



SME Executive Kick-off Meeting

28th March 2013

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REMINDER SME 2013 EXECUTIVE Kick-Off meeting!!!

WELCOME!!

Dear Members and Friends....

We are holding the 2013 Executive Kick-off meeting on Thursday 28th March at 6.30pm till 9.30 pm. All Members and Friends welcome.

The Meeting will be held at :

SME Toronto 7100 Woodbine Avenue Section 312 Markham Ontario L3R5J2.

Admission FREE!

The SME Toronto Chapter is transitioning from the very successful 2012 year's Executive team to the 2013 Year's Executive team.

We still have Executive positions open

We are offering you the opportunity to hold a position on the SME Toronto's 2013 Executive Team as we roll out our 2013 Take Back Manufacturing plans and progressive Toronto Chapter events for 2013.

If you are interested or even curious about what being on the SME Chapter's Executive team is like, or would consider volunteering on any level, please review the more detailed information link below on these positions and contact me at nigel.southway@smetoronto.ca t: (905) 464-5517

OR

I look forward to seeing you at the event!!!

Best regards,

Nigel Southway

SME Toronto Chair-2013 Society of Manufacturing Engineers Toronto
e: Nigel.Southway@smetoronto.ca w: <http://www.smetoronto.ca> t: (905) 464-5517
TAKE BACK MANUFACTURING www.smc-tbm.org





SME Toronto

WWW.SMETORONTO.CA

Nigel Southway SME Chair 2012/2013



About SME:

www.sme.org.

The [Society of Manufacturing Engineers](http://www.sme.org)

Premier source for manufacturing knowledge, education and networking.

Connecting manufacturing practitioners together.

Provide Tradeshow, Expo and network events.

Reviews latest manufacturing technologies/processes/techniques/practices.

SME world-wide supported network of chapters and technical communities.

Many programs, events, magazines, publications, huge technical database and online training

SME leader in manufacturing workforce Education/training/skill development.

SME is a LEAN Business Certification Authority.

WWW.SMETORONTO.CA

\$125 per Year

SME Technical Community Networks (8)

www.sme.org.

Automated Manufacturing & Assembly

Identifies and pursues advancing technologies and techniques in automation and assembly.

Manufacturing Education & Research

Advances education and research in manufacturing, career and professional development, and the manufacturing enterprise's need for a skilled workforce.

Forming & Fabricating

Concentrates on key metal forming and fabricating technologies.

Plastics, Composites & Coatings

Addresses the manufacturing processes of plastics, composites, and finishing and coatings technology.

Industrial Laser

Promotes laser technology in North America with high intensity by educating the market and advancing the laser technology base.

Product & Process Design and Management

Discusses, investigates and advances ideas related to the design and management of products and processes, as well as lean manufacturing concepts.

Machining & Material Removal

Discusses, explores and advances ideas related to cutting processes and machining systems.

Rapid Technologies & Additive Manufacturing

Concentrates on the technologies and processes that help conceive, develop, test, improve and manufacture new products to bring them to market faster and more cost effectively.

Society Manufacturing Engineers

LEAN Certification

<http://www.sme.org/leancert>



Advanced Options

Events Membership Professional Development Education and Careers Knowledge About SME Education Foundation Publications

Lean Certification

Lean Certification
Lean Bronze Certification
Lean Silver Certification
Lean Gold Certification
Lean Certification Pricing
Preparing for Certification
Classroom Review Program for Lean Certification
Lean Online Review Program (LORP)
Lean Certification: Recertification Requirements
Lean International Reseller
Certification Oversight & Appeals Committee
Professional Development
SME Certification
Green Manufacturing
Specialist Certificate
EET Outcome Assessments for Educators
Lean Registry
SME Certification Frequently Asked Questions (FAQ)

Lean Certification

This Lean program is the benchmark for achievements and personal growth in Lean. Designed by three organizations – the Society of Manufacturing Engineers (SME), the Association for Manufacturing Excellence (AME) and The Shingo Prize for Operational Excellence – this alliance has established the standard for continuous improvement and Lean practices.

In 2010, the American Society for Quality (ASQ) joined this collaborative alliance, which truly aligns these leading organizations to a single standard for Lean certification, providing manufacturers and their supply chains with a roadmap for workforce development.

Manufacturing Knowledge Resource

LEAN CERTIFICATION



SME - TORONTO CHAPTER WWW.SMETORONTO.CA

The place for Manufacturing Engineers and Manufacturing Practitioners to MEET KNOW GROW

Join us and find out more about our Society and our members and get to know us better.

We would be pleased to welcome you in person!



We maintain this SME Chapter to ensure that the science of Manufacturing Engineering and associated Manufacturing Technology is nurtured, and that we support the advance of the manufacturing industry sectors so that they may remain competitive.

We support the development of new engineering and manufacturing innovation and ideas for business improvement, and we provide a conduit to communicate these opportunities to industry.

We encourage members of all ages who share a passion for Learning, sharing and lively debates, fun activities and making new friends.

We are always pleased to welcome new members who bring new perspectives and experiences and a breath of fresh air to the group.

Please stop by - we would love to meet you!

Important Dates and Events



SME Chapter monthly Meetings ...Join us at our at SME Toronto headquarters to explore new concepts and exchange ideas, network and listen to guest speakers, so that we can further the manufacturing engineering knowledge within our engineering and manufacturing community.

[More](#)

The Proceedings from all past SME Chapter meetings are at <http://www.sme-tbm.org/tbm-information>



Take Back Manufacturing

www.SME-TBM.org

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TBM Press Release Information | [Registration](#) | [Chat about TBM](#)

TBM is a Forum Dedicated to Restoring Our Manufacturing Sectors.

The ultimate goal of Take Back Manufacturing is to get government, educators and industry leadership to start working closer together to plan the recovery of the declining manufacturing sectors in Canada.

Latest TBM Happenings...

Read about TBM on the front cover of Canadian Industrial Machinery Magazine.



[VIDEO - What is TBM???](#)

[VIDEO - Why is it Important?](#)

[VIDEO - Why do the Survey?](#)

[VIDEO - TBM Policy](#)

[Join SME Today!](#)

SME TORONTO website
www.smetoronto.ca

FABTECH ISAH Cocktail Party Oct 8 @8:00

DO YOU CARE?



**Do you care?.....
About
Manufacturing in
CANADA?**

**If you do...Push this Button
And
Respond to our Request.**

[SEE TBM MOVIE](#) - Explanation of the SME TBM [Success](#)

- **SME Toronto Executive team (2012)**

Nigel Southway
 Chair 2012
 Society of Manufacturing Engineers Toronto
 t: (905) 464-5517
 e: Nigel.Southway@smetoronto.ca
 w: <http://www.smetoronto.ca>

THANKS!!!!!!
ALL OF YOU!!!!

Marie Laird
 Past chair and secretary
marie.laird@smetoronto.ca

Parvin Marzban
 Executive team member
Parvin.Marzban@smetoronto.ca

Ovidiu Demian
 Executive team member
ovidiu.demian@smetoronto.ca

Norm Nopper
 Executive team member
norm@normnopper.com

Mehdi Nooraniazad
 Executive team member
mnooraniazad@yahoo.ca

Ron Kurtz
 Executive team member
randskurtz@rogers.com

Bruce McDonald
 Executive team member
tumpline@cogeco.ca

John Quarterly
 Executive team member
john@chessmenmediagroup.com

Roger Jones PEO
 Executive TBM



Who has joined us today?

- Name?
- Brief background and discipline?
- Interest in being here?

Also.. Add name/email to register....



SME Toronto ChapterRecent history...

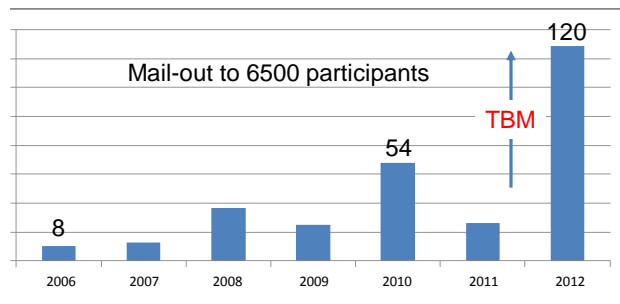


- Started in 1939...
- Always been a strong central chapter in Canada..
- Has struggled in last 5 years
- BUT
- Found a new way forward...
- But we have to do things differently..!!!
- Plus.....

HAVE FUN!!!!!!



NEW CHAPTER MEMBERSHIP



CHAPTER FINANCES

Jan 2012 Balance	\$24,453.59
Income	\$1,927.20
GIC Matured	\$24,922.20
Expenses	-\$7,701.13
Dec 2012 Balance	\$43,601.86
Note: SMEEF funds remain unspent ~\$14895	





Society of
Manufacturing
Engineers

Presentations.... TAKE BACK MANUFACTURING



CMTS Toronto Canada October 2011

FABTEC Toronto Canada March 2012

MMTS Montreal Canada May 2012

SME Annual Conference Cleveland USA June 2012

Many other Society and Association events in 2012

M

SME Chapter Monthly Meeting

Will be held same time each month...at SME Toronto offices (Free/plenty of parking)

General Agenda (2 Hours Typical2.5 Hours max)

Network greet and meet and coffee

Opening remarks from the Chair

Welcome.. Attendees and recognize visitors and new members

Review of absent / members with sickness etc ..Plan follow-up

Guest speaker/s

Or

Discussion session on topic of choice (facilitated)

Refreshments

General announcements and outlook of planned events

Special projects status reports

Proposals received for events and the good of the chapter

Chair closing remarks

Break and good night

Then

Officer Meeting (After General Agenda 1 hour max)

Summary of accounts

Last meeting minute actions pending

New actions to minutes.

Short report from each officer

Specific officer meeting actions.

CLOSE



Society of
Manufacturing
Engineers

SME Monthly **TBM** Journey.....

*We are holding regular SME Chapter meetings with **TBM** as the central theme*

With one of the TBM imperatives discussed as a special topic each month.

- January TBM Overview
- February Innovation
- March Balanced Sourcing
- April Industrial Education and Training
- May Computer Integrated Manufacturing
- September Rapid Prototyping/Additive Manufacturing Technology
- October Employee Engagement
- November TBM Survey results ... TBM Roadmap
- December SME Year end Review/Party
- January Productivity and Lean workshop
- February TBM Toolkit workshop



Innovation and Commercialization

A Key Strategy to Take Back Manufacturing

Norm Nopper, MA, BBA

Board Member, SME Toronto Chapter 26

Managing Director, Lakeport Metalcraft Inc.

Manufacturer of The Backbone™ for Reach Trucks



*The Future of Education & Training
for Industrial Success in Ontario....*

Society of Manufacturing Engineers
Toronto Chapter 26



Ron Kurtz
<http://www.sme-tbm.org>



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Rapid Technologies and Additive
Manufacturing

The next competitive Edge

Vesna Cota
SME Toronto
September 13, 2012





**SME Annual Conference Cleveland
(Presented TBM)**



**SME Toronto
Presented
Take Back Manufacturing
To the other Chapters at the
SME annual Conference
With great feedback!!**



PLANT
ADVANCING CANADIAN MANUFACTURING

Business Outlook:
2012
Investing in
the future

Sponsor:
Grant Thornton



Mission of the SME Student Chapter

Provide a conduit for students to:-

- Meet/experience real life manufacturing engineering professional environments.
- Grasp the culture and topics of interest in engineering and manufacturing technology.
- Study and share in the debate on the future socio-technical environment and current economic issues.

Status:

Sheridan kicked-off... Sessions held...more in 2013

Seneca agreed to start.. Plans being prepared

Durham have agreed .. Plans being Prepared

SME/TBM Communication Sessions

• TBM Forum Kick-off	June 2011
• CMTS Tradeshow TBM Road-show at SME Pavilion	October 2011
• PEO Review sessions on TBM	January/February
• FABTECH Canada Tradeshow TBM Road-show	March 2012
• Ontario MPP Briefing meeting/s On TBM	April 2012
• CME Strategy review (SME Toronto/PEO supported)	Apr/May 2012
• Book Launch ...How to Make Manufacturing Sexy .	25 th April 2012
• ASME TBM Toronto Ryerson University	3 rd May 2012
• OCEPP Policy Session Toronto	May 11 th
• CAW Auto Industry Report review	May 2012
• SME MMTS Show Montreal LEAN/TBM Presentation	15 May 2012
• CAMM Dinner and TBM Windsor	May28th
• SME Annual Conference Cleveland (Presented TBM)	June 2012
• Ontario manufacturing Council TBM Presentation	July 2012
• Lambda/Alpha..Intro To TBM	10 Sept 2012
• PEO TBM Symposium University Of Toronto..	13 October 2012
• SME-AMT Show Toronto	October 2012
• SME-Medical Show Toronto	November 2012
• Plant Magazine Outlook 2013 SME Supported	November 2012
• Canadian Industrial Machinery Magazine TBM interview	November issue
• TVO The Agenda..with Steve Paikin	December 2013
• USA Manufacturing Revival Radio show interview on TBM	November & February 2013
• Report on Business article Reshoring/TBM	March 2013
• AME TBM/Reshoring	Q1 2013
• ASQ TBM Presentations (Toronto and Kitchener)	March 2013
• SME Edmonton TBM Awareness	June 2013
• SME Annual conference... Lean Implementation panel	June 2013
• CIM Symposium Niagara falls	July 2013



 Professional Engineers
Ontario
West Toronto Chapter



**TAKE BACK
MANUFACTURING** Symposium

SATURDAY, OCTOBER 13, 2012, 10 A.M. – 3:30 P.M.

 Mechanical & Industrial Engineering
UNIVERSITY OF TORONTO

 SME
Society of
Manufacturing
Engineers

 ONTARIO CENTRE
FOR ENGINEERING
AND PUBLIC POLICY



Take Back Manufacturing

TBM

**A Forum Dedicated to Restoring
our Manufacturing Sectors.**



Take Back Manufacturing

TBM

www.SME-TBM.org

**A Forum Dedicated to Restoring
our Manufacturing Sectors.**



NIGEL SOUTHWAY

Owner of NEXUS CONSULTING SERVICE

- 40 years Broad Business and Manufacturing Experience

- **British Engineering Apprentice**...Aerospace/Electronics (1966)
- BSc EEE C-Eng. in Engineering/MSc Management (1972)
- **Manufacturing Engineer** (1972)

- **MOTOROLA** Director Manufacturing Eng / Lean and Six Sigma Implementation (1980,s)
- Engineer / Manager / Director / VP Operations (1992)
- Change Agent/Educator/Coach/Advisor for LEAN business improvement

- **AUTHOR** : **CYCLE TIME MANAGEMENT**... *Fast Track to Productivity Improvement*

- **Consulted many organizations in different industry sectors.**
Automotive, Aerospace, Avionics, High-tech and consumer Electronics, Pharmaceuticals, Food, Beverage, Consumer Products and Appliances, Steel, Fabrication, Mining, Resource extraction equipment, Construction, Off-road equipment, Service and Financial Industries.



1966..... 4 Important things

England wins soccer world cup
Beatles release Revolver LP
Star Trek premiers on TV
I start my Engineering Apprenticeship

(1992)



NEXUS

www.nigelouthway.com

NIGEL SOUTHWAY

Owner of NEXUS CONSULTING SERVICE

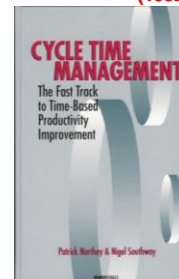
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NEXUS

www.nigelouthway.com

Manufacturing has been good to me!



The future of manufacturing in Ontario's economy.



Nigel Southway SME Chair 2012



The future of manufacturing in Ontario's economy.



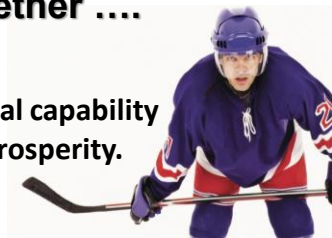
TBM...Our Ultimate Goal

**STRONG Manufacturing in North America...
AGAIN!**

Government,
Education organizations
Industry leaders

} **Work together**

**ROADMAP.....Recover our future industrial capability
..... and therefore our future prosperity.**



THE TBM FORUM...

Canadian Industry Associations, Government Agencies, Major Educational Institutions, Industry associations, Unions and Industrial experts that have participated and agree to fully support the TBM initiative include:

Associations:

Society of Manufacturing Engineers (SME) ,
 American Society of Mechanical Engineers (ASME),
 Association of Manufacturing Excellence (AME);
 Association of Operations Management (APICS);
 Auto Part Manufacturing Association (APMA);
 Canadian Manufacturers and Exporters (CME);
 Canadian Tooling and Machining Association (CTMA);
 High Performance Consortium (HPC),
 Ontario Power Generation (OPG);
 Ontario Society of Professional Engineers (OSPE);
 Professional Engineers Ontario (PEO);
 Ontario Professional Engineers Policy Group (OSPE) ,
 Society of Auto and Aeronautics (SAE),
 Society of Manufacturing Engineers Canadian Exposition Group,
 American Society of Quality (ASQ)
 Ontario aerospace council (OAC)
 MacDonald Laurier Institute (LSI)
 Canadian Tooling and Machining Association (CTMA)
 Certified management accountants (CMA)
 Excellence in manufacturing Consortium (EMC)
 The Progressive Economics Forum (TPEF),

Experts:

High Performance Consortium (HPM),
 Organization Thought-ware International Inc.,
 Re-shore Group USA.
 RIC Center.

Educators:

Association of Canadian Colleges (ACCC),
 Canadian Apprenticeship Forum (CAF);
 Canadian Competition University Forum (CCUF),
 Sheridan College.
 Seneca College

Government and Associated Agencies:

Ontario liberal members of parliament (Industry Education study group),
 Ontario NDP members of parliament,
 York Municipality Economic and Innovation Development .

Unions:

Canadian Autoworkers Union (CAW),
 United Steel Workers (USW)

Media:

Canadian Plant Magazine,
 Canadian Manufacturing Automation magazine
 Shop Metalworking Technology Magazine
 PEO Engineering Dimensions Magazine
 CBC Radio/Canada,
 Globe & Mail.
 The Star
 Other specialized Magazines

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Presentations....

TAKE BACK MANUFACTURING
Raising the Awareness



- CMTS Toronto Canada October 2011**
- FABTEC Toronto Canada March 2012**
- MMTS Montreal Canada May 2012**
- SME Annual Conference Cleveland USA June 2012**
- Many other Society and Association events in 2012**

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Taking back manufacturing

A new plan for economic prosperity

BY JOE TERRETT, EDITOR, ON DECEMBER 28, 2011 3:56PM



<http://www.canadianmanufacturing.com/fabrication/production/taking-back-manufacturing-51066>

Email Print Text Size



The TBM roadmap addresses knowledge transfer to incoming generations as baby boomers retire. Photo:thinkstock

Share or bookmark this post:



There is much to gain from the opportunities offered by a global economy, but the downside has been the loss of North American manufacturing capacity and jobs.

In 1999, manufacturing generated 19.2% of the country's GDP and was the biggest employer. Today it's good for about 13% and has slipped to third-place as an employer behind trade, and health care/social assistance.

More than 322,000 jobs were lost between 2004 and 2008, according to Statistics Canada, and the erosion continues. In October another 48,000 jobs (mostly in Ontario) were lost out of a national total of 54,000.

PEO GIVES THUMBS UP TO NEW MANUFACTURING INITIATIVE

Professional Engineers Ontario

THE ENGINEERING REGULATOR HAS JOINED FORCES WITH OTHER GROUPS IN AN AMBITIOUS CAMPAIGN TO WIN BACK LOST MANUFACTURING OPPORTUNITIES TO ONTARIO.

By Michael Mastromattio

O

ntario's engineering regulator is throwing its weight behind a bold initiative aimed at bolstering Ontario's manufacturing sector. Take Back Manufacturing (TBM) is a campaign launched by the Toronto chapter of the Society of Manufacturing Engineers (SME), which it describes as a multi-faceted effort to persuade government, the public, industry and other stakeholders of manufacturing's significance to Ontario's long-term prosperity and economic competitiveness.

The ultimate goal of TBM is to implement economic policy changes to enable the recovery of a declining manufacturing sector. SME believes the trend in the last two decades to under-capitalise local manufacturing technology, reduce capability and related education, and allow extensive migration of production to offshore sources has harmed Ontario and the rest of the country by leading to severely unbalanced import-export trade that is counter-productive to the Canadian economy as a whole.

PEO council endorsed PEO's support of the TBM initiative at its September 2011 meeting on the basis that migration of Ontario's manufacturing sector to offshore locations has taken a toll on the engineering profession, including the technical deskilling of members and the lack of the employment opportunities engineering graduates need to become licensed.

The Ontario Society of Professional Engineers (OSPE) also supports TBM.

Nigel Southway, operations manager for TBM, says that while the problems have been identified, there has been little action to shore up the manufacturing sector.

"The goal of TBM is to raise awareness of this issue and ensure that industry, government and the educating bodies get it together to correct the decline and support a sustained recovery," Southway told *Engineering Dimension* November 14. "It's clear that the globalised economic picture now looks very bleak for emergent economies and this has clearly proved our point that a TBM approach is the only way to reverse this picture."

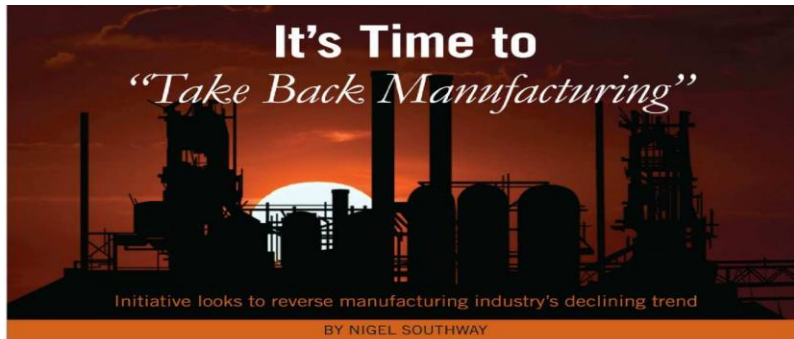
TBM includes a full range of activities, such as publicity, crafting its message to specific audiences, and a skills development component, aimed at promoting new entrants to the field through four career stages: trade, technician, technologist and engineer.

The initiative emphasises reducing imports and bringing manufacturing home (reshoring), or rebuilding local capacity to better support local demand. It also seeks to develop "the correct infrastructure" by way of education and training. In fact, phase 3 of TBM includes such proposals as a joint apprenticeship and training board, a professional retraining program, career development activities, and a technology development effort to ensure the province can sustain the manufacturing opportunities starting up in or flowing back to Ontario.

Southway says talk of Ontario as a leader in innovation or the epicentre of a resource-based or service economy is meaningless without a solid, sustainable manufacturing base.

"A lot of nonsense has been talked about innovation as a critical imperative for our collective success," he says, "but without manufacturing, how is it going to work?"

<http://sme-tbm.org/app/download/5809147904/PEO+TBM+article.pdf>



It's Time to "Take Back Manufacturing"

Initiative looks to reverse manufacturing industry's declining trend

BY NIGEL SOUTHWAY

IT'S NOW CLEAR to many Canadians that it's time to rescue our declining manufacturing industries. Many now believe that our sinking prosperity, especially in Ontario and Quebec, requires an awareness of the important part the manufacturing sector plays in our economies.

The Take Back Manufacturing (TBM) initiative is about getting everyone—government, educators, industry and the general population—to embrace this need.

The Society of Manufacturing Engineers (SME) is spearheading this initiative with support from other management associations and technical societies. We called the initiative "Take Back Manufacturing" because we literally need to "take" it back for our future prosperity and a balanced economy, with a combination of policy change, education renewal and business case re-planning, and by understanding the true value of the manufacturing environment.

We need to ensure policy makers re-visit and grasp the multiplier effect manufacturing has on other jobs in an economy—it's three to one. For every manufacturing

job you get, three are support or service related jobs.

This advantage needs to be woven into our policy and capitalization models when we look toward building capacity and infrastructure and providing tax incentives.

To undertake this transformation we need business leaders and engineers who run companies to understand the total cost of ownership of offshore versus onshoring, and be able to review these global sourcing factors and direct their business plans correctly to become competitive.

The true cost of ownership is not just labour rate differential; it's much more complex, and involves an understanding of the costs of manufacturing, technology, logistics, fuel, quality, tariff, exchange rate, distribution and product support, and must include risk to Intellectual Property and lost innovation incubation capability.

We must study total global manufacturing cost structures and global market economics to reach a balanced sourcing strategy and a maximum opportunity for a prosperous economy.

It's our leaders in industry with strong unified support

JUNE/JULY 2012 www.shopmetaitech.com 65

CIM: What factors are driving manufacturers' decisions to bring production back to Canada?

Southway: It's a North American-wide realization that off shoring is getting more expensive with increased transportation expense due to oil costs, as well as labor price escalation in emerging economies. Many corporations and large consulting groups also recognize that there are many hidden costs and issues in supporting a remote supply chain. In general, local manufacturing is now considered to be no more expensive than offshore production. The landed cost tipping point in some sectors and commodities is projected to be reached by 2015. Local manufacturing also offers more stability and the ability to innovate at home more effectively. And, being closer to the customer has added inventory and flexibility advantages.

CIM: How can industry members communicate the importance and value of manufacturing to the general population?


Southway: We have had three decades of people thinking manufacturing is bad news. Manufacturing has been viewed as dirty and dangerous, risky and unstable employment, and so forth. We have a lot of work to do to change this negative image. Just talking about TBM, telling the real story, and showing what we do will help. If we look at the long term, today's 12- to 15-year-olds will lead the way. When they reach 22 years old, we will have a thriving localized manufacturing economy. It certainly won't be based on cheap oil or energy, but it will be very lean and very green. Things will be made in local manufacturing hubs or clusters. Factories will be very high-tech and their operation will demand high levels of skill and education. All this needs vision and a can-do attitude. Not having both of these is our biggest risk.

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DONATE NOW

The Agenda with Steve Paikin: Manufacturing 2013: An Economic Engine Revived?



A Ontario Manufacturing Revival?
theagenda.tvO.org

Take Back Manufacturing on TVO The Agenda

Marie Laird ... Past Chair SME Toronto

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CONTENT PROVIDED BY



BUSINESS *without* BORDERS™

HELPING BUSINESSES GROW INTERNATIONALLY

Reshoring is picking up—but will Canada benefit?

While U.S. manufacturers are bringing assembly work home there's no evidence of it happening here

- By: John Lorinc
- From: [Canadian Business](#)
- Date: Thursday March 14th, 2013

Management consultant Nigel Southway, a British-born manufacturing engineer based in Oakville, Ont., spent much of the 2000s in China helping a client establish an industrial operation there. It was a tough gig but an exhilarating place to work, as western manufacturers flocked to booming Guangdong province to take advantage of low wage rates. He only realized the cost of China's success when he returned to Canada in 2010. "I came back and I was horrified how much Canada's manufacturing sector had hollowed out," the management consultant says. Since that eye-opening moment, Southway, now chairman of the Toronto chapter of the Society of Manufacturing Engineers, became the spokesperson of the Take Back Manufacturing Initiative, criss-crossing Canada with an admittedly bittersweet message about both the perils of outsourcing to China and the opportunities available to those who return.

0



WHY?..Take Back Manufacturing FOR OUR KIDS!!



This is NOT a game!!!!...



Our Kids will think we don't *make things*!!!



GLOBALIZED



MANUFACTURING

Moved Off-shore.....

For low cost labor rates

15% Reduction in Manufacturing Intensity in the last decade



Un-controlled trade.....

“herd behavior”



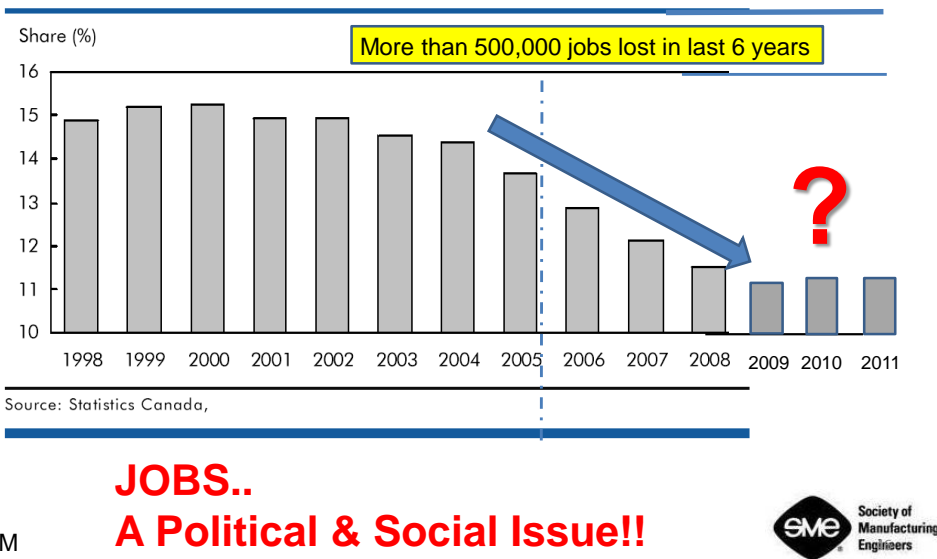
CANADA

Manufacturing's share of employment has fallen sharply since the turn of the century



CANADA

Manufacturing's share of employment has fallen sharply since the turn of the century



JOBS..
A Political & Social Issue!!

M



What happened?



47

How did it happen?

Corporate "brow-beating"
 "If you don't Go Offshore you wont be on the bidders list!"
 (Fortune 500 Corporations to local NA Suppliers)

50% of the mid –sized manufacturers (100 to 500 employees) have disappeared since 2000

Local Suppliers

Governments

Globalization

Middle Class

Corp tax evaded stash

"The only way to compete with a 3rd World Economy Is.... to Become One!!"
 ?

Hard Lesson...Globalization Rule #1
 Citizens need passports
 But
 Jobs and capital don't!

So what's next?.....

We need a critical mass of awareness across our population to force action taking to recover our future.

A glimmer of hope!

THE GAME CHANGER!

A 2nd Chance!!



GLOBALIZED



MANUFACTURING

TBM Positional Paper on the Waste in a Global Supply Chain

Waste of VERY Expensive Bunker Fuel



Much Non-Value-Adding Inventory

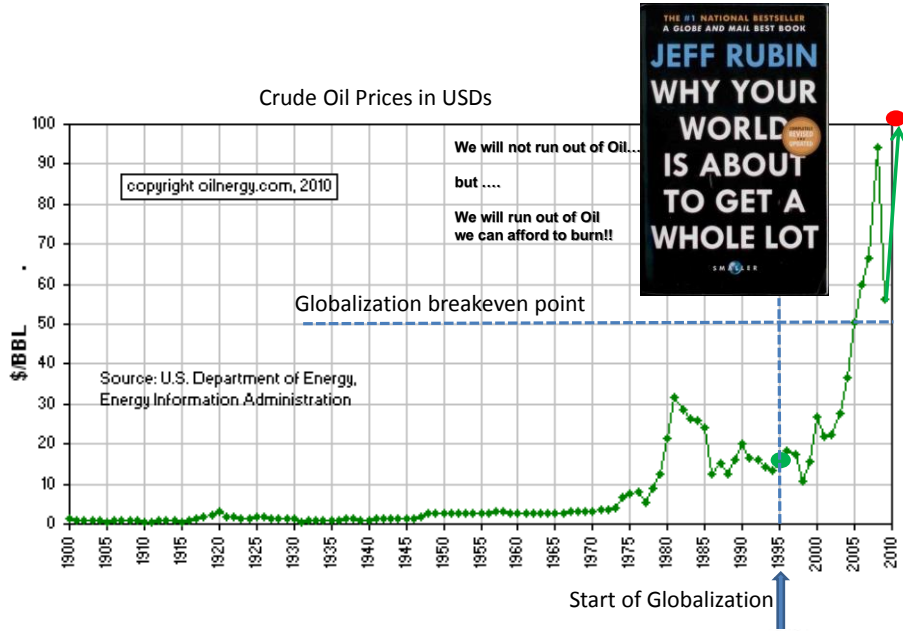
Waste of VERY Expensive Bunker Fuel



VERY LARGE CARBON FOOTPRINT

This low grade bunker fuel is used by the worlds 90,000 cargo ships
 A *single* large container ship emits pollutants equivalent to **50 million cars.**
 Total container ship pollution is 6 times that of the TOTAL cars in world
2,000 times the amount of sulfur compared to diesel automobiles.
 Container ships account for 90% of global trade by volume.
Our Economies will be jeopardized by this global warming enabler

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Note: localized supply of energy will not change this outlook



The Economist CHINA ... Low Cost Country?

The end of cheap China

What do soaring Chinese wages mean for global manufacturing?

Mar 10th 2012 | HONG KONG AND SHENZHEN | from the print edition



GLOBALIZED



MANUFACTURING

START THINKING **LEAN** & **GREEN**

LEAN Review of Trading Models

We have

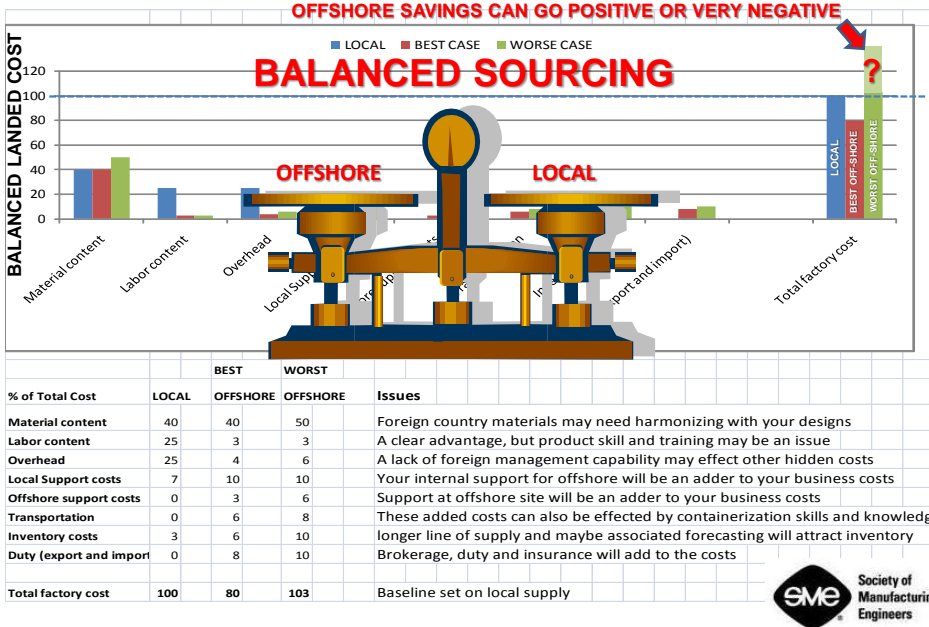
“Run the Numbers”



**USED
BALANCED SOURCING
MODELS**

Every Engineer should understand business costing and economics!!!

We built Cost Trade-off Models ... LOCAL versus Off-shore



We built Cost Trade-off Models ... LOCAL versus Off-shore



Boston Consulting Group (BCG).....

Predict *BALANCED LANDED COST* parity by 2015 in most sectors

Due to exchange, tariffs, Transportation, wage inflation, other hidden drivers....

The **REAL** Costs to Manufacture OFF-SHORE will continue to rise.



GLOBALIZED



MANUFACTURING

START THINKING **LEAN** & **GREEN**

What is happening in the USA?

Re-shoring !!!  Reshoring Initiative
Bringing Manufacturing Back Home

- Resurgence of Manufacturing in USA ... Now at *“tipping point”*

via

lower US exchange rate

Rethinking of globalized supply

Balanced Sourcing Cost trade-off modeling



THE GAME CHANGER!



What is happening in the USA?

Re-shoring !!!

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via

lower US exchange rate

Rethinking of globalized supply

Balanced Sourcing Cost trade-off modeling



BOSTON CONSULTING GROUP STUDY ..April 20, 2012

More Than a Third of Large Manufacturers Are Considering Reshoring from China to the U.S.

BCG Survey Confirms That Rising Chinese Wages, Logistics, and Other Factors Are Prompting Companies to Rethink Where They Manufacture.....



What is happening in the USA?

Re-shoring !!!

Reshoring Initiative
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via

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Balanced Sourcing Cost trade-off modeling



Reasons..

Transportation costs

Labor costs

Product quality

Customer location

Ease of doing business



What is happening in the USA?

Re-shoring !!!

- Resurgence of Manufacturing in USA ... Now at **“tipping point”**

via

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Balanced Sourcing Cost trade-off modeling



Most next generation products will Re-shore if:

- ✓ Large bulk shipping cost %
- ✓ Low/Mid labor content (less than 50%)
- ✓ Hi Technology (Embedded Innovation)
- ✓ Value adding local supply chains
- ✓ Integrated with customer services

Re-shoring !!!



- Resurgence of Manufacturing in USA ... Now at **“tipping point”**

Maybe NOT Canada with a HIGH LOONIE

via

lower US \$ value

Rethinking of globalized supply

Balanced Sourcing Cost trade-off modeling



Re-shoring !!!



- Resurgence of Manufacturing in USA ... Now at **"tipping point"**

via

lower US \$ value

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Maybe not us with a HIGH LOONIE



Re-shoring !!!



- Resurgence of Manufacturing in USA ... Now at **"tipping point"**

via

lower US \$ value

Rethinking of globalized supply

Balanced Sourcing Cost trade-off modeling

Maybe not us with a HIGH LOONIE



Experts are certain Manufacturing will
Re-shore to North America

.....but not sure it will be Canada!

New Pressures on LCC Globalization (Resource & Product Transfers)

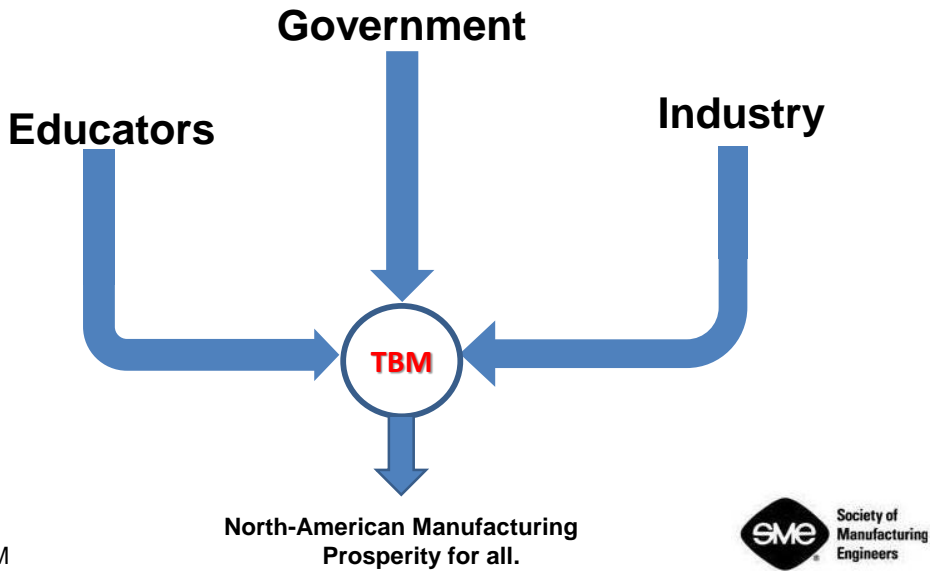


But....Are WE Ready???

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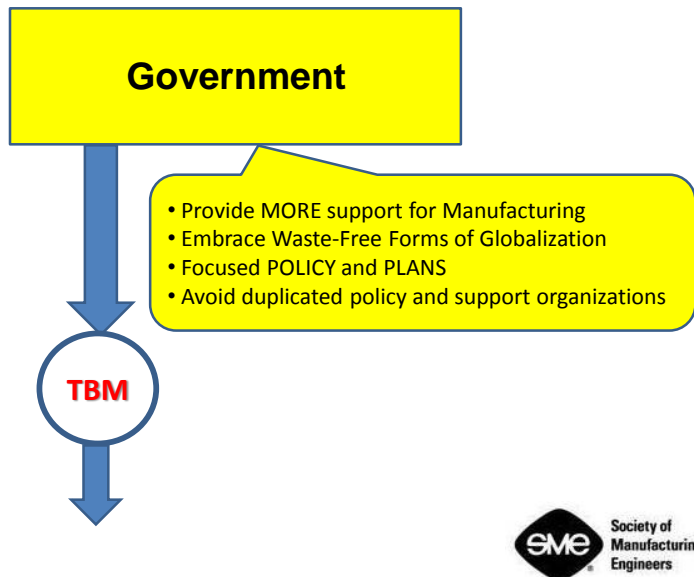


TBM - The 3 Parallel Imperatives



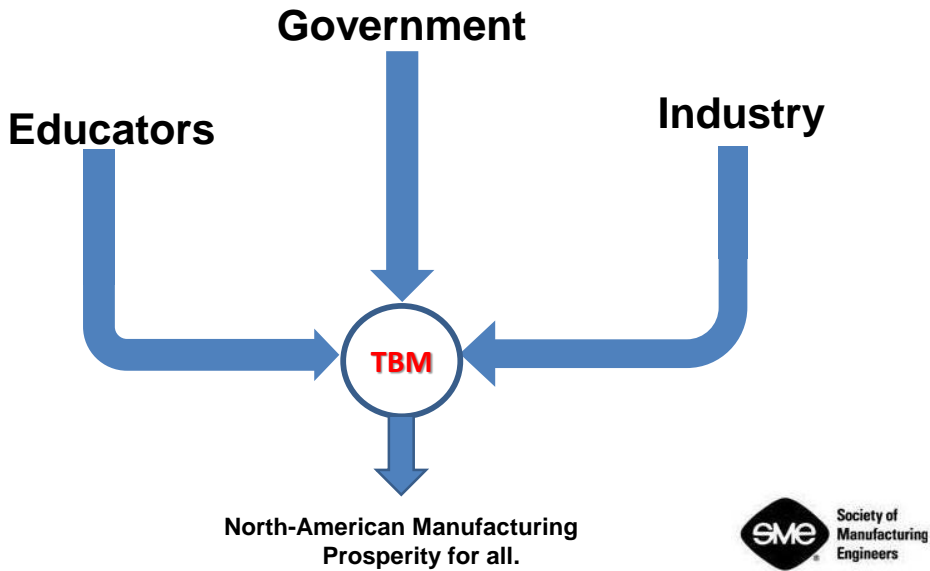
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TBM - The 3 Parallel Imperatives

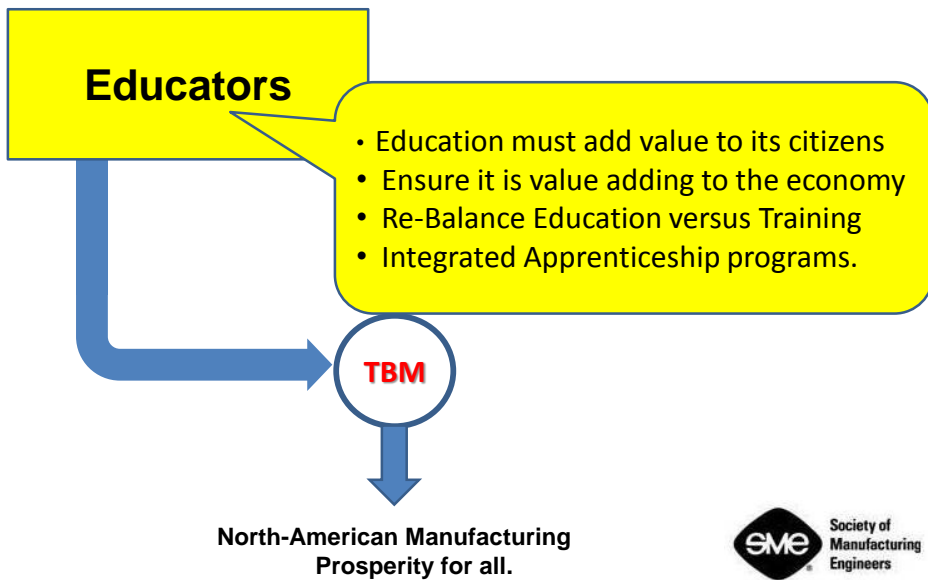


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TBM - The 3 Parallel Imperatives

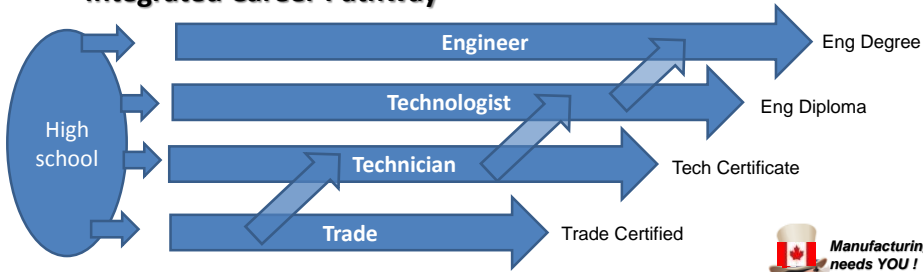


TBM - The 3 Parallel Imperatives



VISION ..Re-focus on New Apprenticeship Programme

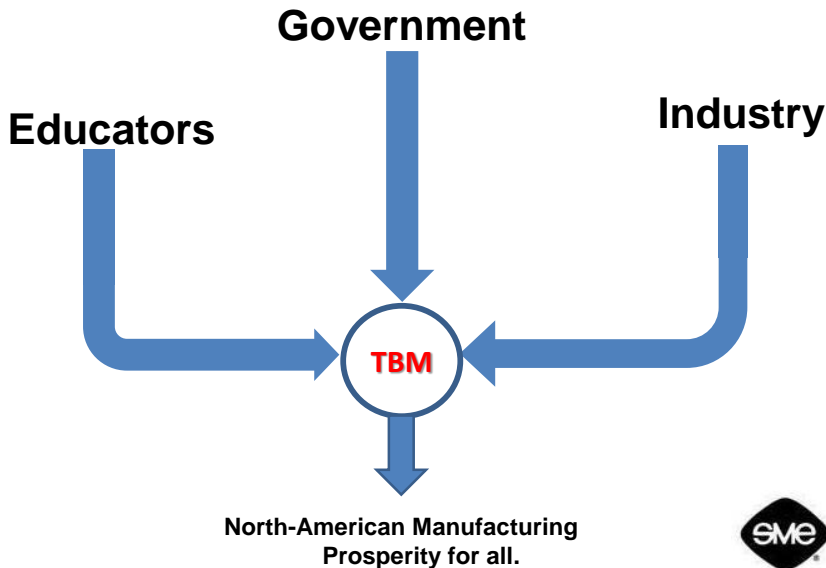
- **Integrated Career Pathway**



- Industry Recognized Skills and Education Development Progression
- Apprenticeship Pool From The Best, the Brightest And The Most Talented
- Become The Learning/Occupation Destination Of Choice for High School Students
- Apprenticeship Courses Transferrable And Articulated To Other Post Secondary Colleges And Universities, Supporting Lifelong Progression In Learning As Shown In Career Pathway Above
- Industry must lead on driving and installing this system. (So..can't complain about skill shortage!!)
- The Integrated education and training must provide a highly flexible workforce.
- **DO IT!..... Before we loose the Industrial Experience of the Baby Boomers!!**



TBM - The 3 Parallel Imperatives



TBM - The 3 Parallel Imperatives

Industry

- Gain a Vision & Aptitude for all forms of "INNOVATION"
- Use **BALANCED SOURCING**.... Run the numbers!!
- Reinstall a "MINDSET" for Continuous Improvement
- Install New Technology and Capital Re-investment
- Re-build **LOCALIZED** Manufacturing Communities (Incubators)

Niche and hobby
Manufacturing
not enough to
sustain us

TBM

North-American Manufacturing
Prosperity for all.



Manufacturing has an IMAGE problem!!

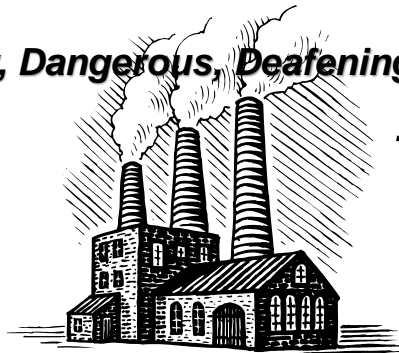
Most manufacturing-based businesses are beyond dispirited....

Our Politicians/Government/Population have little understanding of business and manufacturing...We must EDUCATE them!!

Manufacturing is deemed:

Dark, Dirty, Dangerous, Deafening and Difficult....

..... And Smelly!



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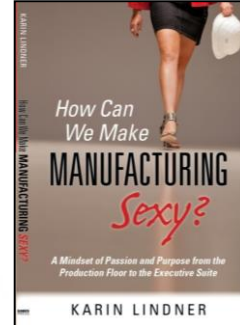




Change

The **Image** of Manufacturing

Let's Make
Manufacturing
SEXY!



EXCITE the NEXT GENERATION





Society of Manufacturing Engineers Toronto
Advancing Manufacturing in Ontario

Take Back Manufacturing

www.SME-TBM.org

Let's Re-engineer Our Economy to Work Again!

- ✓ Government support
- ✓ New and BOLD Policies
- ✓ Fix impact of Hi Cdn \$
- ✓ Tax supportive re-capitalization
- ✓ Rethink globalized manufacturing
- ✓ Balanced sourcing
- ✓ Local supply clusters
- ✓ Build factories of the future
- ✓ More innovation capability
- ✓ New technology
- ✓ Refocus LEAN / Continuous improvement
- ✓ Enhance business systems
- ✓ Fix energy/support infrastructure
- ✓ Integrated Apprenticeships
- 78 ✓ Re-Engineer Manufacturing Image

T
B
M

Reshore to NA/Canada
Local trade bloc

Balanced trade
Balanced economy

Rebirth business energy
Recover jobs
More career Stability/growth
More prosperity via Value Jobs
Improved legacy for our Kid's





Society of Manufacturing Engineers Toronto
Advancing Manufacturing in Ontario

Why.... Take Back Manufacturing

For Our....

Population
Province/State
Workforce
Business Leaders
Investors
Kids

MAKE SURE

They Listen / Take action!!



M



Society of Manufacturing Engineers Toronto
Advancing Manufacturing in Ontario

Why.... Take Back Manufacturing

For our Population

Recover **lost prosperity** and reduce risk of global economic instability now and into the future.
Recover higher income jobs of all types via manufacturing's higher productivity
Recover the ability for manufacturing to create the 3:1 economic activity into other sectors.

For Our Province

Recover lost tax revenue to **balance budgets** at all levels of government and public services.
Recover an autonomous and **balanced economy** without over reliance on natural resources

For our Workforce

Stabilize **future skills and career opportunities** at all levels Including Professionals

For Business Leaders

Provide a strong incubator and support system for local Innovation and R&D investment.
Better protect and sustain the Intellectual property of the next generation of innovations
Improve **ability to compete world wide** from a stable home market/manufacturing base.

For our Investors

Provide solid Value-added **investment opportunities for local capital** via manufacturing.

For Our Kids

Reduce the **Global Carbon Footprint** and oil dependency ... Reduce the **Negative wealth flow**



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Advancing Manufacturing in Ontario
Take Back Manufacturing
www.SME-TBM.org

Let's Re-engineer Our Economy to Work Again!



FOR OUR KIDS!!!



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Society of Manufacturing Engineers Toronto
Advancing Manufacturing in Ontario
www.SME-TBM.org

Take Back Manufacturing

TBM Self Positioning Survey

TBM SURVEY



**Do You Care
About Manufacturing
in CANADA??**



THEN PUSH HERE



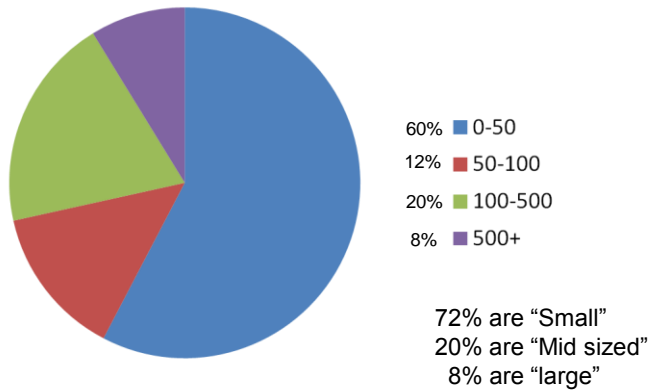
TBM Survey Results

From an ongoing online survey on the www.sme-tbm.org website

Presented at the SME TORONTO Monthly Meeting 22nd Nov 2012



How many people are in your business?

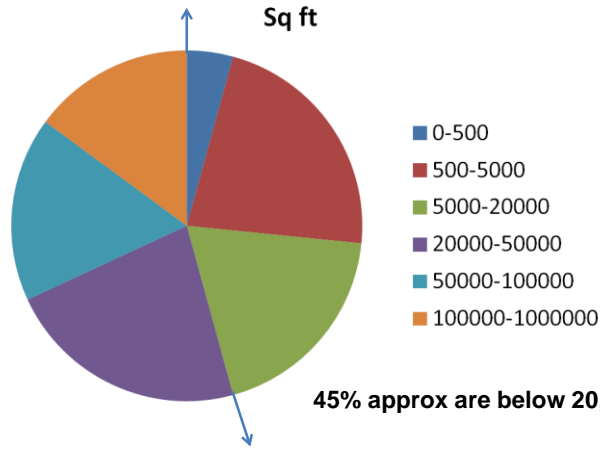


TBM SURVEY RESULTS

478 participants



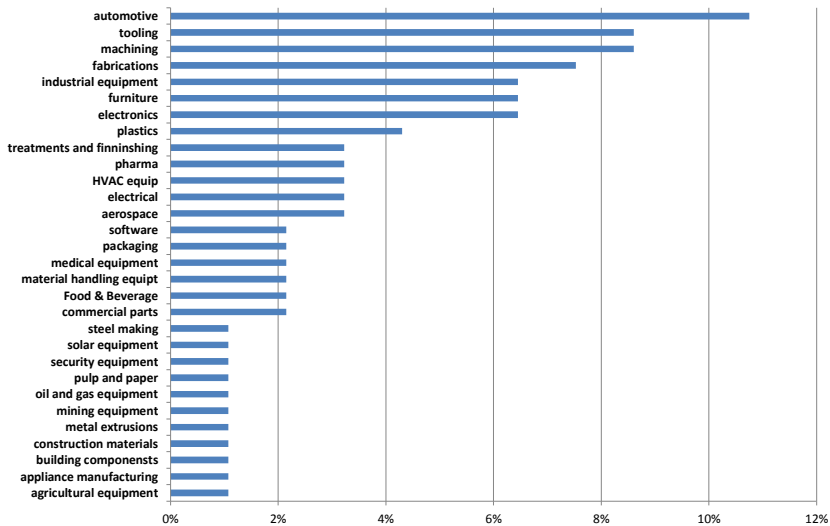
Size of manufacturing facility



78% of manufacturing sites design own product.



Manufacturing participants only by sector



(389 Participants)

Were you aware of the Take Back Manufacturing initiative?

65%





KEY QUESTIONS WE ASKED?

Are you concerned about global competitiveness?	87%
Do you feel you can compete with the global economy as a Canadian manufacturer?	66%
Are you concerned about the decline of manufacturing in your sector?	82%
Do you feel pressure from the level of the Canadian dollar?	73%
Are you satisfied with local government support for your industry?	44%
Are you satisfied with Federal government support for your industry?	43%
Do you feel your business is under capitalized?	62%

CONFIRMS NEED FOR TBM!!





If your company were to engage in an effort to Take Back Manufacturing, what would you need the most help with?

Calculating total real cost of production (Balanced Sourcing)	42%
Productivity Improvements 	68%
New product development and innovation	49%
New product introduction	35%
Workforce training and development 	65%
Information/education on new technologies	53%



Which of the following process improvements are you planning to pursue?

[Lean thinking and implementation] 	60%
[Six Sigma]	29%
[ERP Class A]	9%
[ISO]	26%
[Productivity through computerization]	27%
[Innovation systems for products and processes] 	47%

5 biggest challenges ?

TOP 10

15.2%	Skill shortage
13.4%	Economic demand
12.7%	Offshore competition
7.6%	Productivity
6.2%	High \$ DOLLAR
5.8%	Investment
5.4%	Legislation (Safety/environmental/products)
3.6%	Material costs
3.3%	Energy costs
2.2%	Managing change

Over 50%

The Others

1.4%	delivery
1.4%	lack of supply base
1.4%	logistics and transportation costs
1.4%	Quality issues
1.4%	technology gap
1.8%	customer satisfaction
1.8%	lack of government support
1.8%	taxes
1.1%	government regulations
0.7%	Distribution issues
0.7%	IP control
0.7%	liquidity
0.7%	market barriers
0.7%	material sources
0.7%	product launch
0.7%	Supply base availability
0.4%	international regulations
0.4%	material quality
0.4%	Offshore quality
0.4%	quality of imports
0.4%	unionism
0.4%	US protectionism



How interested are you in educational assistance for the following?

- 57% Understanding how to Improve Total Business Cycle Time to satisfy the customer.
- ★ 60% LEAN thinking Implementation....simplify your operational and material support systems?
- 44% Having e a Certified LEAN instructor as part of your operating team
- 43% Nominating some -one to Train as a certified LEAN instructor.
- 50% Installing a LEAN performance measurement system
- 52% Installing a Cost of Poor Quality system..... how to measure and improve for business success.
- 51% Installing Total Productive Maintenance and Calibration systems.
- 45% Implementing Statistical Process Control (SPC) as a strategic weapon for process improvement.





Take Back Manufacturing

TBM Self Positioning Survey

TBM SURVEY



**Do You Care
About Manufacturing
in CANADA??**



THEN PUSH HERE

THE FUTURE

SME

CORPORATE UPDATE

THE RACE FOR RELEVANCE

- SME has acknowledged that changes are required in order to stay relevant
 - The book “The Race for Relevance – 5 Radical Changes for Associations” was identified and used to provoke discussion
 - Some issues discussed:
 - governance
 - member value
 - volunteer leaders
 - percentage of young SME members

THE RACE FOR RELEVANCE

- SME President selected a task force to identify “radical” changes to meet these challenges
- Task Force presented ideas to the Board of Directors on Feb 8, 2013
- Member Council has now been charged with how some of those ideas might be put into practice

WHAT DOES IT MEAN?

- Change is coming.
- Chapter 26 has been held up as an example many times.
- An opportunity to spread TBM ideas and concepts beyond our chapter...?

REMINDER SME 2013 EXECUTIVE Kick-Off meeting!!!

WELCOME!!

Dear Members and Friends....

We are holding the 2013 Executive Kick-off meeting on Thursday 28th March at 6.30pm till 9.30 pm. All Members and Friends welcome.

The Meeting will be held at :

SME Toronto 7100 Woodbine Avenue Section 312 Markham Ontario L3R5J2.

Admission FREE!

The SME Toronto Chapter is transitioning from the very successful 2012 year's Executive team to the 2013 Year's Executive team.

We still have Executive positions open

We are offering you the opportunity to hold a position on the SME Toronto's 2013 Executive Team as we roll out our 2013 Take Back Manufacturing plans and progressive Toronto Chapter events for 2013.

If you are interested or even curious about what being on the SME Chapter's Executive team is like, or would consider volunteering on any level, please review the more detailed information link below on these positions and contact me at nigel.southway@smetoronto.ca t: (905) 464-5517

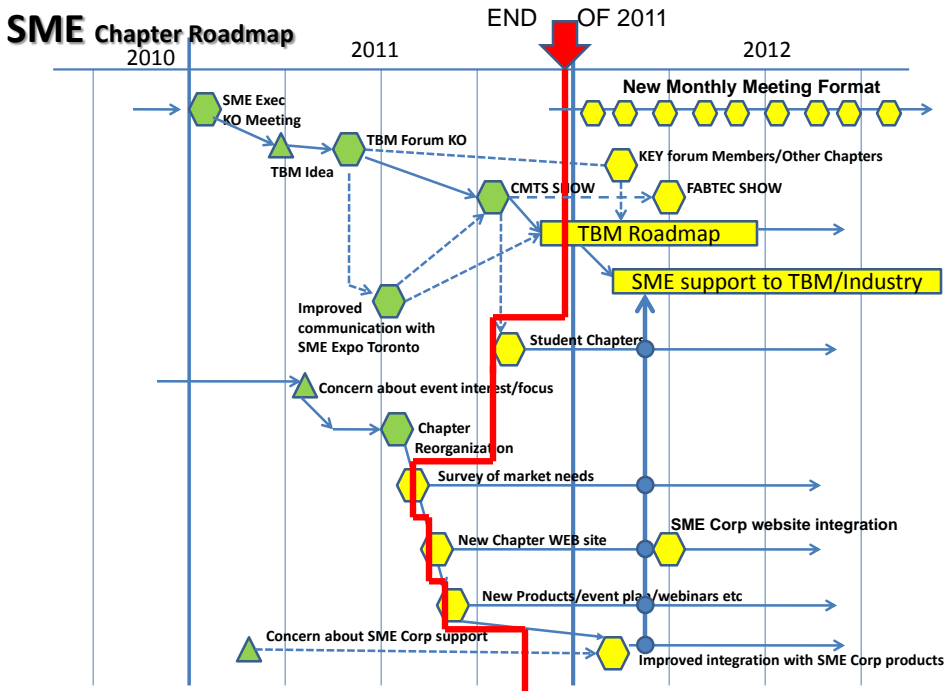
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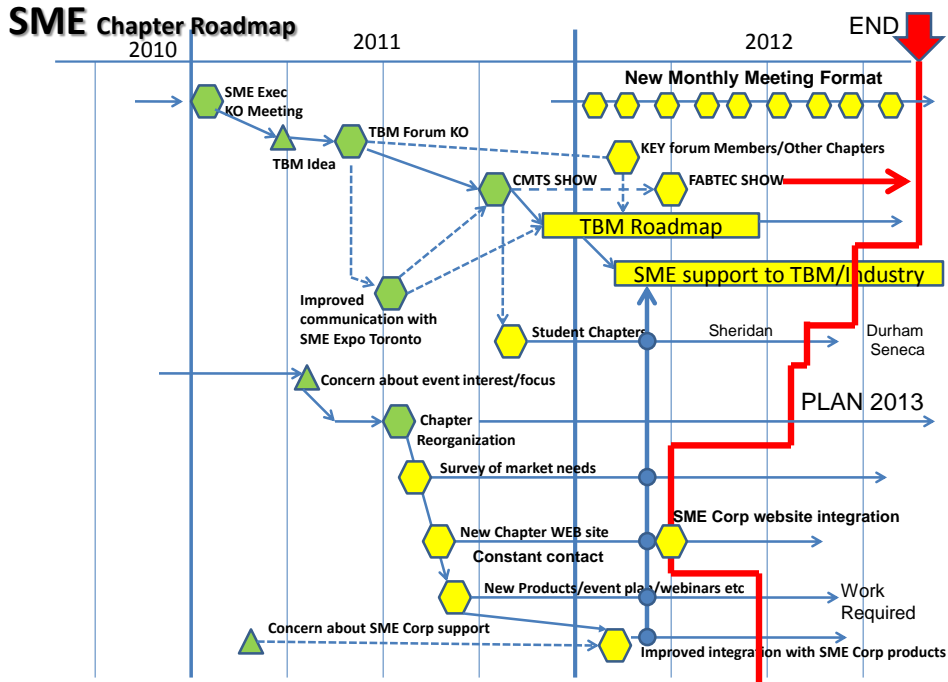
I look forward to seeing you at the event!!!

Best regards,

Nigel Southway

SME Toronto Chair-2013 Society of Manufacturing Engineers Toronto
 e: Nigel.Southway@smetoronto.ca w: <http://www.smetoronto.ca> t: (905) 464-5517
 TAKE BACK MANUFACTURING www.sme-tbm.org





2013 Plan

Nigel continue in a 2nd term as Chair for 2013 mainly to maintain continuity.... Vote was taken by 2012 Executives..

Conditions of acceptance...:

- 1/We appoint a chair elect in early 2013 so they can start to assume the chair type duties through that 2013 year as much as possible and go into the chair position in 2014 year fully engaged.
- 2/ We Form a new and broader executive with a more formal executive structure by Q1 2013However..ensure that these members will take responsibility for tasks by signing a pledge... avoid weak resolutions of the past
- 3/ We document a formal business plan for the chapter.

2013 Plan

Initiatives to follow..

Continue the TBM Initiative to maintain the back-bone of interest in the chapter .. To gather ongoing membership and build alliance's and make progress on the 3 TBM thrusts..

Continue the monthly meeting format with TBM related topics.

Continue the 2 new websites until we are confident with the SME Corp Web-site to migrate... links are in place already.

Ensure strong mail out and communications continue.

Perform a formal request for members ... Request support from Local Canadian rep to do this.

Gather support and cross membership with affiliated associations wh built relationships over last year.



2013 Plan

Initiatives to follow..

Continue the work already planned and started to re-birth the Student chapters... Sheridan/Seneca/Durham/ Algonquin etc.

Undertake the debrief on the TBM survey results and leverage a review of the SME product set to assist with a TBM toolkit to assist industry members improve and compete.

Start physical or virtual technical communities that follow the SME structure using Executive leaders that are appointed.

Structure events and plant tours around these Technical community activities...

Plus.....

HAVE FUN!!!!!!



SERVE ON THE SME TORONTO EXECUTIVE TEAM in 2013

Dear Members and Friends....

The SME Toronto Chapter is transitioning from the very successful 2012 year's Executive team to the 2013 Year's Executive team.

We are offering you the opportunity to hold a position on the SME Toronto's 2013 Executive Team as we roll out our 2013 **Take Back Manufacturing** plans and progressive Toronto Chapter events for 2013.

We have Executive positions currently open for a selection process.

If you are interested or even curious about what being on the SME Chapter's Executive team is like, or would consider volunteering on any level, please review the information link below and contact me at nigel.southway@smetoronto.ca



I look forward to hearing from you soon!

Best regards,
Nigel Southway
SME Toronto Chair-2013

MAKE A DIFFERENCE TO THE MANUFACTURING COMMUNITY!!

EXECUTIVE POSITIONS TO FILL

Chair-Elect Chair 2014
 Secretary (open)
 Treasurer (open)
 Innovation and Creativity coordinator-(open)
 Computer Integrated Manufacturing coordinator-(open)
 Product & Process Design and Management coordinator-(open)
 Manufacturing Education coordinator-(open)
 Rapid Technologies & Additive Manufacturing coordinator-(open)
 Forming & Fabrication coordinator-(open)
 Automated Manufacturing & Assembly coordinator-(open)
 Industrial Laser coordinator-(open)
 Machining & Material Removal coordinator-(open)
 Plastics, Composites & Coatings coordinator-(open)



Why become an SME Chapter Executive Volunteer?

The Toronto Chapter is one of the Society of Manufacturing Engineers' largest, most active and most successful Chapters. With approximately 500 members and thousands of visitor contacts within our local communities, we believe our Chapter provides one of the best ways to connect and network with your peers on a professional basis in the area of manufacturing.

The SME Chapter is affiliated with like-minded associations and communities who support the **Take Back Manufacturing** initiative which is dedicated to Restoring our Manufacturing Sectors and providing support for local manufacturing and process excellence. As a Chapter volunteer, you will represent not just the SME, but, by extension, all of these organizations who share our goals.

The **Take Back Manufacturing** initiative is important to the future of Ontario manufacturing and the prosperity of the province itself, and we will continue the journey with your help in 2013. We can't just leave it up to others and hope it gets done. We must be "the others" that will help Ontario Manufacturing return to prominence and prosperity for all through a renewed focus on capability and competitiveness.

We also believe that volunteering for the SME Chapter can be a highlight of your work history rather than just a footnote. The skills and knowledge and business contacts the Chapter volunteers cultivate in technical know-how, business practices, team leadership, project management, financial management, presentation skills, public speaking and business networking will help our volunteers establish their personal brands and develop and demonstrate expertise that will make them stand out in the manufacturing and service sectors.

What does a Chapter Executive Volunteer do?

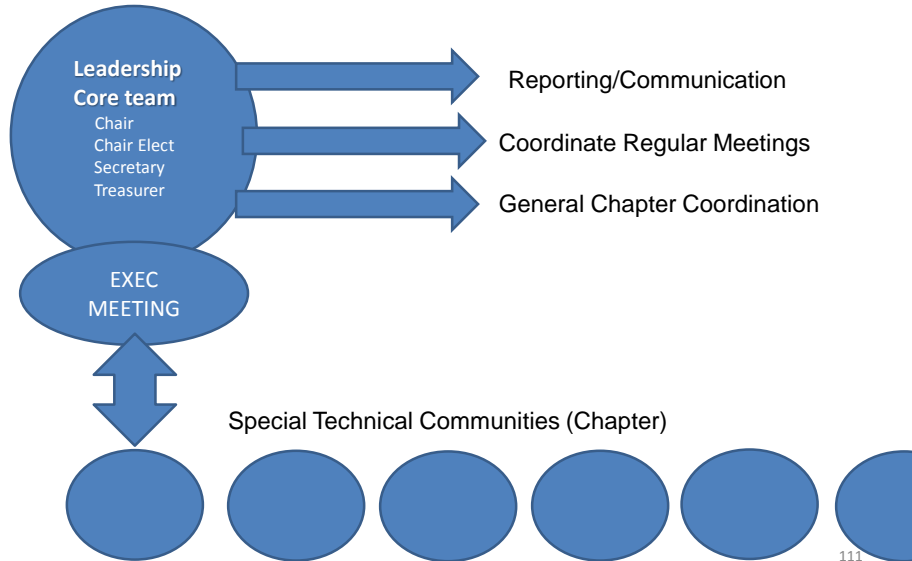
The Executive Team consists of the Leadership core team and a range of special technical community coordinators.

Executive Volunteers must be an SME member (you can join if you're not already a member). We encourage a wide range of skills and disciplines for our executive positions. Each position has its own responsibilities, but every Chapter Volunteer is expected to abide by the SME and Toronto Chapter's Code of Ethics and Guidelines.

We ask our Executive Volunteers to be committed to the position they take on and to be prepared to spend the time and make the effort necessary to meet our goals and to keep our Chapter successful. Time commitments may vary with the position taken on and fluctuate between weeks, but on average it is estimated that the weekly time requirement will be 2 to 5 hours.

Executive Volunteers are expected to attend the monthly chapter meetings, quarterly Strategy Sessions, and the occasional special event meeting as required by their positions.

SME Toronto Chapter Organization



SME Toronto Chapter Volunteer Positions for 2013

We are organized into 2 types of positions, the Leadership core team that undertakes to manage the running of the chapter, and Special Technical Community Coordinator positions that focus on moving us forward in those specific focus areas.

The 2013 Leadership Core Team positions:

Chair 2013, (Nigel Southway.... Agreed to serve a 2nd term in 2013)

Chair-Elect, (for Jan to Dec 2014) (Open)

Treasurer, (Open)

Secretary/Event coordinator. (Open)

The Leadership Core team will have the overall responsibility to ensure the continued success of the Chapter.

All positions have the responsibility of transferring knowledge pertaining to their positions to their successors at the end of their term.

Chair – (Filled)

Execute the plan developed in the previous year and oversee the health of the chapter as well as Lead and motivate the whole chapter. Delegate authority and responsibilities. Answer policy and procedure questions. Member retention and recruitment. Chair and conduct planning meetings. Ensure planning and chapter reports are complete and submitted on schedule. Establishing a budget and providing oversight.

Chair-Elect- (open)

Develop an Operating Plan or Short-range Plan for upcoming year – include meetings and events planning and Member retention and recruitment.

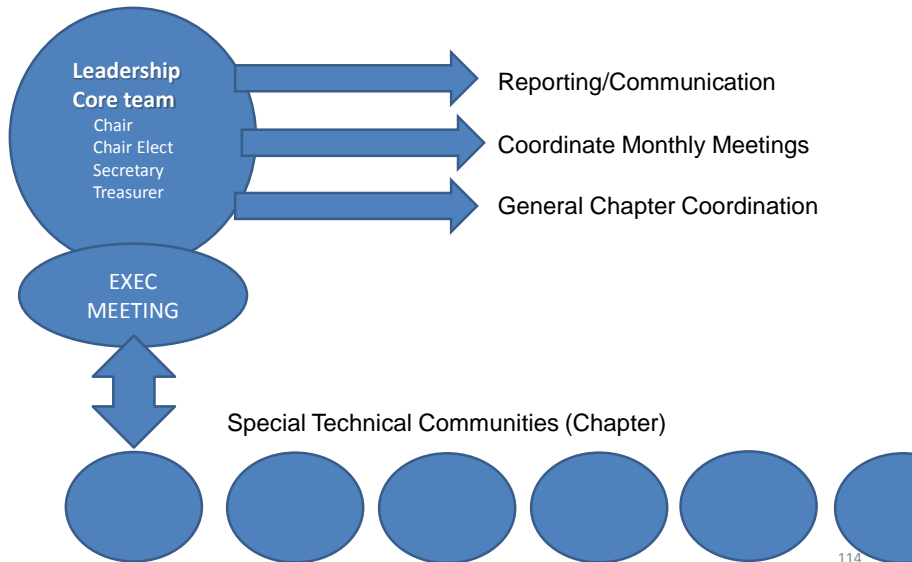
Secretary- (open)

Creating agendas for all formal meetings creates and distributes the agenda for planning sessions. Recording the minutes of those meetings and distributing them to all attendees. Maintains a central record of meeting minutes and Treasurer Reports as well as any other financial documents presented during meetings. Coordinating the website for booking the venues and necessary amenities for each event, costing and purchasing appreciation gifts for presenters etc.

Treasurer -(Filled until 1st Qtr 2013...open for balance of 2013)

The Treasurer's primary responsibility is to ensure the financial well being of the Chapter. This involves budgeting, collection of revenues, payment of expenditures, banking duties, organized tracking of all financial dealings, preparation of a monthly Treasurer's Report, filing of all financial documents and transferring gained knowledge to the following year's elected Treasurer. Other duties revolve around working with the Executive Team on capital approval, suggesting and exploring ideas which will generate cash flow for the Chapter.

SME Toronto Chapter Organization



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2013 Special Tech Community Coordinator Positions

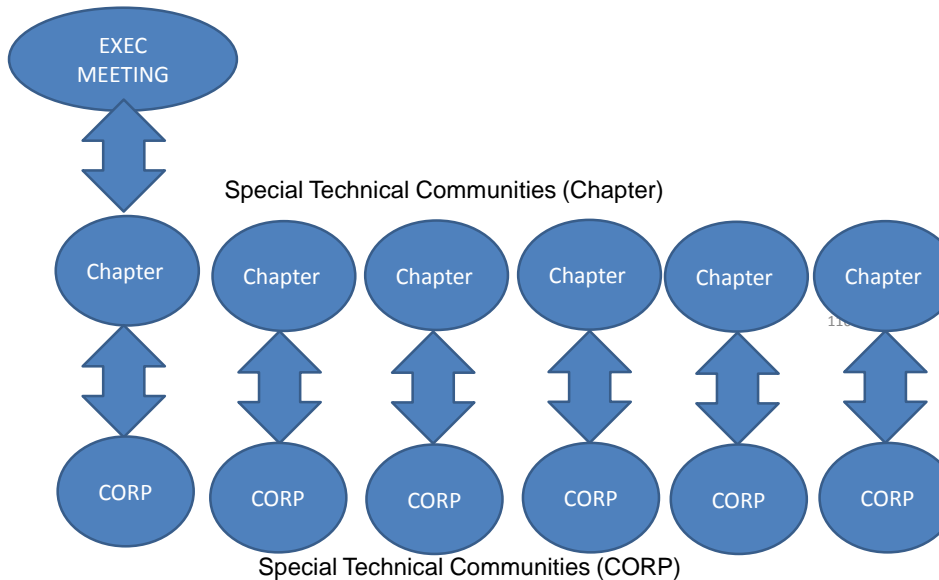
SME has strong special technical communities that are active via our corporate website and on-line webinars etc.

To bring a more local and personal contact to these communities and to foster and encourage and support local manufacturing to become involved and develop a competitive edge on the journey to Take Back Manufacturing we will appoint Special tech community coordinators. The role will be to ensure we are current and active in these communities and also develop a local contribution within these communities.

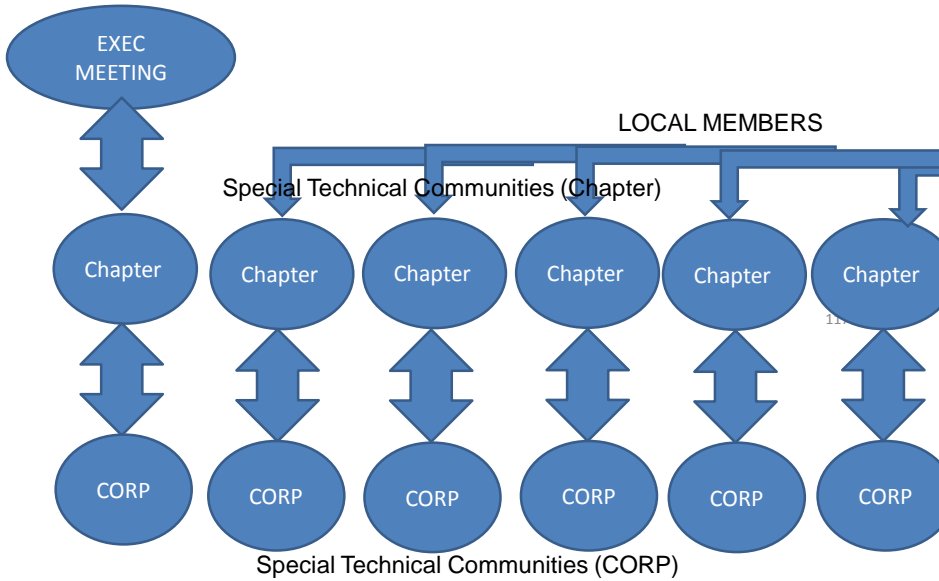
The special tech communities coordinator positions currently planned are:

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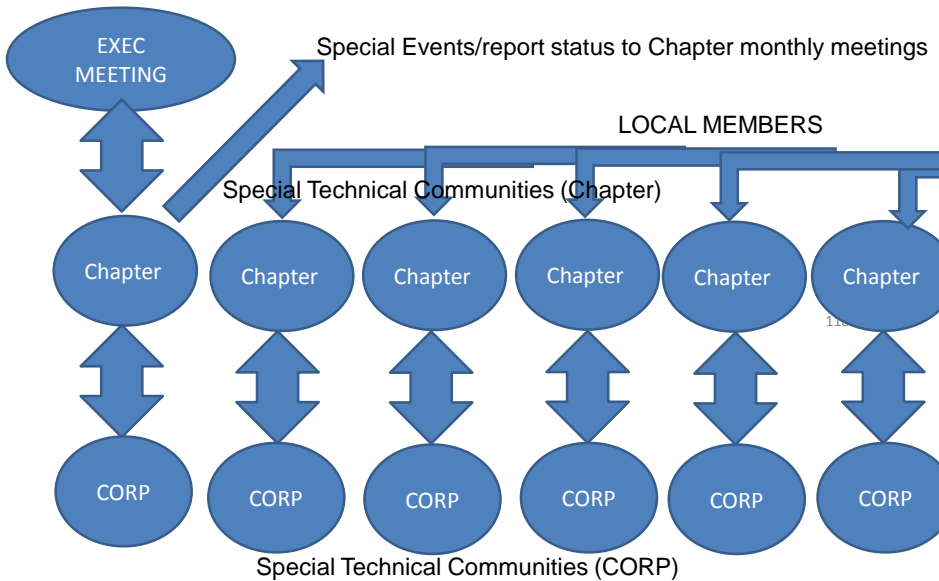
SME Toronto Chapter Organization



SME Toronto Chapter Organization



SME Toronto Chapter Organization



Innovation and Creativity Coordinator-(open)

The mandate of Innovation and Creativity is to promote and share best practices in innovation and creativity, and assist the turning of innovation and creativity into results by bringing new ideas to market. The real goal is to deal with the business challenges of bridging the divide between Concept and manufacturing result.

Forming & Fabricating Coordinator-(open)

Concentrates on key metal forming and fabricating technologies.

The overall usefulness of metals is due largely to the ease by which they can be formed into useful shapes. Nearly all metal products undergo metal deformation at some stage of their manufacture. By rolling, cast ingots, strands and slabs are reduced in size and converted into basic forms such as sheets, rods and plates. These forms then undergo further deformation to produce wire, or the myriad of finished products formed by processes such as forging, extrusion, sheet metal forming and others. The deformation may be bulk flow in three dimensions, simple shearing, simple or compound bending or complex combinations of these. The stresses producing these deformations can be tension, compression, shear...the specific processes are numerous and varied and the journey to continue the expansion of this technology as an important role in the manufacturing of products must continue.

Automated Manufacturing & Assembly Coordinator-(open)

Identifies and pursues advancing technologies and techniques in automation and assembly and shares knowledge through networking, publications and events..

Assembly in the manufacturing process consists of putting together all the component parts and subassemblies of a give[n] product. Assembly includes fastening, performing inspections and functional tests, labeling, separating good assemblies from bad, and packaging and/or preparing them for final use.

Assembly is unique compared to the methods of manufacturing such as machining, grinding, and welding in that most of these processes involve only a few disciplines and possibly only one. Most of these non-assembly operations cannot be performed without the aid of equipment, thus the development of automated methods has been necessary rather than optional. Assembly, on the other hand, may involve...one machine, many of fastening methods such as riveting, welding, screw-driving and adhesive application. Automatic parts selection, probing, gaging, functional test, labeling and packaging are also involved. Eliminating unnecessary effort

119

Industrial Laser Coordinator-(open)

Promotes laser technology in North America with high intensity by educating the market and advancing the laser technology base.

A **LASER** (from the acronym of **L**ight **A**mplification by **S**timulated **E**mission of **R**adiation) is an optical source that emits photons in a coherent beam. Laser light is typically near-monochromatic, i.e., consisting of a single wavelength or color, and emitted in a narrow beam. Laser action is explained by the theories of quantum mechanics and thermodynamics. Many materials have been found to have the required characteristics to form the laser gain medium needed to power a laser, and these have led to the invention of many types of lasers with different characteristics suitable for different applications. The laser was proposed as a variation of the maser principle in the late 1950s, and the first laser was demonstrated in 1960. Since that time, laser manufacture has become a multi-billion dollar industry, and the laser has found applications in many fields including science, defense/aerospace, medicine, and consumer electronics.

Lasers benefit engineering applications because of their monochromatic, directional, and coherent characteristics. Being able to control a broad range of laser parameters precisely is what allows mechanical engineers to use lasers for manufacturing processes. Some laser manufacturing activities include cutting, welding, heat treating, cladding, vapor deposition, engraving, scribing, trimming, annealing, and shock hardening. Laser manufacturing processes compete technically and economically with manufacturing processes such as mechanical and thermal machining, arc welding, electrochemical and electric discharge machining, abrasive water jet cutting, and plasma spraying etc.

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Machining & Material Removal Coordinator-(open)

Discusses, explores and advances ideas related to cutting processes and machining systems.

The MMR Community also offers opportunities for learning, networking and collaborating with your industry peers.

Machining is the process of removing unwanted material from a work piece in the form of chips. If the work piece is metal, the process is often called metal cutting or metal removal. U.S. industries annually spend \$60 billion to perform metal removal operations because the vast majority of manufactured products require machining at some stage in their production, ranging from relatively rough or non-precision work, such as cleanup of casting or forgings, to high-precision work involving tolerances of 0.0001 in. or less and high-quality finishes. Thus machining undoubtedly is the most important of the basic manufacturing processes.

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Plastics, Composites & Coatings Coordinator-(open)

Provides a focus on manufacturing processes of plastics, composites, and additive finishing and coatings technology. The community offers opportunities for SME members with like interests to connect, learn from one another and collaborate to further manufacturing knowledge and education.

Rapid Technologies & Additive Manufacturing Coordinator-(open)

Concentrates on the technologies and processes that help conceive, develop, test, improve and manufacture new products to bring them to market faster and more cost effectively.

Rapid manufacturing/rapid technologies/rapid prototyping are general terms describing a variety of methods used to directly construct three-dimensional models and end-use products from electronic data. The systems use CAD data to build fabrications layer by layer in very thin cross-sections using a variety of 3 dimensional additive printing or deposition processes.

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Computer Integrated Manufacturing Coordinator-(open)

This will concentrate on how we leverage computerized technology in an integrated manner to make manufacturing more productive and competitive and will include technologies such as CAD/CAM Design Software and Simulation Packages, Factory control, data management and Management Information System (ERP/MRP), IT in general etc.

Product & Process Design and Management Coordinator-(open)

Discusses, investigates and advances ideas related to product design and process management methodologies, as well as lean and six sigma improvement concepts.

Lean and Six Sigma are the most widely accepted and successful business process improvement strategies in the world. But In North America less than 5% of companies achieve sustainable results and they increasingly realize that the secret lies in the necessity of actively and successfully addressing Lean Implementation.

The primarily focus will be providing education about and engaging the Manufacturing and other Business communities in the philosophy of Lean and Six Sigma.

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Manufacturing Education Coordinator-(open)

We need to take an active role as industrialists in the need for education in manufacturing, career and professional development, and the manufacturing industry need for a skilled technical workforce that is trained and developed on an ongoing basis.

The community local effort must be linked through the local Manufacturing Education & Training environment. The focus is on educational aspects, including careers, educational opportunities, excellence in academic programs and professional credentialing, that specifically address the diverse needs of manufacturing enterprises

Development of SME Student Chapters will also be a strong focus as the success of manufacturing in future years will largely depend on getting young people interested and involved with manufacturing now. We have identified the need to improve Manufacturing's image and popularity with young people. We will need to move manufacturing away from the image of being "dark, dirty, dangerous and difficult" and bring back the "cool" factor in the eyes of youth and drive engagement at all ages and levels of the educational system.

This will require visionary and energetic people who will lay the foundation for success in 2013 and the implementation of a fully integrated Engineering Apprenticeship system.

Manufacturing education will need to encompass a wide range of teachings, including degree programs that prepare graduates for roles as engineers and technologists in manufacturing. It also includes special training and/or certificate programs that prepare graduates for roles in technical positions as technicians and skilled workers, as well as professional development courses and continuing education for the manufacturing workforce.

An Integrated Apprentice style education and training curriculum focused on manufacturing is the preferred choice by industry for individuals who fulfill the role of a manufacturing engineer or manufacturing technologist. The manufacturing engineer uses knowledge and expertise to invent, design, integrate and improve technical manufacturing processes and, in support of product design, to provide producibility analysis. The manufacturing technologist's role is to apply his/her knowledge to develop production systems and improve or support manufacturing processes today. We need to assist in this experiential teaching process by offering the young engineer a strong and encouraging learning environment.

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Other Suggestions??

If you have an idea that you believe cannot be incorporated into one of the above positions and you would like to take the lead on developing such a suggestion lets discuss that opportunity together.

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Kevin McCormick

Member and Industry Relations Manager for Canada.

In this role, Kevin will lead membership recruitment, retention, and engagement initiatives in this key market for SME Membership, as well as develop key relationships with industry, government entities, and SME partners in Canada.

Kevin will be based in SME's Markham office and will be working closely with the SME Canada Team.

The Technical Communities!!

