

## **2. Make the CLS the Most Responsive and Valuable Synchrotron Light Facility for Industry**

A key component of the strategic mission of the CLS is to engage the industrial community to the highest degree possible. The CLS, as Canada's state-of-the-art synchrotron facility, provides unique capabilities to industry in a broad range of applicable technologies. The CLS is already a science and technology success story in providing an entrepreneurial advantage to Canadian industries that use synchrotron science to solve real business problems. From the earliest conceptualization of the CLS, industrial participation through collaboration and outreach has been a central consideration. In addition, CLS has chosen to focus this mandate in a group of highly qualified scientists. The CLS Industrial Group currently employs eight scientific personnel whose key focus areas are Earth and Environmental Science, Materials Science, and Pharmaceuticals and Life Science. Most synchrotrons around the world have created industrial programs, but the CLS was the first to build such programs into its core organizational structure from the outset of the project. Since then, other new facilities in Australia, France, and the UK, for example, have followed the CLS model.

The CLS has established aggressive targets for participation of industry through a fee-access structure. At the beginning of each six-month scheduling cycle for use of the facility, 25% of the time available on each beamline is set aside for fee-access. Unused time reverts to the broader peer-reviewed community. This easy access, coupled with a very simple and straightforward intellectual property policy, is highly attractive to industry. Industrial research and applied research of industrial relevance comprises a broad range of projects, from one-time experiments that help solve an urgent problem in a production line, to long-term projects which help companies develop new techniques or products, to measurements that satisfy regulatory requirements.

The value of all these projects for the Canadian economy goes significantly beyond the monetary value of the service that CLS provides, as in many cases the results are the basis for either creating new jobs or securing jobs that might be endangered due to changes in regulatory or environmental requirements. The industrial use of the CLS also goes beyond the service that the Industrial Science Group provides for companies, as a significant number of our academic users also collaborate with industrial partners.

### **2.1 Communicate, develop and deliver synchrotron science to solve business-critical industrial problems**

1. CLS' mandate includes making up to 25% of each beamline available for industry on a fee-for-service basis. To accomplish this, the CLS has created industrial science and business development groups which operate as a single business unit with a common mission. The existing business plan projects industrial revenue to total \$7.5M by fiscal year 2012/13. For this outcome to occur, it is crucial that the CLS achieve the deliverables as outlined in the business development plan (see Appendix H).

*Deliverables/Milestones:*

- Realize annual revenue projections of \$2.6M by fiscal year 2012/13 for fee-for-service and collaborative research as outlined in the CLS operating budget
  - Provide business critical solutions to our clients in a timely fashion in order to ensure repeat business and lasting customer satisfaction
  - Identify, target and engage five new clients per year within the primary target sectors (natural resources and environment, pharma and materials), and one new client per year from the secondary target sectors
  - Implement a marketing and communication plan that increases awareness amongst key sectors of our services as a scientific solution provider for industry
  - Execute a client feedback mechanism to increase our understanding of client needs and concerns, thereby improving our services and customer relations
2. Expand industry-relevant scientific capabilities and research at CLS, covering the industry value chain from discovery (fundamental) to commercial (revenue generating) science. This will increase CLS' visibility as an industrial service and solution provider.

*Deliverables/Milestones:*

- Conduct annual meetings with the Business Development Advisory Committee (BDAC) to develop applied science strategies, and discuss industry trends and needs
- Match the capabilities of CLS infrastructure and associated applications with the primary and secondary target sectors thereby improving our ability to match industrial projects with appropriate tools
- Create new marketing materials focusing on four industrial sectors per year, defining the R&D needs of each sector and promoting matching CLS capabilities
- Identify, engage and conduct five demonstration projects for new clients per year, within the primary target sectors
- Implement a plan to attend trade shows and other events in which industry is present. The plan will include the criteria for attendance and a yearly analysis of outcomes
- Complete and commission an industry-focused beamline (IDEAS) which will allow for fee-for-service beamtime larger than the 25% maximum currently available on other beamlines
- Act as a nucleus for multi-partner research initiatives that bring together academia, government, industry and CLS within specific research areas, including the Canadian Innovative Materials Research Centre (CIMRC), which is now in the planning phase

## **2.2 Collaborate with academic and government users to strengthen industrial ties and improve reporting of economic impact of research**

1. Formulate a beamtime price for academic and government users that will encourage purchase of time for industry-sponsored projects and aid in capturing accurate statistics on industrial usage.

### *Deliverables/Milestones:*

- Implement academic and government research beamtime rates for collaborative projects
- Develop and implement a plan to encourage the user community to purchase beamtime for projects in which industry is funding some of the work

2. Encourage collaborations between CLS staff, government laboratories, industry and academic communities in order to increase CLS expertise within various scientific areas.

### *Deliverables/Milestones:*

- Create a process to encourage in-house industrial scientist projects with private sector relevance, and resulting in 1-2 private sector relevant publications per year
- Commence five new collaborative projects per year in partnership with academia, government laboratories and/or industrial partners

3. Inform the user community of the importance of gathering information on industrial utilization and related economic impacts to sustainable facility operations.

### *Deliverables/Milestones:*

- Improve methods to report on the industrial program and its achievements to the user community
- Send a letter to users outlining the importance of reporting industrial utilization and modify the end-of-run report to ask about support from industry
- Make a clear statement about CLS guidelines on industrial utilization through all access mechanisms

## **2.3 Create an industry-friendly environment**

In order to achieve its industrial science targets, it is essential that awareness regarding the importance of responsiveness to industrial clients permeate the CLS culture. There is already an overall understanding of the significance of the industrial science mandate as part of the CLS Mission, but progress needs to be made to improve processes to facilitate industrial science, as well as to engage staff, in order for CLS to achieve its ambitious targets.

1. Develop robust commercialization systems and strategies to accommodate industry usage and investment.

*Deliverables/Milestones:*

- Develop confidentiality and IP policies and procedures to accommodate industry collaboration and usage
- Develop contract templates (in collaboration with Directors of Finance, Research, and Industrial Science)
- Track deliverables from research activities
- Project opportunity identification in consultation with Director of Research and Director of Industrial Science
- Agreement frameworks for CLS Staff regarding confidentiality and IP
- Develop stratified fee structures to increase beamline usage

2. Engage internal staff to support industrial awareness and mandate.

*Deliverables/Milestones:*

- Customer profiles and stories for *In the Loop* staff newspaper
- Paper version of *InnoVision* delivered to staff mailboxes
- Information sessions with staff on approaches to commercialization of research discoveries
- Hold industry forums with CLS Directors, staff and companies from strategic areas of: life sciences; information and communication technologies; nanotechnology; environment and materials