

## Standing Committee on Finance (FINA)

### Pre-budget consultations 2012

# Southlake Regional Health Centre

## Responses

### 1. Economic Recovery and Growth

*Given the current climate of federal and global fiscal restraint, what specific federal measures do you feel are needed for a sustained economic recovery and enhanced economic growth in Canada?*

Economic recovery and sustained growth will arise from a stronger Canadian presence in global technology markets by building on existing private sector strengths and creating new collaborative partnerships to accelerate innovation in new sectors. Based upon my experience as a physician-astronaut, space scientist and leader in both the Canadian Space Agency and NASA, it has been proven that the unique challenges of human spaceflight both drive the development of new technologies for commercialization. The world-recognized Canadian expertise in space robotics has been leveraged by MDA and IMRIS to create the world's first precision guided neurosurgical robot using intra-operative MRI imaging. Similarly, creating an economic advantage for Canada through collaborative initiatives that provide cost-effective technology solutions to current global healthcare challenges will leverage Canadian expertise in the biomedical sector. Newmarket and York Region represent North America's third largest cluster of biomedical companies and we believe that Southlake Regional Health Centre can be a catalyst for building that capacity to compete on a global scale. The model we are proposing is based on the NASA commercialization model and that of the Sheikh Zayed Institute for Surgical Innovation in Washington. By bringing together the best clinicians, engineers and software developers using new processes to enhance collaboration it is possible to create an innovation accelerator where ideas for new technologies selectively fail fast or succeed early to enhance successful commercialization. We would like an investment from the Government of Canada to expand the capability of the centre, hire more engineers and bring our products to market faster. The goal is to use this seed funding to create a self-sustaining entity that is funded from the revenues it generates through commercialization.

### 2. Job Creation

*As Canadian companies face pressures resulting from such factors as uncertainty about the U.S. economic recovery, a sovereign debt crisis in Europe, and competition from a number of developed and developing countries, what specific federal actions do you believe should be taken to promote job creation in Canada, including that which occurs as a result of enhanced internal and international trade?*

Supporting the early development of organizations that have proven commercialization expertise to develop world-leading Canadian innovations to bring to market is perhaps one of the best job creation tools the Government of Canada has at its disposal. A key element of this approach is creating an infrastructure that focuses on innovation and commercialization, not solely on product invention. We believe we have created an infrastructure in which commercializable healthcare devices can thrive. As a tertiary care hospital with world-class cardiac and cancer programs, we focus on cost effective solutions – devices that make a difference in the daily care of our patients. Using frontline healthcare professionals to identify requirements for new technologies and bring their expertise to the development process resulted in Southlake helping launch Patient Way, a new start-up company that produces hospital kiosks to streamline patient registration. We believe the unique requirements to develop cost-effective healthcare technologies can drive the creation of new jobs and economic growth in the biomedical sector. Through partnerships with academic institutions and private sector companies

we are building innovative practices in healthcare education and administration to accelerate commercialization successes to create a health advantage for Canadians. Our Biomedical Innovation Accelerator at Southlake is working on new collaborative projects that include potential partnerships with MDA, Phillips, L3 and continued growth of our successful partnership with Patient Way. Our intellectual property policies encourage private sector involvement. Early participation by the private sector also encourages market sensitivity that permits a rapid assessment of the marketability of solutions and ensures that resources are committed to products with greatest probability of commercialization success. We hope to commercialize products in health informatics, in precision diagnostics and therapeutics and in computer-assisted surgery. The potential market for each of these areas is profound. For example, the global market for minimally invasive surgery and medical simulation is valued at over \$30+ billion. Similarly, the development of wireless biomedical sensors and medical informatics is predicted develop a new multi-billion dollar market in the next decade. Canada has a unique opportunity to grow the biomedical technology sector for economic advantage.

### **3. Demographic Change**

*What specific federal measures do you think should be implemented to help the country address the consequences of, and challenges associated with, the aging of the Canadian population and of skills shortages?*

The economic burden placed on the healthcare system due to Canada's aging population is something that must be addressed. Cost constraint while maintaining quality patient care will continue to be a serious challenge. Shifting the model of care delivery for chronic disease from hospitals to community settings will help address the predicted \$47T global cost of managing chronic disease over the next 20 years. Our centre will bring new technologies to market that will enable home care of patients with chronic disease but also provide jobs to Canadians who will develop and sell these new technologies. We believe the Biomedical Innovation Accelerator at Southlake is an example of how we can attract skilled workers to Canada. We believe the best and brightest look for places where they can train on the latest technology and work in creative environments where they can see a project to fruition. Our partnerships with leading global organizations put us in a unique position to attract and retain skilled workers by allowing them to work on innovation in a collaborative environment designed to bring products to market quickly. An investment by the Government of Canada to support our proposal will ensure that Canada is better positioned to take on major healthcare challenges such as wait times, access to care and cost containment in the healthcare sector through the application of new technologies. We hope we can count on your support.

### **4. Productivity**

*With labour market challenges arising in part as a result of the aging of Canada's population and an ongoing focus on the actions needed for competitiveness, what specific federal initiatives are needed in order to increase productivity in Canada?*

Our goal is to create technology that will enable our healthcare professionals to design, build and train using the latest technology and also bring these devices to market for the benefit of patients in Canada and globally. We have developed an online registration and express check-in kiosk that has proven its ability to save patient and staff time while reducing waiting times and errors. The clinical staff at our hospital worked directly with private sector engineers and software developers to solve immediate problems that occur every day at our location. The solution is written such that it can be adaptable to any other health care institution and the private partner ensures that a commercialization path is always kept open for future commercialization potential. Products developed this way are designed for real-world success and development time is reduced with the constant interaction of the clinical teams and the developers. This is innovation at its best and the kind of innovation that Canada needs more of.

## 5. Other Challenges

*With some Canadian individuals, businesses and communities facing particular challenges at this time, in your view, who is facing the most challenges, what are the challenges that are being faced and what specific federal actions are needed to address these challenges?*

The commercialization of new technologies continues to be a challenge in Canada. It is critical to increasing productivity, reducing skill shortage, job creation, and deficit reduction. Fostering an environment where business can thrive with low tax rates is part of the solution. It is just as important to foster an environment where innovation can thrive. Academic models are very successful at generating peer-reviewed research to create new knowledge. Canada lacks structures and mechanisms that are focused more on the marketplace and the public sector needs to enhance success at launching new commercializable products. This is especially true in the health care sector where our academic research portfolio is extensive but our commercialization portfolio is limited. At Southlake, we are endeavouring to do things differently, take some calculated risks, and let our highly skilled clinicians work in a collaborative environment with industry to create ground-breaking and leading-edge technologies. We have skilled industry partners with a strong track record of results and an entrepreneurial spirit. We have advisors who will help us navigate the road to success. With the Federal Government of Canada at the table as an equal partner, I know the future is limitless. We look to the Government of Canada to match our investment of \$19.2 million dollars to ensure the Biomedical Innovation Accelerator at Southlake has the required resources to change the way we innovate in Canada and bring 'shockingly excellent' healthcare to Canada and the world. Thank you for taking the time to review our submission and I would be happy to appear in front of the committee at a time and location of its choosing should the opportunity arise.