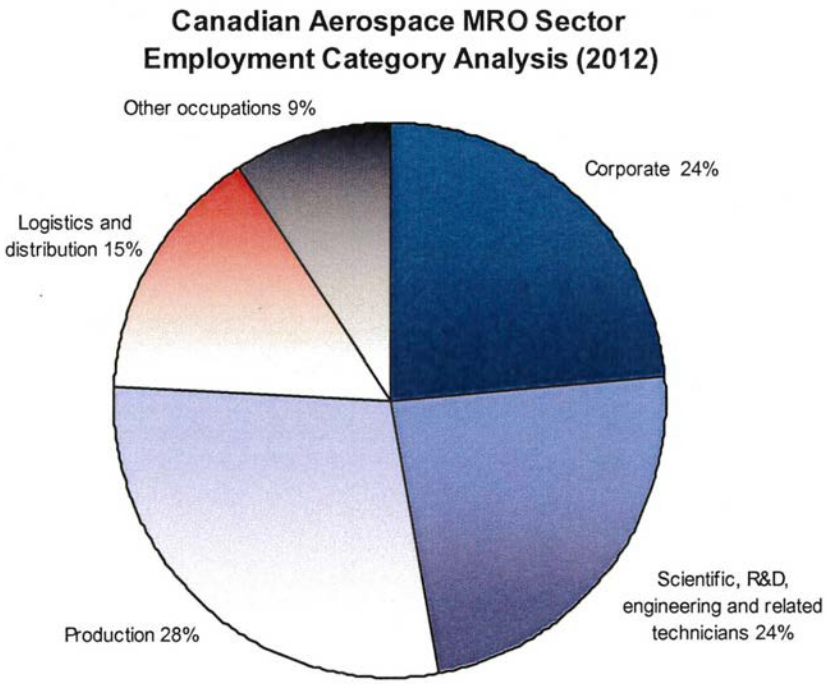
South America and Asia, including militaries have their aircraft and parts repaired in Canada. Transport Canada, which is Canada's government regulator for aviation, equivalent to the FAA, has a globally recognized safety regulation system and bilateral agreements with the United States FAA, the European JAA and other national regulatory authorities allowing foreign approvals for Canadian repair designs and MRO work. Experienced technicians, cutting-edge technology, state-of-the-art equipment and strict adherence to industry standards help Canadian MRO companies provide aircraft repair and overhaul services of the highest quality and reliability. Below is the 2012 analysis for Canadian MRO Sector Employment Category (Data from Industry Canada & Statistics Canada)



Canada's MRO industry is made up of a mix of original equipment manufacturers (OEMs), independent MRO service providers, and aircraft operators (airlines) that have grown their internal MRO capabilities into dynamic and competitive third party maintenance businesses. These firms offer expertise in line and heavy maintenance, repair, overhaul and modification of complete aircraft, aircraft engines and accessories, aircraft structures, aircraft systems and components, avionics and instruments. They provide complete "nose-to-tail" service backed by reliable non-destructive testing and uncompromising engineering and technical support through the full product life cycle.

Airframe & Engine MRO in Canada

- **Afr** Airframe Heavy Maintenance
- **Eng** Engine & APU maintenance
- **Com** Component / systems maintenance
- **Avi** Avionics maintenance
- **Rep** Repair services
- **Int** Aircraft interiors MRO
- **Mod** Aircraft mods; pax to freight conversion; winglet installation
- **Hel** Helicopter MRO
- **Line** Aircraft Line Maintenance
- **Bus** Corporate aircraft maintenance

Company	City	Afr	Eng	Com	Avi	Rep	Int	Mod	Hel	Line	Bus
Advanced Composite Structures Inc	Winnipeg, MB			Y		Y					
Aero Aviation Ltd	Calgary, AB	Y		Y		Y	Y	Y			
Aeropol Aviation Services	Mississauga, ON			Y		Y					
Air Georgian Ltd	Toronto, ON	Y	Y	Y	Y	Y	Y				
Avianor Inc	Mirabel, QC	Y		Y	Y	Y				Y	
Aviatron Canada Inc	Montreal, QC			Y							
Avmax Aviation Services Inc	Calgary, AB	Y		Y	Y	Y	Y	Y		Y	
Borescope4U Inc	Summerside, PE		Y								
Cadorath Aerospace	Winnipeg, MB			Y		Y					
Cascade Aerospace Inc	Abbotsford, BC				Y	Y	Y	Y			
Comtek Advanced Structures	Burlington, ON					Y	Y	Y			
Discovery Air Technical Services	Pointe-Claire, QC				Y	Y	Y	Y	Y		
Essential Turbines	Dorval, QC		Y	Y					Y		
Execaire	Dorval, QC	Y		Y	Y	Y	Y				
ExelTech Aerospace	Dorval, QC	Y		Y	Y	Y					
Field Aviation East Ltd	Mississauga, ON	Y			Y	Y	Y				
Flying Colours Corp	Peterborough, ON	Y									
FORTAS	Montreal, QC	Y	Y		Y		Y				
Global Aerospace Corp	Mississauga, ON			Y		Y					
Goderich Aircraft	Centralia	Y									
Heli-One	Delta, BC	Y	Y	Y	Y	Y	Y		Y		
Héroux-Devtek Inc	Longueuil, QC			Y		Y					
Honeywell Aerospace	St Laurent, QC			Y	Y	Y					
JD Aero Maintenance	Sault Ste Marie, ON	Y		Y							
Kelowna Flightcraft	Kelowna, BC	Y			Y	Y					
Mecaer America Inc	Laval, QC			Y					Y		
Messier Services Canada	Ajax, ON			Y							
MTU Maintenance Canada Ltd	Richmond, BC		Y			Y					
National Coating Technologies Inc	Winnipeg, MB										
Navhouse Corporation	Bolton, ON			Y	Y						
Pacific Avionics & Instrument	Richmond, BC				Y						
Pôle Air Aviation	Lachine, QC			Y	Y	Y			Y		
Pratt & Whitney Canada Corp	Longueuil, QC		Y	Y							
Premier Aviation Overhaul Center Inc	Trois Rivieres, QC	Y			Y	Y		Y		Y	
Rolls-Royce Canada	Lachine, QC		Y	Y		Y					
Spar Aerospace	Edmonton, AB			Y							
StandardAero	Winnipeg, MB		Y				Y				
Vector Helicopter Services	Richmond, BC	Y		Y							
Vector Aerospace Engine Svcs - Atlantic	Summerside, PE		Y	Y		Y					
Volvo Aero Services - Canada	Cochrane, AB		Y								
Western Propeller (Pacific) Ltd	Richmond, BC			Y							

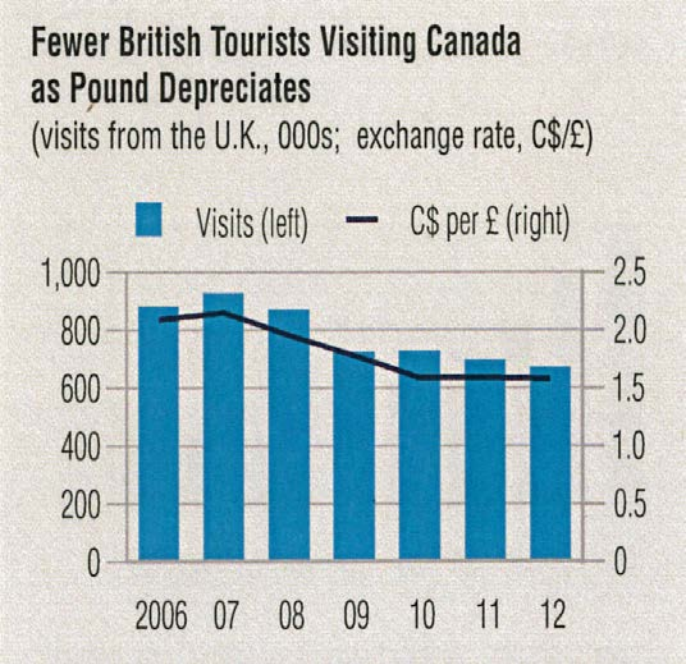
Concerns in Canada

Although Canada is a very large country, its proximity to the USA and the MRO companies that operate within it create some challenges. Canada and the USA share many similarities but the costs fluctuate based on currency exchange between the two countries. Also problematic has been the MRO's located in Central America, which operate at a much lower cost base and the fact that they are easily accessible for carriers to use them for repairs.

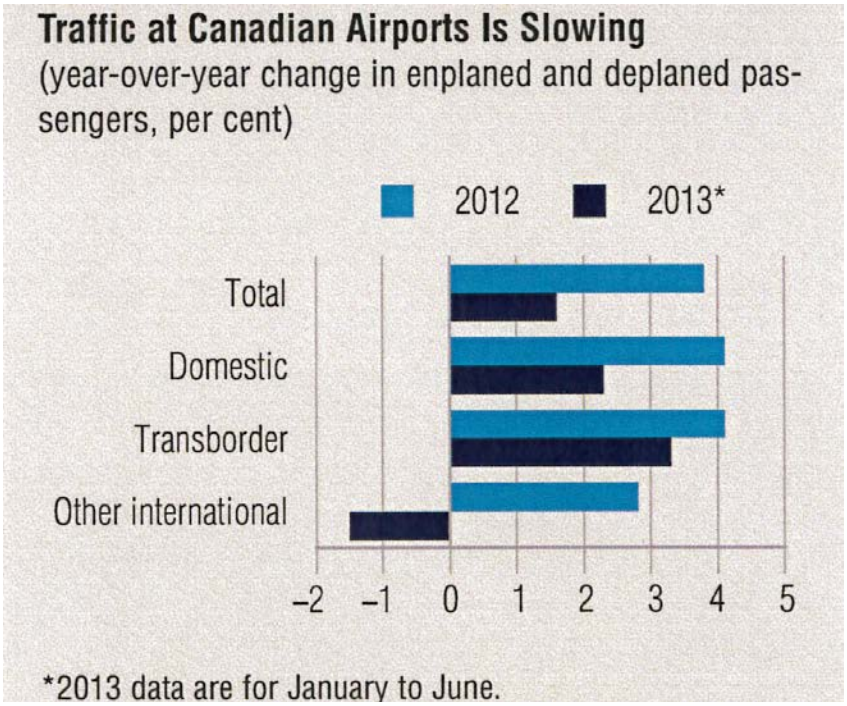
Canadian consumers have been increasingly reluctant to spend money on Air Transportation. In the First quarter of 2013, household spending on air transportation services saw its first year over year decline since the financial meltdown in 2008. The reasons are high indebtedness, weak consumer confidence, and poor job creation which are creating pressure on their budgets.

But the uncertainty about the future of the world economy is also creating problems for Canadians. As a result we are seeing fewer air travelers from emerging markets coming to Canada. The only positive is that the US economic recovery as poor as it may seem, is providing opportunities for Canadian exporters which improves the picture in the air transport industry in Canada.

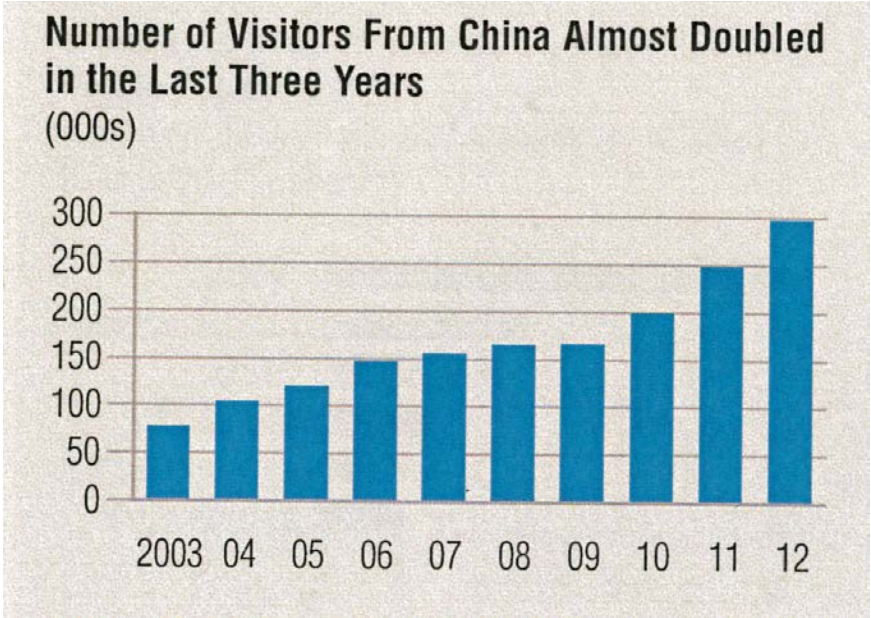
Even though Europe is not in recession, the high unemployment continues to weigh on European consumers spending. The number of travelers from the UK continues to shrink as well due to the weaker purchasing power and currency and unless the British economy rebounds strongly and fast, this reduction will continue into the future. (See chart below from Statistics Canada, Bank of Canada, and Conference Board of Canada)



All of this obviously impacts airlines, and the MRO sector due to the reduction in flying. This slowdown is confirmed by data showing passengers going through Canadian airports. Growth in passenger travel was reduced by more than half in the first six months of 2013 compared to 2012. Of interest is the number of passengers flying on international routes which fell by 1.5%. One of the other reasons for this reduction is the high cost of travelling overseas which ties in to the monitoring of household budgets as explained previously. This has led to airlines reducing capacity, which in turn reduces the MRO activity for the airlines. (See chart below from Transport Canada)



The number of travelers from China to Canada has almost doubled over the last three years, from 170,000 to 300,000, and is a direct result of China getting destination status approval from Canada and the Air Transport Agreement signed by both Governments. In 2013, this number has increased by 20%, as Chinas middle class has increased tremendously as a result of their manufacturing economy doing very well at North America's expense. (See chart below supplied by Statistics Canada)



Besides the financial concerns raised, one of the other challenges companies are facing is finding and retaining qualified maintenance technicians. There are many reasons given, from the baby boomer retirements, to a lower growth rate, to other industries poaching these highly qualified people with offers of better wages, and a better work environment and treating them better. In reality as the industry runs into turmoil, and companies shut down, technicians enter the work field and will migrate wherever they can find a job. There are many studies and initiatives, such as the one sponsored by ICAO, which in effect are trying to reduce the technical skills into competencies broken down by task, similar to what was accomplished in the auto repair industry. All of these initiatives are solely designed to create a lower skilled technician, which will eventually drive down wages and at the same time possibly generate a larger supply of available aviation workers.

Problematic is the fact that many companies operate in the far north in inclement conditions. Many technicians do not want to work in these areas, which are many hundreds if not thousands of miles away from main cities, and their families.

Another problem, is that many companies, are very small, and they do not offer well-paying jobs or benefits, which further make it hard for someone looking for a job, specially, when other industry sectors are able to compensate their employees much better in more ideal locations.

One unique circumstance was the bankruptcy of AVEOS. Initially when Air Canada was created in the 1930's, it developed its own MRO over time to repair and overhaul their fleet. Over time, as the airline grew, the Air Canada overhaul center grew as well. It was a state of the art MRO, with highly skilled technicians that also attracted work from other airlines and countries due to its reputation for excellent work. In the 1980's, Air Canada was privatized and the government of

Canada created the “Air Canada Public Participation Act” to protect the airline within Canada and their MRO side of the business which was Canada’s largest MRO, to ensure that the work stayed in 3 vital locations and by protecting the employees at these locations.

Eventually Air Canada sold its MRO business which eventually became known as AVEOS. Prior to this Air Canada bought Aeroman, a company based in El Salvador, and started to expand that company to attract more work at even lower costs from around the world. Eventually after AVEOS operated at arm’s length from Air Canada, it ran into financial difficulties and went bankrupt.

When this happened, despite many attempts to stop it through court challenges that it violated the Air Canada Act, it was dissolved and sold off into pieces. This created close to 3000 permanent layoffs, which was a disaster to Canada’s MRO industry. Although many companies hired many of these out of work technicians, many decided to leave the aviation industry for a more stable sector, with better or similar wages and conditions. Many highly specialized skills disappeared, and this country has never rebounded from this event. Court challenges are still in play through the court systems, but will take many years to be resolved.

New start-ups have entered the market to take over some of the lost MRO work but a much reduced level. A.J. Walters which employs about 100 technicians and Lockheed Martin employing a similar number is an example. They amount to about less than 10% of the size of the former AVEOS.

In the end, the sad part of the story is that the majority of the work required to repair Air Canada’s fleet has been sent to the USA, AIS, and around the world as the airline sees fit. A very minor portion remained in Canada, sent to a company called Premier Aviation among the few which received this work. This appears to be done on purpose to satisfy the unions, population and the Government, to ensure it is not seen in a positive manner and not done on purpose to get away from the Canadian sector with higher costs that other parts of the world.

Companies Performing Maintenance Work for Larger Airlines in Canada

Air Canada – Unionized by IAMAW - Line Maintenance performed in-house. MRO carried out by A.J. Walters in Montreal, Canada; Lockheed Martin in Montreal, Canada; AAR Aircraft Services in Duluth Minnesota, USA; Premier Aviation in Trois Rivieres, Canada and in Rome NY, USA; Lufthansa Technik in Germany; HAECO in Hong Kong; General Electric in USA.

Rouge – Unionized soon by IAMAW - Line Maintenance performed by Air Canada. Heavy Maintenance is carried out by Avianor in Mirabel Canada.

Air Canada Express – Not unionized - Line Maintenance performed by Jazz Airlines in Canada.

Air Transat – Unionized by IAMAW – Line Maintenance is performed in-house. Heavy Maintenance is carried out by Advanced Aviation in USA; TAP in Brazil; and by Avianor in Mirabel, Canada.

Air Labrador - Unionized by IAMAW - Line and Heavy Maintenance done in-house.

Jazz Aviation – Unionized by UNIFOR (CAW) - Line Maintenance done in-house. Most of the Heavy maintenance is done in-house in Nova Scotia Canada; the rest is sent to Premier Aviation in both Canada and the USA.

Westjet – Not unionized. Line Maintenance performed in-house. Heavy Maintenance carried out by Premier in Trois Rivieres and Kelowna Flightcraft in Kelowna; both located in Canada, and by Eirthech Aviation in Ireland. Engine overhaul performed by General Electric in USA.

Porter – Not unionized - Line Maintenance performed in-house.

Bearskin Airways - Unionized by IAMAW - Line and Heavy Maintenance performed in-house

Canadian North – Not unionized - Line Maintenance performed in-house. Heavy Maintenance performed by Kelowna Flightcraft in Kelowna, Canada; and by Premier Aviation in Trois Rivieres, Canada.

First Air – Unionized by internal Association - Line Maintenance performed in-house. Heavy Maintenance performed by Premier Aviation in Trois Rivieres, Canada.

Sunwing Airlines – Not unionized – Line Maintenance performed in house. Some heavy maintenance is carried out by UTC Aerospace Systems in North Carolina, USA; the rest is performed by lease owners.

Summary of Concerns by the IAM and the Industry in Canada

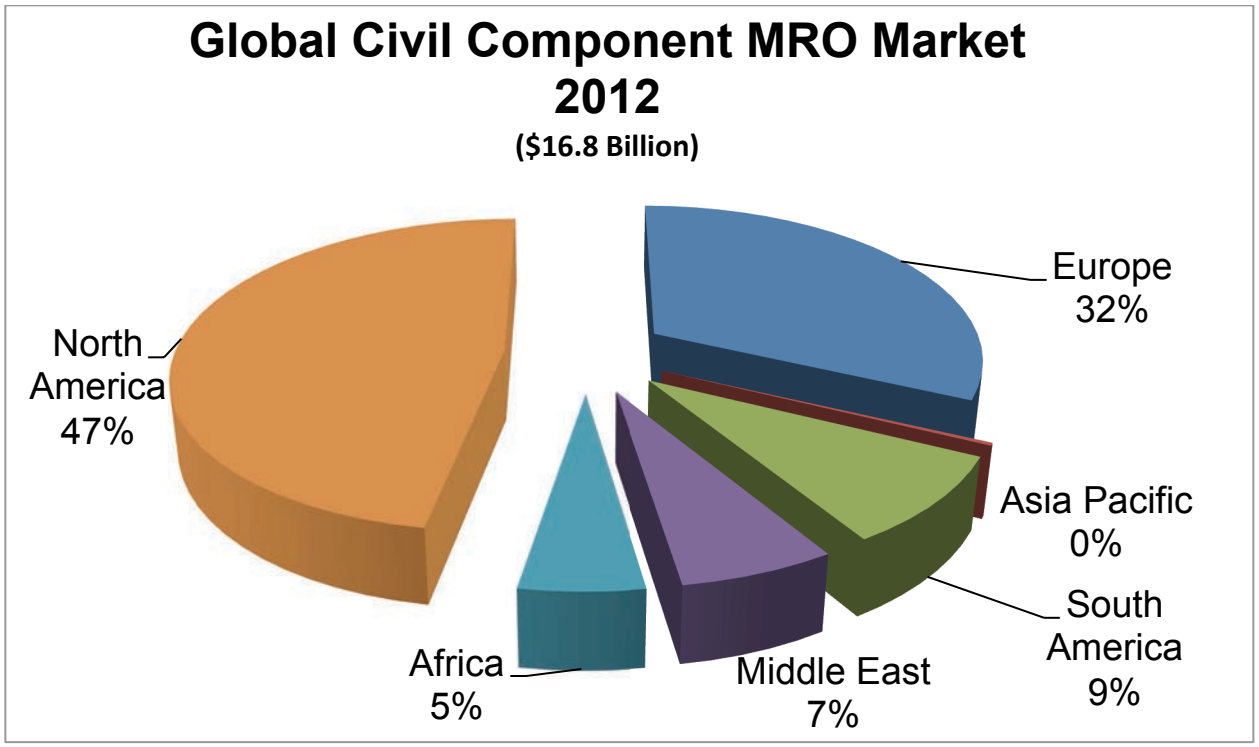
1- Deskilling of maintenance trades and standards

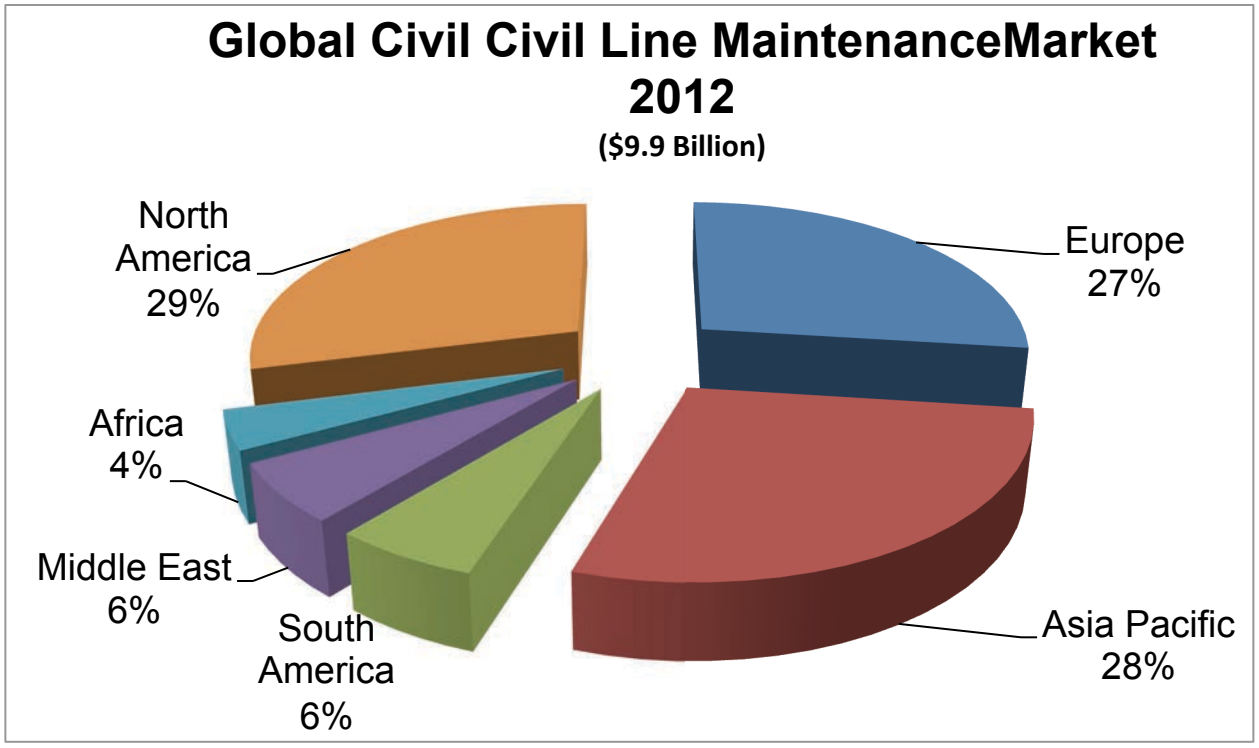
2- Lack of proper pay to compete with other trades in the country

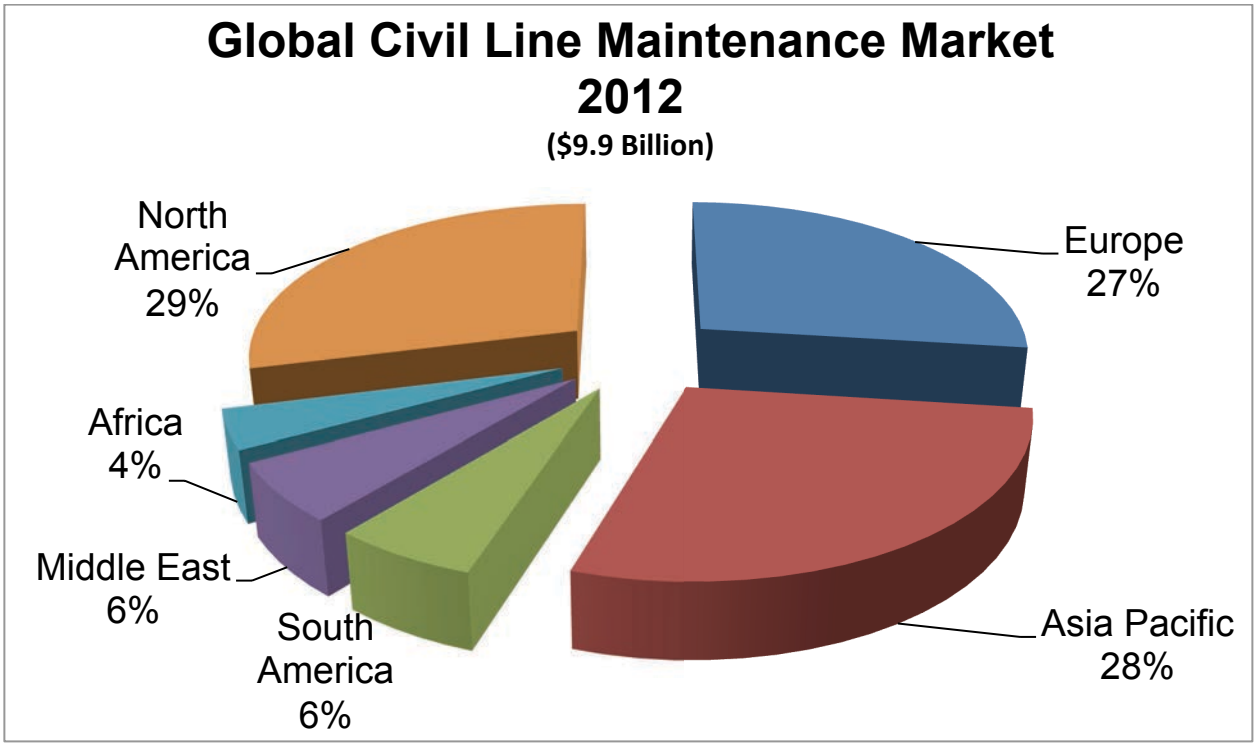
3- Large amount of MRO work outsourced outside of Canada

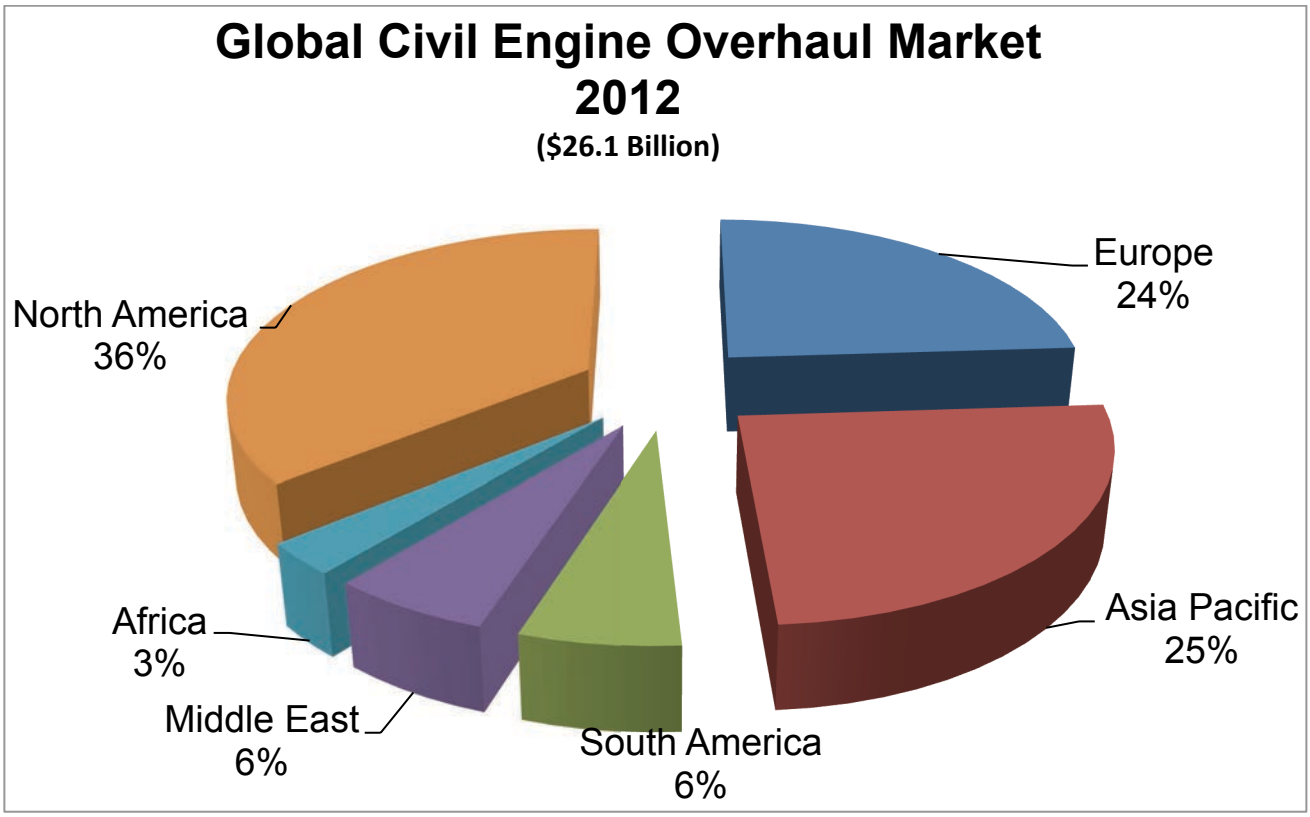
4- Lack of support by Canadian government to promote Canadian MRO industry

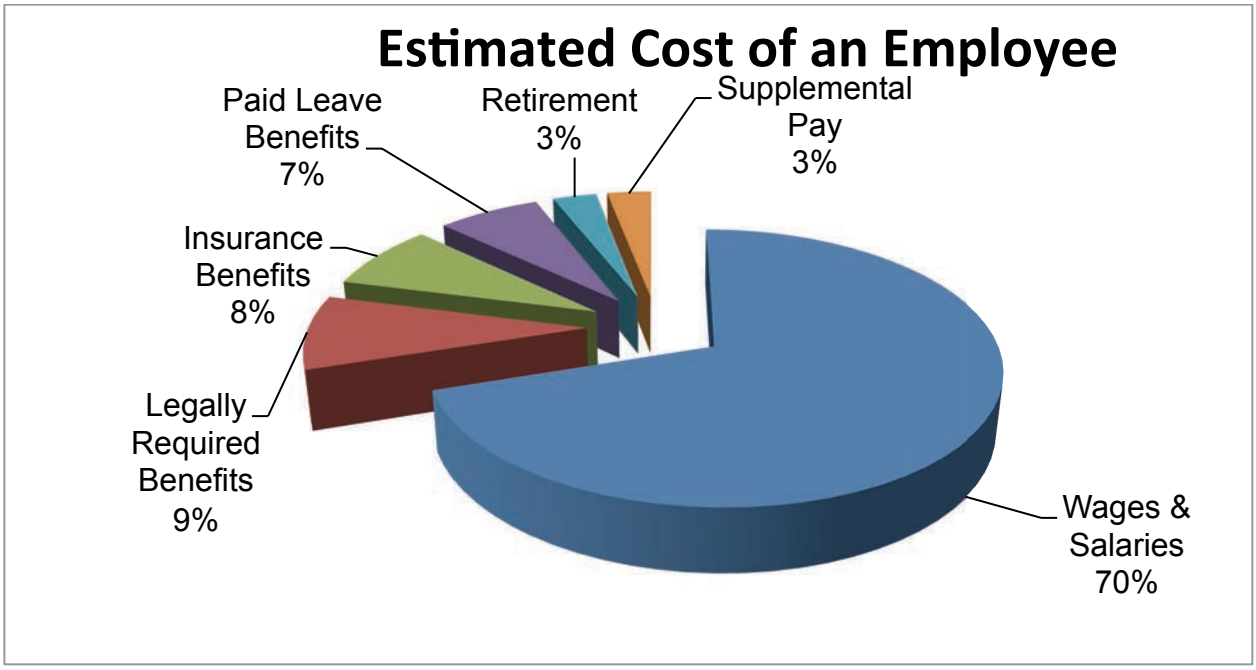
5- The world economy and free trade agreements signed by Canada

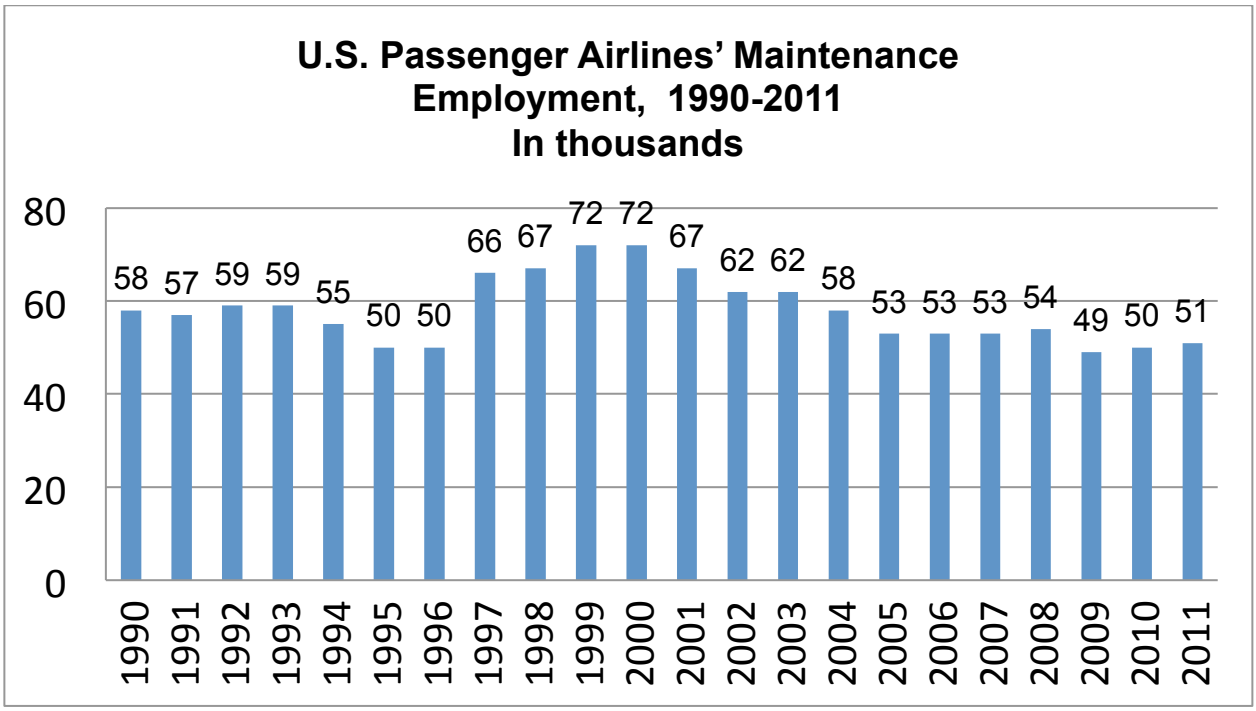

Global Civil Component MRO Market
2012
($16.8 Billion)
Europe
32%
North
America
47%
Asia Pacific
0%
South
America
9%
Africa
5%
Middle East
7%


Global Civil Civil Line MaintenanceMarket
2012
($9.9 Billion)
North
America
29%
Europe
27%
Africa
4%
Middle East
6%
South
America
6%
Asia Pacific
28%


Global Civil Line Maintenance Market
2012
($9.9 Billion)
North America 29%
Europe 27%
Africa 4%
Middle East 6%
South America 6%
Asia Pacific 28%


Global Civil Engine Overhaul Market
2012
($26.1 Billion)
North America 36%
Europe 24%
Africa 3%
Middle East 6%
South America 6%
Asia Pacific 25%


Estimated Cost of an Employee
Paid Leave Benefits 7%
Retirement 3%
Supplemental Pay 3%
Insurance Benefits 8%
Legally Required Benefits 9%
Wages & Salaries 70%


U.S. Passenger Airlines' Maintenance Employment, 1990-2011
In thousands
80
60
40
20
0
58 57 59 59 55 50 50 66 67 72 72 67 62 62 58 53 53 53 54 49 50 51
1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011