

**Fifth Science Centre World Congress
June 15-19, 2008 • Toronto, Canada**

Opening Ceremony

Lesley Lewis

Chair, 5SCWC and Chief Executive Officer, Ontario Science Centre

Congress Chair Lesley Lewis welcomed over 400 delegates from 51 countries to the Fifth Science World Congress, which she described as a chance to build on the accomplishments of previous years and an opportunity to reflect on the work of science centres globally.

More than 290 million people actively participate in exhibits, programs, events, and outreach initiatives at science centres across the world. Science centres stimulate curiosity, develop enquiring minds, change people's perceptions, and influence their thinking by demystifying science and making it accessible to the public.

"In 2008, science literacy is as important as other kinds of literacy and numeracy and operates across borders. Science centres influence the skills of current and future generations because they target children who are the critical agents of change. Those who participate in today's exhibits are tomorrow's decision makers," Lewis said.

Science centres are safe places for difficult conversations. They are highly visible and trusted hubs of activity about science and technology that influence and motivate students, empower teachers, and create important platforms for understanding the current global knowledge of science and its context within local reality.

Welcome from the Government of Canada

The Honourable Jim Flaherty, Minister of Finance

Minister Jim Flaherty welcomed delegates to the first science centre congress held in North America. He described the Ontario Science Centre and science centres around the world as "places of fascination and discovery ... places to learn and explore and contemplate the vast world around us."

He applauded science centres for encouraging innovation, noting that the top 10 jobs in 2010 will not have existed in 2004. "Science centres help prepare youth for jobs that don't even exist yet using technologies that haven't even been invented."

Flaherty congratulated organizers for their foresight in creating the theme of the congress. "Science centres will continue to be local, national, and international agents of change, as they continue to challenge and inspire."

Welcome from the Province of Ontario

The Right Honourable Dalton McGuinty, Premier

The Honourable John Wilkinson, Minister of Research and Innovation

The Honourable Aileen Carroll, Minister of Culture

“Every great discovery begins with a thirst for the unknown,” said Premier Dalton McGuinty. “I congratulate you on coming together to captivate people around the world. Our world needs ideas and innovation more than ever before. Thank you for fuelling the passion for learning.”

Minister John Wilkinson commended science centres for the work they do “inspiring youth to discover the boundless worlds of possibility ... It falls to the next generation to conquer disease and to discover how we can live sustainably. In a time of global change, your work is more important than ever.”

“By cultivating an interest in science and technology, science centres are helping to create a culture of innovation, fostering creativity and nurturing young lives,” Minister Aileen Carroll said. Science centres link imaginations to a world of possibilities, and drive innovation that will help address burning social issues and create new economic opportunity.

Welcome from the City of Toronto

Joe Pantalone, Deputy Mayor

Toronto is Canada’s largest city, and one of the most diverse in the world, Deputy Mayor Joe Pantalone said. Commonly described as the economic engine of Canada, the city is focused on meeting the challenges of climate change and using innovation and creativity to drive sustainable economic growth.

The city’s initiatives include Green Toronto environmental standards, solar installations, and a green roof policy. “We have much to learn from other places in the world, but also much to share,” Pantalone said.

He invited delegates to enjoy the city while continuing the Congress’s important work, “which is foundational if we are to thrive and survive in the future.”

Creating the Future

Remarks from Keynote Sponsor, IMAX Corporation

Larry O'Reilly, Executive Vice President, Theatre Development

IMAX has enlightened and inspired nearly a billion people since the first theatre opened in Toronto in 1967, Larry O'Reilly said. "Each theatrical presentation is an opportunity to learn by taking people to places they might not normally get to go. By humanizing and simplifying complex subjects, it has always been possible to inspire people."

Noting that IMAX movies make the possibilities of science real for children and adults alike, O'Reilly welcomed congress participants from around the world and challenged them all "to think big."

Keynote Address

Jennifer Corriero, Executive Director, TakingITGlobal (TIG)

In an entertaining and interactive presentation, Jennifer Corriero invited delegates to reflect on the role science centres can play in building the future. She shared her personal experiences and those of several "virtual participants" linked via webcast from all corners of the world.

The current generation of young people are the most technologically enabled the world has ever seen, and technology will continue to enable future generations, Corriero said. At its best, that technology can also empower them.

Corriero described herself as a by-product of her environment, tracing how her experiences as a student at the Ontario Science Centre affected her view of the world. "I was exposed to an environment of enquiry, exploration, and curiosity ... able to challenge myself and be challenged by others with many diverse perspectives."

A key message for meeting the challenges of this and future generations is to take advantage of every opportunity to engage youth, Corriero said. Strategies must involve and incorporate the voices of youth, not just speak for them or speak at them.

Five important aspects of the "net generation" should be considered:

- This generation is very influential. Globally, 50% of the population is under the age of 25, so it is important to engage them constructively, because for the first time children are more knowledgeable about technology than their parents, and are in a position to change the world.
- They are connected with a high level of enthusiasm for technology. Constant multitasking, using multiple technologies, and shifts in how people connect are changing social networks, and different worlds are getting blurred as work,

- interaction with friends, leisure, and school can all happen on the same screen at the same time.
- There is an incredible diversity among youth and an appreciation for multiculturalism because of exposure to global culture, foods, and music, and it is influencing expectations and the desire to interact.
 - Young people today are enabled. The old hierarchies are being challenged by the Internet and other communications technologies. People have become co-creators of interactive experiences and are shifting from being passive consumers to producers, using discovery-based learning.
 - This generation is aware of what is happening in local communities and across the world.

Taking these dimensions of younger people into consideration, Corriero described the future role of science centres:

- They will need to provide access, either a real or a virtual space where people can ignite their curiosity and interest.
- There must be a shift in paradigms so that everyone has the ability to participate in being part of the solution.
- The spaces they create must encourage grassroots initiatives and experiential-based projects.
- They must promote cross-cultural understanding and incorporate it into exhibits and spaces.
- They must provide a place to connect with global networks.

Corriero introduced delegates to three members of TakingITGlobal's (TIG's) international network, who joined the meeting from Argentina, China, and Egypt via webcast. Though technical challenges created some difficulty in hearing some of the participants, they also allowed for some poignant human moments, as young participants in Egypt waved to delegates through the webcam, laughed, and chatted while waiting for their turns to answer questions.

Damien Profeta is a TIG coordinator in Argentina. He described an early school trip to a participatory museum in Buenos Aires where he was encouraged to touch and try things. "It was just amazing ... playing with things at the same time as you're learning to understand physics and mathematics. It was a great learning experience, but also totally fun," he said. "That's the greatest thing about science centres; they provide a better way to learn and keep the knowledge in our minds by doing, sharing, participating, playing ... just by being kids."

Wu Yang from China is another TIG coordinator. He described growing up in a less-developed city in southwestern China. As a small child, he wanted to become a scientist but lost interest as he got older because science had been "reduced to a game of calculations and formulas." After visiting the China Technology and Science Museum four years ago, he realized that his life might have been changed if he had had the

experience earlier. “Without the help of science centres, how many young Newtons, Edisons, or Einsteins might not have chosen their careers?”

The science centre at the Library of Alexandria has been an inspiration for Maged Hassan, TIG coordinator in Egypt. “Participating in one of their very first conferences was a turning point for me, because I learned about activism and how one person’s attitude can create positive change in the world.”

Everything about TIG is about technology and changing the world, Profeta said. He described the Adobe Youth Voices Project, in which youth from 10 countries participated in workshops about climate change, cultural identity, and other pressing issues, and learned how technological tools could be used to create a positive impact. In Buenos Aires, two workshops focused on inspiring young people to create images expressing their perspective and visions. Many of the participants were from under-serviced areas, so it was empowering for them to see how they have the potential to create content that can influence youth all over the world, making links to those with similar experiences while retaining their own unique cultures and identities.

Corriero also worked on the project and said there was an important opportunity for science centres to move boldly into the future by taking advantage of opportunities to showcase the vision and experience of young people from around the world. Interlinked with science centres, there would be a real-time, real-world opportunity to enable youth to participate in solving global and community problems, and learn about using technology at the same time.

Wu Yang described a TIG Earth Day project aimed at creating youth action on climate change. Hundreds of thousands of young people from across China participated in simultaneous events. In less than a week, a brochure was designed, printed and circulated across the country.

In Egypt, TakingITGlobal is using the Internet to inspire youth toward action in employment, education, culture, and other important issues. Then youth are encouraged to take the change they learn about, envision, and experience online, and make it real in their own communities.

Over and over, virtual panelists identified important synergies and opportunities for linkages between science centres and the kinds of projects TIG encourages. “Science centres need to maximize the benefit of existing facilities to larger audiences, especially young people in more isolated places who don’t have the same access,” Yang said. “It’s not necessary to invest more in building more local science centres, but those in more developed areas could be linked with less developed areas, and all could use information and communication technology to make connections with science centres and communities across national borders.”

The passion to link science centres to different parts of the world was echoed by the other participants, who noted particularly the need to provide outreach to underprivileged areas

and to come up with technology-based solutions that allow access for those in communities without Internet access. “The same themes keep emerging,” Corriero said, “connecting people, creating experience-based opportunities for learning, creating forums and opportunities to meet global challenges, creating platforms for cultures to interact.”

“We all need to work together,” Profeta concluded, “communities, NGOs, science centres ... to confront global challenges, to harness our creativity and knowledge.”