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# Annual Report 2001-2002

## **Becoming Recognized as a Centre for Innovation**

# Chairman's Message

Technology transfer and commercialization encompasses a range of activities that protect and market intellectual property. This process of knowledge transfer adds value to early stage technology and can achieve significant benefits for the inventors, the university, and the public.

Canada's Innovation Strategy calls for a greater investment in people, knowledge and opportunity in order to achieve the goals of excellence and greater global competitiveness. Specifically it seeks to leverage the commercialization potential of publicly funded academic research. It supports academic institutions in identifying intellectual property with commercial potential and forging partnerships with the private sector to commercialize research results.

There is growing recognition and a significant need for more extensive and successful university technology transfer operations. Government invests significant amounts in university infrastructure and individual research programs. The public has some expectation that this investment in research will yield public benefits and stimulate economic growth in a knowledge-based economy through business creation and technological advancement. An expanded and successful technology transfer and commercialization program can convincingly demonstrate to government that U of T is achieving these public objectives with respect to innovation, while maintaining and safeguarding the primacy of the University's academic mission.

The mission of the IF is to benefit the University of Toronto by aiding in the transfer of its research results into the marketplace on commercial terms that will generate appropriate benefits to the university and its researchers. This transfer is governed by practices that are consistent with the University's academic principles, and demonstrates a concern for the welfare of the researchers and the institution.

IF acts as an effective bridge between its two client communities, the internal community comprised of university researchers, and the external community comprised of investors, entrepreneurs, and government. Its principal operational goals are:

1. to provide superior services at competitive prices
2. to meet the diverse needs and expectations of its client communities.
3. to create partnerships with other institutions, government and private commercial interests wherever they are the best means of serving the academic community and the University.

During this year IF demonstrated great initiative and innovativeness in creating a flourishing incubator, helping to establish several large dedicated early stage venture funds, and starting and stimulating several new businesses. Moreover, IF has been active in the development of policy initiatives to advance the national innovation agenda.

I would like to recognize the outstanding efforts and successes of the IF staff, and to commend the directors of the foundation who have demonstrated expansive vision and commitment in advancing the mission of Innovations Foundation.

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Gary Goldberg  
Chairman

## President's Message



### Highlights

- Exceler@tor business incubator opened and had 14 companies by April 2002
- A third venture capital fund formed with major bank
- New 5-year strategic plan completed and approved
- IPM-6 group fully funded for next three years by all three granting councils
- Major license agreement for salt-tolerant plants
- Launch of quarterly newsletter "The Better Mousetrap"
- Sponsored and hosted world and Canadian Business Incubator Conferences

The major goal for IF this year was to establish itself as an innovation centre by acting as a catalyst for the formation of new companies, and by bringing together technology, management and financing. IF also has begun to create partnerships with other institutions, government and private commercial interests in order to maximize the impact of knowledge generation within the University and its affiliated institutions.

The activities of the past year have responded to the following opportunities:

- Significant increase in R&D funding
- Future government funding contingent on measurable wider economic benefits
- Disclosure rate accelerating
- Effective technology transfer operation established with many strategic partnerships
- \$20+ million in capital available for business creation
- Opportunity for University to collaborate on technology transfer activities in Southwestern Ontario
- Opportunity to establish leadership role in business incubation

The year started with the formation of the concept of creating a business incubator for the ICT sector to deal with the many companies who had formed but were unable to grow without significant advice and support. The second business plan competition showed there were many companies with excellent business opportunities. The Exceler@tor was open in November 2001 to help these companies by sharing services and preparing them for the next round of financing. There were 14 companies in the Exceler@tor after only the first 6 months and already these companies were working on joint projects and some had raised new capital. The Exceler@tor was a showcase for the Foundation with the world and Canadian Business Incubator Conferences here in Toronto in the spring of 2002.

In partnership with a chartered bank we established our third early-stage venture fund, the Cotelydon Fund. This makes 4 such funds which are specifically targeted at University of Toronto start-ups. These funds have now done 16 investments in 14 companies deploying a total of \$8.5 million and securing co-investments of \$8.5 million. These 14 companies along

with the 14 companies in the Exceler@tor represent a significant portfolio of emerging businesses for the Foundation.

The multi-university group, IPM -6, had its funding renewed by all three granting councils, NSERC, CIHR and SSHRC with an increase in budget to \$1.3 million over a three year period. This group continues to meet monthly to look at early projects, bundling of technologies and sharing of best practices. This consortium model was highly praised by the granting councils who encouraged hospitals and universities to join together in regional consortia.

The Foundation's gross revenues were \$2,718,794 for this year compared with \$3,507,089 for last year for a 22% decrease. Inventors, the University and others received \$730,827 in royalties compared to \$479,899 last year for a 52% increase. The operating loss was \$779,875 compared to \$133,186 last year for a 485% increase. The Foundation decided to invest in creation of the Exceler@tor that was not in the business plan but was the best way to capture the ICT business opportunities. Nevertheless, the Foundation was able to stay within its cashflow projections.

Staff and consultants at the end of the year numbered 23 working at the level of 18 FTEs. The number and quality of invention disclosures has continued to increase but the economies of scale have been sufficient to allow the Foundation to maintain a balance and take on worthy projects. Nevertheless, the Foundation has been able to keep its expenses in line with its revenues while greatly increasing the returns to its inventors and shareholders.

Since the goals of the business plan for 1999-2004 were completed in just 2 years, a complete visioning and strategic plan process was undertaken by the Board of Directors. This resulted in a new five year Strategic/ Business Plan 2002-2007 that outlined an expansion of the scope and scale of the Foundation to meet the growing needs of the University of Toronto and the local community, as well as fully participate in the national agenda for innovation. Accordingly an increase in the operating line of credit of \$8.5 million has been approved by the University in order to achieve an appropriate scale and an international status consistent with the reputation, size, and extent of the research activities of University of Toronto.

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Dr. George Adams  
President and CEO,  
Innovations Foundation

## **A Hub for an Innovation Network: Recent Initiatives**

The following paragraphs describe an array of activities that IF has carried out in the last year. A broad range of partnerships have been established to extend the influence of our organization, and to maximize co-operation, knowledge sharing and impact, which represent operating objectives of the foundation. We are particularly proud of our efforts to initiate programs and activities that are novel, catalytic, and formative.

### **Seed and Follow On Funding: Establishment of Community Small Business Investment Funds (CSBIF)**

IF is helping to create early-stage venture capital funds that can provide the investment capital and management expertise needed for the creation of viable start-up companies. IF serves inventors as an access point for to these funds.

Through the involvement of IF, U of T has sponsored the creation of a growing number of investment funds linked to the university community, pursuant to the provincial government's Community Small Business Investment Fund (CSBIF) program. To date IF participates in 4 such funds where the defined "community" includes the University and where IF serves on the Board of the fund. More than \$20.5 million has been raised to support the funding of start-up businesses that resulted from IF activities. This pool of early stage capital has provided IF with a valuable source of funds to sustain start up companies based wholly or in part upon U of T or affiliate discoveries. To date 16 investments in 14 companies have been completed ranging from \$250,000 to \$1,000,000 and totaling \$8.5 million. These investments have leveraged an equal amount from other venture investment partners for a total investment of over \$17 million in U of T companies.

IF also intends to continue to develop its sources of domestic investment capital through CSBIF funds. In partnership with established venture capital firms, there exists opportunities to establish an additional larger CSBIF-type venture funds to service all sectors. With these funds a number of businesses can be seeded at the \$2–4 million range, which would allow for more expansive ventures to be initiated.

### **Value-Added Fund (IPM)**

The Intellectual Property Management Group (IPM) is an additional service that IF offers. The IPM project is funded by NSERC and CIHR to the amount of \$1.3 millions over 3 years to encourage co-operation between universities in technology transfer. IF operates this program, in conjunction with McMaster, Ryerson, York, Brock and Windsor. It has been shown to be very effective in helping projects get to the commercialization stage. It is the nature of university-based discoveries that they are early-stage and need additional development.

The IPM fund has seen an 8:1 leverage of its investment in projects with follow-on funding from traditional financing sources. Through its participation in the IPM fund, IF has acquired an expertise in selecting projects that would benefit from value-added investment. A value-added fund would enable discoveries to reach a level of development at which they can attract funding. In addition, this fund is a mechanism to attract good inventions if sufficient resources are available to invest in the opportunity.

### **Incubation: The Excelerator**

In November 2001, IF opened its Information and Communication Technology (ICT) incubator, called the [Exceler@tor](#), housed within the IF offices, adjacent to campus. It supports start-up companies. These physical premises are state-of-the-art and offer exceptional facilities, hardware, networking and mentoring infrastructure for the “exceler@tee” companies. It is being recognized as a flagship enterprise that is developing as a focal point in the Toronto region for start-up activity and technology networking in this sector.

IF needs to continue to add value to projects by incubating those companies that qualify and assisting them to become profitable businesses. The very nature of disruptive and early-stage discoveries that arise within a university means that careful stewardship of resources will be required in these companies. It has been demonstrated on numerous occasions that appropriate incubation of early stage companies significantly increases their chances of success.

The best practices for incubators indicate that incubators should be 30,000 sq. ft in size in order to be self-sustaining and efficient. The [Exceler@tor](#) is currently 12,500 sq. ft and so must grow to be truly viable. There are still many companies who wish to move into the [Exceler@tor](#) and we will continue to create new space to meet companies’ needs. To maintain current momentum and become a hub for ICT start-ups in Toronto and Southern Ontario, it will need to grow substantially.

IF is striving become a coordinator of the innovation process. It does not need to perform all the steps itself but it needs to establish itself as a hub in a network of very competent service providers. By creating and operating a major business plan competition and [Exceler@tor](#) incubator IF has demonstrated a leadership role in the innovation process.

### **Biotech Cluster Development**

Canada’s Innovation Strategy promotes the development of “clusters”. The Toronto region has the existing infrastructure and resources to be a global biotechnology center. To advance this objective, IF played a co-coordinating role in BIO2002. IF staff served on the Program Committee and TT Assessment Committee for BIO2002 and were instrumental in obtaining a prime booth space for U of T and the affiliated hospitals within the Ontario Pavilion. IF helped to organize all the institutions under one banner called BioDiscovery Toronto and has established a website for the group ([www.biodiscoverytoronto.ca](http://www.biodiscoverytoronto.ca)).

The dynamics are favourable in Ontario to stimulate “cluster” growth in the biotechnology field in downtown Toronto and other satellite areas, and to target a global leadership position in biotechnology. There are growing opportunities to act as a coordinator and service provider for cluster activities like MARS and other potential cluster areas.

### **Credibility with Clients: Faculty Contact and Education**

Over the past two years, IF has significantly improved its profile and credibility with its client groups. Confidence among faculty in IF’s capabilities has been enhanced by outreach efforts, and more significantly by a series of commercialization successes.

The professionalism, expertise and scientific knowledge of the staff have earned wide respect among the faculty. This confidence of faculty that our technology transfer staff understands their

work and their issues of concern are a significant advantage that IF maintains over other commercialization groups. This has translated directly into an increased number of disclosures, creating a workload that now challenges IF's capacity. The IF team has had one-on-one encounters with almost 500 faculty members.

One on one interaction remains the best way to identify the research with commercial potential and to educate faculty about the benefits of commercialization. This requires time and well-trained staff. While it is difficult for the existing 13 commercialization officers to meet 2500 researchers each year, steps are being taken to target research clusters and the 'stars' within them.

As an improvement on the conventional 2P "Publish or Perish" approach, IF advocates a contemporary 3P policy, namely, "Patent. Publish. Prosper" (The order of operations is very important!). IF has established a quarterly newsletter, *A Better Mousetrap*, to provide practical information its technology transfer activities and to publicize and document its successes.

Credibility with the Toronto venture capital community and the local industry has also been strengthened. New staff members have brought with them a combination of contacts and a profound understanding of how these groups do business. New initiatives, such as the business plan competition, have increased the profile of IF within the business community and created new connections, synergies and ultimately new sources of funding.

### **Consolidating Operations: Building an Organization**

The organization of the technology transfer function at the University of Toronto encourages full coordination between the Business Development Officers (BDOs) and IF staff. This integration, which resulted from the creation of UTech Services, works very well from the faculty/researchers viewpoint by providing "one-stop" service.

In response to the rapid growth occurring, and the expectation of continued substantial growth, the position of Chief Operating Officer was created. Dr. Adi Treasurywala is the COO and is implementing internal organizational systems, documentation and project controls, which include the development of a centralized Contact Database, an Electronic Document Management System, a new accounting system and a Disclosures Monitoring System.

As IF expands its services, demand is expected to grow from other potential customer bases, including satellite campus activity at UTM in particular, other universities, hospitals and institutes.

The external client base of VC's and investors are recognizing the value of the due diligence work, packaging, and value adding that IF is doing on the early stage technologies that it is brokering. Increased efficiencies are still possible by building more alliances with other technology transfer offices, angel investors, management pools and other university departments. Leverage of connections and contacts through the formation of such working alliances is essential.

### **Training Technology Transfer Professionals**

IF participated in a consultation, which was led by the Ontario Science and Innovation Council on commercialization prior to the last Ontario budget. The first recommendation was to train additional experts in technology transfer as all sectors and participants—SMEs, hospitals,

universities, venture capitalists and government research agencies—were short of these staff. There were no funds assigned to this concerning gap in the commercialization infrastructure.

IF undertook to prepare a proposal to establish a training program. This proposal has been sent to all the participant groups and has received widespread support throughout Ontario. We are seeking funding from both levels of government for such a program.

### **Mentoring Resources for Start-Up Businesses**

The experience with start-up businesses has shown that they require executive assistance for one to two years after start-up. Those commercialization groups that provide this support experience an 80% survival rate for early-stage companies while those who do not have a 20% survival rate. Given the investment IF makes in these companies, it needs to maximize their chances for success. Many service providers consider it a benefit to be associated with the University and IF. Experienced professionals in the legal, accounting, marketing, public relations and financial sectors are willing to help these companies provided IF takes on the role of coordinator. This represents further investment of resources in our start-up companies but also represents an opportunity to further engage the Professional Services community and become a hub for innovation activity.

### **Business Plan Competition**

The 2<sup>nd</sup> annual Business Plan Competition was a really community event and over 30 business plans were submitted. The Innovations Network and Business Plan Competition Supporters include:

- Brightspark, TRIAX New Millennium Internet Fund, University Medical Discoveries Fund, TRIAX New Generation Biotech Fund and The National Research Council of Canada, as principle sponsors;
- IRAP, Compaq, Microsoft, Gowlings Lafleur Henderson, Sim & McBurney, Venngo, ITPR and Deloitte & Touche, in the form of sponsors providing goods and services prizes valued in excess of \$200,000;
- Canadian Youth Business Foundation (CYBF), providing seed funding for young entrepreneurs under the age of 29.
- Strategic Health Innovations, SMART Toronto, U of T Entrepreneurs Club, Venture Cluster, Toronto Venture Group, QCED and Liberty Village New Media Centre also join the Innovations Network as new associates who will allow their members to join the main competition and have special categories for prizes of their own.

The top plans were selected by the venture capital partners in a three step process which included on-line judging, group judging and finally a pitch contest with the top plans.

The winners for “Most Promising Business” include:

1. **TRANSGAMING TECHNOLOGIES**, developers of WineX, a software solution which allows gamers to run Windows-based games on the Linux operating platform seamlessly and transparently



2. **iX RESEARCH**, creators of **AEROSOLVE**, an air abrasion system that significantly improves existing air abrasion designs for dentistry
3. **VECTOR INNOVATIONS**, creators of a software solution that replaces existing paper-based processes for long-term health care facilities.

The winners for “Most Promising Technology” include:

1. **BOOLEAN PROTEOMICS**, creators of a novel molecular profiling process for drug discoveries
2. **ASTEBRO BERNHARDT Ltd.**, creators of credit scoring solutions for accessing credit risk of small start-up businesses
3. **B-INNOVATIVE, Inc.**, developers of an Avatar, a Knowledge Management initiative that automates transformation of captured information into the time and context of the user persona.

The Business Plan Competition continues to be an excellent vehicle for stimulating entrepreneurship and financing of new businesses. Transgaming and Vector have received seed investments and Boolean has received a term sheet for a \$2 million investment.

### **Start-up Activity**

Our first start-up business, Neteka, has implemented its technology in three top-level country registries in three different parts of the world. For the first time ever, people can have an internet address in their mother language with the extensions dot.bz, dot.tv and dot.sg. The second start-up business, BIOX Inc., which converts waste grease and animal tallows into biodiesel fuel, has raised additional capital, taken assignment of the patents and is building a commercial-scale plant. With proven technology and interest from all over the world, the future looks very bright for this company. Our third full start-up was Interface Biologics which has a series of technologies for improving biomaterials used in medical devices and drug delivery systems.

As the initiator of BIOX, the biodiesel business, and fuel cell workshop have also identified IF as a source of innovative technologies and business opportunities in the energy sector. Collaborating with various stakeholders to amass resources enabled the success of all of these projects. It would have taken more resources than IF possesses to do these projects alone. This approach needs to be expanded to incubation and value-added consulting services for start-up companies to ensure maximal success rates.

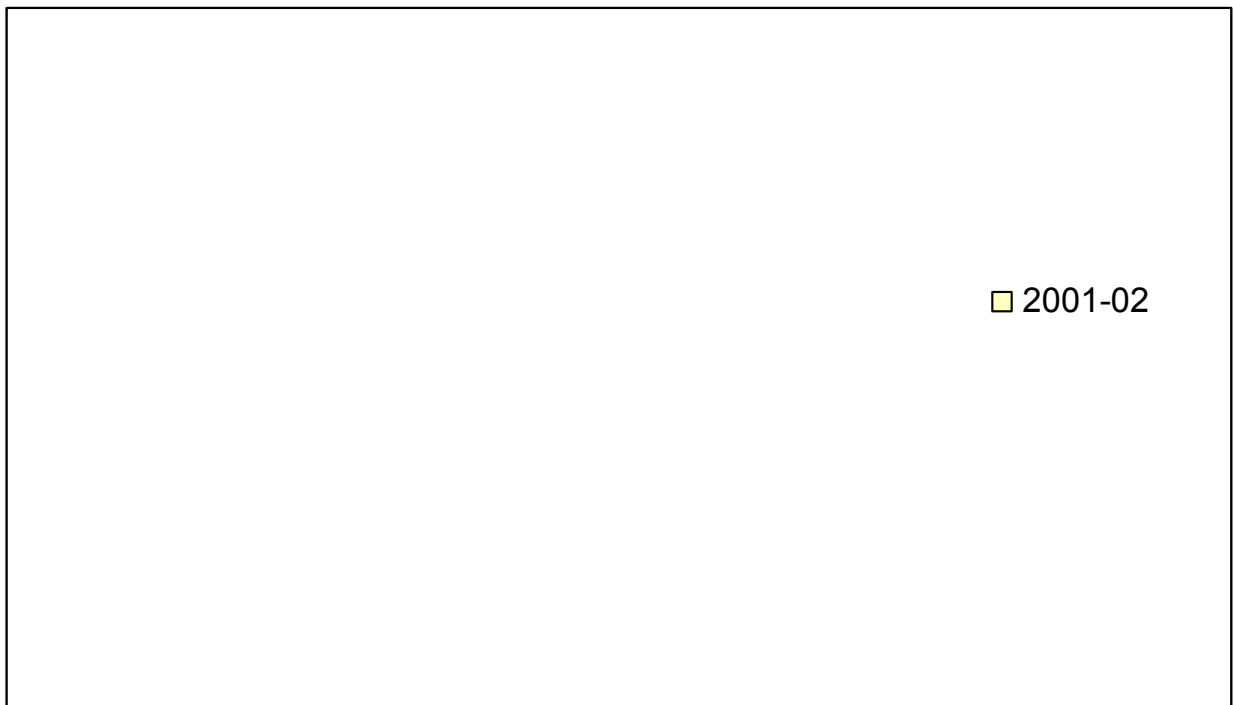
### **Licensing Activities**

The Innovations Foundation continued to license technologies where business creation was not possible. During the year a major license was signed for the salt-tolerance gene which allowed all plants to grow in salty soils. Salt build-up in soils is a global problem with over 30% of the arable soil experiencing reduced yields due to salty soil. Seaphire International is now transforming plants to conduct field trials in 2003. Our license portfolio continues to mature with many technologies entering the product evaluation stage.

## Financial Review

The business projections established in the 1999-2004 business plan anticipated an investment in projects and the operations of the Foundation. The plan called for an increasing amount of retained revenues and a line of credit to fuel this growth. As can be seen in the figure (below), the total revenues (TRev) have grown each year. The actual retained revenues (RRev-act) exceeded projected retained revenues (RRev-proj) each year and show a positive variance (RR-var). These increased resources were used to grow the Foundations operations faster than had been projected to meet demands of a three-fold increase in invention disclosures over the same period.

### Analysis of Actual Against Projected Financial Results 1999-2002



The actual expenditures (Exp-act) have increased each year as projected. In the first year of the plan, 1999-2000, the actual expenditures were less than projected (Exp-Proj) for a positive variance (Exp-var). In the second year of the plan, 2000-2001, the actual expenditures were as projected. This the third year of the plan had much larger expenditures than projected.

The revenues minus expenditures (net) were positive for the first two years and negative this last year. The cumulative effect (cum) was a negative balance relative to projections.

The decision to invest in the creation of an ICT business incubator, the Exceler@tor, was responsible for the increase in expenditures this year. All other operations of the Foundation were consistent with the original plan. The Exceler@tor was not part of the plan but was regarded by the Board of Directors as a strategic opportunity not to be missed.

## **Conclusion**

Innovations Foundation has progressed significantly in the last fiscal year. Its clients now regard it as a preferred partner and many refer their colleagues to the Foundation. There is still a lot of work ahead to “maximize the impact” of the University of Toronto on the global stage. I know all of us here at the Innovations Foundation are looking forward to doing our part to create a center of innovation at University of Toronto. We would like to thank all those who have partnered and supported the activities of IF and assisted it to fulfill its mission.

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