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HIGHER EDUCATION SOLUTIONS NETWORK – FY13 ANNUAL REPORT

MAKERERE UNIVERSITY
RESILIENTAFRICA NETWORK
AGREEMENT NO. AID-OAA-A-13-00018

SUBMITTED: OCTOBER 30, 2013
REPORTING PERIOD: FY 2013, QUARTERS 1-4 (NOVEMBER 8, 2012 TO SEPTEMBER 30, 2013)

This publication was produced for review by the United States Agency for International Development.
It was prepared by ResilientAfrica Network.

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Acronyms

AGIR	Alliance Globale pour l'Initiative Resilience
CEDAT	College of Engineering, Design, Art and Technology, Makerere University
COBAMS	College of Business and Management Sciences, Makerere University
COMESA	Common Market for East and Southern Africa
CS4D	Complex Systems for Development
CSIS	Centre for Strategic and International Studies
CTA	Technical Center for Agricultural and Rural Cooperation
DCHA	Bureau for Democracy, Conflict, and Humanitarian Assistance
DFCU	Development Finance Company, Uganda
DP	Deliberative Polling ®
DQA	Data Quality Assessment
DRC	Democratic Republic of Congo
DRLA	Disaster Resilience Leadership Academy
FAO-EU	Food and Agriculture –European Union
FGD	Focus Group Discussion
GCFSI	Global Center for Food Systems Innovation
HESN	Higher Education Solutions Network
ICT	Information Communication and Technology
IRB	Institutional Review Board
JPC	Joint Planning Cell
KII	Key Informant Interview
KPIs	Key Performance Indicators
M&E	Monitoring and Evaluation
MINAGRI	Ministry of Agriculture and Animal Resources
MIT	Massachusetts Institute of Technology
MOOC	Massive Open Online Course
MOU	Memorandum of Understanding
MSU	Massachusetts State University
NADMO	National Authority for Disaster Management Ghana
OST	Office of Science and Technology
OSTS	Operational Solutions and Transition Section
PMP	Performance Measuring Plan
RAME	Resilience Assessment, Monitoring and Evaluation
RAN	ResilientAfrica Network
RILAB	Resilience Innovation Lab
SLDRP	Strengthening Leadership in Disaster Resilience Program
TBD	To be determined
Texas A&M	Texas Agricultural and Mechanical
ToC	Theory of Change
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children’s Fund
USAID	United States Agency for International Development

Executive Summary

RAN's three strategic objectives are: 1) to design and operationalize a scientific, data-driven and evidence-based resilience framework for Sub-Saharan Africa that builds on the resources already engaged through the RAN, 2) to strengthen resilience at the individual, household and community levels through innovative technologies and approaches to development, which will be identified, incubated, tested and scaled through the RAN in collaboration with its partners and 3) to adopt and launch a state-of-the-art massive online learning platform to engage students, faculty, staff and development experts globally in solving well-defined development challenges.

During Year I, RAN established a vibrant network of scholars and students in 14 African Universities, including the creation of 4 Resilience Innovation Labs (RILabs). RAN developed a theoretical framework for understanding resilience, and conducted the preliminary data collection activities in the framework to identify priority thematic issues of focus that will guide resilience interventions in the four RAN regions. RAN also undertook preliminary assessments of the innovations environment in sub-Saharan Africa, and explored possible platforms for delivery of MOOCs.

The following key results were realized:

1. Makerere-led RAN program office as well as Tulane and Stanford program support offices were established and fully staffed. RAN Secretariat was established and its operational protocols developed including an operations manual and a communications strategy; RAN Steering Committee was established.
2. A vibrant network has been established, currently comprising 15 universities across 10 countries in Africa (*Please see Deliverable 1.1: Building the Network of Scholars*). The Four Resilience Innovation Labs (RILabs) were established, with offices, work plans and staff including a Lab Director, program coordinator, and a program administrator as core staff. The requisite financial and physical resources for each RILab to be a functional member of RAN were provided, and reporting frameworks disseminated.
3. Resilience Workshops and stakeholder forums were conducted to engage RAN members, define goals, galvanize the network, develop an operational level plan and engage stakeholders.
4. Thematic areas of focus for resilience programming in RANs 4RILabs were identified, explored and validated through systematic desk analyses of existing literature, complemented by selection of specific geographical areas of focus for RAN's resilience interventions.
5. A theoretical framework for understanding and measurement of resilience in target communities has been developed. The framework includes a menu of data collection methods to guide resilience assessment and monitoring. This framework shall be tested and validated in subsequent years.
6. Full data collection for qualitative assessments of resilience factors (latent drivers of vulnerability and adaptive capacity) in target communities of RAN were developed and are in various stages of scientific vetting and approval by the respective partner institutions.
7. Developed and piloted a strategy for implementing Deliberative Polling® (DP) in two RILabs
8. Analyses of the innovations environment in sub-Saharan Africa were conducted, with a focus on why ideas fail to make it to scale, challenges of the young innovator in Africa, and opportunities for supporting innovations.
9. A draft innovations and engagement strategy for RAN has been developed, pending further discussions and inputs by experienced stakeholders. This strategy will be completed early in Year II
10. Proposed delivery platforms and media for MOOCs in Africa were discussed and recommendations provided to RAN
11. RILab Resilience Assessment, Monitoring and Evaluation (RAME) workshops were conducted culminating in the finalization of thematic areas of focus for the labs

In Year II, RAN will build on the formative processes undertaken in Year I to complete the data collection processes required to understand resilience factors in target communities. This process will yield a portfolio of problem sets that will form the basis for RAN's innovations agenda. It will also culminate in the first Annual State of Resilience Report for sub-Saharan Africa. This evidence base, coupled with in-depth understanding of underlying drivers and their prevalence in small foci shall be the value addition that RAN will bring to resilience-based programming in sub-Saharan Africa.

In Year II, innovations will be a key focus for RAN. RAN will rapidly operationalize a value added approach to ideation and development of resilience innovations in its RILabs, with deeper engagement of innovators, faculty, entrepreneurs, and the target communities. This will culminate in a set of innovations, technologies or approaches selected and initiated into the innovations pipeline. Viable prototypes/concepts will be prepared for testing/pilot in RAN's target communities.

In Year II, RAN will develop content and rollout mini MOOCs. Mini MOOCs shall be strategically used for rapid cascading of innovation skills for a broad range of students both in Africa and the United States. The MOOCs will also provide a platform for knowledge sharing. RAN will develop and pilot a model for 'team based learning' using MOOCs, so that teams of developers can work together at a distance to share knowledge and incubate innovations.

Part I: Major Milestones and Events Completed

In this section, we present a summary of key milestones achieved in Year I. These milestones are aligned to the M&E indicators in RAN's M&E Framework. It is important to note that this year's focus for RAN has been on startup activities and data gathering related to the resilience framework. There are therefore no direct outputs regarding actual innovations/interventions brought to scale.

I.1. Milestones

RAN Performance Indicator	Achievement during year I
Goal: To strengthen the resilience of targeted communities in sub-Saharan Africa to priority shocks and stresses through innovative technologies and approaches.	
Composite indicators for resilience: Component and aggregate measures of resilience at household, community and other levels depending on the regional themes	<ul style="list-style-type: none"> Data collection activities to define the components of the composite indicator are on-going; no deliverable as yet.
Objective I: A scientific, data-driven and evidence-based resilience framework for Sub-Saharan Africa designed and operationalized	
No. of resilient indicators populated with data collected in targeted communities and made available through human, financial, or institutional resources contributed by RAN	<ul style="list-style-type: none"> Data collection activities to define the components of the composite indicator are on-going; no deliverable as yet; baseline survey not yet conducted (<i>Please refer to Appendix 8.1; Deliverable 2.1: Resilience Framework for a process description</i>).
<i>IRI.1: Data driven methodologies and tools created to assess and monitor resilience</i>	
No. of new data-related technologies, tools, approaches, and best practices supported or applied with human, financial, or institutional resources contributed by RAN	<p><u>A total of 7</u></p> <ul style="list-style-type: none"> A refined resilience framework showing a series of methodologies for understanding resilience in 18 target communities with input from the RILabs (<i>Please refer to Appendix 8.1; Deliverable 2.1: Resilience Framework for a process description</i>). A Guide for conducting context analyses to validate thematic priorities for resilience programming in the 4 RILabs (the 4 RILabs customized it to their local contexts) 4 regional protocols for conducting community consultations (FGDs and KIIs) for elucidation of qualitative dimensions of resilience in 18 target communities; two of these have received ethical clearance A report defining how Deliberative Polling will be used to identify community resilience priorities (<i>Please refer to Appendix 8.1; Deliverable 2.6: Elaborating the role of DP in the resilience framework</i>).
<i>IRI.2: Quality data on resilience available and accessible to different stakeholders</i>	
No. of datasets on resilience made accessible to different stakeholders with human, financial or institutional resources contributed by RAN, meeting USAID data quality standards	<p><u>A total of 6</u></p> <p>4 context analysis reports validating thematic priorities (one for each RILab) compiled by multi-disciplinary faculty in each RILab; they have been used by the respective RILab teams to develop thematic priorities for their regions (The reports</p>

RAN Performance Indicator	Achievement during year I
	<p>are still undergoing review before dissemination; they will be part of the 1st Annual State of Resilience report for sub-Saharan Africa to be published in Yr II (FY2013-14), Q4); 4 thematic problem statements arising out of these reports are now available and were presented to and approved by the RAN Steering Committee at its last sitting in Stanford, October 2013. (Please refer to Appendix 8.1; Deliverable 2.5: Thematic issues of focus for the RILabs).</p> <ul style="list-style-type: none"> • A report on secondary analysis of resilience variables from credible data-bases (LSMS) in Eastern and Horn of Africa (Please refer to Appendix 8.1; Deliverable 2.4: Analysis of resilience factors using secondary data). • A review report on resilience frameworks and resilience measurement (Please refer to Appendix 8.1; Deliverable 2.2: Review of other existing resilience frameworks).
IRI.3: Community (local and global) ecosystem that utilizes evidence to drive decisions that improve resilience	
No. of users who access data, methodologies and tools made available with support from human, financial, or institutional resources contributed by RAN (RILabs)	<p><u>A total of 45</u></p> <ul style="list-style-type: none"> • 34- RAN RILab staff and inter-disciplinary faculty from 4 RILabs) have accessed the context analysis reports; RILabs used the reports to generate resilience thematic priorities for the respective regions. Four problem statements are available as an outcome of this • 11 inter-disciplinary faculty (together with 8 RAN staff) accessed and are adapting deliberative polling tools for use in 2 pilot DPs (Uganda and Ghana)
Objective 2: Innovative technologies and approaches developed to build resilience of communities	
Time required for developing, piloting, adopting, scaling, and evaluating transformative innovations, technologies, and approaches receiving human, financial, or institutional resources contributed by RAN	<p><u>A total of 64 Person-Months</u></p> <ul style="list-style-type: none"> • 8 person-months invested by RAN Staff in development of a draft innovation and engagement strategy. (The innovation strategy is still being developed. Consultations with stakeholders are expected as part of the innovations visioning workshops to be conducted in Year II. The draft strategy will be completed in FY2013-14, at the end of Q2) • 1 person-month invested in developing 2 case-studies on potential scalable innovations, that helped RAN to understand student needs (Please refer to Appendix 8.1; Deliverable 3.3: RAN has identified 2 innovations with a potential to impact on resilience and documented them). • 1 person-month invested in developing a data-base of innovation spaces in Africa, and outreaches to innovation spaces in Uganda; the database is available at: https://docs.google.com/spreadsheets/d/1pUPjdG5DTXBSQUtVQ2pOR3RQY3ozM29sVVE#gid=0 (Please refer to Appendix 8.1; Deliverable 3.5: RAN has developed an inventory of innovation hubs in Africa).

RAN Performance Indicator	Achievement during year I
	<ul style="list-style-type: none"> • 2 person-months invested by independent consultants in a study and report on: Innovations in Uganda, current opportunities and obstacles (the Quinn-Cameron Report) (Please refer to Appendix 8.1; Deliverable 3.1: The Quinn-Cameron report). • 2 person months in invested by Stanford staff in a desk review of the Innovation Ecosystem in sub-Saharan Africa (Please refer to Appendix 8.1; Deliverable 3.2: Review report on the innovations ecosystem in sub-Saharan Africa). • 25 person months invested by inter-disciplinary faculty in conducting context analyses to validate priority issues of focus for RILabs • 8 person months invested in engagement of students, faculty, and private sector in the RILabs and at Silicon Valley; an online engagement data-base is available as a public document at: https://docs.google.com/spreadsheets/ccc?key=0AoVxl6V88tZmdDdzamdEWmdDWkpnYnhLWmJlINzJPZWc&usp=sharing • 3 person months spent on conducting an assessment of technology options for operationalization of MOOCs (Please refer to Appendix 8.1; Deliverable 4.1: MOOC context report). • 12 person months spent on network building activities and forums
<i>IR2.1: Innovation ecosystem enhanced to support innovation development agenda in Sub-Saharan Africa</i>	
No. of private and public sector actors involved in development of innovations	<ul style="list-style-type: none"> • Not part of RAN's plan this year
No. of University multi-disciplinary creative teams participating in innovation development	<p><u>A total of 48 students</u></p> <ul style="list-style-type: none"> • One Team from Makerere University (42 students) participating in the 'Big-ideas' contest, an inter-HESN activity of Berkeley University • 6 potential innovations from student teams received mentoring and a critique from the RAN Secretariat and/or an international group of academics focused on resilience innovations. Please refer to Appendix 8.2 <ul style="list-style-type: none"> ○ Joshua Wabulo (Macotuba: A technology for TB detection; Makerere, Uganda) ○ Brian Gitta and Joshua Businge (Matibabu, a non-invasive technology for malaria diagnosis, Makerere Uganda) ○ Nelson Wasswa, Peter Nankunda (Water for Life:) ○ Rita Musaazi (Land-slide modeling for monitoring/landslides) ○ Paseka Lesolang (Water Hygiene Convenience: An improvement of the conventional toilet) ○ Gilbert Kiliu (Games for Learning: A soft-ware that uses animated figures from Kenya's folk history to

RAN Performance Indicator	Achievement during year I
	teach children mathematics) and other subjects
<i>IR2.2: Potentially transformative community interventions/innovations sourced, adopted, incubated, tested and evaluated</i>	
No. of transformative innovations, technologies, or approaches that were developed with human, financial, or institutional resources contributed by RAN	<ul style="list-style-type: none"> 6 potential innovations from student teams received mentoring and a critique from the RAN Secretariat and an international group of academics focused on resilience innovations. 4 RAN students travelled to Stanford University where they presented their ideas to an inter-disciplinary panel.
No. of transformative innovations, technologies, or approaches that were piloted with human, financial, or institutional resources contributed by RAN	<ul style="list-style-type: none"> Not part of RAN's plan this year
No. of transformative innovations, technologies, or approaches that were adopted with human, financial, or institutional resources contributed by RAN	<ul style="list-style-type: none"> Not part of RAN's plan this year
No. of transformative innovations, technologies, or approaches that achieved wide-scale adoption with human, financial, or institutional resources contributed by RAN	<ul style="list-style-type: none"> Not part of RAN's plan this year
No. of transformative innovations, technologies, or approaches evaluated with human, financial, or institutional resources contributed by RAN	<ul style="list-style-type: none"> Not part of RAN's plan this year
No. of interventions/innovations or technologies progressing through the innovations pipeline from prototype to scale with RAN support	<ul style="list-style-type: none"> Not part of RAN's plan this year
No. of interventions/innovations developed, incubated and tested involving multi-disciplinary teams	<ul style="list-style-type: none"> Not part of RAN's plan this year
<i>IR2.3: Potentially transformative community grounded interventions/innovations accelerated and scaled up</i>	
No. of transformative interventions/innovations, technologies, or approaches that were scaled up with human, financial, or institutional resources contributed by RAN	<ul style="list-style-type: none"> Not part of RAN's plan this year
Ratio of RAN investments to the total value of outside (non-RAN) resources leveraged (\$)	<ul style="list-style-type: none"> Not part of RAN's plan this year
No. of innovations or technologies that result in joint business ventures or public/private partnerships	<ul style="list-style-type: none"> Not part of RAN's plan this year

RAN Performance Indicator	Achievement during year 1
No./% of innovations or technologies that result into community resilience solutions	<ul style="list-style-type: none"> Not part of RAN's plan this year
Objective 3: Massive on-line learning platform adopted and launched to engage students, faculty, staff and development experts globally in solving well-defined resilience-related problems	
No. of students, staff, and faculty enrolled for courses or disciplines created by RAN	<ul style="list-style-type: none"> Not part of RAN's plan this year
No. of students, staff, and faculty completed the courses or disciplines conducted by RAN	<ul style="list-style-type: none"> Not part of RAN's plan this year
<i>IR3.1: Massive on-line learning platform adopted and launched</i>	
New resilience related course or disciplines created by university departments with human, financial, or academic resources contributed by RAN	<ul style="list-style-type: none"> Not part of RAN's plan this year
No. of informal or formal learning opportunities (short courses) created by RAN partners	<ul style="list-style-type: none"> No direct output for this indicator; however, the MOOCs team at Stanford provided technical advice on technologies to be used for delivery of MOOCs based on a series of panel workshops in a technical report. (Please refer to Appendix 8.1; Deliverable 4.1: MOOC context report).
<i>IR3.2: Resilience related knowledge sharing (Collaborative learning) with and between RAN and global stakeholders enhanced</i>	
No. of visitors to RAN knowledge-sharing platforms (disaggregated by self-provided affiliation)	<ul style="list-style-type: none"> Not part of RAN's plan this year
<i>IR3.3: RAN and global stakeholders actively participating in solving resilience-related problems</i>	
No. of RAN interdisciplinary collaborations for resilience-related problem solving that leverages resources and/or collaborates with other HESN labs or other stakeholders	<ul style="list-style-type: none"> Not part of RAN's plan this year
No. of stakeholders engaged in problem solving	<ul style="list-style-type: none"> Not part of RAN's plan this year

1.2. Events

- RAN convened a meeting of seven partners at the Centre for Strategic and International Studies, Washington, D.C (8th November, 2012).** The meeting discussed partnership formation, mission, vision and strategy
- RAN attended the Higher Education Solutions Network (HESN) Launch November 9, 2012** at the US National Academy of Sciences in Washington DC; the Chancellor of Makerere Prof. George Mondo Kagonyera attended and RAN Core partners attended and presented RAN's vision

3. **RAN hosted the 2nd Partners' meeting, December 10-12, 2012** at Kampala, Uganda: The meeting further discussed strategy and core activities for the Year I workplan, as well as appraisal of the sites for the RILabs. Eighteen people attended this meeting which comprised of representatives from RAN's core partners: Makerere University, Jimma University, University of Pretoria and UHAS among others (please refer to Appendix 8.3 for the detailed list of participants).
4. **RAN hosted the 3rd RAN Partners' Meeting**, April 17- 22, 2013, at Kampala, Uganda: This landmark meeting achieved a key milestone in galvanizing the broader network of core universities and network Plus Universities. It also developed the formative approach for RAN's Theory of Change, and broad components of the Resilience Framework. 50 representatives from the RILabs also outlined the broad resilience themes for their regions as well as a broad outline of the geographical focus. The meeting discussed next steps for validating the thematic areas of focus and affirming the specific geographical communities
5. **RAN hosted an Innovation Panel on April 19, 2013** at Protea Hotel, Kampala Uganda, As part of the events of the partners' meeting to show case the potential for innovations in African Universities. Mentor-mentee experiences were shared by 6 students and 5 mentors
6. **RAN held a public forum June 2 -3, 2013, Kampala, Uganda:** This was the largest single advocacy event for the RAN locally. It achieved the objective of creating wide awareness about RAN's strategic objectives among key development partners in Uganda
7. **RAN conducted extensive consultative workshops on the resilience framework:** Led by Tulane University, the team visited Uganda, Ghana, Ethiopia and South Africa, and facilitated 4-day workshops in each of the RILabs to disseminate and get input into the draft resilience framework. The final result is a refined RAN resilience framework; 34 RILab staff were involved
8. **RILabs Internal Stakeholder Forums:** Each RILab held internal stakeholder forums between July and August 2013
9. **West Africa RILab External Stakeholder Forum:** The West Africa RILab held an external stakeholder forum on resilience framework approach and an innovations panel. It included a public forum and an innovations panel to enhance RAN's social capital in Ghana. The Southern Africa and Horn of Africa RI Labs will also host forums in Quarter I or II of Year 2 depending on availability of critical stakeholders.
10. **RAN Staff Retreat:** RAN Secretariat conducted a staff retreat on 16-18 September 2013 at Kabira Country club, Kampala to review Year I accomplishments and finalize plans for Year 2 activities. Ten members of staff were present at this retreat (please refer to Appendix 8.4).
11. **Site Meeting at Stanford University and Internal RAN Steering Committee Meeting:** Two site meetings were held with Stanford University Silicon Valley Stakeholders Forum 15-18 July and 1-5th October. These meetings clarified Stanford's input into RAN's strategy and also included a Steering Committee meeting to receive and review RAN's deliverables for Year I
12. **Valley Stakeholders Forum:** RAN hosted two private sector forums in Silicon Valley, one in August 2013 and another in October. These meetings rallied links in Silicon Valley while RAN received invaluable input into its innovations strategy. RAN also identified potential mentors for students
13. **Site visit to Horn of Africa RILab:** Staff from the RAN Secretariat, represented by Dr. Roy William Mayega and Deborah Elzie) conducted a site visit 27-28 September to help clarify their resilience gaps and strategize for their external stakeholder forum. This arose especially from the challenge that there are many pre-existing resilience programs in which the USAID is involved in the region and there was a need to clarify the value-add from the Horn of Africa RILab to resilience efforts in the region. This core issue was discussed in the visits and it was agreed that the Horn of Africa RILab (and indeed RAN's resilience strategy) will add value to resilience efforts by getting intimate with the community and harnessing the community's view.

I.3. Publications

No publications were made in Year I

I.4. Communications

Below is a list of key communiqués featuring RAN during the reporting period:

- Tulane part of \$25 million to research, promote African resilience: http://tulane.edu/news/releases/pr_111212.cfm
- USAID launches new network to engage students and universities: <http://www.usaid.gov/news-information/press-releases/usaids-launches-new-network-engage-students-and-universities>
- Makerere University stands out at the Launch of the Higher Education Solutions Network <http://news.mak.ac.ug/news-categorization/health>
- ekitongoleResilientAfrica Network, June 4, 2013 <http://www.bukedde.co.ug>
- Makerere University launches ResilientAfrica Network to Build Resilience in the African Communities. Top television Wednesday June 5, 2013 <http://toptv.co.ug>
- Makerere University Launches ResilientAfrica Network, Radio One 90FM Wednesday June 5, 2013 <http://www.radio-one.com>
- Ba'tongoseza ResilientAfrica Network mu Kampala Uganda, Radio Two Akaboozi 87.9FM Wednesday June 5, 2013 <http://www.akaboozi.fm>
- Makerere University has Launched ResilientAfrica Network, SanyuFM 88.2 Wednesday June 5, 2013 <http://sanyufm.com>
- Makerere University is Proud to Launch ResilientAfrica Network, CapitalFM 91.3FM Tuesday June 4, and Wednesday June 5, 2013 <http://www.capitalfm.com>
- Makerere University Launches ResilientAfrica Network to Build Resilience in the African Communities. Top radio Wednesday June 5, 2013 <http://909topradio.com>
- Makerere University etongosezaekitongoleResilientAfrica Network, Central Broadcasting Services (CBS Radio) Wednesday June 5, 2013, <http://www.cbsradio.com>
- RAN Supports Student Innovators from Makerere University (Matibabu), http://www.imaginecup.com/ICI3/WWF/Winners#?fbid=5_-A5WlQjqd
- Makerere University Launches ResilientAfrica Network, a communiqué, <http://www.musph.ac.ug>
<http://www.resilientafricanetwork.org>
- RAN in Public Health Matters, A quarterly Newsletter of School of Public Health, Makerere University College of Health Sciences page I

Part 2: Description of Key Activities

2.1. Annual Objectives

General Objectives: RAN has 3 strategic objectives:

1. Design and operationalize a scientific, data-driven and evidence-based resilience framework for Sub-Saharan Africa that builds on the resources already engaged through the RAN
2. Strengthen resilience at the individual, household and community levels through innovative technologies and approaches to development, which will be identified, incubated, tested and scaled through the RAN in collaboration with its partners.
3. Adopt and launch a state-of-the-art massive online learning platform to engage students, faculty, staff and development experts globally in solving well-defined development challenges.

Operational Objectives: RAN had 10 process objectives this year:

1. To establish RAN Program Secretariat and partners' and constitute working teams
2. To establish 4 Main RILabs (in Uganda, Ghana, Ethiopia & South Africa)
3. To develop a workplan for RAN
4. To conduct regional context analyses so as to identify and validate thematic priorities for RILabs
5. To develop a framework for understanding and building resilience of target communities in Africa
6. To conduct outreach to other HESN partners and other stakeholders
7. To develop and pilot strategy for implementing Deliberative Polling® (DP) two RILabs
8. To develop and operationalize an Innovations and Engagement Strategy
9. To undertake a series of preparatory activities to develop the innovations ecosystem in RAN RILabs
10. To conduct an assessment of technology needs for operationalization of MOOCs in Africa

2.2. Summary of Key Activities

Below are the key activities implemented in the reporting period and how they relate with the annual objectives:

Strategic Objective I: Design and Operationalize a scientific, data-driven and evidence-based resilience framework for Eastern Africa

Activities	Outputs
1.1 Host Team building/vision meeting	Draft workplan was developed and received initial approval Workplan has gone through 27 iterations but is not formally approved [Refer to the RAN Workplan for Year I, a separate submission]
1.2 Establish program offices at Makerere, Tulane and Stanford Universities	Program offices established at Makerere, Tulane and Stanford Minimum staffing requirements developed and shared with USAID RAN Functional Organogram developed RAN Functions and operations manual developed RAN Communication strategy developed Critical staff positions filled in partners' offices [Refer to Deliverable 1.1]
1.3 Hold a partner's meeting to identify thematic and geographic areas of focus for RAN's resilience strategy in 4 regions	Proposed thematic issues and geographic areas of focus for resilience identified for each RILab [Refer to Deliverable 2.5] Programmatic schematic developed that shows key linkages between RAN's three strategic components and intermediate results
1.4 Conduct qualitative data	Context analysis reports on resilience factors for 4 regions

Activities	Outputs
collection activities for a formative understanding of resilience factors in 18 target communities in four regions	have been synthesized into regional thematic issue briefs [Refer to Deliverable 2.5] Protocols for community consultations for 4 regions developed; 2 approved by scientific committees(HoA and Eastern Africa's; the two are preparing for field-work)
1.5 Develop a resilience assessment framework and tool for target communities in sub-Saharan Africa	A Resilience Assessment Monitoring and Evaluation framework (RAME) was developed; the framework has received input from the 4 RILabs and was finalized in Year 1 [Refer to Deliverable 2.1]
1.6.1 Develop modules for RILab workshops on operationalization of the resilience framework	Materials for the RILab resilience workshops were developed
1.6.2 Conduct RILab workshops on operationalization of the resilience framework	Resilience Assessment Monitoring and Evaluation workshops were conducted in all 4 RILabs; consensus was reached on key data collection activities and steps in RAN's resilience framework [Refer to Deliverable 2.3]
1.7 Preparations for a SS Africa Resilience Baseline survey	Activity re-scheduled to the next financial year due to shortage of time
1.8.1 Develop a strategy for integration of Deliberative Polling in Resilience Assessment Methodology	Agreed DP strategy and methodology incorporated into resilience framework for RAN for Ghana and Uganda DP to be piloted in Ghana and Uganda [Refer to Deliverable 2.6]
1.8.2 Conduct preparatory activities for integration of Deliberative Polling in RAN Assessment methodology	Ghana and Uganda currently developing DP protocols [Refer to Deliverable 2.6]
1.8.3 Conduct quarterly meetings of the RAN Steering committee	4 steering committee meetings were held, all Face-to-Face

Strategic Objective 2: Strengthen resilience at the individual, household and community levels through innovative technologies and approaches to development, which will be identified, incubated, tested, and scaled through the RAN in collaboration with its partners

Activities	Achievements
2.1 Establish RILabs in Uganda, Ghana, Ethiopia and South Africa as well as strategic partnerships with in-country and Network Plus Universities	4 RILabs established [Refer to deliverables: 1.1, 1.2 and 1.3] Horn of Africa: Jimma University, Network+ University of Addis Ababa, Ethiopia, Benadir University, Mogadishu, Somalia, University of Nairobi, Kenya West Africa: University of Health and Allied Sciences (UHAS), Network+ Previously, University of Health and Allied Sciences (UHAS) in Ho, Ghana, together with the University of Dakar, Senegal; [NB: UHAS has not been replaced by the University of Development Studies (UDS) Tamale, Ghana as the lead university] Southern Africa: University of Pretoria, Network + University of Limpopo, South Africa, University of Zimbabwe, Lilongwe University of Agriculture and Natural Resources, Malawi

Activities	Achievements
	<p>Eastern Africa: Makerere University, Network +, Gulu University, National University of Rwanda, Rwanda, University of Kinshasa, DRC</p> <p>Office space identified by the respective labs RILab contracts completed and signed and funds transferred At least 3 core staff recruited per lab. (Copies of the agreements are appended)</p>
2.2 Hold a public forum to enhance RAN's social capital in Uganda	Public forum held June 4 th and 5 th ; it was the single largest attended public awareness event for RAN
2.3 Conduct a comprehensive desk review of literature on the innovations environment in sub-Saharan Africa	Desk review conducted by Stanford H-Star team; A report is available for innovations environment in Africa, with in-depth analysis of the RILabs : [Refer to Deliverable 3.2]
2.4 Hold a series of USAID/RAN/Stanford workshops and stakeholder forums at Silicon Valley	2 site meetings held at Stanford; they clarified Stanford's input and reviewed RAN's deliverables for Year I 2 Stakeholder forums conducted in Silicon Valley; they created links and provided learning for RAN's innovations approach
2.5 Conduct a formative qualitative assessment of the innovations environment and its challenges in Uganda as a case study for sub-Saharan Africa	Drs. Quinn and Cameron of CIT Makerere conducted the analysis; a report is available with key learning issues that inform the innovations and engagement strategy now under development: [Refer to Deliverable 3.1] A data-base of innovation spaces in Africa prepared: https://docs.google.com/spreadsheet/ccc?key=0AvqIZtR2pUPj dG5DTXBSQUtVQ2pOR3ROY3ozM29sVVE#gid=0
2.6 Conduct a structured survey of the innovations environment in the 4 RILabs	This activity was not completed in Year I; the survey tool is still under development
2.7 Develop a RAN innovations and Engagement strategy and guidelines for the format of an RILab	Strategy development in on-going. A draft strategy is available with input from RILabs; awaiting further input from partners with model design schools (e.g. Stanford). Further discussions necessary to galvanize the strategy
2.8 Operationalize a stakeholder engagement strategy for students, faculty, external stakeholders (includes the private sector) and RAN communities	25 Inter-disciplinary faculty directly engaged in conducting RILab context analyses Several engagements conducted with internal and external stakeholders, summarized in an engagement report; web-based database of engagements conducted available at: https://docs.google.com/spreadsheet/ccc?key=0AoVxl6V88tZ mdDdzamdEWmdDWkpnYnhLWmJINzJPZWc&usp=sharing 4 students supported to get their ideas peer reviewed including at international level [Please refer to Appendix 8.5].
2.9 Identify candidate innovations to pilot for RAN implementation and support in Year 2	So far, 2 promising innovations have been identified; 2 case studies on innovations with a potential for scaling as resilience interventions prepared [Refer to Deliverable 3.3]

Strategic Objective 3: Adopt and launch a state-of-the-art massive online learning platform to engage students, faculty, staff and development experts globally in solving well-defined development challenges

Activities	Achievements
3.1 Evaluate and advise RAN on suitable available technologies for delivery of MOOCs in Africa	A report(Video/Multimedia format) on technology options for MOOCs prepared after technical team workshops [Refer to Deliverable 4.1]
3.2 Conduct a structured survey of the capacity for a MOOC's implementation in the 4 RILabs	This activity was not completed in Year I; the survey tool is still under development
3.3 Develop a roadmap of content creation for RILabs workshops for Year 2 and start content creation	Milestones for content development are available but yet to finalize and approve them

Part 3: High Value Areas of Collaboration [HVAC] (Lab-to-Lab)

3.1. Data

Partner	Completed / Ongoing Activity [Indicate tie to activity number]	Outcome(s)
William and Mary	(Completed) GIS Training	2 students from Makerere trained in GIS
	(On-going) Big data; RAN has requested for of geospatial data on USAID investments in Africa	W&M has informed us that the data collection is complete but the data is still being processed. W&M will be releasing public data that will be freely available to access
Texas A&M	(Completed) 2 students from W&M (Cherie Saulter and Lyndsay) were mentored for 8 weeks by a Makerere faculty from Department of Geography identified by RAN	2 US students mentored
	(On-going) RAN has requested Texas to share qualitative and survey reports on conflict and food security in DRC; RAN also to share its context analysis reports	
MIT (IDIN)	RAN discussed potential for sharing resilience survey data from Ghana, Zimbabwe and Kenya, as well as tools for measuring resilience with a representative of Global Development Network (GDN) a resilience think-tank; the representative was referred by MIT-IDIN	
MIT CITE	RAN linked visiting MIT CITE team to linguistics department Makerere for help in translating their tools	MIT CITE Tools translated into local languages

3.2. Solutions (Creation, Testing, Scaling)

Partner	Completed / Ongoing Activity [Indicate tie to activity number]	Outcome(s)
MIT (CITE)	MIT CITE shared with RAN their approach to innovation evaluation	Lessons learnt to inform RAN's innovations strategy
MIT (IDIN)	Access to innovations, a Denmark based innovations incubation consulting firm shared their approach to innovation incubation (based in Kasese) with RAN	Lessons were learnt on how to engage NGOs in community roll-out of innovations
MIT	Tour of MIT d.School by RAN Engagement Director on a non-RAN funded trip	Lessons learnt informed RAN's draft Innovations and Engagement Strategy

3.3. Student Engagement

Partner	Completed / Ongoing Activity [Indicate tie to activity number]	Outcome(s)
UC Berkeley	Supported Big ideas contest	42 students from Makerere submitted their proposals to the Big Ideas contest to compete for the available awards. We are yet to obtain feed-back on any applicants that were successful
	4 student innovators from Makerere visited UC Berkeley facilities	The students received technical input into their ideas

3.4. Co-Location of Resources

Partner	Completed / Ongoing Activity [Indicate tie to activity number]	Location (City and Country)	Outcome(s)
Michigan State University	Discussed with Prof. Ajit Srivastava and Prof. Reitumetse Obakeng Mabokela, Co-Directors of the Global Center for Food Systems Innovation (GCFSI) at MSU) the potential for use of RAN's lab spaces in their community based food security interventions	Kampala, Uganda	Resources will be co-located in 2 labs: at Makerere and the Lilongwe University of Agriculture and Natural Sciences, Malawi (where the focus in food security). They also expressed the need for a strong cross-cutting theme on Gender. The point of contact for this discourse was identified as Nathalie Me-Nsope and an update email has been sent to this effect. *

Part 4: Intra-Development Lab/University Engagement

4.1. Interdisciplinary Collaboration

A key strategy for RAN is to approach resilience and innovation from an interdisciplinary perspective. RAN is networking across faculties within partner universities. Academic staff in various disciplines including Health, Engineering, Computing, Agriculture, Economics, Medicine, Social Sciences and Food Science have been contacted. These will be key partners in the implementation of RAN’s resilience strategy, innovations strategy and MOOCs.

- The respective partner universities have identified core academic units that they will work with, in line with their thematic focus. Some of these have been engaged in RAN’s data collection activities.
- 25 Interdisciplinary faculty were engaged in conducting the regional context analyzed in the RILabs. These included 9 from Eastern Africa, 5 from Horn of Africa, 6 from West Africa, and 5 from Southern Africa
- The Resilience Assessment, Monitoring and Evaluation workshops engaged 34 inter-disciplinary faculty across the 4 RILabs
- The planning workshops for Deliberative Polling engaged 20 inter-disciplinary faculty

RAN’s partners are also continuing to foster interdisciplinary collaboration. For example Tulane’s Disaster Resilience Leadership Academy (DRLA) has sought expertise from other departments, such as the Department of Economics in peer review of the resilience framework. A detailed listing of inter-disciplinary faculty engaged is available in a cumulative online data-base prepared by RAN, available at: <https://docs.google.com/spreadsheets/ccc?key=0AoVxl6V88tZmdDdzamdEWmdDWkpnYnhLWmJlNzJPZVvc&usp=sharing>. A descriptive report of engagements conducted is available in the list of RAN Deliverables for Year I

4.2. Partner Engagement

RAN’s strength lies in its network of universities. RAN has 4 RILabs and developed and disseminated different manuals to support functions and operations of the RILabs [Refer to Deliverables 1.1, 1.2 and 1.3]

- West Africa RILab at the University of Health and Allied Sciences in Ghana with Prof. Ishmael Norman as the Lab Director
- Horn of Africa RILab at Jimma University in Jimma, Ethiopia headed by Prof. Kifle Woldemichael
- Southern Africa RILab at the University of Pretoria in Pretoria, South Africa headed by Prof. Lekan Ayo-Yusuf.
- Eastern Africa RILab at Makerere University in Kampala, Uganda headed by Dr. Roy William Mayega

Each of these universities have engaged additional universities referred to as Network-Plus Universities, as follows:

RI Lab	In-country partner	Network-Plus Partner*
Eastern Africa: Makerere, Kampala, Uganda)	Gulu University	National University of Rwanda, Rwanda University of Kinshasa, DRC
West Africa: UHAS, Ho Ghana	University of Development Studies (UDS) Tamale	University of Dakar, Senegal
Southern Africa: University of Pretoria South Africa	University of Limpopo	University of Zimbabwe Lilongwe University of Agriculture and Natural Resources, Malawi
Horn of Africa: Jimma University, Ethiopia	University of Addis Ababa	Benadir University, Mogadishu, Somalia University of Nairobi, Kenya

Apart from the Network Plus Universities formally engaged, RAN's RILabs have contacted and interacted with six other universities within their regions. Engagements with these universities have been informal, by involving them in partner forums. The full list of Universities engaged in the network to-date is as follows: (Refer to Appendix 8.6 for a breakdown of the level of funding for each funded partner for Year I). NB: CSIS was engaged as a sub-awardee of Tulane University and their funding is therefore integrated within the Tulane budget.

	Partner Name	Location	Partner Type	Outcomes
Core partners				
1	Makerere University (RAN Secretariat)	Kampala, Uganda	Funded	<ul style="list-style-type: none"> • A joint workplan • Technical support towards resilience framework, Deliberative Polling, MOOCs and innovations
2	Tulane University and the Centre for Strategic and International Studies	New Orleans, Louisiana/USA	Funded	
3	Stanford University	Stanford, California/USA	Funded	
Resilience Innovation Labs				
1	Makerere University (Eastern Africa RILab)			<ul style="list-style-type: none"> • Thematic priorities for RILabs selected and validated through context analysis; 4 reports under peer review; 4 summary statements prepared • 4 Protocols for community consultations developed (2 approved by scientific committees) • Input into resilience framework discussions, draft innovations and engagement strategy
2	Jimma University, (Hosting the Horn of Africa RILab)	Jimma, Ethiopia	Funded	
3	University of Health and Allied Sciences (West Africa RILab)	Ho, Ghana	Funded	
4	University of Pretoria (Southern Africa RILab)	Pretoria, South Africa	Funded	
Network Plus Universities Engaged				
Horn-of-Africa				
1	Benadir University	Mogadishu, Somalia	Project specific	<ul style="list-style-type: none"> • Participated in the context analysis to identify, validate and prioritize resilience themes for their respective regions
2	University of Addis Ababa	Addis Ababa, Ethiopia	Project specific	
3	University of Nairobi	Nairobi, Kenya	Project specific	
Southern Africa				
4	University of Limpopo	Limpopo, South Africa	Project specific	<ul style="list-style-type: none"> • Participated in regional internal and external stakeholder forums
5	University of Zimbabwe	Harare, Zimbabwe	Project specific	
6	Lilongwe University of	Lilongwe,	Project specific	

	Partner Name	Location	Partner Type	Outcomes
	Agriculture and Natural Resources	Malawi		
	West Africa			
7	University for Development Studies	Tamale, Ghana	Project specific	
8	University of Dakar	Dakar, Senegal	Project specific	
	Eastern Africa			
8	Gulu University	Gulu, Uganda	Project specific	
9	National University of Rwanda	Butare & Kigali, Rwanda	Project specific	
10	University of Kinshasa	Kinshasa, DRC	Project specific	
	Network+ Universities not yet engaged			
1	University of Bamako	Bamako, Mali	Unfunded	<ul style="list-style-type: none"> Mali and Muhimbili participated in 1 partner's forum and theme identification
2	University of Juba	Juba, South Sudan	Unfunded	
3	Muhimbili University of Health and Allied Sciences	Dar-es-Tanzania	Unfunded	
	Engaged but informally			
1	University of Ghana	Accra, Ghana	Unfunded	<ul style="list-style-type: none"> Participated in regional external stakeholder forums
2	Ashesi University	Accra, Ghana	Unfunded	
3	Ghana Technology University College	Accra, Ghana	Unfunded	
4	Mbarara University of Science and Technology	Mbarara, Uganda	Unfunded	
5	Nkumba University	Nkumba, Uganda	Unfunded	
6	Medical University of South Africa (MEDUNSA)	Pretoria, South Africa	Unfunded	

Galvanizing relationships with core-partners

At the core partner's level, Makerere, Tulane and Stanford Universities established program offices at their respective campuses during January through March 2013. RAN's Secretariat as well as field staff from Tulane are based in Makerere's Program Office. Makerere University administration has allocated space (Plot 29, Upper Kololo Terrace) for Makerere's Program Office whose renovation is nearing completion. The main justification for the renovation is that the building allocated by the university was not in a good state to accommodate the RAN and East African RILab staff. In addition, it was constructed as a residential bungalow and needed remodeling to suit the required standard for a Network of the size of RAN, and to host the key lab and networking spaces for our model lab to be hosted by Makerere University. All these characteristics required that the building be modern, with and interior design more suited to supporting networking and innovators. (A separate request for approval for this cost has been submitted to USAID and will be reviewed and responded to under separate cover from this report.)

Tulane University has established the program office at its DRLA office and DRLA's Field Staff based in Makerere's Program Office. Stanford University has established its program office under its HSTAR Program and the Centre for Deliberative Democracy (CDD). Makerere, Stanford and Tulane have hired

over 60% of the required core staff to run their respective sub-programs. However, there have been several reorganizations of RAN Secretariat's staffing to address communication and performance challenges as they arose. RAN intends to submit a new and revised staffing structure for Year 2 as part of the Year 2 Workplan.

- **Tulane University**, through the DLRA, is the lead partner in supporting the resilience framework development. Tulane draws on its experience in implementation of similar programs to develop the initial theoretical resilience framework as a hypothesis setting tool. Tulane University has worked with the RAN Secretariat to guide the RILabs in adapting and operationalizing the framework, in collecting the formative data, and in translating the formative data into regional resilience indices and Tools.
- **The Center for Strategic and International Studies (CSIS)** has initiated activities to ongoing knowledge development of partner institutions to inform and generate discourse on how best to identify and support sources of resilience. In addition to reaching a broader audience with lessons-learned through the Center's research, CSIS will offer a channel for documentation, feedback, constructive critique, and ideas from a diverse set of public and private experts in a multiple disciplines and sectors. During the first year of the partnership, CSIS helped enact this agenda in two main ways: First, it synthesized RILab context analysis reports into short statements that highlight the resilience priorities. Second, it synthesized proceedings from partner meetings and generated reports on key consensus issues realized.
- **Stanford University**, through its Centre for Deliberative Democracy in Year I laid the ground work for use of Deliberative Polling® to consult communities and identify resilience priorities by training teams in two of the 4 RILabs (Uganda and Ghana). It worked with the RILabs in identifying ways in which deliberative polling will be best be used to enhance RAN's resilience strategy. It is also the core partner to support RAN in developing an appropriate innovations strategy. Stanford University has now identified a senior faculty member who will act as RAN's Senior Advisor on innovations.

External stakeholders:

Silicon Valley engagements

In addition to its university partners, RAN has engaged several external stakeholders. The following meetings took place with external stakeholders:

- 2 Private Sector stakeholder forums held in Silicon Valley provides learning to inform RAN's approach to resilience and led to creation of links with potential 'no-cost' student mentors
- **Stanford Alumni Consulting Team:** KarkMatzke (May 20th), consulted on MOOCs through his association with the Stanford Graduate School of Business Alumni Consulting Team (ACT)
- **University of the People.** ArikLifschitz (May 29th), a brief on the 6 year online degree program targeting developing countries
- **Stanford Graduate School of Education:** (Discussions on MOOCs for Africa)
 - o Paul Kim (June 5th), Board Member for USAID Grand Challenges, and faculty lead on a project-based MOOC utilizing design thinking for education
 - o Pam Levine (June 12th, ran Paul Kim's MOOC with him);
 - o Mitchell Stephens, Sociologist in the Stanford Graduate School of Business; running a Stanford seminar series on online education, "Education's Digital Future"
- **NovoEd:** Anne Trumbore (June 10th) Senior Course Designer at NovoEd, consulted on platform for MOOCs
- **Stanford Center for Innovation:** Katie Behroozi provided contacts to a range of relevant Stanford groups
- **SEED:** Gina Jorash (June 11), Director of Education and Dissemination; discussed partnerships with SEED in Ghana and East Africa on entrepreneurship and scaling

- **TechWomen.org:** Heather Ramsey and Beth Garriot (April 29), Techwomen.org leadership) meeting discussed collaboration with TechWomen participants from sub-Saharan Africa (Rwanda Kenya, South Africa and Zimbabwe)
- **Families Without Borders.** Terri Khonsari (May 9th) and potential engagement of McKinney University in Sierra Leone and their program as a model for scaling
- **Stanford Haas Center for Public Service:** Thomas Schnaubelt (June 17th), Discussed the potential for their program to support and engagement of Stanford undergraduates to participate in RAN through exchanges and other mechanisms
- **Intuit Innovation Team:** Stephen Gay, (June 20): An anchor partner would host RAN events in Silicon Valley, participate on Advisory Boards, and train innovators in Africa
- **Firelight Foundation.** Peter Laugharn, Catherine Milton, (June 28)discussed collaboration with the foundation's 700 Community Based Organizations (CBOs)in sub-Saharan Africa that are assisting children impacted by HIV/AIDS as a platform for identifying resilience solutions
- **TeachAIDS.org.** PiyaSorcar, (June 19th) Founder/CEO of TeachAIDS.org)Culturally sensitive, comprehensive HIV/AIDS education in animation format, endorsed by African leadership.
- **iParto.** (April and June 28) A mobile application to improve use of the Partograph, a tool for early identification of labor complications, which is currently misused by health workers in Uganda
- Carrie Kappel (Program Manager of a \$3M Moore Foundation program similarly combining academics and community members to work on development projects)
- John Parker, (June 18th)Sociologist at Arizona State University whose research focuses on the social dimensions of scientific collaboration and creativity; provided insightful references and contacts to explore scientific research on successful academic collaboration
- Terry Winograd (May 28th, Emeritus Professor in Human Computer Interaction at Stanford; founding faculty member of the HassoPlattner Institute of Design at Stanford (the "d.school"); on lessons from his course Designing Liberation Technologies
- PiyaSorcar (June 19th founder/CEO of TeachAIDS.org) and her curriculum on how to create resilience solutions for developing communities at scale being taught at Stanford
- John Quinn and Hugh Cameron (April) Makerere Faculty in Computer Science and innovators; on unique challenges and enablers of student innovators
- Stephen Gay, (June 20th, Intuit Innovation Team) and hosting design thinking workshops in Africa using Intuit methodology to create an internal corporate culture of innovation; and
- Lyndsay Handler, and Brian Warshawsky (April, Fenix Intl) on the potential for students to build add-hardware to the ReadySet that would be purchased by Fenix Intl as a method for speeding student impact with a clearly defined need and exit strategy

RAN Secretariat engagements

Innovation Panel Protea Hotel Kampala Uganda, April 19, 2013: To begin the dialogue about innovations with RAN faculty, a successful 1.5 hour Innovation Panel was hosted for the RAN faculty attending the April meeting in Kampala. Topics covered included innovations and innovators in Africa, innovation in African Universities, and methods of scaling innovative development solutions in the private sector, nonprofit and government, and what Silicon Valley can bring to the table. Panel participants included: Davis Musinguzi (innovator, private sector, government collaboration), Teddy "TMS" Ruge (private sector and Ugandan Hive Colab), Lyndsay Handler (Fenix Intl – private sector); Nelson Wasswa (student innovator, Makerere University Computer Science Department); Peter Nankunda (student innovator, Makerere University Computer Science Department); Mark Nelson (Stanford); Margarita Quihuis (Stanford); and Florence Tushabe (Makerere University innovation programming).

RAN has also engaged with community organizations like:

- Access2Innovation (www.access2innovation.com): Referred to RAN by MIT and focuses on the development of innovations in the fields of renewable energy, water and sanitation, as well as food

security. They partner with Danish universities that develop innovations, and NGOs in Uganda that test the solutions. Potential partnerships are in areas of technical expertise from the Danish universities, and adoption of parts of their approach especially in working with NGOs to scale innovations.

- Uganda Technicians and Information Technologists Association (UTITA): UTITA is an organization of innovators from outside the university, and is based in the Katwe area. Their chairman, Mr. Andrew Yiga, met one of the RAN staff and areas of potential partnership were identified in manufacturing, information technology and electronics.
- GlobeMed, GlobeMedis an organization that promotes health by leveraging university students and community-based education. GlobeMedhas 10 partners in Uganda in Gulu, Iganga, Kabale, Kasese and Masaka. Their access to communities could be valuable to RAN

West Africa RILab conducted a stakeholder consultative meeting for students, faculty, and external stakeholders. This meeting sought to gather feedback of stakeholders to help inform the RILab's work plan and create ongoing dialogue with the community and increase the social capital of RAN in Ghana. Schools represented: Ghana Telecom University, Valley View University, Ashesi University and Ho Polytechnic. The CEO for Softtribe Ghana, Mr. Chinery Hesse participated, as well as representatives of The National Authority for Disaster Management Ghana (NADMO).

The Southern Africa RILab is negotiating a partnership with the Innovation Hub in Pretoria. It is anticipated that while the University of Pretoria will host the RILab for the region, specific innovations that are entrepreneurial in nature would be co-developed with the support of the Innovation Hub. This is not to mean that innovation activities will be out-sourced to the Innovation Hub, but it will provide a facility for rapid prototyping of a specific range of innovations that take on an entrepreneurial nature. This is because of their experience in development of such kinds of innovation. Discussions are ongoing to address various unclear issues such as funding requirements, adoption and implementation of RAN's innovation approach including extensive community involvement, specific incubation requirements for resilience innovations in contrast to other typical business/commercial oriented innovations etc. However, collaborating at this level may also be a useful experiment and learning exercise on various approaches to incubate our innovations. These and other unresolved issues will be discussed in the innovation visioning workshops in Year II. SA RILab is also exploring a partnership with FAO EU-supported project on strengthening resilience of smallholder farmers to climate-related risks in Southern Africa (with University of Pretoria as project partner). The Horn of Africa RILab has signed a Memorandum of Understanding (MOU) with Benadir University in Somalia. They have also established good working relationships with the focal persons from Addis Ababa University and University of Nairobi.

The RAN Secretariat met with the United Nations High Commission for Refugees (UNHCR) Innovation team in August. The Community Technology Access and Social Innovation Operational Solutions and Transition Section (OSTS) team met with the RAN team to establish areas of collaboration.

3.3. Student Engagement

RAN has undertaken initial steps to engage students, first by visiting some academic units at Makerere University to understand on-going innovations, and second, by inviting students to participate in key meetings.

- 1 student attended the RAN Launch in Washington DC
- 3 students participated in RAN's innovations panel in April 2013 and shared their ideas and challenges
- Thirteen other students were also involved in a RAN organized exhibition on the 6th of June 2013. This was to showcase current innovations that are taking place in Makerere and Gulu universities.

The students who exhibited were identified by the faculty staff who attended the RAN sensitization meetings in their units.

- 42 students were mobilized to participate in the 'Big Ideas' contest organized by the University of California Berkeley

4.4. Student Highlights

RAN Secretariat worked to create two case studies of innovations ready for piloting and with a potential to impact on resilience of communities:- one at Makerere and one at University of Pretoria. The first case study focuses on the Matibabu project created by a team of four innovators from Makerere University who have developed a non-invasive way of testing for malaria. The 2nd case study presents a South African innovator who has developed a retrofitable technology called the Leak-Less Valve for toilets that aims to help alleviate water scarcity.

In year 1 RAN provided largely critic sessions of student innovations by leveraging the knowledge and skills of the experts at School of Public Health, Makerere University. This helped to refine and align these innovations to address RAN's thematic areas.

One RAN student, Joshua Wabulo (Makerere University, Uganda) attended a RAN site visit to Stanford University in July, where he was able to interact with private sector mentors at a forum in Silicon Valley. He received technical input and connections with potential mentors. Three RAN students (Peseka Lesolang (South Africa); Joshua Businge (Uganda); Gilbert Kiliu(Kenya), and one mentor,(Davis Musinguzi, Uganda)participated in the 4th RAN Partners' meeting at Stanford University. Students/mentors contributed to RAN's understanding of the opportunities and challenges of the innovation ecosystem in the RILab countries.

At the External Stakeholder Forum in Ghana, 19student innovators attended. In this forum, RAN Secretariat participated in the student innovation panel and exhibition. These interactions afforded RAN with a greater understanding of student challenges in the innovation context in the West Africa RILab.

RAN participated in a series of meetings with Philip Denny to help plan RAN's involvement in Berkeley's Big Ideas Challenge in which Makerere University students will participate. Additionally, Deborah Elzie presented to a group of Makerere students at the Google (GDG) Makerere DevFest held in September at the Faculty of Computing and Information Technology. The subject of the talk related to opportunities and challenges for women in technology.

RAN Secretariat also met with private sector/NGO groups that engage in innovation and with local university student innovators (Hive Colab, Outbox, ThoughtWorks). These initial meetings with private sector actors in the innovation ecosystem helped to build social capital for RAN and set the basis for continued collaboration related to resilience innovations.

Tulane's DRLA continues to engage graduate students. With the new semester underway, the DRLA expects to hire graduate research assistants eager to help conduct resilience research.

Part 5: USAID Engagement

5.1. USAID/Washington Interactions

The HESN launch in Washington, D.C. in November of 2012 provided the first substantive opportunity to interact and engage with USAID staff (as well as other HESN partners). During this launch, the goal and objectives of the HESN were discussed by USAID/OST staff and RAN members were able to better understand the HESN and where the RAN fit within the HESN. RAN members were also able to meet with USAID's Africa Bureau and DCHA Bureau to discuss how RAN's resilience framework and analysis could support USAID's program and policy development.

In December of 2012, OST representatives (Ticora Jones and Katherine Nichols) came to Kampala to attend the 2nd RAN Partner meeting attended by all four RILabs (Jimma, Pretoria, UHAS, and Makerere) as well as Stanford, Tulane and CSIS. During this meeting, the proposal was discussed at length in order to begin the development of the workplan for the first year. USAID/OST provided guidance and RAN RILab partners were able to ask USAID direct questions regarding programmatic and policy development for the RAN.

The RAN management team led by Dr. Bazeyo was invited and attended the HESN Lab-Director's meeting in Washington, D.C in the 1st week of April 2013.

USAID also participated in the 3rd RAN Partners' meeting in Kampala. The meeting brought together the largest number of stakeholders to-date. USAID Washington DC was represented at the Public Forum in June, 2013 by the Head of the Office of Science and Technology (Alex Dehgan) and Katherine Nichols. Uganda's USAID Mission staff also participated in the Partners' meeting and the Public Forum.

RAN conducted regular meetings with the RAN Manager at USAID Washington, DC (Katherine Nichols). The weekly meetings discussed strategy, especially with regards RAN's workplans for Year I and Year II, the resilience framework, innovations, engagements, and MOOCs. The meetings were both through face-to-face discussions and telephone/Skype conferences. Representatives from the Office of Science and Technology (OST) (Alex Dehgan and Katherine Nichols) also participated in the Stanford site visit in July, 2013. Katherine Nichols and Margaret Linak participated in the Stanford site visit in September-October 2013.

5.2. USAID Mission Interactions

Ethiopia USAID Mission 26 July

RILab Secretariat and Tulane's DRLA met with the Ethiopia USAID Mission and presented the RAN program to Mission Director, and the Senior Humanitarian Advisor among others. Mission staff questioned the relative location of Jimma University to the targeted population groups and suggested that RAN partners collaborate with established organizations in the area to ensure RILab tools and metrics accurately measure the resilience of target populations. The USAID Mission in Addis Ababa indicated that USAID has been doing extensive work in East Africa in general and in Borana area in particular, especially with regard to impact assessment of resilience. The HoA RILab was advised to work closely with the USAID Mission in Addis Ababa and also Haramaya University which has had useful experiences on resilience projects.

Southern Africa USAID Mission Meeting 2 August

Those participating included Acting Mission Director, Director of Regional Programs (Blake Chrystal) and Project Development Office, Regional Advisor (Adam Weimer) and Nalini Reddy, Project Management Specialist (Education). Meeting was critical to afford the SA RILab to gain support from the

mission. Potential avenues for collaboration were discussed and as the primary point of contact for RAN, Blake Chrystal requested Prof. Lekan provide the Mission with regular updates and meetings to ensure RAN activities complement rather than duplicate Mission activities. USAID is willing to communicate RAN activities with the ambassadors and diplomats in other Southern Africa countries. RAN Secretariat will follow up with the Southern Africa RILab to check on the status of the on-going engagement. The strategy for mission engagement will further be elaborated in RAN's Engagement strategy to be completed in FY2013-14, Q2.

Ghana USAID Mission Outreach

USAID Mission staff in Ghana were invited and accepted to participate in the external Stakeholders' Forum in Ho, Ghana on 4 September, but in the end no mission staff attended the event.

5.3. Travel

The following travel (domestic and international) using HESN funding occurred during the past fiscal year:

Location (City and Country)	Number of Travelers	Partner(s) Engaged (If applicable)	USAID Engagement (If applicable)	Outcome(s) & Next Steps
1. Washington DC, US (Nov 2012)	3.5 (only trips back to Africa)	Launch	Yes	HESN Launched
2. Kampala, Uganda (Dec, 2012)	12	Partners' meeting in Kampala	Yes	Strengthening the network; RAN Vision and strategic approach discussed
3. Kampala, Uganda (Jan, 2013)	.5 (1/2 trip now, other 1/2 later)	Travel to field		Tulane Director of Resilience (Field Level) relocated to Kampala
4. Addis Ababa, Ethiopia	1		Yes	Link established with Joint Planning Cell, USAID)
5. Washington DC, US (April, 2013)	4	HESN Lab Directors meeting	Yes	Links with other HESN partners established
6. Kampala, Uganda (April, 2013)	25	Partners' meeting	Yes	Strengthening the network; thematic focus for RILabs outlined
7. Kampala, Uganda (June, 2013)	2	RAN External Stakeholder Forum	Yes	Massive local advocacy for RAN
8. U.S. (June, 2013)	.5 (1/2 trip now, other 1/2 earlier)	Tulane Resilience Planning Meetings		Tulane Resilience Planning Meetings
9. Kampala, Uganda (July, 2013)	6	RAME, Uganda		Consensus built on Resilience Framework and thematic priorities for E. Africa RILab
10. San Francisco, US (July, 2013)	3	Silicon Valley meeting with USAID/Stanford		

11. Ho, Ghana (July, 2013)	8	RAME, Ghana	Consensus built on Resilience Framework and thematic priorities for West Africa RILab
12. Addis Ababa, Ethiopia(July, 2013)	8	RAME, Ethiopia	Consensus built on Resilience Framework and thematic priorities for Horn of Africa RILab
13. Pretoria, SA(August, 2013)	8	RAME, SA	Consensus built on Resilience Framework and thematic priorities for Southern Africa RILab
14. Kampala, UG (July, 2013)	1	Interview	Interview Dr. Wanjiku
14. Ho, Ghana (Oct 2013)	2	DP Training	Consensus built on way forward for application of DP
15. Kampala, Uganda (Oct 2013)	2	DP Training	Consensus built on way forward for application of DP
16. San Francisco, US	12	RAN Secretariat Site Visit to Stanford	Consensus built on synergies with Stanford

Part 6: Monitoring & Evaluation

6.1. Progress Narrative

During Year I, RAN's focus was on the resilience framework – generating the evidence base needed to identify priorities for resilience programming. The focus therefore was on formative data collection activities to define and validate themes. With regard to innovations, RAN's activities were only formative, targeted to understanding the innovations environment, because the RILabs have not yet finalized their evidence based resilience problem sets. Most indicators regarding innovations therefore were not realized. It is therefore hoped that as we enter into the innovations phase in Year II, these indicators will begin to be populated with tangible outputs.

6.2. Monitoring & Evaluation Issues

On-going data collection

In order to collect all the data necessary to operationalize the RAN Resilience Framework, RAN has to conduct a multiplicity of data collection activities and triangulate information from them. These include:

- A desk review context analysis to validate regional resilience thematic priorities
- Community consultations (FGDs and KIs) to understand in detail the vulnerability factors and adoptive capacities for use in development of qualitative dimensions of resilience
- Conversion of qualitative dimensions of resilience into measurable indicators and measuring these in surveys
- Construction of quantitative dimensions into composite measure of resilience using exploratory factor analysis

All these data collection processes are necessary for completion of RAN's Resilience Framework, and in particular, articulation of specific indices to measure resilience of target communities. They are also necessary as a pre-requisite for defining RAN's evidence based resilience problem sets. Based on these background data collection activities necessary to generate the evidence base to drive innovations, key outputs for innovation sourcing, incubation and scaling are anticipated earliest in Year II. In addition, definition of key composite indicators for assessment of resilience in target communities will be incumbent of execution of these data collection activities, as well as elucidation of the baseline status of these indicators.

RAN's M&E Plan

RAN's M&E team has drafted an M&E plan and a Results Framework. The plan and Results Framework have been shared and reviewed by USAID, with agreement on a set of core indicators that RAN will use to monitor progress. RAN's M&E team is currently incorporating a final set of comments to the M&E plan from USAID. RAN Secretariat is also working on setting targets for the core indicators. In anticipation of the approval of the M&E plan, RAN has started to develop data collection strategy and tools that will enable all RILabs collect data in a timely and accurate manner for the RAN secretariat to populate performance, outcome and goal indicators outlined in the M&E plan. All RILabs continuously collect and capture engagement data into the database.

Monitoring activities

During the course of Year I, RAN has implemented monitoring activities on the progress of operationalization of its workplan. All RILabs and Core partners have been followed up to submit quarterly program and financial reports. The format for these reports was developed by RAN secretariat, guided by the USAID reporting template. The quarterly reports from the partners and

RILabs are used in the compilation of RANs quarterly reports. All required quarterly reports have been submitted.

M&E Workshops

RAN has conducted two key technical workshops on M&E. The 3rd Partner’s Forum in April 2013 focused on building consensus around RAN’s Theory of Change and outlining the broad components of RAN’s resilience framework. This was followed by site visits to each of the four RILabs to conduct the Resilience Assessment Monitoring and Evaluation (RAME) workshops. These workshops clarified the steps that RAN will take to execute its resilience framework. RAN’s Theory of Change states that the resilience of people and systems in Africa will be strengthened by leveraging the knowledge, scholarship and creativity that exists across the RAN to incubate, test and scale innovations that target capabilities and reduce vulnerabilities identified by a scientific data-driven and evidence-based resilience framework for sub-Saharan Africa.

6.3. Update on Performance Indicators

Below are the updates on the performance indicators for Year I. A full M&E report was submitted along with this Annual Report to document the full set of performance indicators as detailed in the M&E Plan.

Lab Ref.	Performance Indicator	FY12 Baseline	FY13 Target	FY 13 Actual
Gin1	Composite indicators for resilience: Component and aggregate measures of resilience at household, community and other levels-depending on the regional themes.	Data collection activities to define the indicators are on-going		
O1in1	Number of resilient indicators populated with data collected in targeted communities and made available through human, financial, or institutional resources contributed by RAN	Data collection activities to define the indicators are on-going		
O2in1	Time required for developing, piloting, adopting, scaling, and evaluating transformative innovations, technologies, and approaches receiving human, financial, or institutional resources contributed by HESN Development Labs	0	64 person – months	64 person-months
O3in1	Number of students, staff, and faculty enrolled for courses or disciplines created by RAN	No part of year 1 plan		
O3in2	Number of students, staff, and faculty completed the courses or disciplines conducted by RAN	No part of year 1 plan		
IR1.1in1	# of new data-related technologies, tools, approaches, and best practices supported or applied with human, financial, or institutional resources contributed by HESN Development Labs	0	7	7
IR1.2in1	# of data sets provided to or made accessible to USAID operating units and programs, HESN partners, and the broader development community with human, financial, or institutional resources contributed by HESN Development Labs	0	9	9
IR2.1in1	Number of University multi-disciplinary creative teams participating in innovation development	0	48	48
IR2.2in1	# of transformative innovations, technologies, or approaches that were developed with human, financial, or institutional resources contributed by HESN	0	6	6

Development Labs				
IR1.	# of users who access data and tools made available	0	45	45
3in1	with support from human, financial, or institutional resources contributed by HESN Development Labs(custom indicator)			
IR1.	Ratio of RAN investments to the total value of outside	0		
3in2	(non-RAN) resources leveraged (\$)			

Part 7: Lessons Learned / Good Practices

Lessons from Engagement: Engagement of relevant stakeholders is an important and vital task to the success of the RAN project. This engagement is vital during the situational analysis, baseline data collection, innovation design, development and deployment in the community. Effective engagement will therefore involve the active participation of all partners who include faculty, students, innovators, external partners, the community, government bodies, non-governmental organizations and other stakeholders. This very active participation will reduce risks associated with wrong priority areas, duplicated efforts, and in-effective solutions. There is need for vigorous engagement of all stakeholders from the very beginning of the project. Engagement of all stakeholders in sixteen countries in Africa is a huge task. There is need for a position that exclusively deals with engagement and community outreach.

In addition to the Engagement Manager at RAN Secretariat, there is need to deepen the engagement function at the RILabs by designating a specific officer in-charge of engagements. In each of the RILabs, the Program Coordinator will also be designated to serve as the chief engagement person since there is no designated Engagement Manager at the labs. This additional role, while not previously specified, appears to lie under his/her responsibility. The innovation officer will provide local support to the Program Coordinator and strategic and technical guidance from the Engagement Manager at the Secretariat. These roles shall be specified in new guidelines in accordance with the new recommended staffing norms for the RILabs for Year II.

From the Innovations Panels: There is much activity regarding innovations in Africa and a diversity of methods to implement solutions in the nonprofit, government, and corporate sectors. This innovations panel highlighted the novel approach that Silicon Valley expertise can bring to programming, which differs dramatically from traditional university pedagogical formats. It also highlighted that further conversations are needed, to access diverse expertise, to bring the RAN team to a similar and narrow understanding of what RAN innovations will include and the criteria to scale them.

From Partner Meetings: Initial meetings indicated tremendous interest and excitement in Silicon Valley for assisting RAN. However, it also became clear that successful leveraging of Silicon Valley resources by RAN depends on maintaining credibility, relationships management, developing an engagement strategy and delivering on the RAN vision. A successful best practice was limiting the formative meetings to introductions with high-level individuals at organizations with clear alignment with RAN. Each of these meetings yielded further contacts and new potential resources for RAN (curricula, best practices, expertise, etc).

Another best practice was engaging groups with independent funding as potential partners where collaboration with RAN expands their ability to get funding and scales their work and augments RAN programming. Silicon Valley resources can help us strengthen African connections. Silicon Valley is not primarily a source of funding, but a clear conduit to identifying and connecting with diverse African resources for RAN.

Expectation Management: Clear management of expectations of funding is essential for partnership development. Clarifying the limits of funding from RAN in meetings has spurred interest and creative collaborations. A lack of clarification on RAN as a source of funding for resilience programming has led to a problematic expectation of RAN as a source of funding in Africa. RAN has received requests for funding from a range of projects from African organizations. A pro-active strategy that lowers unrealistic expectations, provides limits, criteria and a path for further engagement with RAN will help avoid disappointment.

Innovation Labs: The fact that serious innovations are being made in the universities was re-emphasized by the outcome of our engagement efforts. It is also apparent that having only four physical innovation labs may make innovation development difficult for those Network Plus partners not located in the RILab vicinity. For example, although Gulu and Makerere universities are located in Uganda, it is not practical for student innovators in Gulu to travel to Kampala in order to participate in the Lab activities. It is, therefore, important for the RAN Secretariat to identify ways to best support those partners without a physical innovation space. Physical innovation space refers to the RILab physical facilities (meeting and ideation spaces, power, Internet access and conferencing facilities that enable remote collaboration with the innovation officer who offers day to day support, etc). RAN Secretariat will work with the RILabs to figure out how innovators based in network plus partners will be supported e.g. by leveraging local spaces or innovation hubs within the universities or country hubs.

SA RILab notes the value of housing the innovation lab within the largest science park in the region in order to leverage resources will create greater opportunities for success. Because of the extensive nature of engagements that RAN undertakes, it has become complex to include a line list of all engagements in the appendices of this report. RAN therefore has developed a web-based spread-sheet that tracks all engagements, disaggregated by month. The spread-sheet will allow quick analyses of engagements for key disaggregation factors, to generate reports on the status of engagements. A detailed analysis and disaggregation of RAN's engagements is available in form of a report. The RAN engagement data base is available at:

<https://docs.google.com/spreadsheets/ccc?key=0AoVxl6V88tZmdDdzamdEWmdDWkpnYnhLWmjINzJPZVc&usp=sharing>

Engagement with USAID: Continuous engagements with USAID have promoted the alignment of RAN's strategy with the expectations of USAID and the HESN network. RAN's original draft workplan was revised to reflect changes in strategy learned from the partner meetings and to reflect the affirmed timeline for the end of Year I (September 2013).

Learning from Partners: Tulane/DRLA fosters a collaborative approach to innovation and resilience-themed research activities. In order to facilitate the dissemination of the DRLA's best practices and concepts, DRLA provides strategically targeted training and support for current leaders and academia delivered through local channels and accessible formats. RAN stakeholders are expected to influence other groups and local constituencies by advocating for systemic change and enhanced resilience capacity. Recent workshops involved high-profile officials and practitioners to promote programmatic buy-in and to develop a group of key disaster resilience stakeholders. Furthermore, the DRLA helps partner institutions strengthen local and regional networks, including practitioners from local communities, government, civil society, NGOs and the private sector. This secures local support, maximizes the information and resources exchanged through the RAN and provides strong support linkages to Tulane's existing SLDRP network. Site visits to Stanford University have also helped to further clarify synergies between the different program components.

Who bears the indirect costs related to visits to RAN by other HESN partners? The indirect costs of student visits from other HESN partners to African universities should be made clear to HESN Development Labs so they can budget appropriately. Special attention should be addressed towards costs that may be unusual to U.S. universities, such as funding structure for mentors and levels of costs for use of university resources. RAN had to pay an unexpectedly large fee for the use of computer rooms, operations personnel, and other resources required for the free GIS course taught by the William and Mary University students. Planning courses early enough in the calendar year so that they can be held as credit-bearing courses will reduce the overall costs to HESN Development Labs. Student

fees will offset course costs. RAN Secretariat is still considering the best mechanism for financing such courses. Preliminary recommendations point to the following:

1. That for mutual programs that are within RAN's thematic areas of focus, for which other HESN partners would like to work directly with one or more RILabs, a co-location approach is used. Budgets for the specific activities should be drafted, negotiated and sub-agreements signed with a clear scope of work and deliverables to enable RAN execute the required activities on behalf of the partner.
2. For programs where the HESN partner does not wish to undertake a formal implementation agreement with RAN, but to implement them directly using RAN's infrastructure, MoUs should be worked out and the HESN partner meets the requisite cost implications.
3. For activities outside RAN's thematic priorities that other HESN labs would like to implement using RAN's infrastructure, e.g. trainings and internships, we recommend that budgets be drawn to show the cost implication to RAN and the HESN partner re-reimburses these as external costs of implementing the partner's program.

All such issues will be discussed on a case-by-case basis to ensure we are following appropriate rules regarding cost reimbursement and profit (which is not allowed under Awards).

Planning Early: Future visits should be planned well in advance to ensure that RAN is given ample time to prepare. Where training is involved, course outlines and curricula should to be provided well in advance to facilitate mobilization.

HESN Funding for Cross-Lab activities: While discussions with Amy Smith (MIT) resulted in a number of proposals for synergistic ideas outside of the workplan, it was observed that there are no HESN available funds to support cross-HESN partner activities.

RAN would like to consider supporting student exchanges in the subsequent program years.

HESN Funding for Cross-Lab activities

A continuing issue is the need for HESN available funds to support cross-HESN partner activities.

Part 8: Appendices

Appendix 8.1 RAN Deliverables for Year I

1.0 RAN infrastructure: Creating a network of scholars and students to solve African development challenges

1.1 Building the Network of Scholars

RAN's foremost deliverable for Year I has been successfully putting together a solid functional network of partner universities to implement its agenda. In addition to the core partners (Makerere University – the lead institution, Tulane University, Stanford University and the Center for Strategic and International Studies), RAN has rallied a vibrant network of 15 African Universities out of the 20 that are ultimately targeted. These include Four Resilience Innovation Labs and 11 Network Plus Universities. The RILabs will be the centers for resilience programming, generating innovative solutions and bringing them to scale, so as to improve the resilience of communities. All RILabs have been established, with office space and critical staff hired.

RILabs have each identified an initial circle of Network-Plus University partners to engage with in the first two years of RAN's programs. The full list of institutions engaged to date is provided in the detailed description of this deliverable. The Network's organizational structure was discussed and agreed, showing the linkage between the university partners, scholars and the target communities. In addition, because of the complex nature of RAN's functions and activities, it has been necessary to elaborate a functional Organogram showing how different teams working on the three strategic objectives will be interrelated, leveraging support from partner universities. The proposed functional Organogram is provided in the detailed deliverables. Based on the job-analysis that the functional Organogram provides, RAN has therefore identified the critical staffing needs to run the Secretariat and the RILabs. The proposed structure is also contained in the detailed report on this deliverable.

[Go to deliverable 1.1](#)

1.2 RAN has developed a Functions and Operations Manual

To guide the RAN Secretariat, RILabs and core partners in harmonization of functions, RAN has developed a functions and operations manual. A draft of this manual is contained in the deliverables presented.

[Go to deliverable 1.2](#)

1.3 RAN has developed a Communications Strategy

To guide harmonization of communications across this complex network and a uniform approach to furtherance of the RAN brand, RAN has developed a Communications strategy. A draft of this strategy is contained in the deliverables presented.

[Go to deliverable 1.3](#)

2.0 Resilience Framework

2.1 Elaborating a resilience framework

During Year I, RAN elaborated a framework for understanding, intervening and monitoring resilience of target communities in sub-Saharan Africa. The purpose of the framework is to guide the RILabs in the assessment of resilience factors related to the priority shocks and stresses in target communities, identifying innovation priorities, development of innovative solutions to challenges identified in communities, and monitoring the impact of proposed scaled on resilience of communities. RAN's Resilience Framework for sub-Saharan Africa will be the cumulative result of triangulation of information and approaches from different methodologies thereby mitigating the biases inherent in using only one method. The framework therefore provides a 'menu' of data collection methodologies to guide resilience assessment. A key value adding strength of RAN's framework is that it will provide small-area statistics that will allow closer exploration of resilience variables in focal populations.

[Go to deliverable 2.1](#)

2.2 Review of the current status of resilience frameworks and measurements

RAN conducted a review of existing frameworks for resilience, as a basis for informing its own approach. A synopsis of this is provided in the deliverables

[Go to deliverable 2.2](#)

2.3 Resilience Assessment Monitoring and Evaluation (RAME) Workshops were conducted

RAN also conducted a series of workshops across the four RILabs. The purpose was to discuss and build consensus on key components of RAN's resilience framework, and how it will be operationalized at the RILabs. A synopsis of key findings from these workshops is presented as part of the comprehensive report on elaboration of the resilience framework building processes.

[Go to deliverable 2.3](#)

2.4 Analysis of resilience using secondary data

The context analyses also included an analysis of secondary data from existing credible databases with resilience variables (e.g. the Living Standards Measurement Surveys, Demographic and Health Studies and other credible local surveys). This was done only for the Eastern Africa region. This data was triangulated with literature review data to provide more evidence for resilience programming priorities. A detailed analysis of key findings and recommendations from the secondary data analysis is presented as part of the comprehensive set of deliverables in the resilience framework.

[Go to deliverable 2.4](#)

2.5 Thematic issues of focus for the RILabs have been identified and validated through a context analysis

Resilience is a broad phenomenon that cuts across a multitude of sectors and a broad range of shocks and stresses. In order to focus their operations, the different RILabs have come up with priority themes. To validate the proposed themes RILabs undertook regional context analyses. These involved extensive review of literature on shocks and stresses in the respective regions. Short synopses that describe the issues of focus for each of the four regions are provided in the deliverables. Based on the learning from the different data collection processes and partner forums, RAN provides a summary framing of the 'issues of focus' for each RILab. It also provides a listing of the initial geographical areas of focus for RAN's interventions.

[Go to deliverable 2.5](#)

2.6 Elaborating the role of Deliberative Polling ® in the Resilience Framework

Following consultations with different partners, it has been agreed that the value addition from Deliberative Polling will be to use it to consult communities on resilience priorities and preferred policy options. This will come at a stage when other data collection activities will have been undertaken and shortlists of issues over which communities need to be consulted developed. The short attached below summarizes current learning on how Deliberative Polling will be used in the resilience framework and the two planned pilot DPs in Africa.

[Go to deliverable 2.6](#)

3.0 Preparing for innovations

During Year I, RAN's focus in the innovations strategy has been to understand the innovations environment in sub-Saharan Africa. Information generated from these assessments will inform RAN's approach to building appropriate environments to support innovations. This section presents a summary of key findings from these assessments. Following is a summary of the key deliverables:

3.1 RAN undertook a qualitative assessment on barriers and opportunities for innovations using Uganda a case study (The Quinn-Cameron Report)

One of the prerequisite for building a conducive innovations environment is to understand the challenges that prevent young innovators from developing their ideas to scale and the opportunities that catalyze the likelihood of success. RAN commissioned a study to understand these barriers and opportunities, using Makerere University and the Ugandan context as a case study. Recommendations from this report will feed into RANs Innovations and Engagement strategy.

[Go to deliverable 3.1](#)

3.2 RAN undertook a desk review of the innovations ecosystem in sub-Saharan Africa

To further understand the innovations environment in Africa, RAN undertook a comprehensive desk review of current goings-on in innovations in the sub-regions of RAN's focus, with an in-depth analysis of the environment in Eastern Africa. The analysis was conducted by Stanford University's HSTAR team. Recommendations from this report will feed into RANs Innovations and Engagement strategy.

[Go to deliverable 3.2](#)

3.3 RAN identified two innovative ideas with the potential to impact on resilience of target communities and documented them

To demonstrate the potential for innovations from African students, RAN sought and identified two innovative ideas with the potential to impact on resilience of target communities and documented the kind of support needed for these ideas to come to fruition. These case studies provide evidence that young students from Africa can develop solutions to resilience challenges if supported to overcome the many obstacles they face. The two case studies we present are:

- *Case-study 1: The Matibabu Project: A Cheaper and less invasive diagnostic test for Malaria targeting primary care in hard to reach areas: A case study of an Innovation Team's Experiences in Uganda*
- *Case Study 2: The Water, Hygiene and Convenience Project: a case study of an African business entrepreneur's experiences in South Africa*

[Go to deliverable 3.3](#)

3.4 A brief report on key engagements with internal and external stakeholders

Engagement of students, faculty, external stakeholders and communities is a key component of RAN's innovations and resilience strategy. RAN has prepared a brief report on engagement of stakeholders for Year I. In addition, RAN has a live database of all individuals and agencies engaged cumulatively over the last 1 year.

[Go to deliverable 3.4](#)

3.5 RAN is developing an inventory of innovation Hubs in Africa

Before RAN's inception, there have been a host of other actors in the innovations and technology space. It is important that RAN does not work as a competitor with these, but rather leverages their capacity to enhance its work. In order to better understand this environment, RAN has undertaken an inventory of innovation hubs in Africa. Key findings from this assessment are summarized in the attachments. The detailed inventory can be found in a Google Document, by following this link:

<https://docs.google.com/spreadsheets/ccc?key=0AvqIZtR2pUPjdG5DTXBSQUtVQ2pOR3ROY3ozM29sVVE#gid=0>

[Go to deliverable 3.5](#)

4.0 A framework for MOOCs

4.1 Understanding what it takes to deliver a MOOC for Africa

During Year I, RAN's focus on the MOOCs strategy has been to understand appropriate mechanisms for delivery of MOOCs in sub-Saharan Africa. This includes appropriate platforms, delivery formats and the audience. Information generated from these assessments will inform RAN's approach to building appropriate environments to support MOOCs. This section presents a summary of key findings from these assessments.

[Go to deliverable 4.1](#)

Appendix 8.2: Students actively involved with RAN in Year I

	Name	Title	Affiliation	Country	Innovation	Description of Innovation
1	Gitta Brian Timothy	Student Representative	Makerere University	Uganda	Matibabu	The current method of diagnosing malaria is one that is more invasive requiring constant pricking each time a test is conducted. It also requires specialized persons and microscopes and it is costly. This new technology uses a light sensor connected to a mobile phone, that when passed over a human finger is capable of diagnosing malaria hence it is non-invasive, cost-effective and ensures speed of diagnosis.
2	MusaziRitah	Student innovator	Makerere University	Uganda	Modeling Landslides	This innovation looks at assessment of landslide hazards using bivariate statistical method. The innovation uses a slope map in hazard mapping to identify areas that are susceptible to to landslides. This is particularly relevant to Bududa district in Uganda where there have been numerous landslides.
3	Ephson Benjamin Kwesi	Student innovator	Ghana Telecom University	Ghana	A GIS/SMS application to augment existing emergency responses	This project uses a GIS/SMS application to enhance emergency response processes by placing a phone call and describing the incident at the location. It utilizes the ubiquitous nature of mobile phones, SMS and GPS technology to acquire coordinates of individual in need of help so as to augment existing emergency response processes.
4	Kiilu Gilbert Mutua	Student innovator	University of Nairobi	Kenya	Games for Learning	Games for learning focuses on use of ICT in learning for children aged 5-7 years. The aim is to supplement and reinforce learning in primary schools while targeting the government's laptop

						project. The games are in English, Kiswahili, Maths, Social Studies and Science, all based on the Kenyan Educational curriculum.
5	Eva Muhanguzi Asasira	Student Innovator	Makerere University	Uganda	Chakula Bora	A nutrition mobile App (Android) that allows the use of an up to date database of African food promoting healthy eating habits. The student is considering how community health workers could use such an app to improve nutritional levels of individuals and families.
6	FekaduMela kAssaye	Student Innovator	Jimma Institute of Technology (JiT)	Ethiopia	Indigenous Mineral based Water Treatment Technologies	This project focuses on the development of Point of Use (PoU) water treatment technologies using locally available materials.
7	Irumba Derrick	Student innovator	Makerere University	Uganda	Radar satellite imaging to detect Carbon changes	This project makes use of Radar satellite images in assessing changes in the above ground biomass and carbon in the forests of Uganda. The change in carbon in the environment has a direct link to climate change and food production.
8	Wasswa Nelson	Student innovator	Makerere University	Uganda	Water4Life	This innovation focuses on combating water related diseases and predicting natural disasters by simply using a smartphone (3D Artificial Intelligence Model).The apparatus is installed in the smartphone to detect not only the water purity like turbidity, but also whether the water is fit to be consumed or not.
9	LesolangMosePaseka	Innovator	Water, Hygiene and Convenience Project	South Africa	Leak-Less Valve for Toilets	The Leak-Less Valve for toilets aims to solve the problem of water scarcity in South Africa. It is an enhancement of the conventional toilet that consumes about 192 liters of water a day, per household and often harbors bacteria on the flush handle and in the pot. It uses a technology that saves approximately 140 liters of water a day per house, ensuring efficient use of water

						and eliminating waterborne pathogens in the pot, thus, reducing chances of spread of waterborne diseases.
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Appendix 8.3: RAN 2nd Partners Meeting List

This is a separate attachment in the 'Appendices' folder

Appendix 8.4: RAN Retreat Participants List

This is a separate attachment in the 'Appendices' folder

Appendix 8.5: Student International Review List

This is a separate attachment in the 'Appendices' folder

Appendix 8.6: Funding List

This is a separate attachment in the 'Appendices' folder