



SOUTH AFRICA PARTNERS

Fostering partnerships between the United States & South Africa

**Professional Fellows Program
Massachusetts-South Africa Technology Fellowship
S-ECAPE-12-GR-194(AR)
Final Report
November 30, 2014**

This report provides, 1) a comprehensive description of activities undertaken by Bentley University in collaboration with South Africa Partners in connection with the Massachusetts-South Africa Technology Fellowship program, 2) overall results of the program, 3) participants' evaluation of the program immediately following their participation, and 4) participants' perception of the overall value of the program about nine to 12 months after their participation.

Program Description and Implementation

The purpose of the Massachusetts-South Africa (M-SAT) Fellowship Program was to bring together mid-level professionals in life sciences, bio-tech and IT industries from Massachusetts and South Africa in a two-way workplace exchange to create beneficial peer relationships, promote cultural competency and strengthen professional skills. More specifically, the program was designed to achieve the following goals:

1. Establish strong links between Massachusetts and South African companies that offer long-term and mutual benefits.
2. Enhance the skills of mid-level professionals in the selected companies, including cultural competencies needed to do business in the reciprocal country.
3. Establish communication networks that will continue long after the Fellowship Program ended.

Program implementation began by distributing outreach materials across South Africa through the Public Affairs Office of the U.S. Embassy, South Africa Partners, Bentley University contacts, the South African Consul General in New York City and the South African Embassy in Washington, D.C. in fall 2012. After an initial screening of more than 100 applicants, 23 candidates were selected for personal interviews.

Bentley University and South Africa Partners representatives along with Public Affairs Officers of the U.S. embassy conducted interviews in Cape Town and Johannesburg in February 2013. The interview process yielded a total of 14 South African Fellows who were grouped in two cohorts of six and eight to participate in the Professional Fellows Program in spring and fall 2013, respectively. For a list of South African Fellows, their institutional affiliations, and their U.S. peers see Appendix A.

Program Timeline

- **September 2012:** Developed outreach materials and an application form (see Appendix B for details). A program web site was also created on the Bentley University web site at:
- (<http://www.bentley.edu/events/massachusetts-south-africa-technology-fellowship-program/massachusetts-south-africa-technology>)
- **October 2012:** Bentley University and South Africa Partners worked closely with the Public Affairs Office of the U.S. Embassy in South Africa, South African Consul General in New York, and South African Embassy in Washington, D.C. to distribute outreach materials among a large number of private and public organizations in targeted industries across South Africa.
- **November 2012:** The outreach efforts generated more than 100 applications. After an initial screening, a total of 72 applicants met the selection criteria.
- **December 2012:** After a careful evaluation of qualified candidates, 23 semi-finalists were selected to be interviewed from January 28th to February 5th, 2013 in South Africa.
- **January 2013:** During the week of January 28 to February 1, 2013, a total of 23 candidates were interviewed in Cape Town, Johannesburg, Port Elizabeth and East London. Representatives from the U.S. Consulates in Cape Town and Johannesburg participated in the interview process, along with representatives from Bentley University and South Africa Partners. Consular officers participated in post-interview discussion and ranking of candidates.
- **February 2013:** A total of 14 South African Fellows were selected to participate in the program in two cohorts; six and eight Fellows to participate in spring and fall 2013 Professional Fellows Program, respectively. After approval by the Department of State, finalists were notified of their status, and all fourteen finalists accepted the offer of the Fellowship.
- **March 2013:** Placements for South African Fellows were finalized, and designated U.S. peers were approved by the U.S. Department of State to travel to South Africa in July, 2013 and February, 2014 as U.S. Fellows.

- **April 2013:** The first cohort of six South African Fellows arrived in Boston on Sunday, April 7th. After a week of orientation at Bentley University, they began their worksite placements on April 16th; during the difficult week of the Boston Marathon bombing and its aftermath. The Fellows travelled to Washington D.C. for a week of sightseeing and participation in the Professional Fellows Congress. They departed for South Africa on May 11th.
- **July 2013:** The U.S. Fellows departed for South Africa on July 13th for two weeks where they spent several days in their South African peers work site and participated in a wide range of cultural activities. All Fellows participated in a “debrief” hosted by the U.S. Embassy in Pretoria with Cape Town area Fellows linked in via teleconference before returning back to the United States on July 27th.
- **October 2013:** The second cohort of eight South African Fellows began their fellowship program on October 7th with a week of orientation at Bentley followed by three weeks of worksite placement and a week in Washington D.C. to visit historical monuments and participate in the Professional Fellows Congress.
- **January, 2014:** The second cohort of U.S. Fellows departed for South Africa on January 31st. All Fellows participated in a “debrief” hosted by the U.S. Embassy in Pretoria with Cape Town area Fellows linked in via teleconference before returning the United States on February 15th.

Overall Program Results

The M-SAT program was designed to provide participating Fellows with opportunities to establish long-term and mutually beneficial peer relationships and promote cultural competency, and strengthen professional skills between South African and Boston-based professionals in selected industries. More specifically, the overall program goals were:

1. Establish strong links between Massachusetts and South African companies that offer long-term and mutual benefits.
2. Enhance the skills of mid-level professionals in the selected companies, including cultural competencies needed to do business in the reciprocal country.
3. Establish communication networks that will continue long after the Fellowship Program has ended.

Based on a comprehensive independent evaluation of the program conducted at the conclusion of the Fellowship of both South African cohorts, the overall satisfaction with worksite placement was very high. As it can be seen in Table 1 below, all South African Fellows felt their worksite placement was either excellent or good with a significant majority evaluating their worksite placement as excellent.

Table 1: Overall Satisfaction of South African Fellows with Worksite Placement

Cohort	Excellent Placement	Good Placement	Total
First Cohort	66.7%	33.3%	100%
Second Cohort	80%	20%	100%

Source: Independent evaluation survey conducted at the end of the Fellowship program, June and November 2013

M-SAT was also highly successful in achieving its more specific stated goals. As can be seen in Table 2 and Table 3 below, 83.4% of the first cohort and 100% of second cohort felt that participation in the Fellowship increased their professional skills. Likewise, 100% of both cohorts felt that M-SAT program improved their understanding of the U.S. business practices. Finally, 66.7% of the first cohort and 80% of second cohort felt it was very likely or somewhat likely that they will develop a joint project with their U.S. peers after returning to South Africa. See Appendix C for details of evaluation results.

Table 2: Responses of South African Fellows to Selected Questions in the Evaluation Survey (First Cohort, June 2013)

Item	Very Much/Very Likely	Mostly/Somewhat Likely	Total
Degree to which the Fellowship Increased participants' professional skills	16.7%	66.7%	83.4%
Degree to which the Fellowship helped understanding of U.S. business practices	50%	50%	100%
Likelihood of developing a joint project with U.S. peers after returning to South Africa?	16.7%	50%	66.7

Source: Independent evaluation survey conducted at the end of the Fellowship program, June 2013

Table 3: Responses of South African Fellows to Selected Items in the Evaluation Survey (Second cohort, November 2013)

Item	Very Much/Very Likely	Mostly/Somewhat Likely	Total
Degree to which the Fellowship Increased participants' professional skills	20%	80%	100%
Degree to which the Fellowship helped understanding of U.S. business practices	80%	20%	100%
Likelihood of developing a joint project with U.S. peers after returning to South Africa?	0.0%	80%	80%

Source: Independent evaluation survey conducted at the end of the Fellowship program, November 2013

In a reciprocal exchange, two cohorts of U.S. Fellows travelled to South Africa for two weeks in July 2013 and February 2014. Independent assessment of their experience in South Africa indicated high degree of satisfaction among the Fellows. They uniformly gave high marks to their professional interaction with their South African Fellows as well as to their cultural experiences. Please see Appendix D for details of the evaluation results.

M-SAT also succeeded in achieving its longer-term goals. A survey was conducted nine months to one year after completion of the program among both South African and U.S. Fellows. In these surveys, the Fellows were asked to respond to two questions listed below:

1. *What were the outcomes of your participation in the M-SAT program? Please identify lessons learned, gains in perspective or understanding, processes or policies observed that are relevant to your own work, partnerships initiated, relationships built, etc.*
2. *Describe, from your perspective, the impact of the program, either in the short term or the long term. What will you, your institution or your organization do or have the capacity to do as a result of your participation in M-SAT? If you have or plan to undertake any further activities with other M-SAT Fellows on either side of the Atlantic, please describe those activities and the expected goal or impact of those activities.*

Responses to Question 1

Fellowship Outcomes: South African Fellows' Perspectives

- Learned about successful product launches in the pharmaceutical industry in the U.S. This knowledge was presented to the top executives of a South African company in biotechnology field which led to revamping the go-to-market strategy of the South African company. Furthermore, learning the American practice of placing Ph.D. students as research interns, the South African company has made it a policy that each employee must undertake a minimum of two training courses per year in line with their job functions and signed an agreement with University of Cape Town to get at least one honor's student intern per year and one masters student doing research in biochemistry/pharmaceuticals.
- Developed a partnership between two US and two South African institutions (Boston University, Tufts University, University of Western Cape and Council of Scientific and Industrial Research in South Africa). A workshop is scheduled to be co-hosted by these four institutions in June 2015 in Cape Town on the theme of "infectious diseases" - to bring together key researchers and technology transfer professionals to explore solutions for application in this area.
- Continued networking between South African and U.S. fellows to facilitate in-bound technology transfer.
- Gained practical experience in technology transfer activities during the work placement in Boston with respect to reviewing patent claims, drawing up technology marketing brochures, secondary research to

find potential licensees, and drafting evaluation agreements.

- Gained valuable insights and understanding of challenges facing a state IT organization supporting an emerging market, organizational changes, team development and culture change challenges, governance and procurement issues, skills and leadership training.
- Learned how to improve collaboration across IT and with external parties such as provincial entities, local government, industry, innovation centers, etc.
- Gained a comprehensive understanding of US entrepreneurship and innovation economy as well as US/Massachusetts policy on Innovation, and alignment of the state policies with the development of industries such as life sciences with the intention of creating new businesses. This was demonstrated in the \$1 billion fund used to establish the Massachusetts Life Sciences Center (MLSC). This policy example can be used as a benchmark in the policy engagements and assist in identifying possible solutions to South African challenges of high unemployment through growing the South African bio-economy industry.
- Developed relationships between South African and Massachusetts-based companies in the high tech sector that have resulted in tangible benefits to a number of specific companies in South Africa. These relationships will most likely continue and grow in the future.
- Made great connections with the Cambridge Innovation Center and the wider entrepreneurial community in Boston. The visit to South Africa by my American counterpart further solidified this relationship. This is the beginning of a soft landing when it comes to looking at international and specifically US expansion for the various companies we incubate in South Africa.

Fellowship Outcomes: U.S. Fellows' Perspectives

- Participation in the M-SAT program provided an opportunity to demonstrate to our South African fellow the operations of a biotechnology company (OPK Biotech) in the US. In a strictly regulated environment such as the biotechnology industry, our fellow came to understand the policies and regulations required to run a company that makes therapeutic drugs. Our fellow gained a solid understanding of this environment and offered some insights from her perspective, thereby offering a “two-way” street for sharing information.
- The program was a very eye-opening experience to understand the state of innovation in South Africa. Although they have come very far in encouraging entrepreneurs, much more needs to be done. As a systemic problem, part of the solution emerges from early encouragement of youth to become entrepreneurial and follow through combined with quality education. A tangible outcome of my visit to South Africa is that I have been spending a fair amount of time helping a local non-profit teach young

students about entrepreneurship in the medical field. I would not have spent as much time with the organization had I not observed the negative repercussions of the absence of such programs/opportunity in South Africa.

- One immediate and yet unexpected outcome from participation in the program was the development and enrichment of my professional network here in Boston. I have continued to interact with the other U.S. Fellows who participated in the M-SAT program on work-related issues.
- Having observed the enormous challenges faced by the University of Pretoria to increase enrollment over the next 5-10 years, I, in collaboration with my counterpart in South Africa drafted a memo to the Vice Principal of Research and Postgraduate Studies, at her request, describing how entrepreneurship and innovation studies can be promoted across the university at low cost.
- While Cambridge Innovation Center decided to hold off pursuing a location in Cape Town for the time being, the fellowship resulted in many other connections between Boston and South Africa. For example, MassChallenge (<http://masschallenge.org/>), an entrepreneurial accelerator agency that connect entrepreneurs with resources, expressed an interest in Cape Town and I connected them to my host in South Africa. I also connected my South African host to the coop program at Northeastern University in Boston which led to placing a US student as an intern in South Africa.
- The M-SAT program gave me the opportunity to gain a basic understanding about the high technology/biotechnology innovation environment in South Africa. I was particularly interested to learn how promising early stage technologies are identified, supported and funded in South Africa. The perspective I gained was mostly around the role government, i.e., the Technology Innovation Agency in South Africa plays in this process.
- The most significant professional perspective I gained by participating in the M-SAT program focused on the importance of influence over vendor support. Biotechnology companies in the United States, and especially Cambridge MA, undergo intimate collaborations with their vendors to ensure satisfaction in the vendor's products while expecting reliable service for those products in the future. As a growing industry in South Africa, biotechnology companies and groups have access to cutting edge technology but often rely on third party support for equipment and supplies. For smaller startup companies, this effect is exacerbated and ultimately effects the amount of time spent on real development. Though improved relations seem to exist in the US, achieving meaningful changes in support services for our industry still require aligned cross-company support. After returning to the US, I have taken a more active role in expanding our own support service by increasing cross-company communication.

Responses to Q.2

Fellowship Impact: South African Fellows' Perspective

- Since my return from the US I have identified opportunities I would like to pursue. One through the US State Department grants and the other through the engagements and meetings I attended. For me, the most important thing is leveraging on the relationships to ensure continuous interaction. There was also a lot of networking opportunities and S.A. needs to find a way to ensure that there a lot more networking opportunities created.
- Participation in the M-SAT program has definitely made a strong impact on my personal and professional development. On the personal side, I have developed long lasting friendship across the Atlantic which has allowed me to grow and gain valuable insights from my friends across the Atlantic. Professionally, after completing the M-SAT program, I was appointed as the Manager of Innovation at Industrial Development Corporation (IDC) which is one of the largest in South Africa aimed at providing financing to entrepreneurs engaged in competitive industries through promoting the establishment of new industries and industrial undertakings and the development of existing industries and industrial undertakings.
- As a result of participation in the M-SAT program, we have initiated a discussion to send two young professionals to intern at the Massachusetts Life Science Centre and other key players within Massachusetts innovation ecosystem. The purpose of this internship would be to learn about commercialization and understand the innovation ecosystem from the perspective of the developed country. The ultimate goal of the proposed internship is to empower these professionals in identifying policy that can unleash high impact entrepreneurship and innovation. The internship also seeks to provide an opportunity to interact with policymakers and program leaders focused on exploring different regulatory changes and other policy ideas which can be used in helping to accelerate the development of knowledge based/ innovation economy in South Africa.
- Through the program we had an opportunity to meet 200 other Fellows from other countries in Professional Fellows Congress in Washington D.C. At the congress I met a group of fellows who were conducting research in environmental related projects. From our meeting we decided to form a group called Green Earth Fellowship. The purpose of this group is to share information amongst each other and to assist each other in alleviating environmental issues we face in our respective countries. Furthermore, it is the aim of this group to start joint projects/collaborations where possible. In the Congress, I also met a Fellow from South Africa (who was with another program). She is a managing director at MeloziAvantu SA. During our poster presentations she showed an interest in the bioremediation work we are conducting at the Council for Scientific and Industrial Research (CSIR) in South Africa. Meetings have been held between MeloziAvantu and CSIR Biosciences for possible collaborations.

- The most obvious impact is the direct benefit of having Northeastern University interns working at South Africa tech companies and the experiential benefits they gain along with the value they add to the businesses. We will continue to build relationships with Boston-based organizations, and while the mooted CIC type facility in Cape Town is perhaps a little premature, we are keen to continue fostering a relationship with CIC, specifically through Sarah Delmar. I will also continue interacting with Sue Long - in fact I will probably be getting in touch with her tomorrow.
- The impact of the M-SAT Programme includes mutually-beneficial long-term relationships built between US and SA counterparts. We are able to leverage each other's learnings and expertise and further explore opportunities for internationalization of technology innovations.
- My thinking around sharing and collaboration has evolved significantly as a result of this exposure and this affects the way I think about growing businesses and collaborating on projects.

Fellowship Impact: U.S. Fellows' Perspectives

- Participation in the M-SAT program made me think about how I do my own job and the functioning of our office here at Massachusetts Institute of Technology. While grateful for the resources that we have, I have thought a lot more about how to encourage graduate students and undergraduates to learn more about innovation and entrepreneurship and to that end have hired a number of interns to work in our office under my direction and have begun to reach out to faculty about lecturing in their classes. Furthermore, I have had some early discussions with other M-SAT Fellows about potentially participating in follow-up activities to put in place scientific exchange programs.
- The impact of the M-SAT Programme includes mutually-beneficial long-term relationships built between US and SA counterparts. We are able to leverage each other's learnings and expertise and further explore opportunities for internationalization of technology innovations.
- While Cambridge Innovation Center (CIC) ultimately decided to hold off pursuing a location in Cape Town for the time being, the fellowship resulted in many other connections being made between Boston and South Africa. For example, MassChallenge expressed an interest in Cape Town and I connected them to my host in South Africa. I also connected my host to the coop program that Northeastern University runs, and they now have a student working with them from Boston. I continue to stay in touch with my hosts and am now much more active in hosting South African visitors to expose them to innovation and entrepreneurship in Boston. I have also stayed in touch with the other fellows and we continue to make connections for each other and stay in touch.
- The greatest impact of the program is in the personal, professional, and cultural connections made. It creates a very strong affinity to South Africa, and I'm now active in a community that I previously had no connection to. I am always happy to meet and help South Africans coming to Boston and have found that connections have continued to be made long after the trip ended. I anticipate these connections will

continue to grow and anticipate that there will be opportunities to work together and collaborate in the future.

- As a State Department alum, M-SAT indirectly got me involved in the inaugural Washington Young African Fellows Initiative (YALI - now called the "Mandela Washington Fellowship"), a program initiated by President Obama to bring young African leaders to the US for 8 weeks of skills training. i) I participated as a reader of applications - there were 50,000 applications for the 500 slots! ii) I subsequently got invited to participate in the Dartmouth College program in which 25 YALI fellows came to the college for training in business entrepreneurship and made some wonderful new connections across 18 African countries. iii) I hope to participate in a more substantial way in the (YALI/MWF) program in 2015. iv) I introduced one of the South African YALI fellows to Nick Allen, they both reside in Cape Town and share an interest in securing venture funds for start-up companies.
- As a direct result of our participation in the M-SAT program, our company has a clear vision which is informed from personal information from pharmaceutical industry leaders. The visiting Fellow seemed enthusiastic about our offering, should we be able to amend our current market strategy. He also suggested a few minor changes to the current operational design of our products which has been considered and is undergoing evaluation to test the effect of the modifications to the products.

Value of the Fellowship Program: Recipients' Perspectives

We believe that the excerpts from the evaluations included above testify to the high value of the program, which met its objectives by achieving both "soft" outcomes (cultural competency, relationship development) and "hard" outcomes (reciprocal exchange of business practices and knowledge, initiation of formal business relationships). After the end of the program date, the Recipients have heard from participants that the network established by the M-SAT program continues to yield personal and professional benefits.

One unanticipated benefit of the program has been the deepening of relationships between Fellows within their respective countries. The South African Fellows continue to communicate regularly through a social media platform that was informally created during their stay in the U.S., sharing both professional and personal successes, challenges and news. U.S. Fellows in the Boston area continue to network regularly at events designed for the local innovation sector and through events with a focus on South Africa, such as a recent program at the Federal Reserve Building in Boston in October, 2014 on South African business development.

Reflecting on the program costs vs. the program's value, the largest line item, international travel, was a worthwhile investment. The reciprocal travel of the U.S. Fellows to South Africa, while shorter in duration, played an essential role both in deepening the positive relationships between participants but also in providing a

platform for planning for future activities that would take place outside of, and without funding from, the Fellowship program itself. Each of the follow-on activities detailed below were incubated or planned during the reciprocal visit by the host U.S. Fellow.

The Recipients feel that the value and success of the program were achieved with a relatively small investment in staffing on the U.S. side. Within South Africa, the cooperation of the U.S. Embassy and Consular staff made an important contribution as well.

The greatest challenge the Recipients encountered was securing worksite placements for the South African Fellows, particularly the placements within private industry. The employers of the South African Fellows were much quicker to see the value of granting their employees five weeks of paid leave to participate in the program; the “sell” on the U.S. side was a greater challenge, even though the period of leave that must be allowed was shorter (two weeks). Participants, in discussing this issue as an international group, attributed this challenge to striking differences in business culture in the two countries. They also noted that U.S. employers are less likely to see, at first glance, the value for their employees in international travel if their firms did not already have an international presence that they felt would be materially strengthened by the exchange program. U.S. employers also recognized that hosting Fellows required a commitment of staff time during the U.S. stay in addition to releasing an employee for paid travel. A secondary challenge was ensuring that there was a truly valuable “fit” between the Fellow and the host company or institution; the strongest South African Fellows were selected for the program, and the placement process followed after final selection, rather than working in the other direction. This ultimately yielded better and more productive placements, but the process was the most time-intensive for staff of any aspect of the program implementation.

Ultimately, the U.S. participants and their employers were highly satisfied with the program. If the Recipients were to replicate the M-SAT in future, we would have the positive testimony of the host companies and institutions to share with prospective hosts. It would, in other words, be a much easier “sell.” It should be noted that the reciprocal nature of the travel opportunity was a positive and persuasive feature of the program.

Implications for Future Fellowship Programs

The M-SAT program was not eligible for funding in the most recent grant cycle for the Professional Fellows program. It is clear, however, that there would have been high interest in both the U.S. and in South Africa had it been offered. Queries have continued to be received by the Recipients in the months since the program ended about applying to be selected as a Fellow or to serve as a host company.

Another initial challenge was creating a strategy for outreach to publicize the opportunity within South Africa on a relatively short time frame. If a similar program were to be offered again that included South Africa, the network and relationships that have now been established among the M-SAT alumni, and with South African universities, trade organizations and government would make outreach even more effective. Testimonials from previous participants could be leveraged in both countries to attract a very strong pool of Fellows.

Both South African and U.S. Fellows noted the value of having time to become oriented to the culture, history and economy of the hosting country during the Fellowship. The Recipients would strongly recommend that similar programs in the future combine worksite placements with orientation and learning activities as in the 2013 M-SAT program.

Planned Follow-on Activities

Several follow-on activities have taken place or will take place as a result of the M-SAT Fellowship. It is a testament to the value of the program that, with one exception, each of the activities below has been initiated by the Fellows themselves. Additional potential partnerships and activities are noted in the survey responses above.

- Placement of co-op students from Northeastern University in Boston at Savant Analytic in Cape Town.
- Massachusetts-South Africa Conference for Technology Transfer and Global Innovation Translating Scientific Discoveries into Commercial Products for Infectious Disease Diagnosis and Management. Scheduled for 2015, organized by a cross-cohort group of M-SAT Fellows from the U.S. and South Africa
- U.S. Fellow and South Africa Partners participation in the Nelson Mandela Fellowship program (YALI)
- Establishment of a U.S. office for Diacaustic Medical Devices, a South African company, housed at the M2D2 medical devices incubator at University of Massachusetts, Lowell
- South Africa Partners has submitted a grant to the Curtis International Fund at the Boston Foundation to host a one-day symposium entitled “The Global Innovation Economy: Lessons from South Africa.” If the proposal is successful, the symposium will take place in the fall of 2015 and will feature the M-SAT program and program participants.

Appendix A
M-SAT South African Fellows and U.S. Peers and

Table 1: First South African Cohort and their Peers, April 2013

South African Fellows	Placement Site/Address	U.S. Peer
Nick Allen nick@savantic.co.za	North Shore InnoVentures 100 Cummings Center Suite 438N Beverly, MA 01915	Susan Long sue12211@gmail.com
Janine Chantson jtchantson@gmail.com	Tufts Tech Transfer 75 Kneeland St., Suite 950 Boston, MA 02111	Erika Bechtold Erika.Bechtold@tufts.edu
Veronica Motloutsi Veronica.motloutsi@gmail.com	Cubist Pharmaceuticals 65 Hayden Ave. Lexington, MA 02421	Mike Crispin mcrispin@cubist.com
Mamatla Rantidi rantidimd@yahoo.com	LogMeIn 320 Summer St. Boston, MA 02210	Michelle Looney michellelooney@mac.com
Doug Sanyahumbi dougsanyas@gmail.com	Boston University Technology Development 53 Bay State Road Boston, MA 02215	Michael Pratt mpratt@bu.edu
Nodumo Zulu nnzulu@csir.co.za	OPK Biotech 11 Hurley St. Cambridge, MA 02141	Aaron Bandreimer abandremer@optbiotech.com

Appendix A (continued)

Table 2: Second South African Cohort and their Peers, October 2013

South African Fellows	Placement Site/Address	U.S. Peer
Grace Baloyi Project Manager Technology Innovation Agency gbaloyi@gmail.com grace.baloyi@tia.org.za	Massachusetts Medical Devices Industry Council (MassMEDIC) 650 Albany St. Boston, MA 02118	Andrea Stamp stamp@massmedic.com
Matthys Cronje Managing Director Diacoustic Medical Devices thys.cronje@gmail.com thys.cronje@geomed.co.za	M2D2 University of Massachusetts One University Av. Lowell, MA 01854	Mary Ann Picard m2d2@uml.edu
Keith Kenneth Director, Strategy and Marketing Telenetix Technology Solutions keith@telenetix.co.za	Mass Broadband 75 North Drive Westborough, MA 01581	Judith Dumont Dumont@masstech.org
Mtheza Mtyopo Project Manager Technology Innovation Agency mtheza.mtyopo@gmail.com	Mass. Life Sciences Center 1000 Winter St. Waltham, MA 02451	Beth Nicklas beth.nicklas@gmail.com
Francois Malan Commercialization Manager Savant Analytic Consulting francois@savantic.co.za	Cambridge Innovation Center 1 Broadway, 14 th floor Cambridge, MA 02142	Sara Delmar delmar@cictr.com
Refilwe Ngoato Technology Transfer Manager University of Pretoria refilwengoato@webmail.co.za refilwe.ngoato@up.ac.za	MIT Technology and Licensing Office 77 Massachusetts Av. Cambridge, MA 02139	Catherine Ives cives@mit.edu
Fundisile Serame Senior Specialist, Applications State Information Technology Agency fundisile.serame@sita.co.za fserame@gmail.com	State Street Financial 100 Huntington Av. Boston, Massachusetts 02116	Lawrence Heim LPHeim@StateStreet.com
Anthony Van Wyk Bioprocess Scientist Quoros Biotech antvwy@gmail.com	Biogen Idec 225 Binney St. Cambridge, MA 02142	Terrence Dobrowsky terrence.dobrowsky@biogenidec.com

Appendix B M-SAT Outreach Materials

Massachusetts – South Africa Technology Fellowship Program

Seeking Fellowship Candidates

The Massachusetts-South Africa (M-SAT) Fellowship Program brings together mid-level professionals from Massachusetts and South Africa in a two-way workplace exchange to create beneficial peer relationships, promote cultural competency and strengthen professional skills. Individuals selected to participate in the Fellowship Program will come from industrial sectors that are of major importance to both Massachusetts and South Africa.

These include, but are not limited to, the following:

- Life Sciences: Bio-Tech, Pharma, Medical Equipment
- Telecommunications and Information Sciences
- Precision Manufacturing
- New Technologies, including Energy Renewables, Solar, Wind, Biomass/Biofuel
- Technology Transfer

The fourteen South Africans Fellows selected to participate in the M-SAT Program will spend four weeks in Massachusetts after being matched with a U.S. business and one week in Washington, DC. All travel, accommodation and daily expenses are covered by the Fellowship. Fellows will be mentored by a senior manager and paired with a peer working on similar issues in the field. The U.S. peer will then travel to South Africa for two weeks as U.S. Fellow. The first cohort of six South African Fellows will travel to the United States in April, 2013, the second cohort of eight in October, 2013. In exchange, their American peers will visit South Africa in July, 2013 and January, 2014 with the expectation that they will spend 7-8 days with the South African Fellow in his or her workplace. **Please note that this Fellowship is not designed for the Education sector.**

We seek strong South African applicants who will benefit from the opportunity to compare professional practices, develop skills in working in an international setting, and establish strong links between U.S. and South African companies and individuals with the promise of long-term and mutual benefit.

The M-SAT Fellowship Program is led by Bentley University in Waltham, Massachusetts with support from South Africa Partners and funding from the U.S. State Department Bureau of Educational and Cultural Affairs, Professional Fellows Division.

Appendix B (continued)

Massachusetts – South Africa Technology Fellowship Program

Information for Applicants

Given the broad objectives of the program, we are looking for applicants who meet all or most of the qualifying criteria listed below:

- Employed in high tech, information technology, life sciences or related industries
- Five or more years of work experience in a managerial position
- Identified by employer as an emerging leader
- Fluent in written and spoken English
- Age 25-40 years
- Work experience and skills that allow for a productive match between the sending South African company and the Massachusetts host company.

Applications must be received by **December 7, 2012**. Please include a current CV and a letter of support from your current employer, whom we will contact with a request to host your U.S. peer should you be selected as a finalist for the Fellowship.

All applications will be carefully evaluated on an individual basis. Finalists will be invited to interview in Johannesburg during the week of January 28, 2013.

Applicants must be available to travel to the U.S. between either April 6 and May 12, 2013 or October 5 and November 10, 2013.

The South African applicant's employer must be willing to host the Fellow's U.S. counterpart for a two week exchange placement in July, 2013 or January, 2014.

For further information, please go to the "News" section of the South Africa Partners website: www.sapartners.org or contact Carol Cashion, Education Program Officer for South Africa Partners at cjcashion@sapartners.org or Professor Abdolreza Eshghi, Program Director, at Bentley University at aeshghi@bentley.edu.

Appendix B (continued)

Massachusetts – South Africa
Technology Fellowship Program

Application Form

Name: _____

Address: _____

City: _____ Postal Code _____

Province: _____

Date of Birth: _____ Gender: _____ Nationality: _____

Mobile: _____ Land Line: _____

Email: _____

Current Employer and Position: _____

Supervisor's Name and Contact Information: _____

Do you hold a current South African passport? _____ Expiration Date: _____

Do you hold a current U.S. Visa? _____ Expiration Date: _____

Languages: What languages do you speak (S), read (R) or write (W):

If you are selected as a Finalist, are you available to interview in Johannesburg during the week of January 28, 2013?

If you are selected as an M-SAT Fellow, are you available to travel to the U.S. on:

6 April – 12 May, 2013? _____

5 October – 10 November, 2013? _____

PROFESSIONAL EXPERIENCE

Please describe your current position, including years of experience, job responsibilities, previous foreign travel, if any, and any other experiences that will provide useful background for the Fellowship selection process.

WHAT DO YOU HOPE TO ACHIEVE THROUGH THE FELLOWSHIP?

Describe how you believe the Fellowship will be beneficial to you. Are there specific skills you wish to develop or business or research processes you wish to learn more about through the Fellowship?

U.S. PLACEMENT

Please identify the following to help us design the best possible placement for you if you are awarded a Fellowship:

- The largest challenge facing your industry in South Africa:
- The largest challenge facing the company where you are employed:
- The greatest professional challenge you face in your workplace day to day

WHERE DO YOU HOPE TO BE IN 10 YEARS?

Projecting into the future, where would you like your career to take you? How will this Fellowship help you get there?

Return this Application **via email by December 7, 2012**, along with:

1. Letter of support from your supervisor
2. Up-to-date CV, including educational experience and prior employment

Return to: Abdolreza Eshghi, Ph.D., Professor of Marketing and M-SAT Program Director at Bentley University at aeshghi@bentley.edu. If you have any questions, please contact Professor Eshghi or Carol Cashion, Education Program Officer at South Africa Partners at cjcashion@sapartners.org.

Appendix C M-SAT Evaluation Results

Exhibit 1: South African Fellows Survey - Post Internship First Cohort: April 2013



1. How useful were each of the following lectures in helping you to better understand the U.S. government and economy?

	Very helpful	Somewhat helpful	Adequate	A little helpful	Not helpful	Rating Count
Founding of a Nation (Professor Beneke)	50.0% (3)	50.0% (3)	0.0% (0)	0.0% (0)	0.0% (0)	6
The U.S. Government (Professor Salimbene)	50.0% (3)	50.0% (3)	0.0% (0)	0.0% (0)	0.0% (0)	6
The Role of Government in the U.S. Economy (Professor Scholten)	66.7% (4)	33.3% (2)	0.0% (0)	0.0% (0)	0.0% (0)	6
Entrepreneurship (Professor Blakelock)	66.7% (4)	33.3% (2)	0.0% (0)	0.0% (0)	0.0% (0)	6
Corporate Governance (Professor Wiggins)	16.7% (1)	33.3% (2)	50.0% (3)	0.0% (0)	0.0% (0)	6
Panel Discussion with Massachusetts Agency Representatives	50.0% (3)	16.7% (1)	33.3% (2)	0.0% (0)	0.0% (0)	6
answered question						6
skipped question						0

2. How well did the Orientation prepare you for your worksite placement?

		Response Percent	Response Count
Very much		33.3%	2
Mostly		16.7%	1
Adequately		16.7%	1
Very little		33.3%	2
Not at all		0.0%	0
answered question			6
skipped question			0

3. Please describe how you might use what you learned about the U.S. economy and U.S. government when you return to South Africa (see responses to this question below).

	Response Count
	6
answered question	6
skipped question	0

4. What additional information would have helpful to receive during the Orientation? (see responses to this question below).

	Response Count
	4
answered question	4
skipped question	2

5. Please indicate the degree to which your internship:

	Very much	Mostly	Adequately	Very little	Not at all	Rating Count
Increased your professional skills	16.7% (1)	66.7% (4)	16.7% (1)	0.0% (0)	0.0% (0)	6
Helped you gain a better understanding of U.S. business practices	50.0% (3)	50.0% (3)	0.0% (0)	0.0% (0)	0.0% (0)	6
Increased your knowledge about a specific aspect of technology	16.7% (1)	33.3% (2)	50.0% (3)	0.0% (0)	0.0% (0)	6
answered question						6
skipped question						0

6. Please describe the kinds of hands-on experiences you were able to have during your Internship (see responses to this question below).

	Response Count
	6
answered question	6
skipped question	0

7. Which of these experiences was the most valuable? Why? (see responses to this question below).

	Response Count
	6
answered question	6
skipped question	0

8. Please describe the skills, perspectives, and processes you were able to share with your worksite hosts during the course of your Internship (see responses to this question below).

	Response Count
	6
answered question	6
skipped question	0

9. How well was your time used during your worksite placement?

		Response Percent	Response Count
Very well		66.7%	4
Somewhat well		16.7%	1
Adequately		16.7%	1
Not very well		0.0%	0
Not well at all		0.0%	0
	answered question		6
	skipped question		0

10. How closely did you work with your assigned host Peer?

		Response Percent	Response Count
A lot		0.0%	0
Frequently		66.7%	4
Occasionally		16.7%	1
Very little		0.0%	0
Not at all		16.7%	1
answered question			6
skipped question			0

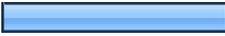
11. How well supported did you feel by your host Mentor and Worksite Organization?

		Response Percent	Response Count
Very well		50.0%	3
Somewhat well		50.0%	3
Adequately		0.0%	0
Not very well		0.0%	0
Not well at all		0.0%	0
answered question			6
skipped question			0

12. If your mentor or peer organized any site visits away from your workplace, please describe the visit(s) and how it added to your overall internship experience (see responses to this question below).

	Response Count
	5
answered question	5
skipped question	1

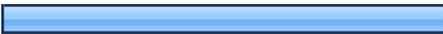
13. How likely are you to develop a joint project with your U.S. peer after your return to South Africa?

	Response Percent	Response Count
Very likely 	16.7%	1
Somewhat likely 	50.0%	3
Don't know 	33.3%	2
Somewhat unlikely	0.0%	0
Very unlikely	0.0%	0
answered question		6
skipped question		0

14. If you answered question #15 as very likely or somewhat likely, please describe the focus of the potential joint project (see responses to this question below).

	Response Count
	6
answered question	6
skipped question	0

15. Overall, how would you rate your worksite placement?

		Response Percent	Response Count
Excellent		66.7%	4
Good		33.3%	2
Adequate		0.0%	0
Fair		0.0%	0
Poor		0.0%	0
answered question			6
skipped question			0

16. How do you anticipate applying what you learned at your workplace site in the future? (see responses to this question below).

	Response Count
	6
answered question	6
skipped question	0

17. How would you rate the following cultural and recreational activities during your visit?

	Excellent	Good	Adequate	Fair	Poor	Rating Count
Duck Tour	83.3% (5)	0.0% (0)	16.7% (1)	0.0% (0)	0.0% (0)	6
Freedom Trail	83.3% (5)	16.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	6
Red Sox Game	66.7% (4)	16.7% (1)	0.0% (0)	16.7% (1)	0.0% (0)	6
MIT Licensing Office	50.0% (3)	0.0% (0)	50.0% (3)	0.0% (0)	0.0% (0)	6
MIT Deshpande Center	50.0% (3)	16.7% (1)	33.3% (2)	0.0% (0)	0.0% (0)	6
Weekend in NYC	50.0% (3)	16.7% (1)	16.7% (1)	16.7% (1)	0.0% (0)	6
Harbor Cruise in NYC	33.3% (2)	50.0% (3)	16.7% (1)	0.0% (0)	0.0% (0)	6
Top of the Rock in NYC	16.7% (1)	66.7% (4)	16.7% (1)	0.0% (0)	0.0% (0)	6
answered question						6
skipped question						0

18. What did you do during your free time? Did you feel that you had enough free time? (see responses to this question below).

	Response Count
	6
answered question	6
skipped question	0

Page 1, Q3. Please describe how you might use what you learned about the U.S. economy and U.S. government when you return to South Africa.

- 1 Lessons learned re: US economy and government will help support some of the changes I will have an opportunity to advocate for in forums where the concepts of 'free markets' and government's role in the economy and in promoting entrepreneurship and business are discussed.
- 2 I will be able to come up with projects that do have economic impact and find ways to establish relationships with the ministry of Communication and Technology for collaboration on some of the projects.
- 3 It's given me a better understanding. Can't really say how I would use it directly.
- 4 Be an advocate of Innovation and Entrepreneurship.
- 5 One highlight I got from the lectures was from the entrepreneurship lecture where it was highlighted that in the U.S small businesses that do not make it are not seen as failures whereas in SA a business failure is seen as a failure and actually this discourages people to start up their own business. There is that fear of failure. The way I can use this is sharing this with the management of my organization and also the institutes who fund small businesses. In this way the investors would be challenged to change their attitude towards business failures.
- 6 A sound understanding of the dynamics of the US economic and governmental systems is crucial for successfully launching new technologies in this market.

Page 1, Q4. What additional information would have helped to receive during the Orientation?

- 1 I would like to know a bit more about what it takes (process and requirements) to establish a technology-based business in the US and the position of the various key states with high technology business activities.
- 2 Professional/ Proposal Writing lecture would have been very helpful in addition to the lectures we have received.
- 3 None.
- 4 The orientation was more than adequate.

Page 1, Q6. Please describe the kinds of hands-on experiences you were able to have during your Internship.

- 1 Participate in engagements with inventors/faculty members with business ideas. Participate in portfolio updates and reviews in management meetings Participate in technology transfer strategy development
- 2 I was given an opportunity to do an analysis of the development process while learning.
- 3 Worked on the same things which the peer worked on.
- 4 IT Governance and IT Service Management
- 5 During the internship I got a chance to work on the development work they were doing to increase the shelf life of their product. This involved testing various buffers, characterizing various membranes, packing the ion exchange chromatography columns and testing their integrity. The membrane characterization also involved running the samples collected in a size exclusion HPLC.
- 6 Interacting with incubator and technology center managers. Meeting with angel investors and people involved in angel networks. Building up contacts in the tech commercialization space.

Page 1, Q7. Which of these experiences was the most valuable? Why?

- 1 Participate in tech transfer strategy development was the most valuable for me (and for my peer whose office also needed to do this) as it came at the point when I am in the process of establishing a technology transfer function at my university
- 2 Understanding of the technical architecture, development process and sales processes.
- 3 The hands-on experience. Learn by doing.
- 4 IT Governance, it always differ based on the uniqueness of the organization. Implementing the framework in the pharmaceutical company was the most valuable experience
- 5 Actually allop them were most valuable to me as I would use them in my PhD studies.
- 6 Being able to build contacts and networks in the tech commercialization space, as this will help me get the companies I work with to market more effectively.

Page 1, Q8. Please describe the skills, perspectives, and processes you were able to share with your worksite hosts during the course of your Internship.

- 1 We shared, compared and contrasted the processes and systems that we have in place at our offices for technology transfer. We shared strategy development perspectives for technology transfer based on our different settings
- 2 IT project challenges in South Africa
- 3 The similar challenges we face, but also the advantages and the programs we have which they do not.
- 4 Enterprise Architecture, Enterprise Data Management and IT Governance and Service Management
- 5 During the manufacturing of their product they use ion exchange chromatography....I suggested the use of affinity chromatography as it is much cost effective compared to ion exchange...i suggested this not knowing that it is one of the things they want to look into next. Shared with some of them the way we carry out product and process development...told them about the expression or production of their product in microorganisms compared to using bovine blood...they are more worried about how expensive the process would be if they were to use microorganisms.
- 6 I didn't manage to share a great deal with my hosts as my peer was not in the country at the time, but I did get to share my understanding and view of the South African tech commercialization and venture capital space with the various people I met.

Page 1, Q12. If your mentor or peer organized any site visits away from your workplace, please describe the visit(s) and how it added to your overall internship experience.

- 1 Attended the MATTO Seminar - Diagnostic Events: interesting and topical discussion on recent patenting issues in the diagnostics space Attended the Cambridge Innovation Centre Thursday event: great networking opportunities to hear who's doing what and try to link up opportunities with interested parties. Attended a IUCRC (Industry/University Cooperative Research Centers Program meeting: great example of an industry-university initiative to support stronger and more relevant collaborations
- 2 I visited a number of start-up companies which focus on new emerging technologies. The visit helped me gain a broader view of new technologies and to identify opportunities in the South African Market. I also build networks by visiting those companies.
- 3 I got to see how rich the innovation culture is in Massachusetts.
- 4 My peer organized a visit to the Bio-manufacturing center at UMass Lowell, where I met with Dr Carl Lawton who gave his advice on some of the projects I am working on back home.
- 5 The meetings organized by my peer were the highlight of my stay and were the main focus of my time here. I was well received by the majority of the incubators I visited and learned a great deal about what they have done in order to be successful.

Page 1, Q14. If you answered question #15 as very likely or somewhat likely, please describe the focus of the potential joint project.

- 1 There are a number of synergistic R&D areas of interest between our two institutions and there is an interest in selecting one of these areas for co-development with a commercialization focus.
- 2 To determine when the peer comes to South Africa
- 3 training and awareness or set up collaborations between our organizations (as opposed to our offices)
- 4 collaboration tool for knowledge sharing within projects.
- 5 Their process is mainly in downstream processing and in my organization we do both upstream and downstream processing. Another factor is that they are already a cGMP facility. While we are still looking into setting such a facility. Also our products are derived mostly from microbes and they obtain their product from bovine blood. These points make it hard to form a collaboration .however there is a group in our unit that does work which can help improve their purification steps and I will be setting up a meeting so that when my peer comes, they can meet and share ideas.
- 6 While I won't be developing a joint project with North Shore Innoventures, I am discussing a joint project with the Cambridge Innovation Centre to look at the feasibility of establishing a CIC type facility in Cape Town.

Page 2, Q16. How do you anticipate applying what you learned at your workplace site in the future?

- 1 I am in the process of developing a strategy for my office and I am looking forward to maintaining close links with key contacts/networks established in Boston
- 2 I will share my learning experience with my colleagues and create new services which we did not offer before going on the M-SAT program.
- 3 for improved efficiency, effectiveness, responsiveness and productivity
- 4 Looking into setting up an incubation in or outside my own organization
- 5 Most of what I have learnt I will share with the management as they have the power/authority to implement the ideas I have received from my internship
- 6 I will look to emulate the aspects of the incubators I visited that I believe will be most beneficial and relevant in South Africa, in particular those learning from the CIC.

Page 2, Q18. What did you do during your free time? Did you feel that you had enough free time?

- 1 Caught up with work from home Explored parts of Boston by bike Set up other meetings Visited a friend in the Boston area Visited some local areas on interest Yes - I feel that there was enough free time.
- 2 Free Time allocated was enough but time in NYC was not enough. I used my time to explore other sites which were not planned with the group and to shop.
- 3 visited museums, went for walks, communicated with friends and family from back home, did some shopping for gifts and groceries, caught up on news from home, did my laundry
- 4 Shopping, Site Visits, Family visits
- 5 During my free time i did a lot of shopping. Went to church and did some sight- seeing and no there was never enough free time
- 6 Toured Boston and got to know the city and its people a bit better, ran along the river, arranged many other meetings and some social time with people I had met, watched the marathon, tried to go sailing! Did some shopping... I felt there was enough free time.

Appendix C (continued)

Exhibit 2: M-SAT Fellows Survey - Post Internship Second Cohort: November 2013



Q1: How useful was each of the following lectures in helping you to better understand the U.S. government and economy?

	Very helpful	Somewhat helpful	Adequate	A little helpful	Not helpful	Total
U.S. History (Professor Beneke)	60.00% 3	40.00% 2	0.00% 0	0.00% 0	0.00% 0	5
The U.S. Government (Professor Salimbene)	100.00% 5	0.00% 0	0.00% 0	0.00% 0	0.00% 0	5
The Role of Government in the U.S. Economy (Professor Scholten)	80.00% 4	20.00% 1	0.00% 0	0.00% 0	0.00% 0	5
Entrepreneurship (Professor Blakelock)	60.00% 3	40.00% 2	0.00% 0	0.00% 0	0.00% 0	5
Mass. Innovation Economy (Professor Edelman)	60.00% 3	40.00% 2	0.00% 0	0.00% 0	0.00% 0	5

Q. 2: How well did the orientation prepare you for your worksite placement?

Answer Choices	Responses	
Very much	20.00%	1
Mostly	60.00%	3
Adequately	20.00%	1
Very little	0.00%	0
Not at all	0.00%	0
Total		5

Q. 3: Please indicate the degree to which your internship:

	Very much	Mostly	Adequately	Very little	Not at all	Total
Increased your professional skills	20.00% 1	80.00% 4	0.00% 0	0.00% 0	0.00% 0	5
Helped you gain a better understanding of U.S. business practices	80.00% 4	20.00% 1	0.00% 0	0.00% 0	0.00% 0	5
Increased your knowledge about a specific aspect of technology	100.00% 5	0.00% 0	0.00% 0	0.00% 0	0.00% 0	5

Q. 4: How well was your time used during your worksite placement?

Answer Choices	Responses	
Very well	60.00%	3
Somewhat well	40.00%	2
Adequately	0.00%	0
Not very well	0.00%	0
Not well at all	0.00%	0
Total		5

Q. 5: How closely did you work with your assigned host peer?

Answer Choices	Responses	
A lot	40.00%	2
Frequently	20.00%	1
Occasionally	40.00%	2
Very little	0.00%	0
Not at all	0.00%	0
Total		5

Q. 6: How well supported did you feel by your host company or organization?

Answer Choices	Responses	
Very well	60.00%	3
Somewhat well	20.00%	1
Adequately	20.00%	1
Not very well	0.00%	0
Not well at all	0.00%	0
Total		5

Q. 7: How likely are you to develop a joint project with your U.S. peer after your return to South Africa?

Answer Choices	Responses	
Very likely	0.00%	0
Somewhat likely	80.00%	4
Don't know	20.00%	1
Somewhat unlikely	0.00%	0
Very unlikely	0.00%	0
Total		5

Q. 8: Overall, how would you rate your worksite placement?

Answer Choices	Responses	
Excellent	80.00%	4
Good	20.00%	1
Adequate	0.00%	0
Fair	0.00%	0
Poor	0.00%	0
Total		5

Q. 9: How would you rate the following cultural and recreational activities during your visit?

	Excellent	Good	Adequate	Fair	Poor	Total
DuckTour	80.00% 4	20.00% 1	0.00% 0	0.00% 0	0.00% 0	5
Freedom Trail	60.00% 3	40.00% 2	0.00% 0	0.00% 0	0.00% 0	5
Innovator's Business Series Lecture at Bentley	60.00% 3	20.00% 1	20.00% 1	0.00% 0	0.00% 0	5
Trip to Rogers Middle School and City Year Headquarters	60.00% 3	40.00% 2	0.00% 0	0.00% 0	0.00% 0	5
Weekend in NYC	60.00% 3	0.00% 0	40.00% 2	0.00% 0	0.00% 0	5
Harbor Cruise in NYC	60.00% 3	40.00% 2	0.00% 0	0.00% 0	0.00% 0	5
Bus Tour of Washington, DC	80.00% 4	20.00% 1	0.00% 0	0.00% 0	0.00% 0	5
U.S. Capitol Tour	80.00% 4	20.00% 1	0.00% 0	0.00% 0	0.00% 0	5

Appendix D M-SAT Evaluation Results

Exhibit 1: U.S. Fellows Survey - Post Internship First Cohort: July 2013

Worksite Placement

U.S. Fellows uniformly expressed high degree of satisfaction with their professional experience in South Africa (see attached ratings).

Cultural Activities and Recreational Activities

U.S. Fellows were equally satisfied with cultural activities and visits to historical sites during their stay in South Africa (See attached ratings),

Take-Aways and potential Follow-on Projects

Overall, U.S. Fellows found their visit to South Africa as extremely valuable from a professional point of view. By all indications, the relationships that have been developed through the Fellowship program will most likely continue in the future leading to several tangible outcomes. For details, please see U.S. Fellows response to the following evaluative questions upon return from South Africa.

Please describe the kinds of experiences you were able to have during your Internship.

I had a unique experience because I created my own program, and set up meetings with business leaders and government staff. I didn't know what to expect from it, so in hindsight I wish that I had gone in with business partnership ideas in advance.
Received a good idea about the startup community in Cape Town, especially they types of high tech markets that are being targeted in the Western Cape and why. Visited six companies and toured their operations. Participated in meetings with funding agencies, both government (TIA, DTI) and private sector (a VC). Got some exposure to how technologies are licensed and/or developed out of academics (UCT, UWC, and Stellenbosch) and other research agency (CSIR).
Time too limited to increase professional skills, but able to learn how CSIR operated and its mandate for biotechnology
Learn about technology-led economic development in SA and the entrepreneurial culture/ecosystem in the Western Cape; meet with peers from many academic institutions Build a stronger bond with my peer and his colleagues; Meet with University leadership
real working experience, interaction with other departments/collaborators/attorneys, gave a talk during a seminar series

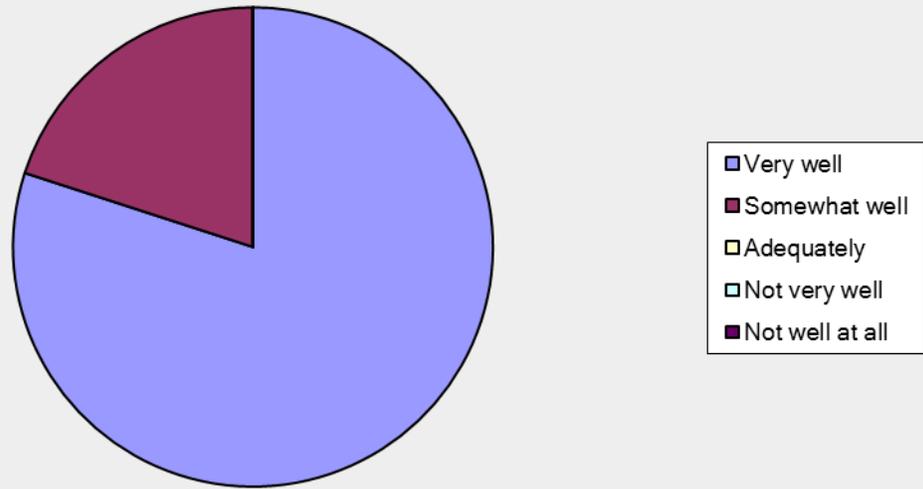
Which of these experiences was the most valuable? Why?

My meeting with Johannesburg government was most valuable, due to the partnership opportunities with US companies I represent. Also it exposed me the immediate and long-term needs of the SA people, and how they must balance the smart city efforts based on those varying needs. VERY cool to be there.
Observing Nick Allen's operation at Savant Analytic. I was able to see how his incubator compares to our own. We face many of the same issues and it was helpful to compare experiences based on our different business models and areas of focus. I feel I was able to make some suggestions for Nick, but also got some good ideas to bring back with me.
Building a stronger relationship with my peer. This resulted in a much more complete understanding of the business climate in SA. The trust we built enabled frank discussions about opportunities and challenges
The real working experience was great- it's really the best way to be able to get a real feel for what working in SA is like.

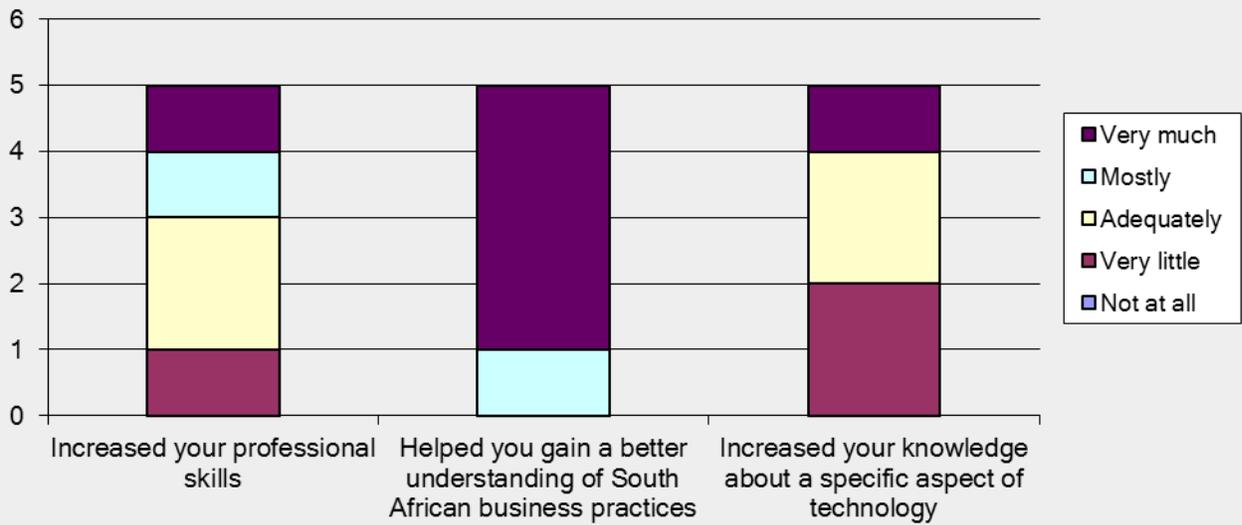
Please describe the skills, perspectives, and processes you were able to share with your worksite hosts during the course of your placement.

Smart city team = I shared the internet of things technology and benefits of having connected objects and how government could implement technology to improve safety and communications between people and government.
Digital agencies = We had very similar approaches in our practices, but unique constraints exist in SA due to bandwidth so we talked about to get around that.
P.E.A.C.E.org = A fascinating look into non-profit and government discord, and the challenges companies face during their attempting create innovation hubs for people in rural areas. I used my background in ethnographic studies to map out what a leap from 3rd world to "better world" would look like, without just coping what worked in the US.
We discussed how this program has helped to fill a need of having an industry contact(s) in the US for SA business trying to expand their markets here. Our incubator also serves as a "soft landing" to the extent there is a desire for the SA company to have a US office. We have a successful Internship program for life sciences companies in Massachusetts that I was able to describe as a potential model for South Africa, also shared best practices for finding and hiring the right interns. I also described our mentorship program which is volunteer based, as away to engage experienced business people with the start up community.
Perspectives shared: biotechnology in USA FDA regulations
Metrics for University Technology Transfer Perspective/"setting expectations" for the role and economic opportunity for university-led entrepreneurial activity/technology transfer
we take a very different approach to venture creation. I tried to present our model as an alternative approach to the same problem.

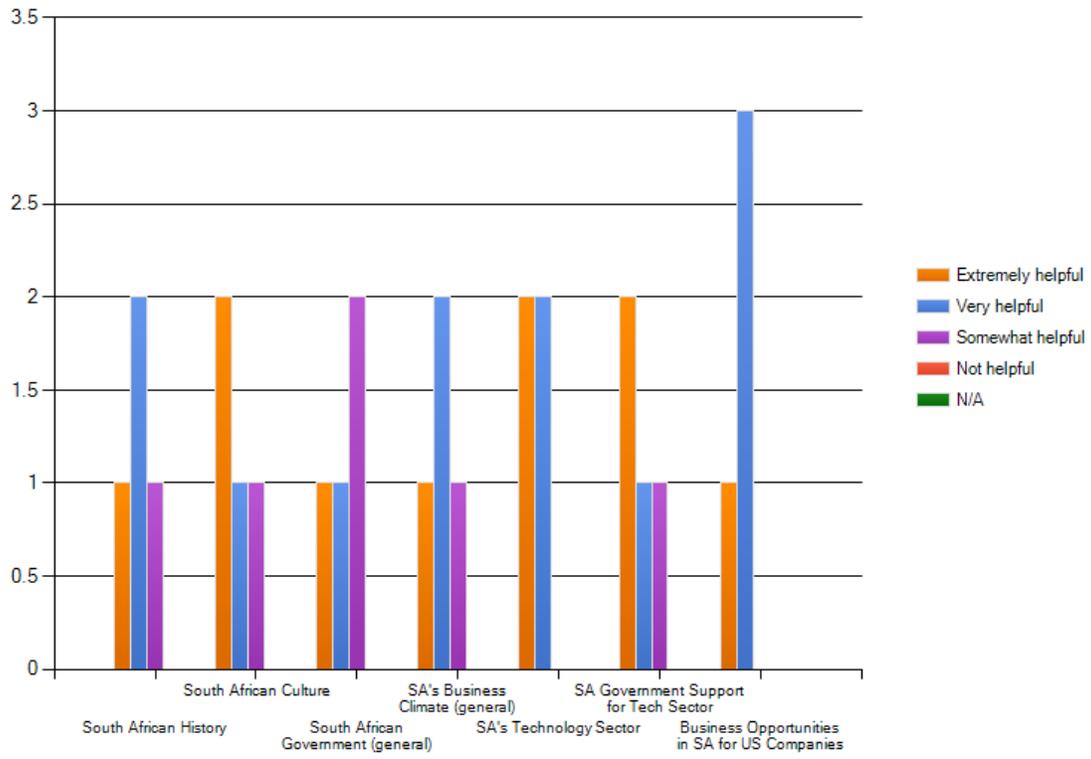
How well supported did you feel by your host peer?



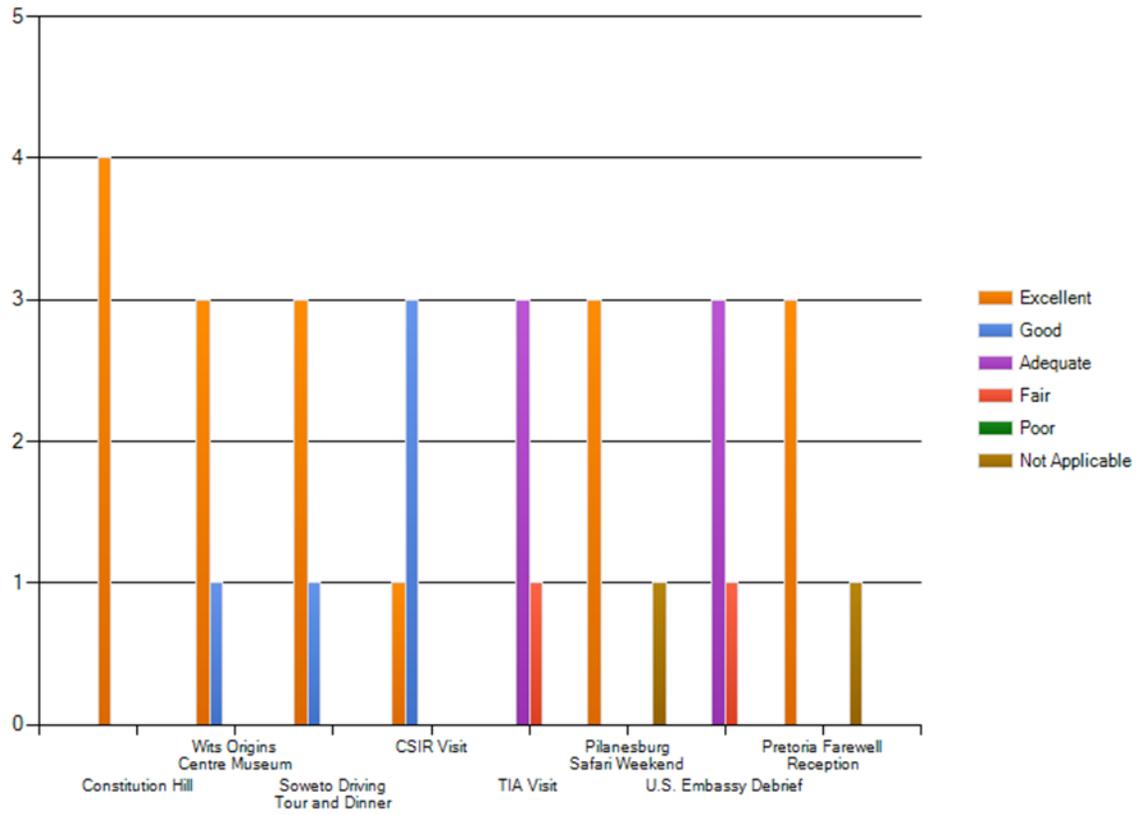
Please indicate the degree to which your worksite placement:



How helpful was your time in South Africa in contributing to your understanding of the following:



How would you rate the following activities during your visit?



Appendix D (continued)
M-SAT Evaluation Results

**Exhibit 2: U.S. Fellows Survey - Post Internship
Second Cohort: February 2014**

Historical and Cultural Orientation in South Africa: U.S. Fellows uniformly gave high ratings to their visits to Constitution Hill, Liliesleaf Farm and the Apartheid Museum. They report that these activities were extremely helpful to their understanding of South African history and culture and prepared them well for their introduction to the workplace. In addition, 100% report feeling adequately to very well-prepared for their visit after the U.S. based Pre-Departure Orientation.

Worksite Placement: Six of seven respondents report that their worksite placements helped them “very much” in gaining a better understanding of South African business practices. Fellows engaged in a range of activities and experiences through their worksite placements.

What kinds of experiences were you able to have during your worksite days?

Areas of focus/discussions: Change management, team development and culture change challenges, governance and procurement issues, skills and leadership training. Meetings with leadership for infrastructure, development, HR, innovation center teams.
Met innovation leaders in the community. Toured facilities that supported entrepreneurs. Learned about the South African innovation ecosystem and support services. Discussed challenges, best practices, possible collaborations, etc.
Attended assessment meetings of applications submitted for funding, presentations by students receiving awards, visits to technology stations in several different locations, met with acting Director and various staff at TIAA, visited the Innovation Hub, CSIR, SABS Design Center and Industrial Development Corporation.
I was able to review the technology developed by the company and see it in operation. I was also able to gain an understanding of the development processes used to arrive at the current model / process. The senior staff was also able to review and detail the supply chain structure and strategies for risk mitigation.
Organized and presented a talk in a workshop focusing on commercialization of intellectual property arising out of universities; met with various government agencies involved in technology development, innovation and commercialization, met with faculty and university administration.
A lot of sharing about best practices and overall business set up and strategies; a lot of networking and setting up business agreements.

Please describe the skills, perspectives, and processes you were able to share with your worksite hosts during the course of your Internship.

<p>How to build and use a professional network and the entrepreneurial ecosystem in Boston.</p>
<p>Spectrum of challenges in South Africa is wide – highly developed country in some fields (private education, health care) vs. emerging market challenges (public education, schools with no electricity or basic infrastructure, public health facilities). And seeing the Mamelodi school outside Pretoria with little to no basic infrastructure was enlightening. SITA shares many challenges and opportunities as other IT organizations, they could benefit from on-going engagement with State Street sharing best practices and IT process enhancement ideas.</p>
<p>Best practices in the Boston innovation ecosystem. Models we use, approaches to making support services sustainable, learnings/successes, etc.</p>
<p>I shared our perspectives and processes with my counterpart while he was in the U.S. He was astonished by the robustness of activity, the volunteer contributions of our expert peer reviewers, and the scale of our private sector investment. It would have been impolite to point out how lacking his agency's procedures and processes are.</p>
<p>I was able to give feedback on their new technology from a biopharmaceutical perspective. I walked through recommendations for their user interface and what customers may expect in terms of functionality. In addition, I recommended stressing the benefit of a specific capability of the technology to demonstrate its improvement over alternative products.</p>
<p>How to manage external relationships with attorneys, how to develop an entrepreneurial culture through the development of courses and other experiential learning opportunities for students.</p>
<p>Specifically the way our business incubator operates as opposed to theirs; the pros and cons of each; the way IP works at a MA state university versus theirs. It is more favorable here to the entrepreneur.</p>

Outcomes and Joint Projects

Several paired Fellows identified opportunities for future collaboration. Possible areas of future work or joint projects include:

Set up session to walk through State Street IT Advisory Board structure and governance. Help SITA with IT collaboration. Share State Street's guidelines and principles related to the IT Mentoring program. Specific input could come from our Women in Finance group to support.

Ways of empowering females in IT. Setup follow-up discussions with State Street's development groups; understand how they are separating the different modules so allow for consistent standards in security, entitlement and customization for business functionality. Speak with Learning and Development group IT leadership training program for SITA management level reps. Establish a formal engagement between Innovation Hub's M-LAB and SITA to create and rapid development and open innovation approach. Set up discussions with SITA related to State Street's work on the Private Cloud. Create a mobile benchmarking discussion group that could include private and public service entities – share best practices, approaches, common area of interests, professional networking, and idea generation. Establish a formal engagement between MISA (Municipal Infrastructure Support Agency) and SITA to break down inefficiencies or duplication of effort, focus attention on leveraging each group's area of strength. Explore potential ways of engaging Cape Town office and vendor partners in support of schools.

Exploring creating innovation infrastructure to support startups in Cape Town in collaboration with the Cambridge Innovation Center.

Working on determining if we can support an MIT project team to partner with SA faculty.

One start-up company already signed on as a client of our medical device incubator. They are establishing a satellite office in MA. There are two others in the process of following suit. We will assist them with getting their medical device inventions to market in the US.

How do you anticipate applying what you learned at your workplace in the future?

I hope to expand product lines into S. Africa some day and expect the business knowledge I gained to be instrumental in opening that door.

Good perspective on development challenges in an emerging market.

Plan to apply best practices.

I came away with a significantly higher level of appreciation for the ecosystem of innovation, collaboration, and volunteerism here in Boston and Cambridge. I learned about the challenges South Africa faces in the workplace, in education, and the stifling effect of too much government. My workplace site provided me with examples of what not to do.

I plan to directly apply the strategies employed by the company with respect to supply chain at my own company.