

## Grand Challenges and Aspirations

Strategic Research Plan (SRP) 2012-2016 sets the strategic direction of the University of Windsor's research and scholarship enterprise in accordance with the University's Strategic Priority Plan, "*Thinking Forward ... Taking Action*", that aspires to "create a more research-intensive university with graduate programs that build on academic and professional strength".

The SRP aims to:

- Build on established research strengths and pursue new strategic opportunities;
- Attract, develop and retain highly qualified faculty, students, postdoctoral fellows and supporting staff;
- Foster excellence, collaboration, and integration of research with education and with societal needs;
- Identify, strengthen and prioritize the University's existing and emerging areas of research excellence on an evolving basis; and
- Sustain and further develop an infrastructure that supports the University's strategic research and creative activities.

Development of the SRP led to identification of the following thematic research areas of priority:

- Automotive research and innovation;
- Environment and ecosystems;
- Advanced materials;
- Health and wellness; and
- Culture and social change.

Cross border strategies were identified as being an emerging theme of priority.

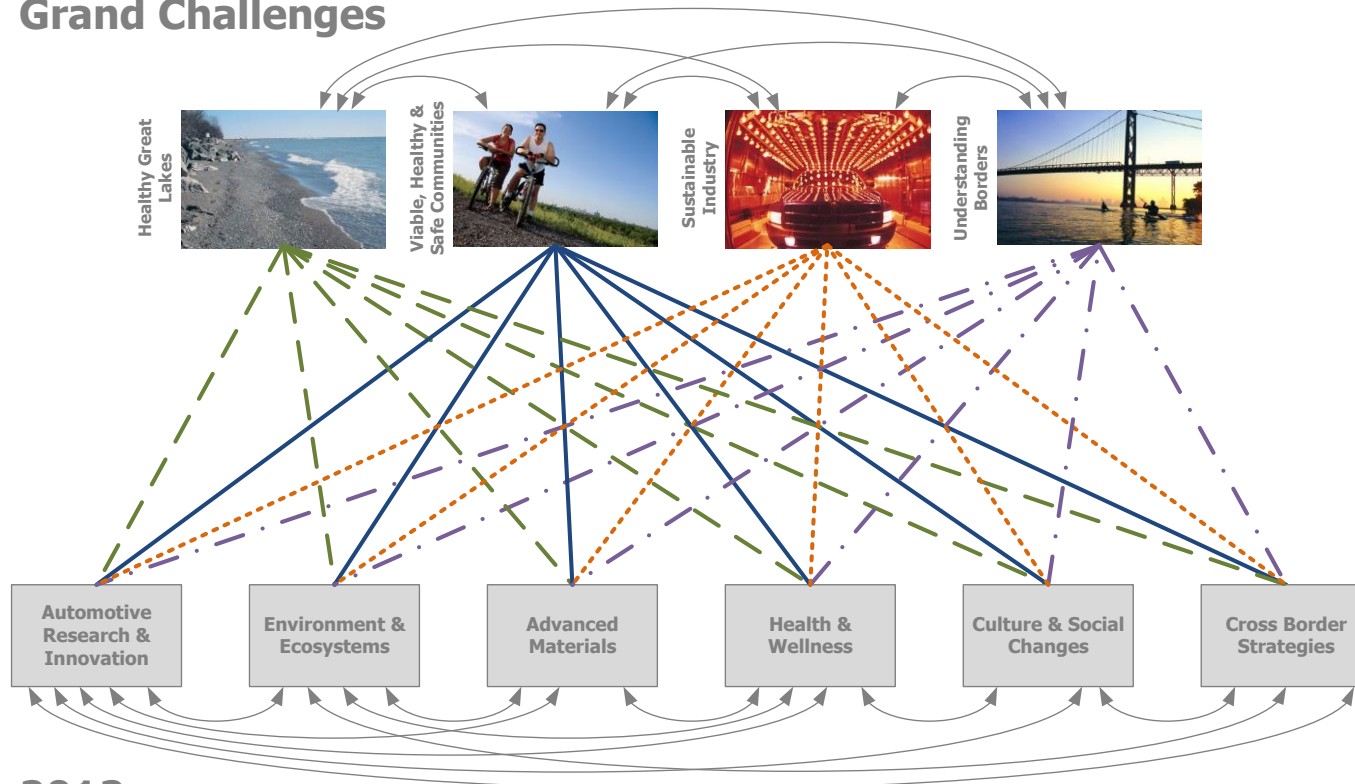
To implement the SRP efficiently and effectively, it was recommended that an implementation plan needs to be crafted annually and that an implementation committee be struck to monitor progress. This committee will not only provide tracking and monitoring, but also recommend taking corrective action when necessary, the latter of which includes changing the tactics as well as the strategy.

Thematic research areas reflect the University's internal excellence and strength. By nature, they define areas of research concentration and are not explicitly designed to lay out our goals and aspirations. In the President's address to the campus community: "*The Future is Never What it Used to Be*", Dr. Wildeman challenged the community to elevate the SRP to the next level and anchor it on grand challenges that can be addressed and solved.

The SRP Implementation Committee (SRPIC) accepts the President's challenge. We view the thematic areas originally identified as foundations upon which we can post grand challenges as well as build aspirations and goals. This concept is illustrated in Figure 1, which demonstrates some of the many linkages between thematic areas and grand challenges.



## 2013 Grand Challenges



## 2012 Thematic Areas

### Legend

- Healthy Great Lakes- (green dashed line)
- Viable & Safe Communities- (blue solid line)
- Sustainable Industry- (orange dotted line)
- Understanding Borders- (purple dash-dot line)



From the grand challenges, we aspire to be leaders in the following areas:

**1. Healthy Great Lakes**

- Advance and communicate fundamental knowledge of Great Lakes science;
- Develop technologies that improve water quality and biota health;
- Contribute to a culture that values and prioritizes activities that enhance the health of the Great Lakes;
- Understand and help develop the policies and regulations to safeguard the Great Lakes;
- Mitigate and adapt to the effects of natural and societal impact to the Great Lakes and lead remediation efforts in the Great Lakes region and beyond; and
- Train highly qualified personnel who will become next-generation scholars and leaders.

**2. Viable, Healthy and Safe Communities**

- Explore and understand the social, economic and health conditions that will lead to viable, healthy and safe communities;
- Advance knowledge about the lives of designated groups and diverse people, including First Nations, women, ethnic and sexual minorities, the disabled, recent immigrants and others, not only of problems, but also of strengths and resiliencies to maximize the health of people and the vibrancy of communities;
- Advance the humanities, arts, social and natural sciences, technologies and engineering that will enhance the viability, health, livability and safety of communities;
- Build synergy from various stakeholders and sectors that will enhance the above goals; and
- Train highly qualified personnel who will become next-generation social and technological entrepreneurs, scholars and leaders.

**3. Sustainable Industry**

- Collaborate with multi-sector industrial stakeholders to help build sustainable industries;
- Mobilize knowledge and technologies to collaborating industry partners;
- Accommodate and facilitate the collaboration with participating industrial partners who prefer locating their innovation units at the University to develop next-generation ideas and products;
- Provide business, legal and technical advice to industries on a collaborative basis; and
- Train highly qualified personnel who will become next-generation industrial entrepreneurs, leaders, scientists and engineers.

**4. Understanding Borders**

- Understand all issues, including logistical, economical, societal, human, cultural, political, legal and trade, associated with borders and border-crossing;
- Understand and support the development of policies, regulations and best practices that will facilitate border crossing;
- Develop the science, technology and engineering that will facilitate safe and secure border crossings, including that of knowledge, goods, certifications, regulations and people;
- Train highly qualified personnel who will become next-generation scholars and leaders; and
- Understand and support bi-national coordination of environmental and emergency management in border regions.



## **Report on the Outcome of 2012 Implementation Action Steps**

Many of the action steps planned for 2012 have been successfully implemented, despite transition in the VPR office. Below is a summary of these activities:

### **1. Faculty Strategic Research Plans**

Progress is mixed, some Faculties are incorporating research into their strategic plans; the SRPIC/VPR will be assisting individual Faculties to (better) develop their plans.

### **2. Annual Research Report**

The Office of Research Services (ORS) has produced and made available on its Web site (<http://www.uwindsor.ca/researchservices/ors-annual-report>) a research performance report that contains not only current research data, but also comparative data for the last several years.

### **3. Review of University Internal Processes and Services**

This has been ongoing, starting with research support, overhead charges and intellectual properties, which has led to updating and changing of policies. The goal is to establish optimal policies and ensure that they are followed.

### **4. Strengthening the Role of VPR**

Since his appointment in December 2012, the new VPR has enjoyed and received tremendous support from the President and his other colleagues.

### **5. Working with the University Executive Team**

There is good rapport and a strong spirit of collaboration among the University Executive team to move research forward in a highly supportive environment.

### **6. Working with Deans' Council**

The VPR attends the Deans' Council and works well the Deans to support and intensify research.

### **7. Research Budget**

University funding for research has increased. An example is the Research Stimulus Fund of which the goals are to build upon research strengths; to enhance future research funding, especially from the Tri-Council; and to enhance graduate training and experiential learning.

### **8. Multidisciplinary research**

Multidisciplinary research has received particular attention. Meeting the grand challenges will require multidisciplinary research to build complementarity and synergy. An example is cross-border studies



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that embrace policies, commerce and trade, engineering, social science and natural science. A Cross Border Institute has been established and significant external funding from FedDev Ontario for personnel and research is in place.

### **9. Library Service**

The Dean of Library and her staff have met with the VPR to discuss Library service, in particular a Web portal that will allow faculty to upload their publications to a central repository.

### **10. Information Technology Service**

The University IT Steering Committee has been reinstated; the VPR is a member. This committee will examine how best to deliver IT service to the University and service regarding research is one aspect that will be analyzed.

### **Strategic Research Plan Implementation Committee**

David Andrews, Department of Kinesiology  
William Anderson, Department of Political Science and Cross-Border Institute  
Gordon Drake, Department of Physics  
Daniel Green, Department of Mechanical, Automotive and Materials Engineering  
Douglas Haffner, Department of Biology and Great Lakes Institute for Environmental Research  
Eleanor Maticka-Tyndale, Department of Sociology and Anthropology  
Bulent Mutus, Department of Chemistry and Biochemistry  
Heather Pratt, Office of Research Services  
Michael Siu, Office of the Vice-President, Research  
Patricia Weir, Department of Kinesiology and Faculty of Graduate Studies

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