Meeting the HR needs of the bio-economy

BioTalent Canada
Accomplishments Report 2011

BioTalent Canada
Building skills for Canada’s bio-economy
Cutting across virtually every established and emerging economic sector and generating products and technologies in demand globally, Canada's bio-economy is an economic powerhouse—representing the second-highest concentration of biotechnology in the world. Spanning a vast range of industries, it contributes 6.4% of the national GDP. The federal government is committed to increasing Canada's global competitiveness in innovation by relying heavily on the bio-economy's current strength and its future potential.

Talent is essential for bio-economy companies to realize that potential: an abundant supply of skilled, capable, ready-to-work professionals to execute companies' innovation agendas and drive the commercialization of new products and services. BioTalent Canada's labour market report in 2008 noted that 34.4% of companies are dealing with skills shortages.

As the HR hub of the country's bio-economy, BioTalent Canada™ identifies the skills employers need, connects those employers to qualified talent, and provides them with the tools to manage their human resources effectively.

By doing so, we not only contribute to the strength and growth of the bio-economy but also to the competitiveness and prosperity of Canada as a whole.
Helping bio-economy companies achieve their business goals

The overwhelming majority of firms in the bio-economy are small and medium-sized enterprises (SMEs). Eight out of 10 have fewer than 50 full-time employees. Widely recognized as engines of innovation, these lean, agile companies run to a large degree on inspiration—with many people wearing many hats to get each day’s work done.

Bio-economy SMEs seldom have the resources or in-house skills to focus on HR. Their founders and executives tend to be scientists and researchers, not managers or HR specialists. The bulk of their budgets is poured into R&D, product development, commercialization and business development activities. Many of the companies are ‘pre-revenue’, meaning they survive by drawing on investors’ money and are extremely careful about how they spend.

More than just resources

While these SMEs lack HR capacity, it is nonetheless vitally important to their success. A company’s ability to attract and develop talent is often what makes the difference between survival and failure. Today, more than 35% of Canadian bio-economy firms lack the full set of skills they require. An equivalent number say they can’t find appropriately qualified candidates when they go looking, and 55% need to outsource skills and tasks.

In the five years since BioTalent Canada emerged from the former Biotechnology Human Resources Council, it has been working to meet these SME requirements, becoming the bio-economy’s single, trusted go-to source for practical HR solutions. More than just tools and resources, BioTalent Canada delivers programs that provide active support—allowing it to serve, in many ways, like a free outsourced HR department to these companies in need.

Where industry turns for HR support

BioTalent Canada has seen a steady—and sometimes sharp—rise in use of its many products and programs, a clear sign that they are filling important industry needs.

Key Stats

- Ongoing increase in resource downloads—from 31,792 in 07-08 to 168,346 in 10-11 with a rise of 138% over the last year alone.
- 63% increase in employer use of The PetriDish since 2008, when it was integrated into biotalent.ca
- 55% increase in job seeker use of The PetriDish since 2008
- Industry participation in BioTalent Canada activities, specifically Skills Profiles development (365) and use of services (1,649)
- Publication of Canada’s first statistically significant national labour market information study (and regional companion piece)
- More than 470 employers use The PetriDish national bilingual job bank
HR: The bio-economy context

The HR requirements of bio-economy companies are not exclusive to scientific or research-based roles. Corporate functions like marketing and communications, sales and manufacturing are all important skills areas. What makes the bio-economy distinct is that individuals filling these roles must also have some awareness of biotechnology and its specific requirements. They have to fit seamlessly into the bio-economy context.

The big-picture perspective

To gain a fuller understanding of bio-economy HR requirements, in 2008 BioTalent Canada undertook the country’s first-ever national labour market information (LMI) study of the sector. The resulting report, Splicing the Data, pinpointed the greatest areas of skills shortage and shed light on the Catch-22 challenge many bio-economy companies face, namely that to attract capital they need strong teams, yet to attract strong teams they need sufficient capital.

That LMI produced a significant return on investment for BioTalent Canada. It was widely taken up by industry and spun off into a companion piece that broke the data down region by region, exposing variations in needs across the country. Most importantly, it provided a previously unavailable baseline of data on which to develop targeted HR strategies for the sector. BioTalent Canada plans to build on the success of that original report by updating its LMI information in 2011-12.

Engaging with industry

To further ensure that its solutions meet companies’ real-world requirements, BioTalent Canada actively involves industry in the development and, in some cases, delivery of its offerings. This was the approach it took in 2009, for example, when it set out to assess the challenges and opportunities associated with Canada’s growing bioenergy, biofuels and industrial sector.

Based on a survey of industry members, BioTalent Canada’s Generating Opportunity report identified the actions companies felt were needed to help them achieve their HR targets. Several of these—such as a wage subsidy program—were already available at the time and have since gained profile (for example, Career Focus). Others have since been launched, including the BioSkills Recognition Program to help employers identify BioReady™ job candidates, and skills profiles tailored to bio-economy occupations. The result was a significant increase in new bioenergy companies using the program. Going forward, BioTalent Canada is basing all of its bioenergy initiatives on research and input from the sector.

Meeting the HR needs of the bio-economy

The BioTalent Canada labour market information study provided a previously unavailable baseline of data on which to develop targeted HR strategies.

Skills Required in Biotechnology

<table>
<thead>
<tr>
<th>Skill</th>
<th>Somewhat or Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of the industry</td>
<td>91.2%</td>
</tr>
<tr>
<td>Management/Leadership</td>
<td>91.2%</td>
</tr>
<tr>
<td>Business development</td>
<td>82.1%</td>
</tr>
<tr>
<td>Marketing/communications</td>
<td>81.6%</td>
</tr>
<tr>
<td>Partnership networking</td>
<td>75.9%</td>
</tr>
<tr>
<td>Reading/writing skills related to the comprehension of Good Manufacturing Practices (GMP)</td>
<td>74.4%</td>
</tr>
<tr>
<td>Commercialization</td>
<td>72.8%</td>
</tr>
</tbody>
</table>

Source: Splicing the Data report

Canada’s first bio-economy LMI report

Since their publication in 2008, approximately 3,900 copies of Splicing the Data and its regional companion, Segmenting the Data, have been distributed in hardcopy format—and more than 8,110 electronic versions have been downloaded from www.biotalent.ca/reports. This uptake is clear indication of a desire throughout the bio-economy for insight into HR trends and needs so that informed action can be taken.
Based on a survey of industry members, BioTalent Canada’s *Generating Opportunity* report identified the actions companies felt were needed to help them achieve their HR targets.
Attraction and retention

The challenge for the bio-economy is twofold. On the macro level, it’s a matter of drawing skilled, committed professionals into the field. Company by company, it’s about finding the right candidates for specific positions and being able to offer what it takes to keep them.

Bringing talent to the sector
BioTalent Canada maintains programs to stimulate students’ interest in bio-economy careers, facilitate the integration of internationally educated professionals (IEPs), and transfer workers such as medical specialists and laboratory technologists into the bio-economy from other sectors through the BioSkills Transfer Tool. It also provides company-level guidance on effective HR management.

BioTalent Canada recently launched a skills transfer initiative that helps manufacturing workers migrate out of traditional industries and into the bio-economy where their knowledge and skills are desperately needed. The program supplies bio-economy companies with the human resources they seek and helps offset unemployment caused by job losses in sectors in decline. Unlike retraining initiatives—which can be time-consuming and expensive, and require people to reinvent themselves professionally—skills transfer allows workers to continue doing what they’re used to in a new context.

Who is BioReady?
The bio-economy often has special requirements that have to be accounted for. To help employers determine which job candidates are ready to work in the bio-economy, BioTalent Canada co-developed with industry the BioSkills Recognition Program. It allows anyone entering the bio-economy workforce—including new graduates and IEPs—to be recognized by an industry-led Competency Committee as BioReady for a particular function. Employers can be more confident that their new hires have the skills they need to contribute—and workers who aren’t BioReady are referred to a range of skills development resources offered by BioTalent Canada to fill the gaps in their capabilities.

HR management in a box
Because bio-economy companies often lack internal HR management and expertise, BioTalent Canada developed the BioTalent HR Tool Kit, a compendium of best practices for recruiting, retaining and overseeing personnel. It covers basics including benefits and compensation as well as emerging issues such as how to integrate IEPs or guide a team through corporate change. Available free of charge to anyone in the sector, more than 62,600 copies of the different modules of the BioTalent HR Tool Kit have been downloaded since September 2008.
Industry-led and industry-driven: BioSkills Recognition Program

Bio-economy business leaders from across the country participated in Skills Profile consultations to arrive at the definition of exactly what it means for job candidates to be BioReady. Panels of industry members also donate their time to the program’s Competency Committee, reviewing job seekers’ submissions to determine if they meet the criteria. It’s an exceptional level of involvement that reflects the value industry places on having such a program available.
Hitting the ground running

While SMEs are the generators of much of the country’s bio-economy innovation, it is large companies that have the means to take those new technologies to market, often adopting them once they reach a point of sufficient maturity. By making sure SMEs have the talent to do the groundwork R&D by providing HR capacity, BioTalent Canada contributes to the economic benefits realized when large companies commercialize and roll out new Canadian-made solutions.

Lower risk, greater rewards
To carry out their innovation mission, SMEs need their teams to be productive from day one. They don’t often have the time or resources to invest in gradual acclimatization and on-the-job skills development. Yet few new grads leave post-secondary programs fully prepared to step into bio-economy jobs. To help companies acquire fresh graduate talent and offset the training burden, BioTalent Canada delivers the Career Focus Program. Career Focus subsidizes the employment of recent graduates for a period of 12 months so that companies can hire early, take the time to develop personnel, and give new workers the opportunity to gain invaluable career experience.

Giving young talent a head start
In support of its mandate to stimulate interest in bio-economy careers, BioTalent Canada launched the BioTalent HeadStart program in 2010, giving post-secondary students still at school the opportunity to volunteer their time and gain practical exposure to work in the bio-economy. Through BioTalent HeadStart, companies with specific projects to complete—in any area of the business, from administration, or research to marketing to website development—are assigned student volunteers enrolled in relevant programs. It’s a win-win scenario in which young people gain bio-economy experience and companies advance important initiatives at no cost.

Fostering the scientific spirit
BioTalent Canada also contributes to the country’s innovation capacity through its support of the Sanofi-Aventis BioTalent Challenge (SABC), a nationwide bio-science competition now into its second decade. The SABC gives budding scientists—high-school students who over the years have brought forward some truly groundbreaking research—the opportunity to work under the guidance of a professional industry mentor to investigate a particular bio-science topic. Thousands of students have taken part—with past finalists researching everything from potential treatments for cancer and Alzheimer’s disease to innovative bio-energy applications. Beyond showcasing young Canadians’ achievements, the competition serves as a gateway into the bio-economy for the next generation of innovators.

As a longtime supporter of the Sanofi-Aventis BioTalent Challenge, Canada’s national biotechnology science competition, BioTalent Canada is helping attract young people to bio-economy careers.
Building capacity for innovation

Focus on results: Career Focus

The effectiveness of the Career Focus Program is demonstrated by the fact that nearly 100% of the participants who have completed the program to date have been hired full-time by the companies with which they were placed. Many participating companies—from sectors as diverse as aquaculture, genomics or pharmaceuticals—have said they would not have hired at all without the subsidy; and graduates acknowledge it would have been a challenge for them to find equivalent work experience on which to build their careers.
Engagement and adoption

While BioTalent Canada has done much to support bio-economy companies’ growth and development, it has not done so alone. Partnership and collaboration are essential to strengthening the sector’s human resources capacity—with industry, academia, government and other employment-focused agencies.

A national facilitator

BioTalent Canada is uniquely positioned to facilitate and coordinate partnership initiatives among bio-economy stakeholders. With industry, it develops the tools needed to address known needs—and gathers the information to identify requirements not yet on the radar. It is committed to bringing industry and educators together to ensure that curricula produce graduates with the full set of skills the workplace will require. And it is dedicated to sharing insight into the needs of the bio-economy so that policy makers can foster the growth and development of Canadian bio-businesses.

From contribution to use

Collaboration raises awareness of BioTalent Canada’s offerings among those for whom they were created. Industry participation in developing the organization’s Skills Profiles—a process that will continue as more occupations are added to the list—is translating into widespread uptake of the profiles defined to date, with 22,845 downloaded since their introduction in 2009. The positions detailed so far include Chief Executive Officer, Vice-President of Manufacturing, Regulatory Affairs Specialist, Intellectual Property Officer and Laboratory Worker. Another 19 skills profiles are slated for distribution in 2011-12.

Making connections

As BioTalent Canada develops more offerings, the linkages between them are becoming clearer to users. The Skills Profiles, for example, directly inform the review criteria applied by Competency Committees in the BioSkills Recognition Program. And a new offering to be launched within the next year, BioSkills Match™, will actively connect employers seeking candidates with those BioReady job seekers registered in BioTalent Canada’s database.

One of the most enduring and best-known resources developed to date by BioTalent Canada is yet another ‘connector’, The PetriDish™ online job bank. The number of employers using The PetriDish has risen by 63% since the tool was integrated into biotalent.ca in 2008, with over 475 employers now registered.

**Skills Profiles summaries**

These companions to the full Skills Profiles provide a handy checklist for bio-economy employers of what candidates need to bring to a given role.
CEO’s and other industry leaders volunteered two days of their time to participate in an intensive process of defining the unique occupational requirements for the first set of Skills Profiles issued by BioTalent Canada in 2009. That commitment was a direct reflection of the industry’s need for profiles that, unlike those provided in existing NAICS and NOCs definitions, address the distinctive characteristics of bio-economy positions.
Next steps

People are the engine of innovation. Their talent, experience, skill and creativity that determine the success of bio-economy companies. This recognition underlies every aspect of BioTalent Canada’s work over the past five years.

Going forward, the organization will continue to strengthen the HR skills and capacity of the bio-economy by developing new programs and resources—such as a soon-to-be released BioTalent GMP Tool Kit and GMP Skills Check for biomanufacturing firms, a dynamic Ask BioTalent web feature and mobile app that allows stakeholders to ask questions and be directed to the right resources.

Ask BioTalent underscores the central importance of the organization’s website in all of its endeavours: if BioTalent Canada is the HR hub of the bio-economy, then biotalent.ca is the hub of BioTalent Canada. It is, and will continue to be, the one, single source from which all bio-economy stakeholders can draw and use the HR tools they require.

Canada is predicted to face shortages of the skilled human resources so important to the long-term success and viability of the bio-economy. Attracting and retaining talent is essential to innovation and increasing the global competitiveness of Canada's biotechnology industry, ensuring the country’s ability to build on its advantages and stand as a leader in the bio-economy.

Working in partnership with key stakeholders, employers and new employees, BioTalent Canada will be part of the HR solution in the continued growth of our knowledge-based economy.

Innovation is powered by people

If BioTalent Canada is the HR hub of the bio-economy, then biotalent.ca is the hub of BioTalent Canada.
BioTalent Canada Accomplishments Report 2011

BioTalent Canada Programs/Tools

- The PetriDish™ online bilingual job bank integrated into www.biotalent.ca
- Career Focus Program
- BioSkills Recognition Program
- BioSkills Match™
- Bio-economy Skills Profiles
- Bio-economy Skills At-a-Glance
- BioManufacturing Transferable Skills
- Laboratory Workers Transferable Skills
- Medical Specialists Transferable Skills
- Making Sense of Biotechnology course
- Bio-economy Language Instruction course
- GCP, GLP and GMP courses
- BioTalent GMP Tool Kit
- BioSkills Transfer Tool
- BioLanguage
- BioWorkplace
- BioDocuments
- BioSmarts
- BioSynergy
- GMP Skills Check
- BioTalent Tool Kit
- Culpepper BioTalent Compensation Survey
- Health benefits program
- Ask BioTalent
- Bio-economy Career Profiles
- BioCareer Pathways
- Sanofi-Aventis BioTalent Challenge
- BioTalent Quest
- BioTalent HeadStart program

Typical HR Functions Being Addressed

- Identify skills requirements
- Post employment opportunities
- Pre-screen applicants
- Assist with decision to recruit
- Create awareness of needs areas to attract best applicants
- Advise job seekers on potential employment opportunities
- Manage performance and rewards
- Manage learning for talent development
- Plan workforce
- Design and develop organization
- Move talent to areas of critical need
- Advise employers of best practices for recruitment
- Advise employers of best practices for retention
- Manage learning for talent development
- Manage performance and rewards
- Manage employee relations
- Design and develop organization
- Create awareness of needs areas to attract best applicants
- Manage learning for talent development
- Manage employee relations
- Plan workforce

Research and reports are at the foundation of BioTalent Canada’s programs and tools

- Splicing the Data - The critical role of human resources in Canada’s bio-economy: A labour market report
- Segmenting the Data - Regional labour market information on biotechnology in Canada
- Generating Opportunity: Human resources needs in the bioenergy, biofuels and industrial biotechnology subsectors
- Bridging the Divide - Creating opportunities for the Aboriginal Peoples of Canada to enter the bio-economy
- Experience Biotechnology - The Sanofi-Aventis BioTalent Challenge Developing talent for the future
- The Experience Quotient - How to ensure new graduates are adequately prepared to work in Canada’s bio-economy
- Mapping the Sequence - A labour-market look at Canada’s bio-economy
- Biotechnology Job Titles
- Recognizing Talent - Capitalizing on the skills of foreign-trained professionals for a vital bio-economy: A strategic analysis
- Bio-economy cluster map
- Bio-economy HR ecosystem map
The Board of Directors is composed of experts in the field of HR, CEOs, CFOs and CSOs from across Canada with extensive financial and industry experience representing companies and organizations in Canada’s bio-economy. BioTalent Canada is not a membership organization and therefore relies on the guidance provided by its dedicated volunteer Board of Directors.

Bob Ingratta (Chair)
President
Fast-Trak Strategies
Vancouver, BC

Francois Schubert (Vice Chair)
General Manager, Administration
The Research Institute-McGill University Health Centre
Montréal, QC

Christopher Adams (Treasurer)
AdamsRevers
Toronto, ON

John McMillan (Past Chair)
Winnipeg, MB

Norma K. Biln
Chief Executive Officer
Augurex Life Sciences Corp.
North Vancouver, BC

Anne-Marie Bonneau
Vice-President & COO
Aurelium BioPharma Inc.
Montréal, QC

Paul Braconnier
President, CEO & Co-founder
Global IQ Inc.
Edmonton, AB

Patrick Girouard
President
AgroNovita Inc.
Ottawa, ON

Denis Kay
Chief Scientific Officer
Neurodyn Inc.
Charlottetown, PE

Wilf Keller
President and CEO
Genome Prairie and Ag-West Bio
Saskatoon, SK

Steven Klein
Director, Business Development
Labopharm
Laval, QC

Janet LeClair
Director, Strategic Development
ventureLAB
Toronto, ON

Lucie Morin
Human Resources BioScience Consultant
Charlottetown, PE

Julia O’Rawe
Head of HR Canada
sanofi aventis and sanofi pasteur
Toronto, ON

Jim Smith
Executive Director
Food Technology Centre, Prince Edward Island
Charlottetown, PE

Lee D. Wilson
Assistant Professor
Department of Chemistry
University of Saskatchewan
Saskatoon, SK

Michael D’Amico
SVP, Human Resources and Organizational Effectiveness
Iogen Corporation
Ottawa, ON

Acknowledgements
BioTalent Canada would like to thank everyone who has contributed to these accomplishments, especially those who have volunteered their time to help develop its many resources.