

TERMS OF REFERENCE FOR CONSULTANTS

1. The Asian Development Bank (ADB) will recruit three firms and individual consultants. Firms will be selected to ensure maximum quality for specialized services as the nature and planning of the services vary significantly. The first consulting firm will be a specialist with international expertise in higher education and will be recruited using a simplified technical proposal for the quality- and cost-based selection (QCBS) method (quality–cost ratio of 90:10). The second firm will be a specialist in designing and evaluating entrepreneurship development programs and will be recruited using a biodata technical proposal for QCBS method (quality–cost of 90:10). Coaction Indonesia (a non-profit think tank) will be recruited using the single source selection method to conduct the study on skills for the electricity sector, as Coaction has unique expertise in the sector and the contract size is small. An international gender specialist (2 person-months) and a national engineering specialist (3 person-months) will be recruited on an individual basis. ADB will engage consulting firms and individual consultants in accordance with ADB Procurement Policy (2017, as amended from time to time) and its associated project administration instructions and/or staff instructions.

2. The terms of reference (TOR) for the consulting services is provided below. The proceeds of this Technical Assistance (TA) will be disbursed following the Technical Assistance Disbursement Handbook (2010, as amended from time to time). Training, consultations, and workshops will be organized by ADB or by the consultants in accordance with ADB's Procurement Policy and relevant staff instructions.

3. For the selection of the firms, ADB proposes to seek expression of interests in December 2018 so the Request for Proposals can go out by January 2019, and consultants can be fielded in March 2019, provided the TA has been declared effective. The detailed TOR for the firms is provided in the remaining part of this document.

A. Consulting Firm for Supporting Advanced Knowledge and Skills for Sustainable Growth Project Implementation and Medium-term Planning

4. The Ministry of Research, Technology and Higher Education (MORTHE) will implement the Advance Knowledge and Skills for Sustainable Growth (AKSI) project, financed by ADB. The AKSI-project will support Indonesia's higher education system by providing advanced skills and knowledge to support inclusive and sustainable economic growth. The project will upgrade the University of Malikussaleh (UNIMAL), the University of Jambi (UNJA), the University of Riau (UNRI), and the Indonesia University for Education (UPI) to improve access, and the quality and relevance of their education and research. The impact of the AKSI project will be increased income and productivity of the working age population. The proposed outcome is strengthened relevance and quality of targeted universities. The following two outputs are proposed (i) market responsive programs delivered, and (ii) training of technical and vocational education and training (TVET) teachers improved.

5. The TA project will support the implementation of the AKSI project by the MORTHE and the four universities. This TA has two outputs (i) initial phase of AKSI implementation supported, and (ii) entrepreneurship and technology pilot assessments in higher education prepared.

6. The medium-term higher education investment strategy and the medium-term TVET teacher education strategy will be aligned with pending national medium-term strategy (RPJMN) 2020–2024. The new national strategy highlights the role of Higher Education Institutions (HEIs) in developing advanced skills and in nurturing innovation and entrepreneurship utilizing

transformative technologies like cloud computing, internet of things, and robotics. The strategy also highlights the importance of increasing labor force employability. This involves upskilling to meet new labor market demands, increasing employability of the less educated to ensure equitable development, and strengthening innovation capacity.

7. ADB seeks to engage the services of a consulting firm with experience in education management, preferably higher education and skills development, to support the MORTHE as follows (i) develop a medium-term higher-education investment plan and a medium-term strategy to educate TVET teachers; (ii) introduce a new accreditation tool to measure quality and a new tracer study tool to measure relevance; (iii) strengthen the centers of excellence; (iv) develop a training program with the Human Capital and Education for Asian Development Foundation; and (v) strengthen knowledge management in coordination with the universities and the MORTHE.

1. Objective and Purpose of the Assignment

8. The objective of the assignment is to support and provide technical advice to develop a medium-term higher education investment plan, a medium-term strategy to educate TVET teachers, and to support the initial phase of the AKSI project by introducing international and national good practices. The two plans should be supported by all relevant stakeholders.

2. Scope of Work and Deliverables

9. The firm will field a team of consultants to provide the following results:

10. **Result 1: Medium-term higher education investment plan.** At the national level, the government is preparing the RPJMN 2020–2024. This national plan will set the direction for the development of higher education and advanced skills development. The MORTHE will develop its own medium-term higher education investment plan based on the direction provided in the RPJMN 2020–2024. The consultants will use a collaborative approach to support the MORTHE in developing this investment-plan. This plan is expected to be completed by September 2019.

11. **Result 2: Medium-term strategy to educate TVET teachers.** The need for more and better TVET teachers is compelling. The development of [a](#) center of excellence in UPI is a first step towards developing a medium-term strategy to meet this growing need. The TA will support the development of a medium-term strategy in line with the new RPJMN to strengthen TVET teacher education for both in-service training and pre-service education. This strategy development will be undertaken in close collaboration with the MORTHE, the Ministry of Education and Culture (MOEC), and other relevant stakeholders. This strategy is expected to be completed by December 2019.

12. **Result 3: Knowledge management strategy in AKSI.** The TA will support the development of the communication and knowledge management strategy of AKSI, in close collaboration with project management unit (PMU) and project implementation units (PIUs). Specific attention will be focused on the communication and knowledge management approach developed by the four universities to be adopted by the centers of excellence.

13. **Result 4: Capacity development through workshops.** The TA will support introduction of national and international good practices in the four universities by organizing workshops and training sessions. The following workshops are envisioned:

- (i) Support introduction of the improved tracer study tool by organizing the workshops with the universities and the chosen tracer study tool to strengthen tracer study, set the base-line, and establish new targets;
- (ii) Support implementation of new BAN PT accreditation mechanism by organizing workshops with the universities and BAN PT to coach the universities in the new tool, and to do the assessment;
- (iii) Support implementation of the training program with the Human Capital & Education for Asian Development (HEAD) foundation on university governance; and
- (iv) Support workshops to improve the center of excellence plan and implementation at the four universities.

14. The firm is expected to be fielded from March 2019–December 2020.

3. Consultant Requirement

15. The following specialists are expected to be included in the proposal:

No.	Expertise	Period (person-months)
1.	Education Specialist/ITL	7
2.	Higher Education Specialist/Deputy Team Leader/NTL	8
3.	TVET Teacher Education Specialist (National)	5
4.	Knowledge management specialist (National)	4
5.	Training coordinator (National)	7

ITL = international team leader, NTL = national team leader, TVET = technical and vocational education and training.

16. **Education Specialist/Team Leader (international, 7 person-months).** The expert will work closely with the MORTHE and will assume primary responsibility for overseeing the management and implementation of all four results. In undertaking the assigned project management tasks, the international team leader (ITL) will coordinate with appropriate executing agency/implementation agency staff and work closely with and be supported by the four national team members. The ITL will ensure that all strategies developed and activities undertaken align with the draft RPJMN 2020-2024.

17. The ITL, in consultation with the MORTHE and the MOEC and together with the national team leader (NTL), will develop a detailed workplan for preparing the four results by identifying the key stakeholders, critical steps, and activities. The four results include (i) development of a medium-term higher education investment plan; (ii) medium-term strategy to educate TVET teachers; (iii) knowledge management strategy in AKSI; and (iv) capacity development through workshops. For results (i) and (ii), a core team of key stakeholders will be identified to support drafting of the plans. Specific tasks include the following:

18. Result 1: Development of medium-term higher education investment plan

- (i) carry out a rapid assessment of institutional arrangements and capacity for the higher education sector in terms of organizational structure and functions, staffing, staff qualifications, competencies and experience, and identify institutional capacity development needs and activities ~~that need~~ to be supported for the further development of the higher education sector;

- (ii) undertake a desk review or guide the NTL to review laws, regulations, policies, plans, assessments, and evaluations related to the higher education sector covering the past 10 years;
- (iii) collect and/or guide the NTL to collect information on past, ongoing, and future operations and activities of development partners in the higher education sector covering the past 10 years;
- (iv) identify and assess external factors likely to influence change in the sector (e.g., demographics, industry 4.0) and the international environment in which the Indonesian higher education system operates, including the benchmarking of the system against relevant international and regional comparators and higher education systems, processes, and outcomes in other countries;
- (v) prepare a comprehensive assessment report on the higher education sector and recommendations for a medium-term education investment strategy, aligned to the RPJMN, with emphasis on advanced skills, innovation, entrepreneurship, and a roadmap for preparing Indonesia for digitization and industry 4.0;
- (vi) organize meetings and workshops with the core team and other relevant stakeholders to present and discuss the comprehensive assessment report and recommendations, to formulate a vision and a related set of priority policy and reform actions, physical investments, institutional capacity development, and their sequencing;
- (vii) support the core team to draft the strategy and perform policy simulations;
- (viii) draft guidelines or TOR detailing institutional mechanisms for implementing the higher education investment strategy, in particular, the number and roles of institutions within it which will enable it to deliver on these strategy objectives; recommend any changes required in the system of oversight and accountability that will support achievement of the strategy; and
- (ix) recommend an expenditure framework, including an outlined level of resources required to achieve the strategy objectives, a review of current resources, and any potential for rationalization to maximize the use of these resources and identify how any additional resource requirements can be met.

19. Result 2: Medium-term strategy to educate TVET teachers

- (i) provide overall guidance to the TVET teacher education specialist (TTES) to review relevant laws, policies, implementation plans, assessments, and undertake a rapid assessment of the current status of the TVET teacher training system including relevant institutions providing training. Review TVET teacher training in sectors aligned to current and future labour market needs, status of pre-service and in-service training, current teacher qualifications, competencies and experience and identify future capacity development needs aligned to RPJMN and demands of labour market and industry 4.0;
- (ii) provide overall guidance to the TTES to prepare a comprehensive assessment report on developing TVET teacher education, with specific recommendations for pre-service and in-service teacher training, aligned to objectives of the RPJMN, emerging labour market needs and digitization; and
- (iii) organize meetings and workshops with the core team and other relevant stakeholders to present and discuss the comprehensive assessment report and recommendations, and formulate a set of priority policy actions to strengthen TVET teacher training, including an operational framework and an outline of resource requirements for implementation.

20. **Preferred qualifications and experience:** The expert should have at least 10 years professional experience in higher education and TVET sub-sectors, developing strategies and plans for the government, and managing complex higher education projects, preferably in both emerging and developed economies. She/he should have an advanced degree in education, or a comparable qualification. An understanding of the government processes, and social and cultural environment in Indonesia would be an advantage. Knowledge of ADB and/or official development assistance TA administration procedures and experience [of](#) implementing TA would be an advantage.

21. The ITL will report to the executing agency, implementing agency, and ADB TA officer. Assignment will be in Jakarta, Indonesia on an intermittent basis over 7 months.

22. **Higher Education Specialist / Deputy Team Leader (national, 8 person-months).** The NTL will assist the ITL manage and implement the sub-component activities, with a strong focus on the Higher Education Investment plan. She/he will also support the ITL in managing all the consultants.

23. Specific tasks include the following (i) support ITL to carry out a higher education sector assessment, (ii) review and analyze laws, policies, government and development partner initiatives; (iii) support preparation of the medium-term higher education investment strategy; (iv) identify, engage, and maintain networks with national and local higher education and TVET experts, development partners, and knowledge providers; (v) prepare reports/documents, oversee organization of meetings/workshops; and (vi) attend relevant meetings and undertake any other activity in support of the ITL, the TA, and as requested by ADB.

24. **Preferred qualifications and experience:** a degree in education or related field, with experience in developing and managing projects in higher education. At least 8 years of in-country experience in Indonesia. The NTL will be based in Jakarta. Excellent verbal and written English skills are required.

25. **TVET teacher education specialist (national, 5 person-months).** The TTES will work closely with the MORTHE, the MOEC, the ITL, and the NTL. Specific tasks include:

- (i) review relevant laws, policies, implementation plans, assessments, and undertake a rapid assessment of the current status of the TVET teacher training system, including relevant institutions providing training, a review of TVET teacher training in sectors aligned to current and future labour market needs, status of pre-service and in-service training, current teacher qualifications, competencies and experience and identify future capacity development needs aligned to RPJMN and demands of labour market and industry 4.0;
- (ii) prepare a comprehensive assessment report on TVET teacher education development, with specific recommendations for pre-service and in-service teacher training, aligned to objectives of the RPJMN, emerging labour market needs and digitization;
- (iii) organize meetings and workshops with the core team and other relevant stakeholders to present and discuss the comprehensive assessment report and recommendations, and formulate a set of priority policy actions to strengthen TVET teacher training including an operational framework and an outline of resource requirements for implementation;
- (iv) identify and maintain networks with local TVET experts and attend meetings and workshops on TVET as needed; and

- (v) prepare and review reports, relevant documents and undertake any other activity as reasonably requested by the ITL and ADB.

26. **Preferred qualifications and experience:** The TTES should have at least 8 years professional experience in the TVET sub-sector developing, managing, and implementing TVET strategies and plans aligned to labor market needs. She/he should have at least a master's or equivalent degree in education. A specialization in TVET is an added advantage. Knowledge of cutting edge TVET sector strategies, in particular to support employability and innovation in the subsector will be an advantage. Knowledge of government processes, and the social and cultural environment in Indonesia is required. Excellent verbal and written English skills are required.

27. **Knowledge Management Specialist (national, 4 months).** The objective of the assignment is to support the development of the communications and knowledge management strategy to share knowledge and disseminate information about the progress and results of the AKSI project. The specialist, in close collaboration [with the](#) PMU and PIUs will (i) meet with key stakeholders to generate their views on a communications and knowledge management strategy; (ii) prepare a strategy and advocacy plan (profile and identity for the program and proposed strategic actions for improving program appreciation and recognition) as well as a paper on institutionalization of communications and advocacy work within the center of excellence (CoE); (iii) advise on branding for CoE and a dissemination plan; (iv) train relevant CoE and university staff in communications and knowledge management; social media development and handling; and (v) support implementation of the plans. The ITL will guide the specialist, but the specialist is expected to work independently.

28. **Preferred qualifications:** The specialist should have at least 8 years professional experience in communications, knowledge management, and marketing with a solid understanding of brand development and positioning, or other similar work. She/he should have at least a university degree, preferably a master's degree in communications/marketing and program management, or public administration. A proven ability to prepare knowledge management and branding concepts for large institutions is a must and experience in the education sector is an added advantage.

29. **Training coordinator (national, 7 months).** The consultant will work closely with the PMU, the universities, and the respective government agencies and key stakeholder of the AKSI project to (i) prepare a concept note and a workshop plan to introduce the tracer studies and the new accreditation instrument; (ii) identify relevant international best practices and resource persons required to strengthen the center of excellence; (iii) support universities to organize the workshops and mobilize the resource persons; (iv) work closely with the HEAD foundation and the universities to develop the University Governance capacity development program; and (v) perform any other relevant coordination and organizational/administrative activity as may be reasonably requested by ADB and the PMU.

30. **Preferred qualifications:** The consultant should have a strong education background, preferably a communication, social science, or a degree in a relevant field. She/he must have proven experience working in the education sector on a broad range of topics, especially on conceptualizing and organizing knowledge events with different stakeholders. The consultant should have at least 5 years of relevant experience. Excellent organizational and English language skills are required.

4. General Specifications for the Firm

31. The firm will have experience in education management, preferably higher education and skills development, in Indonesia, both for policy advice as well as capacity development.

5. Management and Reporting Requirements

32. The firm is expected to closely collaborate with ADB and the MORTHE. It will be recruited using QCBS (90:10) method using simplified technical proposals, and with maximum budget.

33. Expected reports:

- (i) thorough inception report for developing the two medium-term plans, the knowledge management approach, and the workshop plan based on consultations with all relevant stakeholders;
- (ii) draft medium-term higher education investment plan;
- (iii) draft medium-term TVET-teacher education plan;
- (iv) final medium-term higher education investment plan;
- (v) final medium-term TVET-teacher education plan;
- (vi) final report on the knowledge management approach; and
- (vii) final report on all workshops conducted as well as short individual reports from each workshop.

Workshops, training, seminars, and conferences (in-country)

Title	Participants	Location	Days
1) To strengthen university governance, together with the HEAD foundation, a program of workshops will be held to address specific governance challenges in each university. After a joint workshop, targeted programs for each university will be designed based on the results of the first joint workshop. The results of the individual workshops will be presented in a final workshop. University staff and the MORTHE staff in the initial and final workshop, will be participating in the workshops. In the final workshop the results from the tracer study workshops and the BAN PT workshops will also be discussed. The workshops will be on cost-sharing basis with the HEAD foundation. The HEAD foundation will provide experts to facilitate the workshops.			
1. Workshop with HEAD foundation on improving university governance	30	Batam	3
2. HEAD foundation workshop in UNRI	15	UNRI	3
3. HEAD foundation workshop in UNINMAL	15	UNIMAL	3
4. HEAD foundation workshop in UNJA	15	UNJA	3
5. HEAD foundation workshop in UPI	15	UPI	3
6. Final workshop to discuss specific results, and lessons learned.	45	Jakarta	2
2) To support introduction and usage of national best practice tracer study approach to measure relevance, two workshops per university are planned, one to introduce the new method, a second to discuss the results of the first round and to address changes to improve the next round of tracer studies. Participants are representatives from each university, together with national resource persons who are experts in the tracer study tool.			
7. Tracer Study Workshop in UNRI (1)	15	UNRI	2
8. Tracer Study Workshop in UNRI (2)	15	UNRI	2
9. Tracer Study Workshop in UPI (1)	15	UPI	2
10. Tracer Study Workshop in UPI (2)	15	UPI	2
11. Tracer Study Workshop in UNIMAL (1)	15	UNIMAL	2
12. Tracer Study Workshop in UNIMAL (2)	15	UNIMAL	2
13. Tracer Study Workshop in UNJA (1)	15	UNJA	2
14. Tracer Study Workshop in UNJA (2)	15	UNJA	2
3) To train the four universities in the new accreditation method to assess quality at the institution level two workshops per university will be held. One to train the universities in the self-assessment, and the second to review and analyze the results of the self-assessment and develop a plan to address the issues found in the self-assessment. Participants are representatives from each university, from the MORTHE, and experts from BAN PT, who will function as the national resource persons to facilitate the workshops.			
15. BAN PT Workshop in UNRI (1)	20	UNRI	3

Title	Participants	Location	Days
16. BAN PT Workshop in UNRI (2)	20	UNRI	2
17. BAN PT Workshop in UPI (1)	20	UPI	3
18. BAN PT Workshop in UPI (2)	20	UPI	2
19. BAN PT Workshop in UNIMAL (1)	20	UNIMAL	3
20. BAN PT Workshop in UNIMAL (2)	20	UNIMAL	2
21. BAN PT Workshop in UNJA (1)	20	UNJA	3
22. BAN PT Workshop in UNJA (2)	20	UNJA	3
4) To support the development of the centers of excellence in each university, two workshops per university are foreseen. In these workshops international experts will be invited as resource person to work 3 days with selected stakeholders in each center of excellence to further develop the center of excellence. Participants will be university staff and representatives from industry and the local community. The specific international experts will be identified based on the need of the university to improve its center of excellence.			
23. COE Workshop in UNRI (1)	50	UNRI	3
24. COE Workshop in UNRI (2)	50	UNRI	3
25. COE Workshop in UPI (1)	50	UPI	3
26. COE Workshop in UPI (2)	50	UPI	3
27. COE Workshop in UNIMAL (1)	50	UNIMAL	3
28. COE Workshop in UNIMAL (2)	50	UNIMAL	3
29. COE Workshop in UNJA (1)	50	UNJA	3
30. COE Workshop in UNJA (2)	50	UNJA	3
5) To support development of medium-term higher education investment plan and medium-term TVET teacher education strategy, four national workshops, two workshops for each, will be conducted to engage with industry, policy-makers, academia, and other stakeholders. Two workshops in Jakarta, and two outside.			
31. Consultation on medium-term Higher Education investment plan (1)	40	Jakarta	1
32. Consultation on medium-term Higher Education investment plan (2)	40	TBC	1
33. Consultation on medium-term TVET teacher education strategy(1)	40	Jakarta	1
34. Consultation on medium-term TVET teacher education strategy(1)	40	TBC	1

BAN PT = Higher Education Accreditation Agency, COE = Center of Excellence, HEAD = Human Capital & Education for Asian Development, MORTHE = Ministry of Research, Technology and Higher Education, TBC = to be confirmed, TVET = Technical and Vocational Education and Training, UNIMAL = University of Malikussalleh, UNJA = University of Jambi, UNRI = University of Riau, UPI = Indonesia University for Education.

Source: Asian Development Bank.

B. Consulting firm for the Evaluation of Entrepreneurship Development Programs

34. The MORTHE will implement the AKSI project, financed by ADB. The AKSI project will support Indonesia's higher education system by providing advanced skills and knowledge to support inclusive and sustainable economic growth. The project will upgrade UNIMAL, UNJA, UNRI, and UPI to improve access, and the quality and relevance of their education and research. The impact of the AKSI project will be increased income and productivity of the working age population. The proposed outcome is strengthened relevance and quality of targeted universities. The following two outputs are proposed (i) market responsive programs delivered, and (ii) training of TVET-teachers improved.

35. The TA project will support the implementation of the AKSI project by the MORTHE and the four universities. This TA has two outputs (i) initial phase of AKSI implementation supported, and (ii) entrepreneurship and technology pilot assessments in higher education prepared.

36. ADB seeks the services of a firm with experience in evaluation and entrepreneurship development and/or university industry linkage programs. The firm will evaluate entrepreneurship development and university industry linkages programs.

1. Objective and Purpose of the Assignment

37. The objective of the assignment is to evaluate four or five entrepreneurship development and/or university industry linkages programs. The purpose of the assignment is to identify lessons from the programs to inform future entrepreneurship training programs.

2. Scope of Work and Deliverables

38. The consultants will evaluate four or five ongoing or completed innovative entrepreneurship development and/or university industry linkages programs. The programs to be selected will include at least one or two industry linkages programs implemented by Japan International Cooperation Agency (JICA), the Asian Entrepreneurship Training Program, by the Zurich University of Applied Sciences (ZHAW), the Swiss Federal Institute of Technology (ETH Zurich), and a private initiative. The consultants will support an independent evaluation and/or assessments of these programs, to develop lessons learned for higher education institutions and future entrepreneurship programs. The consultants will, in consultation with the MORTHE and ADB, finalize the list of the programs for evaluation. The following programs are to be included, and two more can be added.

39. The university industry linkages programs implemented by the Electronic Engineering Polytechnic Institute of Surabaya, the Hasanuddin University, and or the Gadjah Mada University, are programs which received financing from JICA and can be considered. The decision [of](#) which programs to include will be taken as consultants are mobilized, in consultation with the MORTHE and JICA.

40. The ZHAW and the ETH Zurich are planning an innovative entrepreneurship development program, called the Asian Entrepreneurship Training Program (AETP). This pilot program aims to provide targeted coaching during a few intensive working sessions in which joint Swiss and Indonesian teams work on their proposals. The Swiss part of the teams is expected to work from Zurich, so the training program will be partly in Indonesia and partly in Switzerland. After each

session the proposals will be reviewed and suggestions for improvement will be given.¹ The program will encourage the teams to work together and will provide high quality coaches to advise on how to strengthen the proposals. The draft design for the Swiss universities will further specify the target group, industry sector, teaching learning approach, timing, and other logistical arrangements. The draft is expected to be completed in December 2018.

41. The *Lingkaran's* Business Starter Pack program, which is a 3-month short course for budding entrepreneurs in Jakarta. *Lingkaran* is an educational community which offers entrepreneurship training programs in the creative industry. This private sector training program offers an entrepreneurship skill set from concepting and branding to financing, providing insights, expert feedback, personal coaching, and a peer network. It has been running successfully since 2014.

42. The consultants are expected to perform an independent evaluation of the selected programs. The evaluation approach, which is yet to be developed, needs to be aligned with the status of the program. For example, the AETP can be evaluated from the start until the end, while the JICA programs and *Lingkaran* program have already completed several runs, so those who have completed the program can be interviewed. The aim is to develop lessons learned for higher education institutions and future entrepreneurship programs. The following steps are foreseen:

- (i) selecting the five programs;
- (ii) developing an evaluation approach;
- (iii) collecting data; and
- (iv) providing findings.

43. The consultants are expected to produce the following reports:

- (i) inception report with the selection of the five programs;
- (ii) evaluation approach; and
- (iii) final evaluation report with analysis:
 - (a) results of the evaluation;
 - (b) lessons learned from the programs;
 - (c) success stories;
 - (d) advice on how entrepreneurship training can be upscaled, based on this pilot, but also using other best practices; and
 - (e) identify, based on the evaluation, skills shortages ~~from~~ as noted by entrepreneurs which could be covered in earlier education.

44. The assignment is expected to be conducted by a team of two consultants (international and national). At the start of the project the consultants will be provided with the relevant documents of the three identified projects.

45. It is expected that the international consultant will come to Indonesia twice—at the start of the program and at the end.

¹ The program is a pilot within the Swiss bilateral Science and Technology Cooperation with Asia, funded by the Swiss State Secretariat for Education, Research and Innovation (SERI). The program will be executed in partnership between ZHAW and ETH Zurich in its function as the Leading House for bilateral cooperation with Asia mandated by SERI.

3. Consultants requirements

46. **International evaluation expert.** A minimum of 5 years relevant experience is required, as well as a degree in a relevant field, and proven experience of evaluating or designing entrepreneurship programs. Experience in developing countries is required, and experience in Indonesia is an added advantage. The expert must have proven writing skills, and fluent in English. Fluency in Bahasa is an added advantage.

47. **National evaluation expert.** Minimum 10 years relevant experience in evaluation. Proven knowledge or experience, with evaluating and/or designing entrepreneurship required. English language skills are required. The expert is expected to be a full team member and contribute to the evaluation as agreed.

C. Individual Consultants

1. Gender and Labor Market Specialist (International)

Project	Supporting the Advanced Knowledge and Skills for Inclusive Growth Project		
Source	International	Category	
Expertise	Gender and Labor Market Specialist		
Background			
<p>The MORTHE will implement AKSI financed by ADB. The AKSI-project will support Indonesia's higher education system by providing advanced skills and knowledge to support inclusive and sustainable economic growth. The project will upgrade the UNIMAL, UNJA, UNRI, and UPI to improve access, and the quality and relevance of their education and research. The impact of the AKSI project will be increased income and productivity of the working age population. The proposed outcome is strengthened relevance and quality of targeted universities. The following two outputs are proposed (i) market responsive programs delivered, and (ii) improved TVET-teacher training.</p> <p>The TA project will support the implementation of the AKSI project by MORTHE and the four universities. This TA has two outputs (i) initial phase of AKSI implementation supported, and (ii) entrepreneurship and technology pilot assessments in higher education prepared.</p> <p>ADB seeks the services of an international gender cum labor market specialist to support the four universities in designing and implementing one study each on assessing the transition of men and women from university to the labor market and barriers to labor participation in selected disciplines.</p>			
Objective and Purpose of the Assignment			
<p>The objective of the assignment is to provide technical advice to the research teams in each of the four universities on the research they propose to do on transition from university to work and labor market barriers in a specific field.</p> <p>The purpose of the assignment is to ensure that the research conducted by the respective universities on transition from university to work is of high quality.</p>			
Scope of Work			
<p>The international specialist will advise the universities on how to strengthen and improve their research proposals, provide on-line support during implementation of the studies, and advise on the draft final reports and publications.</p> <p>The specialist is expected to ensure that the research proposals are detailed and of sufficient quality to guide the researchers in (i) defining the research question and theoretical framework, (ii) supporting development of the relevant qualitative and quantitative methods, (iii) supporting development of the data collection strategy and instruments, and (iv) envisaging the suitability of the research proposals to the capacity of the researchers. As this will be applied research, it is expected that the results of the studies covering the transition from university to labor market will create better understanding of labor market barriers for men and women. Specific recommendations for students, universities, employers, and government can also be formulated. The specialist is expected to assist and coach the research team in analyzing the data and documenting the results of the studies in a report, or other suitable dissemination methods. The specialist is also expected to identify capacity development needs among the researchers and develop a plan to address these needs.</p> <p>The studies will specifically focus on understanding the transition from university to labor market and labor market barriers for men and women in specific disciplines. Hence the specialist is expected to have in-depth understanding and experience covering gender analysis of labor markets.</p> <p>The consultant will be working in the four universities, and intermittently from home. The consultant will have two missions to Indonesia to work with the research teams. In between, support to the research teams can be done on-line. The assignment will be for 2 person- months on an intermittent basis, with one mission in February 2019 and a second mission to be agreed with the universities, expected in October 2019, after which the assignment can be completed.</p>			

The consultant is expected to work independently with the four universities. ADB and the project management unit, including the national gender consultant, are available for introductions and logistical support. The schedule of the visits will be developed in close collaboration between the project management unit in Jakarta and the research teams in the respective universities.

Detailed Tasks and/or Expected Output

1. Provide in a collaborative process, concrete suggestions, and substantive inputs to improve research proposals on transition from university to labor market, and labor market barriers for men and women in specified disciplines to the four research teams in the respective universities. The expert will also provide suggestions on research questions, a theoretical framework (using gender analysis and labor market insights), operationalization and an appropriate data-collection methodology, questionnaires and/or other research tools, data analysis, and any other relevant issues.
2. Support the research teams in making a capacity development plan to implement the study.
3. Provide regular on-line coaching during implementation of the studies.
4. Provide concrete suggestions and substantive inputs on how to present the results of the studies in a final report or publication.
5. Consolidate the findings and recommendations from the studies in the four universities and prepare a policy brief (maximum 4–5 pages) on how university-to-work transition and labor force participation in the selected sectors can be facilitated, especially for female students.

Minimum Qualification Requirements

The consultant will have at least 10-years' experience in gender studies as well as labor market studies with a strong focus on gender. The experience can be within a university or another research institution, or as a consultant. The consultant will have an advanced degree in a relevant subject. International experience is required, with work experience in Asia and Indonesia as an added advantage. If the consultant has experience with challenges of working in the agriculture, sustainable natural resources, and aquatic and marine sectors, that would be an added advantage. The specialist should have excellent writing skills, preferably having published on gender and/or labor market issues, with a gender perspective in academic or professional journals. The specialist will have a proven track record of coaching researchers, like graduate students or other junior researchers. The consultant will be fluent in English. Being able to communicate in Bahasa is an added advantage.

Minimum General Experience: 10 years

Minimum Specific Experience (relevant to assignment): 5 Years

Regional/Country Experience: X Required Desired Not Required

Deliverables and Estimated Submission Date

1. Short report on the first mission, including description of the advice provided to the four research teams, with the draft research proposals as an annex, and the capacity development plan.
2. Short report on the second mission, with a summary of lessons learned from advising the four research teams.
3. Policy brief (maximum 4–5 pages) on how university-to-work transition and labor force participation in the selected sectors can be facilitated, especially for female students.

Place of Assignment	Working Days	Estimated Start Date	Estimated End Date
Home office	12	1 February 2019	30 November 2019
Bandung	10	15 February 2019	31 October 2019
Riau	10	15 February 2019	31 October 2019
Malikussaleh	10	15 February 2019	31 October 2019
Riau	10	15 February 2019	31 October 2019
Total Days (intermittent)	52		

ADB = Asian Development Bank, AKSI = Advance Knowledge and Skills for Sustainable Growth, MORTHE = Ministry of Research, Technology and Higher Education, TA = Technical Assistance, TVET = technical and vocational education and training, UNIMAL = University of Malikussaleh, UNJA = University of Jambi, UNRI = University of Riau, UPI = Indonesia University for Education.

Source: Asian Development Bank.

2. Civil Engineer (National)

Project	Supporting the Advanced Knowledge and Skills for Inclusive Growth Project		
Source	National	Category	
Expertise	Civil Engineer		
Background			
<p>The MORTHE will implement AKSI, financed by ADB. The AKSI-project will support Indonesia's higher education system by providing advanced skills and knowledge to support inclusive and sustainable economic growth. The project will upgrade the UNIMAL, UNJA, UNRI, and UPI to improve access, and the quality and relevance of their education and research. The impact of the AKSI project will be increased income and productivity of the working age population. The proposed outcome is strengthened relevance and quality of targeted universities. The following two outputs are proposed (i) market responsive programs delivered, and (ii) improved TVET-teacher training.</p> <p>The TA project will support the implementation of the AKSI project by MORTHE and the four universities. This TA has two outputs (i) initial phase of AKSI implementation supported, and (ii) entrepreneurship and technology pilot assessments in higher education prepared.</p> <p>ADB seeks the services of a national engineer to support implementation of the innovative design principles for the civil works in the four universities.</p>			
Objective and Purpose of the Assignment			
<p>The objective of the assignment is to provide engineering advice and quality assurance on the design and implementation of the civil works in the four universities.</p> <p>The purpose of the assignment is to ensure that the agreed upon design principles will be implemented.</p>			
Scope of Work			
<p>The main task of the civil engineer is to support the universities, the MORTHE and ADB in developing and assessing the (i) terms of reference for DED consultants, (ii) draft DED, and (iii) draft bidding documents as compared to the design principles that were agreed during the design of the project.</p> <p>Aside from complying with relevant government standards, civil works will apply best practices for sustainability ('green'), climate change mitigation and adaptation, cost-efficient, inclusive, and support a conducive academic climate. A framework for the assessment, and a lessons' learned document will be available for all universities to use.</p> <p>The engineer is expected to assess the relevant design documents, provide advice to the universities, the MORTHE, and ADB, and also provide training or any other capacity development activities as and when required. The expert will support the project management consultants in the project management unit. The expert will also provide additional independent quality assurance to assure the driving principles are applied, especially during the start-up phase of the project, to instill a culture of quality. The consultant is expected to visit the four universities. The assignment is for 3 months, 66 working days, to be provided during 15 months from January 2019 until March 2020. Inputs will be on an intermittent basis.</p>			
Detailed Tasks and/or Expected Output			
<p>Advise the MORTHE, universities, and ADB on the results of the assessment of the draft TORs for DED consultants, the draft DEDs, and ensure the draft bidding documents comply with the design principles as agreed during the project design.</p> <p>Provide capacity development for relevant project staff and consultants on how to apply the design principles.</p> <p>Keep abreast of new best practices and other relevant developments in design and construction of university buildings, and apply the latest best practices in the design approach in the AKSI project.</p>			

Minimum Qualification Requirements

The engineering specialist should have an advanced degree in civil engineering. The expert should have experience in advising and reviewing complex engineering projects, including at least 5 years' experience in infrastructure development projects for universities in Indonesia, or for comparable projects. This includes involvement in the design, procurement, management, and implementation of infrastructure projects, preferably supported by international development agencies. The consultant should have a thorough knowledge of the construction sector in Indonesia.

The consultant should also have experience with strengthening the higher education sector in Indonesia. She/He will ensure that the specifications for infrastructure and equipment support the objectives of the project.

The consultant needs to be able to report in English.

Minimum General Experience: 7 years

Minimum Specific Experience (relevant to assignment): 5 Years

Regional/Country Experience: ☐ Required ☐ Desired ☒ Not Required

Deliverables and Estimated Submission Date

Short monthly progress reports summarizing his work to assess and improve the TOR, the DEDs, and the draft bidding document, and any new developments that can be included in the framework and/or the lessons learned document.

Any training material developed for capacity development.

Concise final report, indicating possible lessons learned and summarizing his main activities.

Place of Assignment	Working Days	Estimated Start Date	Estimated End Date
Home office	16	1 January 2019	31 March 2020
Jakarta	10	1 January 2019	31 March 2020
Malikussaleh	10	1 January 2019	31 March 2020
Riau	10	1 January 2019	31 March 2020
Jambi	10	1 January 2019	31 March 2020
Bandung	10	1 January 2019	31 March 2020
Total Days (intermittent)	66		

ADB = Asian Development Bank, AKSI = Advance Knowledge and Skills for Sustainable Growth, DED = detailed engineering design, MORTHE = Ministry of Research, Technology and Higher Education, TA = Technical Assistance, TOR = terms of reference, TVET = technical and vocational education and training, UNIMAL = University of Malikussaleh, UNJA = University of Jambi, UNRI = University of Riau, UPI = Indonesia University for Education.

Source: Asian Development Bank.

D. Skills for the Electricity Sector – Single Source Selection: Coaction Indonesia

48. The MORTHE will implement AKSI, financed by ADB. The AKSI-project will support Indonesia's higher education system providing advanced skills and knowledge to support inclusive and sustainable economic growth. The project will upgrade UNIMAL, UNJA, UNRI, and the Indonesia University for Education (UPI) to improve access, and the quality and relevance of their education and research. The impact of the AKSI project will be increased income and productivity of the working age population. The proposed outcome is strengthened relevance and quality of targeted universities. The following two outputs are proposed (i) market responsive programs delivered, and (ii) improved TVET-teacher training.

49. The TA project will support the implementation of the AKSI project by MORTHE and the four universities. This TA has two outputs (i) initial phase of AKSI implementation supported, and (ii) entrepreneurship and technology pilot assessments in higher education prepared.

50. ADB will engage Coaction Indonesia to conduct a study on Skills for the Electricity Sector. The background, purpose, and methodology are explained below.

1. Background

51. The electricity sector in Indonesia is rapidly evolving. More and more parts of the country are being electrified, especially outside of Java. The attention for energy efficiency and sustainability is increasing, as several initiatives have been launched to support the shift from non-renewable to renewable methods of power generation, both on and off grid. Indonesia, like many other countries, has expressed its intention that its electricity sector should benefit from the fourth industrial revolution by using 'smart' systems and solutions. To be able to fully utilize the opportunities these three developments are offering, adequate skills are needed. Some initial assessments have been made to identify the need for engineers and technicians to develop and operate the ongoing and planned electrification, based on extrapolating the current number of professionals. However, these assessments are deemed incomplete and do not do justice to the major changes that the sector is undergoing.

52. The study will provide a picture of skills required, available and needed in the electricity sector, now and in the future. The study will increase understanding of the possible current and future skills gap in the electricity sector, and provide specific suggestions on how to address them. Therefore, the study will produce both an analytical paper as well as several project proposals. As the study is initiated from the demand side of the labor market, the study will also contribute to the policy dialogue on how to ensure that skills development is more demand oriented, a central element in the ongoing preparation of the next five-year plan. As each economic sector has its own challenges and requirements, starting the analysis from the need for skills in a specific sector increases the understanding, and the possibility for targeted initiatives.²

53. ADB has been a long-term partner for Indonesia both in the energy as well as the skills development and education sector, and continues to provide policy advice and investments.³ ADB

² Analytical Capacity Development Partnership. 2017. *Preparing Skilled and Highly Skilled Manpower for Indonesia's Modernizing Maritime Sector*. Jakarta

³ Asian Development Bank (ADB). 2017. *Asian Development Outlook 2017*. Manila; ADB. 2018. *Asian Development Outlook 2018*. Manila; and ADB. 2018. *Indonesia: Enhancing Productivity through Quality Jobs*. Manila. ADB. 2012. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Republic of Indonesia for the Polytechnic Education Development Project*. Manila; ADB. 2010. *Technical Assistance to the*

is engaging Coaction Indonesia, a not-for-profit think tank leading nationwide initiatives on clean energy and energy efficiency, to conduct the study. Given its in-depth knowledge of the sector, Coaction is uniquely situated to conduct this study.

2. Scope

54. To provide the picture of the skills required, available and needed in the electricity sector, now and in the future, the study will cover the following elements:

55. Firstly, an analysis of the major trends in the electricity sector [will be completed](#). This is the basis for the current and future demand for skills. This sketch will look at a broad range of topics like electrification, resourcing, energy efficiency, energy audits, renewable energy on and off grid, financing for electricity, policies on protection of local markets,⁴ unbundling, smart grids, smart metering, automation of electricity systems, new product developments (innovation and manufacturing), etc. This should also include an overview of industries, organizations and other relevant stakeholders traditionally active in the sector, as well as an analysis of the 'new' entrants based on trends in the sector. The analysis is expected to address core elements of geographic differences.⁵ Based on the trends mentioned, a description of the skills needed in the electricity sector will be developed. It is expected that this will cover the full area from basic skills for operators, including micro-enterprises, to advanced engineering and research skills. The analysis is expected to provide skills needed for the currently required skills profiles or occupations as well as for skills profiles or occupations required in the future. This would lead to an overview of the current need and the direction of the future need. For the current need, specific quantitative figures are expected. For the future need, more general suggestions will suffice.

56. Secondly, based on a description of the current organization of the sector, identify the current labor force in the sector, with relevant division at skills levels, occupation, industries, geography, gender, education qualification, and wages. If possible, include a historic picture to analyze trends up until now. While [specific qualifications](#) for certain industries and occupation ~~specific qualification~~ will be available, for some skills levels, most likely at the basic level in the informal sector, more qualitative descriptions need to be included.

57. Thirdly, provide an overview of the policy initiatives in the skills development sector, specifically in the electricity sector, as well as an overview of the capacity of the skills development providers in the electricity sector. The policy section is to include the status of the implementation [of](#) the Indonesian Qualifications Framework in the electricity sector. It is also to address any specific policy initiatives by relevant ministries and other stakeholders to address skills

Republic of Indonesia for Education Sector Analytical and Capacity Development Partnership. Manila; and University-Industry Partnerships: Lessons Learned (accessible from the list of linked documents in Appendix 2).

⁴ The government aims to stimulate the local market by regulating the use of imported equipment as well as the utilization of engineering services provided by foreign experts. For Indonesia, to both benefit from the high performance of the newest internationally available equipment as well as utilize the knowledge and experience gained from innovative practices and research & development, the regulations need to have the right balance between supporting local markets without blocking access to the mentioned innovations.

⁵ The study will focus at the national level but will do justice to the fact that large differences exist between regions. To fully understand trends and opportunities, part of the study will analyze examples at the more local level. Where some skills are needed in a certain place, they might not be needed somewhere else, as electrification reaches regions without existing electricity infrastructure or workforce, and/or renewable energy sources of power generation are largely geographically dependent, like hydro, geothermal, wind, and/or waste to energy power plants near plantations. The analysis will take mobility of skilled labor into account. Evidence shows that many factors influence mobility of skills, and this study aims to provide some insight into this for the electricity sector.

development in the electricity sector. The study will also identify which organizations are providing what training and for whom, from the basic to the advanced education level. A full overview of the formal training system, non-formal training centers, senior vocational secondary school, polytechnics, community colleges, academies and universities is expected. Information on informal training, in-company training and/or training by commercial training organizations will be gathered as much as possible. Special attention is to be provided to the in-house education approaches major companies and organizations, like the State Electricity Company (PLN) and others, are using. The study is expected to provide more detailed case descriptions of relevant emerging initiatives to improve skills development in the electricity sector.⁶ In the description of these emerging initiatives, the uniqueness of certain local developments is expected to be highlighted, and where applicable, initiatives outside of Java are to be highlighted.

58. Lastly, based on the previous three steps, the study will analyze challenges in meeting demand and supply for skills in the electricity sector, including a quantitative description of skills available, skills needed, and skills currently being provided. This includes identification of possible interventions to strengthen skills development in the electricity sector.

3. Results

59. The study will have two specific deliverables:

- (i) A paper describing the current and future skills needed based on the trends in the sector, the current skills available, the capacity, organization and quality of the current skills development system, and the current and future skills shortage, diversified between job profiles and education level. Where possible, this description should contain both a quantitative and a qualitative analysis. If the data is not strong enough, a more qualitative analysis is expected through interviews with key electricity sector leaders.
- (ii) Proposal(s) which identify possible initiatives to address the current and future skills shortages. A strong focus in these proposals should be at presented as practical, implementable, and replicable next steps, by identifying organizations and networks to be established, regulations and policies to be fine-tuned, financing opportunities to be created, skills and competency profiles to be developed, and skills developments systems to be strengthened and/or set up.

4. Methodology

60. The analysis is expected to have the following elements, which will be further developed in the final proposal:

- (i) In-depth analysis of already available studies and reports on the electricity sector, analysis of available databases, including but not limited to data from different ministries and agencies collected for reporting on education and training institutions (education management information system from the MORTHE, the MOEC, and the Ministry of Labor), labor force and household (Sakkenas and Sussenas), companies (enterprises surveys), regional economic development

⁶ A few possible examples are the work MOEC is undertaking in collaboration with the government of France and Schneider. The Deutsche Gesellschaft für Internationale Zusammenarbeit study to identify best practices in existing curricula in Indonesia for off grid renewable energy systems, the PLN education and competency certification program, the Geocap program for geothermal capacity building, United States Agency for International Development Indonesia Clean Energy Development I&II programs, Millennium Challenge support to skills development for the renewable energy sector, and other initiatives from other public and private organizations.

- (Jobs created per regions), and the development of energy and the provision of electricity.
- (ii) Where possible, primary data available from companies, training and education institutions, relevant ministries and agencies, and other stakeholders, including as many details as possible on [the](#) current labor force, vacancies, students and trainees, certificates, and trends; a survey is not envisioned within the scope of the study.
 - (iii) Interviews with core stakeholders, like PLN, Ministry of Energy and Mineral Resources, National Energy Commission, Ministry of Education and Culture, Ministry of Research, Technology and Higher Education, Ministry of Manpower and Transmigration, Ministry of Industries, BAPPENAS, National Certification Agency (BNSP), knowledge institutes, international and national professional working groups, core private employers, and other relevant parties (including stakeholders able to provide information on skills demand and trends in the nonformal sector at the basic level), using Coaction's and ADB's established network. Annex 1 identifies a list of potential stakeholders.
 - (iv) Case study analysis of a few identified successful skills development initiatives in the electricity sector, as well as gathering qualitative data (if quantitative is not available) on skills demands at the basic non-formal level (for example maintenance of solar panels).
 - (v) A methodology to estimate the future skills demand, describe the current skills available and the current capacity of the skills development system in the electricity sector, and identify the current and future gap, if any. The methodology should analyze the information and map the estimated skills demand based on the latest projections of Electricity Demand and the planned power plant and distribution network completion dates. The mapping should identify the specific skills required, level and type of education desired, as well as type of competency certifications and power generation per region. By comparing this with the existing labor force and the capacity of the skills development system, an analysis of demand, supply and gaps can be made. Additional mapping of knowledge institutions will highlight potential education and training partnerships and pilot projects, based on the case studies.
 - (vi) A more comprehensive picture of the skills needed in the electricity sector, and at the same time a tool to generate subsequent proposals as well as ideas and to bring relevant partners closer together. Ideas for follow-up proposals and suggestions on how to strengthen collaboration among different stakeholders will also be collected in the process.

5. Implementation arrangements

61. Coaction Indonesia, together with ADB, will implement the study. Coaction is uniquely equipped to do this work as it has an extensive network of stakeholders including public and private sector and international organizations engaged in the Indonesian energy sector. Coaction has in-depth knowledge of the sector and is constantly analyzing new developments. Coaction was co-founded by experienced members of the Ministry of Energy's former special task force for the Acceleration of Renewable Energy and Coaction is currently leading nationwide initiatives on clean energy and energy efficiency. Coaction has already approached key stakeholders to raise awareness, initiate interest, and gain support for this study. Annex 2 provides more details on Coaction.

62. The study is expected to be completed in about 4 months. ADB and Coaction will jointly present progress and results to the relevant stakeholders. Budget will be \$100,000 maximum, and the contract will be fully results-based.

ANNEX 1: LIST OF POSSIBLE INTERVIEWEES

Coaction has identified the following stakeholders to (potentially) engage with for the collection of information and data:

1. National Development Planning Agency (BAPPENAS), Ministry of Energy and Mineral Resources,, Directorate General for New and Renewable Energy and Energy Conservation, Ministry of Manpower and Transmigration, Ministry of Education and Culture, Ministry of Research, Technology and Higher Education, and various Indonesian Knowledge Institutes from SMK-Higher Education (e.g., State Electricity Company (PLN) University, Institute of Technology Bandung (ITB), Institute of Technology Surabaya (ITS), etc.).
2. National Energy Council (DEN), Indonesian Institute for Energy Economics (IIEE), Institute for Essential Services Reform (IESR), and Renewable Energy Society Indonesia (METI).
3. PLN, PT Pembangunan Jawa Bali (PJB), and Java Power.
4. Private Sector Associations- Indonesian Chamber of Commerce and Industry (Kadin), Indonesian Employer's Association (APINDO), Association of Independent Power Producers (APLISI), Association of Solar Panel Producers (APAMSI), and Indonesian Electrical Contractors Association (AKLI).
5. Eurocham Energy Working Group, US Power Working Group, and French Renewable Energy Group Indonesia.
6. International Development Agency Programs- Agence Française de Développement, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), GIZ Electrification through renewable energy (ELREN), GIZ Energising Development Indonesia (ENDEV), Humanistisch Instituut voor Ontwikkelingssamenwerking (HIVOS), Danish International Development Agency ES3P, United States Agency for International Development Indonesia Clean Energy Development (ICED) I&I, and Millennium Challenge Account Indonesia.
7. Finance Institutions-PT Sarana Multi Infrastruktur (SMI) , Green Climate Fund, Tropical Landscape Fund, Asian Debt Management (ADM) Capital, Japan International Cooperation Agency, and Banque Nationale de Paris (BNP) ParibasParibas.
8. International Organizations-International Energy Agency (IEA), World Resource Institute (WRI), United Nations Development Program (UNDP), and Global Green Growth Institute (GGGI), Carbon Trust
9. Key Multinational Private Sector Companies with Capacity Building Programs in Indonesia- General Electric (GE), Siemens, Schneider Electric, Wartsilla, and Unlimited Power Company (UPC) Renewables.

ANNEX 2: COACTION

1. The non-profit thinktank Coaction Indonesia, together with ADB, will implement the study. Coaction is uniquely equipped to do this work as it has an extensive network of local non-government organization and stakeholders including local governments, private sector, and international organizations engaged in the Indonesian energy sector. Coaction has in-depth knowledge of the sector and is constantly analyzing new developments. Coaction was co-founded by experienced members of the Ministry of Energy's former special task force for the Acceleration of Renewable Energy and Coaction is currently leading nationwide initiatives on clean energy and energy efficiency through policy advocacy, capacity building, campaign, and information and communication technology. During their work in the taskforce, Coaction co-founders were also involved in the development of roadmap for Bali as Clean Energy National Area and Center of Excellence.
2. Coaction Board of Directors (BoD) comprises of (i) Rebekka Angelyn, Executive Director, Legal and Institutional Development; (ii) Dhita Rachmadini, Program Director, Program and Project Management; (iii) Nuly Nazlia, Finance and Operations Director, Private Sector Development; (iv) Eva Fitrina, Partnership Director, Government and Community Relations; and (v) Verena Puspawardani, Communications and Campaign Director, Communication & Campaign. The BoD is supported by a team that consist of geographical information systems (GIS) specialists, policy analyst, researcher, engineer and a stakeholder engagement officer to implement its projects. The organization has a Board of Advisors, namely: Mr. Samsul Bachri, an education practitioner from ITB, Mr. Sarwono Kusumaatmadja, former Minister who is currently serving as an advisor to the Minister of Forestry and Environment and Mr. Widhyawan Prawiraatmadja, former Organization of the Petroleum Exporting Countries (OPEC) Governor and Advisor to the Ministry of Coordinating Economic Affairs.
3. Some of the previous and current work under Coaction Portfolio include (i) Power Watch for Indonesia, a global initiative developed and maintained by World Resources Institute–Indonesia, a database of power plants, interactive map of power plants and tools to help stakeholder understand impacts of power generation; (ii) Scoping study for Energy Access Market Map (EAMM), a map based online system that provides systematic and comprehensive framework for assessing market demand for decentralized renewable energy; (iii) Market studies for off-grid and on-grid power generation and biodiesel; (iv) Feasibility Study for Biomass Gasification in Central Sulawesi; (v) Indonesia Biodiesel Industry Platform for Biofuel Information System Development; (vi) Clean Energy Campaign; and (vii) Communication Strategy.
4. Coaction team members have established networks in West, Central, and East Kalimantan and had been working with local governments as well as with academics, civil society organizations (CSOs), and international organization's working in the region. In 2017, Coaction Indonesia joined the *Lingkar Temu Kabupaten Lestari* (Sustainable District Platform) as a consortium member, where eight heads of districts from South Sumatera, Riau, West Kalimantan, and Central Sulawesi are committed to becoming sustainable districts.
5. Coaction also has a strong network in Nusa Tenggara Timur (NTT) specifically on the energy landscape in NTT through their work in developing the Program Indonesia Terang, an energy access program under former Minister of Energy with a focus on electrification of the Eastern Provinces. The team also worked closely with provincial and district governments, the private sector and CSOs operating in the area such as HIVOS, Pikul, Geng Motor Imut, etc.

6. Rebekka Angelyn the Executive Director of Coaction is a graduate from the Faculty of Law, University of Indonesia, and University of Aberdeen in Oil and Gas Law. She started her career as an environmental analyst based in Singapore and branched out to other sectors as a government consultant and researcher on forestry, energy, politics, investment, and governance.

7. Having worked on development projects over recent years, Rebekka's portfolio includes: designing institutional and legal frameworks for government-led funding instruments for the energy and forestry sectors; advising policy makers on investment issues; governance and sustainability; and designing green projects at a regional and community level as a part of the REDD+ program. She has worked with the Ministry of Disadvantaged Regions, Ministry of National Development Planning (BAPPENAS), Ministry of Energy and Mineral Resources, Ministry of Finance, bilateral and multilateral donors, and the private sectors.