

CATtales

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Inside this issue

Aviva and ICLR develop free app	2
New Executive Director for MEOPAR	3
A new age of supply chain disruption	4/5
ICLR develops Municipal Advisory Committee	6

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Aviva Canada and ICLR create free emergency preparedness app

Aviva Canada announced “another industry first” April 26 with the launch of the Plan & Protect mobile app in partnership with the Institute for Catastrophic Loss Reduction. According to the Insurance Bureau of Canada’s 2015 Fact Book (page 16), for six consecutive years, insured losses caused by large natural catastrophes have been around or over \$1 billion. By comparison, insured losses averaged \$400 million a year over the 25-year period from 1983 to 2008.

The free app can be downloaded to mobile devices where users will receive personalized information to help

them prepare for natural disasters, including severe weather and earthquakes. For the first 10,000 app downloads, Aviva Canada will donate \$5 for each download to the Canadian Red Cross to help communities affected by disasters.

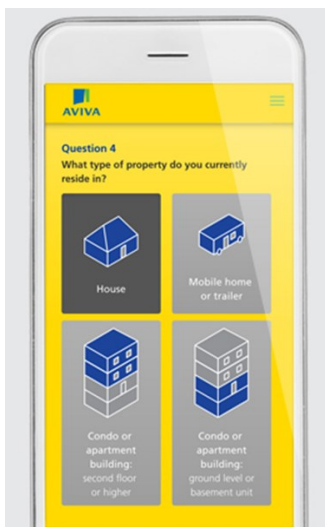
“As one of the leading insurers in Canada, we see the devastating impact of severe weather and natural disasters firsthand,” says Irene Bianchi, EVP National Claims, Aviva Canada. “We’re excited to partner with the ICLR to help people prepare for the unexpected. Canadians who download the Plan & Protect app will have the information they need to protect their family and ►

homes, even if wifi isn't available.



Now available from the App Store and Google Play, the Plan & Protect app is available in English or French and compatible with both Apple and Android devices in support of national Emergency Preparedness Week (May 1-7).

Once users download the app, they can easily create a profile and answer a brief set of questions that will determine their level of vulnerability to Canada's five most common perils – floods, wildfires, severe wind, winter storms and earthquakes. All information is tailored to the user's location by postal code and can be used to



plan and prepare in case of an emergency. The app provides users with practical resources such as: a personalized risk report that is specific to their location; alerts and notifications tailored to their emergency needs; useful tips and information that can be used to protect people and property in the event of a natural disaster; and, a customized list of items to include in their 72-hour emergency kit.

The Plan & Protect app can also store home and auto insurance policies. In the event of an emergency, users can access all app content and policy information without an Internet or data connection. Users will receive vital information about what to do before, during and after an emergency as well as seasonal preparedness tips throughout the year.



“We share a common goal with Aviva Canada – to protect Canadians and educate them about disaster prevention and emergency preparedness,” says Glenn McGillivray, Managing Director, ICLR. “We’re proud to be involved in a partnership that will help Canadians and provide them with the information they need to prepare for natural disasters,



whether caused by a severe storm or a devastating earthquake. Together we can control the damage caused by natural hazards and build more resilient communities.” **CT**

For the first 10,000 app downloads, Aviva Canada will donate \$5 for each download to the Canadian Red Cross to help communities affected by disasters

Download it for free today



MEOPAR appoints new Executive Director

The Marine Environmental Observation Prediction and Response (MEOPAR) Network's Board of Directors is pleased to announce the appointment of Mr. Stefan Leslie to the role of MEOPAR Executive Director. Mr. Leslie joins MEOPAR following a diverse career in the private sector and government, most recently as Regional Director of Fisheries Management (Maritimes Region), Fisheries and Oceans Canada. He brings a strong depth and breadth of experience leading marine research and management programs to the MEOPAR role.

"We are delighted to welcome Stefan to the Network," said MEOPAR Board Chair, Robert Walker. "His expertise and experience, especially in executive management and marine stakeholder relations, is an excellent addition to our team. We look forward to his leadership as we continue to grow and develop as a Network."

Mr. Leslie joins the Network as it seeks renewal from the federal Networks of Centres of Excellence Program. If successful, it will see the Network funded for an additional five years (2017 – 2022).

"MEOPAR has a great team behind it, and I'm looking forward to contributing at this exciting point in its evolution," said Mr. Leslie. "MEOPAR is creating real benefits for Canada, supporting leading research and developing the economy. It has a very bright future."

MEOPAR began its search for a new Executive

Director following the unexpected passing of its former Executive Director, Neil Gall, in early January, 2016. "Neil made extraordinary contributions to our Network and we miss his energetic leadership greatly", said MEOPAR Scientific Director Dr. Douglas Wallace.

"I'm thankful to have someone of Stefan's caliber on board to build on the momentum that Neil helped so much to create, and I look forward to working with him closely as we continue to grow and evolve as a Network."

Mr. Leslie begins his new MEOPAR role on 18 April. The Network would like to thank MEOPAR's Associate Scientific Director, Dr. Ron Pelot, who served as the Acting Executive Director during MEOPAR's search process.

The Marine Environmental Observation Prediction and Response (MEOPAR) Network is strengthening Canada's ability to anticipate and respond to marine risk. Established in 2012 through a five-year, \$25 million grant from the federal Networks of Centres of Excellence Program, MEOPAR is a national network of academic researchers and students, government scientists, and partners in the private, NGO



Newly appointed MEOPAR Executive Director Stefan Leslie.

and community sectors working together to reduce vulnerability and strengthen opportunities related to the marine environment.

MEOPAR is hosted at Dalhousie University in Halifax, Nova Scotia. To learn more, please visit www.meopar.ca. **CT**



MEOPAR

MARINE ENVIRONMENTAL OBSERVATION
PREDICTION & RESPONSE NETWORK

A new age of supply chain disruption

4

By Glenn McGillivray, Managing Director, ICLR

Along with claiming a reported 49 lives (at time of posting), injuring thousands and causing between \$1.7- and \$2.9 billion in insured damage (according to AIR), the April 14 (UTC) 6.4Mw and April 15 (UTC) 7.0Mw earthquakes in Kumamoto, Japan also caused significant disruption to supply chains, some of them global.

According to media reports, companies affected by the temblor include Toyota, Honda, Mitsubishi, Nissan and Sony and several of their key suppliers. The quakes also took four General Motors plants offline for two weeks, including facilities in Spring Hill, Tennessee; Lordstown, Ohio; Fairfax, Kansas; and, Oshawa, Ontario.

The somewhat surprising news that a pair of Japanese earthquakes idled four North American General Motors plants may herald the dawn of a new age of supply chain disruption.

Toyota, it was reported, halted production at 26 assembly lines due to damage at two supplier facilities. Disruptions to Toyota's supply chain include parts for doors and engines produced by affiliated companies. But while it was not immediately clear from media reports, the disruption may also have come as a result of an interruption in production of automotive microcontrollers. These are a key product category produced in the Kumamoto industrial cluster and one that is a must for today's computer-controlled, increasingly wired automobiles (what some have characterized as 'smartphones on wheels').

According to a blog published by Barron's "The Kumamoto Prefecture is relatively small, contributing only 1.1% of Japan's GDP. But it is home to several semiconductor production plants and is sometimes called Japan's Silicon Island."

Indeed, semiconductor manufacturer Renesas Electronics Corp. confirmed it

had sustained damage to some equipment at its plant in Kumamoto which produces microcontroller chips for automobiles.

Interruption of automobile manufacturing due to auto part supply chain disruptions is nothing new.

The flooding of a Daimler Chrysler plant in Greenville, North Carolina due to Hurricane Floyd in 1999 led to a shortage of suspension parts. The event led to the idling of seven company plants across North America, including the Windsor, Ontario minivan plant. Similar disruptions have occurred in the auto assembly business as a result of labour disputes, such as a strike of 3,400 employees at a GM stamping plant in Flint, Michigan on June 5, 1998 and a second strike of 5,800 at a nearby parts plant on June 12, 1998 that closed 25 of GM's North American plants as a result. The dispute ended July 29, 1998, but not before it affected nearly 90% of GM's production capabilities and over 150,000 workers in Canada and Mexico.

What appears to be new, however, is the disruption of auto production as a result of an interruption in the manufacture of semiconductors and auto microcontrollers.

Not so long ago, earthquakes in regions where semiconductors are produced tended to impact only the production of computers, external hard drives, flat panel televisions and the like (consider the September 21, 2000 earthquake in Taiwan that knocked out production of the world's top computer chip manufacturers, like Taiwan Semiconductor Manufacturing Co. At the time of that temblor, Taiwan produced 10% of the world's chips and about 80% of motherboards used for personal computers).

Today, however, such disruptions also impact the production of smart phones and tablets and – now - automobiles.

Further, as noted by Barron's, "Semiconductor plants require precision manufacturing equipment and cleanrooms with very low levels of contaminants. Production lead times are relatively long, and consequently the supply chain can at times be affected. Following an earthquake it tends to take more time to restore operations in comparison with an assembly plant..."

So, with the Kumamoto earthquakes, it may be clearer that with more things being digitally controlled – and connected (consider the rise of the Internet of Things) - the nature of supply chain risk may be broadening.

And where semiconductors, motherboards, microcontrollers and the like are manufactured are some of the most riskiest places in the world from a natural hazard perspective: China, Japan, Taiwan, Malaysia, Thailand, the Philippines and California.

With this, it is even more vital that manufacturers have an intimate familiarity with their supply chain (what they get, in what quantities, from whom, from where, how and why).

Next, companies need to put continuity plans, backups and workarounds in place.

Finally, they must understand the differences between business interruption and contingent business interruption, and ensure that they have proper coverage in place for both.

The world is already a dangerous place, and with the growing reliance on computer processors, it is becoming that much more dangerous. **CT**

A flat, interconnected world

In the 2005 book *The World is Flat*, by New York Times columnist Thomas Friedman, the author tracks the supply chain of a Dell Laptop, starting from his initial telephone order of the machine to the time it is delivered to him by UPS. His point was to illustrate the large number of players, both large and small, involved in all facets of the process, from the initial telephone order and verification of his credit card to assembly, shipping and delivery of the unit:

Dell uses multiple suppliers for most of the thirty key components that go into its notebooks. That way if one supplier breaks down or cannot meet a surge in demand, Dell is not left in the lurch. So here are the key suppliers for my Inspiron 600m notebook: The Intel microprocessor came from an Intel factory either in the Philippines, Costa Rica, Malaysia, or China. The memory came from a Korean-owned factory in Korea (Samsung), a Taiwanese-owned factory in Taiwan (Nanya), a German-owned factory in Germany (Infineon), or a Japanese-owned factory in Japan (Elpida). My graphics card was shipped from either a Taiwanese-owned factory in China (MSI) or a Chinese-run factory in China (Foxconn). The cooling fan came from a Taiwanese-owned factory in Taiwan (CCI or Auras). The motherboard came from either a Korean-owned factory in Shanghai (Samsung), a Taiwanese-owned factory in Shanghai (Quanta), or a Taiwanese-owned factory in Taiwan (Compal or Wistron). The keyboard came from either a Japanese-owned company in Tianjin, China (Alps), a Taiwanese-owned factory in Shenzhen, China (Sunrex), or a Taiwanese-owned factory in Suzhou, China (Darfon). The LCD display was made in either South Korea (Samsung or LG, Philips LCD), Japan (Toshiba or Sharp), or Taiwan (Chi Mei Optoelectronics, Hannstar Display, or AU Optronics). The wireless card came from either an American-owned factory in China (Agere) or Malaysia (Arrow), or a Taiwanese-owned factory in Taiwan (Askey or Gemtek) or China (USI). The modem was made by either a Taiwanese-owned company in China (Asustek or Liteon) or a Chinese-run company in China (Foxconn). The battery came from an American-owned factory in Malaysia (Motorola), a Japanese-owned factory in

Mexico or Malaysia or China (Sanyo), or a South Korean or Taiwanese factory in either of those two countries (SDI or Simplo). The hard disk drive was made by an American-owned factory in Singapore (Seagate), a Japanese-owned company in Thailand (Hitachi or Fujitsu), or a Japanese-owned factory in the Philippines (Toshiba). The CD/DVD drive came from a South Korean-owned company with factories in Indonesia and the Philippines (Samsung); a Japanese-owned factory in China or Malaysia (NEC); a Japanese-owned factory in Indonesia, China, or Malaysia (Teac); or a Japanese-owned factory in China (Sony). The notebook carrying bag was made by either an Irish-owned company in China (Tenba) or an American-owned company in China (Targus, Samsonite, or Pacific Design). The power adapter was made by either a Thai-owned factory in Thailand (Delta) or a Taiwanese, Korean, or American-owned factory in China (Liteon, Samsung, or Mobility). The power cord was made by a British-owned company with factories in China, Malaysia, and India (Volex). The removable memory stick was made by either an Israeli-owned company in Israel (M-System) or an American-owned company with a factory in Malaysia (Smart Modular).

All-in-all, Friedman noted that “the total supply chain for my computer, including suppliers of suppliers, involved about four hundred companies in North America, Europe, and primarily Asia, but with thirty key players.”

An interruption anywhere in the chain could disrupt the process. Indeed, Friedman wrote that “It happened that when my notebook order hit the Dell factory in Penang, one part was not available - the wireless card - due to a quality control issue, so the assembly of the notebook was delayed for a few days.”

This, written about a laptop more than ten years ago, now applies to of the production of automobiles and, with the rise of connected devices, will apply to any number of items going forward. **CT**

In March 2016, ICLR held the first meeting of its Municipal Advisory Committee (MAC). This group was developed to guide specific projects and provide strategic direction to improve ICLR's capacity to produce relevant urban flood mitigation resources. The MAC is currently comprised of stormwater, wastewater, sustainability and related staff from the cities of Toronto, Victoria, Fredericton, London, Kingston, St. Thomas, Burlington, Welland, the Town of Oakville, and the Regions of York, Peel and Halton as well as the Center for Neighbourhood Technology, based in Chicago, ICLR staff and academic and consulting partners. Given strong support from the municipal sector in the early stages of development of the MAC, it is expected that participation will grow in the coming months.

Discussion at the first meeting focussed on three ongoing projects, including:

- Development of a guidance document that will provide practical advice on limiting basement flood risk in new urban subdivisions. The project, led by Amec FW, will focus on measures that can be applied both on the public- and private-sides to limit inflow/infiltration, and will include advice for managing storm

- water conditions that exceed common design standards used in new construction.
- Identification of practical legal mechanisms that can be applied by municipalities to increase uptake of lot-level basement flood mitigation measures in existing subdivisions, in collaboration with Zizzo Strategy Inc.
- The ICLR/UofG/UWO partnership focused on increasing understanding of the reliability and efficacy of lot-level basement flood reduction technologies, which has an initial focus on testing of backwater valves under a variety of installation and operational conditions.

Aside from the above projects, participants discussed a need to ensure consistency in municipal and insurer messaging following flood events to reduce public uncertainty about recovery and lot-level mitigation measures. Insurer recommendations that homeowners install backwater valves without consideration of foundation drain disconnection was identified as a particular concern by municipal participants.

Other topics discussed included a need to move away from technical language when

communicating the severity of extreme rainfall events to the public (e.g., discontinue use of terms like "1 in 100 year storm"), a need to consider groundwater flood risk when planning new subdivisions, construction practices leading to inflow/infiltration in new subdivisions, legal liability for municipalities that have implemented flood and inflow/infiltration reduction requirements (e.g., downspout disconnection) but do not allocate appropriate resources to ensure enforcement and compliance, among other topics.

ICLR will continue to work with the MAC over the coming years to develop and complete projects that are highly relevant to the municipal sector. While the initial focus of the group is on urban flooding associated with extreme rainfall, the scope of the group will expand depending on member interests. In the short term, the MAC will be involved in updating ICLR's comprehensive *Handbook for Reducing Basement Flooding*, originally published in 2009. The MAC will also be involved in the development of ICLR's next five year plan, which will emphasize ICLR's ongoing work related to management of urban flood risk. **CT**

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Mission
To reduce the loss of life and property caused by severe weather and earthquakes through the identification and support of sustained actions that improve society's capacity to adapt to, anticipate, mitigate, withstand and recover from natural disasters.

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