Minutes of the working group meetings held June 24-25, 2013

- Selling/Branding
- Commercialization
- Financing

July 5, 2013
About the Toronto Region Board of Trade Cluster Initiative

The Toronto Region Board of Trade has launched an ongoing cluster initiative with the tagline “Collaborate to Compete”. The Board is fostering a spirit of collaboration by helping GTHA cluster participants come together to accelerate innovation and the growth of their industries. ‘Cluster’ approaches to economic development have proven internationally to be one of the strongest avenues to the creation of new, higher paying jobs through increased regional business growth and productivity. It is a common-sense approach, based on standard business strategic and tactical planning best practices. Focus first on areas of strength, work to make them stronger and more connected to other assets and the needs of customers, then identify and address strategic gaps or weaknesses to make the whole “ecosystem” stronger.

The Board has engaged its members, business leaders, influencers and academics to assess their readiness to collaborate and advance the business strategies needed to improve the city-region’s productivity. Out of this came a focus on two clusters: Human Health Sciences and Food & Beverage. For the Human Health Sciences Cluster, an independent industry-led steering committee (chaired by David Naylor, President of the University of Toronto and Elaine Campbell, CEO of AstraZeneca Canada) is setting the strategic direction and guiding the work of three working groups.

Human Health Sciences Cluster Steering Committee

David Naylor  Co-chair, President, University of Toronto  
Elaine Campbell  Co-chair, President, AstraZeneca Canada  
Robert Bell  President & CEO, University Health Network  
Eric Berke  Managing Partner, Torquest Partners  
Ghislain Boudreau  Vice President, Public Affairs, Pfizer  
Ungad Chadda  Senior Vice President, TMX Group  
Paola Cipolla  Audit Leader, Biotechnology Industry, GTA, KPMG  
Michael May  CEO, Centre for Commercialization and Regenerative Medicine  
Thomas P. Reeves  President, Interface Biologics  
Beni Rovinski  Managing Director, Lumira Capital  
Anne Snowdon  Chair, Ivey Centre for Health Innovation and Leadership  
Ilse Treurnicht  CEO, MaRS

Questions and Feedback to:

Chris Holling, Director, Economic Development, Toronto Region Board of Trade  
416.862.4513, cholling@bot.com
Strategic Intent and Vision

Strategic Intent of the Toronto Region Life Sciences Cluster Initiative

The Life Sciences Cluster Initiative is a multi-stakeholder effort that has been launched by the Toronto Region Board of Trade. It has drawn together leaders of organizations and enterprises active in the broad health sphere in the Toronto region, with a view to developing plans and programming that will accelerate the development of a world-class economic cluster. In this respect, the Board is motivated by a widespread perception that, for biosciences and the broader field of health-related commercial activity, the whole remains less than the sum of the parts in the Toronto region. The strength of the Region is enormous, but limited convergence means that we do not capitalize fully on the breadth and depth of R&D and growing entrepreneurial energy in the Region. Similarly, a variety of intermediaries and brokers ably champion the interests of subgroups within the broad health field. However, we are still not telling a consistent and coherent story about health-related economic activity in the Region and its extraordinary global potential.

The goal of this Initiative is to reach agreement on a set of action-oriented projects with well-defined business plans that can be implemented drawing primarily on existing resources - including the investments already being made in advocacy and coordination by subgroups in the broad health sector. Any projects should ideally accelerate the process of convergence across the cluster by making new connections and filling gaps in the cluster’s ecosystem. They should also aim at improving the ‘brand’ and strengthening the narrative of the Toronto life sciences cluster as a whole.

In the short run, impact will be measured more in terms of structures and processes that move us towards broader economic goals. Obviously, the longer-term goals are to see the cluster grow and develop, with a stronger research base, increased rates of commercialization, more start-up companies, greater investment in mid-sized and large companies in the Toronto region, and all the resulting knock-on effects in jobs, opportunities, prosperity, and positive health outcomes for individuals and communities.

Vision for the Human Health Sciences Cluster in 2025

In 2025, the Toronto Region is globally renowned for its dynamic and innovative Human Health Sciences cluster. We created more opportunities, more linkages, and a more visible global presence that has resulted in a thriving scientific and business environment, and a healthcare ecosystem that is in the top five of global human health sciences clusters.

Across the cluster there is a strong understanding of global market opportunities for health solutions spanning all medical and related technologies. Convergence within the cluster has resulted in successfully winning and expanding share of these markets and bringing wealth into the region in the form of knowledge jobs, capital investment, and revenue growth. This has been achieved by fully capitalizing on the breadth and depth of discovery and applied R&D and the entrepreneurial energy that has developed.

There is a strong long-term strategic relationship among companies and academia that has removed many barriers to commercialization while protecting academic integrity and promoting fundamental bioscience research. These strong incentives are further leveraged because the region’s financial services cluster is providing access to risk capital and has the specialized skills required to evaluate investment opportunities in the cluster. Early stage companies are being formed at an increased rate and many more of them are growing to become established companies. There are new investments by major multi-national players in health who now recognize Toronto as one of their global research centres of excellence.
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Introduction and Action Initiatives Summary

The main purpose of this report is to document the discussions that were held among members of the Toronto Region Human Health Sciences cluster on June 24 and 25, 2013 at the Toronto Region Board of Trade (TRBOT). In addition, this report captures the action initiatives that were generated by each of the three working groups. The mandates and interrelationships among the working groups is illustrated in Figure 1.

Following the best practices of other successful cluster initiatives around the world, each of the action initiatives needs to have an identified champion, team members, business plans and a sense of timing. The role of champion is to serve as single point of coordination and management of the task, reporting to the Human Health Sciences steering committee. The process is still in early stages, so the fact we do not have many identified champions is to be expected. In fact, it is this document and the listing of initiatives that will be used to expand awareness and lead to the self identification and/or recruitment of champions. Ultimately, action initiatives without champions will be taken off the active implementation list.

These initiatives will be reviewed at the next Steering Committee meeting on September 11, 2013 and further guidance on next steps will be provided after that meeting.

In the meantime, to volunteer for either a leadership or team member role, please contact Chris Holling, TRBOT (416.862.4513, cholling@bot.com), Alternative contacts are Richard Joy or Carol Wilding or any member of the steering committee.
### Table 1 Selling/Branding Working Group Action Initiatives

<table>
<thead>
<tr>
<th>Initiative Description</th>
<th>Champion</th>
<th>Team Members</th>
<th>Status</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB1. Develop a short vision statement and standard cluster initiative presentation materials.</td>
<td>Chris Holling, (TRBOT)</td>
<td>TRBOT staff, Sean Kelly (Pfizer), Karen Michell (CAHO),</td>
<td>Business plan complete, work in progress</td>
<td>July 26, 2013</td>
</tr>
<tr>
<td>SB2. Develop a categorized listing of discoveries and innovations made in the region.</td>
<td>Matt Buist (City of Toronto)</td>
<td>TRBOT staff, TBA</td>
<td>Matt will provide a listing that he maintains</td>
<td>TBA</td>
</tr>
<tr>
<td>SB3. Organize a recurring Human Health Sciences conference in the Toronto region.</td>
<td>TBA</td>
<td>TBA</td>
<td>Identify champion and team members</td>
<td>TBA</td>
</tr>
<tr>
<td>SB4. Develop a detailed cluster ecosystem map that provides a description of the elements of the current cluster map (see Figure 2 on page 6).</td>
<td>Chris Holling (TRBOT)</td>
<td>TRBOT staff, TBA</td>
<td>Develop business plan, identify additional team members</td>
<td>TBA</td>
</tr>
<tr>
<td>SB5. Develop a balanced scorecard for the cluster and recommend required data collection requirements.</td>
<td>TBA</td>
<td>TBA</td>
<td>Identify champion and team members</td>
<td>TBA</td>
</tr>
<tr>
<td>SB6. Develop a Toronto region Human Health Sciences logo that would be used to indicate virtual membership in the virtual cluster network.</td>
<td>TBA</td>
<td>TBA</td>
<td>Identify champion and team members</td>
<td>TBA</td>
</tr>
</tbody>
</table>

### Table 2 Commercialization Working Group Action Initiatives

<table>
<thead>
<tr>
<th>Initiative Description</th>
<th>Champion</th>
<th>Team Members</th>
<th>Status</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1. Complete Asset Map of Toronto region technology/commercialization incubators and accelerators.</td>
<td>Chris Holling, (TRBOT)</td>
<td>TRBOT staff, TBA</td>
<td>Develop business plan and additional team members</td>
<td>TBA</td>
</tr>
<tr>
<td>C2. Complete the segmentation and analysis of the culture/education requirements of the cluster.</td>
<td>TBA</td>
<td>TBA</td>
<td>Identify champion and additional team members</td>
<td>TBA</td>
</tr>
<tr>
<td>Initiative Description</td>
<td>Champion</td>
<td>Team Members</td>
<td>Status</td>
<td>Timing</td>
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<tr>
<td>----------------------------------------------------------------------------------------</td>
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<td>------------------</td>
</tr>
<tr>
<td><strong>C3.</strong> Recruit additional working group members to cover more of the development end of the commercialization spectrum.</td>
<td>Chris Holling (TRBOT)</td>
<td>Tom Reeves (Interface Biologics), Michael May (CCRM)</td>
<td>Business plan complete, begin work.</td>
<td>August 9, 2013</td>
</tr>
<tr>
<td><strong>C4.</strong> Encourage innovation-based Ministry of Health procurement</td>
<td>TBA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 3 Financing Innovation Working Group Action Initiatives**

<table>
<thead>
<tr>
<th>Initiative Description</th>
<th>Champion</th>
<th>Team Members</th>
<th>Status</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F1.</strong> Complete the map of financing sources along the financing/commercial development spectrum.</td>
<td>Chris Holling (TRBOT)</td>
<td>TRBOT staff, TBA</td>
<td>Develop business plan and identify additional team members.</td>
<td>TBA</td>
</tr>
<tr>
<td><strong>F2.</strong> Develop a plan to maximize the region’s share of the $400M Venture Capital Action Plan.</td>
<td>TBA</td>
<td>TBA</td>
<td>Identify champion and additional team members</td>
<td>TBA</td>
</tr>
<tr>
<td><strong>F3.</strong> Develop a plan to expand the pool of available capital by allowing charitable foundations, typically those focused on a specific disease, to invest in companies. This follows practice in the US and would require a change to Canada Revenue Agency regulations.</td>
<td>TBA</td>
<td>TBA</td>
<td>Identify champion and team members</td>
<td>TBA</td>
</tr>
<tr>
<td><strong>F4.</strong> Develop a proposed approach to streamlining grant application processes.</td>
<td>TBA</td>
<td>TBA</td>
<td>Identify champion and team members</td>
<td>TBA</td>
</tr>
</tbody>
</table>
Selling & Branding Working Group

Minutes of June 24, 2013

Present: Steering Committee Sponsor: David Naylor (University of Toronto)
Others: Ryan Wiley (SHI Consulting), Arun Bala (Alpha Labs), Shawn Kurian (Alpha Labs), Matt Buist (City of Toronto), Melissa Pogue (Rotman), Susan Baker (Eli Lilly), John Buckingham (MaRS Discovery District), Nicole Foster-Woollatt (Global Public Affairs), Rajin Singh (MEDTE), Mark Stewart (McMaster Innovation Park), Doreen D’Souza (D’Souza Consulting), Rick Jeysman (Past President, Ferring Pharmaceuticals), Janet Kasperski (Kasperski Consulting), Kimberly Robison (Janssen), Peter Henderson (Ideovation), Bob Waterworth (KPMG), Sean Kelly (Pfizer), Terri Lohnes (GE Canada), Jason Field (Life Sciences Ontario)

Staff: Carol Wilding, Richard Joy, Juan Gomez, Chris Holling, Jackie Lively, Heather White, Patrick Gill

Toronto Region Board of Trade (TRBON) CEO Remarks

C. Wilding welcomed everyone to the meeting and then turned the proceedings over to D. Naylor, who expressed the importance of supporting this initiative. D. Naylor’s overarching message was the cluster’s participants are stronger together than apart.

Agenda Discussion

C. Holling provided an overview of the cluster project and the work of the steering committee to date. After outlining the meeting's logistics, C. Holling shared the cluster’s draft vision statement with the working group.

Vision & Metrics

After the cluster’s vision statement was read aloud by members of the working group, C. Holling collected the group's feedback. There was broad agreement that good metrics are needed to ground a future public relations (PR) campaign. D. Naylor noted that PR campaigns not based on metrics tend to falter. This sentiment was shared by J. Buckingham and J. Field, who encouraged the committee to develop a balanced scorecard and baseline for Toronto. Both of these individuals caution the steering committee on using the “5th in the world” ranking; as it was agreed that there are problems with this measurement. There was also broad agreement with R. Jeysman, for simplifying the cluster's vision statement and for designing short to medium term goals. Related to this, several working group members, including K. Robinson and N. Foster-Woollatt, stressed the importance of clarifying who the cluster will target with its message. Both J. Kasperski and D.
Naylor highlighted the significance of selling the cluster’s benefits locally; not just globally. In fact, D. Naylor underlined Canada’s domestic procurement deficit. Finally, the working group also thought the cluster’s vision statement should be more aspirational.

**Strategic Differentiation & Value Proposition**

Moving to the next topic, the working group determined that Toronto could strategically differentiate itself from other global clusters in three ways. Firstly, the working group thought the cluster should exploit the residual brand strengths of Canada’s health care system although later in the meeting others noted that there are much stronger examples of single payer system excellence (Kaiser Permanente, US Veterans Administration) and that there are weaknesses to our system as well (i.e. sustainability). Secondly, the working group agreed the cluster should create a catalogue of Toronto’s life science successes; both past and present. For instance, Toronto can differentiate itself by celebrating its contribution to things such as insulin and stem cell research. Related to this, the working group also thought the cluster should create/obtain an asset and ecosystem and find ways to illustrate our strength in innovation and biotechnology. M. Stewart specified the cluster was akin to a large mall; whereby each store in the mall represents one of Toronto’s strategic assets. Before breaking, N. Foster-Woollatt and D. Naylor highlighted the prospect of Toronto hosting its own flagship conference, something similar to BIO. Moreover, D. Naylor came back to the issue of who are the cluster’s target customers.

The meeting broke at 10:40 a.m. until 11:00 a.m.

**Understanding the Ecosystem**

Returning from the break, the working group was asked to review the cluster’s ecosystem map. The group requested that several sectors be added to the map, including community care and health IT. Before wrapping up, D. Naylor floated the idea of developing a logo for the cluster, which all cluster partners could promote.

**Next Steps**

1) Working group will reach out to various organizations, including MaRS, HTX and Rotman to develop a detailed asset map, success stories and pertinent case studies.
2) TRBOT will update the cluster’s ecosystem map. (complete, see Figure 2)
3) Steering Committee, Working Group Members and TRBOT will work to fill the working group’s gaps, by inviting representatives from the health IT, medical devices, venture capital and business development sectors.
4) Working group will expand on the idea of developing a logo.
5) Working group will expand on the idea of organizing a recurring Toronto Human Health Sciences conference.

**Adjournment**

The meeting adjourned at 11:30 a.m.
Figure 2 Revised Cluster Map

Toronto Region’s Human Health Sciences Cluster

- Health Care IT: Telus, IBM
- Laboratory Products & Research Tools: CML Healthcare
- Community Care Providers: Bayshore, St Elizabeth’s
- Manufacturing, Clinical Trials & GROs: Celliaegis Devices
- Health and Beauty Products: Shoppers Drug Mart
- Medical Devices: 3M and GE Canada
- Research Hospitals: TAHSN, Mount Sinai, Sick Kids, Sunnybrook, University Health Network
- Large Bio-Pharmaceutical Products: Astra Zeneca, Pfizer, Baxter, Merck, Eli Lilly, Sanofi Pasteur
- Small Bio-Pharmaceutical Products: Medipattum, Highland Therapeutics, Trillium Therapeutics, Profound Medical, Interface Biologics, Torando Medical Systems, Baylis Medical, Therapure Biopharma
- Research Organizations: Structural Genomics Consortium, Ontario Institute for Cancer Research, Centre for Commercial & Regenerative Medicine, Ontario Brain Institute
- Cluster Organizations: OBIO, LSO, MaRS, Medec, Rx&D, HTX
- Specialized Business Services: Banking, Accounting, Legal: KPMG, Telus
- Specialized Risk Capital: VC Firms, Angel Networks: Torquest, Lumira, Genesys Capital, TMX
- Specialized Research Service Providers: Laboratory, Clinical Testing, Infrastructure: Abbot Labs, Clinical Testing Ont.
- Patient Advocates: Disease specific foundations: Heart & Stroke, JDRF
- Educational Institutions: University of Toronto, York University, Richard Ivey, George Brown College
Commercialization Working Group

Minutes of June 24, 2013

Present: Steering Committee Working Group Sponsors: Tom Reeves (Interface Biologics), Michael May (Centre for Commercialization of Regenerative Medicine).
Others: Derek Newton (U of T), Rick Jeysman (Past President of Ferring Pharmaceuticals), Tracey Allin (Eli Lilly Canada), Jayson Parker (U of T), Mark Taylor (UHN Techna Institute), Alison Fenney (Ontario Brain Institute), Mark Penner (Fasken Martineau), Steve Plymale (Profound Medical), Forest Parlee (Mitacs), Catherine Bonnier (KPMG), Andrew Yoshoka (Sanbonki Consulting), Andrea Veneri (Deloitte Monitor), Rajin Singh (MEDTE), Kais Lakhdar (KPMG), Pratima Rao (Foreign Affairs & International Trade)

Staff: Carol Wilding, Richard Joy, Juan Gomez, Chris Holling, Jackie Lively, Heather White, Patrick Gill

Meeting start at 1:08 pm

Toronto Region Board of Trade (TRBOT) CEO Remarks

C. Wilding welcomed everyone to the meeting and went over the high level themes coming out of the Selling/Branding workshop earlier in the day. She reiterated D. Naylor’s message of “The whole needs to become greater than the sum of its parts”. She introduced and thanked the Steering Committee members and working group sponsors. The Steering Committee members in attendance were M. May and T. Reeves.

Agenda Discussion

C. Holling provided a short overview of the cluster initiative process and the work of the steering committee to date. Key message: go at the pace that is required – no strong deadline – need to identify the “what who how when” – something ready to present to steering committee by the fall.

T. Reeves commented on the commonality of interests represented in the room for the cluster to become more successful. He expressed some concerns about the mandate of the working group being too broad and suggested that the group be action oriented. He suggested that the composition of the working group indicated a base of expertise more oriented to earlier stage research and “small d” commercialization.

M. May added emphasis for the need to focus on actionable tasks and also the need to expand the composition of the working group in future meetings to include investors. He also asked the group to think about other members of the cluster ecosystem who should be recruited to the effort.
M. Taylor said that we have a cultural issue to solve – researchers see their job as generating ideas, not pushing them in any particular direction, but currently the focus of research on the cluster is treating patients, and/or publishing papers, rather than pursuing commercialization opportunities. Commercialization should not be a “dirty word”

Group Discussion

Early in the discussion, M. May developed the following rough commercialization schematic to help guide the discussion.

**Figure 3 Draft Commercialization Pathway Graphic**

![Commercialization Pathway Diagram]

**Culture**

The discussion started with a focus on the observed need for a change in the clusters general culture with regards to commercialization. It was observed that tech transfer is very passive -- we wait for a researcher to come up with something and then find a way to exploit it. J. Parker with agreement from M. May recommended a shift towards starting with problems and then developing inventions that solve them.
Less common is focusing on a problem whose solution has commercial potential. That is, the current culture is to invent for the sake of inventing rather than for the sake of solving a specific problem and commercializing that solution. Furthermore, there is little scale to the flow of inventions – each invention is linked to a single research effort and we need to think about how to create critical mass. Clearly, reimbursement policies of the Ontario health system have a role to play.

D. Newton described how the culture at the University of Toronto is changing. Current students are interested in entrepreneurship and are "rolling up their sleeves" and trying company creation. At U of T there is a process of student invention disclosures and over the last 6 months the number of disclosures coming in has doubled. Among young people in the cluster, a culture of entrepreneurship is emerging and U of T is generating about 25 companies a year. The key challenge is: “how do we keep them in Canada?”.

A number of times during the discussion, the group was careful to establish the value of basic research and this group's emphasis on commercialization was not to indicate an undervaluing of the value of basic research. Also, it was recognized that some inventors don’t want to commercialize.

A key gap identified is the void of senior executives who have shown that they can develop a product in Canada – those people left the country and went to the US. There is a perception that there is a lack of experienced management expertise with a good track record. This situation makes it hard for many investors to develop a measure of trust that an idea or start up will turn into an actual viable company. However, we do have some examples of linking inventions and proto companies to experienced leaders. Generally this has involved attracting Canadians back from the US.

There is a need to increase the level of risk tolerance in the cluster and to change the perspective that it is not acceptable to fail. Projects need to fail faster if they really are not going to be viable. We need to be less worried about offending each other and more willing to be honest about the commercial viability of ideas and start ups. In the US the emphasis is on “getting to no” quickly so that you don’t waste time and can move on to other opportunities quickly.

**Linkage to Finance**

In addition to culture, it was clearly recognized that it is critical to foster a more consistent, deeper flow of financing across all the stages of development. Life Sciences financing is challenging: returns are not quick, final results can seem uncertain or intangible and specialized expertise is required to evaluate risk and market potential.

In the region, individual entrepreneurs each have to find their own path to financing and there is a feeling that the path is not clear. Also, it was observed that because so many resources are concentrated at the early stage of the development spectrum, there is pressure to develop ideas sooner than they really should be. There was a general consensus that projects are turned into start up companies too early. So many inventions and start ups simply are not ready for any kind of VC attention. There is a respectable amount of early stage government funding available, but it is
divided up across a large number of different programs that is challenging to navigate. One participant mentioned “innovation vouchers” as a policy tool that seems viable.

**Approaches to Intellectual Property Protection**

In general, the group consensus was that there is a need for more sophisticated knowledge across the cluster with regards to intellectual property protection and patent strategy and tactics. The shift in US patent law to “first to file” from “first to invent” is a significant change and best practice strategy and tactics need to be disseminated across the cluster,

There is an over emphasis on patents – IP protection does not just mean patents. It is important to also highlight examples where you can be industrious and successful without patents. Some innovators abandon ideas because they determine that they cannot be patented. There are many examples of successful business models that are not built around patent protection. Yet, it was observed that often investors are interested in patent portfolios.

Therefore, the working group could explore ways to have a more comprehensive and earlier stage approach to IP strategy and tactics which will involve bringing in more patent strategy expertise – especially within all the region’s accelerators.

**Process Streamlining**

Throughout the meeting there were references to a need to work together to streamline various processes across the cluster. For example, the cost of accessing grant money is very expensive because of the multitude of specific funding programs, each with their own application process and content requirements. Also work could be done on standardizing IP definitions, and non-disclosure agreements and other contractual mechanisms that support collaboration.

*The meeting broke at 2:35 p.m. until 2:45 p.m.*

**Break Out Sessions**

Returning from the group, T. Reeves and M. May decided to form two break-out groups. One to focus on the culture change concept and the other to focus on the early stage technology transfer/translation portion of the development spectrum.
Group 1. Technology Transfer – incubators and accelerators

The group focused on populating the initial dimensions of a matrix that would be used to develop a guide to understanding the roles and linkages among the various incubators and accelerators.

Initial Inventory of Institutions
- TTOS (Tech transfer offices) at the base of all of this – question if they had been effective, then all of these organizations may not have developed
- MaRS DD
- MaRS Innovation
- ONE network
- OCE
- CIMTEC
- CCRM
- OBI
- McMaster Centre for Probe Development (CPDC)
- Can Probe
- Innovator Factory
- UHN TECHNA
- OICR
- OCI
- UTEST
- Sttarr
- Coral CEA
- MaRS EXCITE
- The Impact Centre
- Most of those listed above are public funded
- Kinetic Café (privately funded, private sector)

Information to collect about each institution
- Focus – output, sector, product, stakeholder
- Offering
- Links – coordination and communication factor
- Resources
- Track Record (leverage, output, input)
- Customer
- Model (sustainable, commercialization, promotion, funding)
- Degree of gatekeeping
- Metrics/Processes
- Process of killing projects

The group agreed that it would be useful to fill out the matrix with the two dimensions above. Also it was agreed that more representation from more of these groups should be brought into the
working group. The group observed that there appears to be much redundancy across these institutions.

**Group 2. Cultural Change**

The discussion started with an observation that the culture that exists within engineering training and practice is an example of the direction in which the Human Health Sciences cluster should move. Engineers are trained to always be thinking about what the product is and company creation is built into many engineering programs.

A key objective of training needs to be on IP protection, especially now with the US shift to a first to file basis for patenting. This brings the US into line with existing global practice, but the change is significant given the size of the US patent market. This training would need to emphasize the required sophisticated strategic way of thinking about patents and when to patent.

The group focused on populating the initial dimensions of a matrix that would be used to develop a guide to understanding the roles and linkages among the various incubators and accelerators.

**Figure 4 Culture Matrix**

<table>
<thead>
<tr>
<th>Cultural/Education Change: what are the gaps in education/training, resources and incentives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Young Entrepreneurs/Students</td>
</tr>
<tr>
<td>Researchers – Basic</td>
</tr>
<tr>
<td>Researchers – Applied</td>
</tr>
<tr>
<td>Clinicians</td>
</tr>
<tr>
<td>.....</td>
</tr>
</tbody>
</table>

*Introducing an Engineering Culture to the education process*

*Third Dimension: Potential Sources of funding*

*Identify current culture and motivation in each “cell” and develop culture change tools/tactics*
3:30 group comes back together

The whole group reviewed the output from the two breakout sessions described above.

Next Steps

1) Complete the two matrices (incubator and culture)
2) Attract expanded participation to the group:
   o Business development at big pharma (Pfizer) and some other companies that have had success and why
   o MaRS Innovation – they have a broad mandate
   o Clinician and an entrepreneur with experience
   o Investors
Financing Innovation Working Group

Minutes of June 25, 2013

Present: Steering Committee Sponsors: Ilse Treurnicht (MaRS), Beni Rovinski (Lumira Capital)
Others: Doreen D’Souza (Principal, Doreen D’Souza Consulting), Rick Jeysman (Past President, Ferring Pharmaceuticals), Joe Rodrigues (Vice President, KPMG Corporate Finance), Kevin Jarvie (Ministry of Economic Development and Employment), Paul Bernard (Partner, KPMG Tax), Garth Smith (Director, Industry Relations, Ontario Brain Institute), David Allan (Chairman, Stem Cell Therapeutics)

Staff: Carol Wilding, Richard Joy, Chris Holling, Juan Gomez, Jackie Lively

Meeting start at 11:11 am

Toronto Region Board of Trade (TRBOT) CEO Remarks

President and CEO C. Wilding welcomed everyone to the meeting and went over the high level themes coming out of the Selling/Branding and Commercialization workshops the day before. She reiterated that the foundational item in these working groups is the notion of convergence and to look beyond one’s own area of interest to take that broader view. She reviewed TRBOT’s role as a catalyst and facilitator in this process and the importance of allowing the cluster work to take its due course without timeline restrictions.

Agenda

C. Holling provided an overview of the day’s agenda and the work of the steering committee to date. He requested that the group review the current mandate and produce key objectives and a tangible business plan with the intention of having a report prepared for the steering committee by the fall.

Discussion & Issue Identification

I. Treurnicht began the discussion by commenting on the mandate. She urged that the group not focus their analysis too heavily on best practices and not to re-do work that has already been done. Rather, the group must think about financing and innovation at a local level as well as the role of different types of funders from public, finance, and corporate sectors and what can be done to make the region more attractive to international investors, which requires convergence with the selling/branding group. She addressed the need to establish a clearly identified innovation food chain. It was highlighted that the federal government has $400 million available for funding and life
sciences is currently on the list to potentially receive some of this, however how much and to what extent the private sector would match that is unknown.

B. Rovinski concurred. The assumption is that the amount of this funding that will be made available to life sciences will be a small percentage but hopefully the private sector will contribute at least as much. The group identified lobbying to the private sector, particularly big pharma, as an objective of the group. B. Rovinski shared that Lumira Capital has already been in discussion with some big pharma companies and it is important to have Venture Capital (VC) firms and big corporations to work with government to force larger pools of money into the life sciences cluster ecosystem.

VC Pipeline

The group agreed that the available funds, incubators, TTOs, and accelerators in the province is very difficult to navigate and were pleased to hear that the commercialization group was taking on the task of mapping these. Streamlining and reducing the amount of paper work involved in this process could attract more VC. As R. Jeysman contributed, this process is daunting to VC and would benefit from streamlining. To complement this effort the group identified a process map and funding pipeline identification as an action item. A rough draft was sketched on the chart paper:

Figure 5 Financing Spectrum
Limitations of Canadian Foundations

J. Rodrigues identified another challenge as the limitations of Canadian foundations in their ability to only give money to charity and not to fund an early stage for-profit company. Compared to the US, where schools such as Harvard have established a venture philanthropy fund, it was K. Jarvie’s understanding that this was not allowed in Canada because the CRA does not allow a foundation to maintain its charitable status if they invest in for-profits. It was identified that this is an area that needs to be clarified and better understood.

Current Assets

The discussion moved to identify another action item for the group, which is to create an asset map or matrix of what exists in the region in terms of VC and funding, the continuum of funding sources, active available funds, where corporations are making investment, and the identification of the various “risk-boxes”.

The group determined that there is a lot of money in the GTA but very little is invested in the life sciences space. D. Allan proposed that in addition to a current asset map the group must also identify who the players are, what they do and who will support life sciences at what stage. The missing element of a concierge service for funding was identified. K. Jarvie agreed a concierge service would be a necessary improvement to the pipeline and that this feeling was echoed in government as well.

Development Gap

B. Rovinski posed the question: how do we mobilize the billion dollars we need? How do we attract that investment? Another key gap was identified as being not so much the lack of VC but also the lack of things to invest in or lack of attractive development. D. Allan expressed that very few companies are interested in development and that Canada does not foster an environment to encourage development-stage companies. He noted that we have a tax system that penalizes investment in life sciences development (i.e. It favours geologics) whereas the US does not. It was also noted that we do have SRED tax credit for research and development but whether it is sufficient compared to other countries is questionable.

From another perspective, some thought that the region actually does have a lot available to invest in, however the gap is in connecting these inventions with development and investment.

The meeting broke from 12:35pm until 1:05pm.

Following the break the discussion turned to how the challenges will be tackled. Key action items and next steps were identified.
Next Steps & Action Items

Working Group

1) Complete the asset and pipeline maps discussed and distribute to working groups.
2) The $400 million in federal funding was identified as the most pressing issue. It was decided that the group must work with major private corporations to match any funding received. B. Rovinski is currently working on this and requested support from the group. Elaine Campbell at Astra Zeneca (steering committee member) was identified as a key person to approach on this item.
3) The group will target disease-based foundations and explore options to allow foundations to invest in for-profit companies. This may involve lobbying efforts to the CRA to lift restrictions and to the finance committees of specific boards. I. Treurnicht offered to provide more clarity on this item and will email to C. Holling for distribution.
4) Grant application streamlining.
5) Long term funding.

Toronto Region Board of Trade

1) The Board will provide ongoing support for all working group action items.
2) The Board will reach into their contacts to find potential additional members for the working group. Big banks, TMX, Janet Ecker, Rob McKewin, Medtechs, Health IT and foundations were identified as people and organizations that were missing from the current working group composition.

Adjournment

Meeting adjourned at 1:53pm.