Maastricht University Leading in Learning!

Maastricht Graduate School of Governance (MGSoG)

Connecting Diaspora for Development

Baseline Report

May 2017

Charlotte Mueller

Dr. Katie Kuschminder

Sarah Langley

Maastricht Graduate School of Governance (MGSoG)

Contents

1 Introduction

This report has two objectives: the first is to summarize the main findings of the interviews conducted between November 2016 and March 2017 as part of the impact evaluation of the Connecting Diaspora for Development (CD4D) - Project. The purpose of this baseline study is to identify the main characteristics, strengths and challenges of selected host institutions as well as their motivation to host CD4D-assignments and their expectations for the project. This report summarizes the baseline of the institutional fieldwork only; separate baselines are currently being conducted with colleagues and participants. The second objective is to provide an overview of the progress to date on the impact evaluation as a whole for which work commenced in July 2016.

Following from this introduction, Chapter 2 provides an overview of the work conducted to date on the overall impact evaluation. Chapter 3 gives an overview of the main institutional and individual characteristics. Then the main findings are presented, divided into four main topics: (1) Familiarity with CD4D and Theory of Change (ToC), (2) Existing institutional knowledge transfer, (3) International experience as potential knowledge transfer facilitator and (4) Potential barriers to knowledge transfer (KT). These themes have been selected from the literature review. The recommendations following from this report and next steps are outlined in the final chapters.

2 Work to date

This chapter provides an overview of the progress of the impact evaluation since July 2016. The impact evaluation uses a mixed methods approach of both quantitative and qualitative research methods. Data will be collected through interviews and surveys at three points in time (prior to implementation of the CD4D assignment, after the CD4D placement, one year post placement) and from three target groups (CD4D participant, colleagues, host institution). Interviews are being used for the collection of all institutional data and a selected number of participants will be interviewed upon their return to the Netherlands. All other data collection with participants and colleagues is being done via online questionnaires.[1]

The following table shows an overview of the deliverables completed to date.[2]

Table 1: Overview of completed deliverables

Deliverable	Date of delivery
Literature Review	August 2016
Theory of Change for the Evaluation	August 2016
Baseline Interview Guide	November 2016
Baseline Colleague Survey	November 2016
Baseline Participant Survey	November 2016

Baseline fieldwork has been completed in the five target countries (Afghanistan, Ethiopia, Ghana, Sierra Leone and Somalia/Somaliland). A total of 25 institutions have been included in the baseline evaluation, comprising around five institutions per country. The data collection was completed between November 2016 and March 2017. The following table gives an overview of the dates of field work, number of institutions interviewed per country and the names of the institutions:

[1] A comprehensive time scheme can be found in the appendix.
[2] All completed deliverables can be found in the appendix of this report.

Table 2: Overview of interviewed institutions per country[3]

Country	Date of fieldwork	No. Institutions	Names of institutions[4]
Afghanistan	21.02. – 07.03.2017	5	1. Kabul Polytechnic University 2. Khairkhwa Medical Complex (KMC) 3. Ministry of Energy and Water 4. Ministry of Public Health 5. Ministry of Rural Rehabilitation and Development
Ethiopia	27.01. – 03.02.2017	5	1. Ministry of Agriculture and Natural Resources (Rural Job-Opportunity Creation Directorate & Ethiopia Crop Development Directorate) 2. Ethiopian Institute of Agricultural Research 3. Wollo University, College of Medicine and Health Sciences 4. Wollo University, Kombolcha Institute of Technology 5. Ethiopian Horticulture and Agricultural Investment Authority
Ghana	18.01. – 26.01.2017	4	1. St. Dominic's Hospital 2. Korle Bu Teaching Hospital 3. Komfo Anokye Teaching Hospital 4. Sunyani Technical University
Sierra Leone	28.11. – 06.12.2016	6	1. Institute of Advanced Management and Technology (IAMTECH) 2. Ministry of Agriculture and Food Security (several divisions) 3. The Institute of Public Administration and Management (IPAM) 4. University of Sierra Leone (USL) College of Medicine Allied Health Sciences (COMAHS) 5. Ernest Bai Koroma, University of Science and Technology-EBKUST 6. Milton Margai College of Education and Technology (MMCET)
Somalia/Somaliland	12.01. – 26.01.2017	5	1. Ministry of Justice (SL)[5] 2. Ministry of Interior (SL) 3. Ministry of Public Works Housing and Transport (Roads Development Agency) (SL) 4. Ministry of Agriculture (SL) 5. Ministry of Water (SL)

The institutional baseline data was collected through in-depth interviews with staff at higher management level. The institutions were selected by the International Organization for Migration (IOM) Netherlands and the local IOM offices. Per target sector, at least one institution was included. Practical

[3] A more comprehensive table with information on number of staff, departments interviewed and main challenges for each institution can be found in the appendix.
[4] In order by date of interview.
[5] SL in this cell stands for Somaliland.

aspects and the current security situation in each country and at the different locations were also taken into account in determining the selection of the host intuition's included in the evaluation.[6] At each institution, the intention was to interview five respondents and in practice this ranged from 4-6 respondents. The respondents were selected by the host institution in close coordination with the local IOM office. All interviews were conducted using a semi-structured interview guide and the majority were recorded with a voice recorder. At this time all interviews are being transcribed for further coding and analysis. In a few cases, respondents refused to be recorded in which case the interviewer took extensive notes. In the case of Afghanistan, Ethiopia and Somaliland, the interviewer was accompanied by a local IOM staff member who served as a translator. In Ghana and Sierra Leone, a local staff member accompanied the interviewer to the institution, but was not present during the interview.

[6] For these reasons, in Somalia/Somaliland interviews took only place in Hargeisa/Somaliland, not in Mogadishu/Somalia.

3 Descriptive Overview of Institutions and Individuals Interviewed

This section summarizes the main institutional and main individual characteristics of the people interviewed for the baseline data collection. Both are important as a foundation for later discussion and analysis.

3.1 Main institutional characteristics

The CD4D-Project focuses on five sectors of intervention and comprises different types of institutions. For an overview, the institutions are here being categorized among three different lines: (1) Type of institution (Table 3), (2) Primary source of funding (Table 4) and (3) Sector of intervention (Table 5). As Table 3 shows, almost half of the institutions included in the impact evaluation are governmental ministries or departments. Nine of the interviewed institutions are universities and four are hospitals. Additionally, one institution can be categorized as a research institute. This sample is representative as it proportionally reflects the types of institutions in the overall project.

Table 3: Number of institutions by type of institution

Type of institution	In sample							In overall project[7]						
	AF[8]	*ET*	*GH*	*SL*	*SO*	*Total*	*%*	*AF*	*ET*	*GH*	*SL*	*SO*	*Total*	*%*
Governmental Ministry or Department	3	2	-	1	5	**11**	44	6	2	-	2	14	**24**	44
Hospital	1	-	3	-	-	**4**	16	4	-	7	-	-	**11**	20
Research Institute	-	1	-	-	-	**1**	4	-	1	-	-	-	**1**	2
University	1	2	1	5	-	**9**	36	2	6	1	8	1	**18**	33
Total	**5**	**5**	**4**	**6**	**5**	**25**	**100**	**12**	**9**	**8**	**10**	**15**	**54**	**100**

Furthermore, the majority of institutions in all countries are public institutions, that is ministries, public hospitals and public universities. Another five institutions are categorized as publicly-funded institutions meaning that the primary source of funding is public funds. Only one institution in Afghanistan and one institution in Sierra Leone can be classified as a private institution. These organizations are the Khairkhwa Medical Complex (KMC) in Kabul and the Institute of Advanced Management and Technology (IAMTECH) in Freetown.

[7] This overview was created based on the list of host institutions as of May 11, 2017.
[8] AF =Afghanistan, ET = Ethiopia, GH = Ghana, SL = Sierra Leone, SO = Somalia/Somaliland.

Table 4: Number of institutions by primary source of funding

Type of institution	AF	ET	GH	SL	SO	Total
Public Institution	3	2	3	5	5	18
Publicly-funded Institution	1	3	1	-	-	5
Private Institution	1	-	-	1	-	2
Total	**5**	**5**	**4**	**6**	**5**	**25**

As the project comprises five different sectors of intervention, the institutions included in the baseline evaluation were also taken from these five sectors. The sectors depend on the country and some sectors are presented (e.g. Agriculture and Health) in a greater number of institutions than others (e.g. Justice). As for the baseline fieldwork the inclusion of at least one institution from each sector was ensured at all times, the sample is not completely representative of the overall project in terms of institutions by sector of intervention.

Table 5: Number of institutions by sector of intervention

Sector of intervention	In sample							In overall project						
	AF[9]	*ET*	*GH*	*SL*	*SO*	*Total*	*%*	*AF*	*ET*	*GH*	*SL*	*SO*	*Total*	*%*
Agriculture	-	3	1	1	1	**6**	24	-	3	1	1	7	**12**	22
Education	-	1	-	4	-	**5**	20	-	3	-	6	-	**9**	17
Health	2	1	3	1	-	**7**	28	5	3	7	3	-	**18**	33
Infrastructure	3	-	-	-	2	**5**	20	7	-	-	-	5	**12**	22
Justice/ Rule of Law	-	-	-	-	2	**2**	8	-	-	-	-	3	**3**	6
Total	**5**	**5**	**4**	**6**	**5**	**25**	**100**	**12**	**9**	**8**	**10**	**15**	**54**	**100**

[9] AF =Afghanistan, ET = Ethiopia, GH = Ghana, SL = Sierra Leone, SO = Somalia/Somaliland.

3.2 Main individual characteristics

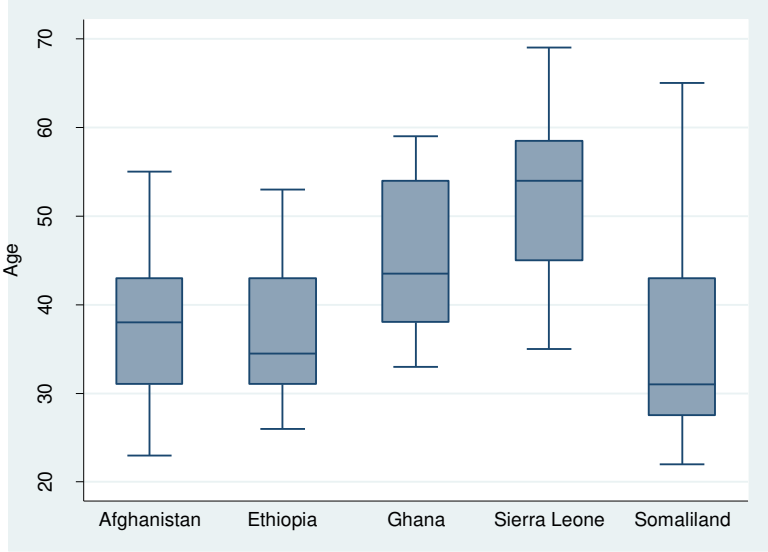
This section summarizes the main individual characteristics of the respondents by country. A total of 124 respondents were interviewed. The majority of respondents are male (see Table 6). The share of female interviewees was the lowest in Afghanistan and Ethiopia, with only one female respondent per country. In Ghana, Sierra Leone and Somaliland between three to five women were interviewed. This is not necessarily surprising as all of these countries score relatively low on gender equality. [10]

Table 6: Respondents by gender, by country

Gender	AF	ET	GH	SL	SO	Total
Male	21	25	16	27	21	108
Female	1	1	4	5	3	16
Total	**22**	**26**	**20**	**32**	**24**	**124**

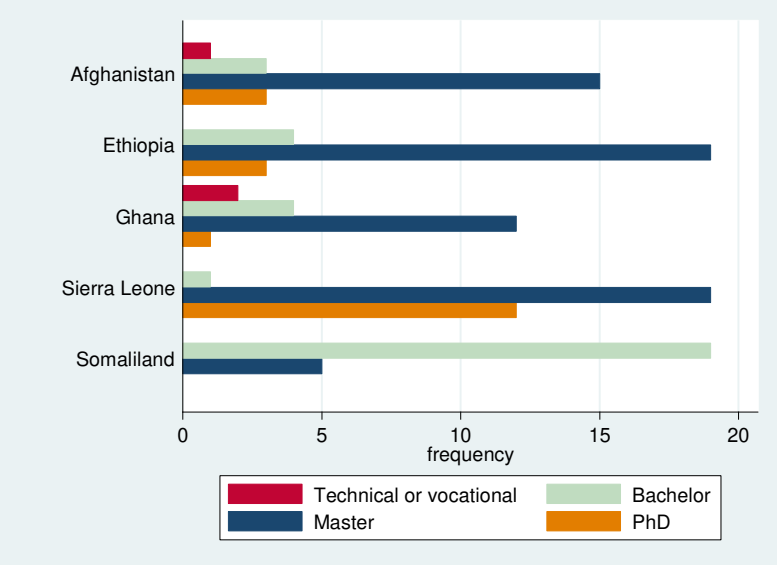
The average age of respondents was 42 years old, however as Graph 1 shows, this clearly varies by country. Respondents working in Sierra Leonean institutions were on average the eldest with a mean age of 53 years old, compared to respondents in Somaliland that were on average the youngest with a mean age of only 35. This age discrepancy is partially explained by education levels below.

Graph 1: Age of respondents, by country



[10] Ethiopia scored rank 116 on the UNDP Gender Inequality Index for 2015, Ghana rank 131, Sierra Leone rank 151 and Afghanistan rank 154. Somalia was not included in the ranking, but has a female labour force participation rate of 33.2 percent. This is higher than in Afghanistan (19.1%), but lower than in Sierra Leone (65.0%), Ethiopia (77.0%) and Ghana (75.5%) (UNDP, 2016).

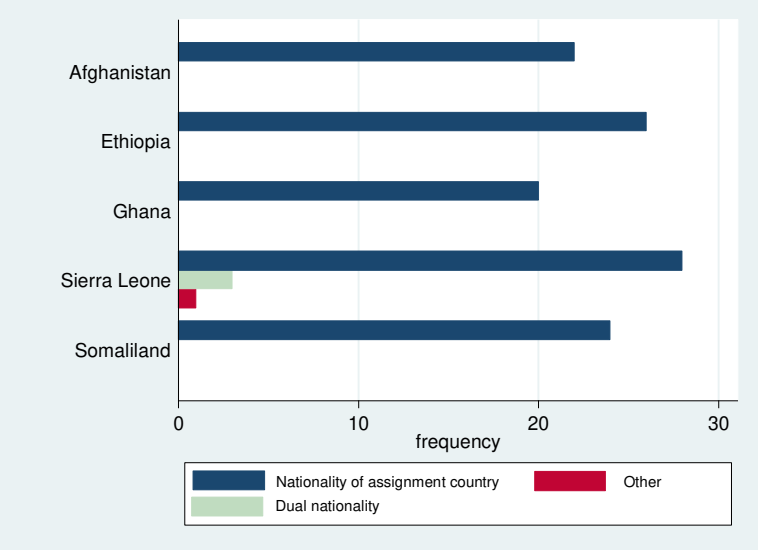
Graph 2: Level of education of respondents by assignment country[11]



Overall, a master's degree is the level of education most frequently obtained by respondents from all target countries (57%). Twenty-five percent of respondents hold a bachelor's degree and 15% have a PhD. Only 3 respondents have a degree not higher than technical or vocational training. None of the respondents has only pursued secondary education or lower. When looking at the individual countries (see Graph 2), only in Somaliland the most frequently obtained level of education is a Bachelor's degree. In Sierra Leone, a significantly higher number of interviewees hold a Doctoral Degree. This might be attributed to the fact that five of the six institutions included in the baseline interviews are universities while in all other countries a maximum of two universities were evaluated (see Table 3). Overall, it is promising that a high level of education is the norm within the selected institutions.

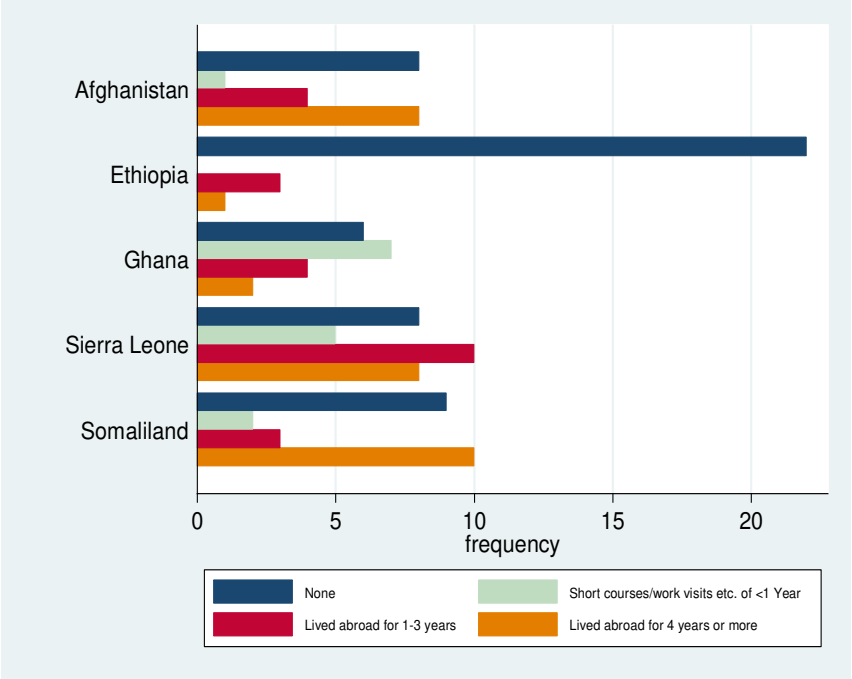
[11] For one Ghanaian respondent the level of education is missing. Therefore the statistics and the graph show the education levels of 123 respondents.

Graph 3: Nationality by assignment country



All 124 interviewed individuals have the nationality of the country they are working in. There are a few exceptions insofar as three interviewees in Sierra Leone have dual nationality (Sierra Leonean and United Kingdom or American) and one respondent in Sierra Leone has Sierra Leonean nationality through naturalization, but was born in Nigeria.

Graph 4: International experience by assignment country[12]



[12] For three respondents there was not enough information available to determine to which category they belong. This was the case for one respondent from Afghanistan, one respondent from Ghana and one respondent from Sierra Leone.

Over forty percent of respondents have never lived abroad. As Graph 4 shows, the share of individuals without any international experience is significantly higher in Ethiopia than in any of the other assignment countries (22%). In Ethiopia, only three respondents have lived abroad for one to three years and one respondent for four years or more. In Afghanistan, Sierra Leone and Somaliland, the share of people who have not lived abroad and the share of people who have lived abroad for more than four years are very similar. In Ghana, respondents have mostly gained international experience by short/courses and work visits, some also through shorter living periods abroad, mostly to pursue higher education. These differences can be attributed to the different country contexts and histories. This information will be valuable in the evaluation in assessing if there are differences in how CD4D participants are received based on the international experiences of the staff at the different host institutions.

4 Main Findings

The following section is divided into four main themes : (1) Familiarity with CD4D and Theory of Change (ToC), (2) Existing institutional knowledge transfer, (3) International experience as potential knowledge transfer facilitator and (4) Potential barriers to knowledge transfer (KT). These themes represent critical areas of the overall evaluation identified in the literature review that will be examined through each stage of the evaluation.

4.1 Familiarity with CD4D-Project and Theory of Change (ToC)

The first section of this report examines the respondent's familiarity with the CD4D-Project and the institutional Theory of Change (ToC) that was created by the institution in coordination with the IOM country focal point. The commitment of the higher management level to the project and their involvement in the Theory of Change-Process is regarded as essential for the success of the project. Therefore, respondents were asked if they are familiar with the CD4D-Project, if they participated in the development of the ToC for their institution or if they are familiar with the document and content of the ToC.

Significant differences were found in the familiarity with the CD4D-Project and the institutional ToC across countries. In Afghanistan, the majority of respondents in all organizations were familiar with the CD4D-Programme prior to the interview/the introductory meeting. Most respondents had also participated in the ToC-Process. If not, they had at least been informed about the ToC-Workshop and/or had seen the ToC-Document (in most cases). This was similar in Ethiopia and Sierra Leone. In Ghana, respondents were generally familiar with the project, yet most respondents had little knowledge about the ToC. Only in Somaliland, the vast majority of respondents at all organizations were not familiar with the CD4D-Programme prior to the interview/the introductory meeting. Additionally, the majority of respondents had not participated in the ToC-Process; most of them had not heard that a ToC had been formulated or seen the document. In most cases, the only person at the organization familiar with the TOC was the institutional focal point who was responsible for coordinating with IOM Hargeisa on the ToC. One respondent (who was not the institutional focal point) at the Ministry of Agriculture in Somaliland even expressed great frustration about the fact that this had not been communicated to him/her and the other staff by the institution's management (for him/her this lack of communication of such programmes etc. was a general frustration).

The main reference point for the quality of the ToC is the guidance document prepared by MDF Training and Consultancy for the participants of the 2-day training on Theory of Change at the International

Organization for Migration, the Netherlands (7, 8 September 2016) (MDF Training and Consultancy, 2016). The guidance document presents the ToC as a step-wise process. Thereby, great importance is given to the inclusion of all affected individuals or parties. The approach, as designed by MDF, also assumes that a ToC is developed during a workshop and the visualization of the ToC is an essential element.

In general and in comparison to the other countries, the quality of the ToC-Documents of the interviewed institutions in Somaliland was poor (by the time the evaluation was conducted). In Somaliland, the ToC-Documents took the form of a very brief questionnaire and the indicated changes are general. None of the documents contained any graphic illustration of the ToC, as, for example, all ToC-Documents for the Sierra Leonean institutions did. The ToCs for Afghanistan, Ethiopia and Sierra Leone were much more detailed, indicating very specific changes, outputs and outcomes. As of May 2017 updated versions of the TOCs have been completed in Somaliland which are more in line with the ToC-Documents from the other countries and the guidelines from MDF. These identified, significant differences in the quality of the ToC-Documents seemed to result from the way in which the ToCs were developed, as during this baseline research significant differences in the approaches of the local IOM offices were identified. While in Sierra Leone the ToCs were drafted in two-day workshops with each institution individually, the local offices in Afghanistan and Ethiopia conducted (sector-specific) one or two-day workshops with a group of host institutions on how to develop a institutional ToC. In Ghana, the ToCs took a different format insofar as they were not specifically about the institution, but about the broader sector and they seemed to have been developed by a consultancy company. In Somaliland the local office only provided the institutional focal point with a questionnaire he or she filled out.

4.2 Existing institutional knowledge transfer

In the literature review (Appendix 3) a variety of explicit and tacit knowledge transfer methods were identified. Explicit knowledge transfer methods include manuals and up-to-date documentation, formal trainings/boot camps, memos or guidance notes, translated foreign language materials, process documentation, critical incident interviews/questionnaires, expert system, job aids storyboards, knowledge maps and wikispaces (Caltrans, n.d.; IMPA-HR, 2004; Kuschminder et al., 2014; Raytheon, 2012). Tacit knowledge transfer methods comprise mentoring/coaching, problem solving, learning by example, teamwork encouragement, targeted work assignments, after-action reviews, on-the-job training, job-shadowing programs, job rotation programs, communities of practice, storytelling, information exchanges/knowledge fairs, best practice meetings, cross training/position backup and transitional training/double-fill (Caltrans, n.d.; Huffman, 2012; IMPA-HR, 2004; Kuschminder et al., 2014; Raytheon, 2012).

This study approaches the lack of existing tools to measure knowledge transfer effectiveness by monitoring the effectiveness of practices that inherently entail the transfer of knowledge. The most common methods of tacit knowledge transfer (teamwork, mentoring, trainings and workshops and networking) were included as questions in the interview guide to evaluate their existence and use within each institution. Additionally, this baseline fieldwork aimed to identify possible other methods of knowledge transfer and their use within the institution.

In all countries and institutions, work is commonly conducted through regular staff meetings. Depending on the context and institution, these are daily or weekly staff meetings on a unit or department level, as well as monthly meetings of heads of department or quarterly or annually on other levels (e.g. round tables on ministry level, Afghan Ministry of Public Health). Despite the fact that these meetings do not

have knowledge transfer as a primary purpose, the majority of respondents across countries mentioned them when asked for methods of knowledge transfer common in their institution.

Additionally, teamwork was frequently mentioned in all countries. Especially in Ethiopia, teamwork seems to be culture - driven and comes naturally. In the public institutions in Ethiopia and Somaliland, teamwork was reported to be a fix component of the daily work as works together in units or caseteams (e.g. Ethiopian Ministry of Agriculture and Natural Resources). Yet, a few respondents in Afghan institutions reported that teamwork is not common due to an old organizational structure (Afghan Ministry of Energy and Water) or to being too occupied with tasks (Afghan Ministry of Rural Rehabilitation and Development). Across countries, the majority of respondents were not familiar with the term mentoring. In some institutions mentoring is happening in an informal way (for example at IAMTECH and COMAHS in Sierra Leone). In Ghana, within the hospitals, informal mentoring systems could usually be found for clinical employees but not for non-clinical employees. The idea that clinical staff are favored over non-clinical staff in terms of access to resources, trainings, mentoring, etc. came up several times. There were some cases where respondents were very engaged with knowledge transfer activities and especially mentoring. This seemed to be driven by personal motivation, not by organizational measures. For example, one respondent at EBKUST (Sierra Leone) seemed to be very familiar with and engaged in knowledge transfer methods. He had already retired before he was recruited for his current position. Therefore, he stressed that he is only staying in this position until he has passed on his knowledge to somebody who can then do his job. During the interview, he handed out a 2 page-guideline he developed for more junior staff about how to move forward in their career and he told me that he gives this guideline to his mentees. This demonstrates a form of explicit knowledge transfer that he has developed a formal reference tool for his junior staff and mentees. This level of knowledge transfer was a strong exception to the norm.

Trainings were generally part of tasks respondents expect diaspora members to engage in. At some institutions, across countries, trainings are being given at the moment. The topics of the trainings in place include project proposal, result based management (Ethiopian Ministry of Agriculture and Natural Resources) or research proposal (Ethiopian Institute of Agricultural Research). Yet, this is restricted through a lack of qualified staff. In many cases, the trainings in place are conducted by or in cooperation with international organizations such as Asian Development Bank, World Bank and GIZ. Overall, most institutions cannot offer their staff the possibility to attend external trainings. In the institutions where staff members have the opportunity to attend external trainings this is mostly possible through international donors or cooperation with foreign governments.

In Ghana, internal or “in-service” trainings were quite common but external trainings were rare for non-clinical staff and usually needed to be funded by an external party. Also in the other countries, some institutions have Training of Trainer (ToT)-Programs or on-the-job training (e.g. Afghan Ministry of Public Health, Ethiopian Ministry of Agriculture and Natural Resources, Wollo University, College of Medicine and Health Sciences, Ethiopia, Ethiopia Horticulture and Agricultural Investment Authority). There are two restrictions to this. On the one hand, these types of trainings are mostly in place in the provincial branches, but not in the headquarters where the respondents are working. On the other hand, for example at the Ethiopian Institute of Agricultural Research, training is only being provided to new staff or juniors.

(Academic) Conferences were another frequently mentioned way for sharing ideas by respondents at the interviewed institutions (mentioned e.g. at the Afghan Ministry of Rural Rehabilitation and Development, Ethiopian Institute of Agricultural Research, Ethiopian Ministry of Agriculture and Natural

Resources, Institute of Public Administration and Management (IPAM) Sierra Leone, Kabul Polytechnic University, Ministry of Public Works Housing and Transport (Roads Development Agency), Somaliland). To give the most striking examples, the Afghan Ministry of Energy and Water is organizing the first National Afghan Conference on Electrical Engineering this year and the Ethiopian Wollo University College of Medicine and Health Sciences annually hosts a Research Conference. The majority of respondents was also not familiar with the term networking. When explained, some respondents reported to engage in networking within sector-specific associations such as the Afghan Association of Private Sector Hospitals, Afghanistan Microfinance Association (AMA) and Institute of Electrical and Electronics Engineers (IEEE) or, in the case of ministries, committees, for example the Afghan Renewable Energy Coordination Committee. In Ghana, employees use WhatsApp groups for informal networking.

The use of technology for the transfer of knowledge seems to depend not only on the country and the resources available, but on each respondent. While the majority of knowledge transfer happens face to face, respondents also mentioned social media (Facebook, Linkedin, Twitter, Whatsapp, Youtube), emails, phones and smartphones, websites, powerpoint/projectors, network sharing as means they currently use to share ideas with other colleagues. Nonetheless, respondents frequently reported a lack of technology for knowledge sharing, especially the lack of a stable internet connection at the institution. The lack of resources will be addressed further on Page 18.

At the moment, none of the interviewed organizations has policies for knowledge transfer or knowledge management in place. Yet, one organization is currently working on such policies.

4.3 International experience as potential knowledge transfer facilitator

Knowledge transfer might be facilitated or inhibited by certain factors. These factors can be assessed at the individual, organizational, and the national level.

Summarizing from the literature review, factors that influence KT on an individual level are trustworthiness, organizational status, common language, capacity of colleagues, open-mindedness of colleagues, passion, network range, social cohesion, tie-strength and embeddedness.[13] Trustworthiness plays a crucial role for KT success (Joia & Lemos, 2010; Kuschminder et al., 2014; Levin & Cross, 2004; Narteh, 2008; Riege, 2005; Yih-Tong Sun & Scott, 2005). Trust between actors of KT decreases barriers, lowers the probability of recipients to react in a defensive way to new ideas (Joia & Lemos, 2010; Narteh, 2008; Riege, 2005) and increases the willingness to engage in KT (Boh & Xu, 2013). Especially relevant for the CD4D-Project is that a lack of confidence in a participant's capacity, cultural differences and a lack of shared values can provoke mistrust (Riege, 2005; Yih-Tong Sun & Scott, 2005). The level of trust of an institution's colleagues for a returning expert (RE) might be determined by their previous experiences with diaspora members and foreigners. Therefore, in the baseline interviews, each respondent was asked whether foreigners or returnees are working in the institution or if a foreigner or returnee worked there in the past and which the experiences were. This, at the same time, might influence another factor of KT, the open-mindedness of the individuals involved.

In the baseline interviews, significant differences in the attitude of the respondents towards diaspora members and foreigners as well as in their experiences with diaspora members and foreigners and the respondents' international experience were identified.

[13] A comprehensive list of the factors, their interaction with KT and their predicted impact on KT can be found in chapter 4.1 of the literature review in the appendix.

In Afghanistan, some respondents have international migration experiences. The Kabul Polytechnic University is the Afghan institution with the lowest score for international experience with its respondents having little international experience. The other four institutions rank higher, having some to high international experience scores (see Table 7). In most cases, the Afghans who have lived abroad left the country during the war to Iran or Pakistan, most of the time at a very young age. These respondents grew up in these countries and obtained all (most of their) education there. Therefore, the time they have lived in this country was even higher than the time they have spent in Afghanistan. Only three respondents have lived in European countries or the United States of America. In all three cases this was to pursue higher education (e.g. a master's degree, Fulbright Scholarship). Independent of their personal migration experience, all Afghan respondents reported that foreigners regularly work at their institution as international consultants. The experiences were generally positive. All Afghan respondents who had never left the country emphasized the fact that they had maintained in their country and continued their work despite massive security risks. Some of the interviewed organizations in Afghanistan have experiences with returnees and returnee programmes. At the time the interviews at the Ministry of Energy and Water in Afghanistan were conducted participants of the RQA-Programme were completing their last week at the institution. Other Afghan organizations previously participated in TRQN.

Table 7: Institutions by level of international experience[14]

Level of international experience	Interval	Name of institution(s), Assignment country
No international experience	0	• Ministry of Agriculture and Natural Resources, ET • Wollo University, College of Medicine and Health Sciences, ET • Ethiopian Horticulture and Agricultural Investment Authority, ET
Little international experience	$0 < x \leq 0.5$	• Kabul Polytechnic University, AF • St. Dominic's Hospital, GH
Some international experience	$0.5 < x < 2$	• Wollo University, Kombolcha Institute of Technology, ET • Ethiopian Institute of Agricultural Research, ET • Milton Margai College of Education and Technology, SL • Komfo Anokye Teaching Hospital, GH • Ernest Bai Koroma, University of Science and Technology-EBKUST, SL • Ministry of Justice, SO • Ministry of Interior, SO • Ministry of Agriculture and Food Security (several divisions), SL • Ministry of Public Works Housing and Transport (Roads Development Agency), SO • Ministry of Rural Rehabilitation and Development, AF • Korle Bu Teaching Hospital, GH • Sunyani Technical University, GH • University of Sierra Leone (USL) College of Medicine Allied Health Sciences (COMAHS), SL • Ministry of Agriculture, SO • Khairkhwa Medical Complex (KMC), AF • Ministry of Public Health, AF
High international experience	$2 \leq x < 3$	• Institute of Advanced Management and Technology (IAMTECH), SL • The Institute of Public Administration and Management (IPAM), SL • Ministry of Energy and Water, AF
Very high international experience	3	• Ministry of Water, SO[15]

[14] The score for each institution can be found in the appendix. The institutional scores were calculated as the average of the respondent's values. For this calculation, the same categories as in Graph 4 were used. A respondent was given a value of "0" if he or she had no international experience. A value of "1" was given to respondents who have completed short courses/work visits etc. abroad of less than one year. The value of "2" was given if the respondent lived abroad for one to three years and a value of "3" if the respondent lived abroad for four years or more. These values were added up per institution and then divided by the number of respondents per institution. This means that in institutions with a level of international experience of 0 none of the respondents has been abroad. The higher the score of international experience, the more and the longer respondents have been abroad. In institutions with a score of "3", all respondents have been abroad for four years or more.

In comparison, the situation is very different in Ethiopia. All respondents have very little international experience or exposure (see also Graph 4). Therefore, some of the Ethiopian institutions rank lowest in the institutional level of international experience (Table 7). All respondents are Ethiopians, almost all of them grew up in Ethiopia (one exception) and almost all of them had never lived in another country. Additionally, none of the institutions has received a significant number of diaspora members and none of the interviewed institutions has participated in a similar project before which included diaspora members. Most Ethiopian institutions have received foreigners in the past or currently have foreigners working in their institution (with exception of the Ethiopia Horticulture and Agricultural Investment Authority). The experiences were ambiguous. On the one hand, respondents reported very good experiences and described foreigners as highly-valued and hard-working colleagues. On the other hand, respondents reported significant language barriers as the Ethiopian colleagues (and students) have difficulties understanding the English of the foreign professionals and the foreigners seem to have difficulties expressing themselves in English. Moreover, the respondents at some organizations seriously questioned the qualifications of the foreign staff. This was especially the case at the Ethiopian Ministry of Agriculture and Natural Resources. They reported that they have the impression that the foreigners are less qualified for the specific area they are working in (e.g. certain medical professions, certain crops) than the Ethiopian staff. Accordingly, they expressed as concerns and expectations for the CD4D-Project that only highly-qualified staff with sector-specific skills and expertise will come to the institution.

In Ghana, the migration histories of respondents can be classified into two main groups; never having travelled outside of Ghana (except for short holidays) and having studied abroad for several years and returning directly to Ghana after the study programme was completed (see also Graph 4). Only one or two respondents had lived and worked abroad for a longer period of time. This categorization also seems to hold true for the larger staff populations of each of the organizations, per the respondents. When asked about Ghanaian returnees, most stated that there were many Ghanaians who had studied abroad within their organization (completing Masters or PhD programmes or a variety of short courses ranging from several weeks to six months). Very few had lived abroad for a period beyond completing a specific singular study programme.

When asked about the perception of returnees by other staff, almost all Ghanaian respondents said that returnees are welcomed with open arms and that there are no problems (many of these people had studied abroad themselves and returned). One participant noted that to study abroad is “normal” in the more senior ranks of an organization. Only three respondents noted that there are sometimes difficulties for returnees, including other staff seeing them as a job threat and a friction between the returnee and other staff due to the returnee trying to implement new ways of doing things. When asked if there are any foreigners working at the organization, most Ghanaian respondents answered that there are very few; permanent or long term foreign employees tend to come from neighboring or regional countries while foreigners from Europe or North America tend to be on short-term assignments to the organization. It was consistently noted that foreigners are welcomed warmly and that there are no problems with working together. One respondent noted that they are given “red carpet treatment” but that this does not lead to tensions because staff are so eager to learn new skills and ideas from the foreigner.

[15] It has to be noted that at this institution only three respondents were interviewed which is below average.

To some extent, respondents in Sierra Leone have similar migration experiences as Ghanaian interviewees. Respondents have frequently moved to another country for higher education purposes (Master or PhD). Interestingly, the self-identification of interviewees as returnees/diaspora members differs. Some respondents who had studied abroad do not identify themselves as returnees. One respondent gave as an explanation that for him/her a returnee must have worked and not only studied abroad. Yet, other respondents immediately made clear that they identify as returnees themselves.

Four of the interviewed institutions in Somaliland can be categorized has having some international experience (see Table 7). Additionally, the only institution which scored a very high level of international experience is the Somaliland Ministry of Water. In Somaliland respondents saw an added value in a diaspora member coming to the institution (instead of a foreigner) as this would avoid language and cultural barriers. Respondents there are partially familiar with diaspora experts as some organizations have previous experience with return programs (MIDA). Almost all interviewed ministries regularly work with international consultants.

4.4 Potential barriers to knowledge transfer

On an organizational level, the success and effectiveness of knowledge transfer can be influenced by factors such as the organizational culture, a safe psychological environment, organizational trust, fear of losing power, time restrictions, organizational resources, employee rewards, industry similarity, an organization's absorptive capacity and the number of knowledge brokers/returnees.[16] The interview guide therefore also included questions asking for the availability of time, technology, resources as well as other potential barriers for knowledge transfer.

A lack of time may decrease the occurrence of knowledge transfer by limiting a person's willingness to engage in the sharing of ideas (Michailova & Husted, 2003; Riege, 2005). In Ethiopia, Sierra Leone and Somaliland, respondents were generally surprised when asked if enough time was available for knowledge transfer as (almost) all respondents considered time not to be an issue at all. Very few respondents from two institutions (Wollo University, College of Medicine and Health Sciences and Wollo University, Kombolcha Institute of Technology) mentioned time as a constraint for knowledge transfer due to lack of staff and therefore overload of existing staff.

The capacity of colleagues is another important factor for the success of KT on an individual and organizational level. It is essential that staff members share field-specific terminology where a certain level of capacity is needed. This also means that the colleagues at the host institutions need to have the experience and capacity to absorb and apply sector-specific knowledge. In Afghanistan, all organizations voiced a great interest in capacity building/lack of capacity of staff. In some cases, for example at the Kabul Polytechnic University, the respondents said that they have very well equipped laboratories and machinery but nobody who can teach how to operate them. In the other countries, especially in Somaliland the lack of capacity among existing staff was voiced as one reason for participation in CD4D. In these cases, the lack of capacity within the institution might make KT more difficult.

On an organizational level, the literature shows that a lack of organizational resources impedes KT (Mitton, Aidar, McKenzie, Patten, & Waye Perry, 2007; Riege, 2005). KT requires a financial commitment, that is dedicated organizational resources facilitate KT and a lack of dedicated resources inhibits KT.[17] Especially in Somaliland, a lack of financial resources and technology in all organizations

[16] For a comprehensive list of the factors, see the literature review (4.2. Organizational Level) in the appendix.
[17] An overview of all factors that influence KT on an organizational level can be found on page 13 of the literature review in the appendix.

was identified. Often the lack of resources and the lack of capacity and capacity building were closely linked. As one respondent put it: “We need the equipment, but then we also need somebody to teach us how to use the equipment”. Looking at all target countries, when existent, the lack of resources concerns two different areas. First, as in the example from Somaliland, some host institutions experience a lack of technical equipment characteristic to the institution’s sector of intervention (machinery, statistical software, measuring instruments). Second, the institutions lack resources which are necessary to complete daily tasks but which are also intrinsically connected to knowledge transfer activities (computers, internet connection). Especially in Somaliland respondents reported a significant lack of resources/technology for knowledge transfer. Besides difficulties with internet access and the lack of a stable internet connection, in one organization respondents reported that nine staff members share two computers. In another institution, staff worked on their private laptops (e.g. Ministry of Public Works Housing and Transport (Roads Development Agency), Somaliland).

4.5 Other findings

Demand for very specific skills

In Ethiopia, the before-mentioned negative experiences with previous and current foreign staff lead respondents at these institutions to express very clear expectations for the diaspora experts. Also in the Ethiopian institutions which did not have these experiences, there is a clear need for experienced staff as staff at most institutions are very young and the respondents expressed the urgent need for experienced experts. In Afghanistan, especially respondents at the Afghanistan Khairkhwa Medical Complex voiced similar concerns. They have already received one application from a CD4D-Applicant who did not fulfill the requirements they expect. The respondents at Khairkhwa Medical Complex emphasized the need for returnees who are more experienced than the current staff is. In Sierra Leone, respondents generally emphasized the importance of sector-specific skills and mentioned that they would prefer a foreign expert over a diaspora expert in case the foreign expert had more sector-specific knowledge. Somaliland was the only country in which respondents saw an added-value in receiving diaspora experts (for cultural and language reasons), in all other countries the concern for highly-qualified specialists seemed to outweigh this aspect. Also, one organization in Ethiopia (Wollo University – Kombolcha Institute of Technology) showed an explicit interest in strengthening gender equality and empowering women. They would like to receive a female participant to work on this.

“Lessons learned” from RQA

During the field work in Afghanistan, our researcher was invited by IOM Kabul to join the “Return of Qualified Afghans (RQA), Wrap Up Event for Project Phase 2016-2017”. At this event, a panel of former RQA-Participants shared their experiences. This was very informative, as some points mentioned during the event also seem relevant for CD4D. The former assignment duration of 8 months was considered to be too short (by participants and host institutions) and the increase for future project phases was appreciated. Employers were also concerned about the sustainability of the programme. Former participants voiced interest in greater connectivity among participants; suggestions were a kick-off meeting/lunch, a participant database and alumni-events. These last points are items that could in parts be incorporated into CD4D as well.

5 Recommendations and Conclusion

Drawing from the main findings, the following recommendations could be retrieved.

Lack of resources

- To respond to the lack of resources identified in a number of host institutions, alternative sources of funding for necessary resources should be encouraged and facilitated. This can be in the form of enhancing the possibility for crowd-funding initiatives which was presented during the Kick-Off-Event of the project.

Theories of Change (ToC)

- To ensure the quality of the ToCs in all target countries and to ensure that the required changes can take place at the institution, the guidance document provided by MDF is a useful source to review. An exchange between the involved staff members of the local offices in the target countries on this topic might prove useful, as was done in other countries. This would allow to share experiences and to make improvements of ToCs in all assignment countries easier.

Experiences from similar projects

- Experiences from other IOM return projects should be taken into account, such as RQA. Even though they differ in design and goals, certain similarities allow learning from participant feedback of these projects. As former RQA-participants voiced interest in greater connectivity among participants (kick-off meeting/lunch, a participant database, alumni-events) that came from a lack of possibilities for exchange among each other, similar events should be incorporated in CD4D. This could also be in form an online platform or a buddy-program, so that former participants can assist current participants.

Demand for very specific skills

- As the adequate qualification of the diaspora experts was a major concern which was voiced frequently across countries, special emphasis should be put on the sector-specific skills of the participants in the selection process. Especially to take into account the negative experiences in the Ethiopian case, the selection process of the participants should take place in very close cooperation with the host institution in the selection process, as IOM already plans to do.

Effectiveness of knowledge Transfer

- To ensure effective knowledge transfer during the assignments, expectations and deliverables for knowledge transfer should be clearly specified in the Terms of References (ToR) of all assignments. This should include the most common methods of knowledge transfer, such as mentoring/coaching, teamwork and trainings. This should also be addressed very specifically in the TOR for example the participant will:
    - deliver one training on X topic at the host institution,
    - develop a one-on-one mentoring plan with two junior colleagues that includes weekly progress meetings to understand and address their knowledge and development throughout the assignment; and
    - provide a written guidance document on X topic to be shared and discussed with colleagues prior to the end of the assignment.

It is essential to ensure that the knowledge transfer expectations are specific so that the CD4D participants are clear on exactly what activities they need to engage in, in order to be contributing to knowledge transfer and development. Simply stating goals such as 'providing training, support and skill development to the institution' are too broad for expecting strong knowledge transfer activities to occur.

- Additionally, participants should receive training on knowledge transfer activities prior to their departure to the target country.

6 Next Steps

This final section provides a brief outlook on the other components of the impact evaluation and future deliverables. This report has summarized preliminary key findings from the institutional baseline, some surveys for the participant and colleague baseline have already been conducted. Up to date, data from 14 participants and 19 colleagues has been gathered. This data collection is on-going during the duration of the project as it follows the start and end dates of each individual assignment. Accordingly, the tools are being developed for the different stages of the evaluation. Table 8 gives an overview of future deliverables and their estimated date of delivery. The next fieldwork will take place between October 2017 and January 2018.

Table 8: Future deliverables

Deliverable	Estimated date of delivery
Colleague Survey Post Assignment	May 2017
Colleague Survey 1-Year	May 2017
Participant Survey Post-Assignment	May 2017
Participant Survey 1-Year	May 2017
Interview Guide Year 2	September 2017
Mid-Term Report	April 2018
Interview Guide Year 3	September 2018
Final Report	Fall 2019

References

Boh, W. F., & Xu, N. Y. (2013). Knowledge Transfer across dissimilar cultures. *Journal of Knowledge Management*, *17*(1), 29–46. https://doi.org/http://dx.doi.org/10.1108/13673271311300723

Caltrans. (n.d.). *Knowledge Transfer Guidebook.* Caltrans.

Huffman, K. (2012). *Workplace Knowledge Transfer Methods (Based on Bloom's Taxonomy)*. The Knowledge Transfer Guild.

IMPA-HR. (2004). *Knowledge Transfer: 12 Strategies for Succession Management. Capturing the Lessons of Experience.*

Joia, L. A., & Lemos, B. (2010). Relevant factors for tacit knowledge transfer within organisations. *Journal of Knowledge Management*, *14*(3), 410–427.

Kuschminder, K., Georgina Sturge, & Nora Ragab. (2014). *Contributions and barriers to knowledge transfer. The experience of returning experts.* (CIM Paper Series No. 7). Maastricht Graduate School of Governance.

Levin, D. Z., & Cross, R. (2004). The Strength of Weak Ties You Can Trust: The Mediating Role of Trust in Effective Knowledge Transfer. *Management Science*, *50*(11), 1477–1490.

MDF Training and Consultancy. (2016). *Guidance on Theory of Change. For IOM*.

Michailova, S., & Husted, K. (2003). Knowledge-sharing hostility in Russian firms. *California Management Review*, *45*(3), 59–77.

Mitton, C., Aidar, C. E., McKenzie, E., Patten, S. B., & Waye Perry, B. (2007). Knowledge Transfer and Exchange: Review and Synthesis of the Literature. *The Milbank Quarterly*, *85*(4).

Narteh, B. (2008). Knowledge transfer in developed-developing country interfirm collaborations: a conceptual framework. *Journal of Knowledge Management*, *12*(1), 78–91. https://doi.org/doi: 10.1108/13673270810852403

Raytheon. (2012). *Onboarding and Knowledge Transfer*. Raytheon Professional Services LLC & Training Industry Inc. Retrieved from https://cdns3.trainingindustry.com/media/16389331/onboarding_and_knowledge_transfer_report_v3.pdf

Riege, A. (2005). Three-dozen knowledge-sharing barriers managers must consider. *Journal of Knowledge Management*, *9*(3), 18–35. https://doi.org/10.1108/13673270510602746

UNDP. (2016). *Human Development Reports. Table 5: Gender Inequality Index*. Retrieved from http://hdr.undp.org/en/composite/GII

Yih-Tong Sun, P., & Scott, J. L. (2005). An investigation of barriers to knowledge transfer. *Journal of Knowledge Management*, *9*(2), 75–90. https://doi.org/10.1108/13673270510590236

Appendix

Appendix 1: Summary statistics

1. Age (Summary statistics corresponding to Graph 1 and explanation)

	Observations	Mean	Std. Dev.	Min	Max
Afghanistan	22	38.5	9.0	23	55
Ethiopia	26	36.9	7.9	26	53
Ghana	20	45.2	9.0	33	59
Sierra Leone	32	52.5	9.4	35	69
Somaliland	24	35.4	12.2	22	65
Total	**124**	**42.3**	**11.6**	**22**	**69**

2. Level of education (Summary statistics corresponding to Graph 2 and explanation)

Level of education	AF	ET	GH	SL	SO	Total
Technical or vocational	1	-	2	-	-	3 (2.44%)
Bachelor	3	4	4	1	19	31 (25.20%)
Master	15	19	12	19	5	70 (56.91%)
PhD	3	3	1	12	-	19 (15.45%)
Total	**22**	**26**	**19**	**32**	**24**	**123 (100%)**

3. Nationality by categories (Summary statistics corresponding to Graph 3 and explanation)

Nationality	AF	ET	GH	SL	SO	Total
Nationality of assignment country	22	26	20	28	24	120 (96.77%)
Double nationality	-	-	-	3	-	3 (2.42%)
Other	-	-	-	1	-	1 (0.81%)
Total	**22**	**26**	**20**	**32**	**24**	**124 (100%)**

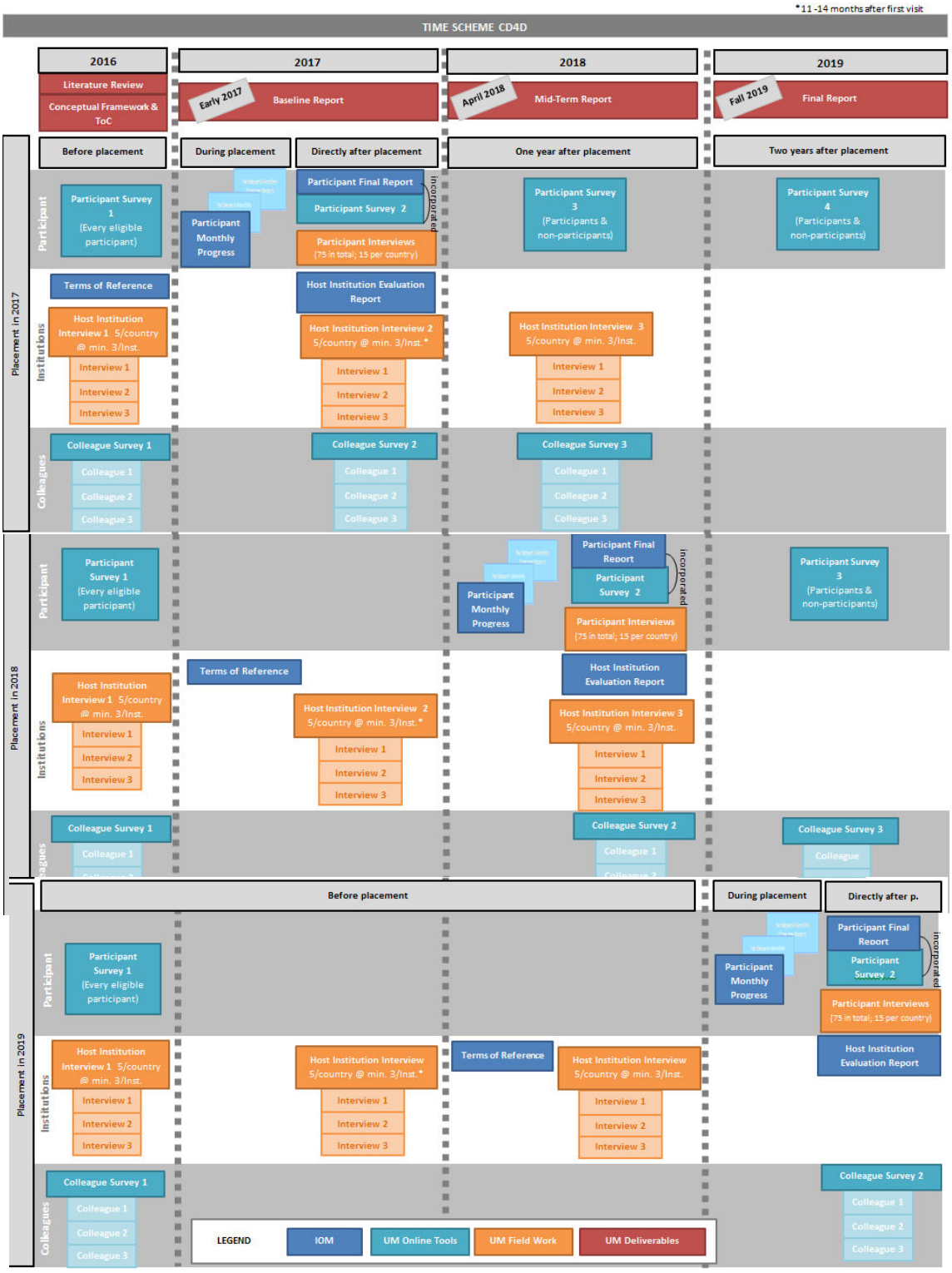
4. Migration experience (Summary statistics corresponding to Graph 4 and explanation)

R.'s int. experience by categories	AF	ET	GH	SL	SO	Total
None	8	22	6	8	9	53 (43.80%)
Short courses/work visits etc. <1 year	1	-	7	5	2	15 (12.40%)
Lived abroad for 1-3 years	4	3	4	10	3	24 (19.83%)
Lived abroad for 4 years or more	8	1	2	8	10	29 (23.97%)
Total	**21**	**26**	**19**	**31**	**24**	**121 (100%)**

5. International Experience (Values corresponding to Table 7)

Value	Name of organization
0	Ministry of Agriculture and Natural Resources (Rural Job-Opportunity Creation Directorate & Ethiopia Crop Development Directorate)
0	Wollo University, College of Medicine and Health Sciences
0	Ethiopian Horticulture and Agricultural Investment Authority
0.4	Kabul Polytechnic University
0.5	St. Dominic's Hospital
0.8	Wollo University, Kombolcha Institute of Technology
1	Ethiopian Institute of Agricultural Research
1.17	Milton Margai College of Education and Technology (MMCET)
1.2	Komfo Anokye Teaching Hospital
1.2	Ernest Bai Koroma, University of Science and Technology-EBKUST
1.2	Ministry of Justice
1.33	Ministry of Interior
1.4	Ministry of Agriculture and Food Security (several divisions)
1.4	Ministry of Public Works Housing and Transport (Roads Development Agency)
1.5	Ministry of Rural Rehabilitation and Development
1.5	Korle Bu Teaching Hospital
1.5	Sunyani Technical University
1.5	University of Sierra Leone (USL) College of Medicine Allied Health Sciences (COMAHS)
1.6	Ministry of Agriculture
1.75	Khairkhwa Medical Complex (KMC)
1.8	Ministry of Public Health
2	Institute of Advanced Management and Technology (IAMTECH)
2.2	The Institute of Public Administration and Management (IPAM)
2.4	Ministry of Energy and Water
3	Ministry of Water

Appendix 2: Timescheme



Appendix 3: Overview of interviewed institutions per country and main characteristics[18]

Country	Name of institution	Number of staff (approx.)	Number of staff (department, approx.)	Years in operation[19]	Departments[20]	Main challenges
Afghanistan	Kabul Polytechnic University	220 -250 Lecturers: 100 Admin Staff	n.a.	53-54	• Building • Building Construction Management (BCM) Department • Civil Engineering Department/International Relations Office	• Equipment (Lack of laboratories, library) • Infrastructure • Lack of PhD-Program, only Bachelor Program • Lack of standardized curriculum • Staff capacity (no PhD degrees)
	Khairkhwa Medical Complex (KMC)	200	n.a.	2	• Administration/Human Resources • ENT • Medical Directorate • Operations Directorate	• Equipment • Lack of capacity building • Lack of consultants • No training centre • Staff capacity (lack of qualified doctors, medical staff)
	Ministry of Energy and Water	3,000	n.a.	/	• Audit • Human Resources • Renewable Energies • Training Institute	• Lack of financial resources • Lack of specialized literature • Lack of staff (Low educational level, lack of qualification) • Low salaries • Management • Nepotism, corruption, complicated laws and regulations • Old organizational structure • Political situation/Insecurity • Slow processes
	Ministry of Public Health	n.a.	160 (Human Resources)	/	• Deputy Minister's Office of Policy and Planning • Evaluation and Health Information	• Competition from private sector • Insecurity • Lack of a centralized system

[18] This is a preliminary list. At this time all interviews are being transcribed for further coding and analysis. Some content might be subject to changes. The column "Main challenges" will be made more comparable.
[19] For ministries, this section does not apply. This is indicated with " / ".
[20] This refers to departments from which one or more representatives have been interviewed.

			500 (Directorate for Preventive Medicine) 100 (Evaluation and Health Information)		Department • General Directorate for Human Resources • General Directorate for Preventive Medicine • General Directorate of Curative Medicine	• Low salaries • Old layout of hospital • Quality of Healthcare-Providers • Research and Evaluation • Scarce resources (financial and human) • Staff capacity (technical skills) • Sustainability
	Ministry of Rural Rehabilitation and Development	/	100 (Reform Process) 80 (Regional Development Programme)	/	• Reform Process • Regional Development Programme	• Solutions/experts regarding water sector, water irrigation, water shed management • Staff capacity (lack of highly-qualified experts to develop technical training manuals, policies and reports)
Ethiopia	Ministry of Agriculture and Natural Resources (Rural Job-Opportunity Creation Directorate & Ethiopia Crop Development Directorate)	/	18 (Rural Job-Opportunity Creation Directorate) 22 (Crop Directorate)	/	• Ethiopia Crop Development Directorate • Rural Job-Opportunity Creation Directorate	• Infrastructure/Transport • Lack of database • Lack of financial resources • Qualified staff (skill and knowledge gap, experience, technical knowledge) • Scarcity of improved technology • Unemployment, food insecurity, fragmented structure/small-holder farmers, technological adoption, climate change • Work environment
	Ethiopian Institute of Agricultural Research	3,000 – 4,000	112 Researchers in Addis Ababa	50	• Biotech Research • Integrated Soil Fertility and Health Management Department • Irrigation and Drainage Research • National Plant Biotechnology Research Program • Natural Resource Management Directorate	• Drought, viral diseases, climate change • Funding • IT-Infrastructure • Laboratory • Lack of qualified staff (skills, expertise) • Low salaries • Multidisciplinary approach • Quality organic fertilizers • Technical gap • Turnover
	Wollo University, College of Medicine and Health Sciences	200 – 260 academic staff (40-70 on	/	7-9	• Dean, CMHS and Lecturer • Lecturer • Partnerships and International Relations	• Equipment (Software-Packages) • Lack of academics and finance experts • Lack of continuous training and refreshment courses

		study leave) 200 administrative staff				• Lack of financial resources/funds • Need for specialists • Own training institutions • Practical sessions • Research • Transport • Very young staff with lack of experience; Lack of senior staff/PhD-Holders
	Wollo University, Kombolcha Institute of Technology	350 – 440 academic staff (150 on study leave) 600 – 640 administrative staff	42 academic staff, 26 on study leave (College of Informatics)	9-10	• College of Informatics • Managing Directorate • Scientific Directorate • University Linkage Directorate	• Infrastructure • Lack of laboratories • Lack of laboratories, references/text books • Lack of networks • Lack of resources • Lack of skilled staff (only four assistant professors, shortage of PhD-Holders) • Lack of workshops/trainings (pedagogical development trainings, training in research) • Turnover
	Ethiopian Horticulture and Agricultural Investment Authority	400 - 430[21]	n.a.	n.a.[22]	• Agricultural Investment Support Directorate • Duty Chief Executive Officer	• Awareness creation • Equipment • Infrastructure (Access to remote areas) • Staff capacity (lack of experts) • Transport
Ghana	St. Dominic's Hospital	600	n.a.	57-60	• Health Information Department • ICT-Department • Nursing Administration • Nursing/Pre – and post natal care	• Lack of financial resources (no governmental health insurance, lack of funds) • Turnover
	Korle Bu Teaching Hospital	5,000 – 6,000	n.a.	93-94	• Administration • Application Development • Human Resources • ICT-Department	• Equipment • Infrastructure • Internal communication • Lack of trust of staff in ICT-Department • Need to re-train staff • Network-Downtime • Ownership/Stakeholder involvement
	Komfo Anokye Teaching Hospital	4,000	n.a.	60	• Child Health/Consultant Pediatrician • Health Information	• Lack of tertiary care/More advance medical investigation and providing more detailed

[21] This number is ambiguous due to current transformation process/merger.
[22] Could not be determined due to current transformation process/merger.

					Management/Biostatistics • ICT-Department	care • Space (old building) • Staff • Supplies/Equipment
	Sunyani Technical University	400 - 600 (in all locations) (200 Lecturers)	n.a.	53 (but less than 1 year as university)[23]	• Agroforestry • General Agriculture • Planning	• Capacity building of lecturers • Curriculum development (need for field training) • Diversify teachings methods/instructional content (educational technology, virtual teaching) • Equipment of laboratories and workshops (need to be upgraded) • Lack of sufficient qualified staff (to admit more students) • Old facilities (lack of laboratories, lack of space)
Sierra Leone	Institute of Advanced Management and Technology (IAMTECH)	300 (in all locations) 60 - 70 (Main Campus)	n.a.	25	• Academic Affairs • Principal • Pro-Chancellor • Registrar • Studies Directorate (Administration)	• Acceptance of IT-System • Administration • Equipment • Funding • Quality and quantity of staff (Lack of qualified staff, Turnover)
	Ministry of Agriculture and Food Security (several divisions)	n.a.	48-60 70-80 not clear (15; 100) 10 in Extension 150-200; Ext. Staff: 600	/	• Agricultural Engineering • Crop Division • Deputy Director General • Extension Division • Irrigation Division	• Funds for implementation • Lack of crop specialist • Restricted mobility/Lack of vehicles • Staffing
	The Institute of Public Administration and Management (IPAM)	30 – 40 full-time staff; 80	n.a.	31-36	• Acting Deputy Vice Chancellor • Business Administration and Entrepreneurship Development department • Dean of Faculty • Department of Accounting • IPAM Library/University Library	• Funding • Inadequate facilities • Lack of class room space • Laptop/desktop • Printers • Tax and Auditing

[23] Since 1964, Sunyani Technical University developed from a technical institute into a polytechnic and was then converted in a Technical University in September 2016.

	University of Sierra Leone (USL) College of Medicine Allied Health Sciences (COMAHS)	200	n.a.	28	• Academic Affairs • Registrar • Senior Lecturer	• Infrastructure (Lack of classroom space, no centralized campus) • Lack of electricity • Lack of funding • Lack of knowledge on how to use existent equipment • Lack of teaching and learning materials • Quality and quantity of staff (Lack of staff, Staff with low qualifications)
	Ernest Bai Koroma, University of Science and Technology- (EBKUST)	5 Junior Staff, 6 Staff	n.a.	Less than 1 year[24]	• Acting Principle • Faculty of Religious and Interfaith Studies • Principal Port Loko Univ. College • Public Relations • Registrar • Vice Chancellor/ Principle	• Equipment (Classrooms, computers, laboratories) • Financial resources • IT improvement • Library improvement (E-Library/Internet-System) • Publishing • Staff capacity/Lack of academic staff
	Milton Margai College of Education and Technology (MMCET)	500	n.a.	16 or 50	• Dean Brookfields Campus • Dean Congo Cross Campus • Dept. of Math and Comp. Science • Principal • Registrar • Registrar • Vice Principal	• Equipment (Classrooms, libraries, laboratories, lack of practicing hotel) • Infrastructure (growing number of students) • Lack of staff
Somalia/Somaliland	Ministry of Justice (SL)[25]	53-57 (in Headquarter) 92 (in regional offices)	9 in department, 2 in Development Unit	/	• Development Unit, Planning Department • Judiciary and Access to Justice • Planning department • Prisons and Human Rights Department • Women and Children Justice Department	• Data gathering • Equipment • Financial resources • Good (result-oriented) work plans • Maintenance management • Project planning • Training on M&E

[24] The legal instrument establishing the campus was enacted in 2014, the first staff members (Director, Registrar etc.) started working at the campus in early 2016.

[25] SL in this cell stands for Somaliland.

	Ministry of Interior (SL)	47	10 in departments, 3 in section	/	• Citizenship & Public Relation • Deparment of Planning • Elders and Peace Building Department • Human Resource Department • Regions and Districs Development Department	• Budget • Decentralization • Implementation of laws • Lack of capacity • Lack of experience • Lack of police stations/prisons (low capacity) • Lack of trainings • Monitoring • Telecommunication-Infrastructure
	Ministry of Public Works Housing and Transport (Roads Development Agency) (SL)	300 - 500	n.a.	/	• Building Department • Roads Development Agency (RD)	• Equipment (Site machineries, GPS, surveying software, office equipment) • Lack of raw material • Skills • Training in internal audit; Administration & Finance
	Ministry of Agriculture (SL)	56 (6 in HQ) 10 20	n.a.	/	• Department Planning and Statistics • Director Department of Program & Coordination • Hargeisa HQ • Land use and irrigation department, • Plant Protection Department	• Capacity building, training • Drought, Rainfall • Financial resources • Lack of capacity • Lack of experts; Need of plant protection expert • Lack of time • Logistics • Marketing • Technical processes • Training
	Ministry of Water (SL)	13 (6 regional staff, 7 in Hargeisa) around 200 102/37	n.a.	/	• Finance • Planning & Coordination • Sustainable Management and Regulatory Framework	• Budget • Lack of qualified staff (Lack of engineers) • Lack of water studies • Need for Vocational Training Centers • Water scarcity, drought, lack of using rain water

Appendix 4: Literature Review

Maastricht University Leading in Learning!

Maastricht Graduate School of Governance (MGSoG)

Connecting Diaspora for Development

Literature Review

16-08-2016

Sarah Langley

Dr. Katie Kuschminder

Maastricht Graduate School of Governance (MGSoG)

Contents

1. Introduction

Evidence has demonstrated that skilled emigrants and diaspora populations can have a positive influence on development through economic, social and intellectual contributions to both origin and destination societies (Castles & Miller, 2009; Kuschminder, 2011; Levitt, 1998; Meyer et al., 1997; Siar, 2014). Several large-scale initiatives have functioned in the past to encourage knowledge transfer from skilled members of the diaspora to the country of origin, including the United Nations Transfer of Knowledge through Expatriate Nationals Programme (TOKTEN) and the International Organization for Migration's Migration for Development in Africa (MIDA) and Temporary Return of Qualified Nationals Programme (TRQN). The Connecting Diaspora for Development (CD4D) acts as a continuation of TRQN.

The primary objective of the CD4D project is to support the development of prioritized sectors in six countries (Afghanistan, Ethiopia, Ghana, Morocco, Sierra Leone and Somalia) by strengthening the capacity of targeted institutions through the engagement of qualified diaspora. Specifically, this will entail the facilitation of 250 physical "assignments" and 50 virtual assignments in which diaspora members with Dutch residence will temporarily return to their country of origin and work within their field of expertise. During this time, the individuals on assignment, or "returning experts" (REs) are expected to transfer their knowledge and expertise to their colleagues to the greatest extent possible.

This review examines the concept of knowledge transfer, and the most appropriate tools and indicators to measure the quantity and quality of knowledge transfer activities. This review draws on literature from the fields of management theory, organizational change, organizational effectiveness, psychology, and migration studies. The purpose of this review is to inform the CD4D evaluation and project development to enable the greatest environment for successful knowledge transfer and development impacts within the programme. The methodology used to conduct this review consisted of an in-depth search of the academic and grey literature, followed up by snowball referencing techniques. The result has been the examination of 88 sources to inform this literature review.

Two studies in particular are noteworthy in this review and are directly relevant to CD4D. The first is that of Wang (2015), which is frequently cited in the below literature review. This study is based on a survey sent to previous participants in the U.S.'s Exchange Visitor Program (or J-1 visa holders), which encourages work- and study-based exchanges among research scholars, specialists, teachers, trainees and students (U.S. Department of State, 2016). Wang specifically surveyed those who had worked in the U.S. and asked returnees if they have shared knowledge acquired in the U.S. with their current colleagues and if their organization has adopted or practiced the knowledge transferred. A similar approach was used by Kuschminder et al. (2014), who conducted a survey and interviews with past participants of the German Government's Migration for Development Returning Experts programme. The survey asked past participants about the specific KT behaviours they had undertaken, including methods of KT and frequency of transfer. Together, these two works provide valuable examples of studies in which a survey methodology is applied to participants of international exchange and temporary return programmes to analyse KT occurrence and effectiveness.

This review is divided into five sections; first, knowledge transfer is defined; second, the various types and methods of knowledge transfer are examined. Third, the factors that facilitate or obstruct knowledge transfer are examined; fourth, the various documented tools and indicators used to measure the incidence or quantity of knowledge transfer are listed. Lastly, the documented tools and indicators used to measure the quality or effectiveness of knowledge transfer are discussed.

2. Defining Knowledge Transfer

Knowledge transfer (KT) can be generally defined as the process of an individual's or group's experiences affecting another individual or group (Argote and Ingram, 2000). Bender and Fish's (2000) definition regards KT as a multistage process, noting that it includes **both the transmission of information and the absorption of said information by the receiving individual or group**. They also add that to hold value, transferred knowledge should impact behaviours, policies, processes and practices within the recipient party. Wang (2015) builds upon this definition by adding the element of ***success*****,** noting that **KT is successful when a practice adopted from another individual or group becomes routine within the recipient unit[26].**

3. Types and Methods of Knowledge Transfer

Polyani (1966) classified the knowledge held by human beings into two categories; tacit and explicit knowledge. Today, these categories are widely used in the academic literature. Explicit knowledge can be defined as knowledge that can be codified and transmitted through a systematic language (Levin and Cross, 2004; Nonanka, 1994). Joia and Lemos (2010) add that explicit knowledge is somewhat independent from context and is therefore more accessible to a wide range of people. Examples of explicit forms of knowledge include manuals, reports, assessments, patents and databases (Goh, 2002). Due to its ease of articulation, Goh (2002) notes that explicit knowledge is more readily transferred through structured or formal processes sometimes involving technology or information systems. Interpersonal reaction is not required for the successful transfer of explicit knowledge from one person to another. Table 1 illustrates various methods that may be used to transfer explicit knowledge.

Conversely, tacit knowledge is difficult to articulate and codify as it is personal in nature and is created through performing actions and gathering experiences (Joia and Lemos, 2010). Nonanka (1994) notes that **tacit knowledge is rooted in an individual or group's commitment and involvement within a specific context**. Goh (2002) adds that this sort of knowledge is also more complex than its explicit counterpart. Due to the difficulty of formalizing and articulating tacit knowledge, it is inherently more difficult to transfer, and also to measure or quantify. Reagans and McEvily (2003) and Levin and Cross (2004) note that the transfer of tacit knowledge requires a great amount of effort by all parties involved as verbal explanations may be insufficient. Goh (2002) notes that interpersonal interaction is almost always required for successful tacit KT, as up-close observation and hands-on experience are often necessary. Table 2 illustrates various methods that may be used to transfer tacit knowledge.

[26] To measure whether or not transferred knowledge became routine, Wang asked the following survey question: "Did your company implement any of the suggestions you made as a routine procedure or repeated practice?"

Table 1 Explicit Knowledge Transfer Methods

Type/ method of transfer	Description	Source
Manuals and up-to-date documentation	Written handbooks or publications that instruct the reader on how to perform specific tasks or become familiar with specific subjects	Caltrans, n.d.
Formal trainings/ boot camps	Lectures, seminars, or presentations that aim to develop new skills, develop theoretical knowledge, and teach participants how to use equipment or new technologies	Caltrans, n.d.; Kuschminder et al., 2014
Memos or guidance notes	Written materials that share positions, best practices, experiences, or advice	Kuschminder et al., 2014; Raytheon, 2012
Translated foreign language materials	Subject-relevant materials that have been translated into the language used in the country of return so that colleagues can utilize materials that would have otherwise been inaccessible	Kuschminder et al., 2014
Process documentation	A flowchart of how various work-tasks should be performed	IMPA-HR, 2004; Raytheon, 2012
Critical incident interviews/ questionnaires	Documentation of the lessons learned when a difficult situation arises so that they can be learned from in the future	Caltrans, n.d.; IMPA-HR, 2004
Expert systems	Automated electronic systems that instruct employees on how to troubleshoot commonly logged problems	IMPA-HR, 2004
Job aids	Low-tech tools to aid employees in performing tasks, such as a checklist or a sign	IMPA-HR, 2004; Raytheon, 2012
Storyboards	Groups of pictures used to instruct employees on performing a specific procedure or technique	IMPA-HR, 2004
Knowledge maps	Maps of the location, form, utilization and value of knowledge within an organization created to identify barriers and gaps	Caltrans, n.d.
Wikispaces	An online communication tool that allows users to create, capture, edit, share and comment on information	Caltrans, n.d.; Raytheon, 2012

Table 2 Tacit Knowledge Transfer Methods

Type/ method of transfer	Description	Source
Mentoring/ coaching	Formal or informal sessions in which a more experienced employee offers advice, training and knowledge to a less experienced employee	Caltrans, n.d.; Kuschminder et al., 2014; Huffman, 2012; IMPA-HR, 2004; Raytheon, 2012
Problem solving	A colleague helps other colleagues in solving problems that may occur	Kuschminder et al., 2014
Learning by example	A colleague models behaviours such as organization, punctuality and discipline that can be adopted by other colleagues	Kuschminder et al., 2014
Teamwork encouragement	A colleague encourages collaboration through initiating team meetings or peer learning	Kuschminder et al., 2014
Targeted work assignments	A more experienced employee works jointly with a less experience employee on a specific task to develop understanding and gain experience	Huffman, 2012
After action review	A more experienced employee, together with a less experienced employee, review successes and failures that were experienced in performing a joint activity	Huffman, 2012
On-the-job training	An employee is given the opportunity to practice job tasks in a hands-on manner at the job site. Usually follows a structured learning process	Caltrans, n.d.; Huffman, 2012
Job-shadowing programs	A more experienced colleague is paired with a less experienced colleague to share knowledge and hands-on practice on how to deal with difficult situations that can arise in the field	Caltrans, n.d.; IMPA-HR, 2004; Raytheon, 2012
Job rotation programs	A program which introduces an employee to a variety of responsibilities and tasks to prepare him or her to take on more responsibilities in their present position	Caltrans, n.d.; Raytheon, 2012
Communities of practice	A group of colleagues that gather to share information on common issues, topics or problems	Caltrans, n.d.; IMPA-HR, 2004
Storytelling	The passing of a description of an event between colleagues in an informal manner	Caltrans, n.d.; IMPA-HR, 2004
Information exchanges/ knowledge fairs	An event in which knowledgeable employees are stationed at a booth or table and can be visited by less experienced personnel to dispense wisdom and information	Caltrans, n.d.; IMPA-HR, 2004
Best practice meetings	Meetings at the organizational or work-group level in which best practices are shared	Caltrans, n.d.; IMPA-HR, 2004
Cross training/ position backup	A program in which an employee is trained to perform another employee's work	Caltrans, n.d.; Raytheon, 2012
Transitional training/ double-fill	A program in which an experience colleague is paired with a less experienced colleague to perform the same position at the same time, for a set time period	Caltrans, n.d.; Raytheon, 2012

In following the categorization of knowledge commonly used in the literature, this section has defined explicit and tacit knowledge in a binary fashion. However, it is critical to note that the transfer of explicit and tacit knowledge have been found to be mutually reinforcing; the transfer and effectiveness of explicit knowledge is often aided by the transfer of tacit knowledge, and vice versa (Mowery et al., 1996).

4. Factors that Impact Knowledge Transfer

Factors that impact knowledge transfer can be described as either a facilitator leading to knowledge transfer success, or an inhibitor that obstructs the transfer of knowledge. Both facilitators and inhibitors of knowledge transfer can be assessed at the individual, organizational, and the national level. Each of these will be discussed in this section.

4.1 The Individual Level

The ability of an individual to successfully transfer knowledge is centred around the relationship a potential knowledge transferor has with his or her teammates, colleagues, and superiors. How an individual is viewed by his or her colleagues is essential in determining how they are treated and respected within the working environment. As such, the importance of **trustworthiness** is often noted in the literature as being crucial for KT success (Joia and Lemos, 2010; Kuschminder et al., 2014; Levin and Cross, 2004; Narteh, 2008; Riege, 2005; Sun and Scott, 2005). Narteh (2008) notes that trust is tantamount to co-workers being in some part dependent upon each other without being fearful of the vulnerability that may entail. In addition to strengthening relationships and reducing conflict, trust also aids in KT success. The presence of trust between colleagues allows for the dismantling of barriers and safeguards and weakens defensive behaviours that would otherwise prohibit KT (Joia and Lemos, 2010; Narteh, 2008; Riege, 2005). Boh and Xu (2013) find that the presence of trust increases the willingness of both sides to spend the time and resources necessary to complete a transfer of knowledge and Levin and Cross (2004) note that trust reduces the need to verify information, thereby decreasing the time required to complete KT. It is important to note that trust (and mistrust) can occur between individuals or within a team. Kuschminder et al. (2014) observe that in the case of returning experts (REs), the team the returnee is placed in may decide collectively that it does not trust the RE, or vice versa. Trust may be perhaps more difficult to gain in the case of REs as mistrust can stem not only from a lack of confidence in a co-worker's capacity, but also from cultural differences and a lack of shared values (Riege, 2005; Sun and Scott, 2005).

Linked to the notion of trust is an individual's **organizational status**, or place within the organization's hierarchy. In the case of REs, both Sun and Scott (2005) and Kuschminder et al. (2014) note that a returnee who is not perceived to be an "expert", or is perceived as being too junior or inexperienced, will have a difficult time establishing competence-based trust, which is a prerequisite for KT.

If a RE is a true expert, Sie and Yahklef (2009) argue that he or she should be **passionate** about their subject of expertise. They suggest that expertise itself is a form of tacit knowledge and that the more passionate the expert is on their subject of expertise, the more likely they are to practice KT. This is because experts acquired their expertise not solely through their own pursuits, but through dialogue and mutual understanding with others. Accordingly, true experts view KT not as a one-way exchange but as a process of co-learning in which the participants involved are both learning and creating knowledge together. Research on TRQN in Afghanistan demonstrated that a key element of success in the programme was the passion and motivation of the participants (Kuschminder, 2011). In the case of CD4D passion most likely expands beyond their expertise to passion for the country of origin and being able to contribute to development and change in the country.

Another prerequisite for KT is thought to be a **common language** shared by the transferor and the transferee (Joia and Lemos, 2010; Kuschminder et al., 2014). While speaking the same language is critical for meaningful communication, this may also extend to a shared understanding of the

terminology and jargon used by professionals in a specialized field. Being able to utilize and employ this type of specialized language can greatly aid in the transfer of tacit knowledge (Joia and Lemos, 2010).

Co-workers can only reach a shared understanding of field-specific terminology and jargon if a certain level of capacity is held. In the case of REs, the expert's colleagues need to have sufficient experience and **capacity** to absorb and utilize the highly specific knowledge transferred. Kuschminder et al. (2014) found that one of the most frequently reported barriers of successful KT was a lack of experience and low capacity of an expert's colleagues.

In addition to the capacity of a RE's colleagues, it is also crucial that they are **open-minded** in nature, as a successful working environment is dependent upon all participants being open to working with diverse groups of people from different backgrounds (Boh and Xu, 2013). This requirement goes beyond simply accepting foreign colleagues, but also requires that colleagues be open to new ideas and ways of doing things. Sun and Scott (2005) note that common barriers include the team being unwilling to deviate from the standard line of thinking or not wanting to absorb new ideas, which can negatively impact KT.

While the previously discussed factors have focused on the RE themselves and the relationship between the RE and his or her direct colleagues, the following factors use a broader lens to examine the importance of the REs network in facilitating KT. A returning expert's social network has a crucial impact on his or her ability to complete KT successfully and various specific aspects have been identified in the literature as impacting KT success, including the range of the RE's network, its social cohesion, tie-strength, and the embeddedness of the individual. Reagans and McEvily (2003) define the **range of an individual's network** as the incidence of social connections that transcend institutional, organizational or social boundaries. Connections of this sort are useful in transferring knowledge in that individuals exposed to different groups and various worldviews usually evaluate an issue from various perspectives. These individuals are also more likely to communicate in a way that is easily understood by people from various groups. In their study, Reagans and McEvily empirically show that network range is associated with a greater ease of KT. This reasoning is also demonstrated in the migration literature through the concept of transnationalism. Returnees with transnational networks are more likely to be continually generating new ideas and sharing knowledge for development in their environments upon return, due in part to their regular interactions with transnational networks that share knowledge and new ideas (Kuschminder, 2014).

Reagans and McEvily (2003) also comment on the **social cohesion** of an individual's social network. When analysing a single relationship, social cohesion refers to the extent to which that relationship is supported by strong mutual connections to third-parties. KT is then supported through an individual's desire to gain or maintain a positive reputation among the third-party connections, as well as through cooperative norms.

In a similar vein, **tie-strength**, or the strength of the connection between two people, also impacts an individual's motivation to participate in KT. Some argue that stronger tie strength increases the likelihood of KT success (Levin and Cross, 2004; Reagans and McEvily, 2003; Szulanski, 1996;). Specifically, individuals who communicate frequently and have a strong emotional connection may be more accessible and willing to transfer useful knowledge when necessary. In this case, the motivation to transfer knowledge lies within the transferor's desire to help the transferee. Both Levin and Cross (2004) and Reagans and McEvily (2003) find empirical support for this idea. However, weak-ties, or connections between individuals characterized by infrequent or distance communication, also have advantages in the field of KT.

Table 3 Factors that Influence KT: The Individual Level

Factor	Interaction with KT	Predicted Impact on KT
Trustworthiness	-Dismantles barriers between colleagues -Increases willingness to spend time or resources needed for KT -Reduces the need to verify information	-Higher levels of trust facilitate KT -Lower levels of trust inhibit KT
Organizational status	-Knowledge from "junior" or "inexperienced" individuals will not be well-received	-Higher org. status facilitates KT -Lower organizational status inhibits KT
Common language	-Allows co-workers to communicate using field-specific terminology and jargon	-Common language and use of field-specific terminology facilitates KT -A lack of a common language or inability to use field-specific terminology inhibits KT
Capacity of colleagues	-A sufficient level of experience and knowledge is necessary to absorb transferred knowledge	-Higher levels of capacity among colleagues facilitates KT -Lower levels of capacity among colleagues inhibit KT
Open-mindedness of colleagues	-KT requires a willingness to accept new ideas and ways of thinking	-Having open-minded colleagues will facilitate KT -Having closed-minded colleagues will inhibit KT
Passion	-Experts acquire expertise through dialogue and mutual understanding -Experts that are passionate about their subject are more likely to engage more frequently in dialogue and mutual understanding	-Higher levels of passion facilitate KT -Lower levels of passion inhibit KT
Network Range	-Individuals exposed to diverse groups of people evaluate issues using multiple perspectives -Individuals exposed to diverse groups of people can communicate more easily	-Broader network ranges facilitate KT -Narrower network ranges inhibit KT
Social Cohesion	-KT is completed to fulfil the transferor's desire to maintain a positive reputation or fulfil cooperative norms	-Higher levels of social cohesion facilitate KT -Lower levels of social cohesion inhibit KT
Tie-strength	-Individuals with a close relationship are accessible and willing to transfer useful knowledge	-Stronger ties facilitate KT -Weaker ties inhibit KT
Embeddedness	-High home-country embeddedness is correlated with having novel information and being able to recognize opportunities for KT success -High host-country embeddedness is correlated with familiarity with the local work environment and higher trust levels	-Higher levels of home and host country embeddedness facilitate KT, *as long as trust is high* -Lower levels of home and host country embeddedness inhibit KT

Narteh (2008) notes that weak-ties may allow for the transfer of a different kind of knowledge than do strong-ties. For example, because weak-ties are characterized by infrequent communication, they may lead to the provision of non-redundant or novel information such as employment opportunities (Garnovetter, 1985; Narteh, 2008).

Wang (2015) discusses the "**embeddedness**" of an individual as a sort of composite score including social cohesion, tie strength, and network range. An individual can be embedded in either the home-county, the host country, or in both, with each providing unique advantages and sometimes disadvantages[27]. Wang notes that returnees with a high degree of home-country (the Netherlands) embeddedness are more likely to have novel ideas and are more likely to be able to recognize opportunities for KT success while working on assignment in the host-country. Conversely, embeddedness in the host country (Afghanistan, Ethiopia, Ghana, Morocco, Somalia or Sierra Leone) gives the returnee familiarity with the local culture and work environment and can lead to higher levels of trust among the work team. However, Wang notes that these two factors may be mutually contingent in that to utilize novel ideas, trust from colleagues is necessary and many returnees are not deeply engaged in both the home and host country. This again highlights the importance of transnationalism and simultaneous dual-engagement for enhancing knowledge transfer.

4.2 The Organizational Level

While knowledge is often transferred from one individual to another, there are a wide variety of environmental factors that can either facilitate or obstruct the transfer process. These factors can be found at both the organizational level and at the national level and generally centre around leadership styles, availability of resources, culture and attitudes towards change and uncertainty. This section will detail the organizational level factors that can work to encourage or block KT practices.

The impact that **organizational culture** has on KT success has been widely discussed in the literature (McDermott and O'Dell, 2001; Riege, 2005). Organizational culture can be seen in an organization's goal orientation or in its mission and values, while also being visible in the way employees interact with each other and complete tasks. Accordingly, organizational culture is both articulated and unarticulated (McDermott and O'Dell, 2001). In order to effectively implement knowledge management and sharing initiatives, the authors argue that the initiatives must be intrinsically integrated into an organization's culture, meaning that the organization's values and goals, as well it's leadership's managerial style should all value knowledge management. Accordingly, knowledge sharing approaches and techniques are not one-size-fits-all, but instead should be customized to fit as closely as possible the values and style of the organization. In such an environment, knowledge sharing is intrinsically motivated and expected by organizational members, not something that is coerced or required. In order to achieve this, organizations should create clear and visible connections between knowledge sharing practices and practical business objectives, enhance existing social networks to create incubators for knowledge sharing, and instruct managers to encourage and support employees in knowledge sharing practices. Susanty et al. (2012) noted the positive impact organizational culture can have on knowledge sharing in their study of Indonesian small and medium enterprises. After examining aspects of organizational

[27] The term *home* country is used in the review to indicate the country that experts return to after assignment completion (the Netherlands). The term *host county* is used in the review to indicate the country that experts visit on assignment (Afghanistan, Ethiopia, Ghana, Morocco, Somalia, or Sierra Leone).

culture such as encouraging trust, learning and collaboration, they found that these aspects had a positive impact on KT success.

Organizational culture is a very broad concept that is comprised of numerous elements. Specific elements such as enabling a safe psychological environment, trust, power sharing, and small power distances have been shown to facilitate knowledge sharing practices. First, a **safe psychological environment** within the organization is also thought to be essential in promoting knowledge sharing behaviours. Joia and Lemos (2010) note that employees need to feel able to express a variety of opinions and ideas without encountering negative feedback. Bender and Fish (2000) and Joia and Lemos (2010) also argue that employees need to feel comfortable in admitting that they do not know something, as it is often more efficient for an employee to learn from a co-worker than to discover the information by themselves. A safe psychological environment can be created through practicing mindful leadership. Specifically, this entails tolerance when employees make mistakes, supporting employees' efforts to learn from mistakes, encouraging group problem-solving and experimentation, treating employees fairly, and being open about mistakes made by leadership (Goh, 2002; Riege, 2005).

Second, although **trust** was already discussed in the section on individual level factors, it also applies at the organizational level. Goh (2002) notes that trust is essential to developing an organizational culture of collaboration and collective problem-solving and lists actions organizational leadership can take to encourage trust among employees. Practices can include open and multilateral decision-making structures, making information widely accessible to employees and fair treatment of employees in regards to discipline and rewards. Within this type of environment, Goh argues that knowledge sharing practices such as team-wide meetings and best practice networks will be most easily adopted.

Third, the source of power within an organization has a substantial impact on the likeliness of KT occurring. If an organization's culture signals that knowledge is a source of power (such as superiority, status or job security), then employees will subsequently **fear the loss of** that **power** and actively work to isolate and retain their knowledge for their individual use (Joia and Lemos, 2010; Riege, 2005; Sun and Scott, 2005). Accordingly, organizations in which knowledge is valued when it is shared and utilized instead of when it is hoarded will be more successful in implementing KT practices.

Fourth, the structure of an organization can also impact KT success. Specifically, **hierarchically structured organizations** or **large power-distances**[28] tend to have a negative impact on KT (Rivera-Vazquez et al., 2009; Riege, 2005; Kuschminder et al., 2014). Joia and Lemos (2010) note that factors such as narrow job specializations, standard operating procedures and a top-down chain of command affect the amount of time available for and ease of completing (especially tacit) KT. People that hold tacit knowledge need to be accessible when their knowledge is required by others within the organization. Riege (2005) also notes that strong hierarchies and organizational regulations punish mistakes and do not encourage experimentation or creative thinking. Lastly, Goh (2002) observes that organizations with strong hierarchies and strict regulations encourage the creation of knowledge "stickiness", where knowledge is created and stays in only one area or "silo" of an organization and is not easily transferred. To counteract this, Goh suggests horizontal lines of communication such as the creation of business teams across working groups.

[28] Power-distance refers to the distance between organizational leadership and lower-level employees. A large "distance" is equated with organizational rules and norms that dictate little to no interaction between the two levels (Keida and Bhaget, 1988)

Fifth, within organizational culture, **time restrictions** have been noted as a major barrier to KT (Michailova and Husted, 2003; Riege, 2005). As KT costs both the transferor and the transferee time, working in a time-pressured environment may limit employees' willingness to partake in KT if not enough time is set aside for it. Joia and Lemos (2010) note that tacit KT may be especially hindered by a lack of time, as its transfer requires time set aside for face-to-face contact and personal interaction.

Sixth, in addition to a lack of time, a **lack of organizational resources** may also hinder KT. Mitton et al. (2007) and Riege (2005) note that organizations must make a financial commitment to facilitating knowledge sharing practices. This could include providing formal and informal spaces in which employees can share their knowledge and providing equipment and infrastructure to facilitate KT (Kuschminder et al., 2014; Riege, 2005). Sun and Scott (2005) also comment on the usefulness of proper information sharing systems in facilitating KT. Specifically, Goh (2002) notes the importance of best practice networks, which are computer or technology based systems that link employees within and across different business working units so that they can share what works and what doesn't.

Seventh, **employee rewards** given in exchange for practicing KT are an often discussed aspect of organizational culture, although their impact is debated (Bender and Fish, 2000; Goh, 2002; Joia and Lemos, 2010 Narteh, 2008; Sun and Scott, 2005; Sie and Yahklef, 2009; Riege, 2005;). Riege (2005) notes that some researchers doubt the effectiveness of rewards systems in encouraging KT as they argue that these systems don't encourage long-term knowledge sharing and that they are not sufficient in hostile sharing organizations. However, many argue for the effectiveness of increased compensation, incentives, recognition, and other tools in encouraging knowledge sharing practices. Joia and Lemos (2010) note that performance appraisal systems should take into account whether the employee engages in knowledge sharing practices. Narteh (2008) argues that higher remuneration leads to employees being more dedicated to knowledge acquisition, while Bender and Fish (2000) and Sie and Yaklef (2009) highlight the need for intrinsic motivating factors, such as career advancement and increased visibility or recognition. Even if knowledge sharing is not rewarded specifically, Goh (2002) argues that organizational reward systems should not be based on financial success alone, as this discourages collaboration and sharing. Instead, a "balanced scorecard approach" should be used in employee reward and recognition and this will additionally promote knowledge sharing and collaboration within the organisation.

Beyond organizational culture, there are several other factors that have been identified as being influential in the KT process, including industry similarity, absorptive capacity and the number of knowledge brokers/ REs. Wang (2015) notes that KT may be easier to complete if the industry a RE previously worked in and is currently working in are similar (**industry similarity**). This may be due to the RE having more relevant knowledge and being able to establish common ground (and higher levels of competence-based trust). However, it could also be that a RE who has previously worked in and is currently working in similar industries may only be able to provide redundant information and accordingly, a returnee may not be seen as being distinct enough. In his study, Wang finds that it is not supported that returnees working in the same industry will experience greater KT success. He does find, however, the organizational similarity positively interacts with home-country embeddedness, meaning that employees must be both embedded and have relevant knowledge to be able to successfully participate in KT.

Linked to the idea of individual capacity is an organization's **absorptive capacity**. Goh (2002) and Mowry et al. (1996) note that organizations need to have a base level of knowledge or in-house expertise to be able to understand and absorb new knowledge that may be transferred to it.

Table 4 Factors that Influence KT: The Organizational Level

Factor	Interaction with KT	Predicted Impact on KT
Organizational culture	-KT initiatives must match or be intrinsically linked to an organization's values and goals	-Organizational culture that encourages trust, learning and collaboration facilitates KT -Organizational culture that encourages competition and independence inhibits KT
Safe psychological environment	-Employees need to feel safe in admitting they don't know something and in trying out new ideas or ways of thinking	-A safe psychological environment facilitates KT -An insecure or dangerous psychological environment inhibits KT
Organizational trust	-Organizational trust is essential to encouraging collaboration and collective problem-solving	-A high level of organizational trust facilitates KT -A low level of organizational trust inhibits KT
Fear of losing power	-Organizations can place higher values on knowledge when it is shared and utilized versus when it is hoarded	-A low level of fear of power loss facilitates KT -A high level of fear of power loss inhibits KT
Time restrictions	-Having ample time to participate in KT activities is essential	-A low degree of time restrictions facilitates KT -A high degree of time restrictions inhibits KT
Lack of organizational resources	-KT requires an organizational financial commitment	-Dedicated organizational resources facilitates KT -A lack of dedicated organizational resources inhibits KT
Employee rewards	-Rewards for employees that participate in KT, such as better performance appraisals, higher remuneration, or increased recognition may encourage KT	-Employee rewards facilitate KT -A lack of employee rewards inhibits KT
Industry similarity	-Working in the same industry before and during return is correlated with having relevant, but sometimes redundant information	-Industry similarity facilitates the positive effects of home-country embeddedness -Industry dissimilarity inhibits the positive effects of home-country embeddedness
Absorptive capacity	-Organizations must have a base level of knowledge to be able to absorb industry-specific ideas and information	-Higher levels of absorptive capacity facilitate KT -Lower levels of absorptive capacity inhibit KT
Number of knowledge brokers/ returnees	-Individuals who are the sole link between two distinct groups that value each other's information will hold power	- Unclear relationship between the number of knowledge brokers and impact on knowledge transfer: A higher number of knowledge brokers have the potential to increase or decrease knowledge transfer

According to Sie and Yahklef (2009) and Narteh (2008), individuals and organizations as a whole can more easily absorb new ideas and information if they can associate them with prior knowledge. Reagans and McEvily (2003) find empirical support for the idea that sharing common knowledge increases the ease and success level of KT.

Lastly, much of the literature notes that the **number of knowledge brokers** present in an organization can impact KT success. In structural hole theory, an individual who serves as a mediator between two separate groups, such as a returnee mediating information between his or her home and host countries, is able to act as a gatekeeper for valuable knowledge (Burt, 2000). Buskens and van den Rijt (2008) point to the structural advantage held by an individual who is the sole linkage mechanism between two distinct social networks as they can control and monitor the flow of information between the two groups. They find that this advantage is only present when the person filling the structural whole acts independently, or when there is only one knowledge broker mediating flows between the two groups. Ryall and Sorenson (2007) confirm this argumentation as do Reagans and Zuckerman (2008). In other words, an actor becomes powerful and impactful when he or she bridges groups of actors who are disconnected yet who place value in the knowledge held by the other. If there are multiple actors in this position, dependence on the knowledge broker decreases and he loses power and impact. Wang (2015) tests this in his study and finds that his hypothesis that multiple knowledge brokers (or returnees) will be seen as less novel and important and finds that it is not supported. However, he does find that the positive impact of a returnee's home country embeddedness decreases as more returnees are added.

4.3 The National Level

National cultures promote and support a specific set of values and beliefs. Wang (2015) notes that organizational attitudes have a tendency to correspond with national culture and that the national culture may influence how employees conduct business and interact with one another. This section therefore details the factors identified in the literature at the national level that may work to encourage or discourage knowledge transfer.

First, scholars have found that basic **cultural differences** can impact the success of KT (Kuschminder et al., 2014; Narteh, 2008; Wang 2015). Specifically, Narteh (2008) argues that national and ethnic backgrounds accompany individuals into collaborative relationships and can accordingly affect how an individual defines and values knowledge. Furthermore, cultural differences can negatively impact effective communication through variances in communication styles and value orientations. If effective communication is not easily achieved, KT will require more time and resources on the parts of both the transferor and the transferee.

Second, when national culture features a fear of foreigners as evidenced through discriminatory policies or economic protectionism, this can manifest as **xenophobic attitudes**, which can undermine a foreign colleague's impact in the workplace. REs can be specifically targeted as being both foreigners and "turncoats". While Wang (2015) does not find that REs are less successful at KT in more-xenophobic countries, he does find that the benefits of home-country embeddedness decrease in more-xenophobic countries. Accordingly, embeddedness in the host-country may be used by the returnee to counteract this effect in more-xenophobic countries.

Third, KT success is highly dependent on the degree of individuality present in the culture, or whether a culture can be deemed more "**collectivist**" or more "**individualist**" (Boh and Xu, 2013). Rivera-Vazquez et al. (2009) refer to a "collectivistic index", which indicates an employee's awareness that teamwork

and collaboration produces superior results to those achieved through individual work. Kedia and Bhagat (1988) note that in collectivist cultures, "in-groups", consisting of relatives, clan members or members of an organization, are contrasted with out-groups, consisting of foreigners or members of different communities. This mind-set encourages cooperation and greater knowledge sharing within the in-group. However, it must be noted that knowledge sharing within collectivist cultures usually occurs only once a high level of trust has been established, meaning that a returnee would first need to achieve a trustworthy status. Heike and Wilkesmann (2009) observed in their study of an organization in Hong Kong (which is deemed to be a collectivist culture) that high levels of knowledge sharing occur, but only among trusted individuals and only through face-to face interactions. Accordingly, employees working within a collectivist culture may exhibit wariness or mistrust for computer or phone communication, as the necessary level of trust cannot be established through these mediums.

Forth, the degree of **uncertainty avoidance** accepted within a culture can impact KT success. Heike and Wilkesmann (2009) and Kedia and Bhagat (1988) note that in societies that feature high uncertainty avoidance, individuals try to avoid ambiguity and accordingly may be more apt to follow formal rules and regulations, reject new ideas, or accept the idea of absolute truths. Rivera-Vazquez et al. (2009) find that in these societies, trust levels tend to be low and knowledge sharing must accordingly be facilitated by regulations and instructions. Alternatively, in societies with low uncertainty avoidance, trust levels are higher and knowledge sharing is seen as an expected behaviour. In Heike and Wilkesmann's (2009) study of knowledge sharing in both the German and Hong Kong contexts, he finds that due to a low level of uncertainty avoidance, knowledge sharing in Hong Kong is less organized but also more innovative and flexible.

Table 5 Factors that Influence KT: The National Level

Factor	Interaction with KT	Predicted Impact on KT
Cultural differences	-Differences in backgrounds can lead to ineffective communication and different definitions and valuations of knowledge	-A low degree of cultural differences will facilitate KT -A high degree of cultural differences will inhibit KT
Xenophobic attitudes	-A fear of foreigners undermines the credibility of an RE and prevents trust form being established	-A high degree of xenophobia inhibits the positive impacts of home-country embeddedness -A low degree of xenophobia facilitates the positive impacts of home-country embeddedness
Collectivist vs. individualist cultures	-KT within collectivist cultures may only occur within trusted "in-groups"	-A high degree of trust facilitates KT in a collectivist culture -A low degree of trust inhibits KT in a collectivist culture
Uncertainty Avoidance	-High uncertainty avoidance leads to more formal regulations and the need to facilitate KT	-A low degree of uncertainty avoidance facilitates innovative and flexible KT -A high degree of uncertainty avoidance inhibits innovative and flexible KT
Power-distance	-A large power distance restricts intrinsic motivation to participate in KT and it may only occur only after explicit instruction	-A small power distance facilitates KT -A large power distance inhibits KT

Lastly, the amount of **power-distance** that is promoted within a national culture can impact KT success. Kedia and Bhagat (1988) follow Hofstede (1980, 1983) in stating that power-distance refers to how willingly less-powerful members of society accept an unequal power distribution as a normal aspect of their society. In an organizational setting, a large power-distance would equate to a large gap between management or leadership and lower-level employees, or a strong hierarchical structure (Rivera-Vazquez et al., 2009). The amount of power-distance commonly accepted in a society has various implications for knowledge sharing success. Rivera-Vazquez et al. (2009) and Heike and Wilkesmann (2009) find that when a large power-distance is present, knowledge sharing generally only occurs after an explicit instruction or invitation from senior personnel to lower personnel, in a top-down manner. -He also notes that high-power-distance hinders the development of intrinsic motivation to share knowledge in that employees fear that the knowledge they share may be taken advantage of by someone higher up in the company. Finally, Kedia and Bhagat (1988) note that in societies that encourage a large power-distance, the sharing of technologies that may change power, status and reward distributions are often not welcome and are not likely to be transferred successfully.

5. Tools to Measure Knowledge Transfer

While there is no internationally agreed upon method for measuring the transfer of knowledge, a handful of approaches have gained prominence within both academic literature and the business world. As KT involves both a sender and a receiver, measurement approaches have evolved around each actor; studies have measured KT by analysing *knowledge* or the *performance* of recipients and have also analysed the *behaviour* of senders. Each approach carries with it advantages and disadvantages and some types of knowledge are better measured by one approach over another. This section will accordingly discuss in detail the different approaches used today to measure KT.

5.1 Knowledge Metrics

Referring to what is perhaps the least commonly used approach, Argote and Ingram (2000) observe that KT can be measured by directly measuring the knowledge of recipients. This generally entails the employment of a large-scale survey in which respondents (potential KT recipients) are asked to self-report changes in their knowledge or skill-set after participating in a KT initiative (Rich, 1997). This approach has been criticized however due to several drawbacks. First, organizational knowledge does not reside solely within the individual, but also within an organization's culture, practices, structures, and operating procedures (Argote and Ingram, 2000; Walsh, 1991). Accordingly, exclusively testing the knowledge of an individual may not capture knowledge transfers that have affected or influenced the organization as a whole. Second, tacit knowledge may not be captured through direct tests or assessments of an individual's knowledge as tacit knowledge is difficult to codify and articulate. It is even noted that individuals may not be aware that they have received and absorbed tacit information, but it may still influence how they carry out their work tasks (Argote and Ingram, 2000; Reagans and McEvily, 2003).

5.2 Performance Metrics

A more widely used approach to measure KT is to track the changes in the performance of KT recipients, as knowledge manifests itself in performance (Argote and Ingram, 2000). Performance can of course be measured in various ways and indicators need to be selected based on the context the knowledge is

transferred within. For example, Darr et al. (1995) studied the incidence of KT within the pizza industry by measuring the unit cost of production, while Ingram and Roberts (2000) conducted their study within the hotel industry and operationalized performance as revenue per available room.

This approach has also been widely used to answer the question of how well universities perform in transferring their research knowledge to the economic and social sectors of society. A 2008 Library House report identified indicators that could be used for this purpose. It is important to note that in addition to the context within which KT takes place, indicators of KT need to be tailored to fit the method of transfer used. For example, Library House noted that when knowledge was intended to be transferred through teaching, the graduation rate and the rate at which students are hired in their field of training can be used as an indicator of KT. Further examples can be found in Table 6.

Table 6 Indicators to Measure Knowledge Transfer

Mechanism of knowledge transfer	Measures of quantity	Measures of quality
Networks	# of people met at events which led to other Knowledge Transfer Activities	% of events held which led to other Knowledge Transfer Activities
Continuing Professional Development (CPD)	Income from courses, # of courses held, # people and companies that attend	% of repeat business, customer feedback
Consultancy	# and value/income of contracts, % income relative to total research income, market share, # of client companies, length of client relationship	% of repeat business, customer feedback, quality of client company, importance of client relative to their company
Collaborative Research	# and value/income of contracts, market share, % income relative to total research income, length of client relationship	% of repeat Business, customer feedback, # of products successfully created from the research
Contract Research	# and value/income of contracts, market share, % income relative to total research income, length of client relationship	% of repeat Business, customer feedback, # of products successfully created from the research
Licensing	# of licenses, income generated from licenses, # of products that arose from licenses	Customer feedback, quality of licensee company, % of licenses generating income
Spin-Outs	# of spin-outs formed, revenues generated, external investment raised*, market value at exit (IPO or trade sale)	Survival rate, quality of investors, investor/ customer satisfaction, growth rate
Teaching	Graduation rate of students, rate at which students get hired (in industry)	Student satisfaction (after subsequent employment), employer satisfaction of student
Other Measures	Physical Migration of Students to Industry, Publications as a Measure of Research Output	

Source: Library House, 2008

The European Commission's Expert Group on Knowledge Transfer Indicators also created a set of indicators to measure KT from higher education institutions (HEIs) and public research organizations (PROs) to other sectors of society (Finne et al., 2011). Specifically, the Expert Group proposed indicators to measure knowledge transferred through trained people, through co-operative agreements, and

through the commercialization of research, which they then combined into a composite KT score. Table 4 below details the indicators chosen.

Table 7 Indicators to Measure Knowledge Transfer

Knowledge transfer through trained people	Institutional co-operation in R&D and other phases of innovation	Commercialisation of research
1.1. Stock of HEI graduates employed in business enterprise sector	2.1. Number of R&D contracts in HEIs/PROs with firms and other users	3.1 Invention disclosures from HEI/PRO employees
1.2 Stock of doctorate holders employed in business enterprise sector	2.2. Number of consultancy contracts in HEIs/PROs with firms and other users	3.2 Priority patent applications submitted from HEIs/PROs
1.3. Continuing professional development revenue for HEIs	2.3. Revenue to HEIs/PROs from R&D contracts with firms and other users	3.3 Patent applications submitted from public sector actors to the European Patent Office
1.4 Employed adults (age 25-64) engaged in university level training or education	2.4. Revenue to HEIs/PROs from consultancy contracts with firms and other users	3.4. Patents granted to HEIs and PROs
1.5 Teaching in HEIs performed by people with their primary job outside the HEI/PRO sector	2.5. Firms co-operating with HEIs	3.5. New licensing agreements
1.6. Entrepreneurship propensity among HEI students	2.6. Firms co-operating with PROs	3.6. Licensing revenue to HEIs and PROs
	2.7. R&D in HEIs/PROs funded by business	3.7. International licensing trade from HEIs and PROs
	2.8. Co-publications between private and public authors	3.8. Number of new spin-offs

Source: Finne et al., 2011

5.3 Behavioural Metrics

A third and commonly used approach in measuring KT is to examine the self-reported behaviours of the knowledge sender. Using this method, a survey or questionnaire is commonly sent to respondents (potential knowledge transferors) which asks about the respondent's methods and frequency of transfer, as well as the perceived impact of the knowledge transferred. Two examples of this approach (Kuschminder et al., 2014 and Wang, 2015) were discussed in the introduction section of this review.

Larger organizations such as universities also use surveys and questionnaires to learn more about the KT behaviours of their employees. These surveys vary in size and frequency. On the small side, for example, Wayne State University implemented a KT questionnaire for employees to complete after they had given their notice of resignation. The survey is short and simple in nature, asking the respondents about open projects, key contacts, critical job functions performed, passwords, and user IDs or other sign-on data (Wayne State, n.d.).

Other universities have conducted much larger-scale surveys, such as the University of Melbourne's Knowledge Transfer Survey. The survey began by asking participants about their motivation for

participating in KT activities, with possible answers including fostering partnerships, developing better policy, commercializing intellectual capacity, or readying students for professional life. [29] Next, the survey asked which KT method was used by the respondent within the last 12 months, including blogging, contributing to Wikis, collaboration, improving professional practices, putting on a performance or exhibition, registering patents, and report writing, among other methods. Respondents were then asked about the perceived impact or outcome of their knowledge sharing activities, with possible answers including engagement, adoption, benefit, or no perceived outcome. The survey concluded by asking respondents to provide specific details of their KT activities, including the number of activities undertaken, the length of time committed, the proportion of work time spent on KT activities, the resources expended, and specific collaboration partners (University of Melbourne, n.d.).

Another example of a large scale university survey was done by Bangkok University and aimed to examine facilitators and barriers to KT among expatriate managers transferring knowledge to local Thai subordinates within the University. [30] Respondents were asked to comment on the following subjects:

- The level of knowledge complexity faced and the difficulty encountered in codifying it
- Their willingness and ability to transfer knowledge
- The ability of their Thai subordinates to absorb, retain and utilize transferred knowledge
- The perceived impact of the University's structure, environment and culture on KT
- Perceived differences between Thailand and the respondent's home country, in regards to national culture, workplace norms, acceptance of power inequalities, the degree of collectivism, and the tolerance for uncertainty
- The reward system in place within their department (monetary/ recognition/ sanction, etc.)
- Barriers faced in completing KT activities

This survey is extremely relevant for the project at hand as it focuses specifically on experts abroad and touches on many of the facilitating and obstructing factors for KT discussed earlier in the review.

In addition to KT surveys and questionnaires analysing the behaviour of universities, surveys have also been used to examine the status of knowledge transfer activities within an industry as a whole. An organization called NoGAP works to achieve this goal within the sustainable energy field and conducted a KT questionnaire among all types of stakeholders within the industry. [31] Each respondent represents one organisation. Respondents are first asked about the types of cooperation and knowledge sharing programs their organization participates in, including dual education programs, contract research projects, business collaborations, and knowledge clusters, among others. Next, respondents are asked about perceived needs for knowledge and technology transfer to take place, including long term cooperation strategies, handbooks of best practices, trainings, flexible communication, and mentality shifts. Lastly, respondents are asked to list the barriers they have seen or experienced in knowledge and technology transfer, including a lack of financing, a lack of knowledge, a lack of communication, a lack of innovation, and a lack of entrepreneurial knowledge (NoGAP, 2013).

[29] The full survey can be viewed at https://www.surveymonkey.com/r/NYVKY8N
[30] The full survey can be viewed at http://ikisea.bu.ac.th/ExpatQuestionnaire.pdf
[31] The full survey can be viewed at http://www.no-gap.eu/en/1503.php

5.4 Tacit v. Explicit Knowledge Transfer and Implications for Measurement

As there are numerous indicators to measure the incidence of KT, the type of knowledge to be measured should be taken into account when selecting an indicator. Specifically, tacit and explicit knowledge are often best captured by different types of indicators (Rosli and Rossi, 2015). First, explicit knowledge (that can be easily codified and articulated) is well-measured through indicators that record the amount, diffusion or value of tangible outputs, such as citations or patents. Examples of this approach include Rinia et al. (2002), who analyse interdisciplinary knowledge exchange by examining the external citation averages of a discipline, or Mowery et al. (1996), who examine knowledge diffusion through analysing the citation patterns of firm's patent portfolio. Mowery et al. explicitly note that their study only captures explicit knowledge, but argue that explicit and tacit knowledge are complements to each other and are often closely linked.

Conversely, tacit knowledge is poorly measured by output-oriented indicators. Instead, Rosli and Rossi (2015) argue that process oriented indicators, such as the number, duration, intensity, characteristics, and quality of interactions should be used to measure tacit knowledge transfer, as an element of interpersonal interaction is required for this to be successful. Examples of this approach include Lee (2000), who measures KT within a social network using indicators such as the frequency of advice seeking and the number of "links" per respondent, or Carrillo et al. (2004), who measure KT through tracking the frequency of meetings, the number of conferences attended, the number of active communities of practices, and the satisfaction of those community members.

6. Tools to Measure Knowledge Transfer Effectiveness

While there is little agreement or convergence on how to measure the incidence of KT, there is even less research on measuring the *effectiveness* of KT. The OECD identified three basic issues with attempting to measure KT effectiveness; 1) timing, or the gap between the completion of the KT initiative and societal effects, 2) attribution, or isolating the impact of KT alone, and 3) appropriability, or identifying all of the individuals effected by the KT initiative (Garnder, n.d.). Keeping these issues in mind, many of the identified indicators for measuring KT effectiveness are the same as the indicators used to measure its incidence. Returning to the indicators identified by Library House (2008) and Finne et al. (2011) (see Tables 6 and 7), indicators such as the number of students working in their trained field, the percentage of repeat business, or the survival rate of spin-outs already hint at the impact of KT activities. Furthermore, Gardner finds that the most widely used measures of KT effectiveness among North American companies include the number of start-up companies formed, income from licenses, the number of patent applications, and the number of invention disclosures.

While the indicators identified above are useful, they can only be applied to certain circumstances and instances, such as in the field of education or the corporate sector. A more widely-applicable approach may therefore be to take an indirect measure of KT effectiveness by monitoring the effectiveness of practices that inherently entail the transfer of knowledge, such as mentoring/ coaching, teamwork, formal trainings, job rotation programs and communities of practice.

6.1 Mentoring/ Coaching

Mentoring or coaching of colleagues, as defined in Table 2, is noted to be one of the most common methods of KT (Caltrans, n.d.; Kuschminder et al., 2014; Huffman, 2012; IMPA-HR, 2004; Raytheon, 2012). There are numerous studies that comment on the expected results of successful mentorship programs, with these studies analysing different industries functioning within different country contexts (Agwu and Luke, 2015; Mundia and Iravo, 2014; Neupane, 2014; Ofobruku and Nwakoby, 2014; Orpen, 1997; Velasquez, 2015). **The most notable effects of a successful mentoring/ coaching program are decreased turnover rates within the organization, higher levels of job engagement, motivation and satisfaction, and lastly and most measured, increased employee performance**.

Velasquez (2015) notes that participating in a mentoring program helps employees to foster and nurture strong relationships with their colleagues and superiors, which in turns helps to build a stronger sense of belonging to the organization. These factors combined then work to increase the likelihood that an employee will remain at an organization. Agwu and Luke (2015) test this idea in the context of the Nigerian natural gas industry using an employee survey and find that respondents who partake in a mentoring program are less likely to express a desire to leave the company.

Another expected impact of an effective mentoring or coaching program is a higher level of engagement, motivation or satisfaction among the participants. Velasquez (2015) notes that employees that know that they will receive career development guidance from experts in their field are more motivated to do their best work. Orpen (1997) found empirical support for this relationship, especially among mentors and mentees that had a close physical proximity to each other and had work schedules that allowed time for mentoring. While Velasquez points to the reward of expert counsel as a motivating factor for employees, Orpen notes that mentoring practices allow the employee to feel liked and respected by organizational leadership and satisfies their need for affection and belonging within the workplace.

Lastly, increased employee performance is likely the most studied result of a successful mentoring program. Many authors have used a survey or questionnaire methodology which asks employees and sometimes their supervisors if participating in a mentoring program has improved their performance, however Mundia and Iravo (2014) note that other measures of employee performance could include improved performance appraisals and higher levels of customer satisfaction. In their study, Mundia and Iravo found a positive and significant relationship between career development guidance (mentoring programs) and employee performance. Similarly, Ofobruku and Nwakoby (2014) find that mentoring programs within the construction industry in Nigeria resulted in a positive effect on employee performance. Ismail et al. (2009) studied the Malaysian context and found similar results, namely that both formal and informal mentoring had a positive and significant impact on individuals' career development and performance. Neupane (2014) studied the UK hotel industry and also found that coaching or mentoring had a positive and significant effect on employee performance. However, Orpen (1997) represents the dissenting voice, as he did not find evidence for better job performance as a result of participating in a mentoring program, noting that mentoring usually results in better relationships between the mentor and the mentee, but not always in improved skill sets, which is seen as necessary for increased job performance.

6.2 Encouraging Teamwork

Encouraging teamwork, as defined in Table 2, has also been observed as a method of KT (Kuschminder et al., 2014). **Studies note that the positive impacts of increased teamwork include heightened mutual support among colleagues, a greater sense of accomplishment or job satisfaction, and lastly, increased job performance** (Bacon and Blyton, 2003; Boakye, 2015; Boundless, 2016; European Foundation for the Improvement of Living and Working Conditions, 2007; Manzoor et al., 2011).

It is widely thought that teamwork or working in a team environment heightens levels of mutual support between team members. This is due to the fact that team members take on related tasks and can therefore assist and support each other with tasks that they are not confident in completing by themselves (Boundless, 2016). It is also thought that teamwork can lead to a greater sense of accomplishment and job satisfaction among team members. According to a 2007 report published by the European Foundation for the Improvement of Living and Working Conditions, an incidence of teamwork within the EU 15 countries was positively and significantly correlated with being satisfied with working conditions. However, it should be noted that these results did not hold when applied to the 12 acceding and candidate countries.

Furthermore, increased work performance is often noted as a positive effect of increased levels of teamwork within an organization. As with mentoring, work performance is often measured through a direct survey asking team mebers how they felt that teamwork had impacted their job performance. Other measures could include a change in production costs, customer satisfaction levels or product quality. The 2007 report from the European Foundation for the Improvement of Living and Working Conditions notes that teamwork can impact work performance through various channels, including boosting employee well-bringing through decreased stress levels and increasing efficiency. This idea has been tested empirically in various industries and country settings. Boakye (2015) found that teamwork was positively and significantly correlated with work performance within the Ghanaian healthcare industry. Manzoor et al. (2011) also finds similar results within the Pakistani Higher Education Department (Peshawar). Lastly, Bacon and Blyton (2003) find that within the UK manufacturing sector, participating in teamwork was associated with the employee feeling that their skill level, variety of work, and work quality had all increased. However, they note that the benefits of teamwork varied across the hierarchy of an organization, with employees on the lowest rung of the organizational ladder reporting the smallest increase in positive job aspects.

6.3 Formal Training

Formal training, as defined in Table 1, is another standard method of KT (Caltrans, n.d.; Kuschminder et al., 2014). **The impact of successful formal trainings are noted in the literature to be similar to those of mentoring and encouraging teamwork and include increased organisational commitment, higher levels of job satisfaction, and increased employee performance** (Avgoustaki, 2015; Bafaneli and Setibi , 2015; Chiang, 2005; Cho, 2009, Jagero et al., 2012; Jones et al., 2008; Royal Economic Society, 2012; Truitt, 2011; US Department of Labor, 2014). In studying a life insurance company in South Korea, Cho (2009) finds through a questionnaire that the incidence of structured on-the-job formal training is positively and significantly correlated with a sense of organizational commitment.

In regards to an employee's intention to remain at the organization and their level of job satisfaction, Jones et al. (2008) and Chiang (2005) find a positive relationship to formal training. Jones et al. (2008) find that formal trainings in the workplace are positively and significantly associated with increased

levels of job satisfaction and Chaing finds similar results in the hotel industry, but notes that in order for the relationship to hold, employees also had to be satisfied with the *quality* of the training received.
As was the case with the impact of mentoring and encouraging teamwork, increased employee performance is the most noted impact of formal training. The US Department of Labor observes that high quality, relevant trainings can improve productivity and decrease the costs associated with turnover (2014). Empirical evidence for this claim is provided by Truitt (2011), who found that employees who felt that they had received updated training felt that their job proficiency level had increased. Jagero et al. (2012) examined the courier industry in Tanzania and found the same results. Bafaneli and Setibi (2015) found similar results when studying Botswana's hotel industry, but noted that in order for employees to successfully implement lessons learned during the training, work and time constraints needed to be manageable. Avgoustaki (2015) further specifies this relationship, noting that formal trainings can increase work productivity through two channels; trainings increase an employee's skill level and trainings also work to increase an employee's motivation.

Beyond the impact of formal trainings on participants themselves, evidence of spill over effects have also been found. De Grip and Sauermann found that when half of a team or unit has participated in a training, the performance of trained team members increased by around 10 percent, while the performance of untrained team members notably increased by around 2.5 percent (Royal Economic Society, 2012). However, the authors also find that the results are time sensitive in that improvements are highest in the weeks immediately following training and decrease over time. Jones et al. (2008) also add caveats to the positive relationship between formal workplace trainings and increased employee performance, noting that trainings lasting less than two days in length do not appear to have a beneficial effect on employee performance and also noting that the training must cover a large proportion of the work population or team if it is to be effective.

In regards to methodology, most of the studies discussed above use a questionnaire approach in which the training participant is asked directly about how they thought the training impacted their job performance. However, Jones et al. (2008) used five different indicators to measure job performance; the rate of absenteeism, the rate of quitting, and an evaluation by managerial staff of the organization's financial performance, labour productivity and product quality.

6.4 Job Rotation Programmes

Job rotation programmes, as defined in Table 2, are another method of KT, although somewhat less common than mentoring/ coaching or formal trainings. **Impacts of effective job rotation systems include enhanced networks, higher levels of employee motivation, increased organizational performance, and most noted, higher retention or lower turnover rates** (Bruce, 2012; Coy, 2013; Kaymaz, 2010; McLean and Co, n.d.; Mohan and Gomathi, 2015; Willer, 2016). Willer (2016) notes that participation in an organization-wide job rotation program allows employees to expand their networks as they come into contact with colleagues that they had previously had less interaction with. This also aids in a breakdown of departmental knowledge silos common in some organizations.

In regards to higher levels of motivation, Mohan and Gomathi (2015) found that job rotation systems can work to decrease feelings of monotony in employee's work tasks and ready employees to deal with managerial challenges, which in turn increases the level of motivation of the employee. Empirical evidence from Kaymaz (2010) studying the Turkish case also supports this conclusion.

While in the previous sections, increased employee performance was commonly seen as an indicator of effectiveness, here increased organizational performance is seen as an indicator of success. This organization wide improvement can be linked to improved skill sets among individual employees (Willer, 2016), addressing organizational skill gaps, finding the right job-placement or "fit" for employees and meeting fluctuating organizational demand through mobility (McLean and Co, n.d.).

The most noted impact of effective job rotation programmes is a reduced rate of staff turnover, or a higher retention rate. McLean and Co. (n.d.) note that job rotation schemes signal an emphasis on employee development and find that companies that emphasis employee development through initiatives such as job rotation schemes are 1.5 times more likely to retain their employees as compared to companies that do not emphasis employee development. They also note that rotation programmes retain high quality employees through increasing their engagement and may attract younger employees due to the increased development opportunities (Coy, 2013; McLean and Co., n.d.). Bruce (2012) observes that this decreased turnover also results in lowered costs for the organization as learning and on-boarding costs subsequently decrease.

6.5 Communities of Practice

The impacts of effective communities of practice, as defined in Table 2, are somewhat less studied compared to the impacts of the KT methods discussed in the previous sections. **The literature that does exist notes that the impacts of effective communities of practice include broadened networks and increased domain competencies among employees and reduced costs for organizations** (Fontaine and Millen, 2004; Ropes, n.d.; Zboralski and Gemunden, 2006; World Bank, n.d.). Zboralski and Gemunden explain that participation in an effective community of practice, which could involve frequent communication through a common language and shared knowledge base, members increase the size and strength of their social networks and accordingly develop higher levels of social capital. Fontaine and Millen, Ropes and Zboralski and Gemunden also note that through this increased networking, personal knowledge is shared and retained by participants, resulting in a higher level of competence within the subject area of the community of practice. This may in turn lead to the participant being seen within the organization as a subject-matter "expert".

Lastly, it is also argued that effective communities of practice will result in a cost savings for the organization that hosts them. Specifically, it is noted that communities of practice can work to decrease the amount of time and resources spent on on-boarding new employees, help existing employees learn new subject matter faster and ultimately lead to increased customer satisfaction as employees will be more knowledgeable in addressing customer demands and needs (Fontaine and Millen, 2004; Zboralski and Gemunden, 2006). However, the World Bank (n.d.) notes that being a member of a community of practice does not automatically instil the benefits discussed. Instead, members must actively participate and engage within the group to reap the potential benefits, meaning that results or impacts of communities of practice will vary widely between employees/ individuals.

7. Conclusion

This review of KT literature has elicited numerous valuable findings that can be used to guide the implementation of the CD4D project. First, the review has shown that there is a wide array of methods used to transfer knowledge from one colleague to another and that the method selected is usually dependent upon whether the knowledge to be transferred is explicit or tacit in nature. Commonly used methods to transfer explicit knowledge include manuals, formal trainings, process documentation, expert systems and job aids. Methods commonly used to transfer tacit forms of knowledge include mentoring, teamwork, on-the-job training, storytelling and communities of practice.

Second, the review has also exposed factors that can work to facilitate or inhibit knowledge transfer at the individual, organizational and national levels. Individually, most of the literature concurs that a high level of trust, organizational status and passion, the sharing of a common language, a high level of capacity and open-mindedness among colleagues and a social network that is comprised of a broad range and high levels of social cohesion, tie-strength and embeddedness will lead to increased levels of KT. At the organizational level, scholars largely agree that a collaborative organizational culture, a safe psychological environment, a high degree of organizational trust, a lack of time restrictions, ample organizational resources, the offering of rewards, organizational absorptive capacity and industry similarity improve the chances that KT will occur. Lastly, at the national level, scholars find that the presence of distinct cultural differences, xenophobic attitudes and a small power-distance may obstruct or make KT more difficult to complete.

Third, the review thoroughly assesses metrics and indicators commonly used to measure the incidence of KT. It was discovered that metrics can be knowledge-based, performance-based, or behaviourally-based and that each of these approaches have their unique merits and disadvantages. The review identified the measurement of the quality and effectiveness of KT to be a critical gap in the literature, as there are very few studies that aim to address this subject. It is suggested in the review that KT effectiveness can be indirectly measured through examining the individual and organizational effects of effective mentoring, teamwork, formal training, job rotation programmes and communities of practice.

The review also identified a broader literature gap in that most of the sources consulted in this paper were either written for a corporate audience or focus on for-profit businesses. While this literature provides useful information on knowledge transfer in general, very few studies focus specifically on knowledge transfer in the context of the temporary return of diaspora members. Maastricht Graduate School of Governance's evaluation of the CD4D project therefore aims to address this gap by providing crucial information on what actually facilitates or obstructs knowledge transfer and how knowledge transfer behaviours and activities can be properly measured.

8. References

Agwu, M.O. & Luke, G.R. (2015). Impact of coaching and mentoring in the Nigeria liquefied natural gas company limited, bonny. *European Journal of Sustainable Development,* 4(1), 85-100. doi 10.14207/ejsd.2015.v4n1p85

Argote, L. & Ingram, P. (2000). Knowledge transfer: A Basis for competitive advantage in firms. *Organizational Behaviour and Human Decision Processes,* 82(1), 150-169. doi:10.1006/obhd.2000.2893

Avgoustaki, A. (2015). The Impact of on-the-job training on firm productivity: Employee skill and motivation concerns. *Academic Management Proceedings,* (Meeting Abstract Supplement). doi 10.5465/AMBPP.2015.12671a

Bacon, N. & Blyton, P. (2003). The Impact of teamwork on skills: Employee perceptions of who gains and who loses. *Human Resource Management Journal,* 13(2), 13-29.

Bafaneli, S. & Setibi, G. (2015). The Impact of on-the-job training on employee performance: The case of Riley's hotel. *Journal of Business Theory and Practice,* 3(2), 239-251.

Bangkok University. (n.d.). Knowledge transfer study questionnaire. Retrieved from http://ikisea.bu.ac.th/ExpatQuestionnaire.pdf

Bender, S. & Fish, A. (2000). The Transfer of knowledge and the retention of expertise: The Continuing need for global assignments. *Journal of Knowledge Management*, 4(2), 125-137

Boakye, E.I. (2015). The Impact of teamwork on employee performance. *Research*. doi 10.13140/RG.2.1.4959.8804

Boh, W.F. & Xu, N.Y. (2013). Knowledge transfer across dissimilar cultures. *Journal of Knowledge Management*, 17(1), 29-46. http://dx.doi.org/10.1108/13673271311300723

Boundless. (2016). *Advantages of Teamwork*. Retrieved from https://www.boundless.com/management/textbooks/boundless-management-textbook/groups-teams-and-teamwork-6/defining-teams-and-teamwork-51/advantages-of-teamwork-259-4562/

Bruce, S. (2012, November 5). *3 Benefits of a job rotation program*. Retrieved from http://hrdailyadvisor.blr.com/2012/11/05/3-benefits-of-a-job-rotation-program/

Burt, R.S. (2000). Structural holes versus network closure as social capital. In N. Lin, K.S. Cook & R.S. Burt (Eds.), *Social capital: Theory and research* (1-30). Chicago: Aldine Transaction

Buskens, V. & van de Rijt, A. (2008). Dynamics of networks if everyone strives for structural holes. *American Journal of Sociology,* 114(2), 371-407. http://www.jstor.org/stable/10.1086/590674

Caltrans. (n.d.) *Knowledge transfer guidebook*. Sacramento: Michelle Tucker. Retrieved from http://www.dot.ca.gov/docs/ct_knowledge_transfer_guidebook.pdf

Castles, S. & Miller, M.J. (2009). *The Age of Migration: International population movements in the modern world*. New York: The Guilford Press.

Carrillo, P., Robinson, H., Anumba, C. & Douchlaghem, D. (2004). Knowledge transfer framework: A Knowledge transfer approach to continuous improvement on PFI projects. Leicestershire: Loughborough University.

Chiang, C.F., Back, K.J., & Canter, D.D. (2005). The Impact of employee training on job satisfaction and intention to stay in the hotel industry. *Journal of Human Resources in Hospitality & Tourism*, 4(2), 99-118. doi 10.1300/J171v04n02_06

Cho, D. (2009). The Impact of structured on-the-job training (S-OJT) on a trainer's organizational commitment. *Asia Pacific Education*, 10, 445-453. doi 10.1007/s12564-009-9037-9

Coy, C. (2013, April, 24). *Why rotating employees through your company is a win-win.* Retrieved from https://www.cornerstoneondemand.com/rework/employee-rotation-works

Darr, E.D., Argote, L. & Epple, D. (1995). The Acquisition, transfer and depreciation of knowledge in service organizations: Productivity in franchises. *Management Science,* 41(11), 1750-1762

European Foundation for the Improvement of Living and Working Conditions. (2007). Teamwork and high performance work organization. Retrieved from http://www.eurofound.europa.eu/observatories/eurwork/articles/working-conditions/teamwork-and-high-performance-work-organisation

Finne, H., Day, A., Piccaluga, A., Spithoven, A., Walter, P., Wellen, D. (2011). A Composite indicator for knowledge transfer: Report from the European Commission's Expert Group on Knowledge Transfer Indicators. Retrieved from https://ec.europa.eu/research/innovation-union/pdf/kti-report-final.pdf

Fontaine, M.A. and Millen, D.R. (2004). Understanding the benefits and impact of communities of practice. In Hildreth, P.M. & Kimble, C. (Eds.) *Knowledge networks: Innovation through communities of practice* (1-13). Hershey, PA: Idea Group Publishing.

Gardner, P.L., Fong, A.Y., Huang, R.L. (n.d.). Measuring the impact of knowledge transfer from public research organizations: A comparison of metrics used around the world. Retrieved from https://www.triumf.info/public/repository/ttb/ttr20070603.pdf

Goh, S.C. (2002). Managing effective knowledge transfer: An Integrative framework and some practice implications. *Journal of Knowledge Management*, 6(1), 23-30 http://dx.doi.org/10.1108/13673270210417664

Granovetter, M. (1985). Economic action and social structure: The Problem of embeddedness. *American Journal of Sociology,* 91, 481-510

Heike, U.W. & Wilkesmann, F.M. (2009). Cultural characteristics of knowledge transfer. *Journal of Knowledge Management,* 13(6), 464 -477

Hofstede, G. (1984). *Culture's consequences: International differences in work-related values*. Beverly Hills: Sage

Hofstede, G. (1983). The Cultural relativity of organizational practices and theories. *Journal of International Business Studies,* 14(2), 75-89.

Huffman, K. (2012). *Workplace knowledge transfer methods.* The Knowledge Transfer Guild. Retrieved from http://theknowledgetransferguild.com/wp-content/uploads/2012/03/Workplace-Knowledge-Transfer-MethodsKen-Huffman-The-KT-Guild.pdf

IMPA-HR. (2004). *Knowledge transfer: 12 strategies for succession management.* Alexandria: William Rothwell.

Ingram, P. & Roberts, P.W. (2000). Friendships among competitors in the Sydney hotel industry. *American Journal of Sociology,* 106(2), 387-423. http://www.jstor.org/stable/10.1086/316965

Ismail, A., Abdullah, M.M., &Francis, S.K. (2009). Mentoring program and its impact on individuals' advancement in the Malaysian context. *Journal of Industrial Engineering and Management,* 2(3), 592-615. doi 10.3926/jiem.2009.v2n3.p592-615.

Jagero, N., Komba, H.V., & Mlingi, M.N. (2012). Relationship between on the job training and employees' performance in courier companies in Dar es Salaam, Tanzania. *International Journal of Humanities and Social Science,* 2(22), 114-120.

Joia, L.A. & Lemos, B. (2010). Relevant factors for tacit knowledge transfer within organizations. *Journal of Knowledge Management,* 14(3), 410-427. http://dx.doi.org/10.1108/13673271011050139

Jones, M.K., Jones, R.L., Latreille, P.L., & Sloane, P.J. (2008). *Training, job satisfaction and workplace performance in Britain: Evidence from WERS 2004*. (Discussion Paper No. 3677). Bonn: IZA.

Kaymaz, K. (2010). The Effects of job rotation practice son motivation: A Research on managers in the automotive organizations. *Business and Economics Research Journal,* 1(3), 69-85.

Kedia, B.L. & Bhagat, R.S. (1988). Cultural constraints on transfer of technology across nations: Implications for research in international and comparative management. *Academy of Management Review,* 13(4), 559-571

Kuschminder, K. (2011). The Role of the diaspora in knowledge transfer and capacity building in post-conflict settings: The Temporary Return of Qualified Nationals to Afghanistan. (IS Academy Migration Policy Report No. 1). Retrieved from https://collections.unu.edu/view/UNU:896

Kuschminder, K. (2014). Female Return Migration and Reintegration in Ethiopia. *Maastricht Graduate School of Governance PhD Thesis.*

Kuschminder, K., Sturge, G. & Ragab, N. (2014). Programme migration for development returning experts: Short-term evaluation on knowledge transfer. Maastricht: Maastricht Graduate School of Governance

Lee, L.L. (2000). Knowledge sharing metrics for large organizations. In D. Morey, M. Maybury & B. Thuraisingham (Eds.), *Knowledge management: Classic and contemporary works* (1-25). Cambridge: MIT Press

Levitt, P. (1998). Social remittances: Migration driven local-level forms of cultural diffusion. *International Migration Review*, 32(4), 926-948.

Levin, D.Z. & Cross, R. (2004). The Strength of weak ties you can trust: The Mediating role of trust in effective knowledge transfer. *Management Science*, 50(11), 1477-1490. http://dx.doi.org/10.1287/mnsc.1030.0136

Library House. (2008). Metrics for the evaluation of knowledge transfer activities at universities. Cambridge: Martin Holi, Rochana Wickramasinghe, Matthijs van Leeuwen.

Manzoor, S.R., Ullah, H., Hussain, M., Ahmad, Z.M. (2011). Effect of teamwork on employee performance. *International Journal of Learning & Development*, 1(1), 110-126. doi 10.5296/ijld.v1i1.1110

McDermott, R. & O'Dell, C. (2001). Overcoming cultural barriers to sharing knowledge. *Journal of Knowledge Management*, 5(1), 76-85. http://dx.doi.org/10.1108/13673270110384428

McLean & Company. (n.d.). Implement a job rotation program to engage and develop the workforce. Retrieved from http://www.slideshare.net/McLeanCo/implement-a-job-rotation-program-to-engage-and-develop-the-workforce

Meyer, J.B. et al. (1997). Turning brain drain into brain gain: The Colombian experience of the diaspora option. *Science Technology and Society*, 2(2), 285-315.

Michailova, S. & Husted, K. (2003). Knowledge-sharing hostility in Russian firms. *California Management Review*, 45(3), 59-77

Mohan, K. & Gomathi, S. (2015). The Effects of job rotation practices on employee development: An Empirical study on nurses in the hospitals of Vellore district. *Mediterranean Journal of Social Sciences,* 6(1), 209-215

Mowery, D.C., Oxley, J.E., & Silverman, B.S. (1996). Strategic alliances and interfirm knowledge transfer. *Strategic Management Journal,* 17, 77-91

Mundia, C.N., & Iravo, M. (2014). Role of mentoring programs on the employee performance in organizations: A Survey of public universities in Nyeri County, Kenya. *International Journal of Academic Research in Business and Social Sciences,* 4(8). doi

0.6007/IJARBSS/v4-i8/1110

Narteh, B. (2008). Knowledge transfer in developed-developing country interfirm collaborations: A Conceptual framework. *Journal of Knowledge Management,* 12(1), 78-91. http://dx.doi.org/10.1108/13673270810852403

Neupane, R. (2015). Effects of coaching and mentoring on employee performance in the UK hotel industry. *International Journal of Social Sciences and Management,* 2(2), 123-138. doi http://dx.doi.org/10.3126/ijssm.v2i2.12323

NoGAP. (2013). Questionnaire related to cooperation and knowledge transfer between industry and public research and for pre-analysis of possible implementation of specific transfer centres. Retrieved from http://www.no-gap.eu/en/1503.php

Nonaka, I. (1994). A Dynamic theory of organizational knowledge creation. *Organizational Science,* 5(1), 14-37

Ofobruku, S.A., & Nwakoby, K.P. (2015). Effects of mentoring on employees' performance in selected family business in Abuja, Nigeria. *Singaporean Journal of Business Economics and Management Studies,* 4(9), 29-50.

Orpen, C. (1997). The Effects of formal mentoring on employee work motivation, organizational commitment and job performance. *The Learning Organization*, 4(2), 53-60. Retrieved from http://dx.doi.org/10.1108/09696479710160906

Polanyi, M. (1966) *The tacit dimension*. New York: Doubleday.

Raytheon. (2012). *Onboarding and knowledge transfer*. Waltham: Raytheon Professional Services LLC & Training Industry, Inc. Retrieved from http://www.trainingindustry.com/training-outsourcing/products/research/onboarding-and-knowledge-transfer-challenges-and-best-practices.aspx

Reagans, R. & McEvily B. (2003). Network structure and knowledge transfer: The Effects of cohesion and range. *Administrative Science Quarterly,* 48, 240-267

Reagans, R.E. & Zuckerman, E.W. (2008). Why knowledge does not equal power: The Network redundancy trade-off. *Industrial and Corporate Change,* 17(5), 903-944. doi:10.1093/icc/dtn036

Rich, R.F. (1997). Measuring knowledge utilization: Processes and outcomes. *Knowledge and Policy: The International Journal of Knowledge Transfer and Utilization,* 10(3), 11-24

Riege, A. (2005). Three-dozen knowledge-sharing barriers managers must consider. *Journal of Knowledge Management, 9(3), 18-35.* http://dx.doi.org/10.1108/13673270510602746

Rinia, E.J., van Leeuwen, T.N., Bruins, E.W., van Vuren, H.G. & van Raan, A.F.J. (2002). Measuring knowledge transfer between fields of science. *Scientometrics*, 54(3), 347-362.

Rivera-Vazquez, J.C., Ortiz-Fournier, L., & Flores, F.R. (2009). Overcoming cultural barriers for innovation and knowledge sharing. *Journal of Knowledge Management*, 13(5), 257-270.

Ropes, D.C. (n.d.). Measuring the impact of communities of practice: A Conceptual model. *Academia*. Retrieved from http://www.academia.edu/2309073/Measuring_the_impact_of_communities_of_practice_a_conceptual_model

Rosli, A. & Rossi, F. (2015). Monitoring the knowledge transfer performance of universities: An International comparison of models and indicators (CIMR Research Working Paper No. 24). Retrieved from http://www.bbk.ac.uk/innovation/publications/docs/WP24.pdf

Royal Economic Society. (2012, May). Positive effects of on-the-job training. Retrieved from http://www.res.org.uk/details/mediabrief/2048943/Positive-Effects-of-On-The-Job-Training.html

Ryall, M.D. & Sorenson, O. (2007). Brokers and competitive advantage. *Management Science*, 53(4), 566-853. http://dx.doi.org/10.1287/mnsc.1060.0675

Siar, S. (2014). Diaspora knowledge transfer as a development strategy for capturing the gains of skilled migration. *Asian and Pacific Migration Journal,* 23(3), 299-323. Retrieved from http://www.smc.org.ph/administrator/uploads/apmj_pdf/APMJ23%5B3%5D%20ART3-Sheila%20Siar.pdf

Sie, L. & Yakhlef, A. (2009). Passion and expertise knowledge transfer. *Journal of Knowledge Management,* 13(4), 175-186. http://dx.doi.org/10.1108/13673270910971914

Sun, P.Y. & Scott, J.L. (2005). An Investigation of barriers to knowledge transfer. *Journal of Knowledge Management,* 9(2), 75-90. http://dx.doi.org/10.1108/13673270510590236

Susanty, A., Handayani, N.U., and Henrawan, M.Y. (2012). Key success factors that influence knowledge transfer effectiveness: A Case study of Farment Sentra at Kabupaten Sragen. *Procedia Economics and Finance,* 4, 23-32. Doi:10.1016/S2212-5671(12)00317-6

Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practices within the firm. *Strategic Management Journal,* 17, 27-43

Truitt, D.L. (2011). The Effect of training and development on employee attitude as it relates to training and work proficiency. *SAGE Open,* 1-13. doi 10.1177/2158244011433338

University of Melbourne. (n.d.). Knowledge transfer survey. Retrieved from https://www.surveymonkey.com/r/NYVKY8N

U.S. Department of Labor. (2014). What works in job training: A Synthesis of the evidence. Retrieved from https://www.dol.gov/asp/evaluation/jdt/jdt.pdf

U.S. Department of State. (2016). J-1 Visa: Exchange visitor program. Retrieved from http://j1visa.state.gov/wp-content/uploads/2016/06/FactSheet_J1Visa.pdf

Velasquez, J. (2015, June 8). *7 Trends in employee engagement and what role mentoring plays.* Retrieved from http://www.mentorcloud.com/blog/2015/6/7/7-trends-in-employee-engagement-and-what-role-mentoring-plays

Walsh, J.P. (1991). Organizational memory. *Academy of Management Review,* 16(1), 57-91

Wang, D. (2015). Activating cross-border brokerage: Inter-organizational knowledge transfer through skilled return migration. *Administrative Science Quarterly,* 60(1), 133-178. doi 10.1177/0001839214551943

Wayne State. (n.d.). Employee knowledge transfer questionnaire. Retrieved from http://hr.wayne.edu/clientservices/forms/knowledge_transfer_questionnaire.pdf

Willer, P. (2016, March 11). *Why job rotation can drive engagement – and improve your workplace*. Retrieved from http://www.eremedia.com/tlnt/why-job-rotation-can-drive-engagement-and-improve-your-workplace/

World Bank. (n.d.). Communities of practice questions and answers. Retrieved from http://siteresources.worldbank.org/WBI/Resources/CoP_QA.pdf

Xiao, Z. & Tsui, A.S. (2007). When brokers may not work: The Cultural contingency of social capital in Chinese high-tech firms. *Administrative Science Quarterly,* 52, 1-31

Zboralski, K. & Gemunden, H.G. (2006). The Impact of communities of practice. Idea Group Inc. Retrieved from http://www.igi-global.com/chapter/impact-communities-practice/10493

Appendix 5: Baseline Interview Guide

Connecting Diaspora for Development

Institutions Interview Guide (Baseline)

Interview Identification	
Questionnaire ID number	
CD4D assignment country	☐ 1 Afghanistan ☐ 2 Ethiopia ☐ 3 Ghana ☐ 4 Sierra Leone ☐ 5 Somalia/Somaliland
Locale of assignment (name of city/village)	
Name of organization	
Interviewer	
Date conducted	

Preamble

Thank you very much for participating in this interview. I would like to remind you again that participation in this interview is on a voluntary basis. Our research team is therefore very happy that you agreed to participate in this interview as you are making an important contribution to this evaluation. As mentioned before, this interview is part of the impact evaluation our research team from Maastricht University is conducting of the Connecting Diaspora for Development (CD4D) – Project, operated by IOM. For this research, we need to interview you at three different points in time: now, in one year from now and again two years from now. This is essential as we want to understand if changes occur in your organization through the CD4D programme and to provide you with the opportunity to share with us how you think the programme is going. In this first interview we want to know more about your institution, and your expectations for the CD4D-Program. Therefore, we kindly ask your participation for all three interviews. To be able to follow up, I would ask you to fill out this sheet with your contact

details. (*Give respondent information sheet to fill out).* Please note that all interviews will be recorded and that we anonymize all interviews so your name will never be used. *(Ask if respondent agrees to be recorded).*

Before we start, do you have any questions? Do you agree to participate in the interview? Is it ok for you if I turn the voice recorder on now?

Note to interviewer: Turn on the recorder and say the country, the number of the organization, the number of the interview and the type of interview, e.g. say ¨"Sierra Leone, Organization 2, Interview 3, Time 0".

Questions to be filled out by the interviewer before/after the interview	
Type of organization	☐ 1 Governmental Ministry or Department ☐ 2 Publicly-funded Institution (i.e. public universities, etc.) ☐ 2 Non – governmental Institution ☐ 3 Private company ☐ 4 Other (Please specify)
Sector organization is working in	☐ 1 Agriculture ☐ 2 Education ☐ 3 Food security ☐ 4 Healthcare ☐ 5 ICT ☐ 6 Rural and urban development ☐ 7 Security/ Rule of law
Gender of interviewee	☐ 0 Male ☐ 1 Female

Introduction/Warm up

1. Can you tell me a bit about your organization?

- What do you think are some of the strengths of this organization?
- What are some of the organization's biggest achievements/ successes?
- What are the current challenges facing your organization?

Check if the following information is being provided	
Number of employees	
Please provide a brief summary of the organization's mission statement.	
How long has the organization been in operation?	

(not relevant for government ministries)	

2. Can you tell me about your role in the organization?

- Please describe for me your current role.

Check if the following information is being provided	
Current role or job title	
Department (Subdepartment/Team/Unit)	
How long have you been working in this organization?	____(*Fill in number of years (with this institution) in {insert assignment country})*
Nationality	
In which country did you grow up?	
Have you lived abroad? Where? For how long? Why?	

CD4D – Participation

I would like to know a bit about how your institution came to participate in the CD4D-Project

- How did you hear about the CD4D Program? From whom did you find out about it?
- What is your institution´s main motivation in hosting a CD4D assignment?
- What are your expectations of the CD4D Programme as a whole?
- Did you participate in the Theory of Change-Process?

Note to interviewer: Look at the institution's Theory of Change together with the interviewee and highlight the main project outputs envisioned. Then probe by asking which tasks and responsibilities the CD4D participant will have in order to achieve these outputs.

- What do you expect the participant's main role/tasks to be? What are your expectations for the participant?
  Probe: What do you want the participant to achieve for your organization? How do you expect the participant to contribute to your organization?
- Has your organization participated in a similar project prior to CD4D?
  Probe: Which? Experiences?

Institution's Work Culture

I would like to get a better understanding of how it is to work at your organization.

Note: When interviewing universities, it is important to stress that these questions concern the interaction between staff members, not the interaction with students.

The objective of this set of questions is to understand the interviewees and institution's familiarity with and use of knowledge transfer activities.

- Is it common within your institution to exchange ideas with colleagues? If so, how?
- Do you think sharing ideas and knowledge between staff members is important for your institution/for your work?
- Is it common to work in teams within your organisation? If so, can you share some examples?
- Does the organization have a formal mentoring program? Does mentoring take place in a more informal way within your institution (senior staff advising more junior staff)?
- Does your institution offer any trainings or workshops for staff? What were those trainings about? (*Find out if formal trainings on sector-specific skills or topics*) Does the organizations support staff that are interested in attending external trainings or workshops to do so? If yes how? (ie: give them the time to take the course as part of their paid hours, pay the registration fees, etc.)
- Is it common to share new ideas or ways of doing things/does staff try and test new ideas or ways of doing things? If so, how is this normally done?
- Does staff in your organization engage in networking? If so, how?
- We have discussed how ideas are shared within your organization. Are there any other ways in which colleagues share ideas that we haven't discussed?
- Does your organization have any specific policies for knowledge transfer or management? *If yes, probe: Knowledge management strategy? Is there staff allocated to coordinate knowledge transfer activities?*

The objective of this set of questions is to find out if barriers to knowledge transfer exist.

- Do you perceive any barriers to sharing ideas within the institution?
- Do you think there is enough time available to share ideas among staff within your institution?
- What spaces are available for staff to share ideas in? (for example, a common room)
- What sort of resources are available to encourage staff to share ideas?
- What sort of technology is available to enable staff to share ideas?
- Do you think people in your organization feel comfortable sharing ideas with colleagues?

Foreigners and returnees in the institution

I would like to ask you some questions about foreigners and returnees working at your institution.

Foreigners (People who are not *(insert assignment country)* nationals) *Check if the following information is being provided*	
Are there foreigners working in your institution?	☐ 0 No ☐ 1 Yes
If yes, how many?	__ *(Fill in the number of foreign employees)*
From which countries are they?	_____*(Fill in their countries of origin)*
What were your experiences working with them?	

Returnees (Afghan/Ethiopian/Ghanean/Somali/Sierra Leonean nationals who have lived abroad and returned) *Check if the following information is being provided*	
Are there returnees working in your institution?	☐ 0 No ☐ 1 Yes
Did returnees work in your institution in the past (since you work here)?	☐ 0 No ☐ 1 Yes
If yes, how many (aprox.)?	__ *(Fill in the number of returnees)*
Do you know in which countries they lived?	_____*(Fill in the countries)*
How long have they been working in the organization?	
What types of roles do they have?	
What type of education do they have?	
How do people perceive these returnees? *Probe: How do people in the organization experience working with returnees?*	

Socio-demographic questions

- How old are you? Could you tell me your date of birth?
- What is the highest level of education you have obtained?
  - ☐ 1 Secondary or lower
  - ☐ 2 Technical or vocational
  - ☐ 3 Bachelor
  - ☐ 4 Master
  - ☐ 5 PhD

Concluding Questions

That is the end of my questions.

- Is there anything else you would like to share?
- Is there anything else that you think is important to know about your professional experiences?
- Do you have any questions?
- Thank you so much for your time today.

Appendix 6: Participant Survey Baseline

Connecting Diaspora for Development (CD4D)

Participant Baseline Survey

Dear CD4D-participant:

Thank you very much for participating in this survey. This questionnaire is part of the impact evaluation our research team from Maastricht University is conducting of the Connecting Diaspora for Development (CD4D) – Project, operated by IOM. You have been selected for this survey as you will be participating in a CD4D assignment. For this research, we need your participation in a survey at three different points in time: 1) now- prior to starting your assignment, 2) after the completing of your assignment has ended and 3) one year from the completion of your assignment.

We would like to remind you again that participation in this survey is on a voluntary basis. Our research team is therefore very happy that you agreed to participate in this research as you are making an important contribution to this evaluation.

Please note that we anonymize all answers you give in the survey so your name will never be used. Therefore please enter the participant number and the assignment number we send you in the email in the corresponding fields on the next page. It is very important that you type the code in as stated in this email as it allows us to match this surveys with the surveys you will fill out in the future.

The survey consists of seven sections of different length. It will take you about 45 min. to complete the entire survey. A small orange bar in the part above the question will indicate your progress.

In case you have any questions after completing the survey, please contact charlotte.mueller@maastrichtuniversity.nl

Kind regards,

Maastricht University Research Team

Please enter the codes you received in the email here.	
Participant identification number	
Assignment identification number	

Section 1: Basic Information	
1.1. In which country will your assignment take place?	
1.2. At which location will your assignment take place?	
1.3. At which institution will your assignment take place?	
1.4 Participant identification number	
1.5 Assignment identification number	

Section 2: Demographic Information	
2.1. How old are you?	
2.2. In which country were you born?	
2.3. In which country(ies) do you hold citizenship?	
2.4 Which country do you currently live in?	
2.5. What is your sex?	☐ 0 Male ☐ 1 Female
2.6. What is the highest level of education that you have completed?	☐ 1 Technical or vocational ☐ 2 Bachelor ☐ 3 Master ☐ 4 PhD
2.7. Which field of study is your highest degree in?	☐ 1 Engineering ☐ 2 Mathematics or natural sciences ☐ 3 Medicine or health sciences ☐ 4 Humanities, language or cultural studies ☐ 5 Law ☐ 6 Business administration or economics ☐ 7 Social or political sciences ☐ 8 Agriculture ☐ 9 Other (please fill in the field of study of your highest degree)

2.8. In which country did you receive your highest level of education?	☐ 1 The Netherlands (or other European country) ☐ 2 *{Insert assignment country}* ☐ 3 Other (please specify)
2.9. Are you currently employed in the Netherlands (or other European country)? *(If answer=2, skip to 2.14)* *(If answer=3/4/5, skip to 2.18)*	☐ 1 Yes, in my area of expertise ☐ 2 Yes, outside of my area of expertise ☐ 3 No, unemployed and currently looking for work ☐ 4 No, unemployed and not currently looking for work ☐ 5 No, currently enrolled in an educational/study program
2.10. How many years have you been in paid employment in your field of expertise in the Netherlands (or other European country)?	
2.11. What type of entity do you work for?	☐ 1 Private company ☐ 2 Academic institution ☐ 3 Government institution ☐ 4 Not-for-profit organization ☐ 5 International non-governmental organization ☐ 6 Self-employed
2.12. In order to participate in CD4D, what action have you taken in regards to your current job?	(please check all that apply) ☐ 1 Resigning ☐ 2 Taking a leave of absence ☐ 3 Taking a sabbatical ☐ 4 Using vacation time ☐ 5 Other (please specify)
2.13. How would you rank your workplace seniority in the position you held prior to your CD4D assignment? *(Skip to 3.1)*	☐ 1 Very junior ☐ 2 Junior ☐ 3 Mid-level ☐ 4 Lower-management ☐ 5 Upper-management
2.14. Have you ever previously worked in your area of expertise in the Netherlands (or other European country)? *(If 0, skip to 2.16)*	☐ 0 No ☐ 1 Yes
2.15 How many years did you work in your area of expertise in the Netherlands (or other European country?)	

2.16. In order to participate in CD4D, what action have you taken in regards to your current job?	(please check all that apply) ☐ 1 Resigning ☐ 2 Taking a leave of absence ☐ 3 Taking a sabbatical ☐ 4 Using vacation time or sick leave ☐ 5 Other (please specify)
2.17. How would you rank your workplace seniority in the position you held prior to your CD4D assignment? *(Skip to 3.1)*	☐ 1 Very junior ☐ 2 Junior ☐ 3 Mid-level ☐ 4 Lower-management ☐ 5 Upper-management
2.18. Have you ever previously worked in your area of expertise in the Netherlands (or other European country)?	☐ 0 No ☐ 1 Yes
2.19. Do you receive social benefits in the Netherlands (or other European country)?	☐ 0 No ☐ 1 Yes

Section 3: CD4D Assignment Information	
3.1. In which field will your CD4D assignment be in?	☐ 1 Agriculture ☐ 2 Education ☐ 3 Food security ☐ 4 Health ☐ 5 Healthcare/ ICT ☐ 6 Rural and urban development ☐ 7 Security/ Rule of law
3.2. Have you worked within this industry?	☐ 0 No ☐ 1 Yes ☐ 2 Not applicable due to no previous employment
3.3. Prior to the CD4D project, have you ever had interactions or communication with the institution you will work for during your assignment?	☐ 0 No ☐ 1 Yes
3.4. Prior to the CD4D project, have you ever participated in a temporary return program (	☐ 0 No ☐ 1 Yes

(If 0, skip to 3.8)	
3.5. In which temporary return programme did you previously participate in? (If you participated in more than one, please indicate the most recent experience)	☐ 1 Temporary Return of Qualified Nationals (TRQN) ☐ 2 Migration for Development in Africa (MIDA) ☐ 3 Transfer of Knowledge through Expatriate Nationals (TOKTEN) ☐ 4 Connecting Diaspora for Development (CD4D) ☐ 5 Other (please specify)
3.6. Please indicate the dates that you participated in the previous program.	(mm/yyyy) – (mm/yyyy)
3.7. In your previous assignment, did you work in the same institution you will work in during your CD4D assignment?	☐ 0 No ☐ 1 Yes
3.8. What is your main motivation for participating in a CD4D assignment?	☐ 1 Received a job opportunity ☐ 2 To be closer to family and friends ☐ 3 Nostalgia for *{insert assignment country}* culture and traditions ☐ 4 Wanted to share my skills and contribute to the development of *{insert assignment country}* ☐ 5 Exploring opportunities for longer-term return ☐ 6 Other (please specify)
3.9. How often do you read about or discuss your field of expertise outside of work hours?	☐ 1 Very infrequently ☐ 2 Infrequently ☐ 3 Sometimes ☐ 4 Frequently ☐ 5 Very frequently
3.10. How motivated are you to make positive changes in your country of assignment?	☐ 1 Very unmotivated ☐ 2 Unmotivated ☐ 3 Neutral ☐ 4 Motivated ☐ 5 Very motivated
3.11. How did you find your CD4D placement?	☐ 1 Through professional contacts ☐ 2 Through personal contacts ☐ 3 Through the IOM website ☐ 4 Through an information session ☐ 5 Through the host institution I will be working for ☐ 6 Through past participants in temporary return programmes ☐ 7 Through another migration-focused organization (besides IOM) ☐ 8 Other (please specify)
3.12. Where do you plan to live after completion of your CD4D	☐ 1 The Netherlands (or other European country) ☐ 2 *{Insert country of assignment}*

assignment?	☐ 3 Other (please specify)
3.13. Where do you plan to retire?	☐ 1 The Netherlands (or other European country) ☐ 2 *{Insert country of assignment}* ☐ 3 Other (please specify)

Section 4: Engagement	
4.1. How many years within your lifetime have you spent in the Netherlands (or other European country)?	
4.2. How many years within your lifetime have you spent in *{Insert assignment country}?*	
4.3. How many times within the past five years have you returned to *{Insert assignment country}* to visit? *(If answer=0, skipto C.5)*	
4.4. What is the primary purpose of your visits to *{Insert assignment country}*?	☐ 1 Visit family and friends ☐ 2 Business activities ☐ 3 Charitable/ voluntary work ☐ 4 Temporary return programme (TRQN, MIDA, TOKTEN, etc.) ☐ 4 Other (please specify)
4.5. Are you currently active in any business ventures or activities in *{Insert assignment country}*?	☐ 0 No ☐ 1 Yes
4.6. Do you currently have family or friends living in *{Insert assignment country}*?	☐ 0 No ☐ 1 Yes
4.7. (If yes) How often do you communicate with the friend or family member in *{Insert assignment country}* whom you are closest to?	☐ 1 Never ☐ 2 Several times a year ☐ 3 Every three months ☐ 4 Every month ☐ 5 Every week ☐ 6 Daily
4.8. How often are you in contact with professionals within your field in *{Insert assignment country}*?	☐ 1 Never ☐ 2 Several times a year ☐ 3 Every three months

	☐ 4 Every month ☐ 5 Every week ☐ 6 Daily

Section 5: Knowledge Transfer Behaviors					
5.1. Have you ever had a paid job prior to your CD4D assignment? *(If answer=0, skip to 5.3)*	☐ 0 No ☐ 1 Yes				
5.2. At your most recent job, how often did you:					
	Never (1)	Seldom (2)	Some-times (3)	Often (4)	Very often (5)
5.2.1. Contribute to writing or updating manuals or documentation?	☐	☐	☐	☐	☐
5.2.2. Give formal trainings to co-workers?	☐	☐	☐	☐	☐
5.2.3. Write memos or guidance notes?	☐	☐	☐	☐	☐
5.2.4. Translate foreign language materials?	☐	☐	☐	☐	☐
5.2.5. Provide mentoring or coaching to coworkers?	☐	☐	☐	☐	☐
5.2.6. Clarify roles and responsibilities with staff?	☐	☐	☐	☐	☐
5.2.7. Assist colleagues in problem solving?	☐	☐	☐	☐	☐
5.2.8. Encourage teamwork among coworkers?	☐	☐	☐	☐	☐
5.2.9. Challenge the status quo in the workplace (such as suggesting new ways of working)?	☐	☐	☐	☐	☐
5.2.10. Connect colleagues with people in your network that they can learn from?	☐	☐	☐	☐	☐
5.2.11. Organize or contribute to a workshop?	☐	☐	☐	☐	☐
5.2.12. Other (please specify)	☐	☐	☐	☐	☐
5.3. Please indicate if you expect to experience the following during your CD4D assignment?					
5.3.1. Lack of experience and capacity of colleague		No (0)		Yes (1)	
5.3.2. Lack of equipment required to perform a task (i.e. computer)		☐		☐	

5.3.3. Mistrust from a colleague	☐	☐
5.3.4. Negative attitude from a colleague	☐	☐
5.3.5. Unsupportive working culture	☐	☐
5.3.6. Language barriers	☐	☐
5.3.7. Cultural barriers	☐	☐
5.3.8. Frequent staff turnover	☐	☐
5.3.9. Workplace bureaucracy	☐	☐
5.3.10. Corruption	☐	☐
5.3.11. Nepotism (jobs and positions being given to individuals based on their connections instead of their qualifications)	☐	☐
5.3.12. Ethnic factions or rivalries	☐	☐
5.3.13. Strict or demanding management	☐	☐
5.3.14. Insecure working environment	☐	☐
5.3.15. Other (please specify)	☐	☐

5.4. How important do you think the following behaviors are in the workplace?

	Very un-important (1)	Un-important (2)	Neutral (3)	Important (4)	Very Important (5)
5.4.1. Being organized	☐	☐	☐	☐	☐
5.4.2. Arriving at the specified time for meetings or other events	☐	☐	☐	☐	☐
5.4.3. Holding regular office hours	☐	☐	☐	☐	☐
5.4.4. Delivering assigned work by the deadline	☐	☐	☐	☐	☐
5.4.5. Having a clear idea of the goals and objectives of the work you carry out	☐	☐	☐	☐	☐
5.4.6. Helping with tasks that are not within your required work duties that benefit the institution	☐	☐	☐	☐	☐
5.4.7. Working together with others to achieve common goals	☐	☐	☐	☐	☐

Section 6: New ideas, skills and processes

6.1 What sector-specific skills do you plan to transfer to colleagues during your assignment (such as a new surgical technique, a new management practice, etc.)? Please indicate three skills.	1. 2. 3.
6.2 Are you a member of any professional organizations? (Yes/ no)	☐ 0 No ☐ 1 Yes

Section 7: Concluding Questions	
7.1. Is there anything else you would like to share?	
7.2. Is there anything else that you think is important to know about your professional experiences?	
7.3. Do you have any questions?	

This is the end of this survey. Thank you very much for completing this questionnaire. We are looking forward to your participation in the following surveys.

In case you have any questions after completing the survey, please contact charlotte.mueller@maastrichtuniversity.nl

Kind regards,

Maastricht University Research Team

Appendix 7: Colleague Survey Baseline

Connecting Diaspora for Development (CD4D)

Colleague Baseline Survey

Dear respondent:

Thank you very much for participating in this survey. This questionnaire is part of the impact evaluation our research team from Maastricht University is conducting of the Connecting Diaspora for Development (CD4D) – Project, operated by IOM. You have been selected for this survey as you will be working closely with a CD4D-Participant. For this research, we need your participation in a survey at three different points in time: now, after the participant's assignment has ended and again one year from then.

We would like to remind you again that participation in this survey is on a voluntary basis. Our research team is therefore very happy that you agreed to participate in this research as you are making an important contribution to this evaluation. This is essential as we want to understand if changes occur in your organization through the CD4D programme and to provide you with the opportunity to share with us how you think the programme is going.

Please note that we anonymize all answers you give in the survey so your name will never be used. Therefore Ms. Mueller via E-Mail or the IOM Officer will provide you with an identification code which you will be asked to fill in in the next step. It is also important that you fill out the survey by yourself.

The survey consists of seven sections of different length. It will take you not more than 30 min. to complete the entire survey. A small orange bar in the part above the question will indicate your progress.

In case you have any questions after completing the survey, please contact Ms. Charlotte Mueller under charlotte.mueller@maastrichtuniversity.nl.

Kind regards,

Maastricht University Research Team

Identification Number (Please enter the code the IOM staff/Ms.Mueller provided you with here).	

Section 1: Basic Information	
1.1. In which country are you working?	
1.2. At which location are you working?	
1.3. At which institution are you working?	

Section 2: Demographic Information	
2.1. How old are you?	
2.2. In what country(ies) do you hold citizenship? You can choose more than one.	
2.3. What is your sex?	☐ 0 Male ☐ 1 Female
2.4. What is the highest level of education that you have completed?	☐ 1 No formal education ☐ 2 Primary ☐ 3 Secondary ☐ 4 Technical or vocational ☐ 5 Bachelor ☐ 6 Master ☐ 7 PhD
2.5. Which field of study is your highest degree in?	☐ 1 Engineering ☐ 2 Mathematics or natural sciences ☐ 3 Medicine or health sciences ☐ 4 Humanities, language or cultural studies ☐ 5 Law ☐ 6 Business administration or economics ☐ 7 Social or political sciences ☐ 8 Agriculture ☐ 9 Other
2.6. How many years have you had a paid job in your current field?	
2.7. Which category best describes your current job?	☐ 1 Architecture/ engineering ☐ 2 Business and Financial Operations

	☐ 3 Community and social services ☐ 4 Computer/ mathematical ☐ 5 Education/ training ☐ 6 Healthcare practitioner/ technician ☐ 7 Legal ☐ 8 Management ☐ 9 Life science (biologist/ ecologist/ zoologist. etc.) ☐ 10 Media/ communications ☐ 11 Office/ Administrative Support ☐ 12 Physical science (physicist/ chemist/ geoscientist, etc.) ☐ 13 Production/ manufacturing ☐ 14 Sales ☐ 15 Social science ☐ 16 Transportation ☐ 17 Other
2.8. How would you rank your job level?	☐ 1 Very junior ☐ 2 Junior ☐ 3 Mid-level ☐ 4 Lower-management ☐ 5 Upper-management
2.9. How motivated are you to learn new skills related to your work?	☐ 1 Very unmotivated ☐ 2 Unmotivated ☐ 3 Neutral ☐ 4 Motivated ☐ 5 Very motivated

Section 3: Migration Experience	
3.1. Within the past 12 months, how many times have you travelled outside of *{Insert assignment country}*?	
3.2. Have you ever lived outside of *{Insert assignment country}*?	☐ 0 No ☐ 1 Yes
3.3. Do you have family members, friends or colleagues who have lived abroad and returned to *{Insert assignment country}*?	☐ 0 No ☐ 1 Yes
3.4. Do you have family members or friends who currently live outside of *{Insert assignment country}*?	☐ 0 No ☐ 1 Yes

(If answer=0, skip to 4.1)	
3.5. How often do you communicate with the friend or family member abroad whom you are closest to?	☐ 1 Never ☐ 2 Several times a year ☐ 3 Every three months ☐ 4 Every month ☐ 5 Every week ☐ 6 Daily

Section 4: Knowledge Transfer Behaviors					
4.1. How often do you do the following?					
	Never (1)	Seldom (2)	Some-times (3)	Often (4)	Very often (5)
4.1.1. Use written instructions when working	☐	☐	☐	☐	☐
4.1.2. Attend in-person trainings	☐	☐	☐	☐	☐
4.1.3. Receive mentoring or coaching (tips and guidance from more senior staff)	☐	☐	☐	☐	☐
4.1.4. Ask colleagues or superiors for help in solving problems	☐	☐	☐	☐	☐
4.1.5. Attend an information fair	☐	☐	☐	☐	☐
4.1.6. Participate in an online training or course	☐	☐	☐	☐	☐
4.2. How often do you experience the following?					
	Never (1)	Seldom (2)	Some-times (3)	Often (4)	Very often (5)
4.2.1. Low level of knowledge and expertise	☐	☐	☐	☐	☐
4.2.2. Not enough resources (i.e. computer)	☐	☐	☐	☐	☐
4.2.3. Mistrust from a colleague	☐	☐	☐	☐	☐
4.2.4. Negative attitude from a colleague	☐	☐	☐	☐	☐
4.2.5. Negative working environment	☐	☐	☐	☐	☐
4.2.6. Colleagues frequently leaving their jobs	☐	☐	☐	☐	☐
4.2.7. Workplace bureaucracy	☐	☐	☐	☐	☐

4.2.8. Corruption	☐	☐	☐	☐	☐
4.2.9. Nepotism (jobs and positions being given to individuals based on their connections/ family members instead of their qualifications)	☐	☐	☐	☐	☐
4.2.10. Ethnic factions or rivalries	☐	☐	☐	☐	☐
4.2.11. Strict or demanding management style	☐	☐	☐	☐	☐
4.2.12. Uncertainty or concerns regarding future stability/ security within the country (this does not refer job security)	☐	☐	☐	☐	☐
4.3. How important do you think the following behaviors are in the workplace?					
	Very un-important (1)	Un-important (2)	Neutral (3)	Important (4)	Very Important (5)
4.3.1. Being organized	☐	☐	☐	☐	☐
4.3.2. Arriving at the specified time for meetings or other events	☐	☐	☐	☐	☐
4.3.3. Holding regular office hours	☐	☐	☐	☐	☐
4.3.4. Delivering assigned work by the deadline	☐	☐	☐	☐	☐
4.3.5. Having a clear idea of the goals and objectives of the work you carry out	☐	☐	☐	☐	☐
4.3.6. Helping with tasks that are not within your required work duties that benefit the institution	☐	☐	☐	☐	☐
4.3.7. Working together with others to achieve common goals	☐	☐	☐	☐	☐

Section 5: New ideas, skills and processes	
5.1. How often do you work together with foreigners (people who are not nationals)?	☐ 1 Never ☐ 2 Rarely ☐ 3 Monthly ☐ 4 Twice monthly ☐ 5 Weekly ☐ 6 Daily
5.2. How valuable are ideas from foreigners?	☐ 1 Not valuable at all ☐ 2 Invaluable ☐ 3 Neutral ☐ 4 Valuable

	☐ 5 Very valuable
5.3. How often do you work together with people from your country who have lived abroad and returned?	☐ 1 Never ☐ 2 Rarely ☐ 3 Monthly ☐ 4 Twice monthly ☐ 5 Weekly ☐ 6 Daily
5.4. How valuable are ideas from people from your country who have lived abroad and returned?	☐ 1 Not valuable at all ☐ 2 Invaluable ☐ 3 Neutral ☐ 4 Valuable ☐ 5 Very valuable
5.5. Are you a member of any professional organizations (an organization with people who share your professional interests)?	☐ 0 No ☐ 1 Yes
5.6. Do you work by yourself most of the time or with colleagues in a team?	☐ 0 By myself ☐ 1 With colleagues in a team
5.7. How often do you work together with people from different departments within your organization?	☐ 1 Never ☐ 2 Rarely ☐ 3 Monthly ☐ 4 Twice monthly ☐ 5 Weekly ☐ 6 Daily
5.8. Are you currently in contact with any *{insert nationality of assignment country}* living abroad for professional purposes? *(If answer=0, skip to 5.11)*	☐ 0 No ☐ 1 Yes
5.9. What region(s) does this person/ do these individuals live in? (You can choose more than one.)	☐ 1 Africa ☐ 2 Asia ☐ 3 Europe ☐ 4 Latin America and the Caribbean ☐ 5 North America ☐ 6 Oceania
5.10. If you know, please indicate in which countries this person/these individuals live. (You can choose more than one.)	

5.11. What do you discuss? (You can choose more than one.)	☐ 1 Ideas for working together ☐ 2 Sector-specific events ☐ 3 Sector-specific networking ☐ 4 Work or job-related advice ☐ 5 Other
5.12. How often do you work with other people to complete a work task?	☐ 1 Never ☐ 2 Monthly ☐ 3 Twice monthly ☐ 4 Weekly ☐ 5 Daily

5.13. How much do you think the organization as a whole supports the following activities?

	Very un-supportive (1)	Un-supportive (2)	Neutral (3)	Supportive (4)	Very supportive (5)
5.13.1. Participating in formal trainings on sector-specific skills or topics	☐	☐	☐	☐	☐
5.13.2. Participating in mentoring or coaching	☐	☐	☐	☐	☐
5.13.3. Sharing new ideas or ways of doing things	☐	☐	☐	☐	☐
5.13.4. Trying and testing new ideas or ways of doing things	☐	☐	☐	☐	☐
5.13.5. Working together in a team	☐	☐	☐	☐	☐
5.13.6. Networking	☐	☐	☐	☐	☐
5.13.7. Learning new skills and techniques	☐	☐	☐	☐	☐

Section 6: CD4D Assignment Information

6.1. Do you have the following expectations or reservations of the CD4D participants?

	No (0)	Yes (1)
6.1.1. They will teach me new skills or techniques	☐	☐
6.1.2. They will help me with networking	☐	☐
6.1.3. They will share new ideas with me	☐	☐

6.2. Do you have any of the following reservations/concerns regarding the CD4D participant?		
	No (0)	Yes (1)
6.2.1. They will not understand the local context	☐	☐
6.2.2. They will be overpaid compared to local staff	☐	☐
6.2.3. They will not respect the local culture/ way of life	☐	☐
6.2.4. They will not respect local knowledge and expertise	☐	☐
6.3. Have you ever previously worked with a participant of a temporary return programme like CD4D? (a programme where diaspora members returned for a short period of time to work in your institution) *(If answer=0, skip to 7.1)*	☐ 0 No ☐ 1 Yes	
6.4. With how many returnees or participants have you worked with prior to the upcoming CD4D assignment?		
6.5. How would you rate your experience of working with the returnee(s)/ participant(s)?	☐ 1 Very negative ☐ 2 Negative ☐ 3 Neutral ☐ 4 Positive ☐ 5 Very positive	

Section 7: Trainings and work environment	
7.1. In the past year, how many trainings have you been to?	☐ 1 None ☐ 2 One ☐ 3 Between 2 to 4 ☐ 4 Five ☐ 5 More than five

7.2. How would you rate yourself in your job over the past year?	☐ 1 Very poor ☐ 2 Poor ☐ 3 Acceptable ☐ 4 Good ☐ 5 Very good

7.3. How comfortable are you in sharing ideas with the following people?

	Very un-comfortable (1)	Un-comfortable (2)	Neutral (3)	Comfortable (4)	Very comfortable (5)
7.3.1. Other colleagues	☐	☐	☐	☐	☐
7.3.2. Direct supervisors	☐	☐	☐	☐	☐
7.3.3. Institutional management/ leadership	☐	☐	☐	☐	☐
7.3.4. Diaspora members	☐	☐	☐	☐	☐

7.4. How satisfied are you with your current job?	☐ 1 Very dissatisfied ☐ 2 Dissatisfied ☐ 3 Neutral ☐ 4 Satisfied ☐ 5 Very satisfied
7.5. How committed do you think your employer is to helping you learn new job-related skills?	☐ 1 Very uncommitted ☐ 2 Uncommitted ☐ 3 Neutral ☐ 4 Committed ☐ 5 Very committed
7.6. How likely are you to continue working for this institution for the next year?	☐ 1 Very unlikely ☐ 2 Unlikely ☐ 3 Neutral ☐ 4 Likely ☐ 5 Very likely
7.7. How likely are you to continue working for this institution for the next five years?	☐ 2 Unlikely ☐ 3 Neutral ☐ 4 Likely ☐ 5 Very likely

This is the end of this survey. Thank you very much for completing this questionnaire. We are looking forward to your participation in the following surveys.

In case you have any questions after completing the survey, please contact Ms. Charlotte Mueller (charlotte.mueller@maastrichtuniversity.nl).

Kind regards,

Maastricht University Research Team