

# Southern Ontario Smart Computing Consortium

The **Southern Ontario Smart Computing Consortium** helps strengthen Canada's digital economy by providing a new innovation framework that helps solve critical challenges facing our cities, environment, healthcare and economy. In the process, it provides infrastructure that supports highly complex, large-scale data mining and analytics capabilities for advanced research and new commercial product development.

## Overview

- Partnership between IBM Canada, the Governments of Canada and Ontario, and a consortium of seven universities, led by Western and the University of Toronto
- Other university partners include: McMaster University, University of Ottawa, University of Ontario Institute of Technology, Queen's University and University of Waterloo
- Represents a \$210-million investment over three years

## Infrastructure

- Deploys open source Cloud Computing and Agile Computing infrastructure at Western, designed to facilitate researchers' efforts to enhance current cloud computing technology
- Provides state-of-the-art High Performance Computing hardware at the University of Toronto, boasting a combined peak performance of more than half a PetaFLOPS
- Establishes the *IBM Canada Research & Development Centre* in Barrie, Ontario, with staff co-located with university partners
- Expands the *IBM Canada Software Lab* in Markham, Ontario to focus on next-generation "big data" applications

## Areas of Focus

- Problems facing cities, including rapid urbanization and aging infrastructure
- Healthcare challenges associated with rising healthcare costs due to chronic diseases, including afflictions of the brain, and the lengthy development cycle for new medicines
- Water conservation and management across watersheds, including wild areas, industrial and agricultural use
- Efficient energy conservation and management through the application of advanced weather modeling and smart grid technologies
- Software innovation in high performance computing platforms

## Opportunities

- Collaborative model provides university and industry researchers with high performance and cloud computing infrastructure to better manage and analyze massive data sets
- Provides industrial partners, including SMEs, with access to new technologies and expertise otherwise beyond their reach
- Virtual structure allows IBM research staff to work side-by-side with many of Canada's world-renowned scientists
- Access to the *IBM Canada Research & Development Centre*, through university partnerships, once it is fully operational in the fall of 2012



*The Southern Ontario Smart Computing Consortium will help researchers and industry partners make complex decisions more quickly and mine data for better answers.*

## Highlights:

- Uses modern high performance and cloud computing capabilities to better manage and apply big data to solve challenges
- \$210-million investment over three years by IBM and the Governments of Canada and Ontario
- Will create 145 highly skilled jobs and 100 indirect construction and design jobs
- Creates the top High Performance Computing system in the country and a new economic cornerstone for Canada
- Focus on cities, healthcare, water conservation and management, energy monitoring and management and agile computing



**Western**  
Research