

# ANNUAL WORK PLAN

**READI** | Risk Management, Economic Sustainability  
and Actuarial Science Development in Indonesia

**02**

April 01, 2017 - March 31, 2018

*Submitted by:*  
**University of Waterloo**

*Submitted to:*  
**Global Affairs Canada (GAC)**  
**Otoritas Jasa Keuangan (OJK)**

**Canada**

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**UNIVERSITY OF  
WATERLOO**



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## Acronyms & Abbreviations

Acronym	Definition
AAJI	Asosiasi Asuransi Jiwa Indonesia (Indonesian Association of Life Insurance Agencies)
AAUI	Asosiasi Asuransi Umum Indonesia (General Insurance Association of Indonesia)
AS	Actuarial Science
ASARF	Actuarial Science Applied Research Fund
ASEAN	Association of Southeast Asian Nations
AWP	Annual Work Plan
CA	Contribution Agreement
CEA	Canadian Executing Agency
CPD	Continuing Professional Development
COO	Canadian Outreach Officer
DIKTI	Directorate General of Higher Education, Ministry of Research, Technology and Higher Education (Indonesia)
DFATD	Department of Foreign Affairs, Trade and Development
EF	Education Fair (math outreach)
e.g.,	For example
GAC	Global Affairs Canada
GE	Gender Equity
GOI	Government of Indonesia
HS	High School
IAA	International Actuarial Association
IPB	Institut Pertanian Bogor (Bogor)
ITB	Institut Teknologi Bandung (Bandung)
ITS	Institut Teknologi Sepuluh Nopember (Surabaya)
LM	Logic Model
MORTHE	Ministry of Research, Technology & Higher Education
MOU	Memorandum of Understanding
OJK	Otoritas Jasa Keuangan (Financial Services Authority), Ministry of Finance
PAI	Persatuan Aktuaris Indonesia (Society of Actuaries of Indonesia)
PIP	Project Implementation Plan
PISA	Program for International Student Assessment
PMF	Performance Measurement Framework
PPPK	Pusat Pembinaan Profesi Keuangan, Sekretariat Jenderal – Kementerian Keuangan



Acronym	Definition
PSC	Project Steering Committee
POTW	Problem of the Week
RBM	Results Based Management
READI	Risk Management, Economic Sustainability and Actuarial Science Development in Indonesia (“the project”)
SOA	Society of Actuaries
Surya	Universitas Surya (Serpong)
TA	Technical Assistance
TAAS	Think About Actuarial Science (career day math outreach activity)
UI	Universitas Indonesia (Depok)
UGM	Universitas Gadjah Mada (Yogyakarta)
UPH	Universitas Pelita Harapan (Karawaci)
UWaterloo	University of Waterloo
WACE	World Council and Assembly on Cooperative Education
WBS	Work Breakdown Structure
WIL	Work Integrated Learning



## Executive Summary

This is the second annual work plan (AWP) for the Risk Management, Economic Sustainability and Actuarial Science Development in Indonesia (READI) project. The READI AWP 2017/18, which has a total budget of \$4,680,270 CAD, covers the period 01 April 2017 – 31 March 2018. The work plan proposes an ambitious slate of mutually-reinforcing capacity development initiatives to move the project toward achieving its two over-arching development objectives:

- 1) establishing Indonesia as a regional centre of actuarial excellence with attention to gender equity; and
- 2) increasing the number and quality of Indonesian actuarial science graduates available to Indonesian businesses, universities and government agencies.

During the first annual work plan period extending from 01 January 2016 – 31 March 2017, project efforts focused on establishing a firm foundation for the project including: preparation of the Project Implementation Plan (PIP); formalizing the Memorandum of Understanding between the Government of Canada and Indonesian Financial Services Supervision Authority (*Otoritas Jasa Keuangan, or OJK*); hiring project staff in Canada and Indonesia; and establishing project offices at the University of Waterloo, Canada and in Jakarta. This annual work plan aims to fully operationalize all capacity development initiatives agreed in the PIP, with a full schedule of activities which should provide the project with excellent momentum.

The project will launch the READI Actuarial Science Applied Research program, including a call for research proposals in April/May 2017, followed by an international conference in January 2018 which will showcase research focused on the role of actuarial science in analyzing risks associated with climate change, gender equity considerations in the actuarial science and other topical research. The Industry-University Task Force formed by the project which comprises four thematic working groups, will continue to liaise with industry, university and government (GoI) decision-makers to seek solutions to challenges and obstacles hampering efforts to accelerate development of the actuarial science milieu in Indonesia. READI will also work with selected university partners, GoI representatives, and interested industry partners to design and pilot cooperative education (or work-integrated learning) programs.

The project will continue to provide technical assistance and guidance to partner universities to help them to assess and design actuarial science curricula to maximize alignment with international standards and *Persatuan Aktuaris Indonesia (PAI)* professional exams. READI will also support several lecturers from partner universities, and one OJK officer, who have applied for the READI scholarship. The scholarship will enable qualified applicants to attend the University of Waterloo's one-year Master in Actuarial Science program. Other lecturers from READI partner universities and officers from GoI partner agencies will be supported to sit for PAI exams to obtain formal actuarial science accreditation. In addition, visiting University of Waterloo professors will design and deliver three short courses focused on actuarial mathematics. Other demand-driven workshops and seminars will be organized and conducted by the project for partner university faculty members.

The project aims to offer between 250 and 612 scholarships (in the form of Student Academic Scholarship Years) to undergraduate students enrolled in actuarial science study programs or study streams with a concentration of actuarial science courses. The exact number of scholarships is still being finalized, pending consideration of several scholarship package options and a subsequent recommendation from the READI Project Steering Committee. Promising candidates will be identified in collaboration with university partner representatives



during the May-July 2017 period. READI will also liaise with Manulife and other insurance industry partners to document and then disseminate best practices to strengthen the actuarial credentials of insurance company employees. These successful in-service professional development practices will be documented using various types of media, then shared via seminars, workshops and social media.

READI will implement an ambitious mix of activities to provide important momentum to the project's Math Outreach efforts. This will include conducting:

- "Think About Mathematics" workshops in 50 schools for 2,000 students (at least half of which will be female);
- "Think About Actuarial Science" talk show events in collaboration with five university partners, which will target 1,750 students and 500 parents;
- "Problem of the Week" dissemination via 80 teachers registered to participate in the weekly mathematics challenge; and
- Support for 300 students who will participate in the annual "Cayley" and "Fermat" mathematics contests.

Public education and awareness-raising campaigns highlighting the important roles that actuaries play in analyzing and managing financial risks, and the compelling career opportunities that exist for actuaries in Indonesia, will target students, teachers, school counsellors, parents and members of the general (or non-life) insurance sector. Complementing the applied research activities promoted and supported by the project, READI will also encourage greater public awareness of actuarial science via various topical publications, social media campaigns and the READ website.

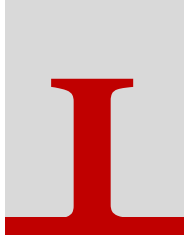
To strengthen the actuarial profession, the project will promote and help strengthen linkages between the OJK, *Pusat Pembinaan Profesi Keuangan* and *Persatuan Aktuaris Indonesia* with international actuarial associations and respected financial supervisions bodies such as the Canadian Office of the Superintendent of Financial Institutions (OSFI). Continuous professional development workshops and seminars, and short-term mentoring arrangements will be facilitated for actuaries and other project stakeholders. To further strengthen the actuarial profession in Indonesia, several studies and workshops focused on gender equity issues particular to the actuarial science and actuarial science education milieu in Indonesia will be undertaken and relevant reports and proceedings published. In addition, following up on the capacity development needs assessment that READI is currently undertaking with PAI, the project will provide technical and material support help PAI begin implementing the 3-Year Capacity Development Plan currently being developed in collaboration with PAI.

To enable the project to undertake this busy slate of activities, three additional team members will be recruited. A local Gender Equity Expert will be hired along with an Undergraduate Scholarship/Applied Research Officer. A part-time Knowledge Management/Communications consultant will also be hired to support the project's Public Education and Math Outreach efforts, and to help document project innovations and products to enhance the long-term sustainability of project results. The project's baseline data collection initiative will be completed by April 2017 along with a roll-out of a robust MySQL-based relational monitoring and evaluation database which will support timely, accurate results monitoring and reporting.

The READI project is now well-positioned to "lift off". With the implementation of an ambitious mix of mutually-reinforcing capacity development initiatives, the project should make excellent progress during the 2017/18 Annual Work Plan period.







## 1. Introduction

This annual work plan, covering the period 01 April 2017 to 31 March 2018, is the second annual work plan (AWP) prepared for the Risk Management, Sustainable Economic Development and Actuarial Science Development Indonesia (READI) project. The AWP aims to build on the foundation activities undertaken during the first annual work plan in order to implement a full set of integrated capacity development activities.

### 1.1. Project Summary/Description

#### 1.1.1. Project Summary

The READI project (\$15.53 million CAD over five years) is funded by Global Affairs Canada (GAC)<sup>1</sup>. The Project is implemented in cooperation with the *Otoritas Jasa Keuangan (OJK)*, the Indonesia Financial Services Supervision Authority. The University of Waterloo, which has entered into a Contribution Agreement (CA) with the Government of Canada to provide technical and project management services for READI, serves as the Canadian executing agency (CEA) for the project. Manulife Financial Indonesia has generously provided one million CAD in co-funding to support the project. Similarly, Sun Life Financial has provided one half million CAD to support senior actuarial technical advice services provided by the University of Waterloo.

The Project Implementation Plan (PIP) for READI, which provides the over-arching principles and directions for the project for the 2016 -- 2020 period, was approved by GAC in July 2016 and formally endorsed by the Project Steering Committee (PSC) in August 2016.

The READI project's objective is to establish Indonesia as a regional centre of actuarial excellence and to strengthen the actuarial profession in Indonesia. The project will achieve these objectives by working with high schools and universities<sup>2</sup>, the insurance and pensions industry, *Persatuan Aktuaris Indonesia* – Indonesia's professional actuarial association – and relevant government agencies – to increase the number and quality of Indonesian actuarial science graduates available to Indonesian business, universities and government agencies<sup>3</sup>. Working in collaboration with the OJK and other project partners, READI supports Canada's foreign policy priority of promoting prosperity in Southeast Asia in alignment with Canada's Global Markets Action Plan, in which Indonesia is a priority. A copy of the Project Logic Model (LM), which outlines the project's results framework, is included below in section 1.1.3 below. A more detailed presentation of the project's results chain and results measurement approaches is presented in the READI Performance Measurement Framework which is included as Appendix B.

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<sup>1</sup> The MOU signed between the governments of Canada and Indonesia for the READI project was signed by the Ambassador of Canada on behalf of the Department of Foreign Affairs, Trade and Development (DFATD) of Canada, which was subsequently renamed Global Affairs Canada (GAC).

<sup>2</sup> As of February 2017, the READI project works with the following university partners: *Institut Pertanian Bogor (IPB)*; *Institut Teknologi Bandung (ITB)*; *Institut Teknologi Sepuluh Nopember (ITS Surabaya)*; *Universitas Gajah Mada (UGM)*; *Universitas Indonesia (UI)*; *Universitas Parahyangan (UNPAR)*; and *Universitas Pelita Harapan (UPH)*; *Universitas Prasetiya Mulia (PRASMUL)*; and *Universitas Surya*;

<sup>3</sup> Along with the partner universities listed above, READI also collaborates closely with: the *Pusat Pembinaan Profesi Keuangan (PPPK)*, *Persatuan Aktuaris Indonesia (PAI)*, the Directorate General of Higher Education from the Ministry of Research, Technology and Higher Education; the Ministry of Education and Culture's Directorate General of Primary and Middle Education; the Indonesian Association of Life Insurance Companies (AAJI); and the Indonesian Association of General Insurance Companies (AAUI).

### **1.1.2. Project Rationale**

The READI project addresses a critical and focused development need – filling a deficit in qualified actuaries to help plan for and avoid significant risks to economic stability and growth for Indonesia. Financial crises over the past two decades have highlighted the importance of a stable and trusted financial industry. Individual Indonesians, particularly those with limited means, rely on health, life and other insurance in times of crisis and need. The insurance market in Indonesia is growing consistently, by 8% in 2013 and about 15-20% in 2014, resulting in an on-going increased demand for actuaries. Indonesia presently faces a shortage of accredited actuaries, threatening the growth of the insurance and pension industry and presenting a risk to economic stability and growth for Indonesia. Actuaries provide an underpinning in risk assessment and assurance of sound business practice similar to financial auditors. Risk based regulation of the insurance and pensions industry, adopted by Indonesia following Canada's lead, requires the professional understanding and oversight provided by accredited actuaries.

Understanding of and expertise in risk management and actuarial science is also important for public sector financial and management capacity, particularly at the national and regional levels. Access to more and better actuarial science graduates by government and business will improve transparency and security in management of public finances (e.g., pension and health insurance systems) and improve the trade and investment climate in Indonesia. Indonesia has enacted laws to provide appropriate oversight of the finance industry by trained actuaries but there is a very large gap between supply and demand for these highly educated and skilled people.

Project activities will enhance the capacity of educational institutions to meet clearly identified labour market demands and engage the private sector in providing students with appropriate, meaningful and structured workplace learning opportunities through to employment. More Indonesian actuarial science graduates with strengthened education acquired in Indonesia will support business growth, market expansion and productivity. Understanding of and expertise in risk management and actuarial science is also important for public sector financial and management capacity including oversight and regulation, particularly at the national and regional levels. Access to more and better actuarial science graduates by government and business will improve transparency and security in management of public finances (e.g., pension and health insurance systems) and improve the trade and investment climate in Indonesia. Project activities are also aligned with current Government of Indonesia development priorities.

### 1.1.3. Project Logic Model

READI Logic Model (02 March 2017)				
Ultimate Outcome				
1000 Indonesia recognized as a centre of excellence in actuarial science and risk management, with attention to gender equity				
Intermediate Outcomes (Results expected by the end of project)				
1100 Increased employment of female and male Indonesian accredited actuarial science and risk management graduates by Indonesian businesses, universities and government agencies			1200 Strengthened actuarial science and risk management profession in Indonesia	
Immediate Outcomes (Short-term results)				
1110 Strengthened linkages between industry and university education in Indonesia	1120 Strengthened capacity of female and male actuarial science and risk management teaching professionals in Indonesia	1130 Improved access to actuarial science and risk management education for female and male university students and graduates in Indonesia	1210 Increased awareness of the actuarial profession by selected target groups including high school and university students, teachers, and parents in Indonesia	1220 Strengthened development of actuarial profession – firms, associations, and regulators - in Indonesia
Outputs (Completed activities)				
<p>1111 <b>Technical</b> assistance provided to partner universities to establish actuarial science and risk management streams of study</p> <p>1112 Actuarial Science Applied Research Program established and operated</p> <p>1113 Industry-University Task Force and associated working groups established and operated</p> <p>1114 <b>Technical</b> assistance provided to selected universities to support development of actuarial science and risk management co-op programs</p>	<p>1121 Technical assistance provided to partner universities for curriculum design – including review of international standards, course mapping and textbook review – that addresses material specified in Indonesian actuarial science professional exams</p> <p>1122 Lecturers and selected practitioners female and male supported to obtain actuarial credits and/or relevant graduate degrees</p> <p>1123 <b>Actuarial</b> science mentoring provided through short courses, e-courses and workshops to selected female and male teaching professionals</p>	<p>1131 Actuarial science and risk management scholarship program for female and male undergrads designed and operated</p> <p>1132 Technical assistance provided to employers to strengthen actuarial development programs for employees</p>	<p>1211 Technical Assistance provided to partners on delivery of high school math outreach programs with an actuarial science focus</p> <p>1212 Actuarial science and risk management awareness campaigns designed and implemented</p> <p>1213 Public interest in actuarial science and risk management promoted through research, publications and media</p>	<p>1221 International professional association and regulator linkages on profession-related topics facilitated for OJK, PPPK and PAI</p> <p>1222 Continuing Professional Development (CPD) seminars, workshops and mentorships conducted for actuaries and other stakeholders</p> <p>1223 TA provided to regulators and associations to strengthen organizational capacity</p>

**Note:** For a list and detailed description of activities see: section Planned Activities by Output 3.1 and Work Breakdown Structure (WBS) 3.3.

## 2. Crosscutting Themes

### 2.1 Gender Equity

The project's Gender Equity (GE) Strategy is intended to achieve gender equality - i.e., where women and men (boys and girls) are treated equally and have equal access to resources and benefits and are able to realize their full potential and contributions as citizens. Treating women and men (boys and girls) equitably is one means to achieve increased gender equality. This means treating them fairly - keeping in mind that women and men (boys and girls) may have different priorities and needs from each other and that therefore to treat them fairly you may need to treat them differently. Details can be accessed in appendix F.

The project will fully integrate GE into the project, and will be included in the following activities and outputs:

- Best practices / key issues report.
- Incorporation of gender and diversity messages into outreach.
- Development of resource materials that lecturers can use to incorporate gender and diversity issues into their teaching materials.
- Review of laws and policies regulating human resource management in the insurance industry in Indonesia from a GE and diversity perspective.
- Incorporation of GE and diversity themes into the research program.
- Training of PAI members on two themes – (a) best practices and key issues review and (b) gender and family -sensitive HR policies.
- Integration of GE and diversity issues into the agendas/themes/actions discussed/taken by the industry-universities task force.

Project data and observations indicate that a large number of girls and women enroll in mathematics and actuarial mathematics programs – in many instances comprising a majority. Female actuarial science students and accredited actuaries likewise tend to excel in their field. Preliminary data and observations, however, which are currently being verified through the project's baseline data collection efforts, indicate that once women enter the actuarial science profession they are less likely than men to assume senior and leadership roles. The reasons for these inequities are not yet clear and will constitute one of the topics upon which the project's gender equity activities will focus. Research on gender equity and equality in the actuarial science milieu, and the experiences of women and men in the milieu – both at the university level and within the profession – will also receive attention through the project's various research initiatives.

### 2.2 Climate Change Mitigation

The READI Climate Action Initiative involves five identified sets of actions.

- Developing a carbon tracking methodology for project activities based on documented and replicable standards. One objective of the project's Climate Action Initiative is to develop and demonstrate good (or best) practices for university activities and international development projects<sup>4</sup>.
- Including reporting of carbon emissions in project financial and activity reports.
- Identifying a reasonable range of pricing of carbon emissions based on international norms.

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<sup>4</sup> One of the largest and typically undocumented negative environmental impacts of development projects is the carbon footprint generated by flights taken by project personnel. Hotel stays also make significant contributions to carbon emissions.

- Establishing an internal project account and allocating funds based on project carbon emissions to specifically target actuarial support for climate action as part of the Applied Actuarial Science Research Strategy (Appendix H)
- Assessing and pilot testing strategies and actions to reduce the project's carbon footprint.

Carbon tracking started in 2016/2017. The first carbon tracking reports, encompassing flights, hotel stays and use of the READI Jakarta project vehicle will be included in the 2016/2017 Annual Report.

## 2.3 Project Reach (Social Inclusion)

In a large geographically and ethnically diverse country such as Indonesia, there are very real differences in access to and quality of education services which emerge regionally, economically, socially and between men and women. Historically, Indonesian economic development has tended to hover on Java and portions of Sumatra – though the Government is working hard to address this issue<sup>5</sup>. Despite the Government of Indonesia's concerted efforts, the locational advantages long seen in Jakarta, Surabaya and other parts of Java, continue to persist. Consequently, economic opportunities and access to employment and other benefits also varies significantly by region.

READI will undertake targeted activities to address these important and longstanding education service access and quality inequities. To address READI's "reach objectives", yet target schools in a pragmatic fashion, it will require careful identification of leading or "most-promising" schools in regions outside of Java. The Ministry of Education and Culture's Directorate General of Primary and Middle Education has identified leading high schools (known as *Sekolah Rujukan*) some of which should be good candidates for READI "reach efforts" outside of Java. READI will work with the Ministry of Education and Culture to identify a number of "most-promising" schools located in provinces outside of Java.

Project efforts to include a university partner from outside of Java will be challenging as most universities in outlying provinces have much more limited infrastructure and highly-educated lecturers are often drawn to Javanese locations where a stronger academic culture exists and more opportunities for consulting activities abound. Nevertheless, the project will work with MORTHE, PAI and others to try to identify and work with outlying universities with highly-committed and fast-improving math departments.

Project activities are grouped under the reach initiative theme which involves a student equity scheme focused on Scholarships, Cooperative Education and work placement opportunities, and academic support activities.

### Undergraduate Scholarship:

The design of the undergraduate scholarship program was built around two factors:

1. All partner universities have a common first year and thus it is not until second year that undergraduates are required to declare their intention to enter into an actuarial science (AS) study program or stream. To ensure that that scholarship recipients are committed to an actuarial science focus, and provide "better return on investment", scholarship programs such as the one provided by the Indonesian Life Insurance Association (AAJI) do not award scholarships until students have formally elected to follow an actuarial science program/stream in their second year. READI will follow the same procedure,

<sup>5</sup> Recent economic data (published in Kompas, 27 February 2017) indicates that economic polarization in Indonesia remains a huge challenge. One of the ramifications of uneven socioeconomic is exemplified in the weakness of high school and university mathematics teaching. While high schools and leading universities in Sulawesi, Sumatra and other parts of the country continue to improve, quality of teaching and facilities outside of Java is still markedly lower.

awarding scholarships to promising actuarial science program/stream students from their second year onward.

2. While more and more Indonesian universities are launching, or planning to launch actuarial science studies, the total number of “seats” for students in actuarial science study programs or streams remains quite limited. For example, Institut Pertanian Bogor, which is currently the only READI partner operating an undergraduate AS program<sup>6</sup>, has 24 full-time students in Year-1 of the program. The Universitas Indonesia (UI), Institut Teknologi Sepuluh Nopember – Surabaya, and Universitas Surya all intend to launch undergraduate actuarial science programs for the upcoming 2017-18 academic year, and other READI partner universities currently have AS streams from Year 2 onward. Thus, the total number of “seats” for AS program/stream students hovers around 200-250 students. However, it would not be practicable to provide scholarships to all Year-2, Year-3 and Year-4 AS program/stream students since some may hail from a wealthy background or have an existing scholarship and thus not need the READI scholarship. For this reason, using the project’s undergraduate scholarship selection criteria<sup>7</sup>, READI expects to work with READI university partners to identify about 100-110 scholarship recipients drawn from Year-2, Year- 3 and Year-4 AS program/streams each year.

To ensure that our REACH initiative objectives are met, the project will also prioritize students from more remote areas and attempt to provide increased coverage as needed. Details of the Undergraduate Scholarship Strategy are presented in Appendix G.

### 3. Capacity Development Activities

#### 3.1 Planned Sub-Activities by Output

Output 1111: Technical assistance (TA) provided to partner universities to establish actuarial science and risk management streams of study					
Indicator	Baseline	Targets Established		Expected Cumulative Completion by 31/03/18	
		Project Period	AWP 17/18	target	% project target
1111-1 Number of universities receiving TA in support of establishing AS streams of study	0	9 undergraduate streams of study (among participating universities)	3 universities	3	33%
1111-2 Effectiveness of the TA provided in support of establishing AS streams of study	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	70%	N/A	N/A

<sup>6</sup> The Universitas Indonesia (UI), Institut Teknologi Sepuluh Nopember – Surabaya, and Universitas Surya all intend to launch undergraduate actuarial science programs for the upcoming 2017-18 academic year.

<sup>7</sup> Please see Appendix G: Undergrad Scholarship Strategy



### Sub-Activity 1111.1a Curriculum Review:

The READI Teams' Chief Actuarial Advisor, Ken Seng Tan, will work with Universitas Prasetiya Mulya partners to review the curriculum planned for *Prasetiya Mulya's* new Actuarial Science stream of study. Recommendations and advice will be provided to ensure that the actuarial stream nested within their Business Mathematics program is sufficiently rigorous and aligned with as many PAI exams as possible. Similar advice will be provided, on an "as-needed" basis, to Institut Teknologi Sepuluh Nopember – Surabaya, and to Universitas Indonesia, both of which are intending to launch new undergraduate actuarial science programs in August/September 2017.

Output 1112: Actuarial science applied research program established and operated					
Indicator	Baseline	Targets Established		Expected Cumulative Completion by 31/03/18	
		Project Period	AWP 17/18	target	% project target
1112-1 Number of papers/technical reports produced	0	40 papers/ technical reports	10 papers/reports	10 papers/reports	25%
1112-2 Perception of quality and value of program by stake-holders	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	N/A	N/A

### Sub-Activity 1112.1a: Actuarial Science Applied Research Fund (ASARF) Designed and Launched

The READI team will work with members of the Industry-University Task Force (IUTF)'s Actuarial Science Applied Research Working Group to identify research themes and prepare the terms of reference for the Actuarial Science Applied Research Program. A call for proposals will be prepared for publication and dissemination during the *Seminar regarding Actuarial Science and Climate Change-related Risks*, which will be implemented in April 2017. Along with a call for submission of papers focused on climate change-related risks, the project will also encourage submission of papers focusing on gender issues related to actuarial science and social inclusivity vis-à-vis actuarial science and actuarial science education.

### Sub-Activity 1112.1b Actuarial Science Applied Research Fund

Research capacity in actuarial science relevant to project, industry and general societal needs will be supported through a competitive granting program as described above. Potential research topics include: insurance as a poverty reduction tool; risk management and transfer of risk in government social assistance programs; private and public insurance issues for Indonesia; insurance needs and opportunities for vulnerable populations in Indonesia; and development of Indonesia-specific actuarial tools (such as mortality tables). Adjudication and award of research funding will be followed by research findings presentation workshops, assistance with publication preparation support and broad dissemination of results in multiple formats and media to enhance accessibility.



### Sub-Activity 1112.1c: AS Applied Research Grants Selection Committee Formed and Operationalized

In collaboration with the IUTF Applied Research Working Group, an ASARF Grants Selection Committee will be formed with representation including representatives from OJK, PAI, AAUI, AAJI and DIKTI. Selection criteria will be finalized, then all submitted papers reviewed and scored to determine which will receive funding.

### Sub-Activity 1112.1d Conference on Risk Management and Climate Change / Gender & Social Inclusivity Issues in Actuarial Science

In January 2018, READI will organize and implement a large conference focused on two principal themes:

- risks associated with climate change and the role of actuaries in analysing associated risks; and
- gender and social inclusivity issues related to actuarial science in Indonesia.

The conference, which will include about 300 participants drawn from universities, industry, insurance company associations, GOI departments and relevant donors and projects, will showcase applied research on the two principal topics and provide an important opportunity for illustrating the important analytical capabilities that actuaries can contribute to pressing socioeconomic challenges facing Indonesia. A selection of best-in-class research papers supported by the project's ASARF Grants program will be presented at the conference and conference proceedings will be produced and distributed.

Output 1113: Industry – University Task Force and associated working groups established and operated					
Indicator	Baseline	Targets Established		Expected Cumulative Completion by 31/03/18	
		Project Period	AWP 17/18	target	% project target
1113-1 Number of industry-university task forces established	0	1 task force 4 working groups	0	1 task force 4 working groups	100%
1113-2 Effectiveness of the TA provided in support of creating and operating an industry-university task force and associated working groups	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	N/A	N/A

### Sub-Activity 1113.1a: Industry-University Task Force Activities

During the AWP period, the Industry-University Task Force (IUTF) will provide strategic advice and recommend solutions to help accelerate the education of actuaries, overcome the deficit in qualified actuarial science lecturers, enhance outreach and public education efforts, and promote actuarial science applied research. The four working groups established in January 2017 include:

- Recruitment and development of actuarial science lecturers.
- Applied actuarial science research.
- Co-operative education programs
- Math outreach and public education on actuarial science

Each working group will conduct internal meetings – both in person and virtually via Skype and other digital communications applications – to develop and finalize a related action plan for the AWP 2017/18 period. The working group work plans will contribute to the IUTF’s work at large. Each working group will hold periodic meetings – some of which may be virtual – and submit findings and recommendations to IUTF members during the four IUTF meetings scheduled for April, August, November 2017, and January 2018. The working groups will be encouraged to focus on achieving results and thus the number and frequency of the working group meetings will be defined by the pace of the activities and the need for achieving results. On a quarterly basis, the working groups and/or their representatives will come together as part of the IUTF. In accordance with OJK’s request, the READI Team will lead the IUTF and serve as the secretariat to the IUTF.

<b>Output 1114: TA provided to selected universities to support development of actuarial science and risk management co-op programs</b>					
<b>Indicator</b>	<b>Baseline</b>	<b>Targets Established</b>		<b>Expected Cumulative Completion by 31/03/18</b>	
		<b>Project Period</b>	<b>AWP 17/18</b>	<b>target</b>	<b>% project target</b>
1114-1 Number of universities and companies receiving TA for the development of co-op programs	0	7 universities 15 companies	4 universities 8 companies	4 universities 8 companies	57% 53%
1114-2 Effectiveness of the TA provided in support of creating co-op programs	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	N/A	N/A

#### **Sub-Activity 1114.1a: Visit to University & Employers for Socialization, Awareness-Raising and Preliminary Study of Existing Internship Programs**

READI will visit all nine partner universities to discuss the following aspects of the proposed cooperative education program:

- Inventory of existing internship programs and practices;
- Benefits and challenges of cooperative education approach for key stakeholders;
- Value-added for employers;
- Commitments and requirements for employers;
- Commitments and requirement for universities;

- Strategies to address /overcome challenges to implementing cooperative education programs (timing and sequence of co-op schedule, regulatory restrictions, outreach to parents).

**As one example, a proposed training program**

- Stakeholder engagement and expectations management
- Scheduling considerations
- Marketing and job development
- Approving jobs
- Safety and risk management
- Working with students – approach and process
  - Work experience preparation
  - Work experience monitoring and coaching
- Working with employers – approach and process
  - Coaching
  - Expanding programs
- Technology
- Dealing with exceptions
- Reporting and reviews

### **Sub-Activity 1114.1b: Fundamentals of Cooperative Education Training for University Partners**

Counterpart personnel and units at participating universities will be identified. In instances where an institution does not have a “career center” or equivalent, an analysis will be conducted to determine if and how one can be created.

Training will be delivered at the two to three institutions ready to pilot cooperative education<sup>8</sup> to help respective university partners to develop an understanding of the fundamentals of cooperative education and Work-Integrated Learning (WIL). Intensive training will be delivered by the Canadian and Indonesian Cooperative Education officers. The training will examine topics relevant to the university institution such as their study sequences, academic calendar, learning structure and student body. Further coaching will be delivered to assist institutions and personnel to apply lessons learned and to continue to learn on-the-job co-op program development and operationalization. Training will typically be two to three days in length. Presentation materials and the outcomes of discussions and deliberations will be made available to participants.

### **1114.1c: Fundamentals of Cooperative Education – Training for Employers**

Capacity development efforts for working with employers will include workshops and job development provided by the Indonesian Co-op Education Officer, including liaison with industry associations and the PAI. Some of the key topics to be covered in the training for employers will include:

- Developing Your Co-op/Internship program
- Best practices
  - identifying work and creating job descriptions
  - advertising positions
  - onboarding co-op students
  - orientation and on-the-job training
  - supervising and coaching
  - evaluating

<sup>8</sup> At the time of writing this AWP, the three universities which appear to have the strongest interest and senior support for piloting an actuarial science cooperative education program are: Universitas Prasetya Mulya (private, western Jakarta area); Universitas Pelita Harapan (private, western edge of Jakarta); and Institut Teknologi Sepuluh Nopember (state, Surabaya, East Java).

### **Sub-Activity 1114.1d: Follow-up TA on the Fundamentals of Cooperative Education for Universities and Employers**

The READI Cooperative Education Officer and uWaterloo Co-op Education Expert will provide follow-up technical assistance and guidance to the two to three university partners which appear ready to begin piloting an actuarial science cooperative education program, or a hybrid thereof. This will include trouble-shooting assistance, mentoring and provision of specific cooperative education management expertise on an as-needed basis.

### **Sub-Activity 1114.1e: Study of Cooperative Program Management at uWaterloo**

Co-operative education is a new learning model in the Indonesian context. Many existing administrative and cultural norms pose a significant challenge to piloting and establishing structured co-op education programs with READI university partners. The process of promoting, and then supporting establishment of actuarial science co-op programs will thus take time, with “marketing” and awareness-raising opportunities representing the first important stage.

University, employers as well as a small number of related Government of Indonesia representatives will be selected to participate in a two-week study tour at uWaterloo to gain a more comprehensive and thorough understanding of Cooperative Education and Work-Integrated Learning system development. The selection process will comprise criteria to identify which employers and universities have demonstrated readiness and a serious commitment to create a co-op program or co-op placements. Suitable representatives from MORTHE (DIKTI) will also be included and possibly representatives from OJK. The READI Canadian and Indonesian Co-op Program Officers will make a recommendation to the Field Director and Project Director. Key aspects of cooperative education management that will be studied include:

- Co-op program administration (e.g., system and account management, work term consults, employer relationship management, etc.):
  - identifying work and creating job descriptions, advertising, onboarding, training, supervising and coaching, evaluating;
- Employer development (e.g., recruitment, job development, job descriptions for all levels of students, etc.):
  - Identifying work and creating job descriptions, advertising, onboarding, training, supervising and coaching, evaluating.

Upon return to Indonesia, the university and Gol officers will be encouraged and supported to act as “co-op education champions” to help promote, design and launch actuarial science co-op education programs.

### **Sub-Activity 1114.1f: Technical Assistance to Universities to Support Development of Cooperative Education Programs**

Following the cooperative education study tour to Waterloo, READI officers will work with the two to three universities that have committed to piloting an actuarial science cooperative education program during the 2017/18 academic year. Technical assistance will focus on helping university partners to overcome administrative, human resource-related and technical challenges posed by the introduction of an actuarial science cooperative education program. Likely areas of focus will include:

- scheduling and sequencing of semesters/work terms;
- outreach to prospective employers;
- information-sharing/outreach with students and parents to explain the co-op approach and related benefits;

- development of databases to track and monitor co-op student progress and performance, and employer information;
- recruitment, training and orientation of co-op program coordinator at each university; and
- registration and orientation of co-op program students

**Output 1121: TA provided to partner universities for curriculum design – including review of international standards, course mapping and textbook review – that addresses material specified in Indonesian actuarial science professional exams**

Indicator	Baseline	Targets Established		Expected Cumulative Completion by 31/03/18	
		Project Period	AWP 17/18	target	% project target
1121-1 Number of universities for which actuarial science and risk management courses are verified as addressing material specified in Indonesian actuarial science professional exams	0	9 university partners	9	9	100%
1121-2 Effectiveness of the TA provided in support of curriculum design	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	70%	N/A	N/A

**Sub-Activity 1121.1a: Mapping of Short Courses to PAI Accreditation**

READI has already mapped short course content to PAI accreditation exams. This will allow those lecturers taking short courses to write a READI created examination that has been approved by PAI. READI will develop and recommend a “support” program to ensure that lecturers completing short courses are well supported by their home campus as they prepare to attempt the examinations. PAI has agreed that faculty passing these examinations will be provided credit towards PAI accreditation and over the duration of the project it is anticipated that most campuses will be populated with lecturers holding at least “associate fellow” PAI accreditation.

**Output 1122: Lecturers and selected practitioners (f/m) supported to obtain actuarial credits and/or relevant graduate degrees**

Indicator	Baseline	Targets Established		Expected Cumulative Completion by 31/03/18	
		Project Period	AWP 17/18	target	% project target
1122-1 Number of (f/m) lecturers and practitioners supported through the project to obtain professional actuarial credits	0	30 professional actuarial credits for lecturers and selected practitioners (15 by females) supported through the project	5	5	17%

<b>Output 1122: Lecturers and selected practitioners (f/m) supported to obtain actuarial credits and/or relevant graduate degrees</b>					
Indicator	Baseline	Targets Established		Expected Cumulative Completion by 31/03/18	
		Project Period	AWP 17/18	target	% project target
1122-2 Number of (f/m) lecturers and practitioners supported through the project with actuarial science and risk management graduate degrees	0	20 lecturers and practitioners supported to enroll in actuarial science and risk management graduate degrees (at least 10 females)	2	1	10%

### **Sub-Activity 1122.1a: Support for Professional Actuarial Credits**

As part of its efforts to help partner universities to move towards becoming centres of excellence, READI will support lecturers from partner universities who wish to sit for PAI exams. As an incentive for succeeding on the exams, the project will reimburse only lecturers who pass the respective PAI exam(s).

### **Sub-Activity 1122.2a: Scholarships for Actuarial Science and Risk Management Master's Degree**

Faculty from partner universities and possibly employees of OJK or other relevant GOI agencies will be selected to participate in the one-year professional Master of Actuarial Science program at uWaterloo. Selection is based on nominations by participating universities and OJK, is merit based, and highly competitive. As of early February 2017, 7-8 candidates have applied for the MActSci scholarship. While the project cannot guarantee acceptance into the program as selection/acceptance is the mandate of uWaterloo Graduate Studies, the READI team is cautiously optimistic that three to four candidates will be accepted. Nominated applicants must be able to demonstrate their full-time employment status, their academic qualifications and sufficient English language proficiency. Applicants meeting the employment and academic requirements but who are somewhat short of the required English language proficiency, will be provided with intensive English language training in Canada for up to six weeks at project expense. Potential candidates who require a higher level of English language training will be allowed to do so in Indonesia with READI covering the cost of their English training up to a maximum of \$1,000 CAD, if they are accepted into the Master's degree program at uWaterloo, with or without the need for the six-week advanced language training in Waterloo.

Accepted candidates will be appropriately oriented before departure from Indonesia and upon arrival in Canada. Financial and academic support will be provided to maximize the probability of successful graduation for all candidates. Graduates will hold a Master's degree from University of Waterloo and will be close to attaining the "associateship" level of the IFoA (professional actuarial accreditation).

<b>Output 1123: Actuarial science mentoring provided through short courses, e-courses and workshops to selected (f/m) teaching professionals</b>					
Indicator	Baseline	Targets Established		Expected Cumulative Completion by 31/03/18	
		Project Period	AWP 17/18	Target	% project target
1123-1 Number of non-credit courses taught by visiting lecturers	0	25 courses	3	6	24%



<b>Output 1123: Actuarial science mentoring provided through short courses, e-courses and workshops to selected (f/m) teaching professionals</b>					
<b>Indicator</b>	<b>Baseline</b>	<b>Targets Established</b>		<b>Expected Cumulative Completion by 31/03/18</b>	
		<b>Project Period</b>	<b>AWP 17/18</b>	<b>Target</b>	<b>% project target</b>
1123-2 Number of workshops delivered by visiting experts	0	12 workshops	3	4	33%
1123-3 Number of lecturer-months of (f/m) Indonesian lecturers participating in study and exposure visits	N/A	24 lecturer-months (with 50% female participation)	6	6	25%

### **Sub-Activity 1123.1a: Individual Training Needs Analysis and Capacity Development Plans for Selected University Lecturers**

READI will work with a select number of highly-motivated lecturers from partner universities to identify their education and training needs and priorities related to actuarial science. Faculty identified for further development who are not able to participate in the uWaterloo master's program will be identified and a unique training plan will be developed for each of them. Attention will be paid to gender and family circumstances to ensure that potential participants are not excluded as a result of such factors. That is, each individual's circumstances will be considered carefully and barriers to participation will be mitigated to the extent possible with project resources.

In instances where "mentorship" is identified as appropriate, a program will be developed that links the candidate to a faculty member at uWaterloo or a professional in Canada from whom the candidate can draw expertise and professional guidance. Where appropriate, mentors and mentees will be provided with the opportunity to work together in ways relevant to the strengthening of actuarial science teaching and research at the mentee's institution. Experience shows that the development of an effective mentorship program is contingent upon both parties seeing concrete benefits from the mentor/mentee relationship. For Indonesian university partners who wish to enter into mentoring relationships focusing on program administration-related issues such as cooperative education management or design and delivery of math outreach activities, it should be easy to set up effective mentor-mentee relationships. For faculty members (lecturers) at universities in both Indonesia and Canada, mentoring arrangements will need to focus on collaborative opportunities to undertake relevant research, since faculty members are evaluated based on their ability to produce peer reviewed papers, which are published in recognized professional journals. To ensure that interest in being a mentor is generated among uWaterloo faculty members, opportunities for undertaking joint research work under the project's Actuarial Science Applied Research Fund (ASARF) will be provided to Indonesian faculty, who will be partnered with a mentor at uWaterloo. To encourage involvement of female mentors, where required, the ASARF will allow for mentee/mentor relationships outside of uWaterloo's Department of Statistics and Actuarial Science faculty, particularly as it relates to gender and climate-based research where engagement with other uWaterloo faculties may be advantageous.

A customized three-year Capacity Development Plan will be collaboratively developed for each lecturer, including a schedule of proposed capacity development activities. Proposed activities may include:

- participation in READI short courses;
- attendance at seminars, workshops and conferences;
- in-Indonesia or in-Canada mentoring;
- completing relevant on-line e-courses provided by the University of Waterloo;
- participating in IAA webinars; and



- reviewing and then utilizing other uWaterloo on-line resources such as student case studies to help enhance actuarial science teaching competence.

Progress against Capacity Development Plan goals will be regularly monitored by the READI Capacity Development & Training Officer in collaboration with respective university lecturers.

### **Sub-Activity 1123.1.b: Short-term Visiting Initiatives for Lecturers and Senior University Administrators**

The READI's short-term visit initiative will provide opportunities for lecturers and senior administrative officers from partner universities to visit the University of Waterloo on a short-term basis. The purpose of these visits may focus on (but not be limited to):

- strengthening lecturers' actuarial knowledge and teaching skills by shadowing some of the courses;
- strengthening lecturers' research abilities by collaborating with selected UWaterloo actuarial researchers;
- learning best practices in math outreach management and practices; or
- gaining in-depth understanding (such as operations/implementation) of cooperative programs.

### **Sub-Activity 1123.1c: Intensive Short Courses for University Lecturers and Regulators**

Intensive training through short courses delivered by actuarial staff approved by uWaterloo will continue to be delivered in Indonesia for selected faculty and potentially practitioners from stakeholders such as OJK and PPPK. Participants will include university lecturers responsible for lecture courses in an actuarial science stream, specialization, minor or study program. Courses will have a minimum of 5-day full time duration. Pre- and post-assessments will be used to calibrate the level and intensity of delivery. Some preparatory and post-course work may be delivered on-line in some cases. Tentative course titles and dates are:

1. Actuarial Mathematics II
  - a. Location: TBD
  - b. Dates: May 2017
2. Actuarial Mathematics III
  - a. Location: TBD
  - b. Dates: late July/early August 2017
3. Actuarial Mathematics IV
  - a. Location: TBD
  - b. Dates: January 2018

These courses will strengthen the capacity of existing lecturers to teach courses in actuarial science related mathematics in addition to preparing them for writing accreditation exams should they choose to do so.

### **Sub-Activity 1123.1d: Mentorship through a one-term engagement with the Master's program at uWaterloo**

In some instances, faculty or other selected practitioners would benefit significantly from a program delivered at uWaterloo that would include:

- One term of courses in Masters studies in Actuarial Science at uWaterloo (professional Master of Actuarial Science or Master of Mathematics in Actuarial Science programs).
- Being assigned to one or more mentors at the university that would provide guidance on:
  - Teaching actuarial science and risk management,

- Research practices in actuarial science and risk management,
- Professional elements associated with actuarial science and risk management.

This program will be intensive, require significant English language capacity and exceptionally strong motivation. Its impact on candidate development is expected to be noteworthy.

### Sub-Activity 1123.2a Workshops Delivered by Visiting Experts

The intent of the visiting expert’s workshops series is to take advantage of senior actuaries’ visits to Indonesia to provide professional development workshops and broader perspective workshops. One workshop, as an example, which is tentatively scheduled for September 2017, is a workshop between OSFI and OJK focused on governance issues related to supervision of non-bank financial institutions. Other workshops will include sessions provided by senior members or representatives from other international actuarial organizations, who are able to share in-depth knowledge and updates of topics of interest to actuarial science lecturers. In many cases, these workshops will be undertaken with READI partners and thus READI may or may not incur costs to facilitate these workshops. The project will however, organize and manage the delivery of the workshops as needed.

<b>Output 1131: Actuarial science and risk management scholarship program targeted for (f/m) undergrad students designed and operated</b>					
Indicator	Baseline	Targets Established		Expected Cumulative Completion by 31/03/18	
		Project Period	AWP 17/18	target	% project target
1131-1 Number and value of scholarships awarded, by target student population (gender, home location)	0	\$1.9 million in scholarships awarded	\$994,500	\$994,500	51%
1131-2 Number of undergrad student-years completed by scholarship students	0	612 student-years* completed by scholarship students (at least half female)	310	310	51%

\* Note: a revised target for 1131-2 was established following reconsideration of the total number of AS program/study stream “seats” in partner universities, the project’s ability to fund a reasonable proportion of (but not all) AS students, and the costs covered by the scholarship package. Fifty-one percent of the undergraduate scholarship budget is allocated for the 2017/18 AWP period as, to the greatest extent possible, the project wants to provide consistent funding to Year-2, 3 and 4 students – that is not leave any previously funded students “stranded” without funding when the project closes. Thus the number of Student Academic Years funded will peak during the AWP 2017/18 period, then gradually be reduced each year.

### Sub-Activity 1131.1a Socialization of the Undergrad Scholarship Program

READI will work with university partners including deans, department heads, lecturers, scholarship coordinators, and READI IUTF members to publicize the criteria for and details of the READI Undergraduate Scholarship Program. Socialization efforts will be in the form of virtual communication (through social media, website, etc.) as well as in conjunction with any Math Outreach activities (Activity 1211) at the university level. The project will target its communication efforts to students in (or soon entering) years 2, 3 and 4 of actuarial science programs or actuarial science streams.

### Sub-Activity 1131.1b Selection of Candidates

In consultation with partner universities, candidates for the scholarships will be selected and vetted by project personnel to ensure that they meet READI criteria. During this process, attention will be paid to both geographic and gender criteria to ensure READI meets its social inclusion and REACH objectives.

### Sub-Activity 1131.1c Scholarship Payment

The scholarship provided to the selected candidates will cover the tuition fee, university facility fees, as well as any PAI exam fees incurred by students who pass PAI exams. Tuition and facility fees will be paid directly to the partner universities. The PAI exam fees will be reimbursed once the student has pass the respective PAI exam.

The target of spending 50% of the scholarship funds in this fiscal year is based on the need to maximize the usage of the funds on actuarial science undergraduates throughout the final years of the project. As such in this FY, READI will start with a pool of undergraduates in years 2, 3 and 4 of their actuarial science program. This becomes the biggest cohort year and justifies the 51% target. In the following year, READI will support only those in years 3 and 4 of their programs and so on. There is expected to be some degree of attrition and this will allow READI to adapt as needed to changing circumstances.

### Sub-Activity 1131.2a Scholarship Program Monitoring

The Under Graduate Scholarship Program will be monitored and supported throughout the project by the soon-to-be-recruited READI Scholarship Program/Applied Research Officer, who will also provide logistical support and advice to scholarship recipients and university partners. Monitoring of Undergraduate Scholarship results will also be undertaken as part of the project's regular monitoring and evaluation efforts. This monitoring will ensure compliance with the Scholarship Program and ensure the project's "Reach" initiative goals are respected.

Output 1132: TA provided to employers to strengthen actuarial development programs for employees					
Indicator	Baseline	Targets Established		Expected Cumulative Completion by 31/03/18	
		Project Period	AWP 17/18	target	% project target
1132-1 Number of employers receiving TA for actuarial development programs	0	50 employers	15	15	30%
1132-2 Effectiveness of the TA provided in support of strengthening actuarial accreditation programs	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	70%	N/A	N/A

### Sub-Activity 1132.1a Survey of Good Practices

A survey of good practices to strengthen actuarial development of staff will be conducted in Indonesia and potentially in the region to determine which practices can be adopted and replicated by the Indonesian financial industry. Manulife has been very successful in this regard and is willing to share its approaches and procedures with READI and other insurance companies. The project will document relevant successes at Manulife and among the

companies and produce knowledge products (printed, and perhaps video<sup>9</sup> form) to support replication of best practices by other companies. There is some evidence of differential pass rates based on gender – more males pass than females. Confirmation of this observation and the identification of mitigation strategies will be included in the survey and its analysis prior to the next activity.

### Sub-Activity 1132.1b Designing Training Program Based on the Survey

Based on the survey, READI project will designing a training program and supporting training materials, which will support the employers to replicate and innovate existing best practices based on their needs. The training program will involve pilot employers from life and non-life insurance, with a mixture of multinational companies and local companies.

### Sub-Activity 1132.1c Series of Introduction Workshop to Employer training program

A series of introductory workshops will be piloted to familiarize insurance sector employers with selected good approaches emerging from sub-activities 1132.1a and 1132.1b above. Gender equity will be an important element of this program.

Output 1211: TA provided to partners on delivery of high school math out-reach programs with an actuarial science focus					
Indicator	Baseline	Targets Established		Expected Cumulative Completion by 31/03/18	
		Project Period	AWP 17/18	target	% project target
1211-1 Number universities receiving TA on delivery of HS math outreach	0	9 university partners	9	9	11%
1211-2 Effectiveness of the TA provided in support of HS math outreach	0	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	70%	N/A	N/A

### Sub-Activity 1211.1a: Actuarial Science and Social Inclusivity Theme

As part of all Math Outreach, Undergrad Scholarship Program, Cooperative Education and Employer Best Practices initiatives, the project will develop and integrate awareness and education messages) on the actuary profession that profiles women and under-represented ethnic groups and highlights the different career paths associated with the profession. Key messages will stress the strength, innovation and organizational resilience that socially inclusive academic selection and intern and staff recruitment offer to programs of study and companies.

<sup>9</sup> To ensure that the videos can be easily understood by a wide variety of Indonesian stakeholders, the videos will be produced in Bahasa Indonesia, with English sub-titles added. Should a clear need arise for producing an English-language narrated video, the project will consider producing an English-medium video.

## Sub-Activity 1211.1b: Math Outreach Site Visits, Event Participation and Liaison Approaches

Actuarial science requires very sophisticated application of mathematics. However, the Program for International Student Assessment (PISA) for 2015, a three-yearly assessment which produces international education rankings based on testing in reading, mathematics and science, recently ranked Indonesian students as having the 62<sup>nd</sup> ranking among 72 countries. In order for the READI project, and GOI initiatives such as OJK's *1,000 Actuaries* program to increase the number of trained and accredited actuaries, and help develop higher education centres of actuarial excellence, the quality of high school math teaching must be strengthened<sup>10</sup> and students must feel confident that they can succeed in mathematics<sup>11</sup>. High school teachers need to have more resources to improve their mathematics skills and teaching content, so that students will graduate from high school with stronger mathematics and analytical skills. Mathematics teachers and students typically have limited knowledge regarding careers which require the application of mathematics – especially actuarial science. To address these shortcomings and help encourage promising mathematics students at the high school level to consider studying actuarial science, the project will implement a robust Math Outreach Program. Key activities will include the following:

- School Visits: “Think About Mathematics” workshop for students

The workshop is designed to ignite enthusiasm for mathematics among high school students and enrich mathematics problem solving skills. Through the workshop, students also will learn about careers in the application of mathematics with focus on actuarial science. At least 50 school visits and 2,000 students will participate in the Math Outreach Program during the AWP 2017/18 period. To strengthen the skills and approaches of selected university partner lecturers, who also conduct math outreach activities regularly, they will be involved in conducting sessions. The project's Canadian Math Outreach Expert will conduct training for lecturers who are interested in this program in September 2017 and January 2018.

- “Think About Actuarial Science” Talk Show

The Indonesian Math Outreach Officer will coordinate with university partners to conduct “Think about Actuarial Science (TAAS)” sessions for high school students who have previously participated in mathematics competitions or other math-related events conducted at respective universities. Think About Actuarial Science events will be conducted in collaboration with Career Days and Education Fairs. At least five universities will participate with 1,750 students and 500 parents targeted during the 2017/18 AWP period.

- Problem of The Week (POTW) for Teachers and Students

POTW is designed to provide resources for teachers and provide students with an ongoing opportunity for enrichment by solving challenging mathematical problems while becoming

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<sup>10</sup> It is beyond the scope and resources of this project to undertake intensive efforts to strengthen high school mathematics teachers. There are over 12,000 high schools in Indonesia and any intensive efforts to upgrade the quality of math teachers would require a major initiative focused on teacher training and a minimum 5-10 year period of time. Even in its principal geographic areas of focus, the READI project does not have the resources and time required to mount the comprehensive teacher strengthening efforts that would be required. Instead, the project will provide selected teachers with access to improved teaching resources and innovative approaches to teaching math which can help model improved teaching practices.

<sup>11</sup> The relatively poor performance of Indonesian high school students in mathematics is attributable to a number of factors, among them: 1) poorly trained math teachers; 2) a curriculum which is largely focused on enabling students to pass the National Exam (*Ujian Negara*) which leaves little time or opportunity for teachers to introduce any supplementary or enrichment material; 3) a shortage teaching materials and resources available in the Indonesian language to facilitate math enrichment activities; and 4) the tendency for high school students to feel that “math is hard” and they “can’t do it”.

updated on actuarial science. Each week, problems from various areas of mathematics and “Actuary at a Glance” will be posted on the READI website and/or sent via email to READI partner teachers for use with their students. READI is working with partner universities and the Ministry of Education and Culture’s Primary and Middle Education Directorate General to identify suitable high school partners. This POTW will be available in Bahasa Indonesia and English.

- Video on Actuarial Science and the Actuary Profession

To support and enhance the project’s Math Outreach activities, READI will produce a short video explaining what actuarial science is, why actuarial science is important, and the compelling employment opportunities that exist for qualified actuaries in Indonesia. The video will be widely used during school visits, career fairs, workshops, social media, and on the READI website.

- To promote interest and excellence in mathematics among high school students, READI will work with partner high school to promote and facilitate student participation in the “Cayley” and “Fermat” mathematics contests which will be conducted in February 2018. At least 300 students will be supported to participate in the contests.

<b>Output 1212: Actuarial science and risk management awareness campaigns designed and implemented</b>					
<b>Indicator</b>	<b>Baseline</b>	<b>Targets Established</b>		<b>Expected Cumulative Completion by 31/03/18</b>	
		<b>Project Period</b>	<b>AWP 17/18</b>	<b>target</b>	<b>% project target</b>
1212-1 Number and type of marketing campaigns by target group (e.g., university students, parents, AAUI) with attention to gender	0	Up to 3 annual marketing campaigns with a gender lens	1	1	33%
1212-2 Number of partners supported for awareness campaigns	N/A	7 partners	3	3	43%
1212-3 Effectiveness of the TA provided in support of awareness programming	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	70%	70%	N/A

### **Sub-Activity 1212.1a Marketing Campaigns**

The project will design and deliver a number of tailored public education/marketing campaigns targeting:

- high school students;
- high school mathematics teachers and school counsellors;
- parents of high school students interested in mathematics studies; and
- members of the Indonesian General Insurance Association (AAUI) among others.



Public education campaigns will build on and extend many of the messages underpinning READI Math Outreach efforts including:

- What actuarial science is;
- How actuarial science is applied in various sectors of the economy;
- The socioeconomic importance of actuarial science;
- The exciting employment opportunities that exist for qualified actuaries in Indonesia and around the world; and
- Why general (i.e. non-life) insurance also need actuaries and what benefits actuaries offer to general insurance companies<sup>12</sup>.

These education, or awareness-raising campaigns will utilize a number of tools and approaches including; video, social media messaging, seminars and workshops. READI will hire a part-time Knowledge Management/Public Education consultant to help develop the project's public education/communications plan along with supporting materials and media.

### Sub-Activity 1212.2a Partner Support for Awareness Campaigns

A number of industry partners have indicated that they are already engaged in public outreach and awareness campaigns. Others, such as PAI and OJK have a mandate for public awareness campaigns. As such, READI will act to support and add value, as opposed to lead, public awareness campaigns through strategic interventions and partnerships.

Output 1213: Public interest in actuarial science and risk management promoted through research, publications and media					
Indicator	Baseline	Targets Established		Expected Cumulative Completion by 31/03/18	
		Project Period	AWP 17/18	Target	% project target
1213-1 Number type of publications/media initiatives launched	0	25 papers or multimedia products	10	10	40%
1213-2 List of themes represented	0	At least 50% of knowledge products incorporate gender, climate change, or social inclusion themes	50%	50%	N/A

### Sub-Activity 1213.1a: Actuarial Science Public Interest Papers

This initiative will support the development of a series of short papers utilizing actuarial expertise, which address topical public interest issues involving risk and uncertainty for Indonesia. The target audience will be policy makers, civil society organizations, insurance and pension industry professionals, news organizations, and interested public.

<sup>12</sup> Although Indonesian laws stipulate that all insurance companies must have an appointed actuary on staff by 01 January 2018, many Indonesia general insurance companies feel that they do not need to hire an actuary. Public education (or awareness) campaigns targeted at AAUI members will thus focus on the many ways in which actuaries can reduce risk for general insurance companies, help improve insurance product and market targeting, and increase profitability.



Topics will be confirmed by a working group established by READI that includes government, industry and education representatives (the READI Applied Research Working Group, under the Industry-University Task Force). Topics may include: funding and disbursements of government social assistance programs such as health insurance; managing risks in public pension schemes; statistical standards and use in insurance for Indonesians; differential insurance rates based on gender and diversity patterns; women's access to insurance in Indonesia; risk and crop insurance, and micro insurance risks and opportunities.

Public interest papers will be commissioned by the READI project, drawing from a pool of pre-qualified expert groups. In May 2017 a request for Expressions of Interest (EOI) will be issued by READI for groups or individuals interested in preparing papers. Responses will be reviewed and qualified groups will be informed by July 2017. An initial set of papers will be commissioned by September 2017, following recommendations of a READI advisory committee. For commissions involving more than 50 Million IDR, a short list of two-three qualified groups may be requested to submit a short proposal detailing approach and estimated cost for preparing the paper. Contract expectations for each commission will be determined by READI staff following project policies and procedures.

The process will be reviewed and revised (if needed) in early 2018, and repeated in following years of the READI project.

### **Sub-Activity 1213.2a: Actuarial Science and Risks Associated with Climate Change in Indonesia Initiative** (also supports Sub-Activities from the 1123 and 1222 series)

This will consist of a linked series of workshops, applied research and public interest activities addressing actuarial science and climate change. The initiative will draw on actuarial science expertise to build public and professional understanding of risks associated with climate change in Indonesia. Funds for the initiative will in part be drawn from pricing of the READI project carbon footprint (as discussed earlier in Section 2.2 Climate Change Mitigation).

The READI project is also actively seeking partners with common interests to broaden the reach of the initiative through, for example, shared sponsorship of workshops, research topics, or publication and communication of research findings.

The target audience will be university researchers, policy makers, civil society organizations, insurance and pension industry professionals, news organizations, and interested public.

The Workshops will address climate change and actuarial science and will involve actuarial science and risk management professionals and experts in climate change. Workshops will focus on application and development of actuarial expertise to the climate change challenges faced by Indonesia. Initial workshops in 2017-2018 will include identification and exploration of priority issues, related actuarial science topics and potential public interest activities (i.e., publications or conferences).

In parallel with the Actuarial Science Applied Research Fund (project activity 1112.1a), topics specific to climate change will be identified and targeted as priorities in the call for proposal and proposal review process.

Complementing the actuarial science public interest papers series (project activity 1213.1), topics specific to climate change may be identified and targeted as priorities for presentation at a conference scheduled for late in the fiscal year. Additional public interest and awareness raising activities may also be identified in READI annual work planning, and in consultation with the Industry-University Task Force and READI working committees.

### **Sub-Activity 1213.2b Actuarial Science and Gender/Social Inclusion in Indonesia Initiative (project activities 1112.3, 1213.3, 1222.3)**

A linked series of workshops, applied research and public interest activities addressing actuarial science and gender/social inclusion will be initiated. The initiative will draw on actuarial science expertise to build public and professional understanding of risks and actions to address gender/social inclusion in Indonesia.

With a target audience similar to the climate change stream this component will begin with an initial workshops which will include identification and exploration of priority issues, related actuarial science topics and potential public interest activities (i.e., publications or conferences).

In parallel with the Actuarial Science Applied Research Fund (project activity 1112.1), topics specific to gender/social inclusion may be identified and targeted as priorities in the call for proposal and proposal review process.

<b>Output 1221: International professional association and regulator linkages on profession-related topics facilitated for OJK, PPPK and PAI</b>					
<b>Indicator</b>	<b>Baseline</b>	<b>Targets Established</b>		<b>Expected Cumulative Completion by 31/03/18</b>	
		<b>Project Period</b>	<b>AWP 17/18</b>	<b>target</b>	<b>% project target</b>
1221-1 Number of workshops involving national and/or international bodies addressing professional topics	0	5 workshops with (50% females)	2	3*	60%
1221-2 Number of professional meetings involving Indonesian and international regulators and actuarial associations	0	10 professional meetings (50% females)	2	2	20%

\*One workshop was completed in September 2016 for a cumulative total by end AWP 2017/18 forecasted to be 3.

### **Sub-Activity 1221.1a: Workshop to Strengthen Financial Supervision Governance**

In response to a request from OJK, READI will liaise with the Canadian Office of the Superintendent of Financial Institutions (OSFI) to provide a workshop focused on strengthening financial supervision and related governance issues. Representatives from *Pusat Pembinaan Profesi Keuangan* (PPPK) and the Ministry of Finance will also be invited to participate in the workshop. The workshop is tentatively scheduled for late August/September 2017.

### **Sub-Activity 1221.2a Professional Meetings**

READI will support and or finance professional meetings for regulators and associations to enhance linkages and create opportunities for professional exchanges.

<b>Output 1222: Continuing Professional Development (CPD) seminars workshops and mentorships conducted for actuaries and other stakeholders</b>					
Indicator	Baseline	Targets Established		Expected Cumulative Completion by 31/03/18	
		Project Period	AWP 17/18	Target	% project target
1222-1 Number of professional seminars and workshops conducted	0	20 seminars, workshops	5	5	25%
1222-2 Number of female and male participants	0	400 participants (at least 200 females)	75	75	19%

**Sub-Activity 1222.1a: Thematic Workshops to Strengthen Capacity of Insurance Associations**

In collaboration with AAUI and AAJI, the READI project will design and deliver a series of workshops addressing priority capacity development issues for the two insurance associations. Potential topics include:

- For AAUI:
  - Rate-making and Reserving (tentatively, April 2017)
  - The Strategic Importance and Value Added by Actuaries (tentatively, October 2017)
- For AAJI:
  - Business/communications skills for actuaries (tentatively, May 2017)

Workshops will typically be one to two days in length. Presentation materials and the outcomes of discussion and deliberation will be made available to project stakeholders via the web.

**Sub-Activity 1222.2a: Workshop on Social Inclusion in the Actuarial Science Profession in Indonesia**

The READI project will carry out an in-depth gender analysis on human resource practices for women and men who work in the insurance industry and in teaching AS subjects/programs. A workshop to present findings and identify potential follow-up activities will be conducted in October 2017 (tentative). Key recommendations and action items will be conveyed to the IUTF and IUTF working groups for further action.

<b>Output 1223: TA provided to regulators and associations to strengthen organizational capacity</b>					
Indicator	Baseline	Targets Established		Expected Cumulative Completion by 31/03/18	
		Project Period	AWP 17/18	target	% project target
1223-1 Number of organizations supported	0	1 (PAI)	1	1	100%
1223-2 Effectiveness of the TA provided in support of capacity building to regulators and associations	0	70% of survey and interview respondents (f/m) assess TA to be	70%	N/A	N/A

Output 1223: TA provided to regulators and associations to strengthen organizational capacity					
Indicator	Baseline	Targets Established		Expected Cumulative Completion by 31/03/18	
		Project Period	AWP 17/18	target	% project target
		relevant, effective, timely and gender sensitive			

### **Sub-Activity 1223.1a: Mapping Against IAA and CIA Continuous Professional Development Practices & Standards for PAI**

The READI Actuarial Capacity Building Specialist will undertake a mapping of current International Association of Actuaries (IAA) and Canadian Institute of Actuaries (CIA) continuous professional development (CPD) practices and standards as a basis for preparing a set of recommendations and proposed continuous professional development standards for the *Persatuan Aktuaris Indonesia* (PAI). The process will involve study and comparison of the current IAA, CIA and PAI CPD practices and standards along with a series consultation with senior PAI representatives.

### **Sub-Activity 1223.1b: PAI Adoption of CPD Rules and Requirements**

The CPD professional development practices and standards prepared under sub-activity 1223.1a above will be presented to the PAI Board of Directors for consideration and adoption.

### **Sub-Activity 1223.1c: Socialization of PAI Capacity Development Needs Assessment & Plan to PAI Members**

Between January and March 2017, the READI Actuarial Capacity Building Specialist met with PAI and PAI stakeholders to assess, identify and prioritize key PAI capacity development related to:

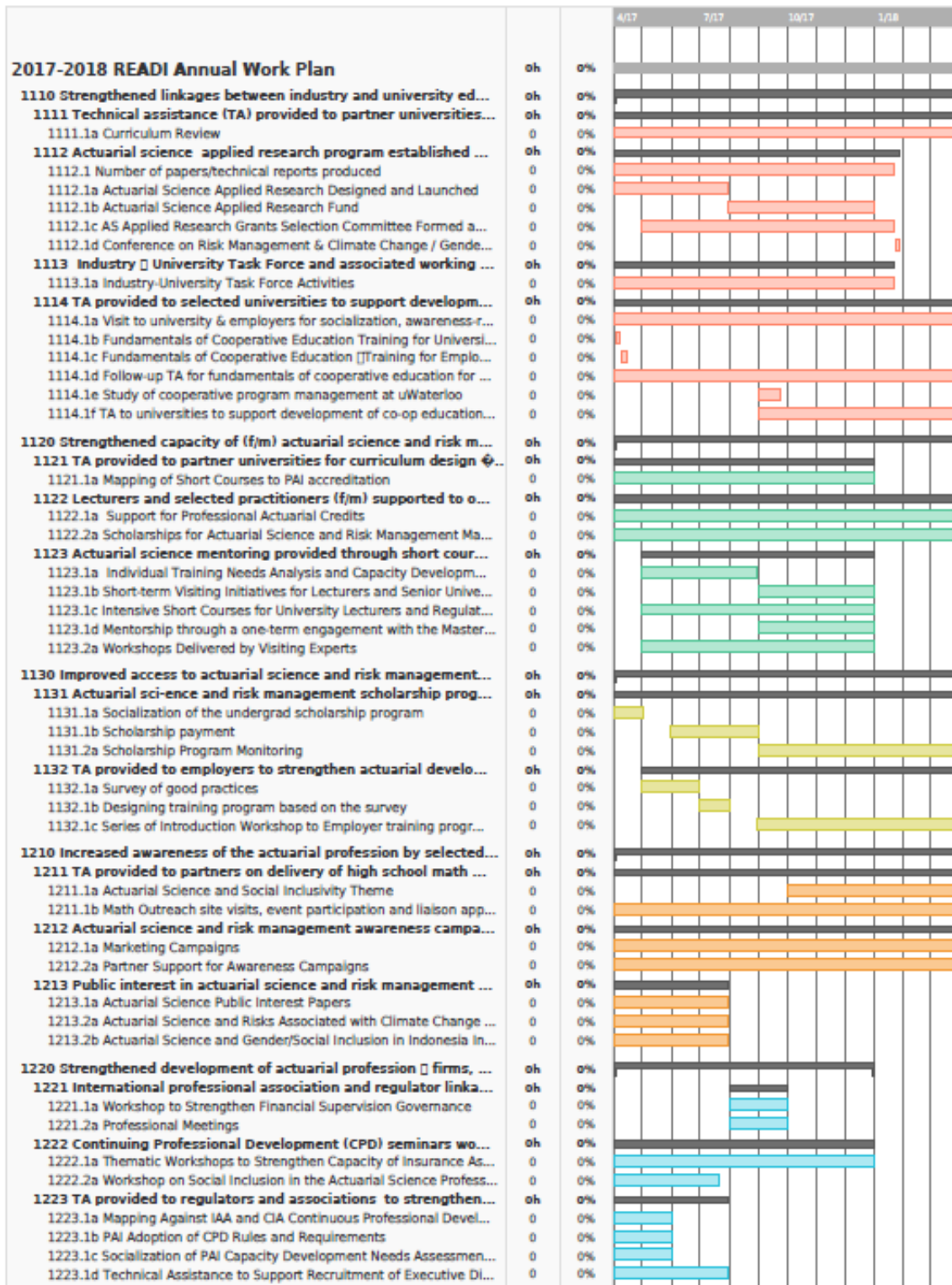
- a) Organizational development and sustainability including:
  - Financial resources and sustainable funding strategies
  - Leadership development and succession planning
- b) Communication and networking including:
  - Cooperation and liaison with other regional and international actuarial professional organizations;
  - Participation in international workshops; and
- c) Provision of services to PAI members including:
  - Improving quality of and access to services
  - Continuous professional development activities and strategies
  - Quality control and consistency of standards

The three-year PAI Capacity Development Work Plan generated by this process will also be presented to the PAI Board of Directors for consideration and adoption. Any necessary changes will be made and then, once formally adopted, the Capacity Development Work Plan and supporting Continuous Professional Development Practices & Standards will be presented to PAI members. READI will work with PAI throughout the year, and during subsequent years to provide technical advice to support implementation of the PAI Capacity Development Plan and CPD Practices & Standards.

### **Sub-Activity 1223.1d: Technical Assistance to Support Recruitment of Executive Director for PAI**

Responding to a key organizational constraint, READI will work with the PAI to help recruit an Executive Director. The project will provide technical advice to help short-list and interview suitable candidates and provide financial support to enable the PAI to hire the most suitable candidate. This support will be provided for 2 to 2.5 years, during which time the Executive Director and PAI will work to strengthen the organization's long-term income generation capacity and financial sustainability.

## 3.2 Gantt chart for technical and management activities





### 3.3 Work Breakdown Structure

WBS# and Activity	Activity Description	
<b>1100 Increased employment of (f/m) Indonesian accredited actuarial science and risk management graduates by Indonesian businesses, universities and government agencies</b>		
<b>1110 Strengthened linkages between industry and university education in Indonesia</b>		
<b>1111 Technical assistance provided to partner universities to establish actuarial science and risk management streams of study</b>		
<b>Sub-activity 1111.1a Curriculum Review</b>		
The READI Teams' Professor Ken Seng Tan will work with Universitas Prasetya Mulya partners to review the curriculum planned for Prasetya Mulya's new Actuarial Science stream of study.		
<b>1112 Actuarial science applied research program established and operated</b>		
<b>Sub-Activity 1112.1a: Actuarial Science Applied Research Designed and Launched</b>  The READI team will work IUTF's Actuarial Science Applied Research Working Group to identify research themes and prepare the terms of reference for the Actuarial Science Applied Research Program. A call for proposals will be prepared for publication and dissemination during in April 2017 on climate change-related risks, gender issues related to actuarial science and social inclusivity vis-à-vis actuarial science and actuarial science education	<b>Sub-Activity 1112.1b Actuarial Science Applied Research Fund (project activity 1112.1)</b>  Research capacity in actuarial science relevant to project, industry and general societal needs will be supported through a competitive granting program. Adjudication and award of research funding will be followed by research findings presentation workshops, publication preparation support and dissemination of results.	<b>Sub-Activity 1112.1c: AS Applied Research Grants Selection Committee Formed and Operationalized</b>  In collaboration with the IUTF Applied Research Working Group, an AS Applied Research Grants Selection Committee will be formed. Selection criteria will be finalized, then all submitted papers reviewed and scored. Research funding will be provided for approximately 15 papers
<b>1113 Industry-University Task Force and associated working groups established and operated</b>		
<b>Sub-Activity 1113.1a: Industry-University Task Force Activities</b>		
Industry-University Task Force (IUTF) will provide strategic advice and recommend solutions to help accelerate the education of actuaries, overcome the deficit in qualified actuarial science lecturers, enhance outreach and public education efforts, and promote actuarial science applied research. The four working groups established in January 2017 will conduct internal meetings to develop and finalize a related action plan for the AWP 2017/18 period, which will contribute to the Task Force at large. Each working group will hold periodic meetings – which may be virtual – and submit findings and recommendations to Task Force members during the four IUTF meetings scheduled for April, August and November 2017, and January 2018. In accordance with OJK's request, the READI Team will lead the IUTF and serve as the secretariat to the IUTF.		
<b>1114 Technical assistance provided to selected universities to support development of actuarial science and risk management co-op programs</b>		
<b>Sub-Activity 1114.1a: Visit to university &amp; employers for socialization, awareness-raising and preliminary study of existing internship programs</b>	<b>Sub-Activity 1114.1b: Fundamentals of Cooperative Education Short Course for University Partners (Bill D to edit)</b>	<b>1114.1c: Fundamentals of Co-op Short Course for Employers (Bill D to edit)</b>

WBS# and Activity	Activity Description	
<p>READI will visit all nine partner universities to discuss aspects of the proposed cooperative education program.</p>	<p>Counterpart personnel and units at participating universities will be identified. Short courses will be developed and delivered at two institutions. Intensive training through short courses will be delivered by Canadian and Indonesian Cooperative Education Officer. Post short course coaching will be delivered.</p>	<p>Co-op stakeholders and topics will be included in the industry-university task forces being created by the project. Approaches for working with employers will include workshops (employers will be invited via industry associations, PAI, university leaders, and/or government leaders), and job development on the ground by the Indonesian Co-op specialist including liaison with industry associations and the PAI.</p>
<p><b>Sub-Activity 1114.1d: Follow-up Fundamental of Co-op Short Course for Universities and Employers</b></p> <p>These courses will strengthen the capacity of university and industry as institutions while preparing them for implementing co-operative education and work-integrated learning programs should they choose to do so.</p>	<p><b>Sub-Activity 1114.1e: Waterloo Study Tour – approved university and employer partners and DIKTI to gain in-depth understanding of co-op system</b></p> <p>University, employers as well as related Government representatives will be selected to participate in the two weeks study tour at uWaterloo in order to gain a more comprehensive and thorough understanding of cooperative Education and Work-Integrated Learning system development.</p>	<p><b>Sub-Activity 1114.1f: Technical assistance to universities to support development of cooperative education programs</b></p> <p>Following the cooperative education study tour to Waterloo, READI officers will work with the 2-3 universities that have committed to piloting an actuarial science cooperative education during the 2017/18 academic year.</p>
<p><b>1120 Strengthened capacity of (f/m) actuarial science and risk management teaching professionals in Indonesia</b></p>		
<p><b>1121 Technical assistance provided to partner universities for curriculum design – including review of international standards, course mapping and textbook review</b></p>		
<p><b>1121.1a Mapping of Short Courses to PAI accreditation</b></p> <p>READI has mapped short course content to PAI accreditation exams. This will allow those lecturers taking short courses to write a READI created examination that has been approved by PAI. READI will develop and recommend a “support” program to ensure that lecturers completing short courses are well supported by their home campus as they prepare to attempt the examinations. PAI has agreed that faculty passing these examinations will be provided credit towards PAI accreditation and over the duration of the project it is anticipated that most campuses will be populated with lecturers holding at least “associate fellow” PAI accreditation.</p>		
<p><b>1122 Lecturers and selected practitioners (f/m) supported to obtain actuarial credits and/or relevant graduate degrees</b></p>		
<p><b>Sub activity 1122.1a Support for Professional Actuarial Credits</b></p> <p>Faculty and possibly employees of OJK or other relevant GOI agencies will be selected to participate in the one year professional Master of Actuarial Science</p>	<p><b>Sub activity 1122.2a Scholarships for Actuarial Science and Risk Management Master’s Degree</b></p> <p>Accepted candidates will be appropriately oriented before departure from Indonesia and after arrival in Canada. Financial and academic support will be provided to maximize the probability of successful graduation for all candidates.</p>	

WBS# and Activity		Activity Description
<p>program at uWaterloo. Selection is based on nominations by participating universities and OJK, is merit based and highly competitive. Graduates will hold a Master's degree from University of Waterloo and will be close to attaining "associateship" of the IFoA (professional actuarial accreditation).</p>		
<p><b>1123 Actuarial science mentoring provided through short courses, e-courses and workshops to selected (f/m) teaching professionals</b></p>		
<p><b>Activity 1123.1a: Individual Training Needs Analysis and capacity building plan for University Lecturers</b></p> <p>Analyzing the faculty training needs to help them to perform effectively as well as determine the focus, define current and intended capacities to develop actuarial education. Faculty identified for further development and not able to participate in the master's program will be identified and a unique training plan will be developed for each of them. Attention will be paid to gender and family circumstances to ensure that potential participants are not excluded as a result of these factors. In those instances where "mentorship" is identified as appropriate, a program will be developed that links the candidate to a faculty member at uWaterloo or a professional in Canada from whom the candidate can draw expertise and professional guidance</p>		<p><b>1123.1b: Intensive Short Courses for University Lecturers and Regulators</b></p> <p>Intensive training through short courses delivered by actuarial staff approved by uWaterloo will continue to be delivered in Indonesia for selected faculty and potentially practitioners from stakeholders such as OJK and PPPK. Participants will include university lecturers responsible for lecture courses in an actuarial science stream, specialization, minor or study program. Courses will have a minimum of 5 day full time duration. Pre- and post-assessments will be used to calibrate the level and intensity of delivery.</p>
<p><b>Activity 1123.3a: Short-term Visiting Initiatives for Lecturers and Senior University Administrators</b></p> <p>The READI's short-term visiting initiatives will provides opportunity for lecturers and senior administrative officers from partner universities to visit University of Waterloo on a short-term basis.</p>		<p><b>Activity 1123.3b Mentorship through a one term engagement with the Master's program at uWaterloo</b></p> <p>In some instances, faculty or other selected practitioners would benefit significantly in a program delivered at uWaterloo that would include: (1) One term of courses in Masters studies in Actuarial Science at uWaterloo (professional Master of Actuarial Science or Master of Mathematics in Actuarial Science programs). (2) Being assigned to one or more mentors at the university that would provide guidance</p>
<p><b>1130 Improved access to actuarial science and risk management education for (f/m) university students and graduates in Indonesia</b></p>		
<p><b>1131 Actuarial science and risk management scholarship program for (f/m) undergrads designed and operated</b></p>		
<p><b>Sub activity 1131.1a Socialization of the undergrad scholarship program</b></p> <p>As part of the visibility of the provided scholarship and READI project, an intense and broad socialization need to be conducted. The socialization can be in form of virtual (through social media, website, etc. ) or can be in conjunction with Math Outreach activities (activity 1211)</p>	<p><b>Sub activity 1131.1b Scholarship payment</b></p> <p>The scholarship provided to the selected candidates will cover the tuition fee as well as PAI test fee. Tuition fee will be paid directly to the partner universities, as for the PAI test will be reimbursed once the student pass the test</p>	<p><b>Sub activity 1131.2a Scholarship Program Monitoring</b></p> <p>Undergrad scholarship program will be monitored routinely throughout the project. This monitoring will ensure the compliance of the scholarship program as well as ensuring the "Reach" theme of the project which intends to minimize gender and social/geographic exclusion.</p>

WBS# and Activity		Activity Description
<b>1132 Technical assistance provided to employers to strengthen actuarial development programs for employees</b>		
<b>Activity 1132.1a Survey of good practices</b>  A survey of good practices will be conducted in Indonesia and potentially in the region to determine which practices can be adopted and replicated by the Indonesian financial industry. There is some evidence of differential pass rates based on gender – more males pass than females. Confirmation of this observation and the identification of mitigation strategies will be included in the survey and its analysis prior to the next activity	<b>Activity 1132.1b Designing training program based on the survey</b>  Based on the survey, READI project will designing training program which will support the employers (pilot) to replicate and innovate the existing best practices based on their needs. The training program will involve pilot employers from life and non-life insurance, with mixture of multinational companies as well as local companies.	<b>Activity 1132.1c Series of Introduction Workshop to Employer training program</b>  Series of Introduction workshops will be piloted to introduce and familiarize selected good approaches for employers emerging from the activity above. Gender equity will be an important element of this program.
<b>1200 Strengthened actuarial science and risk management profession in Indonesia</b>		
<b>1210 Increased awareness of the actuarial profession by selected target groups including high school and university students, teachers, and parents in Indonesia</b>		
<b>1211 Technical Assistance provided to partners on delivery of high school math outreach programs with an actuarial science focus</b>		
<b>Sub-Activity 1211.1a: Actuarial Science and Social Inclusivity Campaign</b>  Develop an awareness and education campaign (targeting students and parents) on the profession (actuaries) that profiles women and under-represented ethnic groups and highlights the different career paths associated with the profession	<b>Sub-Activity 1211.1b: Math Outreach site visits, event participation and liaison approaches.</b>  Actions will include: (1) School Visit: “Think About Mathematics” workshop for students (2) “Think About Actuarial Science” talk show (3) Problem of The Week (POTW) for teachers and students (4) Video promotion of actuarial science and actuary profession created (5) Mathematics contest “Cayley” and “Fermat” conducted in February 2018.	
<b>1212 Actuarial science and risk management awareness campaigns designed and implemented</b>		
<b>Sub-Activity 1212.1a: Marketing and Awareness Campaigns</b>  The project will design and deliver a number of tailored public education campaigns targeting: <ul style="list-style-type: none"> <li>high school students;</li> <li>high school mathematics teachers and school counsellors;</li> <li>parents of high school students interested in mathematics studies; and</li> <li>members of the Indonesian General Insurance Association (AAUI) among others.</li> </ul>	<b>Sub-Activity 1212.2a Support to Partners Awareness Campaigns</b>  A number of industry representatives have indicated that they are already engaged in public outreach and awareness campaigns. Others, such as PAI and OJK have a mandate for public awareness campaigns. As such, READI will act to support, as opposed to lead, public awareness campaigns through strategic interventions and partnerships	
<b>1213 Public interest in actuarial science and risk management promoted through research, publications and media</b>		
<b>1213.1a: Actuarial Science Public Interest Papers</b>	<b>1213.2a: Actuarial Science and Risks Associated with Climate Change in Indonesia Initiative</b>	<b>1212.2b Actuarial Science and Gender/Social Inclusion in Indonesia Initiative</b>

WBS# and Activity	Activity Description	
<p>A series of short papers that utilize actuarial expertise and address topical public interest issues involving risk and uncertainty for Indonesia will be prepared targeting policy makers, civil society organizations, insurance and pension industry professionals, news organizations, and interested public.</p>	<p>A linked series of workshops, applied research and public interest activities addressing actuarial science and climate change. The initiative will draw on actuarial science expertise to build public and professional understanding of risks and actions to address climate change in Indonesia. Funds for the initiative will be in part drawn from pricing of the READI project carbon footprint.</p>	<p>A linked series of workshops, applied research and public interest activities addressing actuarial science and gender/social inclusion. The initiative will draw on actuarial science expertise to build public and professional understanding of risks and actions to address gender/social inclusion in Indonesia.</p>
<p><b>1220 Strengthened development of actuarial profession – firms, associations, and regulators - in Indonesia</b></p>		
<p><b>1221 International professional association and regulator linkages on profession-related topics facilitated for OJK, PPPK and PAI</b></p>		
<p><b>Sub-Activity 1221.1a: Workshop to Strengthen Financial Supervision Governance</b></p> <p>In response to a request from OJK, READI will liaise with the Canadian Office of the Superintendent of Financial Institutions (OSFI) to provide a workshop focused on strengthening financial supervision and related governance issues. Representatives from Pusat Pembinaan Profesi Keuangan (PPPK) and the Ministry of Finance will also be invited to participate in the workshop. The workshop is tentatively scheduled for late August/September 2017.</p>	<p><b>Sub-Activity 1221.2a Professional Meetings</b></p> <p>READI will support and or finance professional meetings for regulators and associations to enhance linkages and create opportunities for professional exchanges</p>	
<p><b>1222 Continuing Professional Development (CPD) seminars, workshops and mentorships conducted for actuaries and other stakeholders</b></p>		
<p><b>Sub-Activity 1222.1a: Thematic Workshops to Strengthen Capacity of Insurance Associations</b></p> <p>In collaboration with AAUI and AAJI, the READI project will design and deliver a series of workshops addressing priority capacity development issues for the two insurance associations. Workshops will typically be one to two days in length. Presentation materials and the outcomes of discussion and deliberation will be made available to project stakeholders via the web</p>	<p><b>Sub-Activity 1222.2a: Workshop on Social Inclusion in the Actuarial Science Profession in Indonesia</b></p> <p>The READI project will carry out an in-depth gender analysis on human resource practices for women and men who work in the insurance industry and in teaching AS subjects/programs. A workshop to present findings and identify potential follow-up activities will be conducted in October 2017 (tentative). Key recommendations and action items will be conveyed to the IUTF and IUTF working groups for further action.</p>	
<p><b>1223 TA provided to regulators and associations to strengthen organizational capacity</b></p>		
<p><b>Sub-Activity 1223.1a: Mapping Against IAA and CIA Continuous Professional Development Practices &amp; Standards for PAI</b></p> <p>The READI Actuarial Capacity Building Specialist will undertake a mapping of current International Association of Actuaries (IAA) and Canadian Institute of Actuaries (CIA) continuous professional development (CPD) practices and standards as a basis for preparing a set of recommendations and proposed continuous professional development standards for the <i>Persatuan Aktuaris</i></p>	<p><b>Sub-Activity 1223.1b: PAI Adoption of CPD Rules and Requirements</b></p> <p>The CPD professional development practices and standards prepared under sub-activity 1223.1a above will be presented to the PAI Board of Directors for consideration and adoption.</p>	

WBS# and Activity	Activity Description
<p><i>Indonesia</i> (PAI). The process will involve study and comparison of the current IAA, CIA and PAI CPD practices and standards along with a series of consultations with senior PAI representatives.</p>	
<p><b>Sub-Activity 1223.1c: Socialization of PAI Capacity Development Needs Assessment &amp; Plan to PAI Members</b></p> <p>Between January and March 2017, the READI Actuarial Capacity Building Specialist met with PAI and PAI stakeholders to assess, identify and prioritize key PAI capacity development related to:</p> <ul style="list-style-type: none"> <li>a) organizational development and sustainability</li> <li>b) communication and networking</li> <li>c) provision of services to PAI members</li> </ul> <p>The three-year PAI Capacity Development Work Plan generated by this process will also be presented to the PAI Board of Directors for consideration and adoption. Any necessary changes will be made and then, once formally adopted, the Capacity Development Work Plan and supporting Continuous Professional Development Practices &amp; Standards will be presented to PAI members.</p>	<p><b>Sub-Activity 1223.1d: Technical Assistance to Support Recruitment of Executive Director for PAI</b></p> <p>Responding to a key organizational constraint, READI will work with the PAI to help recruit an Executive Director. The project will provide technical advice to help short-list and interview suitable candidates and provide financial support to enable the PAI to hire the most suitable candidate. This support will be provided for 2 to 2.5 years, during which time the Executive Director and PAI will work to strengthen the organization's long-term income generation capacity and financial sustainability.</p>



## 4. Project Management Activities

### 4.1 Human Resource Management

#### Recruitment of Additional Team Members and Consultants for READI Jakarta Team

As the project swings into implementation of a full program of capacity development activities for the 2017/18 work plan period and beyond it has become apparent that there will be significantly more demands on READI Jakarta team member's time than previously envisioned. In particular, the Actuarial Science research grant program, and undergrad scholarship program will require significant level of effort to coordinate and support activities. Similarly, ongoing knowledge management and communications/public education activities will require additional part-time consultants to the project for most of the next two years to ensure that all project maintain momentum during the important "middle years". Accordingly, the project will recruit and operationalize the following positions:

1. Indonesian Gender Equity Expert
2. Knowledge Management/Communications
3. Scholarship Management/Research Program Officer

One of READI Jakarta team members will be assigned to help the Mathematics Outreach Program Officer to handle administrative tasks. This team member will be responsible for booking school visits, maintaining materials and maintaining feedback data.

#### READI Team Human Resources at uWaterloo

The Canadian Gender consultant has been on board since Q3 2016/2017 and extensive discussions with her have been held to further the gender strategy and identify the needs for an Indonesian gender consultant or consultants. That work has been completed and the project will be hiring an Indonesia Gender consultant as soon as possible.

In Canada, all staff are in place.

#### READI Team Development & Training:

##### World Association for Co-operative Education (WACE) 2017 World Conference (Bangkok, 05-08 June 2017)

WACE is the only international professional organization dedicated to developing, expanding, branding and advocating for cooperative and work-integrated education programs within industry and educational institutions. The conference offers an opportunity for showcasing and sharing of best practices in cooperative education. The uWaterloo READI Cooperative Education Expert and READI Program Officer – Cooperative Education will attend the conference to learn how cooperative education models are being implemented in other countries, particularly in the ASEAN region. Particular attention will be paid to lessons learned regarding hybrid models supporting a transition from traditional internships to full-fledged co-op education models.

##### Training and Development for READI Program Officer – Cooperative Education at uWaterloo (2-3 weeks, July-August 2017)

This will be a follow up to the READI Program Officer – Cooperative Education's first visit training and exposure visit to University of Waterloo in November 2016. Now that the READI team has entered into substantive discussions with university partners, industry and DIKTI regarding the various challenges affecting implementation of cooperative education models, the team has identified key obstacles and can focus on developing solutions to related challenges existing in the Indonesian higher education milieu. This intensive training visit will

focus on deepening the PO – Cooperative Education’s understanding of the technical details of job development, student support and “matching” in which students are matched to employers. Other important areas of study will include:

- Co-op program administration (e.g., system and account management, work term consultations, employer relationship management, etc.);
- identifying work placements, creating job descriptions, advertising, and training, supervising and coaching and evaluating co-op students;
- Employer development (e.g., recruitment, job development, job descriptions for all levels of students, etc.);

### **Training and Development for READI Program Officer – Math Outreach at uWaterloo (2-3 weeks, April and October 2017)**

The READI Program Officer – Math Outreach will participate in further training at University of Waterloo in April and October 2017. While in Canada, she will job shadow with uWaterloo Center for Education in Mathematics & Computers (CEMC) to deepen her knowledge and understanding of CEMC math outreach strategies, approaches, tools and quality control mechanisms.

### **Salary Increases for READI Team Members in Indonesia and Canada**

In accordance with the Policy on Annual Fee and Salary increase under Multi-Year Service Contracts and Contribution Agreements: ([www.international.gc.ca/development-developpement/partners-partenaires/bt-oa/annualfee-honoraireannuels.aspx?lang=eng](http://www.international.gc.ca/development-developpement/partners-partenaires/bt-oa/annualfee-honoraireannuels.aspx?lang=eng)), the salary of locally engaged staff and local employees, paid in local currency, may be increased annually on the agreement anniversary date up to the CPI of the recipient country for the past 12 months. In accordance with the Bank of Indonesia, the inflation rate was an average of 3% annualized for 2016, which is the most recent 12 months there was data available. Local Salaries (1.2) were adjusted by 3% as of Q3 for 12 months (Oct to Sep). The impact of this increase will be budget neutral.

Salary increases for Canadian members of the READI team, both uWaterloo employees dedicated to the project (such as the Project Director and Field Director), and uWaterloo faculty and professors working on the project, are governed by the collective agreement between the uWaterloo and its employees which publishes its annual salary increase guidelines on the first of May each year. On average, over the past few years, the salary increase at uWaterloo has been around of 3%. Given the timing, we have opted to include a 3% annual increase for this fiscal year.

### **Incorporation of Cross-Cutting Themes into the Work Plan**

In the PIP, the activities listed below were identified as overall management issues. As the READI team moved forward with the planning for 2017/2018 AWP every effort was made to fully integrate RBM monitoring and evaluation, gender equity, climate change and environment into the project. As such the activities and budgets associated with the following cross-cutting themes and principles have been incorporated (or mainstreamed) into the overall work plan.

- 50.2 Baseline survey continued
- 50.3 RBM workshops
- 60.1 Gender specialists contracted
- 60.2 Gender checklist
- 60.3 Training materials
- 60.4 Workshops
- 70.1 Environment specialist contracted

- 70.2 Project carbon tracking
- 70.3 Online workshop
- 70.4 Actuaries in Climate for Development Program

## 4.2 Procurement

A procurement plan for FY 2017/2018 has been prepared and is presented in Appendix D.

There are a number of items which will be needed to support programming during this year. As they are only available from the University of Waterloo there are included here for prior approval.

No.	Item	Sources	Justification of Vendor Selection
1.	CEMC Math Test Material	University of Waterloo	Sole vendor. Material owned and managed by University.
2.	Curriculum support material, e.g. books for shot courses	University of Waterloo	Price competitiveness and availability of the items in the market, considering the volume that we order.
3.	Event/Workshop Supplies	University of Waterloo	Sole vendor. Stationery provided by university, e.g. pen, agenda, mug, paper weight, etc.
4.	Exemption Fee	Chattered Professional Body in Actuary (SOA/IFoA/PAI)	Payment for exam fee. This item not listed in the Contribution Agreement, however we agree to pay for the exam fees in accordance for student to have accreditation as an Actuary.
5.	Software extension package	Software vendor	For this procurement, we will have three quotations and Price Comparison Form filled and approved. The extension might include the extension of user license period, or the extension of the software family
6.	Sponsorship	University/School in Indonesia	Reliable possible recipients who has event that can extend our math outreach activities. Sponsorship given to event related with math/actuarial science enthusiast, e.g. math olympiad, talk show/seminar about actuarial science. We will have the MoU with each of recipients.

## 4.3 Monitoring & Evaluation

In October 2016, the READI project brought on-board an M&E consultant to assist in the development of the READI project monitoring system. Since that time, the consultant has:

- Oriented the team (Indonesia and Canada) to Results Based Management;
- Assisted in the refinement of the project Logic Model and PMF;
- Led in the development of READI's Activity and Results Tracking (ART) strategy set out below.

The strategy is based on the PMF. In it, the indicators have been configured around specific key informant groups. These comprise:

- International Actuarial Associations and other off shore key informants

- Sector leaders (Indonesia) in Industry, Education and Government
- Students (High School and University)
- Heads/senior administrators in Math and Science faculties
- Participants of the Industry University Task Force (IUTF) and its working groups
- Managers of the Applied Research Program
- Research grant recipients
- Scholarship program managers
- Company/Association key contacts
- Partners in READI supported awareness raising campaigns
- Recipients of READI TA
- READI Project Team (re: Carbon Tracking of Expenditures)

These groups are not entirely discreet. For each, one or more data collection instrument is currently being prepared. In the strategy table below, each instrument is referenced to a set of indicators from the PMF, a method, a prescribed frequency of data collection and a person responsible. Since December, the READI team has developed questions/lines of inquiry/data fields for each data collection instrument.

Over the fourth quarter of the 2016/17 AWP and during the first quarter of 2017/18 AWP the following activities are underway:

- Team members are tasked with documenting baseline conditions particularly in areas where the project is developing a feature or capacity that is new to the actuarial sciences in Indonesia, for example: High School Math Outreach, Co-op Program (Integrated Workplace Learning), and a research granting mechanism, an undergraduate scholarship program, and the Industry-University Task Force.

The RBM specialist is working with the team to develop on-line instruments/checklists to reach various stakeholder groups including; international stakeholders (#1), administrators at universities (#4), participants on the IUTF (#5), those who will be managing grants and scholarship programs (#6, 8), and at an operational level, those receiving TA from the READI team.

READI has hired:

- A consulting firm, B-Trust, to develop baseline surveys for use with actuarial science education faculty and leaders, heads of insurance firms, and students at partner campuses;
- A database developer who is building a MySQL-based relational data base, data tracking and reporting system. This robust database's functionality will be fine-tuned over the coming year.

The READI team will submit the READI Baseline Study as part of Annual Progress Report.

A detailed strategy for the READI Monitoring and Evaluation program is presented as Appendix K.

## 4.4 Knowledge Management & Public Education

The READI project aims to increase the profile of actuarial science as a profession, and awareness of the services that actuaries provide to encourage sustainable economic growth characterized by judicious risk assessment and management. As outlined in *Appendix I: Public Awareness re: AS Strategy (in-Indonesia)*, the project will conduct a number of public education campaigns aimed at selected target groups. Effective knowledge management efforts will be required to support and add value to READI project public education efforts. Knowledge management efforts will also be needed to document and help publicize project

products, innovations and successes, and later to help sustain and extend the results generated by the project.

The project will hire a part-time Knowledge Management & Communications consultant to help the project document and package knowledge and innovations generated by the project, and to produce materials required for READI public education initiatives. The consultant will also provide services to support communication of key messages regarding co-op education, math outreach and relevant gender equity issues to project stakeholders and interested members of the public. Details of the public awareness strategies are presented in appendix I and J.

## 5. Budget Summary by Key Budget Category

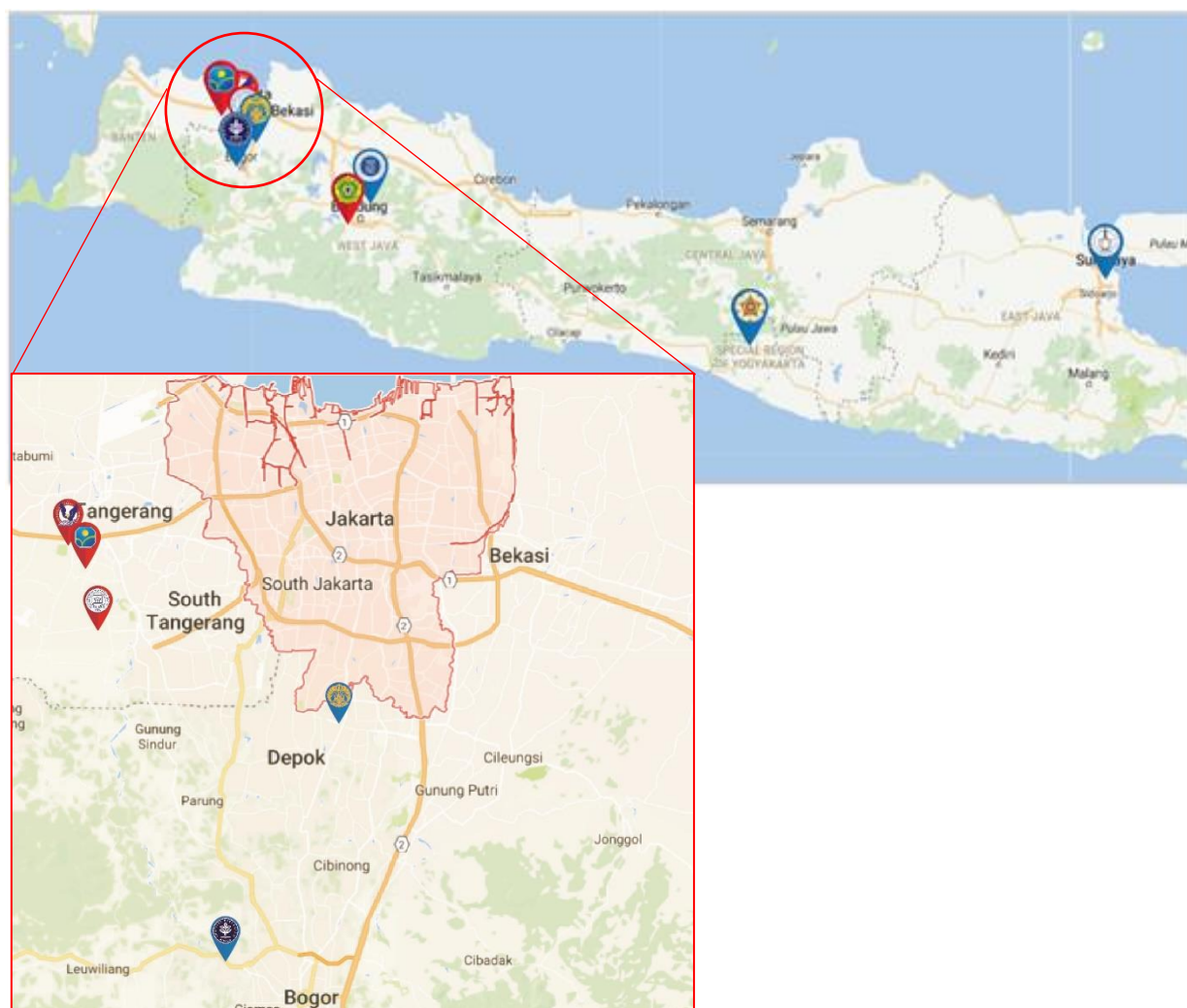
Description	ORIGINAL CA BUDGET	BUDGET AS REVISED - AWP '17-'18	PERCENT (%) CHANGE FROM CA	Manulife Contribution	TOTAL AVAILABLE FUNDING	AWP 2017-2018 Budget	Notes re Justification for Budget Variance
<b>1.1 Remuneration - Organization's Employees in Canada and Overseas</b>							
1.1.1 Employees based in Canada and on short-term assignment overseas	2,518,475	2,889,808	15%	-	2,889,808	650,728	#1
1.1.2 Canadian Personnel on long-term assignment overseas	762,500	736,520	-3%	-	736,520	167,375	
<b>1.1 Subtotal</b>	<b>3,280,975</b>	<b>3,626,328</b>		-	<b>3,626,328</b>	<b>818,103</b>	
<b>1.2 Remuneration - Local Employees</b>	1,247,750	1,154,491	-7%	-	1,154,491	268,576	
1.4.1 Canadian Subcontractors	843,750	551,507	-35%	-	551,507	138,811	#2
1.4.2 Local Subcontractors	225,000	265,149	18%	-	265,149	125,345	#3
<b>Subtotal - Fees</b>	<b>5,597,475</b>	<b>5,597,475</b>		-	<b>5,597,475</b>	<b>1,350,836</b>	
<b>1.6 Reimbursable Costs</b>							
1.6.1 Travel Costs - Project Staff	794,060	794,060	0%	-	794,060	126,538	
1.6.2 Benefits & Allowable Expenses - Long-term Assignment Overseas	654,800	907,159	39%	-	907,159	204,073	#4
1.6.3 Students & Trainees Training Costs (In Canada)	1,754,430	1,400,000	-20%	201,200	1,601,200	379,061	#5
1.6.4 Other Training & Program Costs (In Indonesia)	4,095,570	4,450,000	9%	798,800	5,248,800	2,007,723	#6
1.6.6 Goods, Assets and Supplies	176,000	105,608	-40%	-	105,608	36,836	#7
1.6.7 Administration Costs Directly Related to the Project	480,000	298,033	-38%	-	298,033	103,200	
<b>Subtotal Reimbursable Costs</b>	<b>7,954,860</b>	<b>7,954,860</b>		<b>1,000,000</b>	<b>8,954,860</b>	<b>2,857,431</b>	
<b>Total Fees and Reimbursable Costs</b>	<b>13,552,335</b>	<b>13,552,335</b>		<b>1,000,000</b>	<b>14,552,335</b>	<b>4,208,266</b>	
<b>1.7 Allowance for Indirect/Overhead Costs</b>	<b>1,626,280</b>	<b>1,626,280</b>			<b>1,626,280</b>	<b>474,992</b>	
<b>Total Expenses</b>	<b>15,178,615</b>	<b>15,178,615</b>		<b>1,000,000</b>	<b>16,178,615</b>	<b>4,683,258</b>	



Reference #	Justification for Budget Variance (>10%)
1	Proposal budget incorrectly identified a portion of uWaterloo Faculty salary costs as Subcontractor (1.4). Budget was moved to correctly allocate all Faculty member costs as salary (1.1). The overall budget for 1.1 was also updated from the proposal budget to reflect actual amount after staff hires in place
2	Proposal budget incorrectly identified a portion of uWaterloo Faculty salary costs as Subcontractor (1.4). Budget was moved to correctly allocate all Faculty member costs as salary (1.1). A portion of budget was also moved to Local Subcontractors to allow for more effective deployment of subcontractors and efficient use of project funds.
3	Local Subcontractors budget increased to allow for more effective deployment of subcontractors and efficient use of project funds.
4	The difference was due to the number of dependant family member of Field Director's, including school fees, etc.
5	Program related changes
6	Program related changes
7	We don't think we will need this much for assets and supplies. We engaged with reliable vendors to provide us with assets and supplies that we need with reasonable price.

## Annexes:

### A. Map showing location of partner universities



No.	Name	State or Private	Location
1	Institut Teknologi Sepuluh November (ITS)	State	Surabaya, East Java
2	Universitats Gajah Mada (UGM)	State	Yogyakarta, Central Java
3	Institut Teknologi Bandung (ITB)	State	Bandung, West Java
4	Institut Pertanian Bogor (IPB)	State	Bogor, West Java
5	Universitas Indonesia (UI)	State	Jakarta
6	Universitas Pelita Harapan (UPH)	Private	Karawaci, Banten
7	Surya University	Private	Serpong, Banten
8	Universitas Parahyangan	Private	Bandung, West Java
9	Universitas Prasetiya Mulya	Private	Serpong, Banten

## B. Performance Measurement Framework with Updated Targets

(21 March 2017) \*Note that the total number of indicators may be reduced following discussions with GAC scheduled for early April 2017.

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
1000 Indonesia recognized as a centre of excellence in actuarial science and risk management with attention to gender equity <sup>13</sup>	1000-1 No. of Indonesian university departments or faculties offering actuarial programs recognized as centres of excellence in actuarial science and risk management with attention to gender equity assessed against criteria established by READI	No programs recognized	1 by 2019, 2 by project end	In-country and international published documents  Institute publications	Review of university AS/Risk Management program against Centre of Excellence Criteria <sup>14</sup> .  Document reviews	Baseline  Mid-term  Five-year	Project Director/Field Director
	1000-2 Perception of Indonesian and international professionals active in actuarial science of the quality and gender equity of Indonesia's	Inception Mission finding: Indonesia not producing adequate numbers	Positive shifts over time in several or more of the variables noted in footnote 2 on a "poor" to "excellent" scaler.	Surveys and interviews with stakeholder groups (industry, government, educators, professionals)	On-line survey with follow up key informant interview	Baseline  Mid-term  Five-year	Project Director/Field Director

<sup>13</sup> To be recognized as a centre of excellence, a university actuarial sciences program maintains: a stream of study, lecturers (1 fellow or 2 associates - both full time), an integrated work learning or professional internship, an active research program, a supply of (f/m) students who are job market ready.

<sup>14</sup> The READI project is still finalizing the criteria that will be used to assess "centres of actuarial science/risk management excellence". Proposed assessment criteria include the following: 1) The Department/Faculty must offer an Actuarial Science stream; 2) The Department/Faculty must have two full-time lecturers who demonstrate a "substantial commitment to actuarial science." At least one of these lecturers must be Associate/Fellow of an actuarial association, and at least one must have a PhD in a related field; 3) The Department/Faculty must demonstrate some ongoing scholarship in Actuarial Science.

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
	actuarial science and risk management education and profession <sup>15</sup>	compared to some ASEAN countries (e.g., Singapore, Malaysia); quality of professionals entering the workforce is variable. Perception survey will establish qualitative baseline	Positive shift on a question that compares Indonesia to comparator ASEAN countries in its ability to produce quality actuaries into the workforce	including leaders and members of PAI and international actuarial associations			
<b>1100</b> Increased employment of female and male Indonesian accredited actuarial science and risk	<b>1100-1</b> Number of female and male actuarial science graduates in Indonesia who obtained nationally or internationally recognized credentials	0 (@ 31Dec2016)	150 (50% female)	Partner universities, PAI, IFoA, SOA, etc.	Analysis of university and PAI data  Online survey with follow up key informant interviews	Annual Mid-term Five-year	Project Director/Field Director with consultant support

<sup>15</sup> Variables to be checked include: a) Presence of regulatory practices, b) Extent of education/training in AS, c) Presence of professional body to represent AS in Indonesia, d) Size of the actuarial skill base in country, e) Research capacity in AS, e) Attention to gender/diversity factors in...AS education, development of the regulatory environment and in policies and practices of industry associations.

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
management graduates by Indonesian businesses, universities and government agencies	during the 2017 – 2020 period <sup>16</sup> .						
	<b>1100-2</b> Number of female and male actuarial science graduates employed by relevant Indonesian businesses, universities or government agencies within six months of graduating during the 2017 – 2020 period.	0 (@ 31Dec2016)	200 <sup>17</sup>	University partners, PAI, industry partners, AAUI, AAJI	Online survey with follow up key informant interviews	Annual Mid-term Five-year	Project Director/Field Director with consultant support
	<b>1100-3</b> Perception by Indonesian business, universities, government agencies of the availability and quality of actuarial science graduates <sup>18</sup>	Baseline survey will establish starting point	Positive shift in several or more of the variables noted in footnote 3 on a “poor” to “excellent” scale.  By close, majority of respondents provide combined scores in the “good” to	Partner institutions DIKTI PAI AAJI, AAUI Local industry	On line survey with follow up key informant interviews	Baseline Mid-term Five-year	Project Director/Field Director with consultant support

<sup>16</sup> Note that apart from one uWaterloo MActSci scholarship recipient who was granted IFoA credits based on her MActSci program performance, READI’s support for and influence on achievement nationally or internationally recognized credentials did not begin until the 2017/18 academic year at which time the Undergraduate Scholarship Program began reimbursing AS program students for successfully taking PAI exams.

<sup>17</sup> Note that achievement of this target will be influenced by the number of actuarial science program “seats” available to students in READI partner universities.

<sup>18</sup> Quality refers to having sufficient, relevant knowledge and skills, and to being gender sensitive.

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
			“excellent” range for variables noted in footnote 3. <i>(targets to be refined after baseline, with AWP)</i>				
<b>1200</b> Strengthened actuarial science and risk management profession in Indonesia <sup>19</sup>	<b>1200-1</b> Perception of actuarial profession in Indonesia among industry, actuaries and regulatory bodies, including sensitivity to gender balance/ experiences	Baseline survey will establish starting point	Positive shift in several or more of the variables noted in footnote 4 on a “poor” to “excellent” scale.  By close, majority of respondents provide combined scores in the “good” to “excellent” range for variables noted in footnote 4. <i>(targets to be refined after</i>	Partner institutions DIKTI PAI AAJI, AAUI Local industry	On line survey with follow up key informant interviews	Baseline  Mid-term  Five-year	Project Director/Field Director with consultant support

<sup>19</sup> Variables associated with a strengthened actuarial science and risk management profession in Indonesia include perceived: importance/relevance, public profile, access, responsiveness, and professionalism.



EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
			<i>baseline, with AWP)</i>				
	<b>1200-2:</b> Number of ASAI and FSAI accredited actuaries registered with Persatuan Aktuaris Indonesia (PAI).	2016 – PAI membership: 206 Fellows, 193 Associates	To be obtained from PAI	PAI	Consultation with key contact at PAI	Baseline Mid-term Five-year	Field Director
<b>1110</b> Strengthened linkages <sup>20</sup> between industry and university education in Indonesia <sup>21</sup>	<b>1110-1</b> Number of linkages established between industry and universities involving the actuarial profession	No formal linkages at inception	2 linkages established by 2017; 10 by end of project	Partner institutions DIKTI PAI AAJI, AAUI Local industry	On line survey with follow up key informant interviews	Baseline Mid-term Five-year	Field Director with consultant support
	<b>1110-2</b> Perception of effectiveness of Industry-University Task Force and working groups by stakeholders <sup>22</sup>	N/A	Majority of survey and interview respondents rate the variables in footnote 7 as “good” or “excellent”	Participants on the IUTF from industry, universities and government	Online survey with debriefing workshop	Annual	PO – Capacity Development and Training

<sup>20</sup> A linkage is a formal agreement to co-operate, cemented with the creation of a joint body or a collaborative undertaking. It could be a task force, working group, or a joint research initiative.

<sup>21</sup> Variables associated with strengthened linkages include: visibility, clarity of purpose, scope of topics, formality of culture, representativeness (f/m), effectiveness, innovativeness, responsiveness, sensitivity to gender equity/diversity in the profession.

<sup>22</sup> Effectiveness variables for the IUTF include: level of participation, breadth of representation, sharpness of focus, quality of planning, progress against plan, availability of secretariat support, and coherence of organizational structure.

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
	<p><b>1110-3</b> Number of co-op programs that meet criteria established by project (duration, number of placements, nature of work and compensation)</p> <p><b>1110-4</b> Number co-op terms offered by employers and utilized by students (m/f)</p>	No current co-op programs or co-op terms	<p>3 co-op programs – by project end</p> <p>270 co-op terms (50% by females)</p>	Participating institution reports and key contacts	Analysis of project and participating institution reports; interactions with key contacts	Annual	PO – Co-op Education
<b>1120</b> Strengthened capacity of female and male actuarial science and risk management teaching professionals in Indonesia	<p><b>1120-1</b> Number of (f/m) lecturers at participating Indonesian universities who have: a) attained at least four professional actuarial credits b) attained associate status and above of an actuarial organization</p>	One professor with a PhD in actuarial science (ITB)	<p>15 lecturers (f/m) have attained at least four professional actuarial credits</p> <p>2 lecturers (f/m) have attained associate status and above of an actuarial organization</p>	Participating institution reports and key contacts	Analysis of project and participating institution reports; interactions with key contacts using checklist of data needs	Annual	Field Director/ Chief Actuarial Advisor
	<p><b>1120-2</b> Number of (f/m) lecturers who have an advanced degree in a field related to actuarial science and risk management</p>	0	15 lecturers and practitioners complete with a graduate degree				

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
	<b>1120-3</b> Number of professional actuarial credits earned by those supported	0	80 professional actuarial credits obtained by those supported				
	<b>1120-4</b> Perception by Indonesian business, universities, government agencies of the strength of actuarial science and risk management teaching in Indonesia <sup>23</sup>	To be collected	<p>Positive shift in several or more of the variables noted in footnote 8 on a “poor” to “excellent” scale.</p> <p>By close, majority of respondents provide combined scores in the “good” to “excellent” range for variables noted in footnote 8.</p> <p><i>(targets to be refined after baseline, with AWP)</i></p>	Partner institutions DIKTI PAI AAJI, AAUI Local industry	On line survey with follow up key informant interviews	Baseline Mid-term Five-year	Field Director with consultant support

<sup>23</sup> Variables associated with the strength of actuarial science and risk management teaching include: syllabus alignment with accreditation exam, faculty teaching practices to deliver of content, faculty knowledge of AS content, engagement of teaching institutions with industry, management of the teaching institution, understanding /awareness of and attention to gender equity/diversity issues in teaching/learning, attention to climate risk and risk management.

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
1130 Improved access to actuarial science and risk management education for female and male university students and graduates in Indonesia	1130-1 Number of (f/m) students enrolled in actuarial science streams in Indonesian universities	<40 students in 2 Masters streams (UI, ITB). No undergraduate actuarial science streams approved and with enrolled students	-600 students (at least 300 female) -includes all students enrolled in identifiable actuarial science streams at identified participating universities.	Participating institution reports and key contacts	Analysis of enrollment data; interactions with partner contacts using checklist of data needs	Annual	Chief Actuarial Advisor
	1130-2 Number of actuarial science and risk management streams of study established and recognized in Indonesian universities	Two masters in actuarial science programs (UI, ITB), One draft Bachelor's program in approval process (Surya)	4 undergraduate streams of study (among participating universities)	Participating institution reports and key contacts	Analysis of project and participating institution reports; interactions with key contacts using checklist of data needs	Annual	Chief Actuarial Advisor
	1130-3 Number of companies with a) newly formed, or b) strengthened actuarial development programs	To be collected	10 companies	Insurance companies	On line survey with follow up key informant interviews	Baseline Mid-term	Field Director with consultant support

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
	<b>1130-4</b> Number of participants (f/m) in employer actuarial science student development programs		50 people (at least 50% female)			Five-year	
	<b>1130-5</b> Number actuarial science credits earned by scholarship students, by target student population (gender, home location)	N/A	5,000 actuarial science credits earned (2,500 by females)	Scholarship Mgmt. Database	Review database	Real time	Scholarship/ Research Officer
<b>1210</b> Increased awareness of the actuarial profession by selected target groups including high school and university students, teachers, and parents in Indonesia	<b>1210-1</b> High school and university students and their families' awareness and associated perception of actuarial profession in Indonesia, with attention to gender issues	Initial average recognition rate (HS student) is about 4% equally distributed between genders  University student recognition (f/m) to be determined in B/line study	Anticipate about 50% recognition rate (f/m) in targeted schools  University student recognition (f/m) to be determined once baseline is known	Students	Question posed at beginning of each school visit (session), number count of students recognizing what an Actuary is, broken down by gender, grade	Real time (with each school visit)	PO – Math Outreach

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
	<b>1210-2</b> Number of (f/m) students participating in HS outreach activities (including Initial School Visit, Think About AS session, Problem of the Week distributions), and math competitions	Prior to READI, math competitions organized by student associations	50,000 (25,000 each f/m)  Math comp: 5,000 (250f/2500m)	Partners and Team/ Math Outreach data base	Review data base	Real time (with each event)	
<b>1220</b> Strengthened development <sup>24</sup> of actuarial profession – firms, associations, and regulators -- in Indonesia	<b>1220-1</b> Perception of the development of the actuarial profession among industry, actuaries and regulatory body, with attention to gender issues	To be collected	Positive, shift in several or more of the variables noted in footnote 9 on a “poor” to “excellent” scale.  By close, majority of respondents provide combined scores in the “good” to “excellent” range for variables in footnote 9	Partner institutions - DIKTI - PAI - AAJI, AAUI - local industry	On line survey with follow up key informant interviews	Baseline  Mid-term review  Five-year review	Field Director with consultant support

<sup>24</sup> Variables associated with the development of the actuarial profession include: public perceptions of the importance of the profession, leadership of the profession in Indonesia in relations with international bodies, domestic policy influence, services to members (e.g., white papers, website, member professional development), capacity to support member compliance with standards, ability to maintain own compliance with IAA standards, attention given to the participation of women and men in the insurance and risk management profession.



EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
			<i>(targets to be refined after baseline, with AWP)</i>				
	<b>1220-2</b> Progress against capacity building plan (PAI)	Baseline capacity assessment in progress	Identified capacity building activities implemented by PAI	Executive Director/Chair of the Board	Key informant interview	Annual	
<b>1111</b> Technical assistance (TA) provided to partner universities to establish actuarial science and risk management streams of study	<b>1111-1</b> Number of universities receiving TA to support establishment AS streams of study	0	6	Team	Simple count	Annual	Chief Actuarial Advisor
	<b>1111-2</b> Effectiveness of the TA provided in support of establishing AS streams of study	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	TA recipient key contacts	On-line survey	Annual	
<b>1112</b> Actuarial Science Applied Research Program established and operated	<b>1112-1</b> Number of papers/technical reports produced	0	40 papers/ technical reports	In-country and international published documents	Catalog	Real time	Scholarship/Research Officer
	<b>1112-2</b> Perception of quality and value <sup>25</sup> of program by	N/A	Positive, shift in several or more of the variables	Team Recipients	On line survey	Annual	

<sup>25</sup> Perceptions variables associated with “quality” and “value” of the research program include: clarity of purpose, relevance, visibility, clarity of eligibility requirements, ease of making an application, responsiveness of program to inquiries, support provided to recipients, promotion/dissemination of knowledge products, treatment of gender equity and diversity in relation to the actuarial sciences in Indonesia.

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
	stakeholders (applicants/ recipients)		noted in footnote 9 on a “poor” to “excellent” scale.  By close, majority of respondents provide combined scores in the “good” to “excellent” range for variables in footnote 9 (targets to be refined after baseline, with AWP)				
1113 Industry – University Task Force and associated working groups established and operated	1113-1 Number of industry-university task forces established	0	1 task force/ 4 working groups	Team	Simple count	Real time	PO –Capacity Building & Training
	1113-2 Effectiveness of the TA provided in support of creating and operating an industry-university task force and associated working groups	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	TA recipient key contacts	On-line survey	Annual	
1114 TA provided to selected	1114-1 Number of universities and companies receiving TA	0 co-op programs 0 co-op terms	7 universities 15 companies	Team	Simple count	Real time	PO – Co-op Education

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
universities to support development of actuarial science and risk management co-op programs	for the development of co-op programs						
	<b>1114-2</b> Effectiveness of the TA provided in support of creating co-op programs	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	TA recipient key contacts	On-line survey	Annual	PO – Co-op Education
<b>1121</b> TA provided to partner universities for curriculum design – including review of international standards, course mapping and textbook review – that addresses material specified in Indonesian actuarial science professional exams	<b>1121-1</b> Number of universities for which actuarial science and risk management courses are verified as addressing material specified in Indonesian actuarial science professional exams	0	9 university partners	Team	Activity log	Real time	Chief Actuarial Advisor
	<b>1121-2</b> Effectiveness of the TA provided in support of curriculum design	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	TA recipient key contacts	On-line survey	Annual	

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
1122 Lecturers and selected female and male practitioners supported to obtain actuarial credits and/or relevant graduate degrees	1122-1 Number of (f/m) lecturers and practitioners supported financially through the project to obtain professional actuarial credits	0	30 (at least 50% female)	Participating institution reports and key contacts	Analysis of participating institution reports and interactions with partner contacts using checklist of data needs	Annual	Field Director
	1122-2 Number of (f/m) lecturers and practitioners supported through the project to obtain a Masters degree in actuarial science, statistics or mathematics	0	19 lecturers and practitioners (at least 10 females)	Project database	Database query	Annual	Field Director/Project Director
1123 Actuarial science mentoring provided through short courses, e-courses and workshops to selected female and male teaching professionals	1123-1 Number of short courses taught by visiting lecturers	0	25 courses	Team	Simple count	Real time	PO –Capacity Building & Training
	1123-2 Number of workshops delivered by visiting experts to teaching professionals	0	12 workshops				
	1123-3 Number of lecturer-months of (f/m) Indonesian lecturers participating in study and exposure visits	0	24 lecturer-months (with 50% female participation)				

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
1131 Actuarial science and risk management scholarship program targeted for female and male undergrad students designed and operated	1131-1 Number and value of scholarships awarded, by target student population (gender, home location)	0	\$1.9 million in scholarships awarded	Team/Scholarship Database	Review database	Real time	Scholarship/ Research Officer
	1131-2 Number of undergrad student-years completed by scholarship students	0	250 student-years completed by scholarship students (125 female)				
1132 TA provided to employers to strengthen actuarial development programs for employees	1132-1 Number of employers receiving TA for actuarial development programs	0	50 employers	Team	Simple count	Real time	PO – Capacity Development and Training
	1132-2 Effectiveness of the TA provided in support of strengthening actuarial accreditation programs	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	TA recipient key contacts	On-line survey	Annual	
1211 TA provided to partners on delivery of high	1211-1 Number universities receiving TA on delivery of HS math outreach	0	9 university partners	Team	Simple count	Real time	PO – Math Outreach

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
school math outreach programs with an actuarial science focus	<b>1211-2</b> Effectiveness of the TA provided in support of HS math outreach	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	TA recipient key contacts	On-line survey	Annual	
<b>1212</b> Actuarial science and risk management awareness campaigns designed and implemented	<b>1212-1</b> Number and type of marketing campaigns by target group (e.g., university students, parents, AAUI) with attention to gender	0	Up to 3 annual marketing campaigns with a gender lens	Team	Catalog	Real time	Field Director
	<b>1212-2</b> Number of partners supported for awareness campaigns	N/A	7 partners	Team	Simple count	Real time	
	<b>1212-3</b> Effectiveness <sup>26</sup> of the TA provided in support of awareness programming	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	TA recipient key contacts	On-line survey	Annual	
<b>1213</b> Public interest in actuarial science	<b>1213-1</b> Number type of publications/media initiatives launched	0	25 papers or multimedia products	Team	Catalog	Real time	PO - Knowledge Management (advised by PI)

<sup>26</sup> Effectiveness criteria will include: clarity of messages conveyed; audience engagement achieved (interesting or dull); and targeting of appropriate audiences;

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
and risk management promoted through research, publications and media	<b>1213-2</b> List of themes represented	N/A	At least 50% of knowledge products incorporate gender, climate change, or social inclusion themes				
<b>1221</b> International professional association and regulator linkages on profession-related topics facilitated for OJK, PPPK and PAI	<b>1221-1</b> Number of workshops involving national and/or international bodies addressing professional topics	0	5 workshops with (50% females)	Team	Activity log	Real time	PO Capacity Building & Training Officer
	<b>1221-2</b> Number of professional meetings involving Indonesian and international regulators and actuarial associations	0	10 professional meetings (50% females)				
<b>1222</b> Continuing Professional Development (CPD) seminars workshops and mentorships conducted for actuaries and other stakeholders	<b>1222-1</b> Number of professional seminars and workshops conducted	0	20 seminars, workshops	Team	Activity log	Real time	PO Capacity Building & Training Officer
	<b>1222-2</b> Number of female and male participants	0	400 participants (at least 200 females)	Team	Simple count	Real time	



EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS (by project end unless otherwise noted)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
1223 TA provided to regulators and associations <sup>27</sup> to strengthen organizational capacity	1223-1 Number of organizations supported	0	1 (PAI)	Team	Simple count	Real time	PO Capacity Building & Training Officer
	1223-2 Effectiveness of the TA provided in support of capacity building to regulators and associations	N/A	70% of survey and interview respondents (f/m) assess TA to be relevant, effective, timely and gender sensitive	TA recipient key contacts	On-line survey	Annual	

<sup>27</sup> Associations receiving TA may include: Persatuan Aktuaris Indonesia (PAI), Otoritas Jasa Keuangan (OJK), Pusat Pembinaan Profesi Keuangan (PPPK), Asosiasi Asuransi Jiwa Indonesia (AAJI) and/or Asosiasi Asuransi Umum Indonesia (AAUI).

## C. Updated Risk Register

RISK REGISTER		L-likelihood	I-impact:	1-very low	2-low	3-high	4-very high			
Risk Definition		Risk Response		Investment Statement	LM	Result	Jan. 2016 Initial Ass't	Sept. 2016 Changes, Comments	Feb. 2017 Changes, Comments	
<b>Operational Risks</b>										
<b>OP1</b>	Availability of Canadian and Indonesian personnel to participate in project activities is low due to work obligations at home institutions	<ul style="list-style-type: none"> <li>Engage multiple university partners</li> <li>Alternative partner strategy will broaden pools of expertise and increase availability of appropriate personnel</li> <li>Schedule major uWaterloo faculty inputs for times convenient to faculty member and project stakeholders.</li> </ul>		1110 Strengthened link-ages between industry and education 1120 Strengthened teaching of actuarial science and risk management in Indonesia			L = 1 I = 2	No changes	UWaterloo faculty scheduling challenges reduced from low (2) to very low risk (1)	
<b>OP2</b>	Indonesian higher education regulations and operational norms pose significant challenges to introducing study program innovations and change, including co-op	<ul style="list-style-type: none"> <li>As initial step, seek active support from Directorate General of Higher Education</li> <li>Provide global co-op education outcome information to relevant government agencies (DIKTI), university leadership, lecturers, students and parents to increase receptivity and accelerate implementation</li> <li>Use multiple partner approach to spread risk. Work with private and state universities.</li> </ul>		1110 Strengthened link-ages between industry and education 1120 Strengthened teaching of actuarial science and risk management in Indonesia			L = 2 I = 2	No changes	No significant change yet. Risk persists but strong support from Director General of Learning & Student Affairs bodes well for piloting of co-op program models at 2-3 universities. New university partner Prasetiya Mulya highly committed to piloting co-op education approach.	

RISK REGISTER		L-likelihood	I-impact:	1-very low	2-low	3-high	4-very high			
Risk Definition		Risk Response		Investment Statement	LM	Result	Jan. 2016 Initial Ass't	Sept. 2016 Changes, Comments	Feb. 2017 Changes, Comments	
		<ul style="list-style-type: none"> <li>• Flexible and iterative implementation process. Begin with hybrid models if necessary.</li> <li>• Exposure visits to Canada for senior DIKTI and partner university representatives to increase confidence in the benefits of co-op model.</li> </ul>								
<b>Financial Risks</b>										
<b>FIN1</b>	Interruptions or delays in funding impact activities	<ul style="list-style-type: none"> <li>• Financial management system includes contingency funding mechanism</li> <li>• Pre-project funding commitment to support advanced project action</li> <li>• Multiple funding sources, for example, industry, government agencies, and international multi-lateral funding agencies.</li> <li>• Concerted and urgent efforts to ensure project bank account in Jakarta is functioning ASAP.</li> </ul>		1100 Increased availability of Indonesian trained actuarial science and risk management graduates to Indonesian businesses, universities and government agencies			L = 1 I = 2	No changes	Impact increased from 1 to 2 until project bank account in Jakarta is opened and functioning. Forecasted that the project will have a bank account functioning in Jakarta by 01 April 2017. Any delays however, could delay implementation of activities and hamper project momentum.	
<b>FIN2</b>	Changes in value of Canadian currency reduce ability of project to undertake planned activities	<ul style="list-style-type: none"> <li>• Regular review of budget and costs of planned versus actual activities, assessment of cost effectiveness of each activity stream relative to expected and</li> </ul>		1100 Increased availability of Indonesian trained actuarial science and risk management graduates to Indonesian businesses,			L = 3 I = 2	L=3 I=3	Likelihood reduced from 4 (very high) to 3 (high). Actively engaged in seeking other source of matching funding from Industry and	

RISK REGISTER		L-likelihood	I-impact:	1-very low	2-low	3-high	4-very high			
Risk Definition		Risk Response		Investment Statement	LM	Result	Jan. 2016 Initial Ass't	Sept. 2016 Changes, Comments	Feb. 2017 Changes, Comments	
		actual results, and adjustment following review and approval through project governance mechanisms <ul style="list-style-type: none"> <li>• Seek collaborative arrangements with industry partners and associations to maximize economies of scale.</li> <li>• Seek supplemental or matching funding from alternative sources, for example, industry, government agencies, international multi-lateral funding agencies</li> </ul>		universities and government agencies 1200 Strengthened actuarial science and risk management profession in Indonesia					Government to support parallel and complimentary activities	
Development Risks										
<b>DEV1</b>	Indonesian and regional political instability constrains travel to Indonesia for the provision of Canadian technical assistance	<ul style="list-style-type: none"> <li>• Use technology to substitute for live presence</li> <li>• Develop travel risk mitigation and security procedures program</li> <li>• Actively monitor security situation and obtain reliable situation reports</li> <li>• Substitute with in-country expertise</li> </ul>		1100 Increased availability of Indonesian trained actuarial science and risk management graduates to Indonesian businesses, universities and government agencies 1200 Strengthened actuarial science and risk management profession in Indonesia			L = 2 I = 2	No changes	No changes	

RISK REGISTER		L-likelihood	I-impact:	1-very low	2-low	3-high	4-very high			
Risk Definition	Risk Response	Investment Statement	LM	Result	Jan. 2016 Initial Ass't	Sept. 2016 Changes, Comments	Feb. 2017 Changes, Comments			
<b>DEV2</b>	Global and/or regional economic instability leads to lower contribution from and engagement with industry project partners.	<ul style="list-style-type: none"> <li>National and multi-national partners engaged</li> <li>Project budget reallocations to substitute for industry contributions</li> <li>Lock-in industry contributions at project outset in a secure trust account</li> <li>Implement risk averse fund management systems</li> </ul>	1110	Strengthened link-ages between industry and education	L = 2 I = 2	No changes	No changes			
<b>DEV3</b>	Target universities fail to retain or recruit a sufficient number of qualified lecturers	<ul style="list-style-type: none"> <li>Work with DIKTI to obtain some exemptions or flexibility vis-à-vis hiring of new lecturers and part-time lecturers.</li> <li>Work with university leadership to lobby for allocation of funds to finance hiring contract lecturers.</li> <li>Apply existing government post-scholarship retention practices</li> <li>Work with industry partners to discourage hiring lecturers qualified through project mechanisms</li> <li>Develop retention programs and benefits</li> </ul>	1120	Strengthened teaching of actuarial science and risk management in Indonesia	L = 2 I = 2	No changes	No significant changes. This is a persistent and pivotal risk. Shortage of qualified AS lecturers is perhaps the greatest obstacle to producing large numbers of qualified actuaries quickly. Initial discussions at DIKT give cause for optimism that some flexibility regarding hiring regulations may be possible.			
<b>DEV4</b>	Retention and other incentives are not sufficient to encourage faculty to	<ul style="list-style-type: none"> <li>Provide strong incentives and rewards on completion, to encourage capable faculty to</li> </ul>	1120	Strengthened teaching of actuarial	L = 2 I = 2	L=2 I=3	Likelihood reduced from 3 to 2 as many short course participants			

RISK REGISTER		L-likelihood	I-impact:	1-very low	2-low	3-high	4-very high			
Risk Definition		Risk Response		Investment Statement	LM	Result	Jan. 2016 Initial Ass't	Sept. 2016 Changes, Comments	Feb. 2017 Changes, Comments	
	pursue actuarial accreditations	pursue accreditations during degree programs and/or while they are working		science and risk management in Indonesia					report that they plan to sit for PAI exams.	
<b>DEV5</b>	There are inadequate well prepared and capable students interested in actuarial science study programs	<ul style="list-style-type: none"> <li>• Early development of outreach programs at each participating university</li> <li>• Strong promotion of actuarial science as an in-demand professional qualification with excellent employment opportunities among targeted stakeholder groups (parents, teachers, guidance counsellors, university lecturers)</li> <li>• Scholarship program to compete with other career options perceived to be "more glamorous"</li> </ul>		1211 High school math outreach programs established with sensitivity to gender participation/representation			L = 2 I = 2	No changes	No significant change, however this risk is appearing to be less and less significant as awareness of actuarial science rises and more universities gear up to offer actuarial science courses.	
<b>DEV6</b>	Students achieving internationally recognized accreditations leave Indonesia for better opportunities abroad and do not contribute to diminishing the actuarial shortage	<ul style="list-style-type: none"> <li>• Emphasize and support efforts for actuarial graduates to obtain PAI accreditation.</li> <li>• Encourage employers to emulate international compensation packages, particularly those available in the region</li> </ul>		1100 Increased availability of Indonesian trained actuarial science and risk management graduates to Indonesian businesses, universities and government agencies  1200 Strengthened actuarial science and risk			L = 2 I = 2	No changes	No changes.	

RISK REGISTER		L-likelihood	I-impact:	1-very low	2-low	3-high	4-very high
Risk Definition	Risk Response	Investment Statement	LM	Result	Jan. 2016 Initial Ass't	Sept. 2016 Changes, Comments	Feb. 2017 Changes, Comments
		management in Indonesia	profession				
Overall Risk Level					The overall risk level for the project is low	The overall risk level for the project remains low	The overall risk level for the project remains low with some risk variables diminishing



## D. List of Materials for Approval (procurement plan)

List of Materials for Approval - University of Waterloo - Number 2

Project Title	READI	MODE:	1. Price Comparison	: <\$5,000
Country	Indonesia		2. Request 2 Quotes	: \$5,000<\$25,000
Project Purchase Order			3. ITT or RFP	: > \$25,000
Contracting Officer			4. Non competitive	
Del. Ref. Number				
Amount of Delegation	\$ 87,588			
Fiscal Year	2017 - 2018 (April 2017 - March 2018)			
Total Disbursed to Date	TBC	SOURCE:	RC : Recipient Country	
Firms's Name	University of Waterloo		RE : Regional in Recipient Country	
Date	Feb 16th, 2017		C : Canada	
Total Value of This LMFA	\$87,588		O : Other Country	

Note: Bank of Canada SCDN to IDR exchange rate 2017 of \$1.00 = 10,204.08 IDR (16Feb2017) used for calculations

Item No.	Purchase Order Group	Contract Clause	Description	Quantity	Est. Unit Cost IDR	Est. Unit Cost CDN\$	Total PO Value CDN\$	Proc. Mode	Source
1	Laptop	Local Office Field Exp	HP Business ProBook 450 G4	4	15,000,000	1,470.00	5,880	1	RC
2	Mobile phone	Local Office Field Exp	Samsung Galaxy J2 Prime	3	2,200,000	215.60	647	4	RC
3	Tablet	Local Office Field Exp	Ipad Air 2 - 128 Gb (Wifi+Celular)	4	11,000,000	1,078.00	4,312	2	RC
4	Office Furniture	Local Office Field Exp	Meeting desk, Office Chair, Filing Cabinet	1	300,000,000	29,400.00	29,400	2	RC
5	Office Furniture	Local Office Field Exp	Office partition	1	300,000,000	29,400.00	29,400	2	RC
6	Office equipment	Local Office Field Exp	Panasonic Dsterile – FDSO3SI	1	1,200,000	117.60	118	4	RC
7	Office equipment	Local Office Field Exp	DELL LED Monitor 23 Inch [P2314H]	5	3,000,000	294.00	1,470	4	RC
8	Office equipment	Local Office Field Exp	Logitech Wireless Combo MK345	5	450,000	44.10	221	4	RC
9	Office equipment	Local Office Field Exp	WD My Passport Ultra New 3TB	5	1,950,000	191.10	956	4	RC
10	Office equipment	Local Office Field Exp	Flip chart	10	1,000,000	98.00	980	4	RC
11	Photocopy Machine	Local Office Field Exp	Fotocopy Fuji Xerox DC III 3007 (rental)	1	42,000,000	4,116.00	4,116	1	RC
12	Office vehicle	Local Office Field Exp	Toyota Innova G 2.0 MT (2015) (rental)	1	102,960,000	10,090.08	10,090	1	RC
<b>TOTAL OF THIS LMFA</b>							<b>87,588</b>		

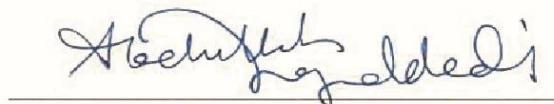
Note:

CEA Approval:



Date signed: 30-May-17

GAC Project Officer Approval:



Date signed: 31-May-17

## E. Updated Budget per Intermediate Outcome (approximate)

Description	ORIGINAL PIP BUDGET	Manulife Contribution	TOTAL ORIGINAL BUDGET	% Overall Proposed Budget (PIP)	AWP 2017-2018 Budget - With All Costs Allocated	% AWP 2017-2018 Budget
<b>Overview by Outcome</b>						
1110 - Study Streams, Research, IUTF, Coop	1,940,467	300,000	2,240,467	15%	444,593	11%
1120 - Curriculum review, M. Act.Sci, Credits, Canada visit	3,040,467	201,200	3,241,667	22%	710,205	17%
1130 - Scholarship High School, Employer support	3,290,467	198,800	3,489,267	24%	1,784,312	42%
1210 - Outreach, Awareness Campaign, Publication and Media	2,990,467	300,000	3,290,467	23%	690,010	16%
1220 - Linkages and CPD, PAI	2,290,467	-	2,290,467	16%	579,146	14%
Overhead on Above - 12%	1,626,280	-	1,626,280		474,992	
<b>Total Expenses</b>	<b>15,178,615</b>	<b>1,000,000</b>	<b>16,178,615</b>	<b>100%</b>	<b>4,683,258</b>	<b>100%</b>

## F. Gender Equity Strategy

### READI Gender Equity Strategy – 2017 - 2020

#### Introduction

The project's original Gender Equity (GE) Strategy was designed for implementation over a five-year period. Given the year's delay in the project's implementation there is a need to review and assess which aspects of the proposed strategy can be achieved within the shorter time frame now available for implementation. This revised strategy also makes a direct link between the different elements of the GE strategy and the project's Performance Measurement Framework.

The READI gender strategy in the project's implementation plan was based on a gender analysis prepared by Canadian and Indonesian gender specialists in 2015-2016. Relevant data were collected in a gender sensitive manner and included large group meetings in which gender was an explicit focus of conversation, as well as in meetings with groups of women only, and individual meetings with women. Quantitative data collected included enrolment rates, complementing qualitative data exploring women's lived experiences. The revised will be further informed by the in-depth baseline study conducted by the READI project in February/March 2017.

The strategy is based on the premise that the project will be working towards increased gender equality primarily using a mainstreamed approach, (i.e., integrating gender into all project components where this is feasible and relevant). To address equity issues, (i.e., where there are exceptional gaps or imbalances) there are also a few measures which are primarily gender-focused, (e.g., to fill in existing gaps related to research in the actuarial science and risk management area).

In keeping with Global Affairs Canada's commitment to poverty reduction, where applicable, the GE Strategy also addresses diversity issues related to which specific groups of women and men have access to studying and working in actuarial science and risk management.

#### READI's Overall Gender Equity Objectives

As a part of its ultimate outcome to help Indonesia become recognized as a centre of excellence in actuarial science and risk management, the project has affirmed that to do so requires attention to gender equity. To meet the standards of being a centre of excellence this attention to GE is defined as meaning that:

*Gender and diversity issues are being systematically addressed in actuarial science and that industry associations treat gender and diversity as technical issues that are addressed and integrated within industry association activities.*

READI aims to attract and retain women as students of actuarial science and as actuaries. The project's GE strategy outlines strategic sensitive interventions designed to increase gender equity within the actuarial science and risk management context in Indonesia that target key stakeholder groups within education, industry and the profession. READI is committed to implementing an integrated gender mainstreaming approach throughout all project components as well as to support several gender-focused activities. Gender mainstreaming is a strategy for achieving gender equality

by ensuring that both women and men's concerns and experience are an integral part of the design, implementation, monitoring and evaluation of project activities. The project will use a gender equity lens – drawing upon interconnectivity theory – that takes lived women and men's different experiences into account as well as analyzes and addresses the mechanisms by which gender inequities are sustained and reproduced.

In keeping with the gender mainstreaming approach and a gender equality framework, all project staff and consultants are expected to contribute to the achievement of the project's planned results by ensuring awareness of gender concerns specific to their field of expertise are incorporated into their work as well as contribute to the specific gender equity results associated with each project component.

The gender analysis conducted in 2015/2016 found that most stakeholders believe there is no gender equality issue with respect to women's involvement in actuarial science in Indonesia. Stakeholders espoused the view that there is cultural support for women studying math and there are relatively equal numbers of men and women in math programs. Despite this perception, the numbers of women who elect to go into actuarial science and risk management is not proportionate to the numbers of female math students with the requisite math skills. However, the analysis did identify gender issues as a key component affecting women's experiences throughout their studies and professional lives. Moreover, there is a notable under-representation of female actuaries in the profession as well as in actuarial studies.

The reasons for this discrepancy may be due to several culturally based factors that are gender-related. These factors may include the following:

- actuarial science and risk management are not traditionally perceived to be fields in which women commonly work;
- actuarial science requires further years of study after the initial undergraduate level and some young women may be under pressure to get married and have children – or choose to discontinue working full-time for several years in order to look after their children at home;
- there is also a lack of female role models in the field; and
- as is common in male-dominated fields, there may also be a tendency for “like to hire like”, with unconscious biases affecting recruitment outcomes.

Conducting a more in-depth gender analysis regarding the reasons for the lower numbers of women studying and working in this field is therefore one priority for the upcoming year.

Another challenge is the paucity of research on gender-related issues in this field. These include, but are not limited to, identification of key categories of analysis in which there is a pressing need for sex-disaggregated data to help determine gender differentials in different types of risks encountered by women and men; an assessment of the working conditions, recruitment and promotion challenges for women and men in related professions; and a need for an in-depth gender analysis of micro-insurance needs in the Indonesian context. For this reason, another key action in this coming year will be the launch of a research grant program in which themes related to gender equality issues are being considered a major priority for funding. The launch of this research fund will be complemented by a background paper which will identify key gender issues in the field as well as potential research themes and questions on which Indonesian researchers could build their own research proposals or to spark additional fields of inquiry.

A third challenge being addressed this year is to increase awareness of the benefits and opportunities associated with the profession of actuarial science and risk management for female high school students. This will be achieved through integrating key messages in this regard in the high school outreach program planned.

To increase awareness among decision-makers of the key gender issues related to actuarial science and risk management, the project will be working to establish a university – industry task force which will include representation from relevant gender specialists. The plan is to ensure that all topics and themes discussed by the task force and related actions taken will integrate related gender equality issues.

In 2017, the project will also be holding consultations with women who work in the actuarial profession to help determine what kind of support they need to further advance in this profession as well as to increase the numbers of women who enter this field. This consultation will help determine the content of training support for women in the actuarial science profession as well as the content needed for more general gender awareness sessions within the industry.

To support these different processes and actions planned the project will also be hiring a half-time Indonesian Gender Advisor. This specialist's work will be further supported by a Senior Canadian Gender Advisor.

All of these actions, as well as others that will be addressed in subsequent years of the project are outlined in the three tables below and are designed to reinforce the intended project results.

With gender-sensitive interventions, the project can address identified and emergent gender and diversity issues and support more equitable female involvement in the actuarial profession. Specific interventions that vary according to each key stakeholder are outlined below. Each is meant to advance a component of the three main goals of the Global Affairs Canada policy on gender equality:

1. To advance women's equal participation as decision makers with men in programs and activities associated with the project;
2. To support the realization of women's human rights in the formulation of policies and regulations affecting the involvement and success of women in the actuarial profession; and
3. To reduce gender inequalities in access to and control over the resources and benefits of education and work in actuarial science and project activities.

The following three tables summarize the key elements of READI's GE strategy 2017-2020 and links each strategy to the relevant project results and indicators. Several of the original strategy elements have been combined due to the similarity of approaches needed to achieve the related results.

The project will also revisit and review this strategy to document related successes and challenges and make any adjustments needed during the implementation process. For several of the results and indicators outlined, the project will also delineate more specific targets following the completion of the gender-related component of the project's baseline study later in 2017.



## Educational Interventions

GE Strategy	Related Results	Related Indicators
1. Increase awareness among decision makers in education on gender equality issues related to actuarial science and risk.	<p>1111 Technical assistance provided to partner universities to establish actuarial science and risk management streams of study</p> <p>1113 Industry-University Task Force and associated working groups established and operated</p> <p>1120 Strengthened capacity of (f/m) actuarial science and risk management teaching professionals in Indonesia</p>	Actuarial science and risk management curriculum includes gender equality module and integrates gender and diversity examples as relevant throughout course materials.
2. Enhance gender-sensitive curriculum.	1111 Technical assistance provided to partner universities to establish actuarial science and risk management streams of study	Actuarial science and risk management curriculum includes gender equality module and integrates gender and diversity examples as relevant throughout course materials.
3. Develop an awareness and education campaign (targeting students and parents) on the profession (actuaries) that profiles women and under-represented ethnic groups and highlights the different career paths associated with the profession.	1210 Increased awareness of the actuarial profession by selected target groups including high school and university students, teachers, and parents in Indonesia	<p>Inclusion of women and under-represented ethnic groups in high school outreach video and mention of benefits of this profession for women in particular.</p> <p>Public and m/f high school and university student awareness and perception of actuarial profession in Indonesia and of the related gender and diversity issues</p>
5. Ensure criteria for project scholarships include gender and diversity criteria.	<b>1131</b> Actuarial science and risk management scholarship program for (f/m) undergrads designed and operated	<p>- value of scholarships awarded by target student population (gender, region, means)</p> <p># of m/f scholarship students who graduate (including comparative of ratio of m/f scholarship students who graduate)</p>
6. Encourage female participation in math contests and collect data on math contest participants by sex.	1211 Technical Assistance provided to partners on delivery of high school math outreach programs with an actuarial focus	<p>Number of math outreach programs established</p> <p># of students outreached (M/F)</p>

Educational Interventions		
GE Strategy	Related Results	Related Indicators
		# of math workshops conducted # of students participating in math competitions (M/F) Inclusion of gender and diversity materials and examples in math workshops and contests. No. of of math outreach programs by established by universities that include workshops that target strengthening of math skills of female high school students
7. Promote female role models from the profession and within education.	1222 Continuing Professional Development (CPD) seminars, workshops and mentorships conducted for actuaries and other stakeholders	Mentorships established involve female role models from the AS industry in Canada and Indonesia



Professional Interventions		
GE Strategy	Related Results	Related Indicators
1. Increase awareness among decision makers on gender equality issues in actuarial science & risk management teaching and profession (cross-cutting theme)	<b>1222</b> Continuing Professional Development (CPD) seminars, workshops and mentorships conducted for actuaries and other stakeholders	# of professional seminars and workshops conducted
2. Carry out an in-depth gender analysis on human resource practices for women and men who work in the insurance industry and in teaching AS subjects/programs.	1222 Continuing Professional Development (CPD) seminars workshops and mentorships conducted for actuaries and other stakeholders	# of professional seminars and workshops conducted  Results of in-depth gender analysis of human resources practices for women and men who work in the insurance industry and in teaching AS subjects/programs. profiled as part of research program and disseminated to all research program applicants as well as the industry-university task force and PAI
3. Allocate the Indonesian Gender Advisor to help university-industry task force integrate gender equality and diversity issues into task force agendas where relevant as well as to provide related technical assistance to support follow-up actions.	<b>1113</b> Industry-University Task Force and associated working groups established and operated	<b>1113-2</b> Effectiveness of the TA provided in support of creating and operating an industry-university task force and associated working groups
4. Create a compendium of best practices and data issues on gender equality and diversity in the actuarial profession and develop a platform to broadcast best practices, research and tools and make them available to industry partners	<b>1000</b> Indonesia recognized as a centre of excellence in actuarial science and risk management with attention to gender equity	Increased awareness of what constitutes a best practice related to gender in AS and risk management among key stakeholders  Adoption of one or more of these best practices or approaches to data collection related to gender and diversity by educational institutions and industry
5. Ensure women's groups and university research centres informed of project research opportunities & encouraged to apply to assist with this research & initiatives that promote dialogue on research results.	1213 Public interest in actuarial science and risk management promoted through research, publications and media	# of women's groups & university research centres that apply for research funding  # of women's groups & university research centres accepted for research funding

**Professional Interventions**

GE Strategy	Related Results	Related Indicators
6. Ensure that research projects funded by project integrate gender and diversity issues in research design	1213 Public interest in actuarial science and risk management promoted through research, publications and media	<p># of research proposals accepted which integrate relevant gender and diversity issues in the research design and methodology</p> <p>% of funding allocated to research proposals which focus on gender and diversity issues.</p>

Industry Interventions		
GE Strategy	Related Results	Related Indicators
1. Develop and deliver gender/diversity workshops to discuss and address gender equity issues to increase awareness among professionals and decision-makers in the industry (to be based in part on needs assessment/priority issues brainstorming process with senior female actuaries in Indonesia).	<b>1222</b> Continuing Professional Development (CPD) seminars, workshops and mentorships conducted for actuaries and other stakeholders	Of the 10 workshops planned at least 2 should focus on gender and diversity issues  At least one of the 2 or more workshops offered that profile gender and diversity issues target industry managers and leaders
2. Carry out a baseline study on the participation of women in the actuarial profession, and to identify obstacles to women's participation (to be linked to study of gender issues in human resource practices in the profession) .	<b>1222</b> Continuing Professional Development (CPD) seminars, workshops and mentorships conducted for actuaries and other stakeholders	Submission of baseline study report on participation of women in the actuarial profession that identifies obstacles to women's participation.  Results of this baseline study disseminated to key stakeholders in the project (education, industry and government)
3. Ensure that all training to support the PAI's professional development programs integrates relevant gender equality and/or diversity issues related to the theme of the workshop.	<b>1223</b> TA provided to regulators and associations <sup>28</sup> to strengthen organizational capacity	All project –related workshops offered through PAI include either a gender component or related examples.
4. Provide the PAI and the university-industry task force with resource manual they can use to enhance gender-sensitive work place policies, including zero tolerance policies and measures on harassment and gender-based violence (based on results of gender analysis of industry working conditions and issues for	<b>1123</b> Actuarial science mentoring provided through short courses, e-courses and workshops to selected (f/m) teaching professionals  <b>1222</b> Continuing Professional Development (CPD) seminars, workshops and mentorships	At least one of training workshops offered through PAI addresses ways in which private sector insurance companies can enhance gender-sensitive work place policies, including zero tolerance policies and measures on harassment and gender-based violence.  # of companies that participated in the workshop that adopt or revise their

<sup>28</sup> Associations receiving TA may include: Persatuan Aktuaris Indonesia (PAI), Otoritas Jasa Keuangan (OJK), Pusat Pembinaan Profesi Keuangan (PPPK), Asosiasi Asuransi Jiwa Indonesia (AAJI) and/or Asosiasi Asuransi Umum Indonesia (AAUI).

## Industry Interventions

GE Strategy	Related Results	Related Indicators
women and men).	conducted for actuaries and other stakeholders	existing policies in line with the gender-sensitive work policies recommended (e.g., improvements in services and mechanisms that respond to gender-specific constraints on rights or rights violations within the company, unbiased recruitment practices, adoption of gender action plans, etc.).
5. Provide training to university-industry task force members on relevant gender equality issues, particularly those related to human resource issues	<b>1113</b> Industry-University Task Force and associated working groups established and operated	Number of University – Industry task force members that take action on gender equality and/or diversity issues reviewed as a part of their training or discussed as a part of the task force agenda
1. Develop and deliver gender/diversity workshops to discuss and address gender equity issues to increase awareness among professionals and decision-makers in the industry (to be based in part on needs assessment/priority issues brainstorming process with senior female actuaries in Indonesia).	<b>1222</b> Continuing Professional Development (CPD) seminars, workshops and mentorships conducted for actuaries and other stakeholders	Of the 10 workshops planned at least 2 should focus on gender and diversity issues  At least one of the 2 or more workshops offered that profile gender and diversity issues target industry managers and leaders

## G. Undergrad Scholarship Strategy

Beginning in the 2017/18 Annual Work Plan period, the READI project will work with university partners to identify suitably qualified, deserving actuarial science programs or stream students as recipients of the READI Undergraduate Scholarship. Key selection criteria will include:

- proof of enrolment in an actuarial science study program, or actuarial science study stream/concentration in Year-2, Year-3 or Year-4<sup>29</sup>;
- strong academic record (exact GPA requirement to be confirmed);
- recommendation from a mathematics or actuarial science lecturer
- strong communication skills;
- at least 50% of recipients are female; and
- special attention to students from economically challenged families or regions

The READI project will produce a complete set of terms of reference and operating principles for the Undergrad Scholarship Program, and will confer with university partners to consolidate and finalize the TOR. Selection of scholarship recipients will be undertaken in cooperation with university partners with program roll-out slated for late May/early June 2017.

Note that in the PIP and previous versions of the Performance Measurement Framework, a target of 2,500 student academic years of scholarships was mistakenly presented. The target should have read “250” not of “2,500”. The mistake was due to a typing error which resulted in the addition of a “0”. As the project wants to provide a quite complete scholarship package – covering tuition, living allowance, textbook allowance, and reimbursement for PAI exam fees – it is not possible to provide anywhere near to 2,500 student academic years of scholarship. The project has developed a number of options and sought guidance from the READI Technical Committee on which option to select. Based on their advice, and after further calculations following new information from the Universities, the breakdown of proposed number of scholarships by year is presented below, along with some explanatory notes:

Year of Study	Academic Year 2017/18	Academic Year 2018/19	2019/20	TOTAL STUDENT ACADEMIC YEARS
Year 2	65	N/A	N/A	
Year 3	65	65	N/A	
Year 4	59	58	58	
<b>TOTAL</b>	<b>189</b>	<b>123</b>	<b>58</b>	<b>370</b>

Notes:

1. Total budget available for undergrad scholarships = \$1,950,000 CAD.
2. Scenario assumes scholarship would cover 100% of tuition, facilities fees, textbook allowance, and PAI exam fees. Does not provide living allowance.
3. Assumes that READI can provide scholarships to a portion of AS stream students at: ITS, UGM, ITB, UNPAR, ITB, UI, UPH, IPB & PRASMUL.
4. Should Universitas Surya AS stream be implemented, READI could potentially provide scholarships to a modest number of actuarial science program students.

<sup>29</sup> Note that if the student is enrolled in an actuarial science co-op education program, scholarship funding could possibly be provided to 5<sup>th</sup> year students if sufficient budget is available.

5. Likely that it will be difficult to provide scholarship to more than 12-15 students/year of study/university as total number of students in Actuarial Study programs is relatively small (e.g., 1st year IPB AS Program = 24 students). Not practicable to provide scholarships to ALL students in a program.
  
6. If, as expected, ITS and UI open their AS Study Programs (dedicated study programs) this year, then READI could potentially funds some of those AS program students.

## H. Applied AS Research Strategy

### *READI Actuarial Science Applied Research Program*

The READI Actuarial Science Applied Research program follows the principles of the READI project: 1) cooperation of government, industry and universities; 2) building public and student understanding of the value and application of actuarial science in Indonesia; and 3) drawing on actuarial science expertise to address issues such as climate change, gender equality and social equity.

The program has two components, set out in READI project guiding documents and implemented in consultation with the Industry-University Task Force (IUTF) and working committees such as the READI Applied Research Task Force:

1. **Actuarial Science Applied Research Fund** – grants available to successful applicants for applied research relevant to Indonesian societal and industry needs.
2. **Actuarial Science Public Interest Papers** – a series of commissioned short papers drawing on actuarial science expertise to address topical public interest issues for Indonesia.

The READI project is also actively seeking partners with common interests to broaden the reach of the program through, for example, shared sponsorship of workshops, research topics, or publication and communication of research findings.

### *Actuarial Science Applied Research Fund (project activity 1112.1)*

**Description:** Funding for targeted applied research and dissemination of research results for topics relevant to actuarial science in Indonesia.

**Target recipients:** lecturers and faculty of Indonesian universities with mathematics and/or actuarial science streams of study. Preference will be given to researchers working in cooperation with industry and/or government actuaries, or insurance or pension practitioners.

**Grant amounts and duration:** research grants of up to 50 Million IDR are available for a research period of one year or less. Terms of payment will be specified in the call for research proposals and confirmed with each grant recipient. Research proposals for amounts above this amount may also be considered on a case by case basis.

**Call for proposal process:** The initial READI Actuarial Science Applied Research Fund call for proposals will be distributed in early May 2017 with a submission deadline of July 10, 2017. Proposals will be reviewed by a committee established under READI guidance; and successful applicants informed by August 15, 2017. Additional details will be provided with notification of the call for proposals.

**Potential research topics:** Preference will be given to research proposals that consider gender equity and diversity issues in their research design – either as the focus of the research or with specific male/female demographic groups integrated as research subjects with data disaggregated and analyzed from this perspective. Potential research topics include: insurance as a foundation for sustainable economic growth; risk management and transfer of risk in government social assistance programs; private and public insurance issues for Indonesia; insurance needs and opportunities for vulnerable populations in Indonesia; and development of Indonesia-specific actuarial tools (such as mortality tables).

**Target for 2017-2018:** 10 research grants with a value up to 100 Million IDR (\$ 10,000 CAN)/ each



*Actuarial Science Public Interest Papers (project activity 1213.1)*

**Description:** a series of short papers that utilize actuarial expertise and address topical public interest issues involving risk and uncertainty for Indonesia.

**Target audience for the papers:** policy makers, civil society organizations, insurance and pension industry professionals, news organizations, and interested public.

**Topics:** will be confirmed by a group established by READI that includes government, industry and education representatives (the READI Applied Research Task Force). Topics could include: funding and disbursements of government social assistance programs such as health insurance; managing risks in public pension schemes; statistical standards and use in insurance for Indonesians; differential insurance rates based on gender and diversity patterns; women's access to insurance in Indonesia; and micro insurance risks and opportunities.

**Process for developing and publishing the papers:** Public interest papers will be commissioned by the READI project, drawing from a pool of pre-qualified expert groups. In May 2017 a request for Expressions of Interest (EOI) will be issued by READI for groups or individuals interested in preparing papers. Responses will be reviewed and qualified groups will be informed by July 15, 2017. An initial set of papers will be commissioned by September 2017, following recommendations of a READI advisory committee. For commissions involving more than 50 Million IDR, a short list of two-three qualified groups may be requested to submit a short proposal detailing approach and estimated cost for preparing the paper. Contract expectations for each commission will be determined by READI staff following project policies and procedures.

The process will be reviewed and revised (if needed) in early 2018, and repeated in following years of the READI project.

**Target for 2017-2018:** 10 public interest papers with funding of up to 30 Million IDR /each commissioned and completed.

## READI Actuarial Science Applied Research Fund – Call for Proposals

<b>Purpose – READI Actuarial Science Applied Research Fund</b>	<p>The purpose of the READI Actuarial Science Applied Research Fund is to support development of the actuarial profession in Indonesia and encourage public understanding of the profession through targeted research and publications as well as to fill in gaps in knowledge in key areas such as gender and diversity and climate change.</p> <p>Adjudication and award of research funding may also be followed by support for: presentation of research findings at workshops; assistance with publication preparation and broad dissemination of results in multiple formats and media to enhance accessibility.</p> <p>READI expects to undertake an annual call for proposals, as well as undertake specific calls for topical or priority issues.</p>
<b>Who May Apply – General Guidelines</b>	<p>Actuarial professionals, researchers and professionals involved in insurance and natural disaster risk management and/or modeling or addressing risks associated with climate change, lecturers and college students.</p> <p>Research papers supported through the READI Actuarial Science Applied Research Fund may be prepared in Indonesian or English languages, and should not have been published or presented previously.</p> <p>Proposals for innovative developments in actuarial education also are invited for consideration such as curriculum development (including textbooks), program expansion, the development of Continuing Professional Development (CPD) programs, or other innovative educational programs or tools.</p>
<b>2017 Priority Topics</b>	<p>For 2017, the READI Applied Research Task Force is particularly interested in proposals related to four topics:</p> <ol style="list-style-type: none"> <li>1) predictive analytics and the implications to the insurance industry;</li> <li>2) climate and extreme events and implications to insured risks such as crop insurance;</li> <li>3) gender, social inclusion and diversity in actuarial milieu; and</li> <li>4) longevity and health.</li> </ol> <p>Proposals that include actuarial science applied research that explicitly incorporate or address gender and social inclusion issues – such as micro insurance for vulnerable populations, small business or personal insurance for women or socially disadvantaged entrepreneurs, and disability insurance – are also strongly encouraged.</p> <p>Examples of longevity and health topics include but are not limited to proposals focusing on individual retirement issues, longevity risk pooling and transfer, mortality improvement, and mortality modeling at the older ages. Opportunities that link Actuarial Science (AS) researchers with research questions and issues related to BPJS-Health’s work are also strongly encouraged.</p> <p>The READI Applied Research Task Force has provided these topic areas as suggestions for applicants. Proposals in other topic areas will be accepted and considered.</p>
<b>Submission Process and Timeline</b>	<p>This is a two-step process. Interested applicants should first submit a brief abstract/letter of intent of the research paper (and interest in follow up presentation and publication). The abstract/letter of intent will be reviewed by the READI Applied Research Task Force and READI project personnel using the selection criteria described below. READI project staff will confirm grant terms with approved applicants.</p> <p><b>The submission deadline is July 10, 2017.</b></p> <p><b>Proposals will be reviewed by the READI Applied Research Task Force; and successful applicants informed by August 15, 2017.</b></p>

## READI Actuarial Science Applied Research Fund – Call for Proposals

<b>Selection Criteria</b>	<p>READI has established five criteria for evaluating the letters of intent and applications submitted for funding consideration. For each letter or application, a total score will be determined based on the following criteria and scoring weights:</p> <ol style="list-style-type: none"> <li><b>1. Relevance to priority topics identified for the Actuarial Science Applied Research fund and year (30% of total score):</b> In scoring a letter or application for this criterion, reviewers will consider the understanding of the priority topic demonstrated in the proposal and how the proposal contributes to further examination or understanding of the topic.</li> <li><b>2. Impact for Indonesia (20% of total score):</b> In scoring a letter or application for this criterion, reviewers will consider how the proposal makes an impact for the actuarial profession in Indonesia or addresses a critical gap in research for Indonesia. Since impact is a function of both significance and innovation, reviewers will also consider the likelihood that the proposed research will achieve its desired outcome.</li> <li><b>3. Innovation (20% of total score):</b> In scoring a letter or application for this criterion, the reviewers will assess the potential for innovation associated with the proposed research and its application in Indonesia.</li> <li><b>4. Gender equality and social inclusion (15% of total score):</b> In scoring a letter or application for this criterion, reviewers will consider how the proposal addresses (including methodology used for related gender analysis) and is relevant to issues involving opportunities or barriers affecting women and/or vulnerable or socially disadvantaged populations in Indonesia.</li> <li><b>5. Viable (15% of the total score):</b> In scoring a letter or application for this criterion, the reviewers will analyze the viability of the research concept and methodology. <b>At a minimum, this criterion <i>must</i> be satisfied in order for the proposal to receive funding (10 of 15 or better).</b></li> </ol>
<b>Guidelines for applicants</b>	<p>Interested parties should submit a concise application (in English or Indonesian) of no more than five pages in length. Format of application:</p> <ul style="list-style-type: none"> <li>• Title of proposed research project</li> <li>• Date of proposal</li> <li>• Name(s) of the author(s) (with the lead and corresponding author clearly identified) – organizational affiliation, city and country of residence, and e-mail for each author</li> <li>• Summary of project objectives – highlighting the value of the proposed investigation to Indonesia and the actuarial profession (addressing criteria 1, 2 and 3)</li> <li>• Description of proposed project – the models and methods developed and/or used to meet project objectives and a description of the intended results; there should be a brief overview of the existing knowledge base that the research will build from and an outline of the steps that the researcher envisages; the researcher should include the area of practice and not assume that the reader/reviewer has an expertise in the proposed subject area</li> <li>• Qualifications of the researcher(s)</li> <li>• Timeframe for project (should be one year or less) – with expected start and completion dates</li> </ul>

## READI Actuarial Science Applied Research Fund – Call for Proposals

	<ul style="list-style-type: none"> <li>Financial considerations – estimated costs (up to 50 Million IDR) and any supplementary funding sources; proposals identifying leveraged funding (e.g., co-funding sources or provision of in-kind services) are encouraged; proposals for funding over this amount will be considered on a case by case basis</li> <li>Qualifications of the lead researcher and research team (detailed CV's may be included with the application as separate documents)</li> </ul>
<b>Selection and Award</b>	Applications will be reviewed by the READI Applied Research Task Force and READI project staff. Recipients of READI Actuarial Science Applied Research awards will be notified by <b>August 15, 2017</b> . Recipients of awards may be invited to present their work at the READI workshops and/or public interest events, such as the “Actuarial Science in Climate for Development” event planned for early 2018. All winners will also receive certificate declaring him/her as the recipient of a "READI Actuarial Science Applied Research Award".
<b>Expectations of Research Paper</b>	The end-product of the research is expected to be a high quality paper (in English or Indonesian) suitable for publication or use in communication materials.
<b>Research Contract</b>	The selected applicant will enter into a formal contractual arrangement with the READI project. Once awarded, READI intends to monitor the progress of the project closely. Award amounts can be up to 100 Million IDR – with a duration of six months to one year. Awards in excess of 100 Million IDR may be considered on a case by case basis.
<b>Questions and responses should be directed to:</b> Contact name and email	

### READI Actuarial Science Public Interest Papers – Request for Expressions of Interest

<p><b>Purpose and Description – READI Actuarial Science Public Interest Papers</b></p>	<p>The READI project is commissioning a series of short papers that utilize actuarial expertise and address topical public interest issues involving risk and uncertainty for Indonesia. The Actuarial Science Public Interest Papers series is separate from the READI research grants process.</p> <p>The papers will provide a summary and analysis of topics of interest to the public in Indonesia that involve actuarial expertise and will likely not involve original research. They are intended for an audience of policy makers and civil society – to build understanding and encourage discussion of each topic. Papers may be as short as two pages length. For examples of potential format for the papers, see: Canadian Institute of Actuaries “<a href="#">Seeing Beyond Risk</a>”.</p> <p>Topics for papers will be identified by the READI Applied Research Task Force with individual papers commissioned by the READI project, drawing from a pool of pre-qualified expert groups.</p> <p>This request for Expressions of Interest (EOI) is for groups or individuals interested in preparing papers. Responses will be reviewed and qualified groups will be informed by <b>July 15, 2017</b>.</p> <p>An initial set of papers will be commissioned by <b>September 2017</b>.</p> <p>Commissioned papers will be funded with the amount up to 30 Million IDR. For commissions involving more than 30 Million IDR, a short list of 2-3 qualified groups may be requested to submit a short proposal detailing approach and estimated cost for preparing the paper. Contract expectations for each commission will be determined by READI staff following project policies and procedures.</p>
<p><b>Topics for the Public Interest Papers</b></p>	<p>Topics will be confirmed by the READI Applied Research Task Force in early 2017.</p> <p>Topics could include: funding and disbursements of government social assistance programs such as health insurance; managing risks in public pension schemes; statistical standards and use in insurance for Indonesians; women’s access to insurance in Indonesia; and micro insurance risks and opportunities.</p>
<p><b>Guidance for applicants – Expression of Interest</b></p>	<p>An application should be submitted to (name and email) by <b>July 15, 2017</b> for consideration in commissioning of the 2017 papers (expected by September 2017). Applications received after May 31, 2017 will be included in reviews for subsequent READI commissions. All expressions of interest will be reviewed and applicants contacted by email annually to confirm eligibility and continued interest.</p> <p>The application should be no longer than three pages. Additional information (such as CVs, organization or group information, short examples of work) may also be included with the application.</p>
<p><b>Application Format</b></p>	<ol style="list-style-type: none"> <li>1. Name and contact information of applicant (with name of lead or identified primary contact if applicant is under the name of a group or organization).</li> <li>2. Areas of primary interest and expertise involving actuarial science, risk management and/or related public interest. (200 words or less).</li> <li>3. Name and a short description of expertise of each team member (max. 100 word per team member).</li> <li>4. List and short description of sample work (no more than five examples).</li> </ol>

## I. Public Awareness re: AS Strategy (in-Indonesia)

### Strategies and Activities to Promote Public Awareness of the READI Project in Indonesia

READI efforts to increase public awareness regarding the READI project, the important roles that actuaries play in economic development and the compelling career opportunities that exist for actuaries in Indonesia, will focus on a select number of target groups. This will include:

- high school students participating in READI outreach activities;
- parents of high school students attending education and career fairs;
- high school mathematics teachers and guidance counsellors;
- undergraduate students who exhibit the requisite mathematics abilities, discipline and interest to study actuarial science;
- mathematics and science lecturers at READI partner universities;
- researchers interested in applications of actuarial science including risks associated with climate change and gender dimensions related to the actuarial science milieu; and
- general insurance companies and members of the General Insurance Association of Indonesia (AAUI).

To support these efforts, the project will produce a variety of public education materials using various media. This will include: printed materials such as pamphlets and brochures; web and social media based content; and a series of short, “catchy” videos. These materials will be used to support public education efforts through math outreach activities, career fairs, university open houses, workshops, seminars and conferences. The project will also collaborate with partner universities to support and enrich their outreach activities, along with education and outreach activities undertaken by interested insurance companies, the Life Insurance Association of Indonesia (AAJI) and the Society of Actuaries Indonesia (PAI). The project will continue to support OJK 1,000 Actuaries outreach and public education activities whenever possible. In addition, through periodic meetings and workshops, the READI project will continue to raise the project’s profile with other Gol partners including the Directorate General of Higher Education/Ministry of Research, Technology and Higher Education, the Ministry of Finance, and the Ministry of Education and Culture.

## **J. Public Awareness of the READI Project and its Goals**

### **Strategies and Activities to Promote Public Awareness of the READI Project in Canada**

To increase awareness of the READI project and access to the progress of the project, a mixed method approach has been adopted for public awareness raising efforts in Canada. The approach harnesses the strength of the internet and the University of Waterloo's reach and networks to promote and facilitate participation opportunities. The methods used include:

- Production and regular updating of the READI website
- UWaterloo Daily Bulletin
- Faculty and department pathway pages
- Press release with project partners

#### **READI website**

The READI website serves as the main communication tool to provide information about the project as well as access to the project deliverables. The website is maintained and updated periodically to reflect project process. It also serves as a repository for project resources including project plans, specifications, minutes of meetings, reports to funders, etc. The READI website is open to all public and accessible online.

#### **Daily Bulletin**

Milestones of the project will be suggested to be featured on UWaterloo's Daily Bulletin, an electronic news bulletin issued daily, which is available online directly. The Daily Bulletin is also available as an e-newsletter, mailed to subscribers each working day. All UW faculty and staff are automatically subscribed to the e-newsletter. Students, retirees, and general community readers are invited to subscribe to the e-newsletter by adding their email address on the e-newsletter subscription page.

#### **Faculty and department pathway pages**

Milestones of the project will be delivered on the homepages of the Faculty of Mathematics and the Department of Statistics and Actuarial Science at UWaterloo to increase awareness of targeted audience in the Mathematics field.

#### **Press release with project partners**

Increase awareness of the targeted audience in the industry by collaborating with project partners to release news and/or stories on their news page.



## K. READI Activity and Results Tracking Plan

### The Strategy

Key Informant Group	Instrument (result area) Strategy	Frequency	Who leads
<b>1 International Actuarial Assocs + other international key informants</b>	Key informant interview (1000-2) <ul style="list-style-type: none"> <li>• OJK advance communication, send out (on line instrument) ahead of phone interview.</li> <li>• Senior project team members of interview</li> </ul>	Baseline, mid, five yr	Project Director/Field Director
<b>2 Sector leaders (industry, education, government)</b> <ul style="list-style-type: none"> <li>• Additional, specific questions for PAI (1100-1, 1200-2)</li> <li>• Additional, specific questions for university partners (1100-1 (tracking alumni), 1120-2),</li> </ul>	Key Informant interview (1000-2, 1100-1, 1100-2, 1110-1, 1110-6, 1120-5, 1200-1, 1200-2, 1220-1, 1112-2, 1213-1, (1120-1 subsumed in 1100-1), 1120-2) <ul style="list-style-type: none"> <li>• OJK advance communication, send out (on line instrument), remind, provide list of non-responses to Team for follow up</li> </ul>	Baseline, mid, five yr	Field Director, Consultant
<b>3 Students</b> University  Assorted educators/admin  H.S. students (teachers/parents)	Impromptu interview tool linked to AS promotion (1210-1)  Questions on pre-existing conditions/potential for outreach with HS students  School Visit – AS familiarity check and math competition (1210-1, 1210-2) Tracking of Math Competitions, Thinking about AS sessions, Problem of the Week (1210-2)	Baseline, mid, five yr  Baseline  Real time	Field Director, Consultant  PO Math Outreach + Jeff  PO Math Outreach
<b>4 Senior Admin of Math Science Faculty</b> Streams of Study, courses and staff capacity development	Campus data base with variety of collections tools/checklists. Tools/checklist for: 1130-2, 1130-1, 1100-1, 1120-1, 1120-2, 1120-3, 1120-	Baseline, then real time	PO Capacity Building & Training

Key Informant Group	Instrument (result area) Strategy	Frequency	Who leads
Co-op Programming	4, 1122-1, 1122-2, 1123-1, 1123-2, 1123-3) <ul style="list-style-type: none"> <li>Team members gather information as opportunities arise (including through Tool #2), using checklists</li> </ul> Questions exploring pre-existing conditions/potential, then data tracking related to: 1110-4, 1110-5 as program becomes defined	Baseline, then real time	PO Co-op Programs
<b>5 University Industry Task Force (UITF)</b> Key contacts involved in setting up UITF and working groups  Participants on IUTFs	Baseline questions exploring pre-existing conditions/ potential for setting up TFs  Data tracking related to: 1113-1, 1113-2 <ul style="list-style-type: none"> <li>Project issues an line survey tool tracking UITF functions – data is summarized and put in front of UITF meeting for discussion and planning</li> </ul>	Baseline  Annual	PO Capacity Building & Training
<b>6 Managers of Consulting and Applied Research program</b>	Baseline questions exploring a) university granting mechanisms, b) research categories (including gender themes)  Data tracking related to: 1112-1, 1112-2, 1213-1, 1213-2 <ul style="list-style-type: none"> <li>Use of on-line application forms for data entry</li> <li>Data entry as part of grant management</li> </ul>	Baseline  Real time	PO Scholarship and Research (TBA)/PO Knowledge Management (TBA) (initially, PO Capacity Building & Training)
<b>7 Research Grant recipients (stakeholders)</b>	No baseline envisaged (beyond what's in #6)	N/A	PO Scholarship



Key Informant Group	Instrument (result area) Strategy	Frequency	Who leads
	PAI Org Development data tracking related to: 1221-1 and 1222-1 <ul style="list-style-type: none"> <li>• Key informant interview(s) with key contacts at PAI (or other associations)</li> </ul>	Annual	PO Capacity Building & Training
<b>10 Partners in awareness campaigns and respondents of awareness campaign</b>  Industry and university contacts  Target group representatives	Questions to understand promotional/awareness raising precedents (lessons learned)  Focus group conversations testing messaging and format design and outcomes: 1212-1,1212-2	Baseline  Prior to and post campaign launch	TBA
<b>11 TA Recipients</b>  Key contacts receiving TA across identified parts of the project	Log for TA activities planned and carried out (1111-1, (1113), 1114-1, 1121-1, 1121-2, 1132-1, 1211-1, (1212), 1223-1)  Data tracking of recipient perceptions of TA support received (1112-2, 1113-2, 1114-2, 1121-3, 1132-2, 1211-2, 1212-3, 1223-2) <ul style="list-style-type: none"> <li>• On line survey tool</li> </ul>	AWP, mid and yr end report  Annual	Field Director
<b>11 READI project team re: Carbon Capture Tracking</b>	Built into Finance system (TBA)	Bi annually	Finance Officers (Indonesia, Canada), Consultant

