long-term financial undertaking. It is an investment with a 30, 50 or 70-year time horizon.

So while all contributions from the federal government have been welcome and useful, they have not provided the long-term solution needed to eliminate the infrastructure deficit for good.

We cannot continue to manage this long-term project with short-term financing and planning. Financing must reflect the long-term nature of infrastructure investments, which will require a long-term plan with agreed-upon goals.

The size of the municipal infrastructure deficit, coupled with inadequate municipal revenue and growing responsibilities, mean it is well beyond what municipal governments can tackle alone.

The extent of the problem and its implications for Canada's competitiveness make it a proper concern of the federal government, which must take the lead and work with provincial, territorial and municipal governments to develop a national plan.

That plan must aim to eliminate the municipal infrastructure deficit and prepare the groundwork for effective infrastructure management in the future. It must also support long-term budgeting; improve coordination among governments; set clear objectives; and deliver maximum results for every dollar invested.

The plan should also consider two other factors: the impact of new environmental regulations, such as the new wastewater regulations, which can dramatically increase costs for municipal governments; and extreme weather caused by climate change, which is putting new strains on infrastructure, particularly in the North.

Conclusion

Some may be tempted to turn the clock back to the 1990s, when the federal government balanced its books by cutting transfers and offloading responsibilities, but we cannot wish away our infrastructure problems.

If we neglect them, they will only get worse and cost more to fix. We cannot afford to ignore them for the next five years, only to start playing catch up all over again.

While we may not be able to increase spending on infrastructure while governments are burdened by deficits, we need to preserve recent gains and use this time to develop a long-term national plan.

That way, when the economy recovers and governments retire their deficits, we can hit the ground running and eliminate our national municipal infrastructure deficit once and for all.

Hans Cunningham is President of the Federation of Canadian Municipalities.



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FEATURE

Finding the Way to Upgrade Canada's Aging Public Infrastructure





DEREK BURLETON

CANADA'S PUBLIC INFRA-STRUCTURE - which includes transit systems, roads, highways, bridges, water and water works, educational facilities and hospitals - is still feeling the impact of under-investment during the 1980s and 1990s. Yet after 5-10 years of renewed government capital spending, momentum to address this so-called "gap" is losing steam. Money set aside for infrastructure in fiscal stimulus programs established during the economic and financial crisis is tapped out, and Finance Ministers are shifting towards addressing their budget deficits. What's more,

with no end in sight to the continual upward pressure in health care costs, competition for scarce public resources is unlikely to let up in the years ahead. In such an environment, infrastructure tends to lose out to other areas of government funding, raising the risk of an ever-widening infrastructure pothole.

Although the negative impacts of inadequate public infrastructure might not be visible on a day-to-day basis, we believe that ongoing neglect of the nation's capital stock presents one of the greatest risks to the country's overall quality of life. With the state of a region's infrastructure weighing heavily on location decisions of highly-mobile businesses and individuals, a deteriorating capital stock will increasingly cut into gains in productivity and living standards. The economy is only part of the picture, however. Without an excellent system of public assets, it will become difficult to ensure that the health, safety and security of the region's residents will be protected.

The new amounts injected into infrastructure by all levels of government over the past several years have been welcome news but have only managed to put a dent in a problem that accumulated over a period of a few decades. This raises the question of how much work is still left to be done to clear away the backlog of deferred maintenance, rehabilitation and replacement of public assets — the so-called infrastructure gap. Measuring the size of the gap is no easy task, since the meanings placed on "public infrastructure" and "needs" will range across individuals. One widely-cited estimate by the Federation

of Canadian Municipalities still had ering around \$123 billion in 2007. sector-specific estimates show that ture deficiencies remain widespread public service. the gap hov-Furthermore, the infrastrucacross areas of

Finding the Money

While the exact cost to bring Canada's infrastructure up to scratch and to support future growth is hotly debated, one thing is for sure – the figure exceeds what most governments could viably foot under the status quo. Consider that the sum total of fiscal deficits at the federal and provincial levels is estimated at nearly \$80 billion this year (5% of GDP) and governments will be implementing restraint measures in order to rein in this shortfall over the next 3-7 years, depending on the jurisdiction. Municipalities could also be affected as provinces and the federal governments have less money to allocate to new infrastructure funding.

While Canada stands in the middle of the pack internationally in terms of competitiveness, we rely more heavily on raising government revenues through income taxes and property taxes at the local level than most industrialized economies. On the flip side, Canada's reliance on consumption-based taxes and levies is relatively low compared to our international competitors other than Mexico and the United States.

Although there is a good case to be made that income and property taxes must remain a fundamental part of the funding equation in Canada, we support a re-balancing of the revenue mix towards greater use of consumption-based levies, such as user fees. Often in Canada, there is little effort put to aligning the price of services towards the full marginal cost of delivery (including capital replacement and environmental impacts). Although consumption-based levies are the most efficient revenue generator, they are also regressive. Nonetheless, there is significant potential to increase their usage in areas where there are no over-riding equity concerns and where consumption can be accurately measured. Water, sewers, electricity and garbage collection all satisfy this requirement. Above all, in stark contrast to trends sweeping the globe, Canada has taken little advantage of utilizing tolls for the purposes of funding roads, highways and bridges.

The challenges facing municipalities on the infrastructure front have been exacerbated by inefficient use of their existing –

albeit limited - tools and powers. Reforming property tax systems, pricing services more in line with the cost of service provision, better application of land-planning strategies to reduce sprawl, stronger coordination of services across municipalities in order to enjoy economies of scale and improvement management of billions of dollars of public assets need to be under heightened focus at the city level. And perhaps most importantly, many municipalities have not made optimal use of debt financing, with many opting to fund infrastructure almost exclusively from non-borrowed sources. Maintaining a very low debt-load may be a laudable goal, but if it comes at the cost of foregoing or delaying capital projects because non-debt sources of financing aren't available, then a low-debt strategy is counter-productive. Besides a healthy level of borrowing passes the test of equity, since benefits, which are normally consumed over the life of several decades, are matched with the

In any event, better use of debt and other funding vehicles currently at their disposal of municipalities will only go so far in providing them with adequate resources to effectively take on their challenges. Municipalities require increased administrative flexibility and access to additional sources of taxation above and beyond the property tax. For example, a change in provincial legislation that would offer local governments the power to levy a gasoline tax over a commuter area on the same basis as the province – and where the municipality would set the rate – passes the tests of administrative efficiency and accountability.

There are a variety of other innovative financing tools that have been applied not only to support debt-financing but also the redevelopment of poverty-stricken and/or contaminated lands. These vehicles, which include tax-exempt bonds, revenue bonds, tax-increment financing, infrastructure banks and enterprise zones, have been especially popular in the United States. As the U.S. experience shows, none represent a magic bullet and if used inappropriately, can come at a large cost to the government treasury. Still, municipal governments in Canada should at least be given the authority to decide when their specific situations warrant their application.

Public private partnerships part of the solution

With the demand for public infrastructure outstripping governments' ability to finance and maintain capital projects, there is an increasing need to bring the private sector on board in assisting the county's infrastructure challenge. Public-private-partnerships have generated controversy, driven in large part by two commonly-held misperceptions:

- P3s are little different from privatization P3s and privatization are two distinct concepts. Privatization refers to the outright selling of a public asset or service to the private sector. In contrast, in a P3 arrangement, the government retains ownership of the asset and continues to establish the ground rules. Thus, there is little loss of public control.
- P3s are more expensive then traditional public procurement

 this argument stems from the fact that governments can borrow at a cheaper rate and that the private sector must be appropriately compensated for taking on the risk of a project. These concerns are justifiable, but they over-simplify the issue. Few analysts take into account the opportunity cost involved such as higher taxes, debt, and potentially missed investment opportunities when governments tie up signifi



cant resources to a particular cause. But more importantly, it is not cost, but net benefit, which is the most relevant benchmark in considering the way to go. And on this count, P3s could provide significant bang for the buck by allowing projects to be carried out more quickly and with greater overall benefits to the taxpayer.

Still, we acknowledge that P3s can be a risky game if not executed correctly. As is the case with any business relationship, there must be synergies in working closely together. And to the extent that the private and public sector parties have different culture and attitudes, there may be leakage of the potential rewards of a P3. Above all, for P3s to provide value to taxpayers, the risks and rewards have to be properly aligned. Unfortunately, the public sector has a tendency to underweight or improperly evaluate risk, which can result in excessive returns.

As has been demonstrated in countries such as the United Kingdom and Australia, the success of P3s in overcoming these inherent risks boils down to the strength of the P3 model adopted. Indeed, a number of Canadian jurisdictions – led by Ontario and British Columbia – have been laying down the key building blocks to get their P3 programs off the ground over the past decade. They have developed P3 centres of expertise (i.e., Partnerships BC and Infrastructure Ontario), developed a standardized capital asset management and evaluation model, focused on transparency and accountability and demonstrated commitment to making them work. Infrastructure Ontario now has more than 50 alternative financing projects that have either been completed or on the table.

Closing the infrastructure gap will require public and private participation and a higher degree of cooperation across the various actors involved. Above all, repairing Canada's infrastructure pothole will require an open-mindedness among Canadians to support less traditional and bolder ways of doing business.

COMMENTARY FUNDING MUNICIPAL INFRASTRUCTURE Moving Forwar Gollegive Responsibility

WITHIN THE LAST FIVE YEARS EACH LEVEL OF GOV-**ERNMENT HAS MADE LAUDABLE EFFORTS IN ACCELER-**ATING FUNDING TO ADDRESS CANADA'S \$200 BILLION MUNICIPAL INFRASTRUCTURE DEFICIT (RENEWAL AND **NEW).** It is clear however, that current approaches are simply inadequate to the task at hand.

What is also clear is that maintaining and continually upgrading Canada's key, strategic public infrastructure is not the sole domain of any one level of government. It must be a priority focus of Canadians and all levels of government and addressed in the context of collectively striking balanced roles and responsibilities.

In an effort to begin addressing this reality, the Big City Mayor's Caucus in May 2010 called upon senior governments to engage in developing a new funding relationship. A step in the evolution towards a solution is the hosting of a National Infrastructure Summit in January 2011 in Regina, Saskatchewan.

Here in Manitoba, the Infrastructure Funding Council (IFC) was jointly struck on May 21st, 2010 by Winnipeg Mayor Sam Katz and Doug Dobrowolski, President of the Association of Manitoba Municipalities (AMM) and I was given the privilege of serving as its Chair.

The IFC mandate is an ambitious one: to develop recommendations for a comprehensive municipal infrastructure funding strategy for submission to the AMM and the City of Winnipeg by the end of November 2010.

Municipalities own most of Canada's infrastructure - in excess of 50% - and are therefore responsible for the bulk of its construction, maintenance and rehabilitation costs. However, of the three levels of government in Canada, municipal governments are the least able to generate the necessary tax or other revenues to adequately maintain and improve that infrastructure.

Generally speaking municipalities are limited to paying for growing responsibilities with property tax and related charges which no longer provide the required fiscal buoyancy which includes capitalization of their infrastructure assets. In addition, municipalities by law must balance annual operating budgets and do not have the option of deficit financing as provincial and federal governments have.

And their responsibilities continue to grow. For example, new proposed federal wastewater regulations introduced March 2010, create standards requiring significant improvements to existing wastewater infrastructure owned and operated by municipalities. The objectives are clearly rational. However, by the federal government's estimates, upgrading wastewater facilities across the country



CHRIS LORENC

to meet these new regulations will affect 1 in 4 of Canada's wastewater systems or about 400 cities and communities at a minimum cost of some \$12 billion over the next 20 years.

As a result of all the above, municipalities increasingly find themselves chronically underfunded and struggle to keep up with growing demands.

To give due credit, there have been tremendous investments in infrastructure by each level of government in recent years in an effort to try and address the national infrastructure deficit.

In 1993 the Chretien government introduced the \$1 billion Canada Infrastructure Works Program. Prime Minister Paul Martin rolled funding into successor programs, the centerpiece being a ramp up of transfers of gas tax revenues to municipalities over five years from one (\$1) billion to two (\$2) billion annually by 2010, as well as rebating of GST paid on municipal purchases.

Prime Minister Harper expanded funding under the \$33 billion Building Canada Fund, which expires in 2014. The Gas Tax Fund program was made a permanent funding program until 2014, now allocating \$2 billion annually towards municipal infrastructure.

In Manitoba, the level of investment has at least quadrupled since 2005. Manitoba announced a ten year \$4 billion Highways Capital Program - the largest in Manitoba's history. Unique to Manitoba, it shares provincial income tax revenues with municipalities to assist funding their local needs. It is also a participant in matching federal dollars in all federal municipal infrastructure programs.

Municipalities have also significantly enhanced their share of investment by increasing the budgetary proportion of investment in infrastructure, and by partnering with both the provincial and federal governments in available cost shared infrastructure investment programs.

Canadians reasonably expect that all levels of government will be involved in not only the identification of needs, but in providing long-term funding solutions to help prevent erosion of our critical national infrastructure

While the above policy actions by governments reflect leadership,

Canadians reasonably expect that all levels of government will be involved in not only the identification of needs, but in providing long-term funding solutions to help prevent erosion of our critical national infrastructure and to ensure we remain a competitive and productive economy.

The IFC has been created to explore options to address the current infrastructure challenge for municipalities, both through existing opportunities and possible new revenue sources and funding relationship options for municipalities.

This solution-based approach aims to move the public policy debate on municipal infrastructure and revenues forward by offering options and solutions grounded in extensive consultations with all orders of government and other stakeholders.

The IFC wants its final report to inform, to generate discussion and to challenge current beliefs on the issues of municipal infrastructure funding and municipal revenue sources, recognizing that moving forward is a collective responsibility.

Chris Lorenc is MHCA President and Chair of the Infrastructure Funding Council (IFC).



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Roles and responsibilities of Government in Funding Municipal Infrastructure



ENID SLACK

MUNICIPAL INFRASTRUCTURE IS ESSENTIAL TO THE ECO-NOMIC, SOCIAL, AND ENVI-RONMENTAL HEALTH OF **CANADIAN MUNICIPALITIES.** To be competitive in the new "knowledge-based" economy, we need to build and maintain our infrastructure and deliver the services that will attract skilled individuals and firms. This means not only providing roads, transit, water, sewers, and other "hard" services, but also the services that enhance the quality of life in our communities such as parks, libraries, social housing, and cultural and recreational facilities.

Yet, the emerging consensus in Canada is that there is a large municipal infrastructure deficit, especially in the larger cities. We know from media reports that the neglect of the country's infrastructure has led to increasing traffic congestion, high levels of pollution, water main breaks, the collapse of bridges, and many more problems that result from years of under-investment. The infrastructure deficit hurts productivity and living standards and is becoming a serious competitive disadvantage for cities and, by extension, for the country as a whole. Although the provision of local services and infrastructure is primarily the role of local government, these governments argue that they face competing demands and have limited resources to maintain and replace their infrastructure. How should we pay for infrastructure? What is the role of the local, provincial, and federal governments?

Getting the Prices Right

To pay for services and infrastructure, economists stress the need to "get the prices right." For services where we can identify those who benefit and we can exclude those who don't pay (such as water, sewers, transit, and recreation), "getting the prices right" means charging user fees that reflect the marginal cost -- the additional cost imposed by the user. In the case of roads, for example, the marginal cost would include not only the wear and tear on the road but also the costs of pollution and congestion.

Why is marginal cost pricing so important? When users do not pay a price that reflects the true cost of the service, they overuse the system (so we think we need more roads or other infrastructure) and they do not consider the cost on others. Without fees, there is also no revenue incentive for governments to invest in infrastructure. Indeed, governments may even face pressure to restrict expansion because it would require higher taxes or cutbacks in other services. The result is infrastructure deterioration, which is what we are now facing.

A Role for Local Governments

Local governments need to make greater use of user fees which now account for about 22 percent of total local government revenues on average across the country. Equally important, they need to restructure the fees they now charge in order to ensure the efficient use of services. Services such as water, roads, and transit must be priced to reflect the marginal cost of providing them. Proper pricing not only affects municipal revenues but also the demand for expenditures. For example, pricing water at marginal cost is likely to reduce not only operating expenditures (because of a reduced demand for water) but also capital expenditures (because the need for water treatment plants may be reduced or delayed).

Where user fees cannot be charged or cannot be set high enough to cover all of the costs, municipalities will need to rely on other sources of revenue. Local governments in Canada rely heavily on property taxes (almost 50 percent of total revenues). The property tax is a good tax for local government but the need for infrastructure is driven by economic and population growth and the property tax increases only marginally with growth. Moreover, much of the infrastructure required needs to be in place before the municipality receives any property tax revenue generated from that growth.

Local governments in a number of provinces (BC, Alberta, Saskatchewan, Manitoba, Ontario, Nova Scotia, the Yukon and the Northwest Territories) use development charges to pay for infrastructure. A development charge (also known as a development cost charge or lot levy) is a one-time levy on developers to finance the growth-related capital costs associated with new development or, in some cases, redevelopment. The idea behind development charges is that "growth should pay for itself" and not be a burden on existing taxpayers. Efficient land use requires that developments that impose higher infrastructure costs on the city (for example, developments that are located far from existing services) pay higher development charges than developments that impose lower costs. Many local governments do not use this type of marginal cost pricing, however.

Municipal governments almost certainly need to borrow more in order to finance needed infrastructure. Not only are municipalities generally well below provincial borrowing guidelines, but they have been reducing borrowing consistently over the last twenty years. A city free of debt, regardless of how good that sounds to the public, is not appropriate when infrastructure is deteriorating. It is also difficult for a debt-free municipality to lobby their provincial or federal counterparts for funding when the latter are facing increasing debt loads.

Other tools at the local level include tax increment financing, which is a way to raise money that relies on the incremental future tax revenues from a specific investment. Widely used in the US in cities such as Chicago, this tool allows local governments to borrow money with repayment based on the incre-

mental property tax revenues from the development. Public-private partnerships are another way to get capital to pay for infrastructure. Although there are pitfalls with both of these tools, they have been used successfully and could be used more widely by local governments in Canada.

A Role for Provincial Governments

Where do the provincial governments fit into the infrastructure picture? To the extent that some services have benefits (or costs) that cross municipal boundaries, there may be a role for the provinces. Positive spillovers (also known as externalities) occur if residents of neighbouring jurisdictions receive a service for free or at less than the cost of providing the service. For example, major roads constructed in one jurisdiction may be used by residents of another jurisdiction without any charge to them. Because the municipality providing the service only looks at the benefits captured within its jurisdiction and does not consider the benefits to those outside its jurisdiction, it would likely provide too little of the service (for example, a two-lane road instead of a four-lane road). The province could provide an incentive to the municipality to provide more service with a conditional, matching transfer. It would be conditional on being spent on the service generating the externality and the matching rate would reflect the extent of the spillover. In other words, if 25 percent of the benefits spill over into neighbouring jurisdictions, the province should cover 25 percent of expenditures.

Another role for provincial governments is to provide local governments with other sources of revenue. A mix of taxes would give municipalities more flexibility to respond to local conditions such as changes in the economy, evolving demographics, and changing expenditure needs. A major advantage of taxes such as municipal income and sales taxes, for example, is revenue elasticity, meaning that revenues increase automatically over time. A fuel tax would not only provide additional revenues to the municipality but it would discourage road use. Since local governments are creatures of the province under the Canadian Constitution, only the provincial government can determine what revenues they can collect.

It is critical that local governments clearly be politically responsible for levying any taxes to which they are given access. In other words, they should be able to set the tax rates. Only with tax rates set locally (rather than by the province) will there be local autonomy and accountability for local expenditures and revenues. International experience tells us that the most responsible and accountable local governments are those that raise their own revenues and set their own tax rates.

A Role for the Federal Government

The federal government should be interested in municipal infrastructure, in large part, because infrastructure is essential to maintain our economic competitiveness within North America and the world at large. Large cities, in particular, are the engines of economic growth in this country and account for most of Canada's employment, wealth, and, importantly, productivity growth. How well cities perform economically depends to a considerable extent upon how well the local public sector performs. In turn, how well cities provide the array of local services and infrastructure needed to underpin success in the global competitive arena depends to a significant extent upon the intergovernmental context in which they operate.

As noted earlier, under the Canadian Constitution, provincial

governments are responsible for local governments. So, what can the federal government do to help municipalities? An important role for the federal government is doing its own job better, for example in areas such as immigration settlement, services to the Aboriginal population in urban areas, air transportation, etc. By doing so, it would relieve the fiscal pressures on municipalities so that they can provide the needed infrastructure. The federal government also needs to invest in those features of cities that make them internationally competitive (including those services that improve the quality of life and attract knowledge workers). Along these lines, investment in major transportation infrastructure, cultural facilities, and other infrastructure would be appropriate.

The Perils of Grant Funding

Although there is a rationale for some federal and provincial funding of municipal infrastructure, there are also some pitfalls. Grant funding is not always a stable or predictable revenue source. In 2001, for example, the Alberta government announced that it would reduce its fuel tax transfers to Calgary and Edmonton. Although it relented, it shows that cities are vulnerable cities to the whims of donor governments.

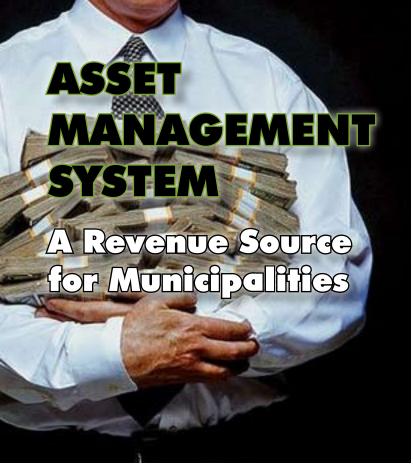
Transfers can distort local decision-making and result in them making expenditures in areas that were not necessarily a priority for them. As part of the economic stimulus package, for example, the City of Toronto applied to the federal government to pay part of the costs of new streetcars for its transit plan. The federal government turned down the request because it did not meet its criteria -- it was not "shovel ready," all of the streetcars would not be built by 2011 (the deadline for stimulus spending), and the jobs created were in Northern Ontario and not in the local economy. The City re-applied to the federal government to fund 500 smaller and lower priority projects.

Transfers can lead to inefficient local revenue decisions. In particular, there is no incentive to use proper pricing when grants cover a large proportion of operating and capital costs. Large grants in the past for water treatment plants in some municipalities, for example, meant that they had no incentive to use volumetric pricing to reduce the demand for water or to engage in asset management. Transfers can also result in accountability problems because two or more levels of government are funding the same service. When users or taxpayers want to complain about the service, they are not sure which order of government is responsible for the problem.

Concluding Comment

Municipal infrastructure plays a crucial role in the economic health of Canadian municipalities and, by extension, the country as a whole. All three orders of government thus have a role to play in ensuring that infrastructure needs are met. Whenever possible, however, local governments should not be given money but rather the chance and challenge to raise money on their own. They should be fully accountable to their citizens for the taxes and fees they impose to finance municipal infrastructure. Although it's always more pleasant to receive money that you don't have to raise yourself, this money is seldom reliable (as federal and provincial priorities change over time) or free (as grants tend to reflect the priorities of the donor government and not necessarily those of municipalities).

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ROOP LUTCHMAN

Introduction

The Municipal Industry worldwide is being challenged by business drivers (Fig 1) that will severely test their ability to meet service levels. In fact, if some of these drivers are not dealt with effectively their very survival may be in question. In an industry that tends to react to change, many municipal managers are struggling with their current operations and at the same time trying to be proactive in finding solutions to the challenges facing their operations. Municipalities must manage their assets in a manner that allow them

to provide for this generation and at the same time ensuring that the assets will be around to provide for the next generation.

In Canada, there is ongoing discussion at all levels on funding our national municipal infrastructure deficit (estimated at \$200 Billion). It is clear is that current approaches are simply inadequate to the task at hand and all groups need to work together to ensure that this chal-



Fig 1 - Municipal Business Drivers

lenge is being addressed properly. Obviously reducing (or eliminating the infrastructure deficit) requires significant infusion of funds either through loans or rate increases. However, stakeholders need the reassurance that they are not paying for a band aid solution and municipalities have effective asset management (AM) programs in place to minimize cost of asset ownership and quarantee adequate levels of service.

What is Asset Management?

An asset is any entity that can be used to produce a good/ product or a service to meet the needs of a client or customer. Assets can fall into three major categories – discrete assets, linear or continuous assets and virtual assets. Effective Asset Management is a critical link in balancing product or service delivery costs to achieve and sustain customer satisfaction.

How Can AM Create Value to Municipalities?

An effective asset management program can provide the following benefits to an organization:

- · Minimum overall cost of ownership for the asset
- Keeps the organization focused on the objective of customer satisfaction through effective service and product delivery
- Creates ownership and buy-in through involvement of staff that ensures there is always a business focus on creating new assets, preserving or replacing current asset
- Incorporates asset related performance measures into the overall performance management program
- Eliminates funding crisis situations (requiring major injection of funds to upgrade and replace assets that can no longer meet performance standards)
- Provides a vehicle for corporate knowledge retention and sharing as it relates to assets
- Improves overall organizational effectiveness (through better coordination and communication) with common goals around the asset throughout its life cycle
- Improves safety and environmental record (less accidents and environmental issues)

Overall, effective AM can reduce ownership costs and create value to the organization in the long term. When done right and municipalities can demonstrate that they are consistently applying AM concepts to meet expected levels of service, it becomes easier for to access revenue streams through rate increases, improved debt rating and access to loans as well as federal and provincial grants.

Asset Management Approach

Effective AM is not only about managing physical assets. It requires a focus on other business areas in order to meet established levels of service. In the past, AM focused on conducting condition assessments, defining the infrastructure deficit, finding suitable funding and executing relevant projects. This approach was not successful as it was really putting a band aid on the problem as opposed to finding the real reason behind the deficits and trying to resolve these as well as implement ways to maximize life expectancy and return on the asset investment. This has resulted in many municipalities taking a more comprehensive approach to asset management with a balanced focus on Strategy, Physical Assets, Technology



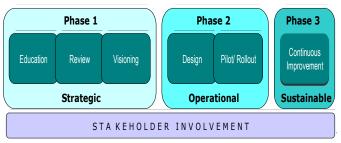
Fig 3 AM Approach

Assets, Business Processes and People Effectiveness to meet established levels of Service (Fig 3). These AM elements are briefly discussed below:

- 1. Strategy sets the AM vision, mission and road map for the organization
- 2. Managing Assets minimize total cost of ownership, maximize reliability and meet LOS
- 3. People Effectiveness make the right choices in organization design, people resources and Corporate Knowledge retention to manage assets
- Business Processes design and implement streamlined and effective processes with only value added steps for doing work on assets
- Technology leverage technology to enable business processes and capture key asset knowledge and support decision making

Implementation Methodology

Implementing asset management, as is the case with all strategic programs, is really about leading change from one way of doing business to a more effective and desirable way. In addition to a simple step by step process for implementation (Fig 4), it is important that the following key implementation themes are carefully managed:



Education – Orientation on Best Practices and Concepts
Review – Gap Analysis and Business Case Analysis Framework
Visioning – Alignment, Mission, Vision and Mandate for Change
Design – Define Desired Attributes of Asset Management based on Best Practices
Pilot/Rollout – Implementation, Support and Benefits Tracking
Continuous Improvement – Value Creation, Process Refinement

Fig 4 AM Implementation Process

Key themes for a successful Implementation are:

- 1. Knowledge Transfer to staff so they can support the new ways of doing business
- Leading change so that the new way of working sticks and becomes the norm
- 3. Use of the Top Down Followed by Bottom Up Approach eliminating the need for extensive data collection up front in the process

4. Quality assurance and control during implementation – do it right the first time

Step 1 – Education

It is important that everyone directly or indirectly involved in the project understands the various best-in-class practices that are available to update the various business elements. The asset management process, potential benefits, implementation approach, and methodology comprises valuable information for people who are required to participate in the process or are expected to make or realize change as a result of program initiation. This will require a shift in strategies, thinking or behaviors. This step starts moving everyone towards a common understanding of best in class asset management concepts and what is expected for implementation.

Step 2 - Review

A high level review of the operations with respect to asset management should be conducted. This review serves three purposes:

- Raises awareness for the program and starts the inclusion process for staff
- 2. Gains an understanding of the current situation with respect to how the Municipality operates (sets the baseline)
- 3. Identifies existing best in class asset management practices that should be leveraged by the Municipality

The review process will also yield valuable information used to develop a business case for the program, as well as identify "quick wins" that can demonstrate much needed results up front during implementation activities. The Business case will be converted into a Benefits Tracking document that will be updated and presented to the implementation Steering Committee and Leadership team on a quarterly basis. The review is also the baseline to track overall progress to leading AM practices.

Step 3 - Alignment/Visioning

Step 3 serves to validate review findings, conclusions, and implementation strategies/quick wins and aligns all stakeholders shown on the roadmap—and the current state, vision, and recommended pieces of the routes needed to get there. The visioning step essentially aligns staff with the end goal and establishes agreement among parties on the implementation strategies required to get there. This step is executed by conducting a visioning workshop with key stakeholders, before major effort is expended in development of implementation plans. This activity sets the stage for design work to finalize the strategy and develop revised business practices, organizational and people arrangements and enabling technology assets.

Step 4 - Design

The high level implementation strategies that were identified in the roadmap will be developed in detail during this step, together with supporting tactical elements. The desired approach to the design process is one that requires that end-users participate in design workshops. Experts would help to document "As-Is" workflows of related asset management business processes that would be reviewed and challenged based on best-in-class. The design process will result in the "To Be" indicators (KPIs) will be developed to track effectiveness when they are

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Renewing Municipal Infrastructure: THE P3 ALTERNATIVE

"We are playing a game of infrastructure 'catch-up'... But when we're talking about (cost) numbers in the billions, we need to be innovative and ensure completion as soon as possible at the best price for the taxpayer. Public-private partnerships, or P3s, have demonstrated their benefit to stretch taxpayers' dollars." Winnipeg Mayor Sam Katz, State of the City 2009

As stimulus programs run their course, governments across Canada are looking for cost-effective ways to tackle the backlog of aging infrastructure. Estimates vary as to just how serious that backlog is today, but in 2007 the Federation of Canadian Municipalities pegged it around \$123 billion and growing, stating that much of our municipal infrastructure is "past its service life and near collapse".

Here in Manitoba, which Statistics Canada recently reported as having the second oldest infrastructure – and among the oldest highways and roads stock – in the country, finding cost-effective solutions for infrastructure renewal is a key priority.

With governments at all levels facing increasing demands upon their financial resources, a relatively new means of undertaking infrastructure projects – public-private partnerships (P3s) – has been gaining traction.

As a straightforward comparison between P3 projects and conventional ones, here's how the Conference Board of Canada describes both approaches in its January 2010 P3 study entitled Dispelling the Myths: A Pan-Canadian Assessment of Public-Private Partnerships for Infrastructure Investments:

- P3 projects tend to feature characteristics such as the integration of two or more project phases, output-based contract specifications, payment upon delivery, private financing, and private sector project stewardship.
- Conventional projects are usually characterized by separate procurements for each project phase, input-based contract specifications, monthly payments to contractors, public financing, and public sector project stewardship.

The City of Winnipeg has been one of the most active municipalities in Canada in pursuing P3 possibilities. To date, Winnipeg has partnered with the private sector to complete a number of P3 projects, including reconstruction of the Charleswood Bridge and completion of the new East District Police Station. Construction work is presently underway on the Disraeli Bridge and, this past summer, the city announced its

latest P3 venture – extending Chief Peguis Trail, a major city commuter route, with the financial support of both the provincial and federal governments as well as the private sector.

Winnipeg Mayor Sam Katz has spoken publicly in favour of the P3 option. In his 2009 State of the City report, Mayor Katz stated: "We are playing a game of infrastructure 'catch-up'...But when we're talking about (cost) numbers in the billions, we need to be innovative and ensure completion as soon as possible at the best price for the taxpayer. Public-private



KEVIN LACEY

partnerships, or P3s, have demonstrated their benefit to stretch taxpayers' dollars."

The mayor went on to say, however, that P3s will have to meet certain conditions. The bottom line: Winnipeg will only enter into a public private partnership if the price of providing the construction and maintenance services is lower than if provided by the city directly, or if a higher level of service can be provided for the same price by the private partner.

There are a number of other factors municipalities take into consideration when conducting their due diligence in assessing the viability of a P3 approach to meet a particular infrastructure need, such as:

- · What is the municipality's need and priority for the project?
- · Is speed of delivery important?
- Will the project achieve the municipality's main reason for making its investment?
- · Are increased efficiencies being sought?
- · Are private sector innovations of value?
- What balance is desired between investments in new construction infrastructure and investments in existing infrastructure?
- What are the financial risks involved and how does the municipality prefer to manage such risks?

P3 projects across the country have included bridges, highways, hospitals, recreational facilities, waste and wastewater, concert halls and court houses. Of the largest heavy construction P3 projects fully operational in Canada, PEI's Confederation

Bridge is often cited as a P3 success story; however, its true value won't be evident until 2032, when its private developer transfers operations to the Government of Canada. Ontario's first public toll road – Highway 407 – has had mixed reviews, but again a complete assessment won't be possible until the expiry of the project's 99-year lease, held by a private consortium.

Municipalities that have engaged in P3 projects across Canada, however, appear to like the P3 option because it lets them focus on what they do best – policy and planning – while letting the private sector do what it does best – finding efficiencies and managing projects to cost.

Raising Capital: Conventional Projects and P3s

A municipality typically raises funds for infrastructure projects by either increasing taxes or by taking on debt. As with the private sector, there are limits to how much debt a municipality can hold before its debt rating is impacted and its borrowing costs become more expensive. In addition, whatever the borrowing costs are, they may have to be addressed at the expense of other municipal projects that are being planned or are already underway. Once the municipality has access to the capital it requires for a conventional infrastructure procurement, it then negotiates the building contract and, upon completion of construction, is responsible for staffing and equipment needs to operate and maintain the asset. The municipality repays any borrowed funds over a specified time period, with interest.

Working within a P3 procurement structure, the municipality shifts the responsibility for raising funds to its private sector partners who make up the P3 consortium. The private sector partners secure financing from financial institutions, pension funds and other investors and then, depending upon how the P3 agreement is structured, are responsible for on time, on budget project delivery and for maintaining and operating the asset. The private sector also is expected to enhance the quality of the asset by bringing increased efficiencies and "best practice" innovations. In return, the private sector partners receive payment over the number of years specified in the contract, either from the municipality itself or, in the case of toll roads for example, through user fees.

Preliminary research in the Conference Board of Canada's P3 report indicates that infrastructure project P3s are delivering savings in costs and time – efficiency gains in the P3s assessed by the report brought in savings of between a few million dollars to more than \$750 million. However, the report also stated that P3s are not appropriate for all public infrastructure projects due to the additional costs entailed with P3s as compared to conventional infrastructure projects.

One of those additional costs is the premium which is built into P3 contracts to reward the private sector for assuming risks the municipality typically carries in conventional procurement projects – for example, being responsible for long-term operational performance. The private sector also wants to earn a return on its investment; for the municipality, it is important that this return is considered reasonable, but not excessive. Transaction costs to develop and monitor P3 contracts are expensive. In addition, the private sector generally pays more to borrow than governments do.

Value and Risk

The UK has some of the most extensive public-private partnership experience in the world, having worked for over two decades with P3s (commonly known there as "PFIs", or Private Finance

As long term projects, P3s require long-term planning and management — a focus on lifestyle costing and managing operational costs is crucial to achieving success.

Initiative projects). Based on that history, the UK government has broadened its approach to P3 procurement to include not only capital costs, but also an assessment of "value for money" and "whole life costing" over the full contract term of P3s. Before opting for a P3 approach, the UK government first determines if the nature of the assets and services involved are capable of being costed out on a whole-life, long-term basis. In addition, the government wants to see that any P3 agreement is structured to allow for "effective, equitable and accountable" delivery of public services in the long term and to ensure that risk allocation (or risk transfer) between public and private sectors can be assigned and enforced.

The objective of risk allocation in any P3 project is to assign risks to the partners who are best able to manage them. P3 partners have to be able to assess and price the risks that are identified and then manage them as assigned over the term of the contract. The trade-off for the public sector in being able to shift certain risks to its private sector partners is price. A P3 project has to ensure that the private sector will receive a reasonable return on its investment in order for that sector to assume these risks – in other words, a higher profit margin for taking on higher risks.

A P3 guide published by the Canadian Construction Association earlier this year gives a good indication of the types of risks contractors, for example, could be exposed to in P3 procurement that they typically would not be held responsible for in more conventional "design-bid-build" projects. These risks include: upfront design and development costs; extraordinary guarantees (e.g. substantial letters of credit, in addition to surety bonds); major environmental permits; conflicts and delays from unknown historical and/or endangered species conditions; changes in zoning, laws or rules that may affect the project.

A Different Way of Thinking

P3s call for a different way of thinking about projects. As long term projects, P3s require long-term planning and management – a focus on lifecycle costing and managing operational costs is crucial to achieving success. A different mindset is involved for builders, for example, who are more accustomed to building a project, turning over ownership and walking away. With a P3, builders may also be responsible for the project's operating performance for the next 25-35 years. Lifecycle costing helps ensure builders – and other P3 partners – will not face large cash outlays in the future that will erode their profitability.

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There are a variety of structures for a P3 consortium, depending on project requirements, and no single P3 model suits all P3 projects. Three of the more typical structures are Design-Build-Finance (DB F), Design-Build-Operate (DBO), and Design-Build-Finance-Operate (DBFO). If the government wants the private sector to actually own the completed infrastructure, a Design-Build-Finance-Own-Operate (DBFOO) structure can be used; if the infrastructure eventually will be transferred back to the public sector, the P3 can be structured as a Design-Build-Finance-Operate-Transfer (DBFOOT).

Whichever structure is selected, it is very important that the parties within that structure truly "partner" with each other. For P3s to succeed, the partners need to establish and sustain long-term relationships. In its 2002 P3 Primer, the Ontario Association of Architects (OAA) notes that one of the benefits of P3s is that they promote

partnerships among the private sector parties involved, which leads to an alignment of interests. Through this alignment, the OAA says that P3s create incentives for innovation, productivity and competitiveness.

P3s rely upon effective, long term relationships. And while the scale and complexity of P3s means it tends to be larger private sector players establishing those relationships, smaller private sector firms which lack the size or scope to be P3 partners on their own can leverage relationships to become involved with P3s as well. Size does matter for P3s – but so does reputation and previous success with other projects. Therefore, if a smaller contractor can strike up a strategic alliance with a larger firm doing P3 work and gain the experience they need, they likely will have a better opportunity to become one of the partners on the next P3 that comes up for bid.

Smaller engineering firms interested in P3s might also consider working their way in as subcontractors, or through engineering design, or by offering a sub-speciality that a larger firm participating in a P3 doesn't have, according April 2010's RBC Industry Update engineering industry roundtable. And, as one of the participants commented, the real benefit of P3s for both large and small firms is that "they make projects happen."

P3s: Moving Ahead

As the P3 approach to infrastructure renewal continues to evolve, keeping costs down remains a particular focus. "Bundling" has been utilized, to get a number of similar infrastructure needs addressed by a single P3 project. Customized procurement models could help reduce the time and expense involved in the P3 procurement process; in the UK, the government uses standardized

P3 contracts and has encouraged its departments to create sector-specific standard contracts.

Establishing centres of infrastructure expertise, which can help assess the viability of the P3 option for any given project, can also be cost-effective. In Canada, four provinces have such centres: Partnerships BC; Alberta's Alternative Capital Financing office within its Treasury Board; Infrastructure Ontario; and Infrastructure Québec. Nationally, expertise is available through the federal agency PPP Canada and the Canadian Council for Public-Private Partnerships.

PPP Canada's overall assessment of P3s is "when used for the right reasons, deployed in the right circumstances and executed in the right way, they are a way to procure infrastructure that can deliver value to taxpayers in the public interest."

P3s are not the solution to every public sector need, as stated earlier, but they do provide another option for municipalities to consider as they seek to reduce their aging infrastructure backlog.

Kevin Lacey is Vice President of Commercial Financial Services at RBC Royal Bank. ₩





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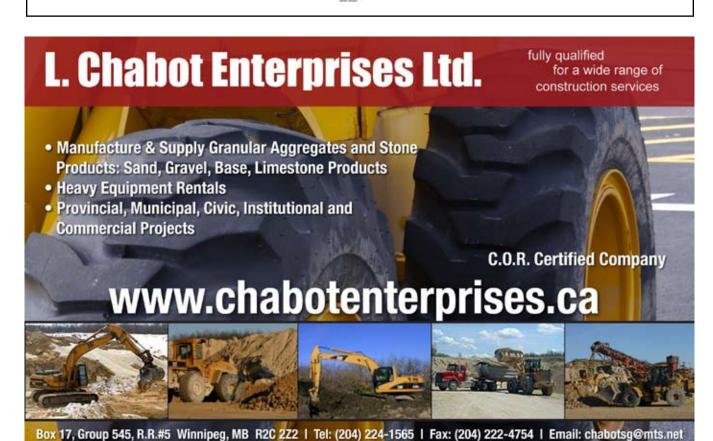
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PETER HALL

A GROWING SENSE OF UNEAS-INESS IS GRIPPING WORLD MARKETS. In market after market, and industry after industry, slower overall growth is creeping quickly into the data, virtually erasing the bullish mood that dominated the airwaves earlier this year. Markets are responding with another volatile episode. Equities, bond markets, commodities and currencies seem quick to react perhaps overreact - to the latest positive and negative data releases. This is perhaps the most challenging period the world economy has seen in the past two years. Recovery seemed to be well

underway just a few months ago, but many are now wondering whether we began to recover at all. Are we emerging from recession, or are we in for a longer bout of weakness?

The flip-flop in world growth has confused many, and in some cases, the analytical community hasn't helped. World growth figures for 2010 were revised up as economic heavyweights cranked out impressive rebound-style growth in the fourth quarter of 2009 and the first quarter of this year. But the stats pulled an abrupt about-face in early May, as concern about possible sovereign defaults in Southern European countries erupted, creating angst about possible global knock-on effects and re-igniting worries about the state of European financial institutions.

Weakening economic data have only encouraged the pessimism. There is growing agreement that a broadly-based second-half softening is inevitable, and a palpable uneasiness about how the world will react. Canada will not likely buck the trend; a combination of international and domestic factors suggests slower second-half performance.

A second round of weakening is awkward and unnerving. Hopes were high just a few months ago that the swift, highly coordinated and substantial worldwide outpouring of both fiscal and monetary stimulus would carry the world economy through the worst of the downturn, bridging to a sustainable recovery. After all, OECD nations had collectively committed funds amounting to almost 4% of the club's GDP. Monetary stimulus only added to that. There is little doubt about the tangible effect; the swift rebound had the fingerprints of stimulus all over it.

The trouble with aggressive stimulus is that the dramatic effects can be very short-lived. They are most obvious in the early stages of stimulus. Beyond this, the impact wanes quickly, even though rates are still rock-bottom and hefty amounts of cash are still being spent. This is the stage we now seem to have reached, but unfortunately, certain key sectors of the economy have not yet found their footing. Consumers and financial institutions in the world's largest economies are still deleveraging. Housing markets in key economies still have a long way to go before they are back in balance. Evidence strongly suggests that this new phase of economic weakness could last for another year.

In the current context, that's a long wait. Fiscal stimulus has weakened public financed all over the developed world, and in certain cases, notably Southern Europe, there is a risk of sov-

ereign default. Governments are turning their attention to their debt and deficit situations, and have little capacity for extra stimulus if the slow-growth phase hits a speed bump. There's also little room for additional monetary stimulus, should it be required.

Complicating matters further is the weakened state of financial institutions in the big economies. Profitability has returned, but special measures that have helped forms get back on their feet are expiring. Banks are still shoring up their books, but in key cases, defaults are still on the rise. Moreover, they face potentially steep costs that new financial regulations will, in short order, impose on them. This, together with low overall growth, will keep them hesitant to lend

The coming year will also test already-frayed nerves. True, consumer confidence has moved up swiftly from the trough levels of early 2009, but it's hardly a recovery: confidence is currently at levels consistent with past recessions. There is a long way to go before confidence is consistent even with a modest growth pace. This is particularly unsettling, as it suggests an overall heightened sensitivity to negative developments in the economy. Keeping consumers reassured during this period is critical. as there are few other points in the economic cycle where confidence itself is as important as other factors in maintaining economic well-being.

Taking these factors into account, the forecast calls for world growth this year to reach 4%, a pace that is welcome relief from the 0.6% contraction last year. While it looks reasonable, growth is relatively modest compared with past global economic recovery periods. Furthermore, most of this growth has already occurred in past quarters, and what lies ahead in the coming months is considerably softer. The latter-2010 softening will also show up in next year's numbers, keeping growth for 2011 at 4.1%. However, prospects are expected to brighten in the second half of 2011, setting us up for better performance in 2012.

Dimmer near-term prospects are expected to lower commodity prices further in the second half of the year, and indeed, this is already obvious in crude oil prices. Base metals are expected to follow in short order, while prices for forestry products remain depressed. In most cases, inventory levels are well above normal, calling into question the earlier year rebound in world prices.



The Canadian dollar has remained high this year, and at points has tested the parity threshold. High commodity prices, the halo effect of Canada's stronger fiscal and financial situations, and expectations of relatively rapid monetary tightening have together boosted the currency on international markets. But nascent world weakening has lowered the loonie, a trend that we expect will continue to weigh it down to the US \$0.92 level by year-end. The weaker currency will give Canadian exporters some relief, but softening demand conditions abroad will restrain growth, keeping exporters on their toes for the remainder of this year. At the same time, the domestic economy – which has been surprisingly resilient through the global recession – will soften, as the heady first-half growth, fuelled by stimulus and those making key purchases ahead of the HST and anticipated interest rate increases, wanes in the latter half of the year. Canada is forecast to see growth hit 3% this year before it eases to 2.5% in 2011. Export growth will follow this pattern, slowing from 11% this year to 6% in 2011.

Will we keep our nerve over the slow months? As long as there are no shocks, we should be alright, but given the experience of the past few weeks, that is far from guaranteed. Weaker sovereign states may cause ripples as they go to market to roll over large blocks of maturing debt. Sub-par growth in key emerging markets - not a remote possibility, given their significant links to the large economies – would likely rattle markets. Negative news from financial institutions could also be disruptive. And any adverse shock, if persistent, could resurrect the worrisome protectionist reactions that surfaced temporarily with the onset of recession. Staying the course will require much effort on the part of policymakers.

Those efforts have been considerable to date, and are not likely to abate soon. But the nature of the efforts is sure to change. With standard policy levers all but tapped out, and manifold worries about fiscal sustainability dominating headlines, other approaches are surfacing. The search for greater efficiency in government spending and taxation is on. Yet this actually increases economic weakness, threatening an already-weak situation. Policymakers are also busily looking at ways of enhancing overall growth, and increasingly, eyes are turning to international trade opportunities. Not a bad option, given that economic growth will remain strong in certain key markets, weakness notwithstanding.

The bottom line? The dreaded economic slowing in the post-stimulus phase of the economic downturn is now upon us. At this early stage, the effects appear to be widespread, and initially, markets aren't taking the news well. But if properly understood, the world can withstand and even overcome the weakness, knowing that weakness today is working down the excesses of yesterday, setting us up for a return to growth tomorrow.

Peter G. Hall is Vice-President & Chief Economist for Export Development Canada.





CENTREPORT CANADA



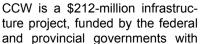
BUILD IT AND INVESTORS WILL TAKE NOTICE HAS BEEN THEEARLYDEVELOPMENTPHILOSOPHYATCENTREPORT CANADA, MANITOBA'S INLAND PORT AND FOREIGN TRADE ZONE. However, CentrePort Canada's 20,000-acres is no ordinary greenfield of dreams, as recognized last month when CentrePort Canada was named one of the top 100 infrastructure projects on the continent at the North American Strategic Infrastructure Leadership Forum in Washington, D.C.

The prestigious designation, awarded by CG/LA Infrastructure, recognizes CentrePort Canada's strategic contribution to long-term competitiveness in North America – and caps a hectic first year of activity at the corporation, which officially opened its doors in November 2009. A private-sector led company that was created in 2008 by provincial legislation, CentrePort Canada has realized a number of significant milestones over the past 12 months.

And investment interest is growing in the land development opportunities that are available. CentrePort Canada is working with a number of companies on possibilities for the more than 2,000 acres of land and 550,000 square feet of industrial space that are shovel-ready right now. The corporation is also working to facilitate build-to-lease and build-to-own facilities for companies that are seeking industrial warehousing, distribution centre or manufacturing space.

CentrePort Canada is also working closely with real estate brokers who are reporting strong interest in the Brookside Boulevard area. Nine new lots totaling 23 acres were recently sold in CB Richard Ellis' Brookside Business Park. The nine lots represent a mix of new operations and significant expansions of local companies, with each in differing stages of development and ranging in size of acreage.

One of the most important achievements in 2010 was the start of construction on CentrePort Canada Way (CCW), a 10-kilometre high-speed expressway that will run through CentrePort Canada, linking the inland port to the Perimeter Highway and into major east-west and north-south transportation corridors. The first section of the divided expressway is being built by SNC-Lavalin and the entire project is expected to be complete in 2012.





DIANE GRAY

the goal of further enhancing Manitoba's existing logistics advantages by improving access to multi-modal transportation options including trucking, rail and air. The investment is part of a nearly \$300 million package to upgrade key national and international trade routes including Highway 75, which is the northern stretch of the Mid-Continent Trade and Transportation Corridor to the United States and Mexico, and the TransCanada Highway, which links CentrePort Canada to the Asia-Pacific Gateway and other important trade centres.

Over the past year, CentrePort Canada also had the distinction of becoming the first inland port in Canada to offer business single-window access to Foreign Trade Zone (FTZ) benefits. This one-stop-shop approach is important to global investors who are used to doing business this way in foreign trade zones in other countries. By offering this service, CentrePort Canada



is better able to compete with FTZs in the United States and actively promote the use of cost-savings programs such as customs bonded warehouse and duty and sales tax deferrals.

Other highlights over the past year for CentrePort Canada include:

- The release of the corporation's inaugural business plan in June. The plan outlined the corporation's activities in four key areas: business development, strategic partnerships, intergovernmental relations, and marketing and communications.
- The signing of a collaboration agreement between CentrePort Canada and Chongqing-Lianglu Free Trade Zone Area in China in May. Treasury Board President Stockwell Day witnessed the signing of the agreement, which will focus on exchanging bestpractices and market information, sharing technolo-gy and engaging in joint promotions that help increase awareness in both Canadian and Chinese markets.
- The establishment of an industry steering group at Red River College to support the development of CentrePort Canada and ensure the college is meeting the training needs of the transportation, logistics, warehousing and manufacturing industries. RRC has two major campuses located within CentrePort Canada and offers aviation, transportation and industrial-based training.
- The completion of a major mission to the United States and Mexico earlier this year. More than 30 delegates from business, labour, education and government visited inland ports, logistics hubs and intermodal facilities in Guanajuato, Dallas, Fort Worth, Memphis and Chicago. The goal of the mission was to learn from other successful inland ports while promoting the strategic advantages of CentrePort Canada.

CentrePort Canada began as a collaborative vision of business, labour, government, the transportation industry, educational institutions and others—and it remains a group effort today as new steps are taken to transform our vision into reality. CentrePort Canada has achieved a lot in a short time frame, but there is still plenty of work to do. At present, work is being completed on a land-use plan for the 20,000 acres and this plan, plus a clear, streamlined process for development and zoning approvals are required in order to pave the way for future investment.

The corporation is also working closely with the City of Winnipeg and Province of Manitoba on a plan for phasing-in the servicing of the inland port area. Land and industrial space in the northwest corner of Winnipeg, in which CentrePort Canada is located, is in high demand and CentrePort's business plan estimates that development could occur at a rate of 250 acres for the first five years once water and wastewater servicing is in place. Already, more than 130 companies are operating within the footprint, many of them in the transportation, logistics, warehousing and manufacturing sectors.

Manitoba has a long rich history as a trade and transportation province. The economic impact of the transportation sector in Manitoba was \$3.34 billion in 2008, giving Manitoba the highest share of GDP of all provinces related to transportation and warehousing. In addition, Winnipeg's geographical location in the heart of North America means that one out of every three jobs in the city is generated by trade, according to the Mayor's Trade Council Report (March 2008). This is the strong foundation upon which CentrePort Canada is built and will prosper into the future.

Diane Gray is the President and CEO of CentrePort Canada.



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ANALYSIS

Training Needs Analysis - So What Have We Learned in Manitoba?

SUFFICIENT QUALIFIED HUMAN RESOURCES ARE CRITICAL TO AN ORGANIZATION'S ABILITY TO DELIVER COMPETITIVE PRODUCTS AND SERVICES AND GROW AND PROSPER IN TODAY'S ENVIRONMENTS. A healthy, robust industry is dependent on its capacity to build strong organizations that attract and retain skilled and productive workers. Timely and accurate information about labour and skill requirements, worker and skill supply and the gaps between this supply and demand is crucial to effective organizational and industry level workforce planning. Accurate identification of education and training requirements to address these gaps informs industry and organization planning as well as government policy and programming and educational institutions'/ training providers' short and long-term offerings.

The Manitoba Construction Sector Council (MCSC) was created in January 2009 to facilitate strategies and tactics that will enhance the skills within the construction industry and help address a projected need in Manitoba of nearly 12,400 skilled tradespeople over the next nine years. Guided by representatives from the Construction Association of Rural Manitoba, Manitoba Building and Construction Trades Council, Manitoba Heavy Construction Association, Manitoba Home Builders' Association, and Winnipeg Construction Association, MCSC retained Meyers Norris Penny (MNP) to conduct a training needs analysis of the industry in Manitoba to ensure they are in a position to develop and implement successful training and skills development initiatives within Manitoba's construction sector. In the spring of 2010, MNP in collaboration with representatives of the five major construction associations, designed and distributed a survey to the member organizations to capture the current situation and needs for skills development and training within Manitoba's construction sector.

What We Found

Through our research we discovered the following about the organizations in the construction industry:

- According to information in the Statistics Canada Business Register database, there are 9500 construction organizations in Manitoba and 2088 in Manitoba in the 1 to 4 employee category. Approximately 1000 are represented by the existing construction associations. Survey response from this organization size was very low. Anecdotal feedback suggested that many of these small organizations are not members of the associations. Therefore their training needs cannot be accurately identified.
- The residential homebuilding and renovation sub-sector relies heavily on the use of sub-contractors. This would seem to suggest that this sub-sector needs highly qualified and skilled sub-contractors to remain competitive and productive. If it is also assumed that sub-contractors make up a large percentage of the organizations with small numbers of employees not involved in the existing associations, it begs the question of how to determine and meet their training needs.

- Approximately 56% of the survey respondents were members of only one construction association.
- The majority of survey respondents (55.5%) who indicated they are in the residential home building and renovation subsector are small (1-10 employees) organizations; the majority (61.9%) in the industrial/commercial/institutional sub-sector are medium-sized organizations (11-50 employees) and the majority (81.9%) in the heavy construction sub-sector are large organizations (51+ employees).



LIZANNE ROZIERE-PENNER

The significant differences in the demographics of the indus try when considering the representative sub-sectors indicates a need for flexibility in training approach and methodology.

- Survey respondents indicated that 44% of the work in the industry is being performed in the Winnipeg region, 12% is conducted in the Brandon region and 10% in the northern region. This indicates a need for qualified workers, and a potential need for training in areas outside of the Winnipeg region.
- The median number of years survey respondents have been in operation in Manitoba is 33. This may indicate that succession from the business and people perspective may be an issue.
- Approximately 33% of survey respondents are signatories to construction trade agreements.

Training Needs Identified

The survey asked construction organizations to indicate the importance of groups of skills for their employees, and their assessment of the current skill levels of their employees in these areas. Below are some of the potential target training areas.

- Pre-employment skills Basic skills and competencies required by potential employees to make them job ready. New hires were felt to be lacking skills to 'manage time and set goals', 'identify problems and solutions' and 'account abilities', which were considered important skills by survey respondents.
- Essential skills Those skills needed for work, learning and life, which provide the foundation for learning all other skills and enable people to evolve within their jobs and adapt to workplace change. All essential skills with the exception of 'computer use' were ranked high on the importance scale, but only moderate for current employee skill level.



- New Trends and Directions An understanding of green construction, energy conservation, legislation, codes and standards, and computerized systems were felt to be important but the current skill levels considered low. Feedback received from the heavy construction sub-sector identified a growing need for training in computerized systems as their equipment evolves.
- Supervisory functions Legal and regulatory compliance, project planning, implementation and quality control, leading the work crew and personal attributes were felt to be very important and well developed, with employers already offering training to employees. However ratios of supervisors to workers indicate there may be a shortage of supervisors within some organizations and the most common methods used to identify potential supervisors are 'anecdotal information' and 'length of time on the job'.
- Business management skills Strategic and business planning, business development and growth, human resource planning and development, financial management and succession planning. There were limited skill gaps identified among the business management skills of current management of survey respondents, however qualitative feedback received suggests that some business managers 'don't know what they don't know' and that many small organizations, who are often sub-contracted on larger projects, are operated ineffectively, significantly impacting these projects. Feedback from participants in the home building and renovation sub-sector suggested that skill development was required in:
 - · Controlling time and money;
 - · Effective communication;
 - Flexibility to adapt to the changing environment, industry, market, economy, climate/weather, legislation and unfore seen circumstances;
 - Adjusting business structure and processes as business grows;
 - · Using technology effectively and efficiently;
 - · Making and implementing strategic decisions; and
 - Addressing succession of key employees, suppliers and sub-contractors.

Additional Findings

With the exception of pre-employment skills and essential Norris Penny Consulting.

skills, which were identified as largely being the responsibility of the education system, the responsibility for training in all skill areas identified was perceived to be shared between employers and the education system. This finding indicates that businesses in the construction industry believe they have the primary responsibility for the development of their employees.

Additional findings show that some employers have limited awareness of sources for relevant training.

The top three reasons survey respondents identified for not providing training were:

- 1. Too few staff to allow for time off work to attend (39%)
- 2. Limited awareness of source of relevant training (31.7%)
- 3. Cost of training (29.3%)

This survey also provided insights into what training activities the construction sector organizations are currently undertaking, their preferred methods of training delivery, and their perspective on potential employer programs and supports.

The survey findings were validated through interviews and meetings with various members of the construction sub-sectors, which identified the following criteria for training delivery:

- Accessible and clear communication methods regarding available training and supports - Awareness
- Employers don't always know what they don't know therefore they need to understand how to identify what training is required and who should take it - Relevance
- Training needs to be offered at times that are convenient
 Access
- Employers need to understand how things will be better once their employees have taken the training - Impact

Conclusions

The Manitoba Construction Sector Council in collaboration with the five major construction associations of Manitoba intend to use the findings from this survey to help inform future training initiatives for construction associations.

For further information please contact Taras Luchak, Executive Director of the Manitoba Construction Sector Council.

Lizanne Roziere-Penner is a Senior Manager with Meyers Norris Penny Consulting. ₩





TARAS LUCHAK

LAUNCHED IN JANUARY OF THE **MANITOBA** CONSTRUCTION SECTOR COUNCIL (MCSC) exists so that the human resource needs of the construction industry in Manitoba are advanced.

The MCSC is comprised of the following sector representative organizations: Construction Association of Rural Manitoba; Manitoba Building and Construction Trades Council: Manitoba Heavy Construction Association: Manitoba Home Builders' Association; and Winnipeg Construction the Association.

In Manitoba, a career in construction continues to be a wise and stable choice both in the short and long term. One of the tasks of MCSC is to assist the sector to meet the training and workforce supply needs of this dynamic sector.

With this in mind, MCSC has been busy setting out to identify the training needs of our industry, in an effort to provide or facilitate appropriate training opportunities to meet that demand.

The most recent forecast prepared by the national Construction Sector Council (CSC), with extensive participation from Manitoba stakeholders, suggests that in Manitoba, an estimated 6200 construction workers will retire between now and 2018. This is in addition to the equal number of 6200 skilled workers needed to keep up with increased demand in construction activity. The industry certainly has a challenge to meet this human resource goal, both by ongoing training of the existing workforce and recruitment programs, particularly aimed at young people looking for a great future.

As noted in the CSC report (the full report is available online at www.csc-ca.org) the construction labour markets in Manitoba have recovered from a shallow recession in 2009, which was limited to a small number of industry sub-sectors. Other sectors, such as renovations grew significantly. One interesting facet of residential construction in Manitoba is that dollar value investment in renovations continually exceeds investment in new housing, a trend that is not expected to change any

On the upside, the Winnipeg new home market in particular has

experienced its best summer for single-family starts in more than two decades, which is certainly a contrast to other regions of Canada.

Job losses in the "recession" appeared to have been limited to a few vulnerable trades and occupations such as:

- Construction managers (residential)
- · Heavy equipment operators and mechanics
- Truck drivers
- Tile setters
- Trades helpers and labourers.

The CSC report noted the following with respect to short term projections to 2012:

Most sectors and trades will increase activity and jobs. "Growth is moderately strong with employment expanding 20 percent in three years. The biggest gains are in new housing and utilityrelated engineering construction." Government stimulus will have driven growth in 2010 with momentum in other non-residential markets.



On the longer term, it is expected that construction employment will remain unchanged at record high levels for the period of 2013-2018. There should be modest gains in new housing. "There are periods of limited job losses in some engineering markets. Steady, minimal gains in commercial and institutional building sustain markets."

As noted earlier, Manitoba will require 12,400 NEW skilled workers to keep up with demand to 2018. The rising age of the workforce will mean that the industry will need to dramatically increase the supply of new entrants in order to overcome retirements and the "circle of life".

There are a number of trades and occupations with an older age profile that will require "replenishment", such as, boilermakers, construction estimators, construction managers, construction millwrights, contractors and supervisors, crane operators, heavy equipment operators, residential home builders and renovators and truck drivers.

There is already anecdotal evidence to suggest that companies are having difficulty finding skilled workers. A recent survey by the Technical Vocation Initiative of the Province of Manitoba asked the following question to Manitoba employers: "In the past year, have you had any difficulty finding qualified new employees with relevant skills?" 69% of Manitoba employer respondents answered "yes". In the construction and manufacturing sectors, 82% indicated that they were having difficulty finding qualified employees!

The Manitoba Construction Sector Council in particular, will be faced with the challenge to sustain and expand training and industry promotion. Not only will there be a need to attract newcomers to construction, but also a significant need to enhance the skills of the existing workforce.

MCSC has undertaken a number of initiatives (in cooperation with its founding organizations and partners such as the national CSC) with these goals in mind. For example:

- · On-the-Job Mentorship/Training Program
- · Building Supervisors for Tomorrow
- · Pre-Employment Construction Training Program

MCSC will continue to provide and facilitate training opportunities to existing Manitoba Construction companies and their workforce. Partnerships will continue with a variety of educational institutions, government departments and specialized training based organizations to meet the challenges of the future. Currently, MCSC receives program funding from the Province of Manitoba, with considerable monetary and in-kind industry contribution, recognizing the value of training and education. One partnership example is a Provincial program known as Workforce Development Solutions, which can assist companies in some of the following areas:

- Human resource planning
- · Recruiting and selection strategies
- Human resource foundations
- · Training and staff development funding
- · Job analysis
- · Succession planning.

MCSC can work with a specific industry sub-sector or group, or company to undertake studies and projects. Examples to date have included a study for the Roofers Contractors Association of Manitoba and a heavy equipment simulator study for the Manitoba Heavy Construction Association.

It is also a key objective for the industry to encourage young people to identify construction as an attractive career option. A number of Manitoba construction organizations undertook a Construction Career Expo in May of 2010. The event introduced nearly 1200 students from across the province to handson demonstrations from industry leaders and trade associations. MCSC will facilitate a similar event in the spring of 2011 in Winnipeg, with plans to do the same in Brandon.

We will continue to work with community colleges and school divisions to dialogue and undertake to enhance the image of the industry. One very significant recent development is the introduction of a formal degree program by the Red River Community College in Winnipeg. Namely, the Construction Management Degree Program. This practical and symbolic step recognizes the importance of the skilled trades as graduates will receive a Bachelor of Technology in Construction.

MCSC has also worked cooperatively with Winnipeg Technical College in the delivery of a very successful Pre-Employment Construction Training Program. Additional classes of this program will be rolled out, some of them targeted to specific high demand trades such as roofers and painters.

In any event, it remains a good time for individuals to consider a career in the construction sector in Manitoba, particularly over the next few years.

For more information on labour market information or with respect to MCSC programs and initiatives, please visit our website at www.mbcsc.com.



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Construction: The Capacity Conundrum

Can a key Canadian industry meet the demands of 20 percent growth with a labour force that's increasing at only 2 percent?



GEORGE GRITZIOTIS

CONSTRUCTION HAS ALWAYS PLAYED A CENTRAL ROLE IN THE CANADIAN ECONOMY.

Over the last ten years, it was the country's leading industry sector, increasing employment by approximately 40 percent. Now, as we recover from the recession and look forward to an extended period of growth, many stakeholders are concerned about the industry's ability to meet the demand for new construction and lead the country back to prosperity.

"We've been told that owners are putting out projects and there are fewer companies bidding on them."

writes the Construction Sector Council's Executive Director George Gritziotis in the organization's May 2010 newsletter. "How common is this? And, if it's happening now, during a recessionary period, what will this mean when the economy recovers?"

The Construction Sector Council (CSC) is a national partnership of labour, business and government that focuses on developing the construction labour force, and promoting productivity and prosperity in the industry. This spring the CSC announced its intentions to conduct a national survey to find out if there will be enough contractors to meet demand in the coming decade and beyond.

Preliminary survey results revealed that 80 to 85 percent of construction companies have less than 15 employees, and that most managers and owners are between 50 and 65 years of age. About a quarter of respondents said they have no plans for business expansion.

"The fear," Gritziotis writes, "is that, as they reach retirement age, many contractors will simply liquidate their businesses. There has been a lot of talk about replenishing the workforce, but it looks as though we may need to look at replenishing the contractor community as well."

Contractor capacity is only one of the challenges faced by the industry. Growth is driving a number of capacity deficits: contractors with sufficient range to respond to the volume and

scope of anticipated construction; people skilled in construction trades and occupations to meet demand in the regions where projects are underway; and a training system able to keep pace with changes in the industry.

If capacity is an issue in all of these areas, as Gritziotis and others fear, its roots can be traced to the country's demographic predicament. The baby boom generation is moving toward retirement and, as a result, the country's average age has been rising and its death rate increasing over the last 30 years. At the same time, the birth rate has been declining: by 2009, Canada's population was growing at an annual rate of only 1.2 percent. Two thirds of that growth was due to immigration, and Statistics Canada projections indicate that immigration will be the most significant source of population growth for the foreseeable future.

In light of these facts, it is small wonder that stakeholders in the construction industry are thinking about capacity. The industry is facing a wave of retirements, projected to lose about a quarter of its workforce in the coming decade—contractors, supervisors and managers as well as tradespeople. Canada's slow-growing population may not provide enough people to fill these positions, let alone meet increasing demand.

The CSC regularly publishes forecasts of industry activity. Its new Construction Looking Forward report provides an assessment of construction labour markets from 2010 to 2018 based on input from industry and government representatives from all provinces and sectors of the industry. The report incorporates key information on major planned and pending construction projects, workforce demographics and training capacity.

Construction Looking Forward observes that recovery from the economic downturn is well underway in most markets and estimates that the industry will grow by about 20 percent between now and 2018. It also notes that construction activity and labour demand will not be uniform across the country; non-residential construction will take the lead with large-scale resource, engineering and utility projects.

The demand for skilled labour created by large projects in Saskatchewan (2009–2012), Newfoundland and Labrador (2012–2015) and Ontario (2015–2018) is expected to outstrip the local supply in each province. These projects will have to rely on workers drawn from other regions in Canada or from other countries.

Growth in residential construction is expected to lag behind non-residential construction due to slow population growth, but the report forecasts strong regional housing markets in response to immigration, with Central Ontario seeing the most sustained growth.

Ontario and Manitoba are expected to lead employment growth to 2018. British Columbia, Alberta, and Quebec recover from losses in the recession and are expected to experience modest to slow growth compared to recent levels of construction activity. In spite of slower growth, employment in these regions is forecast to be at, or close to, record-high levels by the end of the period.

These growth projections make it clear why industry capacity will likely take centre stage in the coming decade. To accommodate the anticipated growth, the industry will need 180,000 new workers, as well as about 189,000 people to replace retiring workers plus the loss of 26,000 workers due to mortality. That's a total of almost 395,000 people. Finding them and bringing them into the construction workforce will stretch the industry's recruiting and training capacity.

Traditional Canadian-born populations will be able to provide less than 170,000 new workers, and the industry will have to recruit more than 200,000 additional construction workers from other industries, from traditionally un-tapped Canadian populations and from outside of Canada. The industry will have to turn to labour sources such as Aboriginal people (who have high birth rates and a young, underemployed population), women, immigrants, youth and older workers.

Recruiting in new domestic and foreign populations will create additional challenges for the industry's training system. In Canada, training is delivered through apprenticeships, private suppliers, training trusts, health and safety programs, and other providers. The system is large and complex and many educators consulted by the CSC in a study of training capacity (Training Capacity in the Canadian Construction Industry, 2008) believe that it cannot easily accommodate enrolment increases of more than 20 percent.

The number of trainees is not the only issue, however. The training system will face new language and supervision challenges in classrooms, at on-the-job training sites and in examinations. It will need to develop the skills of its supervisors, classroom trainers and mentors, and refine its training and certification systems so that homegrown apprentices (both native Canadians and new immigrants) complement foreign-qualified and trained tradespersons.

Faced with so many challenges, Canada's construction industry clearly needs to expand capacity on all fronts. Some stakeholders may see this as a crisis, but many more will view it as an unprecedented opportunity. For them, the challenge is to assess the situation, and to develop short-, medium- and long-term plans to capitalize on it.

A CSC study of the contractor community in Ontario suggests that labour, contractor and training capacity are already top-of-mind in the industry. Between 50 and 60 percent of respondents said that their ability to bid on and build projects depends on the availability of skilled tradespeople, qualified supervisors, project managers and senior managers.

These contractors were asked to identify actions they believe are necessary to increase capacity. For the short term—over the next two years—they cited improving employee retention, training more young workers, getting involved in apprenticeship programs and preparing succession plans.

For the medium term—over the next five years—they identified developing new partnerships, improving marketing initiatives, and investing in new technology and equipment, as well as continuing to add apprentices, expand training, and identify candidates for succession planning.

Other people in the industry, including the leadership of the CSC, point out the need to maximize recruitment from all available labour sources, create working environments that will attract and retain both new and older workers.

The challenge is real and the opportunities are exciting. Entrepreneurs who can successfully build capacity to meet the demand for new construction will prosper in the years ahead. As an industry and government partnership, the CSC is laying the groundwork to help them succeed. It is producing timely, reliable labour market information that can be used for long-term planning, as

well as developing career awareness programs, piloting projects that use new technologies to train workers, and spearheading the development of occupational standards.

With the launch of its contractor survey, George Gritziotis says, the CSC is also "planting the seeds that will generate interest in an issue that is just as important for the future of the construction industry as the requirement for skilled tradespeople."

George Gritziotis is Executive Director of the Construction Sector Council. ₩







MICHAEL ATKINSON

WITH THE FEDERAL STIMULUS MEASURES COMING TO AN END THIS CURRENT FISCAL YEAR (I.E. MARCH 31, 2011), the first post-stimulus Federal Budget expected in February 2011, and the country poised for a sustained economic resurgence and even possibly a federal election in 2011, it is indeed timely to ponder what is needed next to ensure the continued health and prosperity of the country we know as Canada, and the industry to which we belong that builds it.

Last January CCA hosted the first-ever national Non-Residential Construction Industry Summit. The Summit was designed to identify the major industry trends and developments that will impact the non-residential construction industry going forward. The Summit attracted over 110 participants from local, regional and provincial construction associations from all regions across Canada including representatives from Manitoba and the Manitoba Heavy Construction Association. The Summit identified six (6) key areas that the participants felt were the major challenges and opportunities for the industry going forward. They are:

- 1. The Changing Workforce: Labour Supply and Training;
- 2. The Recent Economic Downturn, the Recovery and the Need to Continue to Invest in Canada's Critical Public Infrastructure and to Encourage Private Sector Investment;
- 3. Awareness of Environmental Issues;
- 4. Public-Private-Partnerships (P3);
- 5. Increased Competition from Large and/or Global Firms; and
- 6. New Technology.

Essentially these six issues are what the non-residential construction industry itself identified as to what should be the priorities for the industry post stimulus.

Let's look at each in a little more depth.

1- Changing Workforce: Labour Supply and Training

Labour Supply

A top priority for the construction industry in Canada continues to be labour supply, training and retention. The latest Labour Market Information surveys conducted by the Construction Sector Council conclude that the construction industry nationally in Canada needs to attract some 395,000 new workers by 2018 to replace those expected to retire in the next seven years and to keep pace with demand during that same period. The CSC tracks regionally labour capacity in some 30 construction industry trades and occupations. In those 30 occupations, the CSC says some 215,000 workers will leave the industry due to retirement or death between now and 2018 or about 24% of the total number employed by the industry in those 30 occupations in 2009.

It is very evident that while the current recession has somewhat relaxed the critical need for workers, that gap will only intensify as the economy improves and the workforce continues to age. It is also evident that given the low fertility rate of Canada's general population, and the failings of our current immigration system and policies, the industry will not be able to recruit many of those new workers from traditional domestic sources and must begin to cultivate previously under-utilized domestic and foreign sources.

Training Capacity

Even when we attract those new workers, however, there is a further challenge - namely training capacity. College facilities across Canada, where many of our construction trades obtain the classroom portion of their apprenticeship training and where many of our construction supervisory personnel are trained, were built 40-45 years ago, with an expected lifespan

of roughly 40 years. Many have been neglected to the point they do not possess the capacity, both in terms of physical space, as well as teaching personnel and equipment, to deliver the current and future training needs of our industry, which are only going to intensify.

CCA approached the Association of Canadian Community Colleges (ACCC) in 2008 and suggested a coalition of likeminded industry groups be explored. In September of 2008, a coalition of national organizations was created to lobby the federal government to achieve greater funding for colleges. We were pleasantly surprised when our lobby efforts led to almost immediate success when the January 2009 Federal Budget announced the creation of the Knowledge Infrastructure Program, a two-year \$2 billion program of which 30 per cent or some \$600 million was targeted for community college infrastructure. However, more is needed and CCA through its participation in the Coalition will continue to press for greater recognition of Canada's community college system.

2 - Recent Economic Downturn, the Recovery and the Need to Continue to Invest in Canada's Critical Public Infrastructure and to Encourage Private Sector Investment

The second issue raised at the Summit was the economic downturn and what comes next. CCA launched an intensive lobby campaign prior to the January 2009 Federal Budget to ensure that any stimulus measures in that Budget included infrastructure investment. The result was some \$12 billion in infrastructure measures of which \$11 billion was new money in addition to the Government's previous \$33 billion commitment.

The \$33 billion Building Canada Fund, however, expires in 2014. The only current "permanent" federal contribution that will survive is the \$2 billion annual Gas Tax Fund, which is insufficient.

The concern now is what happens post-recovery, especially to public infrastructure investment at all levels of government when governments re-focus on fiscal policy. Will they repeat the mistakes of the past by cutting capital spending and foregoing needed infrastructure upgrades and maintenance? It was exactly that kind of thinking that generated our current sizeable infrastructure deficit in the first place!

And while the attention of governments' recovery action has been focused on public infrastructure investment, what measures have been taken to encourage private sector investment? We need to find the means by which to stimulate private sector investment through tax incentives and other methods. This will be a major priority of CCA going forward.

3 - Awareness of Environmental Issues

Another challenge identified at the Summit was the need for the construction industry to ensure that it continues to be seen by governments, the public and all stakeholders as a key partner and necessary participant in achieving sustainable development solutions that address prudent environmental public policy objectives.

In the area of environmental assessment, CCA has long-called for a much more streamlined and effective process. We recently had a big win when the Federal Government introduced changes to the Canadian Environmental Assessment Act that address some of our past concerns and formalized the changes introduced last year to help streamline federal approvals of infrastructure stimulus projects.

Going forward, Parliament will be conducting a formal review of the Act in the next year or so, and CCA plans to be an active participant in promoting further changes to streamline the assessment process and to reduce federal-provincial duplication.

4 - Public-Private-Partnerships (P3)

A fourth challenge identified at the Summit is the growing interest and use in Canada of Public-Private-Partnerships or P3s, particularly at the provincial level.

The challenge identified at the Summit in this area is to find the means by which Canadian construction firms possess the ability and capacity to participate successfully on P3 projects in Canada.

The new wave of P3 projects, particularly at the provincial level, has sought minimum project thresholds in the \$50 million plus range in order to attract foreign investor interest. Often this is done by bundling a series of smaller projects. This has the effect of not only eliminating a market for the small to medium sized firms but also taxing the capability of Canadian firms to participate in the delivery of these P3 projects.

CCA has just published an educational Guide on P3s directed at small to medium-sized firms. The intent of this Guide is to provide members with a basic understanding of the different contractual, operational and risk allocation measures that accompany the typical P3 project in Canada.

5 - Increased Competition from Large and/or Global Firms

A somewhat related issue identified at the Summit is the growing presence of large, foreign firms in the Canadian market.

The recent resurgence of large P3 infrastructure projects has in fact attracted a good deal of foreign interest, principally at the financial and concessionaire levels but also at the design-build or construction level. These foreign firms often bring with them their own business methods and practices, which are often at odds with Canadian and even North American practices.

The challenge here is to ensure that Canadian firms are provided an equal opportunity to compete and work successfully with international firms operating within Canada.

6 - New Technology

The final major theme identified at the Industry Summit was technology.

Canadian construction firms must keep up-to-date with new technologies - for example Building Information Modeling (BIM) - and the efficiencies they can deliver. This will be key if Canadian firms hope to successfully compete with foreign firms. Emphasis on applied research and practical innovation will also go a long way to helping the industry in Canada address the other five priorities identified by the Summit.

Recently, the CCA Board emphasized its desire to see the Canadian Construction Association become much more actively involved with other key stakeholders in the adoption and use of new technologies such as BIM.

Conclusion

While 2011 and beyond promises to be a challenging time for the construction industry in Canada there is no doubt that it will also be a period full of exciting opportunities.

Michael Atkinson is President of the Canadian Construction Association.

VIEWPOINT

Civil Infrastructure Council Update



BILL FERREIRA

THE PAST 24 MONTHS HAVE CHALLENGING FOR CANADIANS as the global economic turndown, triggered by financial turmoil in the United States, wreaked havoc on our economy and many of our industries. In particular, the manufacturing industry was hit hard by the first 12 months of the recession. which most economists believe was triggered by the October 2008 meltdown of the global stock markets. During this time, the Canadian manufacturing industry shed more than 240,700 jobs, or 12.5 per cent of its pre-recession workforce of just under 2 million. If not for the

robust actions of all levels of governments across Canada, the declines would have been far worse. The challenge for governments now, as the economy begins to recover, will be to strike the right balance between debt repayment and continued investment in areas of the economy that will help lay a stronger foundation for future economic growth and improved global competitiveness.

Prior to the recession there were a number of strong warning signs that manufacturing in Canada was in trouble. While Canadian industry recorded profits throughout the 1990s, manufacturing productivity lagged most industrial competitors, particularly those within the G7. During this period, the US was leading the world in productivity growth, while Canada lost ground, despite the integrated nature of our two economies.

In a 2008, Professor James Brox of the University of Waterloo argued that while 1995 US and Canadian productivity rates were roughly comparable, by 2007 the US had increased its productivity advantage over Canada by more than 20 per cent. In looking for the cause of the United State's remarkable performance, Professor Brox found that Canadian governments had reduced their overall investment in core public infrastructure by 3.5 per cent, where as in the US, investment in public infrastructure had increased by more than 24 per cent.

In further exploring this correlation, Brox argues that the downward trend in Canadian productivity was actually part of a longer-term trend that began in the late 1970s as our governments

reduced their capital spending on infrastructure. These conclusions were similar to those of Professor David Aschauer of Bates College, who in 1989, first suggested that declines in G7 productivity could by partially explained by reduced government investments in infrastructure.

To construction contractors across Canada, these results come as no surprise. As the frontline workers responsible for the construction and maintenance of core public infrastructure assets, our industry, more than any other, was acutely aware of the impact that government efforts to eliminate deficits were having on core public assets and the challenges created for manufacturing, particularly in larger urban centres.

One needs only to look at the City of Toronto to understand current challenges. Much of the city's core infrastructure – sewers, water mains, electrical grids, roads and highways – were built in the 1960s for a population of just over 1 million. By the year 2000, the city's population was well over 4 million and growing at a sizeable rate as Toronto continued to receive more than 60 per cent of all new immigrants to Canada. Today, roadway gridlock is no longer limited to rush hours, but lasts all day long.

With similar commuter challenges throughout the Greater Toronto Area, Montreal, Vancouver, Calgary, Edmonton and at most of our busy border crossing, it is not surprising that business productivity within our manufacturing sector, which relies on just-in-time delivery for parts and components, has suffered as suppliers spend more time in traffic while worker output declines.

Common to all these cities is the fact that demand for services has outpaced the ability of local governments to raise the revenues necessary to satisfy growing demands. Canada is increasingly an urban country with more than 80 per cent of us living in communities with populations of 100,000 residents or more. Compounding the challenge of increased urbanization has been the transfer of custodianship for much of Canada's infrastructure to municipal governments. With municipalities now responsible for 55 per cent of Canada's core public infrastructure, it is not surprising that most cities are struggling to keep pace with growing infrastructure demands.

Of the three orders of government in Canada, municipal governments have the least amount of freedom to raise the revenues necessary to meet the growing financial burden associated with increased infrastructure custodianship. As a result,

infrastructure across the country is suffering. A 2007 study by the Federal of Canadian Municipalities found funding shortfalls had produced an infrastructure deficit of more than \$123 billion. If these shortages are not addressed quickly, over the coming decade, local governments will be overwhelmed to the detriment of the future competitiveness of the Canadian economy.

While the solution to this problem may seem clear – increase the revenue generation capacity of municipal governments – the nature of the Canadian Constitution makes this a challenging problem for elected officials everywhere. Since municipal governments have no formal recognition within the Constitution, they remain creations of provincial governments and subservient to provincial legislatures. As such, municipalities exist under a very restrictive set of rules that not only limit their borrowing capacities, but hamper their ability to raise the revenues required to adequately manage their infrastructure needs.

Municipalities in Canada rely primarily on property taxes to fund operations and municipal bonds to finance short- to mediumterm infrastructure expenditures. Generally the bond term is tied to the useful service life of the asset being financed. This means most bonds typically carry a maturity of between 1-5 years or 5-10 years. Though the use of longer-term bonds is less common, some cities and provincial / municipal financing authorities do issue 30-year bonds.

Due to low yields, attracting potential investors can be challenging. One solution, used in the United States, has been to provide municipal bonds with tax-exempt status. This means US municipalities are able to borrow at rates of 75 to 100 basis points below federal bonds. By contrast, Canadian municipal bonds are taxable, which increases borrowing costs by as much as 50 to 75 basis points above federal bonds.

If Canadian municipalities had the ability to issue tax-exempt bonds to finance public infrastructure, they could lower municipal borrowing costs and increase the fiscal capacity of cities. This would provide municipal governments with the resources they require to not only manage existing infrastructure needs, but also take on new expenditures such as the estimated \$12 billion needed over the next 20 years in order to comply with new federal wastewater facility regulations.

Another possible solution is to increase the capacity of cities to raise new taxes. According to a 2002 OECD report, municipalities receive just 8 per cent of the total tax revenue raised annually in Canada. These revenues are entirely inadequate to meet the growing list of municipal responsibilities; however, without additional provincial authorities, municipalities will remain shackled to property taxes as their primary source of revenue.

Unlike sales and income taxes, property taxes tend to increase much more slowly than the economy; they make for a very poor source of funding for municipal infrastructure construction and maintenance. Both federal and provincial governments have recognized this problem and have implemented some revenue sharing mechanisms to help increase municipal capacity to manage infrastructure. For example, the federal government has rebated municipal GST purchases through to 2014, and created a permanent \$2 billion annual transfer of revenues to municipalities through the Gas Tax Transfer Fund. Despite the success of these measures, as well as recent increases in national infrastructure funding through government stimulus measures, and jointly-funded infrastructure development programs, Canada will continue to suffer economically without

further increases in government funding for infrastructure modernization.

Municipalities need to transition from the existing tax model to one that fairly serves Canadians. A 2010 study by RiskAnalytica of Toronto estimates the cost of maintaining the status quo will be significant. Over their careers, new entrants to the Canadian labour market may suffer as much a \$51,000 reduction in earnings resulting from lower productivity due to inadequate infrastructure. Though higher levels of taxation may be required to modernize Canada's aging infrastructure assets, the resulting income gains due to improved productivity will more than offset any projected income loss. The study predicts employees will see a return of \$1.48, in real after-tax income, for every addition dollar increase in taxes paid. The Conference Board of Canada drew similar conclusions when looking at infrastructure investment and productivity growth within Ontario, concluding that for every dollar spent on public infrastructure, a \$1.11 increase in real GDP will be generated.

Clearly the need for fiscal prudence in the coming years will require Canadian governments to make some very difficult decisions and reduce their overall spending in order to balance budgets. However, they cannot repeat past practices, which balanced budgets at the expense of capital spending, resulting in Canadian's today being saddled with a significant infrastructure deficit. If Canada is to overcome the productivity challenge, and remain a globally competitive country in which to live and do business, Canadians must demand sustainable, equitable and transparent funding to eliminate the current infrastructure deficit. Inter-jurisdictional considerations should have no place at the negotiation table because, after all, there is only one taxpayer.





Year in Review

The CCA's Gold Seal Certification program is a national certification program for construction Project Managers, Superintendents, Estimators, Owners'

Project Managers and Construction Safety Coordinators. Certification is based on the candidate's education, experience and their ability to satisfy the rigorous standards of the program. This may mean the successful completion of a Gold Seal exam.

Having attained the Gold Seal Certificate the individual can be assured that he/she:

- Has met the Highest Industry Qualification Standards
- Has Achieved a Recognized Skill & Competence Level
- · Has Acquired National Recognition
- · Has Acquired Individual Professional Recognition
- · Has Enhanced Career Opportunities
- · Enhanced the Image of the Construction Industry

The Gold Seal Certification program was developed by the industry for the industry and is a voluntary certification program for individuals. The Canadian Construction Association considers Gold Seal Certification a key part of the services offered to their members and are proud to have been integral in the implementation and delivery of this certification. Gold Seal Certification is increasingly recognized as the national standard for the construction industry.

The program has experienced phenomenal growth in the last couple of years; in 2009 the program received over 1100 applications from candidates seeking certification. This increase was partly due to the changes to the requirements that took effect January 1 2009. So far this year the program has received close to 500 applications for certification. Although the numbers are lower than the previous year, the interest in the program seems to be at its peek. Many firms have requested Gold Seal presentations in order to comprehend the certification requirements and to implement company wide certification among their staff. These firms understand the importance of professional development as well as maintaining a competitive advantage. Employers are assisting their staff with the application process, including the cost of the application fee and locating the appropriate education to meet the certification requirements.

The accreditation element of the Gold Seal Certification Program is also gaining momentum. Construction management education is an integral part of the program, one of the functions of the accreditation program is to review and accredit construction management courses which are then promoted to the industry as a whole. In order to maintain the relevance and currency of these offerings, program guidelines require that all courses be re-accredited every five years.

There have been over130 construction management courses/ seminars accredited in 2010. There over 700 construction management courses/seminars that are Gold Seal accredited with new courses being submitted on a weekly basis. Course availability is essential to the program as the National Gold Seal Committee is considering implementing a mandatory education requirement.

The Gold Seal Projects concept also continues to evolve. The following projects have been designated in 2010:



STEPHANIE WALLACE

- University of British Columbia
 Okanagan Engineering and Management Building, Kelowna, BC
- · Perimeter Institute, Waterloo, ON
- Research in Motion's office Building, Waterloo ON
- · Organic Waste Processing Facility, Guelph, ON
- · La cité verte, Québec, QC

The objectives of the Gold Seal Project are to: promote Gold Seal Certification in construction management, demonstrate excellence in construction management, showcase professionalism and enhance the image of the construction industry.

During the span of the project, the construction management team will endeavor to achieve Gold Seal Certification with the assistance of the local construction association; such as onsite promotion of the program, tool box talks, lunch and learns, information about the program and local educational offerings.

The National Gold Seal Committee continuously focuses on program development and as such a review of the Roadbuilding & Heavy Construction profiles and exams was recently completed with exams shelf ready for the April 2010 writing. Currently underway is the review of the General Contracting profiles and exams as well as a review of the Construction Safety Coordinator profile and exam.

The committee held a strategic planning session in late April 2010 and are currently reviewing their 3 year Business Plan. They are committed to continue to work on initiatives such as; reciprocity agreements with international bodies, developing marketing campaigns to all sectors of construction and exploring developing further designations. There are numerous other initiatives under way by the National Gold Seal Committee – for further information on the Gold Seal Certification program, visit www.goldsealcertification.com.

Stephanie Wallace is the Manager of the Gold Seal Certification Program.

















Introduction

In a paper presented at the International Association for Impact Assessment (IAIA) annual meeting in Boston in 2005 (Barnes et al. 2005), my co-authors and I argued that federal EA in Canada is inefficient, frequently of poor quality and failing to meet its basic objective as a key tool of sustainable development. Many inter-related factors are contributing to this situation. The Canadian Environmental Assessment Act (CEAA) is fraught with jurisdictional challenges and uncertainties. Founded on the principles of self-assessment, various federal authorities must, for each of 6,000-plus assessments annually, determine which government departments are involved and in what capacity.

Contributing to these problems is the duplicative nature of overlapping EA processes required by various levels of government. In addition to federal and provincial EA, there is a diversity of federal and provincial boards, and tribunals, that also administer EA processes (e.g., the National Energy Board, provincial energy boards). The application of these various EA processes to projects is often complex and duplicative. Projects that are the subject of overlapping EA often do not enjoy added value from an environmental protection perspective that could be attributable to multiple reviews.

In 2005 we suggested a number of potential changes and improvements to get EA in Canada on track. Suggestions included the establishment of a federal EA body to manage all federal EA in Canada, reversing the problematic self-assessment principle and providing an opportunity for consistency and higher quality review and administration. Amendment to the legislation needs to include measures that reduce the number of unnecessary project assessments on small projects of little or no environmental consequence and providing for more comprehensive strategic EA (regional and sector), to support consideration of cumulative environmental effects.

Changes Since 2005

In 2006, Crown corporations (some 75 in number) were added to the list of authorities to which CEAA applies. This added a significant number of EAs to that required annually.

Legislative changes since 2005 include amendments to the Law List Regulations and Exclusion List Regulations, and the Navigable Waters Protection Act aimed at minimizing the number of EAs required for inconsequential projects. This has had a tendency to reduce the number of inconsequential assessments. In addition to these permanent legislative initiatives, more recent changes include exemptions to facilitate projects under the recession stimulus packages for infrastructure deemed inconsequential.

On July 6, 2010 Canadian Construction Association President, Michael Atkinson, and I were witnesses before the Senate National Finance Committee regarding omnibus federal government budget bill (Bill C-9). In the bill, the government proposed important amendments to CEAA that passed into effect later in July. We endorsed the proposed amendments, and presented supporting arguments around how they would help address several key issues with the act. The amendments were aimed at improving the complex scoping process and administration of Comprehensive Studies. Since that time, regulations for timelines for comprehensive studies have been introduced for public comment.

A key policy initiative of the government was the issuance in late 2005 of a "Memorandum of Understanding for the Cabinet Directive on Implementing the Canadian Environmental Assessment Act." This directive provided direction on matters pertaining to federal coordination and discretionary decision making regarding the scope of the project for EA, an issue challenged in the courts repeatedly since 1997.

A Supreme Court of Canada decision in January 2010 has recently overturned the scoping policies of the Cabinet Directive, namely, to avoid duplication with other jurisdictions conducting EA, responsible authorities were encouraged by the policy to use legislative discretion to limit the scope of the project to the triggering mandate. This Court decision apparently quashes this efficiency related policy and will likely result in a reversal of previous achievements in minimizing duplication and improving efficiency.

The Persisting Problems

The legislative and policy changes made since 2005 target key issues with CEAA. They are positive in addressing concerns for process uncertainty, efficiency and effectiveness. It remains however, that the Government of Canada still does too many assessments of inconsequential projects by a diffuse and changing roster of responsible authorities and often duplicates the EA of other jurisdictions.

Self-assessment is a key aspect of CEAA. This and the "triggering" mechanism for EA remain a fundamental problem with CEAA. For each assessment, there is a complex federal coordination process that involves the determination of which federal authorities are "responsible authorities" (decision-making authorities) that must conduct the assessment for each project. This process results in a gross waste of resources and contributes immensely to process uncertainty and efficiency problems. The so called "federal coordination process" takes weeks, months and even longer, to determine who has the responsibility to undertake the assessment. There is no value added in respect of what needs assessment or how to better plan a project to meet sustainable development objectives.

Another recently exposed phenomenon is the complexity and capacity of responsible authorities to undertake scoping that is effective and efficient.

A recent study (Jacques Whitford Stantec 2009; Barnes et al. 2010) has pointed to a plethora of issues related to the administration of scoping in energy and mining projects that has broad applicability to EA in general. There is a need for improved scoping and capacity building in the administration of EA. Evidently, resources focus on the administration of the complex process rather than on the quality of scoping decisions. The study identified that the objective of "Good Scoping," effectively focusing the EA on environmental issues and concerns that are relevant to a proposed project is elusive, and that problems of "Broad Scoping," unclear or non-specific direction or requests for more information than may be reasonable or necessary, are pervasive.

The federation of Canada involves a complex division of jurisdiction among federal, provincial, territorial and Aboriginal governments. These all have EA legislation and processes. While they have similar goals, they are generally different processes reflecting the different jurisdictions. This is a complex matter but

THE FEDERAL GOVERNMENT WILL NEED TO PLAY A LEADERSHIP ROLE BY STEPPING BACK FROM DUPLICATING THE EFFORTS OF OTHER JURISDICTIONS AND STEPPING FORWARD

it suffices to observe that there are few mechanisms for equivalency, substitution and reciprocity among jurisdictions.

The Road to Recovery

As I noted in my paper to IAIA in Geneva (Barnes 2010), in 2010, CEAA will be subject to a parliamentary review. As of August 2010, the government of Canada has been silent on how and who will do the review, and whether there will be any engagement of the public and stakeholders. Clearly, the government will need to engage stakeholders to discuss and hear of the problems associated with the implementation of CEAA. The government must persist in its effort to improve the administration of CEAA. At the same time, it should not squander the opportunity afforded by the parliamentary review to consider the fundamental flaws of the legislation and set the course for a complete overhaul of EA legislation in Canada.

There needs to be a national framework for EA in Canada (Barnes 2010). The federal government needs to work with provinces, territories and other jurisdictions to establish a national framework for EA that has equivalency and reciprocity between jurisdictions, and allows for substitution. The fundamental objective will be that EA will be the same irrespective of the jurisdiction and authority conducting it. The framework must facilitate the achievement of "one project, one assessment." It should enable jurisdictions to adopt the national framework applied universally in the country.

Fundamental to this, the federal government should make every effort to get out of the business of assessing projects that are the jurisdiction of others. The success of this approach will require a change in triggering of environmental assessment. The federal government should not trigger an EA when it is issuing a permit or authorization, or providing funding or transferring land to facilitate the project.

A simple list-based approach to deciding which projects require assessment and at what level, analogous to the approach of World Bank, is a simpler approach to this decision. Governments should waste no effort on determining whether there is a trigger for an EA or on who should do the assessment of a project — this practice is of no benefit.

The federal government will need to play a leadership role by stepping back from duplicating the efforts of other jurisdictions and stepping forward to negotiate a national framework that will limit duplication, and readily adopted by all.

Jeff Barnes is a Senior Principal in Environmental Management for Stantec.



The Manitoba Heavy Construction Association Training Academy Program, now called WorkForce, strives to train new entrants with interest in heavy construction as well as provide upgrading for experienced heavy construction personnel.

Students entering the WorkForce program have two training opportunities:

- 1. **Skilled Labourer** An entry level into the heavy construction industry. Individuals will be given classroom instruction and hands-on training related to becoming a skilled labourer.
- 2. Heavy Equipment Operator Provides classroom and hands-on training relating to a variety of heavy equipment pieces.

The WorkForce Program was developed by industry for industry. New materials, technologies and learning techniques are continually integrated into the program. Qualified training instructors have vast industry experience and utilize slides, videos, classroom lectures and exercises to fully involve each student in learning.

The WorkForce program generally utilizes a training rotation of classroom and hands-on training components on most training topics. Upon graduation, students will receive certification in the operation of heavy equipment or as a skilled labourer based on provincial occupational standards.

A graduating student may find work in the following areas:

- · Sidewalk, road or highway construction;
- Sewer and watermain installation and repair;
- · Associated excavation works:
- · Subtrade work related to construction of bridges; and
- · Crushing and aggregate work.

Skilled Labour - 4 weeks

- · Hand & Power Tools WHMIS
- Workplace Safety & Health TDG
- Environmental Awareness Fall Protection
- Shoring/Trenching Ladder Safety
- Soils & Erosion Control Confined Entry
- Flagperson Training Productivity
- Load Securement Back Safety
- · Intro to Blueprints Life Skills

- · Worksite Violence, Harassment & Conflict
- Worksite Communication & Resume Writing
- · Stakes, Grades & Slopes
- · Diesel / Gasoline Engines
- · Basic Construction Math
- Intro to Heavy Equipment Operation
- Hearing Conservation



Heavy Equipment Operator - 4 weeks

- Occupational Health, Safety & Environment
- Heavy Equipment Fundamentals
 - Heavy Equipment Machinery & Attachments
 - Heavy Equipment Inspection & Basic Maintenance
 - Theory of Building to Grade Specifications
- Work Planning & Coordination
 - Communication
 - Assessing a Jobsite

- Heavy Equipment Operations
 - Constructing to Grade
 - Rigging Operations
 - Pushing & Towing Operations
 - Excavating, Stripping and Backfilling
 - Ditching, Sloping & Trenching
 - Lifting Operations
 - Demolition Operations
 - Compacting Operations
 - Loading and Unloading

WorkForce can provide tailored training for groups. Call Greg Huff, WorkForce's Program Manager, at 947-1379 for more information. Greg is responsible for the delivery of safety and environment related services to the heavy construction industry throughout Manitoba, and has worked for over 25 years with industry and government in the capacity of a safety professional.



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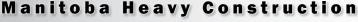
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GLEN BLACK

AS THE INCOMING SAFETY **DIRECTOR WITH MANITOBA HEAVY CONSTRUCTION.** I am extremely pleased to be associated with such a well respected and forward thinking industry. I am equally excited to be aligned with the dedicated and committed professional team at the Manitoba Heavy Construction Association.

My safety career with the construction sector dates back to the late eighties, when I conducted inspections, investigations and delivered safety training to contractors, employers and employees as a Government appointed

Safety and Health Officer. My duties required administering the Workplace Safety & Health Act and Regulations in the very industry sector I now proudly represent. Back then, COR™ certification was not available to industry. In fact, industries in general were not particularly eager to engage with enforcement officers, nor did the industry fully understand their obligations under the Act and Regulations. There were however, successful firms who had comprehensive safety programs in place to protect their workforce. Those firms today still exhibit reputable and strong safety leadership mandates.

Throughout the nineties my career changed paths and I worked directly with private industry developing and integrating modern and effective safety programs. I was very fortunate to work with Executives and Boards of large corporations who had strong conviction, vision and plans for safety success, and those who had an unwavering commitment to administer safety in an effective manner. These strengths are quite similar of those shared by our current Executive and Board of Directors of the Manitoba Heavy Construction Association.

During my brief time here, I have met with stakeholders, board members, contractors, business partners and regulatory personnel. It is evident that the heavy construction industry has taken a substantial step forward to promote and integrate an improved safety model for its workforce. I found the parties to have sound knowledge of the rules, regulations and standards applicable to our industry, and there appears to be a willingness by firms to attain COR™ certification. It is also very gratifying to see firms proudly display their COR™ certification, as this promotion speaks volumes to the strong safety leadership and improved safety culture the industry has built over the last several years.

The industry values its strong relationship with our business partners, the Regulators and the Workers Compensation Board. The industry and the regulators, over time, have become allies in their efforts to improve workplace safety. They have collaborated on new regulations and standards and openly discuss matters of importance and interest. Industry and government now routinely explore new safety initiatives and campaigns, and these are targeted at reducing workplace injuries. The parties have successfully fostered open and effective lines of safety communications. These relations are essential for an improved work climate to exist for the safety, health and wellbeing of our construction workforce in Manitoba.

It is extremely rewarding to help employers develop and implement safety programs. Conversely, it is devastating to experience a loss of life to a co-worker as a result of a tragic workplace accident. Furthermore, it is difficult to defend against legal charges and prosecution in the absence of a strong Safety and Health Program. Attaining COR™ certification will help prevent or minimize accidents from occurring and will provide firms with a due-diligence defense should charges arise from a workplace accident.

The Certificate of Recognition (COR™) Program is an Occupational Health and Safety Accreditation Program trademarked and endorsed by participating members of the Canadian Federation of Construction Safety Associations (CFCSA). The Manitoba Heavy Construction Association (Safety Program) is a member and is an "Authority having Jurisdiction" to grant COR™ in the Province of Manitoba. Achieving COR™ Certification demonstrates a firm has a safety and health program in place, but it also demonstrates the industry can self administer a mature, responsible, and successful safety model.

For our industry to build an even stronger safety culture, individual firms and the industry in general will need to continue to promote and support COR™ certification. COR™ training and safety program services will need to be made available so that all firms within our industry, regardless of their size and complexity, will be able to meet or exceed this established standard. Periodic monitoring, auditing and reporting on compliance to the standard will be necessary to confirm a strengthen culture shift has occurred.

There are significant advantages of becoming COR™ certified. The City of Winnipeg and the Province of Manitoba contract wording specify COR™ certification is required as a "Condition of Contract". The Workers Compensation Board of Manitoba recognizes that firms who have COR™ certification have taken positive steps to eliminate/minimize workplace injuries from occurring. The Workplace Safety and Health Division recognize that COR™ certified companies have the fundamental provisions in place to establish and sustain a robust Safety and Health Management System. In addition, large firms undertaking major projects within our Province, and beyond, are using COR™ as a pre-qualifying condition to contract their services. This pre-qualifying trend will continue as the momentum and preference is clearly to contract the services of COR™ certified companies.

The Executive and Board of Directors of the Manitoba Heavy Construction Association remain committed to ensuring all employers paying premiums into the 407/408 WCB rate code category have access to and use the safety services offered by our Safety Program. Our program is committed to Construction Safety Excellence, designed and directed to ensure that the program meets industry needs.

Attaining COR™ certification is a sound business decision, and an obvious step forward. The COR™ safety model works. It is widely and effectively used throughout Canada to help protect workers against injuries on the job, and I firmly believe there needs to be greater application of this successful safety model within other industry sectors throughout our Province.

Our Safety Team at the MHCA is fully versed and ready to provide support and assistance to any firm who desires to attain COR™ certification. Our safety advisors are deployed throughout the Province supporting current COR™ certified companies, with a mandate to promote, educate and certify new firms in COR™. Let our TEAM certify your firm.

In closing, I wish to express my sincere appreciation to the industry and association for the warm welcome back to the construction sector. Through our collective efforts, I look forward to building a safer, stronger and healthier heavy construction industry within our Province.

Glen Black is Director of the WorkSafely Program for the Manitoba Heavy Construction Association.



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A New Era Begins for the MHCA





JASON ROSIN

The MHCA bison is now officially in retirement.

As you may have noticed, the MHCA is proud to be sporting a new logo, colours and tagline – Groundbreaking – as part of a year-long re-branding process.

The previous MHCA brand has served the organization well for many years. However, it had become dated and tired, thus reflecting inaccurately on an association which has become more dynamic, gained increasing respect and taken a leadership role far broader than could have been imagined a decade ago.

The need to re-brand also comes from our desire to capitalize on our successes and update our corporate image to one that reflects the energy, drive and determination of Canada's leading Heavy Construction Association giving us a fresh identity and look for the organization and its sub-brands.

It was also important that we re-brand to keep our Association fresh when compared to other Associations in Canada. Recently, the Saskatchewan Heavy Construction Association re-branded their association, even changing their name completely to suit their organization.

The Process

After choosing our branding partner, Velocity Branding, togeth-

er we began a process of determining what would suit the MHCA best in terms of a new look, feel and "brand".

We determined the rationale for re-branding to be:

- To visually demonstrate the strength, vision and freshness of our position on policies, and relationships with government and the private sector
- To increase and connect the profile of the MCHA not only in the minds of its members, all levels of government and the private sector, but in the general public as well
- To develop an accessible, powerful and compelling visual identity/brand strategy, the importance of sustainable infra structure becomes relevant to not just those in industry, but to all who encounter it in print, broadcast or online.
- Allow the MHCA Brand to become our standard bearer and further establish our reputation as a leader of, and advocate for, the heavy construction industry

After nearly a year of work, we are very excited to begin a new phase of the MHCA – the *Groundbreaking* phase!

You will also notice our other programs have new names: the Manitoba Heavy Construction Safety Program is now called the *WorkSafely* Program, while the Manitoba Heavy Construction Training Academy is now called the *WorkForce* Program.

These new names reflect the progressive, modern and growing Association programs, and will generate added excitement with a fresh new look, feel and commitment to our programs.

Rest assured, we will continue to provide the best safety and training programs in the industry!



The Manitoba Heavy Construction Training Academy will now be known as the Work Force Program.



The Manitoba Heavy Construction Safety Program will now be known as the Work Safely Program.

The Result

We feel we have aligned our visual image with our continuing achievements and now present us as a dynamic organization pushing the boundaries, while continuing to work with all of our stakeholders. Watch for the major launch of the new MHCA brand at our Annual General Meeting on November 26, 2010. We hope you can attend and join us in celebrating a new era of the Manitoba Heavy Construction Association!

Let the Groundbreaking era begin!

Jason Rosin is Manager of Communications for the Manitoba Heavy Construction Association.



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CORT Value Add Services for 2011 & Beyond...

There is strong commitment and compassion exhibited by heavy construction firms in Manitoba to protect workers against injuries on the job. The COR™ Safety Program has wide acceptance and continues to be the safety standard to achieve in our industry.

The Board of Directors and members of the Manitoba Heavy Construction Association (MHCA) remain unequivocally committed to ensuring that all employers paying premiums into the 407/408 WCB rate code category have equal access to and use the safety services offered by the MHC Safety Program.

Our safety program is committed to "Construction Safety ExcellenceTM' and will be directed in that context with periodic and annual reviews designed to ensure that the program continuously improves and meets industry needs.

COR™ Certification is widely and effectively used throughout our industry. COR™ has gained recognition and strong momentum within the Province. Currently, there are 148 firms in our industry which are COR™ of which 17 are new to 2010. Year to date, 59 companies have registered to train and achieve COR™. An objective of our program in 2011 is to have 250 COR™ accredited companies in 2011.

2011 Value Added Services

In response to requests assembled based upon discussions with industry, safety practitioners and related stakeholders, we will further improve the industry safety program with specific initiatives designed to enhance, add value and benefit to our client, the heavy construction industry in Manitoba.

Some initiatives improve upon existing services, while others are new in scope, intent and effect. They are summarized as follows.

Specific Action Steps:

- 1. COR™ Training All COR™ related training will be delivered by program staff this is a change in direction designed to ensure a more acute and sensitive focus to industry needs. All other related training will be outsourced. In addition, all COR™ training materials will undergo review and improvement to help assure achieving 'Construction Safety Excellence™.'
- 2. Weekly and Monthly Safety Communications We will optimize the use of the MHCA Weekly News and a reinvigorated monthly newsletter the Safety Informer to more effectively promote the safety message including COR™ Certification, provide timely and relevant safety information and enhance industry safety awareness.
- 3. Five Regions: Enhanced Visibility and Presence of Program Safety Advisors We have divided the province into five regions or service areas. Safety Advisors will each be assigned a region; will have specific monthly work plans; and will be assigned clients within their respective regions. Their mandate will be to support COR™ certified companies, assist newly registered companies achieve COR™, and promote and educate new firms of the safety merits.

The above deployment of our resources will result in an increased and more efficient field presence throughout the Province in five newly established program regions across Manitoba.

4. New Company Safety Manual and Safety Subscription Service – In response to industry request for tailored resources, we will develop and offer new individualized 'Company Safety Manuals' bolstered by an optional annual-monthly update subscription service. The purpose: to help companies ensure their safety program complies with the 14 COR™ Program Elements.

This service will allow firms to educate its workforce, have available the documentation required by legislation and COR™, and provide industry with program standardization.

This safety service will be offered to support our clients' COR™ needs specific to safety program development and safety program maintenance. This is a voluntary service. Manual development and subscription development will be on a first come, first served basis.

5. Pre Third Party Audit Readiness Service – Our Program Safety Advisors will at the client's request and with our strong recommendation, visit construction company operations, assess the safety program, and assist the client prior to its submission to a third party external audit.

The pre-audit service will be voluntary but highly recommended prior to any third party external audit being conducted. Where inadequacies are identified, action plans requiring corrections will be implemented and tested prior to the anticipated third party audit

These steps will help ensure our client's ability to demonstrate preparedness for and thereby achieve and thereafter maintain COR™ certification.

This service will also help ensure external auditor costs and expenses are maintained at predictable levels (see point 7). The service will prevent the deployment of auditors where a firm is not ready for its external third party audit. Our goal is to ensure all firms achieve COR™ Certification and keep audit costs at a minimum.

6. External Auditor Accreditation and Maintenance Fees – We will in a more profiled fashion, re-establish a list of COR™ Program accredited and qualified external auditors.

Third party auditors will now pay an annual auditor accreditation fee. For this fee, we will annually review and accredit an auditor's credentials, provide the auditor with the required audit materials, and offer general administration duties on behalf of the client and auditor.

We will establish a list (not to exceed 10) of qualified auditors for firm selection, assignment to regions and availability to rural areas. By assigning auditors to regions and managing a maximum number of accredited auditors, we will help ensure qualified and experienced auditors and an improved more efficient successful audit experience.

7. Cap on Third Party External Audit Fees – Cost control and predictability – We will introduce and recommend the adherence to a proposed external audit fees cap and monitor its implementation and effectiveness. The cap will be introduced to provide a better audit experience (see #5 above) and greater predictability of audit costs.

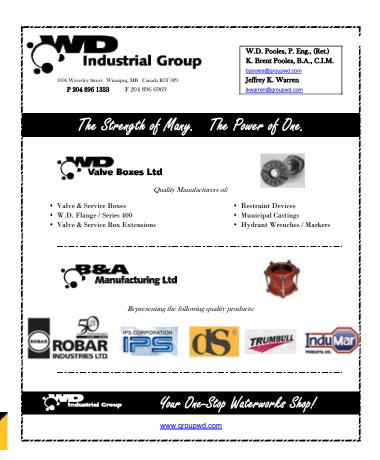
The recommended cap on third party external audit fees will be as follows:

- For SECOR company (19 or less) the audit cap will be set at maximum 2 days plus expenses
- For COR company (20 or more) the audit cap will be set at maximum 4 days plus expenses

This cap will allow firms to predict more accurately what fees they will be charged given the size of their firm. The cap will impress upon the auditor the importance of efficient pre-arrangements to enhance the audit experience. Should auditors unreasonably exceed the recommended caps, they may risk their accreditation status.

- 8. COR™ Audit Quality Assurance (QA) Review: The Safety Program Director will conduct random spot audits as part of Quality Assurance Reviews of our COR™ program. This will test for effectiveness, implementation, identify trends and help adjust and / or introduce services to respond to needs accordingly.
- 9. Safety into Project Design We will consult with industry to examine how the program can assist introducing safety into project design, so that safety is not an afterthought cost, but built into project design. The objective is to ensure proper cost reflection and more competitive bidding.
- 10. WORKSAFELY Logo and Tagline We have just completed a re-branding self examination and will launch our new Safety Program logo and tagline'- 'WORKSAFELY.' WORKSAFELY messaging and campaigns will proactively reach out to industry and workers, to heighten awareness and promote the strong message, that in order to prevent injuries from occurring in the workplace or at home, all parties must WORKSAFELY. and,
- 11. Annual Client Advisory Meetings We will consult with industry and key stakeholders individually and broadly arranged, on an annual basis or more often as needed to review our Safety Program offerings and ensure the needs of our clients are taken into consideration for future program continuous improvement initiatives.

Our program is committed to Construction Safety Excellence™. We have listened to industry, and strongly feel the above action steps will deliver value added services to our valuable client, the heavy construction industry in Manitoba. Specifics of our services will be communicated to our clients in early October. ₩





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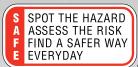
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Hold on to your hard hats and grab your passport, it's almost time for the BEST safety, health and environment event in Canada!

The 22nd annual Manitoba Construction Conference is scheduled for February 1 & 2, 2011. All indications for this year's event point to another fantastic conference. "Every single year, our goal has been to improve on our past success," says Sean Scott, Executive Director of the Construction Safety Association of Manitoba and Conference Co-Chair for the last nine years.

IT'S BIG!!

The Manitoba Construction
Conference practically takes
over the ENTIRE Winnipeg
Convention Centre.

In our continuing efforts to ensure participants enjoy the BEST experience possible, MCC has secured additional training rooms and will again be expanding into the adjoining hotel - Delta
Winnipeg!!

Glen Black, recently appointed Safety Director of the Manitoba Heavy Construction Association joins Sean as Conference Co-Chair in 2011. Black applauds Sean and all conference organizers - and agrees, "This truly is an extremely impressive safety conference, very well planned, with the conference focus being to ensure that every person who attends - whether a registrant, exhibitor, instructor or guest - has an absolutely great experience and receives high quality safety education".

Last year's conference was a resounding success, with both course and exhibitor registrations being SOLD OUT. Over 5,000 certificates were issued to the 3,179 registered participants. These numbers are challenging to overtake the IAPA Conference held in Toronto as Canada's largest safety and health conference!!

The Manitoba Construction Conference is widely known as THE conference to attend, and with something for everyone, this event attracts people from all types of industries in Manitoba and from across Canada. "Although our main focus continues to be our construction industry, safety covers all workplaces – and we are seeing large increases in other industries registering to take advantage of the many excellent and high quality training sessions," says Scott.

Although the conference is hosted by two industry-funded safety programs, the Construction Safety Association of Manitoba and Manitoba Heavy Construction Safety Program, other key conference partners include SAFE Work; the Manitoba Heavy Construction Association, the Winnipeg Construction Association, Manitoba Conservation, the Workers Compensation Board of Manitoba, Workplace Safety and Health Division and the Manitoba Building Construction Trades Council. Behind the scenes, every year, our partners greatly contribute to our conference committee and help make the conference such a huge success.

Free access to The Trade Show is another area that makes the MCC hugely popular. With over 100 booth spaces featuring the latest technologies, services and products in safety and the construction industry, the MCC's Trade Show is an event in itself. The Manitoba Construction Conference's main focus continues to be on offering quality safety education and training that is practical, hands-on and specific to industry. The conference is designed for industry in Manitoba to improve Workplace Safety and Health. All course offerings will directly benefit employers and employees in their efforts to meet or exceed safety and health regulations, essential to demonstrating due-diligence in today's regulatory climate.

All participants will receive either a CERTIFICATE OF ATTENDANCE or the highly coveted CERTIFICATE OF TRAINING for each course attended at the Manitoba Construction Conference.

CERTIFICATES OF TRAINING will ONLY be provided to individuals who attend the training workshop AND successfully complete the competency evaluation for that course - ie: a written and/or performance test.

If you are interested in attending CANADA's Best safety, health and environment conference, please visit our website and/or contact either of the Co-chairs for further information. We look forward to serving you!!

"We take pride in offering quality training that is practical, hands-on and specific."

Asset Management (continued from page 17)

implemented. These KPIs workflows for the various business processes needed to support sustainable asset management. Key performance indicators will be amalgamated into relevant performance dashboards.

Step 5 - Implementation (Pilot & Rollout)

The design outputs from Step 4 will be used to develop the detailed implementation plans. This approach has been found to be the most successful one for major change programs—a pilot followed by updated design and implementation of elements based on lessons learned from the pilot, before proceeding to full-scale rollout. The same concept of review is necessary after rollout so that results are achieved as planned. Again, implementation plans would be aligned to the roadmap so that pilot plans and rollout plans are slotted in reasonable time frames, allowing for adequate user involvement and minimizing the adverse impact on existing operations. Change management implementation elements of communication, issue, conflict management, and culture change would be built into both the pilot and rollout plans.

Step 6 - Sustainability through Continuous Improvement

At this stage in an asset management program one would have achieved a high performance organization executing cost effec-

tive business processes around the asset life cycle. Sustaining this performance would require an understanding of the continuous improvement process, training of staff in this important concept, and helping staff develop and implement continuous improvement projects. It is important to apply this technique at the macro level where leaders continuously look for changes/business drivers that may radically impact operations. At the front-line level, a culture of continuous improvement will help drive value from data through effective decision making.

Summary

Municipalities face many challenges to their operations with large infrastructure deficit and limited funding to meet levels of service that customer's desire. In Canada, this is a major issue that is being addressed at all levels of governments. Municipalities can effectively meet these challenges by adopting a comprehensive approach to asset management. When fully implemented, the municipality can realize revenue streams from savings as a result of lower cost of asset ownership, an increased ability to increase rates to match its needs as well as the ability secure loans and grants. The comprehensive approach sets the foundation for a sustainable and resilient organization that will ensure that the community assets are well managed and will be around for the next generation.

Roop Lutchman is a Senior Principal Management Consultant for CH2M Hill.



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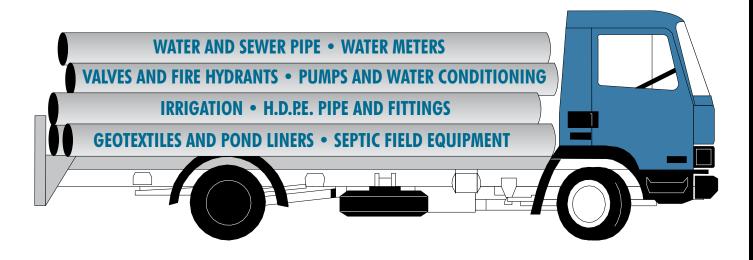


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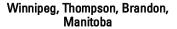


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