Supply Chains, Interrupted
How and why should you prepare for interruptions?

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University of Manitoba Transport Institute

How and why should supply chain managers prepare for interruptions in general, and for a possible pandemic in particular?

To be (or not to be) prepared?

The table below depicts four scenarios in managing or planning for any supply chain interruption. Organisations (e.g. business firms, government agencies, not-for-profit institutions, or even households) can assume either a proactive or reactive position in facing the disruptive event. While a reactive stance implies a lack of planning for the interruption, a proactive position includes developing an action plan to be deployed if the event occurs.

<table>
<thead>
<tr>
<th>Approach</th>
<th>Interruption (e.g. Pandemic)</th>
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<tbody>
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<td></td>
<td>Occurs</td>
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<tr>
<td>Proactive (Risk Management)</td>
<td>Prepared</td>
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<tr>
<td></td>
<td>Resources squandered?</td>
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<tr>
<td>Reactive (Crisis Management)</td>
<td>Unprepared</td>
</tr>
<tr>
<td></td>
<td>Resources conserved</td>
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</tbody>
</table>

Risk Management vs. Crisis Management

Using a reactive approach, the organisation will be unprepared if the disruptive event actually occurs. The event triggers crisis management, during which time is likely to be lost trying to figure out what to do. However, if the event does not occur, then the organisation has conserved resources. It takes time, money and talent to develop plans in anticipation of interruptions. By foregoing this planning, an organisation can devote their scarce resources to competing, serving the customers, developing suppliers, training their employees, interacting with constituents, etc.

On the other hand, the proactive approach helps an organisation to “be prepared.” This is the essence of risk management. A plan is developed in advance, to mitigate the impact of the interruption. If the disruptive event or interruption occurs, then the organisation will be better able to respond and recover. If the event does not occur, it could be argued the organisation has squandered scarce resources that could have been used for some other purpose.

How can we determine whether a proactive or reactive approach is sensible in response to a possible pandemic event? As of March 11, 2008, the World Health Organisation (WHO) has confirmed 372 cases of influenza A/H5N1—and 235 deaths. There have been no cases reported in Canada. Nonetheless, experts generally agree that a pandemic is coming—the question is when (and where) will it start?

The World Economic Forum rates 18 core global risk events, in terms of likelihood of their occurrence during 2008 and severity (number of deaths) if the event does occur. According to the Forum, there is a 5 to 10 percent chance that a pandemic disease will jump from animals to humans, with high mortality and transmission rates. If this pandemic happens, its impact is predicted to be very severe; causing more than one million human fatalities.\footnote{While there are several risk events rated more likely than a pandemic, there are none rated more severe.}

The World Economic Forum further estimates the pandemic will cost the global economy between $250 billion and $1 trillion dollars. The combination of a non-zero likelihood of occurrence and an extremely severe impact...
make pandemic planning and preparedness a worthy endeavor.

**Supply Chain Risk Evaluation and Management (SCREAM)**

Institute staff and faculty in the Supply Chain Management Department have been active in the risk management field, developing approaches to monitoring, measuring and managing supply chain risk under an umbrella of ‘Supply Chain Risk Evaluation and Management’ (SCREAM).

One example of the SCREAM framework in action is a study that UMTI is completing related to vulnerabilities in the Manitoba food supply chain in event of a pandemic. In this study, which began in mid-2007, UMTI contacted virtually all members of the Manitoba food supply chain, post farm gate, in-person or by mail survey. This included abattoirs, food processors, wholesalers, grocery retailers, and logistics firms. The goal was to paint a picture of the production flows through the chain. Using this information, the Manitoba food supply chain was mapped.

In addition, the Institute developed a model of nutrition requirements by region of the province. The food supply chain map and the nutrition model were then combined with estimates of imports to and exports from Manitoba; leading to estimates of nutritional balances by region and measures of flows between regions.

From this base, various risk scenarios were modeled to assess the pandemic impact on net nutritional balances in the Manitoba food supply chain. Scenarios ranged from a total shutdown of trade, to various reductions in processing capacity up to 35 percent. Based on the implications of these scenarios, risk mitigation plans were developed. As the risk to Manitoba’s food supply increases with the stage of the pandemic event, triggers were established based on the stages. Specific risk management activities were proposed to handle every risk at each pandemic stage. To verify the robustness and validity of these plans, an industry workshop and review was held on March 14, 2008 in Winnipeg.

By evaluating supply chain risk, Manitoba is at the leading edge in terms of preparation for interruptions of the food supply chain in the event of pandemic or similar event.

Funding for this project was made available under the federal-provincial Agriculture Policy Framework.


The Transport Institute now offers a one-day workshop on supply chain risk evaluation and management (SCREAM). The purpose of this workshop is to help organizations identify and prepare for salient risks in their supply chains. The Institute also maintains expertise to help organisations prepare for various supply chain interruptions through research and consultation. For more details on SCREAM, contact Dr. Paul D. Larson via e-mail (larson@cc.umanitoba.ca) or phone (204-474-6054).
Supply Chain Connections

4th Annual Supply Chain Connections
Planes, Trains & Hurricanes

Tuesday, May 13, 2008
The Hotel Fort Garry
Winnipeg, Manitoba

AGENDA

Quadrant One - For Profit, Uninterrupted

9:00 - 10:15 a.m.
Speakers: Ron McLachlin, Ph.D & Mr. David White
Professor Executive VP, Supply Management
Dept. of SCM New Flyer Industries

10:15 - 10:45 a.m. Coffee Break

Quadrant Two - For Profit, Interrupted

10:45 - 11:45 a.m.
Speaker: Paul D. Larson, Ph.D & Mr. Ian Seunarine
Director, Transport Institute Logistics Manager
Head, Dept. of SCM The Duha Group
I.H. Asper School of Business

12 Noon - 1:30 p.m. LUNCHEON
Keynote Speaker - Ms. Catherine Viglas
President
Canadian Institute of Traffic & Transportation (CITT)

Quadrant Three - Not-For-Profit, Uninterrupted

1:30 - 2:45 p.m.
Speakers: Paul Earl, Ph.D & Mr. Rick Steinke
Associate Professor Director of Logistics
Dept. of Supply Chain Management Canadian Wheat Board
I.H. Asper School of Business

2:45 - 3:15 p.m. Coffee Break

Quadrant Four - Not-For-Profit, Interrupted

3:15 p.m. - 4:30 p.m.
Speakers: Gyöngyi Kovács & Mr. Donald Shropshire
Assistant Professor National Director, Disaster Services
HANKEN Swedish School of Econ. Canadian Red Cross
and Bus. Admin.

4:30 p.m. CLOSING REMARKS
Supply Chain Connections 2008: The Four Quadrants

4th Annual
Supply Chain Connections Conference
Planes, Trains & Hurricanes
The Four Quadrants: What Are They & How Do They Impact Your Supply Chain?

May 13, 2008
Hotel Fort Garry, Winnipeg, Manitoba

Name: ___________________________________  Title: ___________________________________
Company: _____________________________________________________________
Address: ______________________________________________________________
City/Prov: ___________________________ P/C: ________________________________
Phone: ____________________________  Fax: ________________________________
Email: _________________________________________________________________

Registration Fee as of April 1, 2008 is $350 (Cdn. Funds). If booking a room at the Hotel Fort Garry, please quote group code 10342M to receive the conference rate of $129 Cdn.

Payment Options:  
VISA  MasterCard  Cash/Cheque  

Registrations are transferable, but not refundable.

Please make cheques payable to the University of Manitoba and mail to:

Transport Institute
616-181 Freedman Crescent
Winnipeg, MB  R3T 5V4

Fax your registration form to: 204.474.7530
Further information is available at www.umti.ca or phone 204.474.9842

*NOTE - If you wish, you can phone in your credit card information to Kathy at 204.474.9097
CTRF 2008  
June 1-4, 2008  
Fredericton, New Brunswick

Mark your calendars to attend the 2008 Canadian Transportation & Research Forum Conference in Fredericton, New Brunswick. This year’s theme is “Shaking up Canada’s Transportation Systems to Meet Future Needs”. Visit www.ctrf.ca for further details.

CITT Reposition 2008  
November 5-7, 2008  
Winnipeg, Manitoba

“Supply chain risk evaluation & management (SCREAM): Preparation for a pandemic” by Dr. Paul Larson, I.H.Asper School of Business

What will you do when disaster strikes? How will your organization continue to serve its customers, keep its employees working, and maintain relationships with its suppliers? The purpose of this hands-on session is to help you create a new preparedness plan (or improve an existing preparedness plan). The workshop facilitators, Paul D. Larson and Jack D. Kulchitsky, suggest that your first step in preparation for a pandemic, or other type of disaster or disruption, should be a good SCREAM (supply chain risk evaluation and management) framework.

This workshop will be offered during CITT’s Reposition 2008 – the National Symposium for Supply Chain and Logistics Professionals. Visit www.citt.ca for further details.

2008 SCL Conference  
May 4-6, 2008  
Toronto, Ontario

May 4—6, 2008, Supply Chain & Logistics Association Canada (SCL) will be presenting its 41st Annual Conference in Toronto. On May 4, Dr. Paul D. Larson, Director of the Transport Institute, will be chairing the SCL Research Forum at the Conference. This year, the Forum features eight excellent speakers on critical topics such as supply chain sustainability, logistics education, and supply chain information sharing. For more details, and to register, please visit SCL at: www.sclcanada.org/
The Transport Institute will be experiencing major changes this summer with several staff members departing and many important projects wrapping up.

Congratulations to Sharon Cohen. Sharon is a graduate of the Institute’s Internship Program. Sharon has been a valuable asset to the Institute over the past three years. She will be leaving the Institute to join the Israeli Trade Commission in Toronto. We wish Sharon all the best in her career!

Brian Wirth will be completing his term in June after attending the annual CTRF conference in Fredericton. Brian has been a fixture at the Institute for the past 18 months, spending the first year as an intern and the last six months as a researcher extraordinaire. Brian’s focus during his time at the Institute has been on the Pandemic report, a study of Supply Chain Intermediaries, the Manitoba Transportation Report and northern food prices. Brian graduated in 2006 with a B.Comm(Hons) from the Asper School of Business majoring in Supply Chain Management. He will be looking for a position this summer and has a wealth of experience, knowledge, and leadership ability to bring to any organization. Recently, Brian, Stephen Wright and Dave Wolters (all graduates of the internship program) wrote a paper for the CTRF conference based on the Manitoba Food Supply under a Pandemic study which has been an ongoing project at the Institute for the past year. They are looking forward to presenting their findings in Fredericton this June.

The Institute said goodbye to another staff member recently as Danielle Kososki finished her research internship at the end of March. Danielle, who graduated from the U of M with a Bachelor of Environmental Studies, was primarily focused on the Hydrogen project during her time at the Transport Institute. Danielle who was recently married (Congratulations!) plans to do some traveling before returning to school to further her education.

**Internship Opportunities**

As some of our current staff move on with their careers, the Transport Institute is looking for ambitious people to fill the void. The Institute is currently recruiting for the positions of **Senior Researcher** and **Research Intern**.

The ideal candidate for the Senior Researcher position should posses, at minimum, a Master’s level education in a related field. The Senior Researcher will provide leadership and direction to Junior Research Interns and will be tasked with directing various Institute projects.

Candidates for the Research Intern should be recent graduates with a Bachelor’s degree, Canadian Citizens and under the age of 30 to qualify for the internship. The internship program is a great stepping stone for people looking to bridge the gap between university and the workplace. The experience gained and contacts made are invaluable resources for jumpstarting your career.

Both the Senior Researcher and Research Intern positions require people who are able to work well independently and in a team environment.

Interested applicants should forward their resume to: Kathy Chmelnytzki, Executive Coordinator, Transport Institute, 616-181 Freedman Crescent, Winnipeg, MB R3T 5V4. Only those people selected for interviews will be contacted.

Brian Wirth on a fact finding mission in Churchill
Calendar of Events

April 29-30, 2008
WESTAC Annual Meeting (Members Only)
Victoria, B.C.
Website: www.westac.com

May 4-6, 2008
SCL 41st Annual Conference
Creating a Resilient Supply Chain
Toronto, Ontario
Website: www.sclcanada.org

May 4-7
ISM’s 93rd Annual International Supply Management and Educational Exhibit
Institute for Supply Management
St. Louis, MO
Website: www.ism.ws

May 12, 2008
7th Transportation Situation & Outlook Conference: Evolving World Container Trade Patterns & the Impact on the Transportation Network
The Chartered Institute of Logistics & Transport
Ottawa, ON
Website: www.cilttna.com
Phone: (613) 388-1438

May 13, 2008
4th Annual Supply Chain Connections Conference
The Transport Institute
Location: The Hotel Fort Garry
Winnipeg, Manitoba
Website: www.umti.ca

May 21-23, 2008
83rd Annual PMAC National Conference
Website: www.pmac.ca

June 1-4, 2008
43rd Annual Meeting: Shaking Up Canada’s Transportation Systems to Meet Future Needs
Canadian Transportation Research Forum
Fredericton, NB
Website: www.ctrf.ca

June 9-10, 2008
Taming That Monster Under The Bed: Exploring Critical Relationships Between Supply Chains and the Environment
University of Calgary Van Horne Institute
Calgary, AB
Website: www.supplychainsenvironment.ca/conference

June 16-18, 2008
Reverse Logistics Association Conference & Expo
Amsterdam, Netherlands
Website: www.rltshows.com

June 23-25, 2008
4th Outsourcing Logistics Conference
Best Practices for Managing 3PL Relationships
Atlanta, GA
Website: www.eyefortransport.com/outsource

July 31-August 1
Queensland 2008 Supply Chain & Logistics Conference
Brisbane, QLD, Australia
Website: www.qldscc.com

August 17-21
43rd Annual International Logistics Conference and Exhibition
SOLE- The International Society of Logistics
Orlando, FL
Website: www.sole.org/conference.asp

September 21-24
Transportation- A Key to a Sustainable Future
Transportation Association of Canada
Toronto, ON
Website: www.tac-atc.ca

September 30-October 2
Courier and Parcel Logistics Expo 08
London, United Kingdom
Website: www.cpl-expo.com

October 5-8
CSCMP Annual Global Conference
Council of Supply Chain Management Professionals
Denver, CO
Website: www.cscmp.org

If you have a transportation/supply chain event that you would like to see listed here, please email the information to us at transport_institute@umanitoba.ca
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Canadian Pacific Railway
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Manitoba Aboriginal & Northern Affairs
Manitoba Agriculture, Food & Rural Initiatives
Manitoba Chamber of Commerce
Manitoba Hydro
Manitoba Infrastructure & Transportation
National Research Council of Canada
Transport Canada
Western Economic Diversification Canada

Dispatch

DISPATCH is published three times a year by the Transport Institute.

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DISPATCH designed by Kathy Chmelnytzki

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