Dear Minister:

I am pleased to submit this proposed mandate statement and priority objectives. As you are aware, McMaster is a student-centred, research-intensive university devoted to serving our community and society by nurturing and enabling the fulfillment of human potential. In its 125-year history, McMaster has enjoyed a strong tradition of innovation and reinvention.

My letter to the community, *Forward with Integrity* (September 2011), challenged the University community to build on that tradition and re-imagine the teaching and learning experience to develop a distinct, effective and sustainable undergraduate and graduate student experience.

In order to determine the best approaches and practices to support a transformation, McMaster has been engaged in a pan-campus strategic consultation process over the last year. What emerged from these consultations was both a renewed commitment to research excellence and intensity and an emphasis on the integration of a “research frame of mind” into all aspects of university life. This “research-focused student-centred” approach will be McMaster’s driving imperative.

This proposed mandate statement builds on the work that we have undertaken since the release of *Forward with Integrity*. I have personally attended more than fifty consultations in the last year with faculty, students, staff and alumni. For more information on how we developed this proposed mandate statement visit: [http://tinyurl.com/SMAIntroduction](http://tinyurl.com/SMAIntroduction)

We thank you for the opportunity to present this submission. Please do not hesitate to contact me should you have any questions or require additional information at 905-525-9140 ext. 24340.

Sincerely,

Patrick Deane
Institutional Vision, Proposed Mandate Statement and Priority Objectives

A submission to begin the process of developing McMaster University’s strategic mandate agreement

“Our future shall be continuous and consistent with our past, expanding upon and fulfilling the historic character of McMaster as an institution. We will not only reaffirm the importance of radical questioning at the heart of the academic enterprise but we will ensure the integrity of our work by bringing a critical view to all of our practices—those which bear directly upon education and research as well as those less directly related to it.”

President Patrick Deane

Forward with Integrity
Part 1: Proposed Mandate Statement

Our university was founded in 1887 and is governed by the McMaster University Act, 1976. We operate under a bicameral system (Senate and Board of Governors) and in consultation and coordination with the Government of Ontario’s Ministry of Training, Colleges and Universities.

We exist to serve our community and society by nurturing and enabling the fulfillment of human potential: inspiring creativity and critical thinking, promoting an enduring love of learning and the habit of inquiry, and undertaking innovative research that extends the boundaries and enhances the efficacy of knowledge.

Priorities:

To achieve this mandate our approach over the next three years and beyond will focus on McMaster’s three priority objectives which are, by necessity, interrelated. They are as follows:

1. Developing a distinct, personalized, engaging and sustainable undergraduate experience;
2. Enhancing the connections between McMaster and our community; and
3. Strengthening our research excellence and integrating it with our educational mission.

Our 125 years of achievement are grounded in an ability to embrace change and innovation. We will capitalize on our strengths and build on our hallmark interdisciplinary, inquiry-based, research-focused perspective. This will fuel a transformation that must occur in order to enhance the quality of our programs while expanding access and strategically increasing enrolment within a sustainable framework. Our intention is to pursue manageable growth in undergraduate and graduate programs that are aligned with our strategic priorities.

Innovation:

McMaster’s evolution has relied on a willingness to develop pedagogical approaches that radically transform the way education is delivered. McMaster pioneered small group problem-based learning and evidence-based medicine, both of which enable a level of critical thought that allows innovation to flourish. Exceptional innovation and creativity is what has placed McMaster in the Top 100 Universities in the World.

McMaster defines innovation as: extending the boundaries of knowledge and continually developing creative pedagogical approaches that are closely linked to and informed by the research enterprise, which increase the broader societal impact of the academy and are made possible by supporting and fostering risk-taking.

Universities can only thrive if they embrace innovation in teaching, research and in their connections with the broader community. At McMaster we accomplish this by encouraging and supporting creativity and critical thinking in all aspects of our mission, by fostering and supporting risk-taking and by ensuring the integration of research outcomes and community engagement projects into our educational offerings. Our focus is on serving our society by extending the boundaries of human knowledge and graduating students who are thoughtful, capable and engaged citizens equipped with a range of flexible skills.

Productivity:

McMaster defines productivity as: improving quality within the context of finite resources. This encompasses teaching, research and community engagement, recognizing the critical interplay amongst these diverse aspects of our mission. Quality is measured in terms of the positive impact we are able to make on the student experience, the depth and breadth of our research discoveries as well as our ability to translate the findings of that research, and the level of our engagement with the broader community.
McMaster is already engaged in an institution-wide transformation, based on the priorities outlined in Forward with Integrity (September 2011) and discussed extensively during a year-long consultation process involving hundreds of students, faculty and staff. We aim to improve quality by closely integrating research and education and by embedding community-based, experiential learning in programs across all six Faculties. This will enable a more effective deployment of our resources and assist in establishing the University on a more sustainable footing. We expect to see significant developments over the three-year term of the SMA, which will lay the foundation for our broader transformation over the next decade.

Part 2: McMaster University - Vision

Our Vision

To achieve international distinction for creativity, innovation, and excellence.

Our Vision and the Proposed Mandate Statement:

McMaster’s formal vision statement provides the platform on which Forward with Integrity has been built. It is Forward with Integrity, however, that provides the bold visionary commitment to transformation that will drive McMaster forward over the next decade. We must continually reimagine how best to equip our students for success and seamlessly integrate our educational mission with an expanding world-class research enterprise. This research-focused student-centred approach to scholarship and learning differentiates us, has defined our most renowned programs and resulted in our faculty receiving a variety of accolades, from Fellowships in the Royal Society of Canada to 3M Teaching Fellowship awards.

Part 3: McMaster University - Priority Objectives

Priority #1: Developing a distinct, personalized, engaging and sustainable undergraduate experience

"McMaster has been consistent in three vital areas: commitment to making the student experience the best it can possibly be; its drive to innovate in both teaching and research; and the belief that connecting with the community makes our students even better graduates and citizens." Lynton (Red) Wilson, Chancellor, McMaster and Alumnus ('62). Hear Chancellor Wilson’s thoughts on the impact of McMaster on the student experience: http://tinyurl.com/RedWilson

Current Practices:

McMaster enjoys a storied tradition of pioneering academic programs based on self-directed, problem-based learning, which is intrinsically linked to the nature and mandate of a research-intensive university. These approaches have been emulated at many institutions around the world. The development of high-profile success stories such as the Medical Program, the Arts & Science Program and more recently the Bachelor of Health Sciences Program, has influenced the creation of the Honours Integrated Science Program (iSci), and the complete revamp to online delivery of the flagship Introduction to Psychology, Neuroscience & Behaviour course (IntroPsych). These are just a few examples of the way in which our research-intensive environment provides the basis for high-quality innovative learning techniques that speak to today’s students, with their escalating access to information and their unprecedented connectedness. As indicated later in this submission, there are many other examples of innovations across McMaster’s six Faculties and we will continue to build on these successes in the coming years.
Aspirations Over the Short and Medium Terms:

We will draw the most successful elements from our best programs with a view to expanding the benefits of such programs to the majority of our students. Our signature programs provide a high-quality, in-demand undergraduate education in a research-intensive setting. Financial constraints and the need to ensure the sustainability of our activities will make it increasingly difficult to offer a high-quality educational experience using traditional approaches. The answer lies in combining new teaching practices and learning environments with technology in a radical reconceptualization of our approach to mainstream education.

At the heart of our efforts to improve the student experience is our determination to develop and implement new experiential and self-directed learning opportunities and to intensify our distinctive interdisciplinary, inquiry-based, research-focused approach. Flexibility in the student journey is of the utmost importance and we will strengthen existing partnerships with other universities and colleges, as well as develop new pathways to rewarding careers. The aim is to provide our students with a personalized learning experience which ultimately equips them with the tools they need to be successful and engaged members of our society.

McMaster also shares the government’s goal of increasing the number of under-represented students in the postsecondary education sector. In 2011-12, McMaster had 4,700 first-generation students, almost 500 Aboriginal learners (First Nations, Metis, and Inuit) and approximately 1,140 students with disabilities. We continually strive to improve access for these students and ensure they have the support they need to succeed.

Institutional Plan:

First, we are seeking a partnership with the provincial government to establish a pilot project called the McMaster Experiential Learning Centre (see Appendix). This pilot project will liberate students from the constraints of traditional programs, changing the ways in which we offer courses and evaluate success, as well as enabling a range of pedagogical innovations. It is focused on increasing experiential learning, online delivery, community engagement and mentorship.

The pilot project expands and builds on key lessons learned in our successful Bachelor of Health Sciences program and on the potential for savings that we have been able to generate there. Key components of the pilot project include:

- Facilitating interdisciplinary, experiential opportunities with the engagement of preceptors, skilled professionals with an interest in and commitment to students’ education.
- Expanding community engagement opportunities with benefits for both the community at large and the students involved.
- Expanding blended and online learning opportunities through technological applications.
- Optimizing the use of our existing infrastructure.

This model will allow for significant improvements to quality since students will be engaged in experiential, self-directed and interdisciplinary learning. It also has the potential to achieve measurable cost savings, which will increase as the numbers of participating Faculties and programs expand. In our experience, particularly in Health Sciences, significant savings have been found. For example, for the 20% of the curriculum that is experiential, cost savings of approximately 10% have been generated. (Appendix includes details on costs and measurement). As part of this project we will measure and evaluate the impact on the student experience and the cost-savings achieved. The knowledge we generate will be scalable and applicable to others in the sector.
Second, as mentioned, McMaster is focused on the importance of establishing flexible pathways for students and plans to reinvest savings achieved through the pilot project to investigate in further detail the role and potential of prior learning assessment and recognition (PLAR). McMaster will also continue to build pathways for students who wish to transfer to or from other postsecondary institutions. We currently have agreements in place with a variety of universities and colleges, a recent example of which is our partnership with six other Ontario universities (Queen’s, Guelph, Ottawa, Toronto, Waterloo and Western) to facilitate credit transfer for students. We will continue to build such partnerships in order to increase the flexibility with which students can complete their degrees.

We also expect to strengthen our partnership with Mohawk College and other colleges. Mohawk and McMaster have arguably the strongest college-university partnership in Ontario, a relationship that is exceptional amongst research-intensive universities and is a source of pride for both institutions. We run joint programs with Mohawk across our campus, using a variety of different approaches. Key to the partnership’s success has been the willingness and the ability to build on each other’s strengths. We will work with Mohawk to develop a joint strategy for postsecondary education in our community, one that takes a responsive and open approach and allows for a broad range of complementary student pathways. While the specific programs we develop will capitalize on the distinctive strengths of each institution, we intend ours to be a model that will be scalable across the system.

Finally, as part of our commitment to enhance and individualize the undergraduate and graduate student experience, we are assessing the benefits and pedagogical uses of a student learning portfolio. The portfolio is intended to capture and track both the curricular and co-curricular experiences of students, but more importantly and with the assistance of mentors, to help students identify and refine their personal learning goals and reflect on the value of their activities and accomplishments. The tool will encourage students to seek opportunities beyond the traditional program boundaries of Faculty and curriculum and foster the reflective frame of mind essential to lifelong learning and personal growth.

We anticipate adoption of these initiatives will build on our historical record of student success. McMaster students enjoy higher graduation rates on average than their peers, and since the implementation of Reaching Higher, the overall employment rate for McMaster graduates (2 years after graduation) has increased from 95% to 97%. While McMaster is also involved in piloting the Collegiate Learning Assessment (CLA) and the Assessment of Higher Education Learning Outcomes (AHELO), the University currently measures the experience of its undergraduate and graduate students through the National Survey of Student Engagement (NSSE) and the Canadian Graduate and Professional Student Survey (CGPSS). McMaster consistently ranks higher than the Ontario average in the University’s academic challenge, the active and collaborative learning environment, student-faculty interaction, enriching educational experience provided to learners and the supportive campus environment.

While we are proud of these results, and while we are committed to testing new instruments for the evaluation of learning outcomes, we understand that existing surveys are limited in their ability to measure meaningfully the effectiveness of the experiential learning environment. For that reason, we will supplement these surveys with:

1. An annual student and faculty survey that will focus on experiential learning, community engagement, and undergraduate research. This survey will allow McMaster to report annually on the percentage of students enrolled in for-credit courses that contain experiential learning opportunities.
2. Percentage of for-credit courses that contain experiential learning opportunities.
3. A new employment survey that will measure the employment rate of McMaster graduates after five years. This new measure will provide insight into medium to long-term employment transitions, career development, the pursuit and impacts of lifelong learning, and the contributions our graduates make to society.

With the benefit of these initiatives we believe we will have the ability to make significant improvements to the quality of the student experience. To measure this, in addition to using existing tools, we will devote significant effort
to determining the indices that best reflect the impact on the individual, the institution and the community that we see as critical to our mission, in keeping with our evidence-based approach. As noted in relation to the McMaster Experiential Learning Centre, based on our previous experiences we also see the potential for cost-savings as we re-imagine the learning experience. We will evaluate these savings further as part of the proposed pilot project.

Priority #2: Enhancing the connections between McMaster and the community

“We know all of our work with neighbourhoods, with antipoverty and with developing a more robust future economy, could not be fully realized without the kind of contributions that Mac is making to our work and the community’s welfare.” Terry Cooke, President & CEO, Hamilton Community Foundation and Alumnus (‘83). Hear Terry Cooke’s thoughts on the impact of McMaster in the community: http://tinyurl.com/TerryCooke

Current Practices:

The culture of service distinguishes a McMaster education. Service takes a variety of different forms but the goal in all instances is to harness the creative and innovative energies of our students, faculty and staff and use them for the benefit of the broader community, whether local, regional, national or global. Obviously critical in this regard is experiential learning. Academic placements, student project grants, and internships, together with career planning and a coordinated and well-connected placement service, provide the opportunity for students to develop the skills needed to embark upon a rewarding career.

In addition, a considerable number of students and Faculties participate in clinical, field-based or professional training programs including:

- In 2011-12, approximately 4,300 undergraduate and 1,000 graduate students participated in clinical programs, representing approximately 18% of the University’s total student population.
- In 2011-12, almost 2,700 undergraduate students were enrolled in programs containing a co-op component.

In our Social Sciences Faculty, for example, we focus on building pathways for high school students into the University, and by extension into the labour market and graduate training. We are offering a new life-mapping course for first-year students, three free University courses for 80 at-risk Hamilton students and a new “Social Sciences in Action” course designed to offer University credit for volunteerism and social and political activism. In the Faculty of Humanities, work has been undertaken with local school boards and international agencies to tackle the challenges of autism and low-literacy high school students.

Another compelling example of productive community engagement is the work undertaken at our Xerox Centre for Engineering Entrepreneurship and Innovation. This centre helps individuals and organizations develop their ideas into successful new products or services within existing companies, large or small, or to spawn new commercial enterprises. It also promotes the commercialization of technology-based innovation in Canada and around the world.

Aspirations Over the Short and Medium Terms:

Ensuring a relevant, rigorous, community-based education through an expanding breadth of engagement is an important priority for McMaster; it will be key to our success and of course it will also contribute directly to the health and prosperity of our partner organizations and of the community in general. Our proposed pilot project will build on the principles adopted by currently thriving initiatives such as Mac Serve, the McMaster Community Poverty Initiative, Health in the Hubs, the Discovery Program, and the Children and Youth University which have a strong
focus on building community engagement. Our aim is to become a key partner in the revitalization of Hamilton and the surrounding communities and thereby to have a transformative impact on our community.

Institutional Plan:

As noted from the outset, McMaster’s three priorities and their benefits are closely interrelated.

We will continue to work closely with the City of Hamilton as well as communities in Niagara, Kitchener-Waterloo, Burlington and Halton Region through our distributed learning model. In addition we will build on our partnerships with the local government, business and other community groups. Our new downtown health campus is an excellent example of a productive partnership with the City of Hamilton; we look forward to its opening in 2014.

Our proposed McMaster Experiential Learning Centre will present a prime opportunity for improving the student experience and expanding our community engagement activities. It will be comprised of an integrated learning model that incorporates the community as an essential and vital component in the experience of undergraduate students. The proposed new Centre will also allow us to increase the number of students who are actively engaged with the community through service-learning, co-op training, entrepreneurial activity, or direct work experience with employers in manufacturing, construction, IT and communications, biotechnology, health care and many other sectors.

We will provide curriculum at all levels for those interested in learning about community engagement and recognize those who choose to develop their expertise in this area. We will also create a Network of Community Champions across our six Faculties to raise the visibility of our community engagement mission and to enable communication, mentoring and the sharing of best practices.

To measure our progress in achieving these objectives, we will continue to report on the University’s NSSE survey results, and supplement this with the following new metrics:

1. An annual student survey that will focus on experiential learning, community engagement, and undergraduate research. This survey will allow McMaster to report annually on the percentage of students enrolled in for-credit courses that contain a community engagement component.
2. Percentage of for-credit courses that contain community-based engagement opportunities.
3. Percentage of students who participate in community-based engagement.
4. Percentage of students who participate in study abroad programs.

Priority #3: Strengthening our research excellence and integrating it with our educational mission

“The way in which we engage community through research is with commercialization… McMaster has shown this through investment in creating the research park and the training of our students so we can make a huge difference.” Mark Chamberlain President & CEO, Trivaris. Hear Mark Chamberlain’s thoughts on the impact of McMaster’s research: http://tinyurl.com/MarkChamberlain

Current Circumstances:

Since 2005, McMaster has consistently ranked second in Canada for research-intensity. Our research impact, using the H-index to measure the quantity and quality of all McMaster research publications, indicates we are well above the Ontario average and our U15 peers. McMaster is home to 69 CRCs, 89 endowed chairs, 7 endowed professors,
1 CERC and 7 NSERC industrial research chairs. With more than 100 research centres and institutes, McMaster is a provincial, indeed national, research powerhouse and innovation incubator.

McMaster excels at collaborative research with industrial, government and community partners. We are ideally positioned to play a vital role in the economic development of Ontario and in enhancing the social and cultural fabric of the province. We also have the expertise and experience to manage knowledge and technology transfer and commercialization in collaboration with our industry partners.

Our success is due in large part to the generous investments from the local, provincial, and federal governments and the private sector in world-class infrastructure and technology. Our success in attracting this research funding speaks to our reputation as a research powerhouse. McMaster had the highest average total tri-council (CIHR, NSERC, SSHRC) funding allocation per principal investigator ($71,367) of all of Ontario’s research-intensive universities. As well, our research-intensity over the last decade grew from almost $100,000 per full-time faculty to about $310,000, an increase of almost 210%. The average growth at other Canadian medical/doctoral universities was just over 140%.

Our research-intensity is fundamental to our pedagogical model, which seeks to embed the process of discovery and interdisciplinary collaboration at all levels of the learning process, and translates into innovative undergraduate curriculum and cutting-edge graduate training. Our research findings benefit local, national and international communities, while also adding tremendous value to our ability to teach students and prepare them for rewarding careers. McMaster is at the forefront of leveraging the link between research, teaching and learning. In fact, through our Centre for Leadership in Learning we recently collaborated with HEQCO and the Society for Teaching and Learning in Higher Education in the development of Researching Teaching and Student Outcomes in Postsecondary Education: A Guide for the sector.

**Aspirations Over the Short and Medium Terms:**

We intend to continue to contribute to economic development through progressive training programs, increasing the number of vital partnerships with the private sector and ingraining a research-focused mindset in the undergraduate and graduate learning experience to help train highly qualified personnel.

Our program mix will be driven by opportunities that enhance and build on our research-intensity, linking McMaster’s areas of research excellence with opportunities that address the needs of society.

**Institutional Plan:**

First, McMaster’s research will continue to reflect current and emerging social and economic issues of importance to our local community and beyond. Whether it is aging, infectious diseases, water or advanced manufacturing, poverty or literacy, we are committed to building a stronger economy and a healthier, more engaged society by continuously expanding the breadth of our research activities.

Second, in keeping with our commitment to be a research-focused student-centred institution, we will provide enhanced support to our faculty to assist them in engaging students in their research activities and creatively linking their research and teaching responsibilities.

Third, graduate training is central to research-intensity at McMaster and higher graduate enrolments are targeted for high-quality, interdisciplinary programs that are nationally and internationally recognized. We also anticipate introducing a number of new graduate programs to meet Ontario’s higher education and training needs. Once these programs pass through our internal and external quality assurance processes, streamlined and expeditious program approval from MTCU will enable us to better respond to labour market needs and introduce innovative program options.
Fourth, we will extend our focus on and investment in opportunities that bridge the gap between research and commercialization. We encourage the Government of Ontario to invest in opportunities designed to bring universities together with industry. The German Fraunhofer model epitomizes the benefits of such partnerships and has been a model of success for that country.

Finally, we would expand upon the mandate of the Centre for Leadership in Learning to establish a centre for pedagogical research and best practices, consistent with becoming a research-focused student-centred institution.

To measure the progress of McMaster’s objectives related to research-intensity the University proposes to report annually on the following:

1. Total annual research income compared to the U15 average.
2. The number of collaborative research projects with the private sector.
3. The number of invention disclosures, licenses, patents.
4. The number of major awards (e.g. Vanier Scholarship recipients, Polanyi Prize recipients, Canada Research Chairs).
5. The number of undergraduate students involved in research.
6. Percentage of undergraduate for-credit courses that contain a research component.
7. PhDs and MAs as a percentage of total enrolment.

**SUMMARY**

McMaster University’s achievements are grounded in our proven ability to embrace change and innovation. We believe in transformation and over the past year our faculty, students and staff have enthusiastically engaged in a journey to enhance the capability of our students through experiential learning, extend both the breadth and depth of our connections with our community and enhance our research-intensity and its integration with student learning.

In order to move forward with our transformation we need government’s support for the following:

- McMaster’s Experiential Learning Centre pilot project.
- Ability to reinvest productivity savings to expand opportunities for students.
- Flexibility to build on the unique programs that continue to differentiate McMaster as a research-focused student-centred university.
- Government and community partners to build our community engagement and experiential learning platform.
- Ability to expand our undergraduate and graduate enrolments in areas of strategic importance to the University.
- Continued support for the research enterprise to help foster McMaster’s reputation as one of the World’s Top 100 Universities.

McMaster’s transformation will allow for the re-deployment and more effective use of our resources. It enables us to capitalize on our strengths, build on our hallmark multidisciplinary, research-focused student-centred commitment, and drive quality, access and sustainability.
INTRODUCTION

In September, 2011 President Patrick Deane released his letter, Forward with Integrity, to the McMaster community. This letter outlined the priorities and principles he believes will shape the University’s development. Since its release the internal community at McMaster has begun developing bold ideas and initiatives in an effort to meet the priorities and principles outlined and transform the educational experience for students.

McMaster has always had a strong tradition of innovation and reinvention. Forward with Integrity builds on that tradition and challenges the University community to re-imagine the teaching and learning experience to develop a distinct, effective and sustainable undergraduate experience. In addition to transforming the delivery of education in order to meet the needs of today’s students and prepare them effectively for the job market, there is a clear need to reconceptualise postsecondary education in a way that is financially sustainable. With this in mind we have developed this pilot project with a view to making our system more responsive and flexible, ultimately benefitting Ontario students. Our project focuses on experiential learning, online delivery, community engagement and mentorship.

In considering the needs of today’s students, McMaster has been reviewing the approach of educating for capability, which extends beyond the traditional notion of competence to include the ability to adapt, improve performance, generate new knowledge and engage in continual growth. This pilot project picks up that theme and was explicitly developed to challenge undergraduate students to identify and solve problems, to think critically, to work in groups and to communicate more effectively. It builds on the University’s traditions of inquiry, problem-based learning and on its success as one of the country’s most research-intensive universities. It expands year-round learning opportunities in part through the heightened use of technology-enabled learning. This in turn provides increased choice for students, as well as the opportunity to complete programs and earn credentials within a reduced timeframe. At its core the project aims to strengthen quality teaching and learning outcomes through experiential learning in a way that educates students to become thoughtful, capable and engaged citizens, equipped with a flexible range of skills.

PROPOSAL

McMaster is seeking a partnership with the provincial government to establish the McMaster Experiential Learning Centre. This proposed pilot project will explore and seek to effectively address the emerging needs of students with sustainability and improved productivity in mind. This proposed centre would enhance flexibility within the University, including the ways in which we offer courses and evaluate success, as well as enabling pedagogical innovation.

This pilot project is a critical component of a much broader transformation that the University will be undertaking to cement community engagement through experiential learning as the hallmark of a McMaster education. This will involve change on a number of fronts and will deliver significant improvements in quality and productivity. Within three cohorts of students we envision this transformation will be in place.

For this pilot project we are proposing to develop an integrated learning model that incorporates the community as an essential and vital component of the experience of undergraduate students. The elements of the model include a core of knowledge and competencies attained within the current university curriculum. This in turn informs a second layer of integration into the community through the use of off-campus facilities and a novel curriculum that will involve the full participation of community members as preceptors and educators. The intended consequences will, in the immediate term, address issues of relevance to the community but the longer-term outcome is to develop capable graduates of the university who have the ability to contribute both to the immediate community and to broader society in a meaningful way; ultimately this is the return on investment.
We anticipate that beyond the more obvious improvements in the student experience realized through community-based and experiential learning opportunities, the direct involvement of the community in this educational model provides the opportunity to achieve cost savings realizable in the long term. In our experience, particularly in the health sciences model described below, elemental cost savings have been found. For example, for the 20% of the curriculum that is ‘experiential’, cost savings of approximately 10% have been generated. These experiential opportunities have also enabled the University to build on its existing partnerships with the local community. We anticipate savings will vary across different Faculties and programs and throughout the course of this pilot project we will be able to measure this and develop best practices.

We have already developed some elements of the model, building on the success of satellite medical schools, collaborative nursing programs, community-embedded education and service units, and our off-site business campus. Here are some select examples:

- McMaster has the most highly sought after undergraduate program in Canada, namely the Bachelor of Health Sciences, which receives thousands of applications each year for 200 places. The mainstay of this program is experiential learning based on an interface in the community across all years. We aim to adapt this approach across all Faculties with an even greater community integration and the utilization of novel learning technologies, in particular, web-based learning. In the Bachelor of Health Sciences program all (800) students must complete this community-embedded curriculum over 3 years. The program uses vertically and horizontally embedded peer tutor experiences that contribute to student development and learning without the usual cost implications. The community contributes to global health and child-health specializations by undertaking the supervision of students in course work. Students must complete inquiry projects built from pressing issues within and without the university community. The net impact of these initiatives is that students attain a higher level of competency in community-based issues. One of the positive factors for the university is that a proportion of the curriculum and formal credit is informed by authentic community experience at reduced cost.

- The McMaster Arts & Science Program broke new ground in undergraduate education when it was established. It was designed as a rigorous, interdisciplinary program aimed at students who show themselves capable of performing at a high level in both Arts and Science subjects. The Arts & Science Program was designed to provide students with a broad-based, liberal education. The value of a broad education is widely acknowledged by educators and business professionals, as well as by the many capable students who apply to the Arts & Science Program. With relatively small classes, we can do the kind of individual teaching that we believe is essential to the continued success of the Program, and can encourage the cooperative learning among students that we believe serves them best.

- McMaster’s Faculty of Social Sciences has developed a number of community-based opportunities for students. In one particular course students attend a one day seminar and then are assigned an academic mentor to support them through a community based project. At the end of this work students prepare a reflection paper and presentation which is graded. In the School of Social Work two field placements are part of the program where students gain real-life experience working with service users and community groups and students learn from and are supervised by practicing social workers.

- McMaster’s Faculty of Engineering is developing a multi-disciplinary Sustainable Future Project, a course that will be open to all students. In fact, there will be 20 students from each Faculty across campus participating. The goal is to develop more effective change agents who will be able to act as champions to foster a culture of sustainability. In order to achieve this goal, students will engage in practical research and application through working with groups, individuals and/or organizations on campus and within the community. All students will work with a project champion to plan and implement their defined project.

We know based on evidence from our Bachelor of Health Sciences program and our innovative Arts & Science Program that the problem-based learning model that we employ is the key to achieving deep learning outcomes. The current challenge is to build on these developments and the others mentioned above in a systematic way for many
more university students. This would be significantly aided by the establishment of a community-embedded teaching and learning facility, scaled movement of students into the off-site location for a portion of their studies (space will be reused), utilization of community preceptors to inform the student experience supported by faculty and the utilization of effective technologies to support students and invite larger community reciprocal participation. Beyond the enrichment of the student experience and the positive benefit to society that increased numbers of capable and engaged graduates will bring, we anticipate productivity gains and reduced pressure on university infrastructure and cost savings as the initiative grows.

**PILOT PROJECT DETAILS**

We will, immediately, enroll 100 Level 1 students in a community-based program. The initial cohort will be drawn from two out of our six Faculties. By the end of the fifth and final year of the pilot project all six McMaster Faculties will be participating with a steady state of 400 students over the course of the pilot. Beyond that timeframe, each year we envision more courses and programs coming within the ambit of community engagement: experiential learning, leading the University towards its vision of having the majority of students enhance their degrees through community-engaged learning. Students will utilize twenty percent of their curriculum to explore community issues, engage in community collaboration and develop relationships with community partners; local businesses—both small and large, non-profit groups, poverty roundtables, community foundations, school boards, the University’s Centre for Continuing Education and adult and child support agencies. In Level 2, twenty percent of the curriculum will be devoted to developing detailed understandings of community issues, under the supervision of community members and groups. In Levels 3 and 4, student teams will work with community groups to explore, investigate and resolve real issues of importance to those groups (e.g. develop business models, development plans, solutions to a variety of community imperatives). As a student-centred, research-intensive University, we firmly believe there is an opportunity for all students, at all levels of their education to participate in and undertake research.

As part of this project it is intended that students will act as peer support communities for the subsequent cohorts of students who engage at Level 1. They will work on the development of the modules, on preceptor development and will be actively engaged as TAs. These students will be part of an ambassador program and will assist in putting the Level 2 program in place. This unique feature along with the experiential opportunities will help McMaster engage high school students as they select their university.

The preceptor, who will be a key component of this model, is a skilled professional with an interest and commitment to the education of students. As a teacher, the preceptor acts as a role model, educator, supervisor and colleague. The preceptor:

- Helps to assess the student’s learning needs, so that the student can meet the course requirements, as well as personal learning objectives.
- Works with the student to set and achieve realistic learning goals and identifies a variety of learning opportunities.
- Acts as a guide in developing sound thinking and judgment.

Ensuring that preceptors are effectively supported and managed is fundamental to the success of this project. If we are to effectively cultivate community-based programs and build relationships, we need to offer support, provide mentorship and make financial incentives available to ensure the ongoing commitment of preceptors. Appropriate infrastructure to administer and manage the program will also be required.

The student’s development will be overseen by a faculty tutor, a faculty member who guides the learner and provides consultation to both the preceptor and the student in educational areas. The faculty tutor:

- Assesses the application of theory to practice and professional development for the preceptor.
In an effort to determine the value of this process from the student and preceptor perspective we will survey and gather feedback from these two groups and the findings will be built into future courses and the orientation of preceptors.

Technology solutions will support the entire pilot project. With students spending significant amounts of time in the community we need to support their learning in a more interactive and engaged way. A variety of technologies have already changed the landscape and opportunities; social learning (Twitter, Facebook, LinkedIn), mobile applications and pocket video technology (You Tube, a less-is-more evolution of mobile applications), virtual worlds, blogs, e-books, and QR codes to link education themes, information and opportunities. Trends for the near future include BackChannel (virtual attendance), new tools for digital content creation (Storify, Pearl Trees), tools for creation of content collaboratively (Lectora, eXe, My Brainshark), flipped learning (transposition of homework and classwork), and blended learning.

These offer real and exciting opportunities to change the shape and direction of education. They permit a broader range of connections with knowledge and the community. Students, preceptors and faculty will be encouraged to engage through these technologies in a meaningful dialogue about current issues. Resources will also be developed that are specific to our local region acting as a portal to resources that already exist plus others that students, preceptors and faculty could create collaboratively with community partners such as the Poverty Roundtable, the City and many other community groups. Our goal in time is to explore ways to make these learning technologies open to the community.

Additional formal opportunities to pursue credits could develop from this. Students who have completed online modules will, as part of their own formal curriculum expectations, support the online learning communities in subsequent iterations. We believe when operational this could increase formal education levels in the Hamilton community, at all levels, without having to formally attend university. The technology will have embedded, open-learning structures for community issues that invite broad participation and inform formal student learning. McMaster has already used one element of this design since 1995 and has evidence supporting deep, rather than the usual surface learning design of technology applications.

The physical location of the community-embedded facilities will be important. The location will invite open access of the community, consultation-based learning spaces, flexible options for participation (evenings, weekends) and visibility with respect to opportunities and outcomes. We envision a much more community centred, open access, flexible learning, solutions-oriented approach to university education that broadens the definition of what constitutes a course. The anticipated costs savings in infrastructure, and through the use of preceptors and teaching assistants will be significant but the larger return on investment is in the real-time evolving solutions to community issues.

To be successful we will need to grow our enrollment – which is consistent with our institutional plans and the province’s commitments for creating 60,000 new spaces in the system. The growth in enrollment will enable us to broaden our offering and engage preceptors/experts to facilitate small group learning.

In essence, we are proposing the development of a flexible opportunity for students to attain some of their academic credits through experiential and community-based, problem-based learning. This will be supported by state-of-the-art technology. This project will allow students to self-direct their learning and it will enable greater mentorship by skilled instructors.
The McMaster Experiential Learning Centre’s work will have 3 components:

Component 1 – Experiential Learning and Online Learning:

This component will be the core of the McMaster Experiential Learning Centre. Fundamentally, experiential learning involves educating through hands-on activities. The focus is on the learning process for each student, allowing each to take on tasks with real outcomes, resulting in tangible learning practices through participation and reflection. Experiential learning requires both self-initiative and self-evaluation, two components that are critical to the development of the necessary links between theory and practice and, ultimately, a student’s education experience and his or her career opportunities. The direct experience also develops the student’s ability to engage with and contribute to their communities.

Experiential learning can take many forms and could include both service learning opportunities, traditional co-op opportunities, and newly structured experiential programs where students could earn money in addition to receiving a credit.

We intend to offer experiential learning opportunities to more students in two different ways:

- First, we will undertake bold and creative approaches with the use of a virtual environment for education. This will be possible with an investment from one of our private sector partners in state-of-the-art technology. The technology will enable students to undertake problem-based learning in a virtual environment. Students working in small groups and supported by skilled preceptors will view real-world or formulated problems and work on solving them together. Students will attain academic credits for undertaking this work.
- Second, students will have the opportunity to work in small groups with community partners, and local businesses to solve real-world problems. This will have the added benefit of enabling these local partners and businesses to be more successful. For example, Business students could work with the local arts community to develop sales and marketing strategies. In every experience the information and learning gained will be returned to these groups and will help to build their capacity. The McMaster Experiential Learning Centre will provide learning spaces to enable this type of work, for which students will attain academic credits. The proposed Centre would be located in the city’s downtown core.

Ensuring that the program’s learning outcomes are paramount is the key to successful implementation. Each course within the pilot project will be subject to the same rigours of evaluation and efficacy of learning models as any other course at McMaster. Learning outcomes will be set out from the beginning. Prior to the experiential opportunity the assignment will be explained by the faculty tutor. After the experiential opportunity the student will be required to complete the assignment with a concrete project (ex. research paper, video/multi-media presentation, an exam) and through this will present evidence illustrating whether learning outcomes have been achieved.

With this pilot project we would be creating an experiential learning experience, which is available 24/7 and which fits the needs of students who are increasingly comfortable with new and emerging learning methods.

In addition, lectures or lessons will be provided online with interactive software which students can access at any time. This will build on our existing expertise in courses like McMaster’s IntroPsych program. These lectures will be supported after the fact with small group discussions led by preceptors in a class-like setting. We recognize that there is a time and place for large lectures, but they are not the only avenue for transferring information. Our vision is of a flexible, interactive approach to education, which will also be more engaging to the current generation of technology-savvy students. This approach also encourages critical thought and independent discovery and provides the opportunity to involve students in the process of research at an earlier stage in their studies.
Component 2 - Community Engagement and Economic Development:

The engaged university is an international trend. It is becoming the focus of strategic planning at higher education institutions across North America. Community engagement is not new to McMaster and has always been a distinguishing feature of the University.

It will be in the spirit of this centre as we establish it, not only to provide program specific learning but to make the appropriate resources of the centre open to the community including making some of the content freely available.

Despite the many advances that have occurred over the years, Hamilton still faces significant social challenges. There are too many Hamiltonians without access to primary care and while significant gains have been made in some areas the cycle of poverty continues to present challenges, especially in the downtown core. The local government has made downtown revitalization a top priority and McMaster supports this wholeheartedly. This was an important driver for locating our new Health Campus in the downtown core. We see great opportunities for linking this pilot project with the Downtown Health Campus and our Centre for Continuing Education as it will create a critical mass of students, faculty experts, and community groups and members.

We anticipate many community members and local businesses will have an interest in building their skills or those of their employees by taking some of the innovative courses offered or by encouraging their staff to enrol as preceptors to the program. The University intends to engage community and business partners to explore the feasibility of such a program.

Component 3 - Advisory capacity and credit recognition:

Choosing the right leader for the McMaster Experiential Learning Centre is of key importance. This person will be an expert in experiential learning and well regarded in the academic community. The role is critical as the person will be responsible for working with the Faculties on credit recognition opportunities, building relationships with our local community and businesses to seek out experiential learning opportunities, and will also facilitate students’ ability to move through the system seamlessly and in balance with their studies on our main campus.

The person leading this Centre will work with the Faculties and with individual students on credit recognition for experiential learning and (field) work experiences.

In keeping with our overall approach to cultivate deep learning and to foster enduring capability we are going to invest in, and to the furthest extent possible, take advantage of the benefits of prior learning assessment and recognition (PLAR). When fully operational we will reinvest savings in building our expertise in PLAR as it will be a key component of our broader transformation.

This project is based on a flexible model for learning and because of this we anticipate a significant opportunity to build on our very productive partnership with Mohawk College. Our goal is to maximize capacity in the system and we believe that in future years the opportunity will exist for an open interface with other universities and colleges.

Finally we appreciate the government’s interest in credit transferability and we share this interest. We would welcome the introduction of a provincial credential supplement to facilitate labour-market credential recognition and transferability between jurisdictions.
Timing, Location and Cost

With approval from government we anticipate being able to initiate this program during the 2012/13 academic year.

We envision locating this Centre in downtown Hamilton as it will require a strong link to partners in the surrounding community, as well as showing McMaster’s commitment to downtown revitalization.

We anticipate that the incremental cost of this project over 5 years will be $15 Million or approximately $3 Million per annum. Of this amount the university and its private sector partners for state-of-the-art technology could be expected to contribute in cash or in kind the amount of $5 Million.

In order to move forward with this pilot project we will require an investment from the province of $10 Million over the 5 years of this project. The provincial contribution would go towards providing students with the unique experience, support for success, delivery expertise as well as securing an appropriate space in downtown Hamilton. Although this model has the potential to achieve cost savings over the longer-term, the true benefit will be the enhanced student experience that we will be able to offer through experiential, self-directed and interdisciplinary learning.

HOW THIS FITS WITH GOVERNMENT PRIORITIES

Ensuring a quality education is the key priority of this pilot project. The Ontario Government has made a significant investment in the postsecondary sector. We are on the frontline of education delivery and share the government’s goal of providing a quality experience for students.

The government is committed to transforming the delivery of public services while ensuring the delivery methods are sustainable. The proposed pilot project also aims to transform and modernize the learning methods of today’s students in a sustainable manner.

Quality

- Self-directed learning – students will have the opportunity to work in multi-disciplinary teams set up so they can self-direct their learning with clear learning outcomes outlined.
- Experiential learning – with technology and with community groups, students will undertake problem-based learning for academic credit. This experiential learning will also make students more career and job ready than ever before.
- Community engagement – we anticipate community members and business will take advantage of courses offered.
- Online component – students will have the opportunity to undertake lectures with interactive software online and at their own pace.
- Mentorship – McMaster is one of the country’s most research-intensive universities. We firmly believe there is an opportunity for all students at all levels of their education to participate in and undertake research. This pilot will free up faculty to provide mentorship to students in small group environments. With the greater use of preceptors at the McMaster Experiential Learning Centre students will have the opportunity to learn from individuals who are specialists in their field.

Sustainability and Productivity Improvements

- Online – While online learning can be expensive, we will build on our existing experiences and will utilize any system-wide solutions created. It will ultimately result in less pressure on our infrastructure and reduced capital needs in the long term.
- Because this Centre will offer 24/7 access it will enable a year-round learning opportunity which will increase choice and allow students to earn their credential sooner, which could result in an overall reduction in the cost of postsecondary education.
- Credit transfer – We have arguably the best working relationship in the sector with our partner Mohawk College. We envision this partnership will continue to grow and we envision more partnerships with other institutions in the sector.
- Lower incremental costs.
- Outcome based accreditation.

FINANCIAL IMPLICATIONS FOR THE SYSTEM

Once fully implemented, we anticipate long-term savings for the system. McMaster has already demonstrated through its Faculty of Health Sciences program that efficiencies and long-term savings can be achieved.

**Long-term savings:**
- When fully operational, large groups of students will spend a portion of their studies away from our main campus which will alleviate some of the pressure on our physical resources and reduce our capital needs in the long term.
- In addition, preceptors will be used to help facilitate and guide learning. Most of the instructors who will be supporting students at this Centre will be active in their professions and will be fulfilling their role on a part-time basis. While this presents some challenges in terms of increased need for quality control measures and administration, the benefits are that these preceptors are generally community-based and provide a wider range of speciality training to the students. This presents some financial flexibility because the cost is based on use and there are no employee benefits or pension costs.
- We anticipate that once the project has been scaled up the number of users and student base for the content will be significant, and therefore efficiencies will be found.

SUMMARY

We appreciate the government’s consideration of this request. Our intention is that, through this pilot project, we will build on our existing expertise in this area to create a model that can be developed and ultimately shared with others in the sector. This project, with its strong focus on student-centred learning, builds on McMaster’s priorities, as outlined in *Forward with Integrity*, and also meets the government’s goal of providing a quality educational experience for students in an innovative and financially sustainable manner. This could serve as the next advance in the McGuinty Government’s commitment to higher education for the citizens of Ontario.