

Project Administration Manual

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Indonesia: Promoting Research and Innovation
through Modern and Efficient Science and
Technology Parks Project

ABBREVIATIONS

ADB	–	Asian Development Bank
BAPPENAS	–	Badan Perencanaan Pembangunan Nasional (Ministry of National Development Planning)
COCP	–	code of construction practice
DED	–	detailed engineering design
DGHERT	–	Directorate-General of Higher Education, Research and Technology
FMA	–	financial management assessment
GAP	–	gender action plan
IPB	–	IPB University
ITB	–	Bandung Institute of Technology
M&E	–	monitoring and evaluation
MOECRT	–	Ministry of Education, Culture, Research and Technology
NOL	–	no objection letter
OCB	–	open competitive bidding
PIC	–	person-in-charge
PIU	–	project implementation unit
PMC	–	project management consultancy service contract
PMU	–	project management unit
R&D	–	research and development
SOE	–	statement of expenditure
STP	–	sciences and technology park
TOR	–	terms of reference
UGM	–	Gadjah Mada University

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Project Administration Manual Purpose and Process

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with the policies and procedures of the government and Asian Development Bank (ADB). The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Ministry of Education, Culture, Research and Technology (MOECRT) as executing agency, and University of Indonesia, IPB University (IPB), Bandung Institute of Technology (ITB) and Gadjah Mada University (UGM) as implementing agencies, are wholly responsible for the implementation of this ADB-financed project, as agreed jointly between the borrower and ADB, and in accordance with the policies and procedures of the government and ADB. ADB staff is responsible for supporting implementation including compliance by MOECRT, University of Indonesia, IPB, ITB and UGM of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At loan negotiations, the borrower and ADB shall agree to the PAM and ensure consistency with the loan agreement. Such agreement shall be reflected in the minutes of the loan negotiations. In the event of any discrepancy or contradiction between the PAM and the loan agreement, the provisions of the loan agreement shall prevail.

After ADB Board approval of the project's report and recommendations of the President (RRP), changes in implementation arrangements are subject to agreement and approval pursuant to relevant government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval, they will be subsequently incorporated in the PAM.

I. PROJECT DESCRIPTION

1. The project will support the government's strategy to commercialize research and development (R&D) and improve the success rate of startup incubation of four science and technology parks (STPs). The four STPs operate under public higher education institutions of Bandung Institute of Technology (ITB), Bandung, West Java; Gadjah Mada University (UGM), Yogyakarta; IPB University (IPB), Bogor, West Java; and University of Indonesia, Jakarta.

2. The project will assist the four STPs to upgrade advanced R&D and startup incubation facilities, provide grants to conduct applied research and incubate startups, and upgrade domain expertise of STPs' researchers and capability of research administration staff. It will support each STP to focus on disciplinary fields that are aligned with the Indonesia priority economic sectors. ITB will focus on engineering (transport and energy), Information and communication technology, disaster prevention technology, and food and health technology; UGM on health and pharmaceutical, agro-industry, and renewable energy; IPB on agro-processing, functional food technology, and natural cosmetics and pharmaceuticals; and University of Indonesia on medical device technology, drugs and functional food innovation, and engineering innovation including artificial intelligence and renewable energy. This project will strengthen public-private R&D collaboration, increase workforce competitiveness and productivity particularly as new technologies are developed and adopted, and promote youth entrepreneurship and job creation.

3. **Impact and outcome.** The project is aligned with the following impact: competitiveness of Indonesia's economy and sustained economic growth strengthened through R&D and innovation. The project will have the following outcome: quality and relevance of R&D and innovation system in four STPs improved. The design and monitoring framework is in Section IX.

4. **Output 1: Facilities for research and development and innovation at four science and technology parks upgraded.** Advanced research laboratories and product development facilities in the four project STPs will be upgraded¹ with advanced R&D equipment enabled with industry 4.0 capability to ensure improved R&D results. These upgraded facilities will focus on priority sectors (para. 2) under the government strategy and will undergo regulatory certification.² R&D facilities for incubating startup companies, with co-working spaces and fabrication laboratories for prototyping, will be scaled up with new equipment to support startup incubation. This output will also construct one new building in IPB for halal food innovation, incorporating gender-sensitive, socially inclusive,³ and climate-resilient features. Overall, this output will help to improve the maturity level of these four STPs from madya (intermediate) to utama (advance) level.⁴

5. **Output 2: The four science and technology parks' research and development administration, partnerships, and startup incubation strengthened.** This output will provide (i) ¥4,283.18 million of applied research grant to researchers from the four project STPs to conduct

¹ Minor works such as electrical wiring, repainting, and replacement of windows and ventilators will be carried out.

² These include international standard organization (ISO) certification such as ISO9000 and ISO14000, Hazard Analysis Critical Control Point, Halal certifications, etc.

³ Gender-sensitive and inclusive features will include lactation room, well-lit public areas, person-with-disability-friendly furniture, ramp for wheelchair access, tactile walkway, and security camera system in public areas.

⁴ STP maturity covers broad dimensions from infrastructure facilities to soft components and is assessed based on the following five indicators: input, process, output, outcome, and impacts. Intermediate STPs provide science and technology in a complete and adequate manner with good outcomes, but have room to develop and grow. Under an advanced STP, S&T system has become a complete and mature ecosystem supporting regional economic impacts, especially in stimulating technology transfer and innovation activities, start-up development, and offering of services to industry

research in focused areas (para. 2); and (ii) ¥1,507.10 million grant for startup incubation to students, alumni, and faculty members of the four project STPs. The award of both grants will be conducted through a structured call for proposals annually. The call for proposals will be guided by a common eligibility requirement, evaluation criteria, and selection procedure, which will be finetuned for administrative efficiency during implementation.

6. To access the applied research grant, researchers must collaborate with either private sector companies, local community organizations, or reputable international research institutions to create a demand-driven R&D. All applied research involving external parties outside the project universities shall require a partnership agreement with the university. Only applied research carried out in collaboration with private sector companies will require contribution in cash or in kind. Research involving communities will be aligned with the *tri-dharma* principle (higher education institutions undertake education, research, and community service) of providing services to the communities and thus do not require any contribution or cost sharing. Applied research with international research institution shall involve each party contributing in accordance with its own share of research cost. Applied research is envisioned to result in the development of 167 innovations or products; 18 strategic R&D projects involving community with social inclusion, gender mainstreaming, or climate focus; and 21 joint research projects with reputable international institutions. To strengthen commercialization potential, applied research will be pegged at TRLs 5–9 where 106 R&D projects will achieve TRL 9.⁵ Under the startup incubation grant, 3,750 students will attend entrepreneurship training courses, while 470 startup teams will be incubated. Networking and market linkages will be organized for startups to ensure better business sustainability. To increase female participation in the startup program, the startup incubation grants will support engagement of female mentors and participation of female startup members in marketing events, business networking, and social media campaigns.

7. **Output 3: Capacity of the four science and technology parks and the Ministry of Education, Culture, Research and Technology strengthened.** This output will (i) enhance capability of researchers, including female researchers, at the four project STPs through international post-doctorate scholarship in the priority economic sectors (para 2); (ii) improve the skillsets of STP administrators to develop, implement, and monitor triple-helix⁶ application through training; and (iii) improve the capacity of the MOECRT and STP officials on financial management, procurement, gender, and safeguards through training and other hands-on support. The MOECRT's monitoring and evaluation system will also be strengthened to collate and analyze project data, including sex-disaggregated data for policy and decision-making.

8. **Strategic alignment.** This project is aligned with the Indonesia's RPJMN 2020–2024 which called for the development of four project STPs.⁷ It is also aligned with ADB's Strategy 2030 and will contribute to the following operational priorities (OP): OP 1 (addressing remaining poverty and reducing inequalities), OP 2 (accelerating progress in gender equality), and OP 3 (tackling climate change, building climate and disaster resilience, and enhancing environmental

⁵ TRL is the maturity or applicability of research outcome and technological development, which determines the stage towards commercialization. It is measured systematically in terms of adoptability by users: governments, industry or society. Common Guideline of Measurement and Decision of Technology Readiness Level (accessible from list of linked documents in Appendix 2).

⁶ The tripe-helix model supports the development of a trilateral network of links between university, government, and industry, whereby university is the source of knowledge and helps to spread knowledge in the network.

⁷ Government of Indonesia. 2020. *National Medium-Term Development Plan, 2020–2024*. Jakarta.

sustainability).⁸ The project is also aligned with the first strategic objective of ADB's country partnership strategy, 2020-2024 for Indonesia, on improving well-being.⁹

9. The project design has incorporated international best practices and assessment of Indonesia's R&D and innovation sector such as supporting R&D collaboration with industry and focusing on technology startups.¹⁰ The project will deliver demand-driven R&D projects in collaboration with the private sector or communities and create a sustainable startup ecosystem. ADB has partnered with the government in education, including strengthening of teaching, R&D facilities and infrastructure, and knowledge creation. In terms of alignment in research focus areas and improving R&D eco-system, this project synergizes with several ADB projects: (i) Higher Education for Technology and Innovation project, which supports the *Institut Teknologi Sepuluh Nopember* in Surabaya to strengthen its STP through infrastructure development, financing for research and innovation, and support for startup incubation; (ii) Boosting Productivity through Human Capital Development Program, covering reforms on access, quality, and relevance of higher education; and (iii) Competitiveness, Industrial Modernization, and Trade Acceleration Program, covering reforms to strengthen the R&D eco-system; upgrade technology used by micro, small, and medium-sized enterprises; and strengthen regulation for establishing techno park zone. The project design draws on (i) the findings and recommendations from the Innovate Indonesia study¹¹, and (ii) lessons from ADB's past and current projects.¹² ADB will also explore nurturing startup incubation through its network¹³ and ADB Ventures.¹⁴

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

Table 1: Project Readiness Activities

Main Activities/ Milestones	2022												2023	Responsible Unit/ Agency	
	1	2	3	4	5	6	7	8	9	10	11	12	1		
Preparation of DED for IPB Halal Incubator Building								X	X	X	X				IPB
Resubmit updated project readiness document								X							BAPPENAS, MOECRT, ITB, IPB, University of Indonesia, UGM
Clearance of Daftar Kegiatan										X					BAPPENAS, MOF
Send invitation for loan negotiation and project documents									X						ADB
Authorization of Loan Negotiation										X					MOF

⁸ ADB. 2018. [Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific](#). Manila.

⁹ ADB. 2020. [Country Partnership Strategy: Indonesia, 2020–2024. Emerging Stronger](#). Manila.

¹⁰ Case Studies on R&D and Innovation Practices in Higher Education Institutions in Selected Asian Countries (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President).

¹¹ Asian Development Bank (ADB) and Government of Indonesia, Ministry of Finance. 2020. [Innovate Indonesia: Unlocking Growth Through Technological Transformation](#). Manila.

¹² ADB. [Higher Education for Technology and Innovation Project](#); ADB. [Boosting Productivity through Human Capital Development Program \(Subprogram 1\)](#); and ADB. [Competitiveness, Industrial Modernization and Trade Acceleration Program \(Subprogram 1\)](#).

¹³ ADB established the Open Innovation Platform in 2019 to bring together partners from startups, academe, governments, accelerators, etc. to co-create innovative solutions for Asia and the Pacific.

¹⁴ ADB Ventures provide financing to incubate startups. URL: <https://ventures.adb.org/> (accessed 15 August 2022).

Main Activities/ Milestones	2022												2023	Responsible Unit/ Agency	
	1	2	3	4	5	6	7	8	9	10	11	12	1		
Loan negotiation										X					MOF, BAPPENAS, MOECRT, ADB
Loan approval												X			ADB
Loan agreement signing												X			MOF, ADB
Legal opinion													X		Ministry of Law and Human Right
Loan effectiveness													X		MOF, ADB

ADB = Asian Development Bank; BAPPENAS = Ministry of National Development Planning; DED = detailed engineering design; IEE = Initial Environmental Examination; IPB = IPB University; ITB = Bandung Institute of Technology; MOECRT = Ministry of Education, Culture, Research and Technology; MOF = Ministry of Finance; MOU = memorandum of understanding; NOL = no objection letter; PIU = project implementation unit, PMU = project management unit; UGM = Gadjah Mada University; UI = University of Indonesia.


Source: Asian Development Bank.

Key Activities with Milestones	2022		2023				2024				2025				2026				2027				2028				
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
project activities and achievement (Q4 2022)																											
3.7 Prepare implementation plan on implementing a digital operation system to coordinate project implementation activities (Q4 2022)		X																									

ICT = information and communication technology; IPB = IPB University; IT = information technology; ITB = Bandung Institute of Technology; MOECRT = Ministry of Education, Culture, Research and Technology; Q =quarter; R&D = research and development; STP = science and technology park; UGM = Gadjah Mada University; UI = University of Indonesia.

Legend:

 Indicates the period implementation or duration of all activities for each project output.

 Indicates implementation of activity in each output.

X Indicates delivery or achievement of milestone through a particular activity during implementation or at the end of each activity.

Source: Asian Development Bank.

Table 2.2: Project Management and Implementation Activities

	2022		2023				2024				2025				2026				2027				2028	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Project Management Activities																								
Prepare documents for procurement of civil works, equipment, and consulting services		X																						
Establish the project management and project implementation units		X																						
Establish applied research and startup incubation grants selection procedure, grants mechanism and financial management arrangement		X																						
Engage project implementation consultants			X																					
Prepare quarterly and annual progress reports, gender action plan report, and safeguard report (as scheduled)			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Conduct inception and semi-annual review missions (as scheduled)			X			X		X		X		X		X		X		X		X				
Submit annual audited project financial statements							X				X				X				X				X	
Prepare Project Completion Report (or within 6 months of completion)																								X

Q = quarter

Legend:

X - Indicates delivery or achievement of milestone through a particular activity during implementation or at the end of each activity.

Source: Asian Development Bank.

Table 2.3: Construction of IPB Halal Incubation Center

No	Activity	Year 2022				Year 2023				Year 2024			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.	Confirm site of the Halal Incubator	X											
2.	Bidding civil works consulting services DED is financed by the government financing	X	X	X									
3.	Determination of façade and plan of the Halal Incubator Building			X									
4.	Public Work Ministry's Technical Recommendations			X									
5.	DED Planning for Building Construction			X	X								
6.	Preparation of STP and WWT Teknik Technical Studies				X								
7.	Preparation of Technology approval for Waste Treatment Plan and EIA Revision			X	X	X	X						
8.	Determination of Site plan Revision & Building Construction Licensing						X						
9.	Pre-DIPA Bidding: Halal Incubator Building Construction Management Services					X	X						
10.	Bidding: Halal Incubator Building Construction Management Services					X	X						
11.	Bidding: Halal Incubator Building Construction					X	X						
12.	Contract for building construction management service						X						
13.	Implementation of building construction (include WWT & STP)						X					X	
14.	Bidding for the procurement of Halal custom furniture and equipment										X		
15. -	Deliver and turn over civil work												X

DED = detailed engineering design, EIA = Environmental Impact Assessment, Q = quarter, STP = science and technology park, WWT = worldwide technology

X - Indicates delivery or achievement of milestone through a particular activity during implementation or at the end of each activity.

Source: Asian Development Bank.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations: Roles and Responsibilities

10. The MOECRT through the Directorate General of Higher Education for Research and Technology (DGHERT) will be the executing agency. DGHERT will have the overall management role and responsibility for the project. The implementing agencies (IA) will be four autonomous public universities comprising ITB, IPB, University of Indonesia, and UGM. The MOECRT will establish a steering committee, chaired by its director general of Higher Education, Science and Technology that will provide guidance and project oversight. The steering committee members will include the deputy minister of the Ministry of National Development Planning (BAPPENAS); secretary general of MOECRT; Head of Planning, MOECRT; Director General for Fund and Risk Management, MOF; and rectors of IPB, ITB, University of Indonesia, and UGM. ADB can be invited as an observer.

11. The DGHERT will establish a project management unit (PMU), which will be responsible for overall project implementation. It will ensure the efficient implementation of project activities, leading to its timely completion within available budget. The Director for Institutional Affairs of DGHERT will serve as project director of PMU, who will be supported by a project manager. The Project Manager may serve as concurrent Commitment Officer of the DGHERT, provided he/she holds a Procurement Certificate and other requirements as needed by the government. Otherwise, the DGHERT will have to assign another staff with the required qualification as a commitment officer. The MOECRT will be responsible for procurement and a bid evaluation committee will be formed at the MOECRT level to evaluate bid proposals. The committee will comprise of several members from MOECRT, based on the decree from the Bureau of General Affairs and Procurement (MOECRT). The Universities may contribute technical experts in various subject matter areas as needed. The commitment officer will provide legal instrument on the technical team from the university. The PMU will oversee overall project administration, coordination, supervision, and monitoring of project outputs and activities. It will prepare and submit quarterly progress reports (i.e., gender, environment, and social safeguards); and facilitate the preparation and submission of the annual audited project financial statements. The PMU will have a PMU executive secretary, 17 full-time staff and will be supported by a project management consultant team (PMC). The PMU will closely coordinate with the four STPs in ITB, IPB, University of Indonesia, and UGM. The PMU executive secretary will support the Project Director/Manager to provide overall administrative support for the project (e.g., prepare documents, review reports of the PMC, Person-in Charge, or coordinators of IAs) at the PMU level. He/she will facilitate PMU activities to prepare correspondence (internal and external), and coordinate with IAs, ADB, and third-party entities (e.g., consultants, contractors, and suppliers).

12. The Rector of each university (IA) will establish a project implementation unit (PIU) at the STP, which will be endorsed by the DGHERT. The PIU will be headed by a PIU manager. The PIU manager may serve as Commitment Officer of each IA provided, he/she holds a Procurement Certificate and other requirements as needed by the government. Otherwise, the rector will assign another staff with the required qualification as a commitment officer. The PIU will involve and work with the relevant university staff including preparing tenderable specifications for goods and civil work, finance and accounting, budgeting, and planning, and audit. The PIU will be responsible for day-to-day operations and implementation of project activities.

13. The MOECRT (executing agency) and the four project universities (implementing agencies) shall ensure, that (a) all positions identified as key personnel within each of the PMU and PIU, as set forth in the PAM and howsoever described in each PIU, are filled for the duration

of the Project by individuals with adequate skills and expertise relevant to each position; (b) vacancies in such positions, should they occur, are filled within three months; and (c) the PMU and PIUs are allocated the necessary office space, facilities, equipment, support staff and management information systems to carry out their responsibilities in an efficient and timely manner. The PMU and the PIUs will have six coordinators to implement the project for: (i) promotion, gender, and capacity development; (ii) innovation and technology; (iii) finance; (iv) procurement; (v) monitoring and evaluation (M&E); and (vi) quality assurance. The PMU will assign a focal person for gender from MOECRT, and each PIU will have a gender specialist to support the project at the STP level. In addition, IPB PIU will assign one environment and safety specialist to supervise construction works for the new Halal incubator building.

14. Given the autonomous structure of the universities, the PIU for each STP will have its respective accountability structure and mechanisms. The STP-ITB will be under the Director for Science and Technology Development Institute of the Vice Rector for Research and Innovation. The STP-IPB will be under the Director for Regional Institute of Science and Technology of the Vice-Rector for Business and Innovation. The STP- University of Indonesia will be under the Director for Innovation and Science and Techno Park of the Vice-Rector for Research and Innovation. The STP-UGM will be under the coordination of the Director of Business Development and Incubation of the Vice-Rector for Cooperation and Alumni.

15. A technical advisory committee will be organized and chaired by the Director of Institutional Affairs, DGHERT, with members comprising technical experts from key units of government agencies (e.g., BAPPENAS, MOECRT, MOF), university-STPs, external experts, and other specialists from and resources persons provided by ADB.

16. The roles and responsibilities of key stakeholders are presented in Table 3.

Table 3: Project Management Roles and Responsibilities

Project implementation organizations	Management Roles and Responsibilities
Executing agency: MOECRT through its DGHERT	<p>MOECRT</p> <ol style="list-style-type: none"> 1. As EA, provide overall guidance and project oversight; 2. Serve as the budget user for the project; 3. Establish a PMU at DGHERT; 4. Appoint a Project Director and Project Manager for the PMU, and assign technical staff for the PMU, as required; and 5. Oversee the efficient functioning of the PMU and the PIUs including adequate staffing, resources, and accountability mechanisms <p>DGHERT</p> <ol style="list-style-type: none"> 6. Provide overall oversight responsibility in the administration of PRIME STEP; 7. Approve annual budget plan based on consolidated proposals from the IAs; 8. Establish and maintain a monitoring framework for all PRIME STEP outputs and activities in the STPs; 9. Ensure regular communication and reporting on the PRIME STEP between the steering committee, the EA, the IAs, and ADB and other stakeholder agencies; 10. Elevate project issues that may arise during implementation to MOF, the SC and ADB as well as propose solutions to address them, as needed; and 11. Organize steering committee meeting twice a year to regularly update progress implementation, discuss issues (if any) and strategic direction for the project and the sector
Project management unit: Director for Institutional Affairs, DGHERT (Project Director)	<ol style="list-style-type: none"> 1. Responsible for overall project administration, monitoring, and supervision of the day-to-day activities; 2. Main point of contact of the project to all internal and external stakeholders, including reports to MOECRT directorates, BAPPENAS, MOF and ADB; 3. Facilitate withdrawal applications of PIUs and disbursement;

Project implementation organizations	Management Roles and Responsibilities
	<ol style="list-style-type: none"> 4. Communicate with ADB for any amendments in the reallocation of the loan amount; 5. Prepare and submit electronic withdrawal application and replenishment documents to the MOF's Director General of Treasury through the ADB's client portal disbursement; 6. Ensure fiduciary controls, compliance with loan covenants; 7. Prepare annual work plans, budget plans and procurement for the entire project, based on the approved annual plans, budgets and procurement plans of each university; 8. Coordinate with the Planning Section of the MOECRT to facilitate timely processing and approval of the annual budget for project implementation; 9. Facilitate all relevant approvals from MOECRT, BAPPENAS, MOF, and ADB in accordance with their respective policies and agreements in project documents, including 'no objection' for procurement of works, goods, and consulting services; 10. Prepare progress reports to the MOECRT, MOF, BAPPENAS, and ADB in accordance with the reporting templates: reporting on environment and social safeguards, gender, financial status; 11. Prepare bid documents in consultation with PIUs for goods, works, and services. Execute bidding based on ADB Policy and Regulations and evaluation of bid proposals at MOECRT Level; 12. Ensure compliance with ADB consultant selection and Procurement Regulations 13. Manage procurement of advisory service packages financed by ADB loans; 14. Ensure that the annual audit is well prepared in accordance with government and ADB policies; 15. Oversee quality assurance and facilitate knowledge management within the project, to ensure that STPs benefit from one another's experiences, including supporting the holding of joint workshops on relevant topics, and holding regular meetings to discuss progress; 16. Communicate with ADB on behalf of the project as well as with third parties such as consultants, contractors, and suppliers; 17. Manage communication and dissemination of public information about the project; 18. Coordinate project implementation with the PIU Director; 19. Establish a bid evaluation committee together with the commitment makers; 20. Ensure M&E data and information are collected and properly managed, and supervise monitoring and evaluation activities; 21. Prepare and submit quarterly reports on the program of the project, e.g., gender, environment, safeguards; 22. Conduct quality assurance reviews of project documents from the IAs; 23. Prepare and submit annual APFS; 24. Ensure compliance with agreed guidelines and procedures for the procurement of goods and selection of consultants; 25. Maintain separate project accounts and records by funding source and all expenditures incurred on the project; 26. Consolidate the project accounts and prepare consolidated project financial statements in accordance with government accounting laws and regulations and have it audited by an acceptable auditor to ADB; 27. Manage financial reporting and accountability aspects (withdrawal applications, financial reports, audits, bank account statements, etc.); 28. Ensure compliance with ADB's financial management requirements per ADB's Loan Disbursement Handbook (2022, as amended from time to time); and 29. Be responsible for overall safeguards implementation, monitoring and reporting in compliance with ADB's SPS 2009.
Project Steering Committee: MOECRT as Chair	<ol style="list-style-type: none"> 1. Provide overall policy guidance and oversight of PRIME STEP implementation; 2. Meet twice a year to discuss project progress, and facilitate decision-making processes, approval, and efficient implementation; 3. Discuss issues and offer solution/s to address them;

Project implementation organizations	Management Roles and Responsibilities
	<ol style="list-style-type: none"> 4. Advise budget allocation including loan and state budget (APBN), and university-sourced funds (PNBP); 5. Advise on policy coordination on research, education, science and technology park, and innovation, particularly start-up incubation; and 6. Provide policy advice and direction to ensure achievement of project outcome, outputs, and sustainability.
Technical Advisory Committee	<ol style="list-style-type: none"> 1. Provide technical advice on specific priority cluster/s and research and development, and innovation in each STP; 2. Foster collaboration between and among STPs working on similar or related research and development cluster/s; 3. Review technical aspects of R&D and innovation outputs and products; and 4. Support individual or all STPs in different stages of applied research and development.
Implementing agencies: ITB, IPB, University of Indonesia, UGM (Rector as Lead)	<ol style="list-style-type: none"> 1. Assign and delegate authority to responsible directorate of the university to implement PRIME STEP at the university; 2. Establish the PIU structure of and operation for each STP to ensure efficient implementation of project activities and appoint the PIU Manager; 3. Issue decree to facilitate effective and efficient functional relationship between the PIU and the university staff for procurement, finance and accounting, budget and planning, and audit; 4. Establish, manage, and maintain the subaccounts; 5. Organize technical advisory team for the project at PIU; and 6. Participate in steering committee meeting at the PMU level.
Project implementation unit: (At each implementing agency, Project Manager as Head)	<ol style="list-style-type: none"> 1. Prepare annual work plans and budgets in line with the project implementation schedule and procurement plan, and submit to PMU for review and endorsement; 2. Manage implementation of overall work plan and activities in the university, to include the following: <ol style="list-style-type: none"> (i) Provide tenderable specifications to PMU for procurement of goods, services, and works (if needed) for the university; (ii) Monitor contracts execution of vendors, consultants, and contractor/s (if included) at the university; (iii) Ensure quality assurance of procured works and goods; (iv) Ensure proper financial management of project for the part managed in the university, including preparing for audit; (v) Be responsible for progress reporting (progress and safeguards) and completion report; (vi) Closely monitor status of each contract and ensure timely completion of goods, services, and works (if included, as in the case of IPB); (vii) For IPB, the contract reviewer committee of the university (Unit Kerja Pengadaan Barang dan Jasa) will do the verification; (viii) Verify and approve any proposed changes in goods, services and works. (ix) Support consultants, suppliers, and contractors to obtain necessary permits from the relevant agencies (e.g., local permits); and (x) Lead consultant performance evaluation upon contract completion 3. Be responsible for social safeguards, environment safeguards and GAP implementation, monitoring, and reporting in their respective university; 4. For IPB, be responsible for COCP implementation, monitoring and reporting; 5. Maintain separate project accounts and records by funding source for all expenditures incurred on the project; 6. Ensure proper project financial management, preparation and submission of project financial statements; 7. Prepare and submit regular project monitoring status to PMU; 8. Manage internal and external relationships; and 9. Responsible for preparing progress reports, and provide information and updates during review mission, and support preparation of project completion report.

Project implementation organizations	Management Roles and Responsibilities
Ministry of Finance	<ol style="list-style-type: none"> 1. Sign loan agreement on behalf of the Government of Indonesia; 2. Monitor project implementation, coordination and facilitation allocation and release of counterpart funds; 3. Establish, manage and maintain the advance account; 4. Endorse to ADB the authorized signatories for withdrawal application processing; and 5. Process and submit to ADB any request for reallocating and/or cancelling the loan proceeds, when required.
ADB	<ol style="list-style-type: none"> 1. Assist DGHERT and PMU in providing timely guidance at each stage of project implementation in accordance with the agreed implementation arrangements; 2. Review all documents that require ADB approval; 3. Conduct bi-annual loan review missions, a mid-term review, and project completion review mission; 4. Monitor and require compliance of all loan covenants; 5. Initiate preparation of IEE report for IPB; 6. Monitor compliance of GAP, environmental and social safeguards, as relevant; 7. Process withdrawal applications and release eligible funds in a timely manner; 8. Monitor and require compliance of financial audit recommendations; 9. Regularly update ADB's project performance review reports with assistance of DGHERT and its progress reports; and 6. Regularly post on ADB website the updated project information documents, including safeguards documents following ADB's disclosure requirements.

ADB = Asian Development Bank; APFS = audited project financial statement; BAPPENAS = Ministry of National Development Planning; COCP = code of construction practice; DGHERT = Directorate General of Higher Education, Research and Technology; EA = executing agency; GAP = gender action plan; IA = implementation agency; IEE = Initial Environmental Examination; IPB = IPB University; ITB = MOECRT =Ministry of Education, Culture, Research and Technology; MOF = Ministry of Finance; PIU = project implementation unit; project management unit; PRIMESTEP = Promoting Research and Innovation through Modern and Efficient Science and Technology Parks; R&D = research and development; SC = steering committee; SPS =Safeguard Policy Statement; STP = science and technology park; UGM = Gadjah Mada University; UI = University of Indonesia.

Source: Asian Development Bank.

17. Work mechanisms and business processes for (i) planning and budgeting, (ii) procurement of works, goods, and services; (iii) capacity development; and (iv) applied research and startup incubation grants are as follows:

(i) Planning and budgeting

- (a) PIU prepares annual budget plan based on the projected disbursement plan of next year and/or actual disbursement of last year. Budget plan should be ready for submission by January of each year.
- (b) PIU submits annual budget plan to DGHERT (PMU) through Rector (January).
- (c) PMU reviews and consolidates proposals for submission to DGHERT and seek endorsement from the internal auditor.
- (d) DGHERT submits budget proposal to the MOECRT's Secretary General (Sekjen) through Planning Unit, who will then submit the proposal to BAPPENAS.
- (e) BAPPENAS, MOECRT, and Ministry of Finance (MOF) conduct trilateral meeting to discuss the proposal and agree on indicative ceiling (Pagu indikatif) normally in April–May, and through a reiterative process to agree on definitive budget ceiling (Pagu definitif) in October.
- (f) Detailed budget plan (RKA-KL) to be included in the Annual Budget (DIPA), approved by MOF in December, followed by Operational Plan (POK).

(ii) Procurement of works, goods, and services¹⁵

- (a) The Person-in-Charge (PIC) or coordinator of civil works for STP-IPB PIU oversees the preparation of the detailed engineering design (DED) which is being prepared by DED consultant. The DED is financed by the government, and currently at the concept/preliminary design stage. The DED for STP IPB University is scheduled to be completed by December 2022.¹⁶
- (b) Commitment Officer, in cooperation with the Procurement Unit (ULP/UKPBJ), prepares the bidding documents with assistance from the consultant.
- (c) PIU submits the tenderable specifications to PMU for review and endorsement.
- (d) PMU reviews and verifies the documents to ensure completeness and accuracy within 7 working days.
- (e) If the documents are deemed adequate, PMU sends the bidding documents to ADB, in case of a prior review.
- (f) ADB reviews the bidding documents, and if deemed it adequate, issues a no-objection letter (NOL) to proceed with the bidding process (in case the documents are incomplete, ADB will respond to PMU copied to PIU requesting improvement of the bidding documents).
- (g) UKPBJ of the MOECRT execute bidding based on ADB Procurement Policy and Regulations.
- (h) Bid evaluation committee at the MOECRT level evaluates bid proposals. The committee will comprise of several members from MOECRT, based on the decree from the Bureau of General Affairs and Procurement (MOECRT). The University may contribute technical experts in various subject matter areas as needed. The commitment officer will provide legal instrument on the technical team from the university.
- (i) PMU reviews the submitted documents, and if deemed adequate, submits the documents to ADB within 7 working days in case of a prior review.
- (j) ADB reviews the bid evaluation report and provides feedback to PMU, copying the PIU regarding any of the following action: (i) approves/issues a NOL if deemed adequate; (ii) requests for clarification or revision of the bid evaluation report to address comments and suggestions; or (iii) disapproves the bid results; it may also suggest to rebid.
- (k) The commitment officer (PPK or the appointed project manager of the PMU) finalizes¹⁷ and signs contract with contractor/supplier/consultants.
- (l) Commitment officer (PPK) submits copy of signed contracts (along with contract summary) to PMU and ADB.
- (m) PMU submits signed contract to ADB.
- (n) ADB issues NOL for contract and procurement contract summary sheet (PCSS) number.

(iii) Capacity development

- (a) PIC or coordinator for promotion, gender, and capacity development of PIU coordinates preparation of the annual plan and budget for promotion,

¹⁵ Items (f) and (j) are applicable in case of prior review packages as indicated in the procurement plan. For post-review (sampling), ADB will review after contract signing and on a sampling basis.

¹⁶ Only STP-IPB has building replacement component under the project.

¹⁷ This whole process must be done in a 14-day period, according to the Indonesian regulation. When the winner of bidding process has been determined, there is only 24 hours' time for the PPK to publicly announced the winner. The contract must be signed within 14 days after the announcement.

gender activities, and capacity development implementation as part of the overall PIU workplan.

- (b) PIC prepares terms of reference (TOR) and cost estimates for each activity including workshop, training, interns, study, etc., and submits it to PMU. The TOR should include (at least) objectives, outputs, duration, implementation arrangements, number of participants, outline of the program, total cost estimates, and source of funding.
- (c) PMU reviews the TOR and cost estimates, and if deemed acceptable, provides endorsement to PIU.
- (d) If the PIU requires a service provider to organize the activity funded by ADB loan, the selection of providers should use agreed methods.
- (e) For ADB-funded activities, once the contract is signed, the PIU (through PMU) should request a contract number from ADB (PCSS). This number will be used as reference when processing a withdrawal application.
- (f) PIU prepares completion reports of completed activities described in the TOR and as mentioned in point b above; and submits the report to PMU.
- (g) PIC of STP Institutional Capacity Development of PIU should update data on capacity development and include it in quarterly reports as part of project monitoring and evaluation.

(iv) Applied research and startup incubation grants¹⁸

- (a) The project will have an overall grants budget allocation for applied research and innovation based on the cost estimates of each STP.
- (b) The grants will be administered as follows:
 - b.1. Selection process will be conducted at the implementing agency level.
 - b.2. Implementing agency PIUs will evaluate, select, and award grant to recipients based on the guidelines in Appendix 2. PIUs will submit a consolidated result of awarded grantees to the PMU together with the selected proposals (the proposals can be submitted through the electronic system for managing research and community services used by the universities which is linked to MOECRT).
- (c) The executing agency, Ministry of Education Culture Research and Technology (MOECRT), will review the submitted list from the implementing agencies and issue a No Objection Letter (NOL) to implementing agencies.
 - c.1. This NOL will trigger the signing of an agreement between the executing agency (MOECRT) with the implementing agencies (project universities), allowing the project universities through the PIUs to sign the grant contracts with the selected grantees.
 - c.2. The NOL and agreement between MOECRT and project universities will also trigger the transfer of grants to the subaccount at the university level.

¹⁸ Appendix 2 of the PAM provides the standard operating procedures, eligibility requirements, review committee and evaluation criteria for the applied research and startup incubation grants. The process flow for applied research and startup incubation grants is guided by: Regulation of the Ministry of Education, Culture, Research and Technology, Republic of Indonesia, Number 44, 2020 on Guidelines for Distribution of Government Assistance in the Ministry of Education, Culture, Research and Technology; Regulation of the Ministry of Finance, Republic of Indonesia, Number 173/PMK.05/2016, About changes to Regulation Number 168/PMK.05/2015 Concerning the Mechanism for Implementation of the Government Assistance Budget in Ministries and State Agencies; Regulation of the Ministry of Finance, Republic of Indonesia, Number 132/PMK.05/2021, Second amendment to Regulation Number 168/PMK.05/2015 Concerning the Mechanism for Implementation of the Government Assistance Budget in Ministries and State Agencies;

- c3. All signed contracts between the implementing agencies and grantees will be managed and uploaded into the university's electronic system for managing research and community services which is linked by the MOECRT.
- c4. At the implementing agencies level, established mechanism and payment modality/ies will be utilized to manage the disbursement and monitoring on the use of fund (e.g., Special account, Transaction account, e-wallet, virtual account)
- (d) University level structure, systems, and procedures for cooperation fund (domestic and foreign), payment, reporting, and accountability mechanisms (fiduciary and internal controls), will be used.
- (e) The PMU will submit to ADB a copy of MOECRT's NOL and agreement with project universities (para. 17(iv) (c2)) for ADB's issuance of PCSS number. This number will be used as reference when processing a withdrawal application.

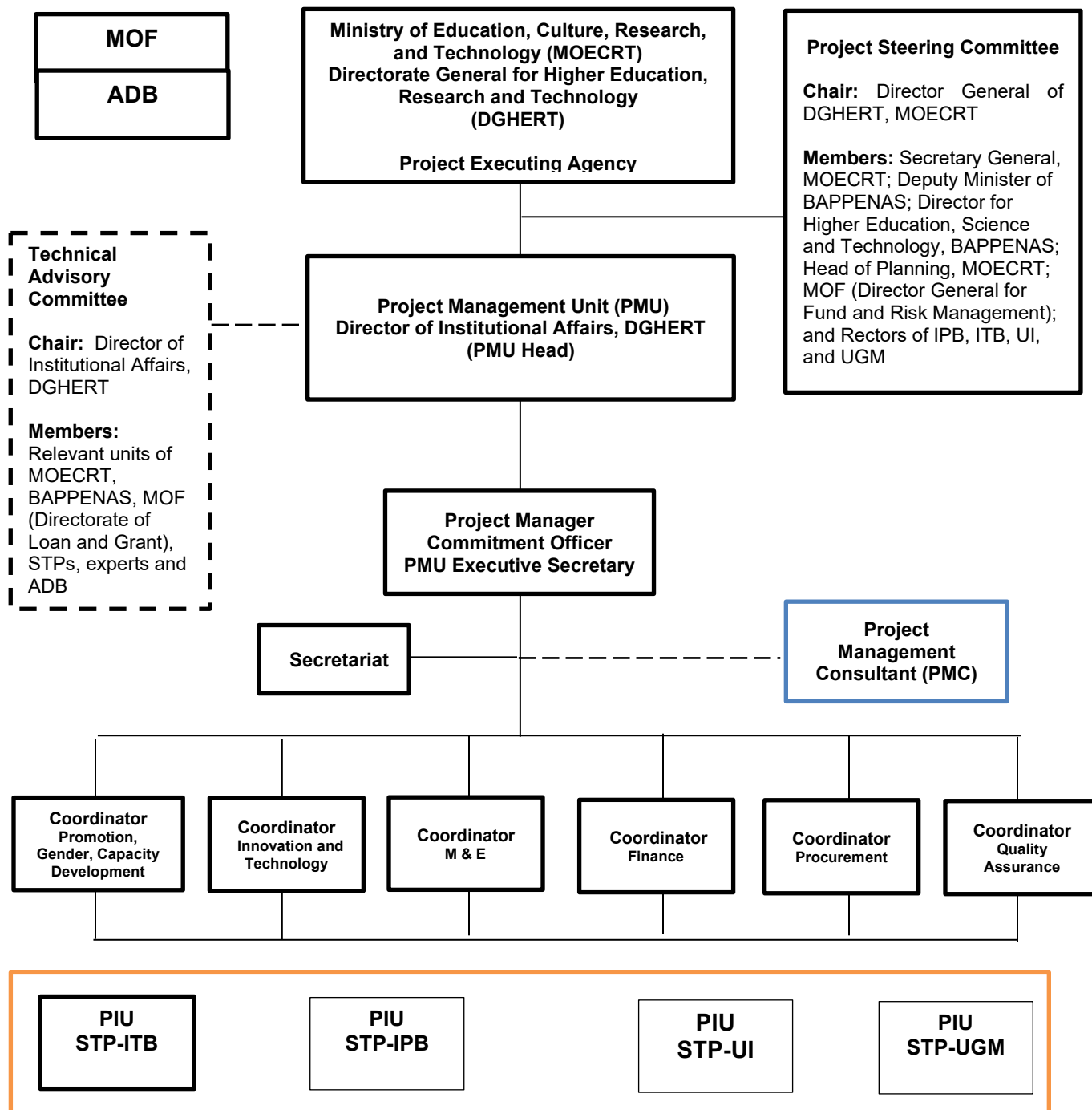
B. Key Persons Involved in Implementation

Executing Agency Ministry of Education, Culture, Research and Technology	Prof. Nizam Acting Director General of Higher Education Telephone: +62 21 57946100 Email address: dikti@dikti.go.id Office address: Gedung D, Jln. Jenderal Sudirman Pintu Satu Senayan, Jakarta Pusat 10270
Asian Development Bank Human and Social Development Division	Ayako Inagaki Director Human and Social Development Division Telephone No.: +63 2 8632-6612 Email address: ainagaki@adb.org
Mission Leaders	Fook Yen Chong Senior Social Sector Specialist (Skills Development) Human and Social Development Division Email address: fchong@adb.org
	Sutarum Wiryono Senior Project Officer (Education) Indonesia Resident Mission Telephone No. +62 21 2992-7388 Email address: swiryono@adb.org

C. Project Organization Structure

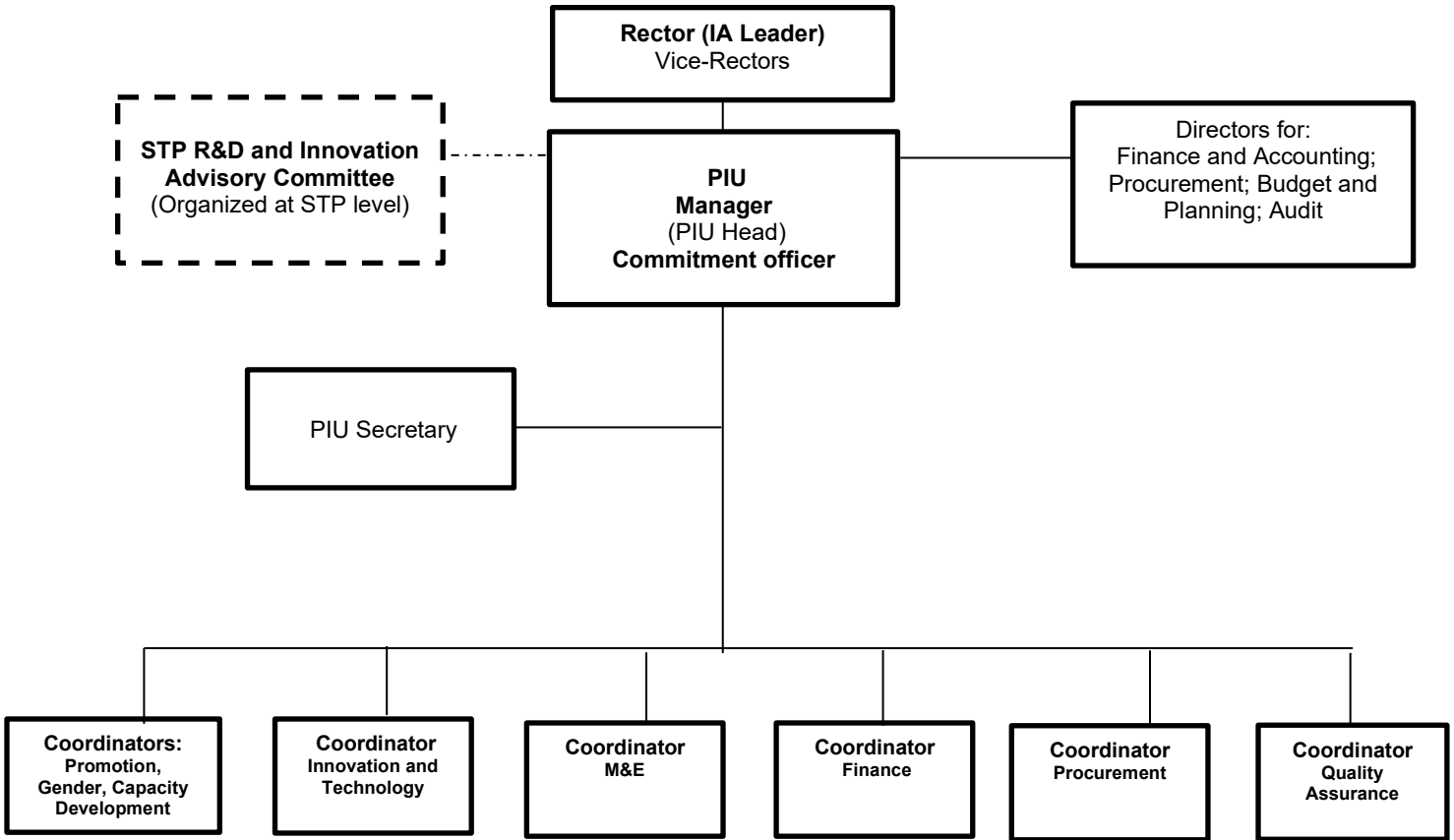
18. Diagrams showing the organizational structure of the project and the relationships among the various agencies are shown in Figures 1 and 2.

Figure 1: Project Management Organization



ADB = Asian Development Bank; BAPPENAS = Ministry of National Development Planning; DGHERT = Directorate General of Higher Education, Research and Technology; IPB = IPB University; ITB = Institute Technology of Bandung; M&E = monitoring and evaluation; MOECRT = Ministry of Education, Culture, Research and Technology; MOF = Ministry of Finance; PIU = project implementation unit; PMU = project management unit; STP = science and technology park; UGM = University of Gadjah Madah; UI = University of Indonesia.
Source: Asian Development Bank.

Figure 2: Project Implementation Unit



IA = implementing agency, M&E = monitoring and evaluation, PIU = project implementation unit, R&D =research and development, STP = science and technology park
 Source: Asian Development Bank.

IV. COSTS AND FINANCING

19. The project is estimated to cost ¥ 22,599.05 million (Table 4). ADB will finance ¥20487.11 million or 90.7% of the total project cost which include works, goods, consulting services, capacity development including grants for R&D, partnerships and startup incubation, operating costs, and contingencies. The government will fund ¥2111.94 million or 9.3% of total project cost to cover for investment and recurrent costs, and financing and commitment charges during implementation. Taxes and duties estimated at ¥2,328.50 million will be financed by the government through exemption.

Table 4: Summary Cost Estimates
(¥ million)

Item	Amount ^a
A. Base Cost^b	
1. Output 1: Facilities for R&D and innovation in four science and technology parks upgraded	10,997.48
2. Output 2: The four science and technology parks' R&D administration, partnerships, and startup incubation strengthened	7,100.87
3. Output 3: Capacity of the four STPs and the MOECRT strengthened.	2,504.85
Subtotal (A)	20,603.21
B. Contingencies^c	1,570.19
C. Financial Charges During Implementation^d	425.65
Total (A+B+C)	22,599.05

Note: Numbers may not sum precisely because of rounding.

MOECRT= Ministry of Education, Culture, Research and Technology; R&D = research and development; STP = science and technology park.

^a Excludes taxes and duties estimated at ¥2,328.50 million which will be financed by the government through tax exemption.

^b In mid-2022 prices as of June 2022.

^c Includes physical and price contingencies, and a provision for exchange rate fluctuation.

^d Includes interest, commitment, and other charges on all sources of financing to be funded by the government.

Source: Asian Development Bank.

20. The Government of Indonesia had requested a regular loan of ¥20487.11 million from ADB's ordinary capital resources to help finance the project. The loan will have a 19-year term, including a grace period of 6.5 years; an annual interest rate determined in accordance with ADB's Flexible Loan Product; a commitment charge of 0.15% per year; and such other terms and conditions set forth in the draft loan and project agreements. Based on the straight-line method, the average maturity is 12.5 years, and there is no maturity premium payable to ADB. The summary financing plan is in Table 5.

Table 5: Summary Financing Plan

Source	Amount (¥ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (regular loan)	20487.11	90.7
Government	2111.94	9.3
Total	22599.05	100.0

Source: Asian Development Bank and BAPPENAS.

21. Climate mitigation is estimated to cost ¥1301.52 million and climate adaptation is estimated to cost ¥359.40 million. ADB will finance 100% of mitigation costs and 100% of adaptation costs.¹⁹

¹⁹ Climate Change Assessment (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President).

A. Cost Estimates Preparation and Revisions

22. **Preparation.** The cost estimates were prepared jointly by ADB, MOECRT, IPB, ITB, UGM, and University of Indonesia with support from the transaction technical assistance consultants.

23. **Revision.** The cost estimates may be revised, if necessary, during project implementation. The MOECRT through the Directorate General of DGHERT will propose revisions which will be reviewed, discussed, and agreed during ADB review missions.

B. Key Assumptions

24. The following key assumptions underpin the cost estimates and financing plan:

- (i) Exchange rate: ¥147.90 = \$1.00 (as of 07 November 2022)
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are as follows:

Table 6: Escalation Rates for Price Contingency Calculation

Item	2022	2023	2024	2025	2026	2027	2028	Average
Foreign rate of price inflation	1.7%	1.7%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
Domestic rate of price inflation	3.6%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.1%

Source: Asian Development Bank.

C. Detailed Cost Estimates by Expenditure Category

Table 7: Detailed Cost Estimates by Expenditure Category
(¥ million)

	Total Cost	% of Total Base Cost
A. Investment Costs		
Equipment & Furniture	9,600.31	46.6%
Civil Works	685.89	3.3%
Software, licenses, and certifications	355.79	1.7%
Applied research and startup incubation	6,565.44	31.9%
Consulting Services	369.35	1.8%
Training & Capacity Development	1,632.01	7.9%
Subtotal (A)	19,208.78	93.2%
B. Recurrent Costs		
Initial Equipment Operation and Maintenance Services	535.05	2.6%
Project Administration - EA PMC	154.00	0.7%
Project Administration - EA PMU	467.59	2.3%
Project Administration - IA	237.78	1.2%
Subtotal (B)	1,394.42	6.8%
Total Base Cost (A+B)	20,603.20	100.0%
C. Contingencies		
Physical	514.31	2.5%
Price	1,055.88	5.1%
Subtotal (C)	1,570.19	7.6%
D. Financial Charges During Implementation	425.65	2.1%
Total Project Cost (A+B+C+D)	22,599.03	109.7%

EA = executing agency, IA = implementing agency, PMC = project management consultant, PMU = project management unit.

Notes: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank.

D. Allocation and Withdrawal of Loan Proceeds

Table 8: Allocation and Withdrawal of Loan Proceeds²⁰

Allocation and Withdrawal of Loan Proceeds			
Number	Item	Total amount allocated for ADB Financing JPY (¥)	Basis for Withdrawal from the Loan
		Category	
1	Civil Works, Goods, Equipment, Consultants, Training and Recurrent Costs**	14,406,865,494	100% of total expenditure claimed*
2	R&D and Innovation Grants***	6,080,242,506	100% of total expenditure claimed*
	Total	20,487,108,000	

ADB = Asian Development Bank, R&D = research and development.

* Exclusive of taxes and duties imposed within the territory of the Borrower.

** Includes contingencies.

*** Subject to the condition for withdrawal described in paragraph 5 of Schedule 3 in the loan agreement.

Source: Asian Development Bank.

²⁰ No withdrawals shall be made from the Loan Account for Applied Research and Startup Incubation Grants unless and until: (i) the operating guidelines and selection criteria have been agreed between MOECRT and ADB for both the Applied Research and Startup Incubation Grants and have been set out in the PAM; (ii) MOECRT has provided ADB with a copy of its no-objection letter confirming the fulfilment of the relevant selection criteria for the first batch of successful applicants of the Applied Research Grant or Startup Incubation Grants; and (iii) MOECRT provides written confirmation to ADB that the total amount of the successful grant proposals for the first batch of successful applicants does not exceed ¥ 739.50 Million.

E. Detailed Cost Estimates by Financier

Table 9: Detailed Cost Estimates by Financier
(¥ million)

	ADB Loan		GOI		Total Cost
	Amount	% of Cost Category	Amount	% of Cost Category	Amount
A. Investment Costs					
Equipment & Furniture	9,498.99	98.9%	101.31	1.1%	9,600.31
Civil Works	651.68	95.0%	34.20	5.0%	685.89
Software, licenses and certifications	353.01	99.2%	2.77	0.8%	355.79
Applied research and startup incubation	5,790.71	88.2%	774.73	11.8%	6,565.44
Consulting Services	369.35	100.0%	0.00	0.0%	369.35
Training & Capacity Development	1,632.01	100.0%	0.00	0.0%	1,632.01
Subtotal A	18,295.76	95.2%	913.02	4.8%	19,208.78
B. Recurrent Cost					
Initial Equipment Operation and Maintenance Services	199.61	37.3%	335.44	62.7%	535.05
Project Administration – EA PMC	154.01	100.0%	-	0.0%	154.01
Project Administration - EA PMU	334.07	71.4%	133.52	28.6%	467.59
Project Administration – IA	20.54	8.6%	217.24	91.4%	237.78
Subtotal B	708.23	51%	686.20	49.2%	1,394.43
Total Base Cost (A+B)	19,004.00	92.2%	1,599.21	7.8%	20,603.21
C. Contingencies					
Physical	507.53	98.7%	6.78	1.3%	514.31
Price	975.58	92.4%	80.30	7.6%	1,055.88
Subtotal C	1,483.11	94.5%	87.08	5.5%	1,570.19
D. Financing Charge During Implementation	0.00	0.0%	425.65	100.0%	425.65
Total Project Cost (A+B+C+D)	20,487.11	90.7%	2,111.94	9.3%	22,599.05
% of Total Project Cost		90.7%		9.3%	

ADB = Asian Development Bank, EA = executing agency, GOI = Government of Indonesia, IA = implementing agency, PMC = project management consultant, PMU = project management unit.

Notes:

- Numbers may not sum precisely because of rounding.
- ADB and government will finance separate contracts/expenditures with 100% financing percentage.
- The recurrent costs are for (i) initial equipment operation and maintenance services including maintenance cost for equipment during the first 3 years, and (ii) project administration and operation expenses such as those for PMU consultants, publications, documentation, exhibitions, seminars, travel, and program monitoring.

Source: Asian Development Bank.

F. Detailed Cost Estimates by Outputs

Table 10: Detailed Cost Estimates by Outputs

(¥ million)

	Total Cost	Output 1		Output 2		Output 3	
		Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category
A. Investment Costs							
Equipment & Furniture	9,600.31	9,600.31	100.0%	-	0.0%	-	0.0%
Civil Works	685.89	685.89	100.0%	-	0.0%	-	0.0%
Software, licenses and certifications	355.79	-	0.0%	174.09	48.9%	181.70	51.1%
Applied research startup incubation	6,565.44	38.36	0.6%	6,518.54	99.3%	8.53	0.1%
Consulting Services	369.35	137.88	37.3%	170.47	46.2%	61.00	16.5%
Training and Capacity Development	1,632.01	0.00	-	-	-	1,632.01	100.0%
Subtotal (A)	19,208.78	10,462.44	54.5%	6,863.09	35.7%	1,883.25	9.8%
B. Recurrent Costs							
Initial Equipment Operation and Maintenance Services	535.05	535.05	100.0%	-	0.0%	-	0.0%
Project Administration - EA PMC	154.01	-	0.0%	-	0.0%	154.01	100.0%
Project Administration - EA PMU	467.59	-	0.0%	-	0.0%	467.59	100.0%
Project Administration - IA	237.78	-	0.0%	237.78	100.0%	-	0.0%
Subtotal (B)	1,394.43	535.05	38.4%	237.78	17.1%	621.60	44.6%
Total Base Cost (A+B)	20,603.21	10,997.48	53.4%	7,100.87	34.5%	2,504.85	12.2%
C. Contingencies							
Physical	514.31	514.31	100.0%	-	0.0%	-	0.0%
Price	1,055.88	575.59	54.5%	355.04	33.6%	125.24	11.9%
Subtotal (C)	1,570.19	1,089.90	69.4%	355.04	22.6%	125.24	8.0%
D. Financial Charges During Implementation	425.65	227.66	53.5%	140.43	33.0%	49.54	11.6%
Total Project Cost (A+B+C+D)	22,599.05	12,315.05	54.5%	7,596.35	33.6%	2,679.63	11.9%

EA = executing agency, IA = implementing agency, PMC = project management consultant, PMU = project management unit.

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank.

G. Detailed Cost Estimates by Year

Table 11: Detailed Cost Estimates by Year
(¥ million)

Items	Total Cost	2023	2024	2025	2026	2027
A. Investment Costs						
Equipment & Furniture	9,600.31	843.05	1,931.14	4,522.49	2,223.54	80.08
Civil Works	685.89	485.76	200.13	-	-	-
Software, licenses, and certifications	355.79	29.97	43.99	39.39	168.77	73.66
Applied research startup incubation	6,565.44	740.04	1,643.89	1,770.79	1,547.89	862.82
Consulting Services	369.35	80.70	151.31	48.41	48.35	40.58
Training & Capacity Development	1,632.01	155.86	417.13	556.95	359.02	143.06
Subtotal (A)	19,208.78	2,335.39	4,387.57	6,938.03	4,347.57	1,200.21
B. Recurrent Cost						
Initial Equipment Operation and Maintenance Services	535.05	26.62	51.69	121.30	167.36	168.08
Project Administration - EA PMC	154.01	30.80	30.80	30.80	30.80	30.81
Project Administration - EA PMU	467.59	93.22	93.22	93.73	93.73	93.70
Project Administration - IA	237.78	39.37	53.18	62.39	44.29	38.55
Subtotal (B)	1,394.43	190.01	228.89	308.22	336.19	331.13
Total Base Cost (A+B)	20,603.21	2,525.40	4,616.46	7,246.25	4,683.76	1,531.34
C. Contingencies						
Physical contingency	514.31	66.44	106.56	226.12	111.18	4.00
Price contingency	1,055.88	129.59	236.15	373.62	239.75	76.77
Subtotal (C)	1,570.19	196.03	342.71	599.74	350.92	80.77
D. Financing Charge During Implementation	425.65	36.72	51.19	76.59	114.25	146.90
Total Project Cost (A+B+C+D)	22,599.05	2,758.15	5,010.37	7,922.58	5,148.93	1,759.02

EA = executing agency, IA = implementing agency, PMC = project management consultant, PMU = project management unit.

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank.

H. Contract and Disbursement S-Curve

Table 12: Contract Awards and Disbursements

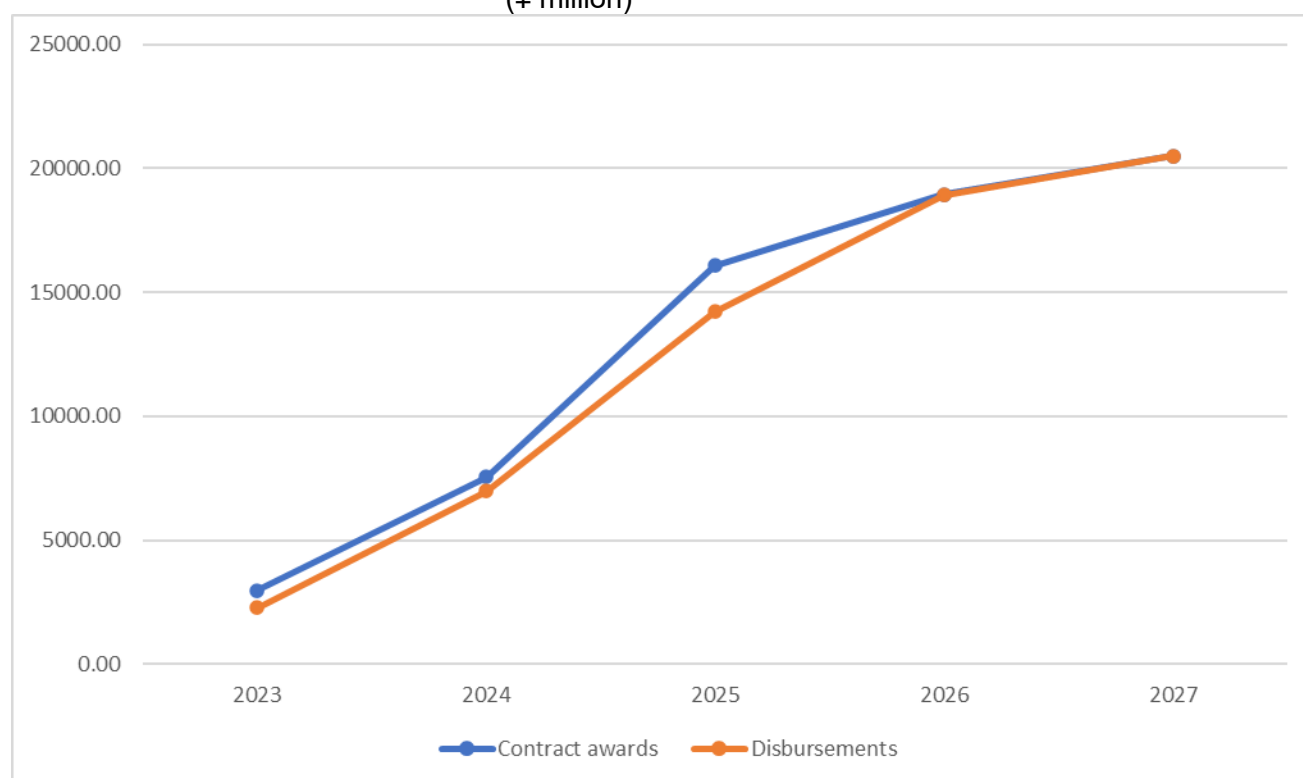
Year	Contract Awards					Disbursements				
	(¥ million)					(¥ million)				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2023	-	615.26	562.02	1,807.34	2,984.62	273.62	273.62	326.86	1,394.70	2,268.79
2024	144.94	391.94	1,678.67	2,356.05	4,571.59	556.10	538.36	1,461.25	2,153.42	4,709.14
2025	1,538.16	1,681.62	2,165.26	3,139.92	8,524.96	914.02	1,258.63	1,539.64	3,530.37	7,242.66
2026	118.32	414.12	739.50	1,594.36	2,866.30	953.96	1,122.56	1,242.36	1,388.78	4,707.66
2027	884.44	644.84	10.35	-	1,539.64	150.86	340.17	473.28	594.56	1,558.87
	Total Contract Awards				20,487.11	Total Disbursements				20,487.11

Note: Numbers may not sum precisely because of rounding.

Q = quarter

Source: Asian Development Bank.

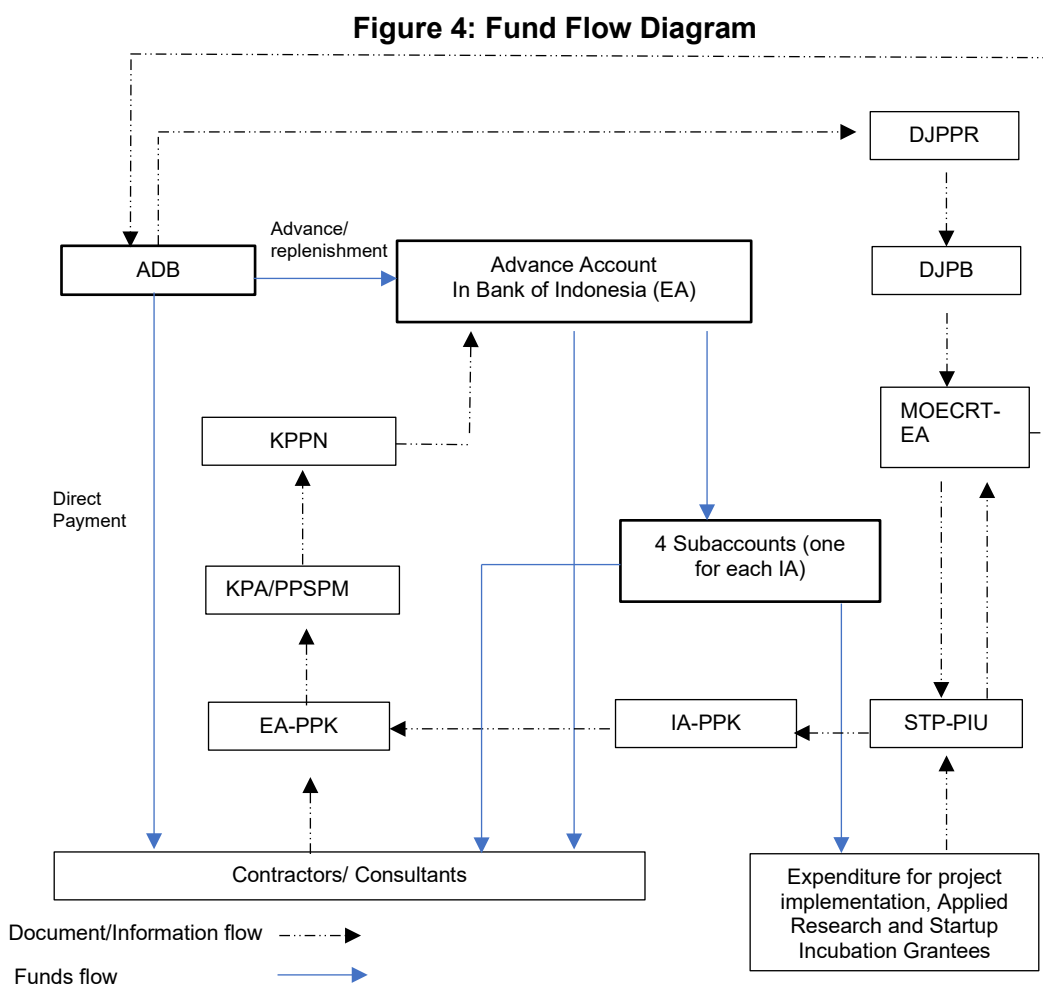
Figure 3: Contract Awards and Disbursement S-Curve
(¥ million)



Source: Asian Development Bank.

I. Fund Flow Diagram

25. **Funds Flow Arrangements.** Figure 4 indicates the overall funds flow from ADB to the advance and subaccounts (para. 32) as well as payment to contractors, suppliers, consultants, and the grantees for applied research and startup incubation grants.²¹ Table 13 provides the disbursement, payment, and replenishment procedures.²² Figure 4 also shows the funds flow and documents flow for project expenditure (recurrent costs, and training and capacity development), applied research and startup incubation grants to be created and managed by each IA. Applied research and startup incubation grants will follow a common process for selection, review, contracting, disbursement, monitoring and evaluation, and financial and performance reporting (footnote 18).



ADB = Asian Development Bank, DJPB = Directorate General of Treasury, DJPPR = Directorate General of Budget, Risk and Financing, EA = executing agency, IA = implementing agency, KPA = Authorized Budget User, KPPN = Regional Treasury Office, MOECRT = Ministry of Education, Culture, Research and Technology, PIU = project implementing unit, PPK = commitment officer, PPSPM = Authorized Budget Officer, STP = science and technology park.
Source: Asian Development Bank.

²¹ ADB 2018. *Public Financial Management System – Indonesia*. Manila. The funds flow for the project also draws on the consultations with the MOECRT and the university-STPs during project processing.

²² Ministry of Finance. 2019. Regulation No. 195 PMK 05/2019 on Procedures for Withdrawal of Foreign Loans and/or Grants.

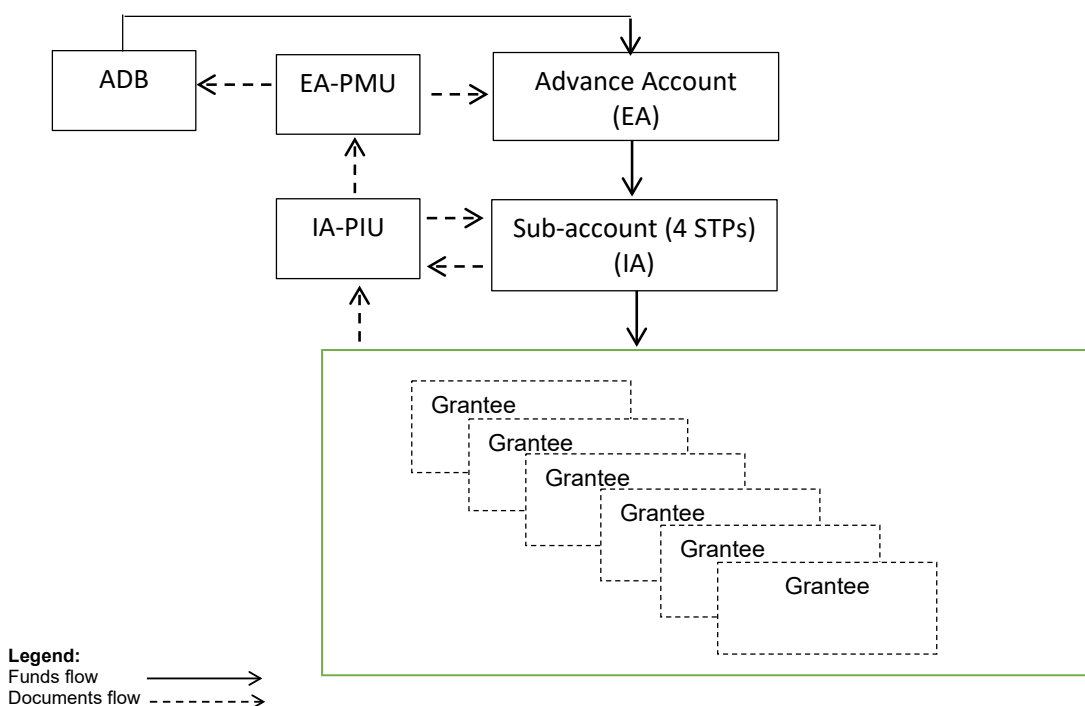
Table 13: Standard Disbursement, Direct Payment, and Replenishment Processes

Procedure	Steps
Disbursement	<ol style="list-style-type: none"> 1. The Contractor/Suppliers submit invoices to the PMU and/or PIU PPK. 2. Upon review, if invoices are deemed complete and satisfactory, the PPK issues a SPM which is then signed by the Authorized Budget Officer (PPSPM). 3. Authorized Budget Officer (KPA and/or PPSPM) issues a SPM and submits to the State Treasury Service Office (KPPN) by enclosing the required documents. He/she endorses the payment. 4. KPPN conducts a verification on SPM-Reksus submitted by PPSPM. If verified and complete, he/she issues a Disbursement Order Letter (SP2D-Reksus/ remittance order). He/she approves payment. 5. With SP2D-Reksus the KPPN transfer the funds from Advance Account to the Contractor's Account through an operational bank.
Direct Payment	<ol style="list-style-type: none"> 1. The Contractor/Suppliers submit invoices to the PPK. 2. Upon review, if it is deemed complete and satisfactory, the PPK issues a Payment Order (SPP) and signed by the Authorized Budget Officer (PPSPM). PPK inputs the contractor's invoice through the ADB's CPD if applicable. 3. The KPA or PPSPM submits the WA Letter of Direct Payment to Special State Treasury Office for Loans and Grants (KPPN KPH). He/she endorses the payment through CPD if applicable. 4. Based on WA of Direct Payment, KPPN KPH endorses Direct Payment order and sends it to ADB IRM or through CPD if applicable. 5. The ADB CTLA (with the IRM DU) verifies the withdrawal application and supporting and documents and authorizes the WA. After receiving the CTLA's authorization, the ADB Treasury Department remits funds to the Contractor's Account. 6. Notice of Disbursement of loan funds to the 3rd party is accessible in the CPD and LFIS website 7. Directorate General of Financing and Risk Management through the Directorate of Evaluation, Accounting, and Settlement issues Bookkeeping Orders for Withdrawal of Foreign Loans and Grants (SP4HLN) to KPPN KPH. 8. The KPPN KPH issues SP3 and sends a copy of the SP3 to Budget User (KPA) for bookkeeping purposes. 9. The KPPN KPH sends a note of disbursement to the Authorized Budget Officer.
Replenishment and Liquidation	<ol style="list-style-type: none"> 1. Bank Indonesia sends a bank statement to the DJPB through the Directorate of State Cash Management. 2. DJPB through the Directorate of State Cash Management sends the bank statement to the EA as the basis for preparing a Withdrawal Application (WA) of the advance account. 3. EA submits WA documents to DJPB through the Directorate of State Cash Management. EA inputs WA into ADB's CPD if applicable. 4. DJPB through the Directorate of State Cash Management endorses WA replenishment request through CPD if applicable or submits the hard copy to ADB IRM. 5. ADB's CTLA (with the IRM DU) verifies the WA and supporting documents and authorizes the WA to replenish the advance account. After receiving CTLA's authorization, ADB's Treasury Department remits funds to the advance account 6. A notification of transfer is available through the CPD and Loan Financial Information System website.

ADB = Asian Development Bank; CPD = Client Portal Disbursement; CTLA = Controllers Department; DJPB = Directorate General of Treasury; DJPPR = Directorate General of Budget, Risk and Financing; DU = disbursing unit; EA = executing agency; IA = implementing agency; IRM = Indonesia Resident Mission; KPA = Authorized Budget User; KPPN KPH = Regional Treasury Office in charge of Loan and Grant; MOECRT = Ministry of Education, Culture, Research and Technology, PIU = project implementing unit, PPK = commitment officer, PPSPM = Authorized Budget Officer, STP = science and technology park, SPM = Payment Order, SPP = Payment Request, SP2D = Payment Voucher, WA = withdrawal application. SP3 = Validation letter issued after Note of Disbursement

Source: Asian Development Bank

Figure 5: Funds Flow from Advance Account for Project Expenditure, Applied Research and Startup Incubation Grants to Subaccount



ADB = Asian Development Bank, EA = executing agency, IA = implementing agency, PIU = project implementing unit, PMU = project management unit, STP = science and technology park.
 Source: Asian Development Bank.

26. Allocation procedure from advance account to sub-accounts. Only six months estimated budget is allowed to be disbursed to advance account. The following procedures will be carried out by the implementing agencies (IAs) and the executing agency (EA) to allocate funds for project expenditure, applied research and startup incubation grants from the advance account to sub-account:

- (i) Implementing agencies (PIUs) submit the annual plan for budget allocation of the project expenditure, applied research and startup incubation grants to executing agency-PMU in line with the budgeting cycle timeline;
- (ii) For applied research and startup incubation grant:
 - a. implementing agencies (PIUs) submit to executing agency-PMU the result of the selection of proposals under the applied research and startup incubation grants annually. The proposals of the selected grantees will be uploaded into the universities electronic research and community services management which is accessible by executing agency-PMU;
 - b. executing agency-PMU reviews consolidated list of grantees submitted by implementing agencies and issues no objection letter (NOL) confirming the amount awarded is within the budget ceiling for each university and that eligibility requirement and selection criteria are fulfilled;
 - c. executing agency-(PMU) and the Implementing agencies (PIUs) enter into an agreement through an MOECRT decree that will allow the implementing

- agencies to sign grant contracts, and administer and monitoring the grant processes;
- d. executing agency-PMU submit request for payment electronically to director general of treasury, through the local treasury office (KPPN) of MOF to disburse the fund to the universities' sub-accounts;
 - e. upon compliance of documentation requirements, the flow of funds will be triggered from the Advance Account to the university's Sub-account earmarked for applied research and startup incubation program;
 - f. grant contracts will be uploaded into the universities' electronic research and community services management system which is linked to and accessible by the executing agency. ADB project officer will be given access to the electronic system for managing research and community services system for verification as and when necessary;
 - g. transfer of funds from the advance account to the subaccount will be made in two tranches: 70% for first tranche, and 30% for second tranche; and
 - h. transfer of funds from the university's sub-account to the researcher/ grantee is made when the requirement is met.
- (iii) For project expenditure (para. 35) such as those related to recurrent costs, and training and capacity development, disbursement in advance account and sub-accounts has to be substantiated by supporting documents as required in the Loan Disbursement Handbook (2022, as amended from time to time).

V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

27. The Financial Management Assessment (FMA) for the proposed ¥20487.11 million on Promoting Research and Innovation through Modern and Efficient Science and Technology Parks Project was conducted in April-May 2022 in accordance with ADB's guidelines for the Financial Management and Analysis of Projects,²³ Financial Due Diligence: A Methodology Note.²⁴ The FMA considered the capacity of the MOECRT²⁵ which is the executing agency and the four IAs – IPB, ITB, UGM and University of Indonesia. The FMA included review of executing agency and implementing agencies funds-flow arrangements, staffing, accounting and financial reporting systems, financial information systems, and internal and external auditing arrangements. The executing agency and the implementing agencies conduct financial reporting on a regular basis. The accounting policies and system are fairly harmonized with accrual-based accounting standards. The auditing standards for both internal and external audits are aligned with international standards.²⁶

28. Based on the assessment, the key financial management risks identified include the following: (i) Implementing agencies still lack familiarity on ADB project guidelines and the Loan Disbursement Handbook (2022, as amended from time to time); (ii) delays in budget release may

²³ ADB. 2005. *Guidelines for the Financial Management and Analysis of Projects*. Manila.

²⁴ ADB. 2009. *Financial Due Diligence: A Methodology Note*. Manila.

²⁵ MOECRT was originally named as Ministry of Education and Culture (MOEC) and it was changed to MOECRT in 2020 following the merging of research and technology functions of the MORTHE. Before 2014, the echelon-1 level in charge of higher education was the Directorate General of Higher Education (DGHE). In 2015 it was merged into the Ministry of Research, Technology, and Higher Education (MORTHE). In 2020, the higher education function was transferred back to MOEC, and the division in charge of higher education was renamed as Directorate General of Higher Education, Research, and Technology (DGHERT).

²⁶ PEFA 2017. *Public Expenditure and Financial Accountability Assessment Report*. Jakarta.

lead to inadequate financing and implementation delays; (iii) the executing agency and the implementing agencies have adequate capacity at present for its current activities. However, to effectively manage the project and ensure fiduciary controls and render accurate and timely financial reporting, PMU and PIUs will need to be set up to support executing agency and implementing agencies. Delay in forming the PMU and the PIUs may adversely impact project financial management; and (iv) the implementing agencies currently have dedicated and fully functional internal audit departments. However, the implementing agencies will have to indicate commitment to conduct internal audit activities for the project for proper implementation of internal controls and to avoid any risk of misuse of funds. It is concluded that the overall pre-mitigation financial management risk is *moderate*. The financial management time-bound action plan is in Table 14.

Table 14: Financial Management Time-Bound Action Plan

Risks Description	Mitigation Measures	Period	Responsibility
Implementing agencies' lack of familiarity with ADB's project guidelines and Loan Disbursement Handbook (2022, as amended from time to time) may affect their ability to effectively manage the project, process disbursements, fund flows, and financial management arrangements to ensure accurate and timely financial reporting and auditing.	Provide training to relevant project staff on ADB procedures including ADB's Loan Disbursement Handbook (2022, as amended from time to time). Conduct a financial management workshop for the current and newly recruited project financial management staff.	During inception mission and annually for the first three years of implementation	MOECRT, IPB, ITB, UGM, University of Indonesia, and ADB
MOECRT and the universities prepare financial statements following accrual basis of accounting. However, following the recent issuance by the Ministry of Finance for donor-funded projects, a cash-basis of accounting will be adopted by MOECRT and the universities in preparing their respective financial statements which will then be consolidated by MOECRT. MOECRT's and the Implementing agencies' lack of familiarity in preparing consolidated financial statements using cash basis of accounting could result in delay and misstatements in the project financial statements.	A financial management manual will be prepared to provide guidance on ADB-financed projects. It will cover financial management process at the implementing agencies and executing agency level including funds flow, budgeting and planning, disbursements, accounting and preparation of project financial statements. The manual will be rolled out through trainings and workshops to relevant project staff.	Before project effectiveness During inception mission and annually for the first three years of implementation	MOECRT, IPB, ITB, UGM, University of Indonesia, and ADB MOECRT, IPB, ITB, UGM, University of Indonesia, and ADB
Executing agency and Implementing agencies' overstretched capacity may adversely affect their ability to effectively manage the project, monitor financial management arrangements, ensure fiduciary controls, and render accurate and timely financial reporting.	MOECRT and the universities will appoint competent personnel to be assigned to the project. Additional financial management specialist will be hired to support the PMU and PIUs and qualified financial management and procurement consultants will be engaged for the project. Trainings on disbursements and financial management will be provided to the new staff.	Before project effectiveness Before project effectiveness During inception mission and annually for the first three years of implementation	MOECRT, IPB, ITB, UGM, University of Indonesia and ADB MOECRT, IPB, ITB, UGM, University of Indonesia MOECRT, IPB, ITB, UGM, University of Indonesia, and ADB

ADB = Asian Development Bank, EA = executing agency, FM = financial management, GOI = Government of Indonesia, IA = implementing agency, MOF = Ministry of Finance, MOU = memorandum of understanding, PFM = public financial management, PIU = project implementation unit, PMU = project management unit.
Source: Asian Development Bank.

B. Disbursement

1. Disbursement Arrangements for ADB Funds

29. The loan proceeds will be disbursed in accordance with ADB's Loan Disbursement Handbook (2022, as amended from time to time),²⁷ and detailed arrangements agreed upon between the government and ADB.

30. The PMU will be responsible for (i) preparing disbursement projections, (ii) requesting annual budget allocations for both loan and counterpart funds to MOECRT, (iii) collecting and retaining supporting documents, and (iv) preparing and sending withdrawal applications to ADB.

31. Direct payment procedures may be used for large contracts under the project. Suppliers, contractors, and consultants are required to submit approved invoices and other supporting documentation to ADB in accordance with the ADB's Loan Disbursement Handbook (2022, as amended from time to time).

32. **Advance account and subaccount.** After loan effectiveness date, the MOF will open an advance account at Bank of Indonesia under the Director General of Treasury, MOF. The currency of the advance account is in Indonesian Rupiah. Any foreign exchange difference between the amount charged to the loan account when the advance was originally made and the equivalent amount at the time of refund of any advances is absorbed by the borrower's loan account. The advance account is to be used exclusively for ADB's share of eligible expenditures. MOF will manage the advance account and MOECRT, who administers the advance account is accountable and responsible for proper use of advances to the advance account including advances to the four subaccounts at the four implementing agencies. MOECRT will be responsible for providing documents for disbursement and replenishment.

33. Each implementing agency will establish a separate account or ledger in its accounting books for the subaccounts. The subaccounts which will be in Indonesian Rupiah will be used primarily for applied research and startup incubation grants, and project expenditures (para. 26). The implementing agencies are accountable and responsible for the proper use of their respective subaccounts. Based on the financial management assessment, MOECRT and the implementing agencies have adequate administrative and accounting capacity to establish sufficient internal control, accounting, and auditing procedures to ensure efficient use and operation of the advance account and subaccounts.

34. The total outstanding advance to the advance account including the subaccounts should not exceed the estimate of ADB's share of expenditures to be paid through the advance account for the forthcoming 6 months. The MOECRT may request for initial and additional advances to the advance account based on an Estimate of Expenditure Sheet²⁸ setting out the estimated expenditures to be financed through the accounts for the forthcoming 6 months. Supporting documents should be submitted to ADB or retained by the borrower in accordance with ADB's Loan Disbursement Handbook (2022, as amended from time to time) when liquidating or replenishing the advance accounts.

²⁷ The handbook is available electronically from the ADB website (<http://www.adb.org/documents/loan-disbursement-handbook>).

²⁸ Estimate of Expenditure sheet is available in Appendix 8A of ADB's *Loan Disbursement Handbook* (2022, as amended from time to time),

35. **Statement of expenditure procedure.**²⁹ The statement of expenditure (SOE) procedure may be used for reimbursement of eligible expenditures or liquidation of advances to the advance account. Supporting documents and records for the expenditures claimed under the SOE should be maintained and made readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit. Based on the financial management assessment, MOECRT and the universities have adequate administrative and accounting capacity to prepare and maintain proper SOE records and make them readily available for examination.

36. Before the submission of the first WA, the borrower should submit to ADB sufficient evidence of the authority of the person(s) who will sign the WAs on behalf of the government, together with the authenticated specimen signatures of each authorized person.³⁰ The minimum value per WA is ¥29,580,000 equivalent or 1% of the ADB loan amount, whichever is lower as stipulated in the Loan Disbursement Handbook (2022, as amended from time to time). Individual payments below such amount should be paid (i) by the MOECRT and subsequently claimed to ADB through reimbursement, or (ii) through the advance fund procedure, unless otherwise accepted by ADB. The borrower should ensure sufficient category and contract balances before requesting disbursements. Use of ADB's Client Portal for Disbursements³¹ is encouraged for submission of WAs to ADB.

37. **Conditions for withdrawal from loan account for applied research and startup grants.** No withdrawals shall be made from the Loan Account for Applied Research and Startup Incubation Grants unless and until: (i) the operating guidelines and selection criteria have been agreed between MOECRT and ADB for both the Applied Research and Startup Incubation Grants and have been set out in the PAM; (ii) MOECRT has provided ADB with a copy of its no-objection letter confirming the fulfilment of the relevant selection criteria for the first batch of successful applicants of the Applied Research Grant or Startup Incubation Grants; (iii) MOECRT provides written confirmation to ADB that the total amount of the successful grant proposals for the first batch of successful applicants does not exceed ¥739,500,000 .

2. Disbursement Arrangements for Counterpart Fund

38. The government contribution to project costs will be provided in each project year through '*Rupiah Murni*' (counterpart budget) allocation in the MOECRT budget as well as non-tax revenue (PNBP) from the IPB, ITB, UGM, and University of Indonesia budgets, which are prepared through the government's regular funding process. The PIU will prepare an annual budget plan based on the projected disbursement plan of the following year and/or actual disbursement of the previous year. The budget plan will be submitted to the PMU, through the rector, in January of each year. The PMU will review and consolidate proposals for submission to DGHERT and seek endorsement from the internal auditor. DGHERT submits the budget proposal to the MOECRT Secretary General, who will then submit the proposal to BAPPENAS. BAPPENAS, MOECRT, and MOF will conduct a trilateral meeting to discuss the proposal and agree on an indicative ceiling between April to May, and through an iterative process, will agree on the definitive budget

²⁹ SOE form is available in Appendix 6A of ADB's *Loan Disbursement Handbook* (2022, as amended from time to time).

³⁰ Evidence of Authorized Persons to Sign Withdrawal Applications is in Appendix 4A of ADB's *Loan Disbursement Handbook* (2022, as amended from time to time).

³¹ The CPD facilitates online submission of WA to ADB, resulting in faster disbursement. The forms to be completed by the Borrower to register for CPD are available online at <https://www.adb.org/documents/client-portal-disbursements-guide>.

ceiling in October. The detailed budget plan will then be included in the Annual Budget (DIPA), approved by the MOF in December, followed by the preparation of an Operational Plan.

C. Accounting

39. The executing agency and the implementing agencies will maintain separate project accounts and records by funding source for all expenditures incurred on the project. The project accounts will follow the government-prescribed accounting standard for donor-funded projects, which is cash-based accounting.³² The IAs will submit separate project financial statements for their respective STPs, which will be consolidated at the executing agency level. The executing agency through its PMU will prepare consolidated project financial statements in accordance with government accounting laws and regulations set by the Ministry of Finance.³³ The Government Accounting Standards (SAP) are issued by the Government Accounting Standards Committee (KSAP). The government sector units are required to comply with these standards.³⁴

40. The consolidated financial statements will be audited by an auditor acceptable to ADB in accordance with international auditing standards. The audited project financial statement will be submitted to ADB within 6 months from the end of each fiscal year. In addition, the audited entity financial statements, together with the auditor's report and the management letter, will be submitted in the English language within one month from approval by the relevant authority.

D. Auditing and Public Disclosure

41. The executing agency, through its PMU, will cause the detailed consolidated project financial statements to be audited. Foreign funds are part of state finances included in the national budget and thus are subject to the Audit Board of Republic of Indonesia (BPK) audit. BPK is an active member of The International Organization of Supreme Audit Institutions. The State Financial Audits Standards (SPKN) comply with international auditing standards. BPK is an independent auditor acceptable to ADB. The executing agency will submit to ADB, the audited project financial statements together with the auditor's opinion in the English language, within 6 months from the end of each fiscal year.

42. The audit report for the consolidated project financial statements will include a management letter and auditor's opinions, which cover (i) whether the project financial statements present a true and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; (ii) whether the proceeds of the loan were used only for the purpose(s) of the project; and (iii) whether the borrower or executing agency was in compliance with the financial covenants contained in the legal agreements (where applicable).

43. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor.

44. The government and the executing agency have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited

³² Ministry of Finance issuance S-5/PB/PB.6/2022 dated 08 February 2022 regarding Financial Statements of Foreign Loans and Grants (LK PHLN)

³³ Director General of Treasury No. S-27/PB/PB.6/2021 dated 31 December 2021 regarding the schedule of reconciliation, preparation, and submission of financial statements of the State Ministries/Institutions (LKKL) 2021 *Unaudited* and Accounting Treatment for year-end Transactions.

³⁴ ADB 2018. *Public Financial Management System – Indonesia*. Manila.

project financial statements.³⁵ ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

45. Public disclosure of the audited project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Access to Information Policy 2018.³⁶ After the review, ADB will disclose the audited project financial statements and the opinion of the auditors on the project financial statements no later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.³⁷

VI. PROCUREMENT AND CONSULTING SERVICES

A. Procurement of Goods, Works, and Consulting Services

46. All procurement of ADB-financed works, goods, and consulting services will be undertaken in accordance with ADB's Procurement Policy (2017, as amended from time to time)³⁸ and Procurement Regulations for ADB Borrowers (2017, as amended from time to time).³⁹ An 18-month procurement plan indicating review procedures, works, goods, information technology products and services, and consulting service contract packages is in Section B. The procurement plan will be made public and annually updated. The project will not apply advance contracting nor retroactive financing due to national regulatory and budget application process.

47. Strategic procurement planning was carried out to identify procurement risks, develop mitigating measures, review procurement options, and agree on fit-for-purpose procurement arrangements. The project will achieve value for money by (i) using e-procurement (SPSE)⁴⁰ to lower the transaction cost and enhance transparency; and (ii) applying competitive bidding as appropriate. In the event of the use of national e-catalogue platform, price comparison of at least three prices quoted from e-catalogue will be carried out to ensure achievement of value for money. The procurement committee/officer will ensure that the price comparison will gain

³⁵ ADB's approach and procedures regarding delayed submission of audited project financial statements:

- (i) When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that (a) the audit documents are overdue; and (b) if they are not received within the next 6 months, requests for new contract awards and disbursement such as new replenishment of advance accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- (ii) When audited project financial statements are not received within 6 months after the due date, ADB will (i) withhold processing of requests for new contract awards and disbursement such as new replenishment of advance accounts, processing of new reimbursement, and issuance of new commitment letters; (ii) withhold extension of loan closing date; and (iii) defer negotiation or Board presentation of new loan proposals. ADB will (a) inform the executing agency of ADB's actions; and (b) advise that the loan may be suspended if the audit documents are not received within the next 6 months.
- (iii) When audited project financial statements are not received within 12 months after the due date, ADB may suspend or cancel the loan.

³⁶ Access to Information Policy: <https://www.adb.org/documents/access-information-policy>

³⁷ This type of information would generally fall under access to information policy exceptions to disclosure. ADB. 2018. *Access to Information Policy*. Paragraph 17 (viii) and (ix).

³⁸ Available at <https://www.adb.org/documents/adb-procurement-policy>.

³⁹ Available at <https://www.adb.org/documents/procurement-regulations-ADB-borrowers>.

⁴⁰ Sistem Pengadaan Secara Elektronik.

least cost combination if the package consists of multiple equipment. Given some equipment to support R&D is proprietary in nature or to be compatible with the existing facilities, direct contracting is envisaged. Few proprietary products are imported goods that will be contracted directly to manufacturers in case the branch or authorized agent/distributor is unavailable in Indonesia. Eligibility of the proposed direct contracting suppliers for the first 18 months have been scrutinized.

48. Open competitive bidding (OCB) is the default method of procurement of goods, works, and services. The market assessment completed during project processing indicated that most equipment to be procured within the first 18 months are available locally. A few equipment will have to be contracted directly to international manufacturers. The market assessment for indicative procurement packages will be updated after 18 months of project implementation and reflected in the procurement plan. OCB with national advertisement will be used for the civil works for Halal incubator STP at IPB and for equipment. ADB standard bidding documents will be used for all OCB (national and international advertisement). For OCB international, if any, bidding and other relevant documents, including the advertisement, will be prepared in English. For OCB national for goods and civil works, the first bidding document will be bilingual (English and Bahasa Indonesia) for ADB review; the subsequent bidding documents for national advertisements may be only in Bahasa Indonesia. Single Stage One Envelope (1S1E) without pre-qualification will be adopted for the procurement of civil works and equipment considering their relatively simple nature.

49. The project will achieve value for money by using e-procurement (SPSE) to lower the transaction cost and enhance transparency and applying competitive bidding as appropriate. In the event of the use of national e-catalogue platform, price comparison of at least 3 prices from e-catalogue will be carried out to ensure achievement of value for money. The procurement committee/officer will ensure that price comparison will gain least cost combination in the event a package consists of multiple equipment. To assist the procurement committee, templates for Request for Quotation (RFQ) and the associated evaluation report will be developed. Given some equipment to support R&D is proprietary in nature or to be compatible with the existing facilities, direct contracting is envisaged. Few proprietary products amounting to ¥378.62 million will be contracted directly to manufacturers in case the authorized agent/distributor is unavailable in Indonesia. The proposed direct contracting suppliers for the first 18 months have been scrutinized for their eligibility.

50. As indicated in Table 3, MOECRT will be responsible for conducting procurement activities, with support from the universities. MOECRT is also responsible for assigning sufficient and qualified procurement staff resources and engaging qualified procurement experts who will supplement the staff's role for procurement and contract management. MOECRT will provide capacity building tailored to project requirements to all procurement committees.

51. An estimated 120 person-months of consulting services are required for Halal Building Construction Management Services Incubator STP for IPB. The consulting firm will be engaged using the quality-and -cost-based selection method with a standard quality-cost ratio of 80:20. The ADB's Standard Request for Proposal will be used.

52. IPB would need an estimated of 63 person-months of individual consultants for STP Management, Business Incubation, technology transfer, food processing, bio products, medicine products, environment management, financial management among others. Similarly, UGM will engage multiple international and national technical experts to support quality system.

Individual project management consultants to support the PMU and technical matter experts for universities will be recruited using the individual consultant selection method. For consultant recruitment, ADB's Consulting Services Recruitment Notice (CSRN) under its Consultant Management System (CMS) will be used for advertisement and collecting the Expression of Interest. PMU and the Consultant Selection Committee will obtain authorized access to CMS. The remaining steps will be carried out offline.

53. The number of contracts reflects the priority identified by EA/IA for the first 18 months during the strategic procurement planning process to set contract requirements to a level that maximizes market competition, including the participation of local bidders. To reduce and/or manage the risk of delays in project implementation due to the number of contract packages, adequate resources to support the PMU to procure and manage the contract will be provided. This also requires ongoing monitoring and recalibration or, where necessary further consolidation, to ensure the most efficient, effective, and competitive outcomes.

B. Procurement Plan

54. The Procurement Plan is presented below. The procurement plan shall be updated as needed throughout the duration of the project.

Basic Data	
Project Name: Promoting Research and Innovation through Modern and Efficient Science and Technology Parks Project (PRIME STEP)	
Project Number: 55063-001	Approval Number:
Country: Indonesia	Executing Agency: Ministry of Education, Culture, Research and Technology (MOECRT)
Procurement Risk: Medium	Implementing Agency: IPB University Bandung Institute of Technology Gadjah Mada University University of Indonesia
Project Financing Amount: ¥22,599.05 million ADB Financing: ¥20,487.11 million Cofinancing (ADB Administered): Non-ADB Financing: ¥2,111.94 million	Project Closing Date: 30 June 2028
Date of First Procurement Plan: Loan approval date	Date of this Procurement Plan: 4 August 2022
Procurement Plan Duration: 18 months	Related to COVID-19 response efforts: No
Advance contracting: No	Use of e-procurement (e-GP): Yes

C. Methods, Review and Procurement Plan

55. Except as the Asian Development Bank (ADB) may otherwise agree, the following methods shall apply to procurement of goods, works, non-consulting services, and consulting services.

Procurement of Goods, Works and Nonconsulting Services	
Method	Comments
Open competitive bidding (OCB) for Goods	Prior review will be applied for all OCB international and the first OCB national contract of each university. Post review (sampling) for the remaining packages.
Open competitive bidding (OCB) for Works	Prior review
Request for Quotation for Goods	The first package will be prior review and the remaining packages will be post review (sampling).
Request for Quotation for Works	Prior review

Procurement of Goods, Works and Nonconsulting Services	
Method	Comments
Direct Contracting	Prior review

Consulting Services	
Method	Comments
Open competitive bidding (OCB) using Quality and Cost-Based Selection (QCBS)	Technical and Financial Weightage (80:20)
Competitive for Individual Consultant Selection (ICS)	For individual consultant contract.

56. The following table lists goods, works, non-consulting, and consulting services contracts for which the procurement activity is either ongoing or expected to commence within the procurement plan's duration.

List of Active Procurement Packages (Contracts)

Goods, Works, and Nonconsulting Services							
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
EQ/UGM/01	Equipment Cocoa Manufacturing plant	268,223.01	Direct Contracting	Prior Review	NA	Q2/2024	To ensure the standardization of equipment or spare parts compatible with existing equipment, the procurement of additional items from the original Manufacture – DUYViS. The investment cost of the existing facility is around IDR 150 billion which is around ¥1479 million.
EQ/UGM/02	Miscellaneous items for Cocoa Manufacturing plant	24,649.90	RFQ	Post (sampling)	NA	Q2/2024	1. Advertising: Not applicable 2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: ADB Sample RFQ Goods 7. E-procurement: No 8. To be procured for UGM
EQ/UGM/03	Tea Learning Factory	16,844.18	RFQ	Post (sampling)	NA	Q1/2024	1. Advertising: Not applicable 2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: ADB SBD 7. E-procurement: No 8. To be procure for UGM
EQ/UGM/04	Medical Devices	53,282.66	RFQ	Post (sampling)	NA	Q2/2023	1. Advertising: Not applicable 2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: ADB SBD 7. E-procurement: No 8. To be procured for UGM
EQ/UGM/05	Miscellaneous items for Medical	107,894.40	RFQ	Post (sampling)	NA	Q2/2023	1. Advertising: Not applicable 2. Number of contract: 5

Goods, Works, and Nonconsulting Services							
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
	Devices						3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. E-procurement: https://e-katalog.lkpp.go.id 7. To be procured for UGM
EQ/UGM/06	Stainless tables and chairs	410.42	Direct Contracting	Prior Review	NA	Q2/2023	These are customized furniture items available with sole manufactures - Jadi Mandiri and these furniture items are aligned lab requirements.
EQ/UGM/07	Ina Shunt Work Desk with Lights	2,280.13	Direct Contracting	Prior Review	NA	Q2/2023	These are customized items available with sole manufactures - ATMI and these furniture items are aligned lab requirements.
EQ/ITB/01	Lab Items for Artificial Intelligence for Vision, NLP, Big Data Analytics (AI-VLB) for ITB Ganesha	60,719.90	Direct Contracting	Prior Review	NA	Q2/2023	To ensure the standardization of equipment or spare parts compatible with existing equipment, the procurement of additional items from the original Manufacture - NVIDIA
EQ/ITB/02	Lab Items for Broadband Wireless Access (BWA) for ITB Ganesha	8,613.99	RFQ	Post (sampling)	NA	Q2/2023	1. Advertising: Not applicable 2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: ADB SBD 7. E-procurement: No 8. To be procured for ITB
EQ/ITB/03	Lab Items for National Center of Sustainable Transportation Technology (NCSTT) for ITB ganesha	23,109.38	Direct Contracting	Prior Review	NA	Q2/2023	The Equipment under this package are proprietary and can be obtainable only from one source - Keyence
EQ/ITB/04	Lab items for Fuel Motor and Propulsion System - FTMD ITB	34,041.55	RFQ	Post (sampling)	NA	Q2/2023	1. Advertising: Not applicable 2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No

Goods, Works, and Nonconsulting Services							
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
	Ganesha						5. Advanced contracting: No 6. Bidding document: ADB SBD 7. E-procurement: No 8. To be procured for ITB
EQ/ITB/05	Lab Items for Electrical Energy Conversion – STEI for ITB Ganesha	11,297.93	Direct Contracting	Prior Review	NA	Q2/2023	The Equipment under this package are proprietary and can be obtainable only from one source - Ansys
EQ/ITB/06	Lab items for Energy (energy storage) and Environmental Materials Lab for ITB Ganesha	17,698.45	Direct Contracting	Prior Review	NA	Q2/2023	The Equipment under this package are proprietary and can be obtainable only from one source - Rigaku
EQ/ITB/07	Green Polymer Lab.	5,152.69	RFQ	Post (sampling)	NA	Q2/2023	1. Advertising: Not Applicable 2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: ADB SBD 7. E-procurement: No 8. To be procured for ITB
EQ/ITB/08	Lab Items for Nutrasetikal Biosciences & Biotechnology for ITB Ganesha	22,053.07	RFQ	Post (sampling)	NA	Q2/2023	1. Advertising: Not Applicable 2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: ADB SBD 7. E-procurement: No 8. To be procured for ITB
EQ/ITB/09	Lab Items for Nanoscience & Nanotechnology for ITB Ganesha	42,324.84	Direct Contracting	Prior Review	NA	Q2/2023	The Equipment under this package are proprietary and can be obtainable only from MicroWriter
EQ/ITB/10	Lab. Kimia Organik - FMIPA ITB Ganesha	6,247.44	Direct Contracting	Prior Review	NA	Q2/2023	The Equipment under this package are proprietary and can be obtainable only from Syrris
EQ/ITB/11	Lab. SITH for ITB Ganesha	8,006.86	Direct Contracting	Prior Review	NA	Q2/2023	The Equipment under this package is proprietary.
EQ/IPB/01	Processing Line -	152,803.77	OCB	Prior	1S1E	Q2/2023	1. Advertising: National

Goods, Works, and Nonconsulting Services							
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
	Bakery & Biscuit Line			Review			2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: ADB SBD 7. E-procurement: SPSE 8. To be procured for IPB
EQ/IPB/02	Food Laboratory Equipment (beverage food)	181,353.80	OCB	Post (sampling)	1S1E	Q2/2023	1. Advertising: National 2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: ADB SBD 7. E-procurement: SPSE 8. To be procured for IPB
EQ/IPB/03	Miscellaneous Food Laboratory Equipment (beverage food)	87,862.21	RFQ	Post (sampling)	NA	Q2, 2023	1. Advertising: Not applicable 2. Number of contract: 5 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: No 7. E-procurement: https://e-katalog.lkpp.go.id 8. To be procured for IPB
EQ/IPB/04	Equipment for Pre-clinical trials	14,420.69	RFQ	Post (sampling)	NA	Q2, 2023	1. Advertising: Not applicable 2. Number of contract: 2 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: No 7. E-procurement: https://e-katalog.lkpp.go.id 8. To be procured for IPB
EQ/IPB/05	Vendor for Interior Refurbishment for Incubation Facility - TBI 1	23,377.07	RFQ	Post (sampling)	NA	Q2, 2023	1. Advertising: Not Applicable 2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: ADB SBD 7. E-procurement: No

Goods, Works, and Nonconsulting Services							
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
EQ/IPB/06	Computers, Electronics, and Furniture	128,636.17	RFQ	Post (sampling)	NA	Q1, 2024	8. To be procured for IPB 1. Advertising: Not applicable 2. Number of contract: 2 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: No 7. E-procurement: https://e-katalog.lkpp.go.id 8. To be procured for IPB
EQ/IPB/07	Processing Line - Simplisia	154,062.55	OCB	Post (sampling)	1S1E	Q2, 2024	1. Advertising: National 2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: ADB SBD 7. E-procurement: SPSE 8. To be procured for IPB
EQ/IPB/08	Miscellaneous Equipment for Cosmetic & Pharmaceutical Laboratory	16,382.74	RFQ	Post (sampling)	NA	Q2, 2024	1. Advertising: Not applicable 2. Number of contract: 2 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: No 7. E-procurement: https://e-katalog.lkpp.go.id 8. To be procured for IPB
EQ/IPB/09	Equipment for Cosmetic & Pharmaceutical Laboratory	276,910.51	OCB	Post (sampling)	1S1E	Q2, 2024	1. Advertising: National 2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: ADB SBD 7. E-procurement: SPSE 8. To be procured for IPB
CW/IPB/01	Halal Building Construction Services Incubator STP IPB (5 floors and basement)	652,336.61	OCB	Prior	1S1E	Q1, 2023	1. Advertising: National 2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No

Goods, Works, and Nonconsulting Services							
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
	infrastructure, IPAL, generator)						6. Bidding document: ADB SBD Small Works 7. E-procurement: SPSE 8. To be procured for IPB

Consulting Services							
Package Number	General Description	Estimated Value (¥000)	Selection Method	Review	Type of Proposal	Advertisement Date	Comments
CS/MOECRT/01	Project Management Consultant	153,816.00	ICS	Prior	-	Q1, 2023	1. Type: Individuals (multiple contracts) 2. Assignment: National 3. Advance contracting: No 4. E-procurement: ADB CMS 5. To be procured by MOECRT
CS/IPB/01	Halal Building Construction Management Services Incubator STP IPB	30,812.45	QCBS	Prior	FTP	Q1, 2023	1. Type: Firm 2. Assignment: National 3. Quality-Cost Ratio (if applicable): 80:20 4. Advance contracting: No 5. E-procurement: ADB CMS 6. To be procured for IPB
CS/IPB/02	Pool of technical experts	22,185.00	ICS	Prior	NA	Q2, 2023	1. Type: Individual 2. Assignment: National 3. Advance contracting: No 4. E-procurement: ADB CMS 5. To be procured for IPB
CS/UGM/01	Pool of technical experts	143,791.67	ICS	Prior	NA	Q1, 2023	1. Type: Individual 2. Assignment: National 3. Advance contracting: No 4. E-procurement: ADB CMS 5. To be procured for UGM
CS/UI/01	Planning Interior for Laboratory and teaching factory	44,522.48	ICS	Prior	NA	Q1, 2023	Type: Individual Assignment: National Advance contracting: No E-procurement: ADB CMS To be procured for UI

D. List of Indicative Packages (Contracts) Required under the Project

57. The following table lists goods, works, non-consulting, and consulting services contracts for which the procurement activity is expected to commence beyond the procurement plan duration and over the life of the project (i.e., those expected beyond the current procurement plan's duration).

Goods, Works, and Non-consulting Services						
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Comments
EQ/ITB/12	Equipment for Information and Communication Technology (ITB Ganesha and ITB Technopolis)	686,390.47	OCB	Prior	ISIE	<ol style="list-style-type: none"> 1. Advertising: National 2. Advertisement Date: Q1/2025 3. Number of contract: 5 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for ITB
EQ/ITB/13	Transportation and Energy Engineering for energy efficient smart technology (ITB Ganesha and ITB Technopolis)	881,881.70	OCB	Prior	ISIE	<ol style="list-style-type: none"> 1. Advertising: National 2. Advertisement Date: Q1/2025 3. Number of contract: 6 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for ITB
EQ/ITB/14	Lab Items for Infrastructure and Disaster (ITB Ganesha and ITB Technopolis)	140,096.65	OCB	Prior	ISIE	<ol style="list-style-type: none"> 1. Advertising: National 2. Advertisement Date: Q1/2025 3. Number of contract: 4 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for ITB
EQ/ITB/15	Food and Health (ITB Ganesha and ITB Technopolis)	180,252.09	OCB	Prior	ISIE	<ol style="list-style-type: none"> 1. Advertising: National 2. Advertisement Date: Q1/2025 3. Number of contract: 2 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No

Goods, Works, and Non-consulting Services						
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Comments
						7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for ITB
EQ/UGM/08	Bean to Bar 10 kg / jam – Lot 1- Lab Items Lot 2- Modular Event System	109,872.25	OCB	Post (sampling)	1S1E	1. Advertising: National 2. Advertisement Date: Q2/2025 3. Number of contract: 2 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for UGM
EQ/UGM/09	Equipment for Herbs & phytoarmaka Lab	149,871.95	OCB	Prior	1S1E	1. Advertising: National 2. Advertisement Date: Q3/2024 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for UGM
EQ/UGM/ 10	Equipment for Healthy Food Lab	103,252.69	OCB	Post (sampling)	1S1E	1. Advertising: National 2. Advertisement date: Q3/2024 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for UGM
EQ/UGM/ 11	Furniture, Fixtures and electronics items for STP at UGM	58,697.81	OCB	Post (sampling)	1S1E	1. Advertising: National 2. Advertisement date: Q3/2025 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for UGM
EQ/UGM/ 12	Lab Equipment for Medical	431,604.59	OCB	Post	1S1E	1. Advertising: National

Goods, Works, and Non-consulting Services						
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Comments
	devices			(sampling)		2. Advertisement date: Q3/2025 3. Number of contract: 3 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for UGM
EQ/UGM/ 13	Equipment for Raw Material for Paracetamol Lab	117,036.08	OCB	Post (sampling)	1S1E	1. Advertising: National 2. Advertisement date: Q2/2026 3. Number of contract: 2 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for UGM
EQ/UGM/ 14	Equipment for Fibre Center for Smart Material Lab	51,354.13	RFQ	Post (Sampling)	NA	1. Advertising: Not applicable 2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: ADB SBD 7. E-procurement: No 8. To be procured for UGM
EQ/UGM/ 15	Equipment for Renewable Energy Lab (Renewable Biomass Research Equipment)	30,812.45	RFQ	Post (Sampling)	NA	1. Advertising: Not applicable 2. Number of contract: 1 3. Pre-qualification of bidder: No 4. Domestic preference applicable: No 5. Advanced contracting: No 6. Bidding document: ADB SBD 7. E-procurement: No 8. To be procured for UGM
EQ/IPB/100	Procurement of Halal Custom Lab Furniture Equipment	66,760.43	OCB	Post (Sampling)	1S1E	1. Advertising: National 2. Advertisement date: Q3/2024 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE

Goods, Works, and Non-consulting Services						
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Comments
						9. To be procured for IPB
EQ/IPB/111	Processing Line - Lot 1- Weaning Food Line Lot 2- Cereal Food Line	314,693.19	OCB	Prior review	1S1E	1. Advertising: National 2. Advertisement date: Q2/2025 3. Number of contract: 2 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for IPB
EQ/IPB/122	Laboratory Equipment - Halal Authentication Laboratory	354,676.77	OCB	Prior review	1S1E	1. Advertising: National 2. Advertisement date: Q2/2025 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for IPB
EQ/IPB/133	Seed Processing Equipment	89,375.38	OCB	Post (Sampling)	1S1E	1. Advertising: National 2. Advertisement date: Q2/2025 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for IPB
EQ/IPB/144	Vendor for Interior Refurbishment for Incubation Facility - TBI 2	16,128.05	RFQ	Post (Sampling)	NA	1. Advertising: National 2. Advertisement date: Q2/2025 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for IPB
EQ/IPB/155	Molecular Laboratorium & Product Stability	97,239.37	OCB	Post (Sampling)	1S1E	1. Advertising: National 2. Advertisement date: Q2/2026 3. Number of contract: 1 4. Pre-qualification of bidder: No

Goods, Works, and Non-consulting Services						
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Comments
						5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for IPB
EQ/UI/01	Teaching Factory: Implants and Medical Devices	300,627.29	OCB	Post (Sampling)	1S1E	1. Advertising: National 2. Advertisement date: Q1/2025 3. Number of contract: 3 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for UI
EQ/UI/02	Biomaterials and Biomechanics Laboratory	59,878.96	RFQ	Post (Sampling)	NA	1. Advertising: Not Applicable 2. Advertisement date: Q1/2025 3. Number of contracts: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: No 9. To be procured for UI
EQ/UI/03	Advanced Metrology Laboratory	286,705.18	OCB	Post (Sampling)	1S1E	1. Advertising: National 2. Advertisement date: Q2/2025 3. Number of contract: 2 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for UI
EQ/UI/04	Supercomputer Laboratory	255,913.09	OCB	Post (Sampling)	1S1E	1. Advertising: National 2. Advertisement date: Q2/2025 3. Number of contract: 2 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for UI

Goods, Works, and Non-consulting Services						
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Comments
EQ/UI/05	Teaching Factory Integrated Bio-Laboratory	759,042.78	OCB	Prior	1S1E	<ol style="list-style-type: none"> 1. Advertising: National 2. Advertisement date: Q2/2025 3. Number of contract: 5 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for University of Indonesia
EQ/UI/06	Teaching Factory Mortar Production (iCell)	10,158.13	RFQ	Post (Sampling)	1S1E	<ol style="list-style-type: none"> 1. Advertising: Not Applicable 2. Advertisement date: Q3/2024 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: No 9. To be procured for University of Indonesia
EQ/UI/07	Teaching Factory Microbiology	230,888.33	OCB	Post (Sampling)	1S1E	<ol style="list-style-type: none"> 1. Advertising: National 2. Advertisement date: Q3/2025 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for University of Indonesia
EQ/UI/08	Laboratory Biosafety Level 2-3	257,329.87	OCB	Post (Sampling)	1S1E	<ol style="list-style-type: none"> 1. Advertising: National 2. Advertisement date: Q3/2025 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for University of Indonesia
EQ/UI/09	Teaching Factory: Mechanical Manufacturing and Testing	557,016.83	OCB	Post (Sampling)	1S1E	<ol style="list-style-type: none"> 1. Advertising: National 2. Advertisement date: Q3/2025 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No

Goods, Works, and Non-consulting Services						
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Comments
						6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for University of Indonesia
EQ/UI/10	Teaching Factory Food Product Development	136,088.54	OCB	Post (Sampling)	1S1E	1. Advertising: National 2. Advertisement date: Q1/2025 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for University of Indonesia
EQ/UI/11	Integrated Laboratory, Laboratory of Developmental Biology (IMERI)	4,930.00	RFQ	Post (Sampling)	1S1E	1. Advertising: Not Applicable 2. Advertisement date: Q4/2025 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: No 9. To be procured for University of Indonesia
EQ/UI/12	Teaching Factory: NRE storage and conversion	157,425.56	OCB	Post (Sampling)	1S1E	1. Advertising: National 2. Advertisement date: Q4/2025 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for University of Indonesia
EQ/UI/13	Biomedical Product and Basic Testing Laboratory (IMERI)	131,580.51	OCB	Prior	1S1E	1. Advertising: National 2. Advertisement date: Q3/2024 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for University of Indonesia
EQ/UI/14	Teaching Factory	265,450.57	OCB	Post	1S1E	1. Advertising: National

Goods, Works, and Non-consulting Services						
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Comments
	Biomedical Equipment			(Sampling)		2. Advertisement date: Q1/2025 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for University of Indonesia
EQ/UI/15	Biomedical Laboratory (iCell)	39,947.09	RfQ	Post (Sampling)	1S1E	1. Advertising: Not Applicable 2. Advertisement date: Q3/2024 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: No 9. To be procured for University of Indonesia
EQ/UI/16	Hydro Dynamics Laboratory	403,270.88	OCB	Post (Sampling)	1S1E	1. Advertising: National 2. Advertisement date: Q1/2025 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for University of Indonesia
EQ/UI/17	Energy Labeling (ILRC) Lab	77,031.25	OCB	Post (Sampling)	1S1E	1. Advertising: National 2. Advertisement date: Q3/2025 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for University of Indonesia
EQ/UI/18	Cadaver Test Laboratory (FKUI)	56,489.58	OCB	Post (Sampling)	1S1E	1. Advertising: National 2. Advertisement date: Q3/2024 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No

Goods, Works, and Non-consulting Services						
Package Number	General Description	Estimated Value (¥000)	Procurement Method	Review	Bidding Procedure	Comments
						7. Bidding document: ADB SBD 8. E-procurement: SPSE 9. To be procured for University of Indonesia
EQ/UI/19	Teaching Factory Development of USG (Fasilkom UI)	3,235.31	RFQ	Post (Sampling)	1S1E	1. Advertising: Not Applicable 2. Advertisement date: Q4/2024 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: No 9. To be procured for University of Indonesia
EQ/UI/20	Heat Transfer Laboratory (MRC)	3,032.98	RFQ	Post (Sampling)	1S1E	1. Advertising: Not Applicable 2. Advertisement date: Q4/2024 3. Number of contract: 1 4. Pre-qualification of bidder: No 5. Domestic preference applicable: No 6. Advanced contracting: No 7. Bidding document: ADB SBD 8. E-procurement: No 9. To be procured for University of Indonesia

Consulting Services						
Package Number	General Description	Estimated Value (¥000)	Selection Method	Review	Type of Proposal	Comments

E. Non-ADB Financing

58. The following table lists goods, works, non-consulting, and consulting services contracts over the life of the project, financed by non-ADB sources.

Goods, Works and Non-consulting Services				
General Description	Estimated Value (cumulative, ¥000)	Estimated Number of Contracts	Procurement Method	Comments

Consulting Services				
General Description	Estimated Value (cumulative, ¥000)	Estimated Number of Contracts	Recruitment Method	Comments

VII. SAFEGUARDS

59. **Prohibited investment activities.** Pursuant to ADB's Safeguard Policy Statement (2009), ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the Safeguard Policy Statement (2009).

60. In compliance with ADB's SPS (2009), the safeguard categories for the project are as follows.⁴¹

A. Environment

61. The project is category C for environment. The project will support the procurement of equipment to strengthen R&D capacities of the four STPs. It will also construct one new building in IPB for halal food innovation and refurbish minor works within existing STP facilities (electrical wiring, painting, flooring, windows, etc.). Such works could potentially cause minor adverse environmental impacts and affect occupational and community health and safety. However, any such impacts are anticipated to be highly localized and limited to a short construction and equipment installation period. A code of construction practice (COCP)⁴² has been prepared to guide environment and safety risk management during minor civil works. Compliance with the COCP will be verified by project management consultant, the IPB-PIU, and the halal building construction management services consultant (CS/IPB/01). Compliance with the COCP will be reported to ADB through the consolidated annual project progress reports. The project will also support certification of all research facilities under national and international certification schemes (including but not limited to ISO 9001, ISO 45001, ISO 14001, HACCP), ensuring adherence to international good environment, health, and safety practices during STP operation.

B. Involuntary Resettlement

62. The project is category C for involuntary resettlement. The project is classified category C for involuntary resettlement, as per ADB's Safeguard Policy Statement. Construction of the halal business incubator building at IPB will be on existing land located within the boundaries of university. There are no people using or occupying the land, and therefore, involuntary resettlement is not expected. Thus, preparation of a resettlement plan and social safeguard monitoring report is not required.

C. Indigenous Peoples

63. The project is category C for indigenous peoples. The project is not expected to affect indigenous peoples as there are no indigenous peoples living in the project areas. The indigenous peoples safeguards requirements will not be triggered by the research and partnership activities.⁴³

VIII. GENDER AND SOCIAL DIMENSIONS

64. The project's gender classification is "effective gender mainstreaming" (EGM). Gender is featured in the project outcomes and outputs with an objective of addressing gender equality, improving women's participation in startups both as leaders and founding members, and encouraging participation of female students in research and innovation activities.

⁴¹ ADB. [Safeguard Categories](#).

⁴² Climate Change Assessment (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President).

⁴³ ADB. 2009. 2009 Safeguard Policy Statement, Appendix 3 on safeguard requirements for indigenous peoples.

65. The proposed project will promote gender-related policy action and gender responsive practices throughout the project life cycle to achieve measurable gender equality outcomes. This will be achieved by: (i) gender specific targeting to strengthen research capability of female researchers and to encourage female students in R&D activities; (ii) promoting increased representation of women in technology startups; (iii) ensuring that R&D facilities incorporate gender sensitive and inclusive designs (e.g., by including nursing room, and separate male and female toilets); (iv) training faculties, management, and other key stakeholders on gender sensitive programming (e.g., by promoting/supporting appropriate control measures to prevent sexual harassment and discrimination in the workplace); and (v) involving women in science and technology to mentor and support more female students to participate in research and innovation. The gender action plan (GAP) is in Table 15.

66. The project requires sex-disaggregated data across all R&D activities routinely collected and applied to research and innovation management activities. MOECRT will hire a gender specialist and a project M&E specialist. The gender specialist (20 person-months) will liaise with the gender focal person of each STP. He/she will be responsible in implementing the GAP and ensure that the project contributes to gender mainstreaming. The M&E specialist will closely coordinate with the gender specialist and gender focal person of each STP to ensure gender targets and performance indicators are achieved.

Table 15: Gender Action Plan

Gender Objectives	Targets and Performance Indicators	Responsibility	Timeframe
Output 1: Facilities for research and development and innovation at four science and technology parks upgraded			
1.1. Facilities integrate gender-responsive physical design features and provide people with disabilities access to the physical environment	1.1.1 One new building for halal food R&D at IPB constructed, with gender-sensitive and socially inclusive features ^a (DMF 1d).	IPB	2023–2027
	1.1.2 All research laboratories, product development facilities, and startup incubation facilities will incorporate gender-sensitive and socially inclusive features (DMF 1a, 1c)	UI, ITB, IPB, UGM	
	1.1.3 Budget earmarked for maintenance of constructed facilities (for IPB halal food R&D center), including male and female sanitation facilities and lactation room (2021 baseline: NA)	IPB	
Output 2: The four science and technology parks' research and development administration, partnerships, and start-up incubation strengthened			
2.1 Promote more women in R&D and female role models	2.1.1. At least 37.5% of startup incubation participants are women at each of the four project STPs (2021 baseline: IPB-34%, ITB-30.0%, UGM-34.0%, UI-35.5%) (DMF 2b). ^b	UI, ITB, IPB, UGM	2027
	2.1.2. At least 45% of startup and innovation mentors are female (2021 baseline: IPB-40.0%, ITB-55.5%, UGM-36.0%, UI-36.3 %). ^c		
2.2 Support women's entrepreneurship to the acceleration phase	2.2.1. All startup (100%) with female founders from four STPs receive additional support (e.g., mentorship, financing, market access) during pre-acceleration phase (2021 baseline: NA)	UI, ITB, IPB, UGM	2023–2027
2.3 Promote gender mainstreaming and social inclusion in science and technology education, research, and entrepreneurship	2.3.1. 18 strategic R&D projects with strong social or gender equality or climatic adaptation thematic areas are completed and studies published ^d (2021 baseline: 0) (DMF 2d).	UI, ITB, IPB, UGM	2023–2027
Output 3: Capacity of the four science and technology parks and the Ministry of Education, Culture, Research, and Technology strengthened			
3.1. Promote increased number of women in R&D as researchers and in management of the STPs.	3.1.1. 174 researchers from the four project STPs, of whom at least 30% are women, completed post-doctorate training or fellowships in the priority areas of the relevant STP ^e (2021 baseline for women: 0) (DMF 3a).	UI, ITB, IPB, UGM	2023–2027
	3.1.2. 207 staff from four STPs and MOECRT trained, of whom at least 35% are women, report overall improvement in knowledge and understanding of project management, research and innovation management, procurement, contract management, and financial management (2021 baseline for women participants: 0) (DMF 3b).	UI, ITB, IPB, UGM	
	3.1.3. 77 staff from four project STPs trained, of whom at least 40% are women, report overall increased knowledge and competencies		

Gender Objectives	Targets and Performance Indicators	Responsibility	Timeframe
	in enhancing STPs as triple-helix hub for commercialization of research products (2021 baseline for women: 0) (DMF 3c).		
	3.1.4 At least 50% of lab technicians to be engaged in the STPs and in IPB are female (2021 baseline: IPB-50%, ITB-42.1%, UGM-36%, UI-19.35 %).	UI, ITB, IPB, UGM	
3.2. Institutional environment for gender equality improved	3.2.1. At least 35% STP administrators are female and at least 30% resource persons are female under the triple-helix hub (2021 baseline: NA)	UI, ITB, IPB, UGM	2023–2027
	3.2.3 Four STPs implement policies on respectful workplace and prevention of sexual harassment. ^f (2021 baseline: NA)	UI, ITB, IPB, UGM	
	3.2.4. Four STPs sharing of gender mainstreaming policies and practices in public seminars and forums for other Indonesia universities conducted annually (2021 baseline: NA).	UI, ITB, IPB, UGM	

ADB = Asian Development Bank; DMF = design and monitoring framework; GAP =gender action plan; GBV-SEAH = gender-based violence and sexual exploitation, abuse, and harassment; IPB= IPB University; ITB = Bandung Institute of Technology; MOECRT = Ministry of Education, Culture, Research and Technology; NA = not applicable; PMU = project management unit; R&D = research and development; STP= science and technology park; UGM = Gadjah Mada University; UI = University of Indonesia.

^a Under output 1, as indicated in the DMF, a new building refers to one replacement building in IPB for halal food innovation. In all four STPs, other advanced R&D equipment will be procured, and research facilities will be retrofitted according to research requirements. These new facilities will undergo regulatory certification. This output will also scale up R&D translation and diffusion facilities for incubating startups including co-working spaces and fab labs for prototyping. Gender-responsive and socially inclusive features will include lactation room, well-lit public areas, person-with-disability-friendly furniture, security camera system in public areas, etc.

^b Baseline for female participation is sourced from startup incubations in 2021.

^c Mentors participate on a purely voluntary basis and majority are part of the alumni. The mentorship program is aimed at helping startups growing successfully in which the mentor gives guidance on fund raising, professional development and advancement and shares experience and leadership.

^d Each researcher may participate more than once in more than one project.

^e Postdoctoral programs include a varied program of training opportunities, short-term research fellowship, as well as long-term fellowship.

^f A respectful workplace incorporates university policies, programs, and activities that include increasing awareness about bullying and sexual harassment and other forms of violence, sharing best practices, as well as developing skills and capacity to create a safe and respectful workplace culture.

Source: Asian Development Bank.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

A. Project Design and Monitoring Framework

67. The design and monitoring framework (DMF) for the project is presented below.

Impact the Project is Aligned with: Competitiveness of Indonesia's economy and sustained economic growth strengthened through research and development and innovation (National Medium-Term Development Plan, 2020–2024) ^a			
Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
Outcome Quality and relevance of research and development and innovation system in the four STPs improved	By 2029: a. The four project STPs achieved the advance STP status ^b (2021 baseline: intermediate status) (OP 1.1; OP 1.2.1) b. At least one unicorn, six Series B, and three Series C start-ups incubated at the four project STPs ^c (2021 baseline: 0) (OP 1.2.1) c. Number of intellectual properties ^d from the four project STPs used by industries increased to 230 ^e (2021 baseline: 60) (OP 1.2.1)	a. STP maturity assessment by the National Research and Innovation Agency b. MOECRT annual project M&E report and STP annual reports c. STP annual reports	R: Indonesia does not mobilize adequate resources for R&D and innovation because of other pressing needs such as those arising from the COVID-19 pandemic. A: Future leadership change in each university will continue to prioritize R&D and innovation through the STP
Outputs 1. Facilities for research and development and innovation at four science and technology parks upgraded 2. The four science and technology	By 2029: 1a. At least 35 research laboratories and product development facilities installed in the four project STPs in the priority industry sectors ^f with gender-sensitive and socially inclusive features ^g (2021 baseline: 0) (OP 1.2.1; OP 2.4.1) 1b. At least 30 new research laboratories and product development facilities are certified ^h (2021 baseline: 0) (OP 1.2.1) 1c. 59 technology start-ups and incubation facilities in the four project STPs upgraded with start-up offices and fabrication laboratories, with gender-sensitive and socially inclusive features ^g (2021 baseline: 19) (OP 1.2.1; OP 2.4.1) 1d. One new building for halal food R&D at IPB constructed, with gender-sensitive and socially inclusive features, ^g and green resilience designs ⁱ (2021 baseline: 0) (OP 1.2.1; OP 2.4.1; OP 3.1.3; OP 3.2.5) 2a. 470 teams (including students, alumni, and industry partners) qualified for start-up incubations in the four project STPs	1a.–1c. MOECRT annual project M&E reports and STP annual reports 1d. <i>Sertifikat laik fungsi</i> ^j issued for IPB 2a.–2c. MOECRT annual project M&E	A: Existing experts in the STPs will spearhead the establishment of new research laboratories and product development facilities. A: STPs streamline administrative procedures for

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
<p>parks' research and development administration, partnerships, and startup incubation strengthened</p> <p>3. Capacity of the four science and technology parks and the Ministry of Education, Culture, Research and Technology strengthened</p>	<p>(2021 baseline: 257) (OP 1.2.1, OP 2.1.3)</p> <p>2b. At least 37.5% of start-up incubation participants are women at each of the four project STPs^k (2021 baseline: average of the four project STPs: 33.4%; IPB: 34.0%; ITB: 30.0%; UGM: 34.0%; UI: 35.5%) (OP 1.2.1)</p> <p>2c. At least 10% of start-up incubation^k teams proceeded to acceleration phase^l (2021 baseline: 0) (OP 1.2.1)</p> <p>2d. 18 strategic research projects and community solutions with social and gender equality, and climatic adaptation thematic areas, completed; and studies published^m (2021 baseline: 0) (OP 1.3; OP 2.3.2; OP 3.2.4)</p> <p>2e. Maturity rating of technology readiness level 9 achieved by at least 106 R&D projectsⁿ (2021 baseline: 54) (OP 1.1)</p> <p>2f. At least 21 joint research collaborations with international research institutions completed^o (2021 baseline: 2) (OP 1.1)</p> <p>2g. 167 innovation products and solutions developed (2021 baseline: 38) (OP 1.2.1)</p> <p>2h. At least 3,750 university students participated in pre-startup training and hackathon and used the R&D and innovation facilities (Baseline: 0) (OP 1.1)</p> <p>3a. 174 researchers from the four project STPs, of whom at least 30% are women, completed post-doctorate training or fellowships in the priority areas of the relevant STP^f (2021 baseline: for training: 0; for women participants: 0) (OP 1.1; OP 2.2.1)</p> <p>3b. 207 staff from the four project STPs and MOECRT trained,^p of whom at least 35% are women, and reported overall improvement in knowledge and understanding in project management; research and innovation management; procurement, contract management, and financial management (2021 baseline: for training: 0; for women participants: 0) (OP 1.1; OP 2.1.1)</p>	<p>reports and STP annual reports</p> <p>2d.–2f. MOECRT annual project M&E reports, or R&D paper published in an international journal, or patent filed before project completion</p> <p>2g. MOECRT annual project M&E reports, STP annual report, and/or agreements with industrial partners</p> <p>2h. MOECRT annual project M&E reports and STP annual reports</p> <p>3a.–3c. Training records such as certificate and attendance record; MOECRT annual project M&E report</p>	<p>application, processing, and disbursement of funds for start-up and R&D programs.</p> <p>A: Business enterprises are ready to work with local public institutions on R&D instead of importing outside technologies or R&D.</p> <p>R: Prolonged COVID-19 restrictions delays overseas training and fellowship programs</p> <p>A: University leadership fully supports the need for STPs to engage in economic and entrepreneurial activities to generate revenue and to become sustainable.</p>

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
	3c. 77 staff from the four project STPs, of whom at least 40% are women, reported overall increased knowledge and competencies in enhancing STPs as a triple-helix hub for commercialization of research products (2021 baseline: for training: 0; for women participants: 0) (OP 1.1, OP 2.1.1)		

<p>Key Activities with Milestones</p> <p>1. Facilities for research and development and innovation at four science and technology parks upgraded</p> <p>1.1 Develop detailed engineering design for new IPB building for research (Q4 2022)</p> <p>1.2 Commence contracting for equipment and furniture for start-up incubation facilities and R&D facilities (Q4 2025)</p> <p>1.3 Initiate contracting for retrofitting to upgrade start-up incubation facilities and R&D facilities (Q4 2026)</p> <p>1.4 Install, test, and commission R&D and start-up incubation equipment (Q2 2027)</p> <p>2. The four science and technology parks research and development administration, partnerships, and start-up incubation strengthened</p> <p>2.1 Dialogue with international R&D cooperation partners and establish joint R&D agreements (Q4 2023)</p> <p>2.2 Dialogue with business enterprises on R&D collaboration and conclude joint R&D agreements (Q4 2024)</p> <p>2.3 Select, fund, and support teams for the start-up incubation program (Q4 2026)</p> <p>2.4 Conduct outreach and promotional activities for innovation and start-up development (Q3 2027)</p> <p>2.5 Conduct applied R&D activities in priority focus sectors of the project^f (Q4 2027)</p> <p>2.6 Conduct applied R&D jointly with international research institutions (Q4 2027)</p> <p>2.7 Organize counselling and motivational sessions for female students in the four STPs on prospects and opportunities in applied research and start-up incubation (Q4 2027)</p> <p>2.8 Design gender-specific targeting and mobilization activities (Q4 2027)</p> <p>3. Capacity of the four science and technology parks and the Ministry of Education, Culture, Research and Technology strengthened</p> <p>3.1 Improve M&E capacity and protocols, including for the administration of pre-training and post-training surveys and collection and analysis of sex-disaggregated data (Q4 2023)</p> <p>3.2 Organize capacity-building courses for staff of the MOECRT and the four STPs on project management, procurement management, contract management, gender mainstreaming, and financial management (Q2 2027)</p> <p>3.3 Promote gender mainstreaming and integration of gender throughout the R&D and innovation life cycle (Q4 2027)</p> <p>3.4 Identify international and national training programs for capacity building in R&D competency (Q3 2023)</p> <p>3.5 Dispatch researchers and technologists for international post-doctorate and fellowship training^p (Q4 2025)</p> <p>3.6 Implement knowledge management and communication strategy and action plan to promote project activities and achievement (Q4 2022)</p> <p>3.7 Implement a digital operation system to coordinate project implementation activities (Q4 2022)</p> <p>Project Management Activities</p> <p>Prepare procurement documents for civil works, equipment, and consulting services</p> <p>Establish the project management unit and project implementation units</p> <p>Establish applied research and start-up incubation grants selection procedure, grant disbursement mechanism, and financial management arrangements</p> <p>Engage project implementation consultants</p> <p>Prepare quarterly and annual progress reports, gender action plan reports, and safeguards reports (as scheduled)</p> <p>Conduct inception, semiannual review, midterm review, and project completion review missions (as scheduled)</p> <p>Prepare and submit annual audited project financial statements</p> <p>Prepare and submit project completion report</p> <p>Inputs</p> <p>Asian Development Bank: ¥20,487.11 million (loan)</p> <p>Government of Indonesia: ¥2,111.94 million</p>
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A = assumption; COVID-19 = coronavirus disease; IPB = IPB University; ITB = Bandung Institute of Technology; M&E = monitoring and evaluation; MOECRT = Ministry of Education, Culture, Research, and Technology; OP = operational priority; Q = quarter; R = risk; R&D = research and development; STP = science and technology park; UGM = Gadjah Mada University; UI = University of Indonesia.

^a Government of Indonesia. 2020. *National Medium-Term Development Plan, 2020–2024*. Jakarta.

^b STP maturity considers a broad dimension from infrastructure facilities to soft components and is assessed based on five indicators: input, process, output, outcome, and impact. An intermediate STP provides science and technology

in a complete and adequate manner with good outcomes but has room to develop and grow. An advanced STP is a complete and mature ecosystem, which offers services to industry and supports regional economic impacts, especially in stimulating technology transfer and innovation start-up.

^c These targets are aggregated targets across all four project STPs. Valuations are set at \$30 million–\$60 million for Series B, more than \$60 million for Series C, and at \$1 billion for unicorns. Unicorn companies are those that reach a valuation of \$1 billion without being listed on the stock market.

^d Intellectual property filing typically refers to patents, utility models, trademarks, and copyrights.

^e Refers to intellectual property generated and filed under the STPs. The target of 230 is based on the universities' projections using past data and taking into consideration support for private sector collaboration under the project.

^f The priority sectors of the four STPs are: (i) for ITB—engineering (transport and energy), information and communication technology, disaster prevention, and food and health technology; (ii) for UGM—health and pharmaceutical, agro-industry, and renewable energy; (iii) for IPB—agro-processing, food technology, and natural cosmetics and pharmaceuticals; and (iv) for UI—medical device technology, drugs food innovation, and engineering innovation including artificial intelligence and renewable energy.

^g Gender-sensitive and socially inclusive features will include lactation rooms, well-lit public areas, furniture to accommodate persons with disabilities, ramps for wheelchair access, tactile walkways, and security camera systems in public areas.

^h Examples of certifications are International Standard Organization (ISO) certifications such as ISO9000 and ISO14000, Hazard Analysis Critical Control Point, Good Manufacturing Practice, and Halal certification. Not all research laboratories or product development facilities need to obtain certification.

ⁱ *Sertifikat Laik Fungsi* is a function-worthy certificate required prior to commencing operation of the entire facility.

^j Green resilience design refers to the use of durable well insulated materials for construction (such as structural insulated panels, insulating concrete forms, recycled wood), reducing and recycling construction and demolition waste, and design features with good ventilation and support energy efficiencies.

^k The share of self-employed women and men out of the population of employed with tertiary education is unknown in Indonesia. The average among the Organization for Economic Co-operation and Development (OECD) countries was 9.7% for women and 16.4% for men in 2017. OECD Statistics. [Entrepreneurship Indicators](#) (accessed 23 October 2022).

^l Acceleration phase is still a start-up incubation stage. It refers to the stage where (i) start-ups are able to prove business viability and (ii) there is a sustainable source of income from business activities and customers.

^m This will include R&D supporting the less advantaged. Previous research and study projects related to social and gender equality that have been conducted by STPs include addressing stunting in children and one village—one chief executive officer.

ⁿ Technology readiness level (TRL) measures the maturity of applied research, or its readiness for commercialization. It is measured systematically in terms of adoptability by users—governments, industry, or society. TRL 9 is the highest-level R&D products/solutions, which are proven to work in real world operational environment.

^o Joint research collaboration will involve mutually reinforcing activities and benefits to the STP and the partner research institution, entailing meaningful, concrete R&D activities on the STP's priority research cluster(s).

^p Participants will be selected and dispatched in batches annually.

Contribution to Strategy 2030 Operational Priorities

Expected values and methodological details for all OP indicators to which this operation will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 2).

Source: Asian Development Bank.

B. Monitoring

68. **Project performance monitoring.** Project progress, inputs, outputs, outcomes, and impacts will be monitored regularly. The executing agency and the implementing agencies will be responsible for monitoring the implementation and performance of the project, and for reporting and documenting the results achieved at various stages of the project. MOECRT will be responsible for disseminating the findings to key stakeholders. Disaggregated baseline data for output and outcome indicators gathered during project processing will be updated and reported through quarterly and annual progress reports and during ADB project review mission.

69. At the start of project implementation, the PMU will use baseline information to develop a comprehensive project performance management system to generate data systematically on the inputs, outputs, and indicators to be used to measure project impact, taking into account the scope of the outputs. The PMU will confirm achievable targets; finalize monitoring, recording, and

reporting arrangements; and establish systems and procedures, no later than 3 months after project loan effectiveness.

70. **Compliance monitoring.** Loan covenants—policy, financial, economic, environmental safeguards, and others—will be monitored through the quarterly progress reports and ADB review missions. The compliance status of loan covenants will be reported and assessed through quarterly project progress reports and verified during ADB review missions.

71. **Environment safeguards monitoring.** Compliance with the COCP will be supervised by the construction management consultant, on behalf of the IPB PIU for the new Halal incubator building at IPB, and verified by the PMC, on behalf of the PMU. Compliance with the COCP will be reported to ADB through the consolidated annual project progress reporting process.

72. **Social safeguards monitoring (IP and IR).** The project is considered category C for Indigenous People and Involuntary Resettlement; therefore, a Resettlement Plan (RP) and Indigenous Peoples Plan (IPP) were not prepared. Social safeguards will not be monitored. However, in the event the Involuntary Resettlement and/or Indigenous Peoples issues are identified during project implementation, a specific mitigation will be prepared (RP and/or IPP) in accordance with ADB's SPS on Involuntary Resettlement and Indigenous Peoples safeguards and applicable regulations laws and regulations of the Government of Indonesia. The executing agency through the PMU will also promptly report to ADB any unanticipated social safeguards issue that may arise during project implementation.

73. **Gender and social dimensions monitoring.** The progress in GAP implementation will be included in the PMU and the PIU quarterly and annual progress reports. A national gender specialist and a project Monitoring and Evaluation (M&E) specialist will support GAP implementation. They will closely coordinate with the gender focal persons of each STP to ensure gender targets and performance indicators are achieved.⁴⁴

C. Evaluation

74. **Inception mission.** ADB will conduct an inception mission within two months after project effectiveness. The main purposes of the inception mission are to (i) reconfirm the working arrangements between ADB, MOECRT, IPB, ITB, UGM, and University of Indonesia; (ii) review the project implementation schedule as well as the contract awards and disbursement projections; (iii) finalize the detailed disbursement arrangements; and (iv) assess if any additional training will be required.

75. **Review missions** will be conducted at least twice annually. The review mission will check overall project implementation, including progress against the DMF outcome and output indicators, covenant compliance, safeguards, gender and 'green' dimensions, achievement of contract awards and disbursement targets, and utilization of both ADB and counterpart funds. The project implementation schedule will also be updated, as necessary.

76. **A midterm review mission** will be undertaken in year 3 of implementation. It will consider whether the projects' outcomes are likely to be achieved. The focus will be on overall project

⁴⁴ ADB's Handbook on Social Analysis: A Working Document, is available at: <http://www.adb.org/Documents/Handbooks/social-analysis/default.asp>, *Staff Guide to Consultation and Participation*: <http://www.adb.org/participation/toolkit-staff-guide.asp>, and, *CSO Sourcebook: A Staff Guide to Cooperation with Civil Society Organizations*: <http://www.adb.org/Documents/Books/CSO-Staff-Guide/default.asp>.

strategy and achievements which may require adjustments of targets and processes and reallocation of resources.

77. **Project completion review mission.** ADB, with the borrower and MOECRT, will field a project completion review mission to evaluate whether the project outcome was achieved, and to assess the performance of ADB, MOECRT, and the universities. Within 6 months of project physical completion, MOECRT will submit a project completion report to ADB. ADB will also prepare and disclose its own project completion report within one year of financial closing.⁴⁵

D. Reporting

78. The executing agency and implementing agencies will prepare periodic monitoring reports (quarterly and annual) covering project implementation progress, issues, and actions; and the PMU will submit the consolidated report to ADB. The quarterly progress report will describe the: (i) DMF outcome and output performance indicator achievements; (ii) status of procurement activities, (iii) financial progress including budget utilization and disbursement projections; (iv) updates on the financial management action plan as detailed in Table 14 of this PAM; (v) status of loan covenants; (vi) updates on GAP implementation; (vii) updates on environmental and safeguards compliance; and (viii) any implementation issues and challenges, and proposed actions and solutions. The annual report will be more comprehensive describing the same content as the quarterly progress report but will include the (i) updated procurement plan, (ii) updated implementation plan for the next 12 months, and (iii) COCP compliance. The executing agency will also prepare and submit to ADB a project completion report within 6 months of physical completion of the project.

E. Stakeholder Communication Strategy

79. The project, in collaboration with the MOECRT and the PIUs, will develop a communication strategy and subsequent communications plan as early as possible after loan effectiveness to ensure robust project coordination and delivery within the internal stakeholder community, including the ADB, and project promotion with external stakeholders. The communication strategy will build on approaches already in use by the ADB but will be enhanced through consultation with MOECRT and other key stakeholders to ensure goodness of fit with Indonesian institutional and cultural expectations and practices. The strategy will set general direction regarding what is to be achieved by the communications plan and will be reviewed and revised in response to normal project review activities and their recommendations. As a minimum, the strategy and its plan should be reviewed by the project steering committee in addition to semi-annual review missions.

80. The communication plan will provide specific guidance regarding steps to be followed and the expected outcomes of each step. The plan will assign responsibilities and timelines for the creation and transmission of communication products including, inter alia, an informal reporting system for the PMU, PIUs, and relevant ADB officers to stay mutually informed of project progress, prospects, and problems. A project website with pages dedicated to PMU, PIU, and relevant university departmental activities will be managed by the PMU with input from the PIUs and the institutions at which they are based. The website will be kept current and provide effective linkages to social media communication channels and mainstream media outlets. Approaches to

⁴⁵ Project completion report format is available at: <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>.

ensure national and international awareness of the project and the participating institutions, particularly the universities, will be developed.

X. ANTICORRUPTION POLICY

81. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.⁴⁶ All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all project contractors, suppliers, consultants, and other service providers. Individuals and/or entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the project.⁴⁷

82. To support these efforts, relevant provisions are included in the loan agreements/regulations and the bidding documents for the project.

XI. ACCOUNTABILITY MECHANISM

83. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make an effort in good faith to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.⁴⁸

XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL

84. All revisions and/or updates during the course of implementation should be retained in this section to provide a chronological history of changes to implemented arrangements recorded in the PAM, including revision to contract awards and disbursement s-curves.

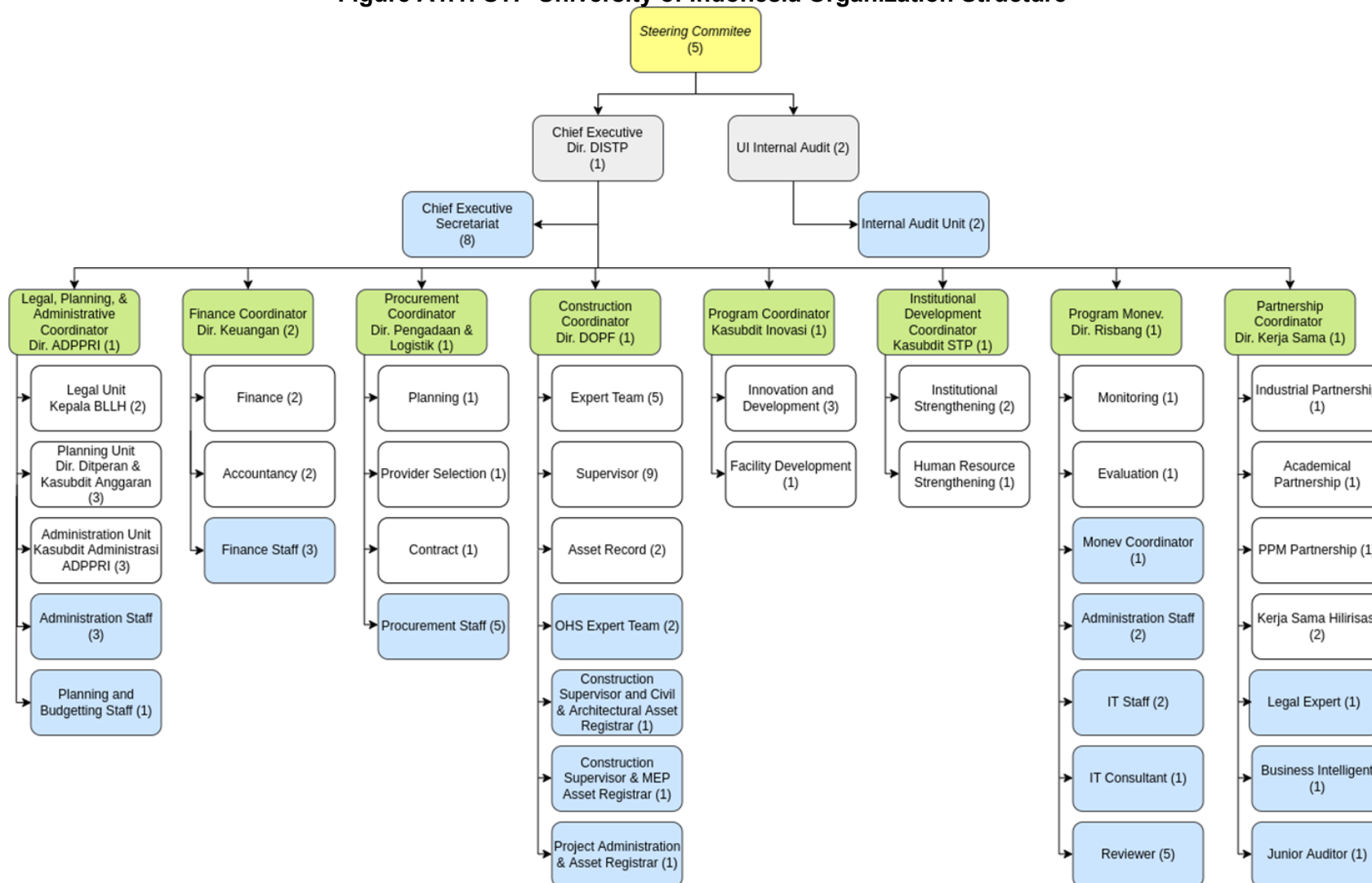
⁴⁶ Anticorruption Policy: <https://www.adb.org/documents/anticorruption-policy>.

⁴⁷ ADB's Office of Anticorruption and Integrity website: <https://www.adb.org/site/integrity/main>.

⁴⁸ Accountability Mechanism. <http://www.adb.org/Accountability-Mechanism/default.asp>.

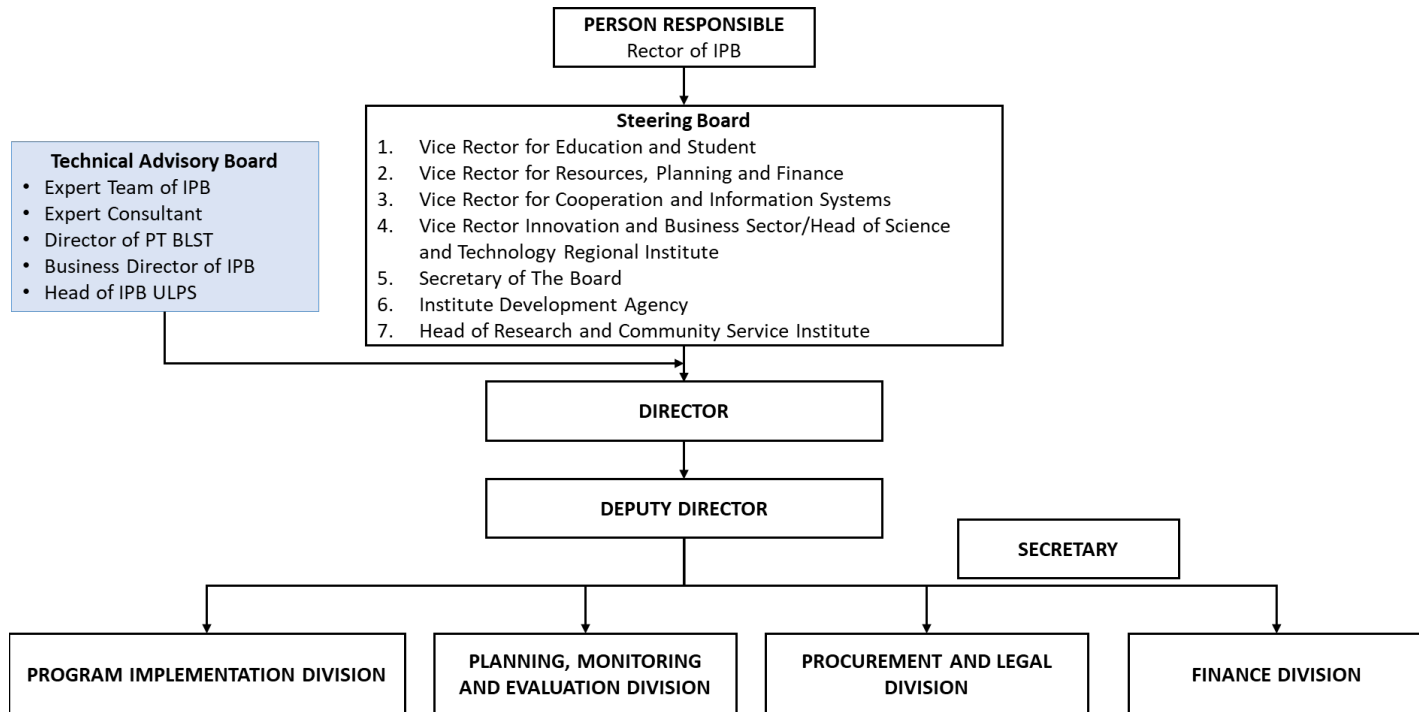
PROPOSED ORGANIZATION STRUCTURE OF SCIENCE AND TECHNOLOGY PARKS

Figure A1.1: STP-University of Indonesia Organization Structure



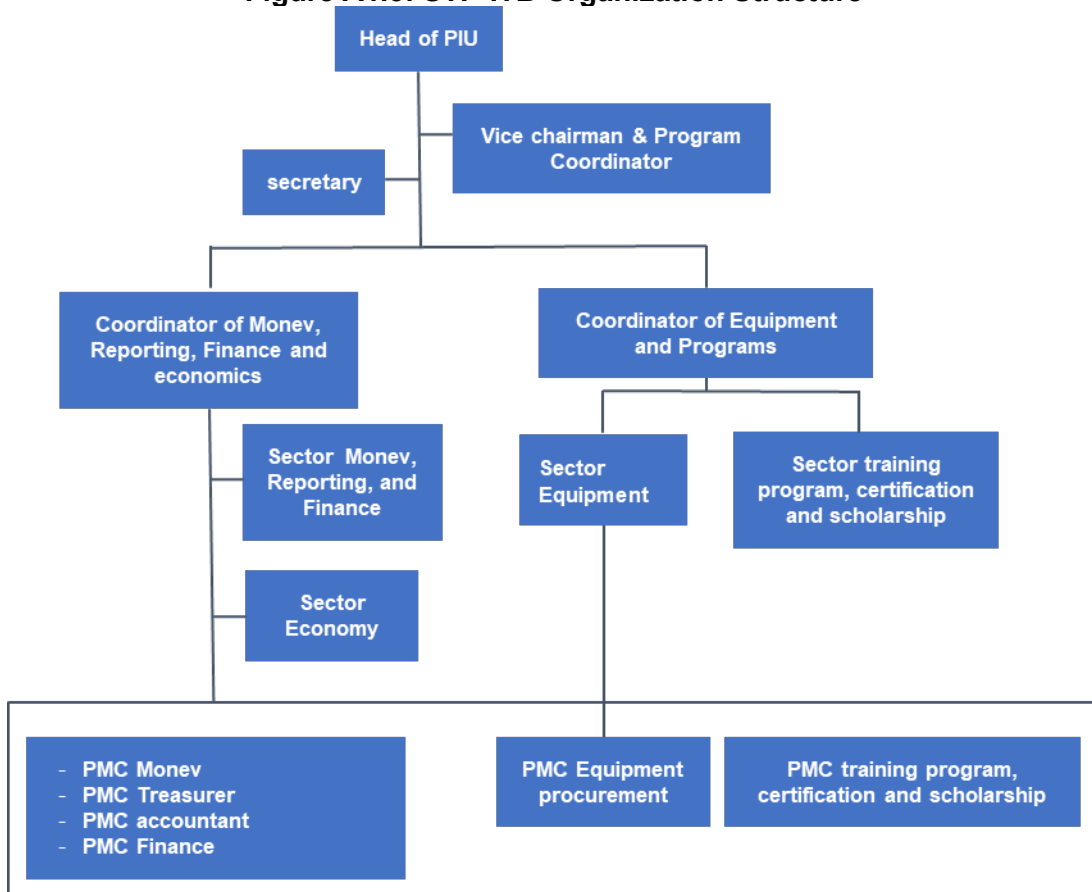
Source: Directorate of Innovation and Science Techno Park, University of Indonesia, presented during Fact-finding Mission, August 2022.

Figure A1.2: SPT-IPB University Proposed Organization Structure



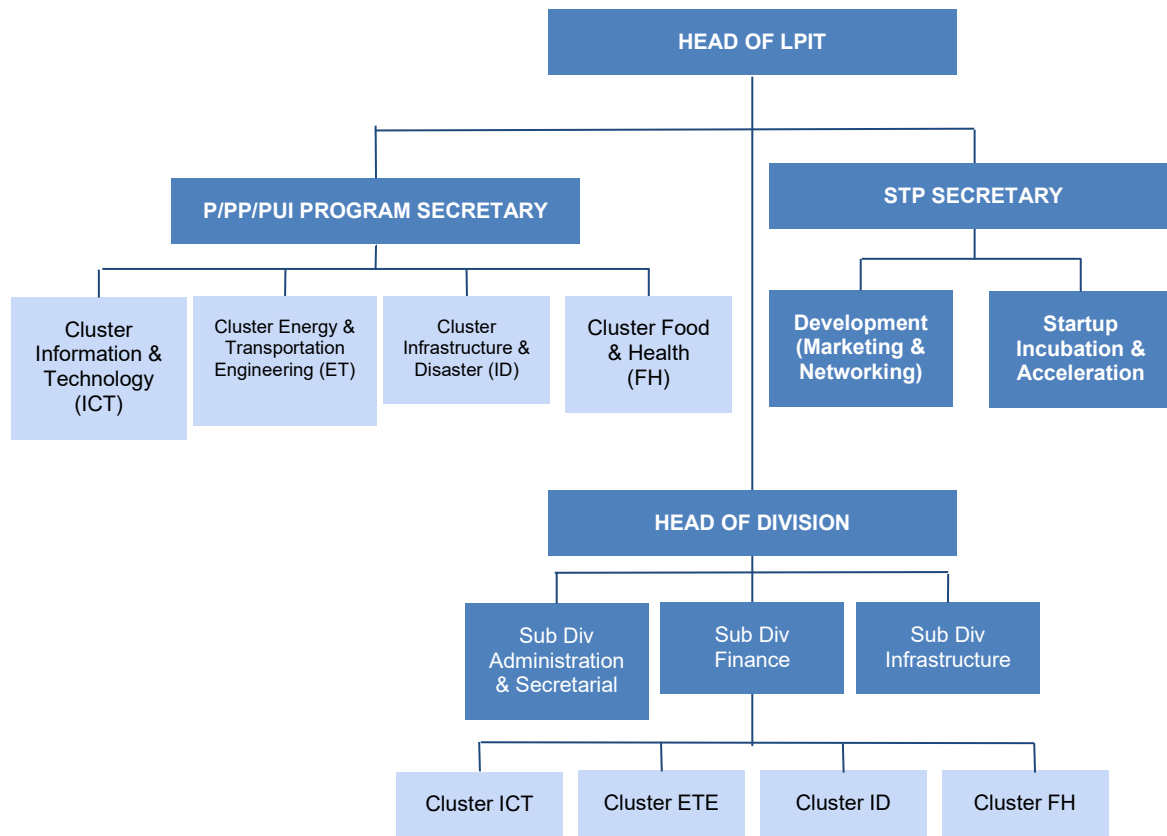
Source: IPB-STP presented during the Fact-Finding Mission, August 2022.

Figure A1.3: STP-ITB Organization Structure



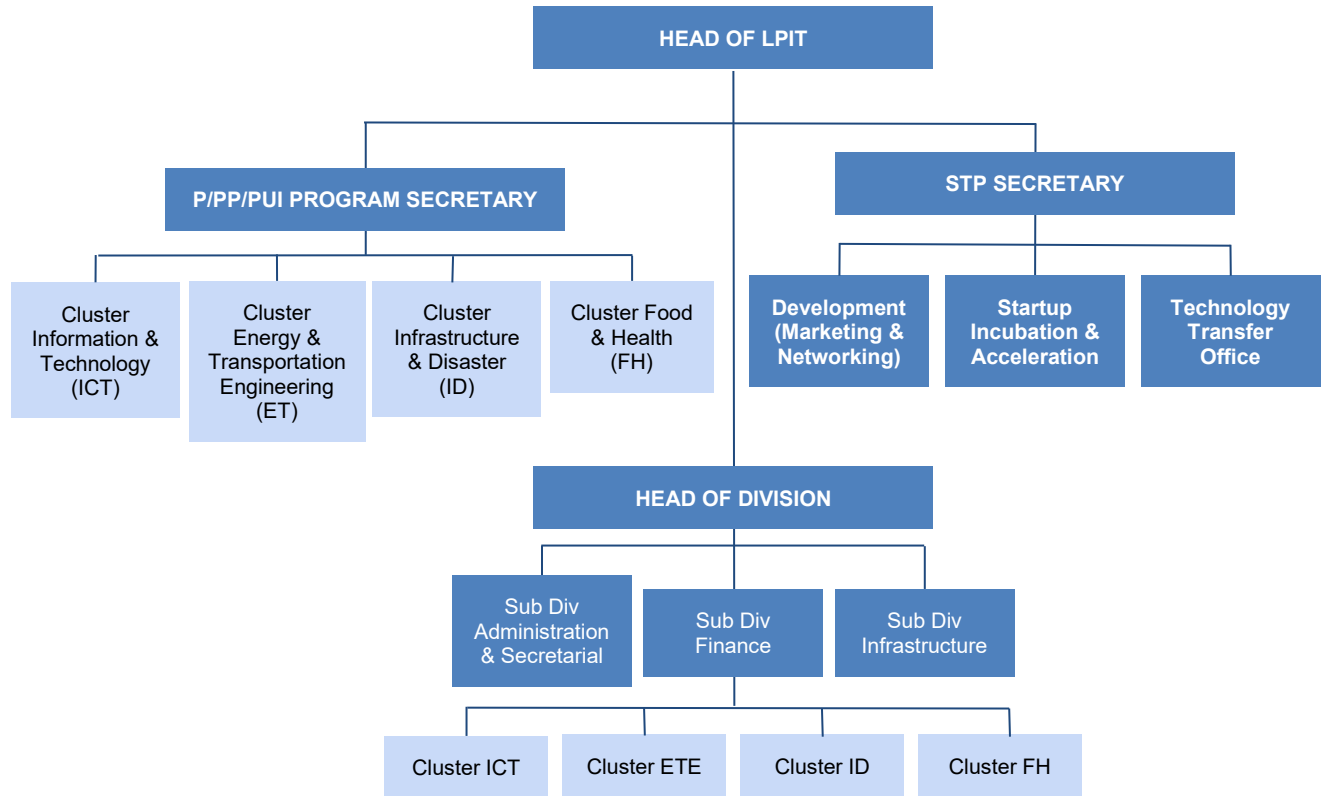
Source: STP-ITB presented during the Fact-Finding Mission.

Figure A1.4: STP-ITB Research Management Center STP Working Unit (2022)



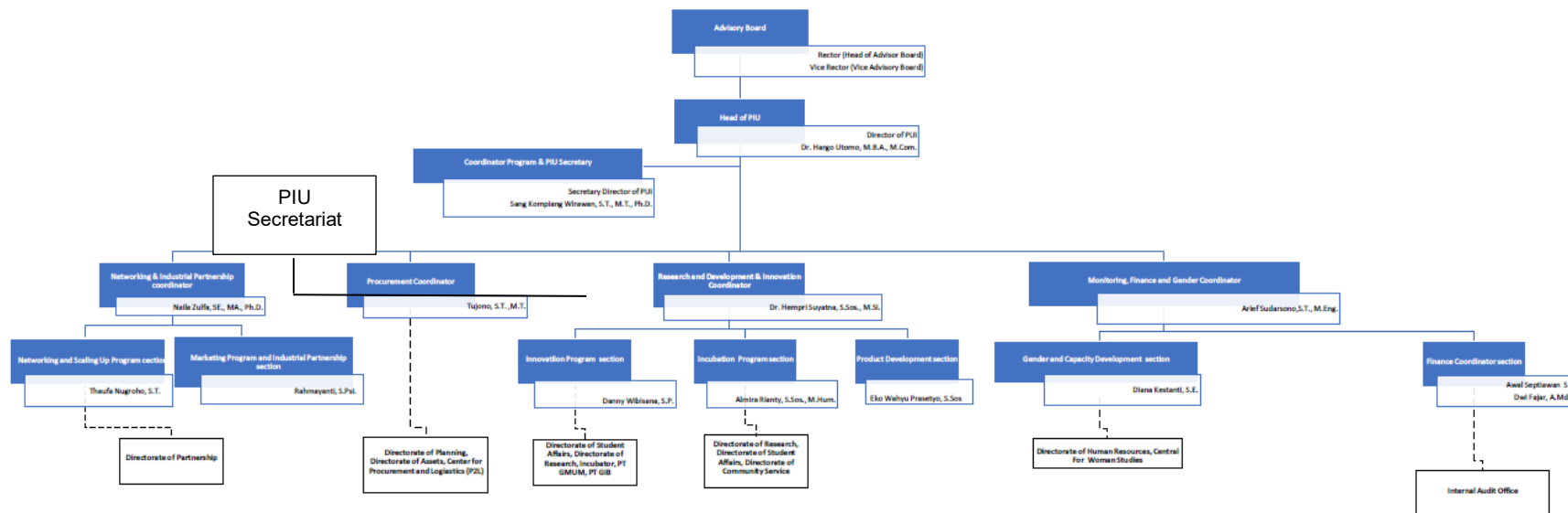
Source: STP-ITB presented during the Fact-Finding Mission.

Figure A1.5: STP-ITB Commercialization Improvement Model (2023-2024)



Source: STP-ITB presented during the Fact-Finding Mission.

Figure A1.6: STP-UGM University Proposed Organization Structure



Source: STP-UGM Fact-Finding Mission presentation.

APPLIED RESEARCH AND STARTUP INCUBATION GRANTS –OPERATION GUIDELINES

A. About the Project

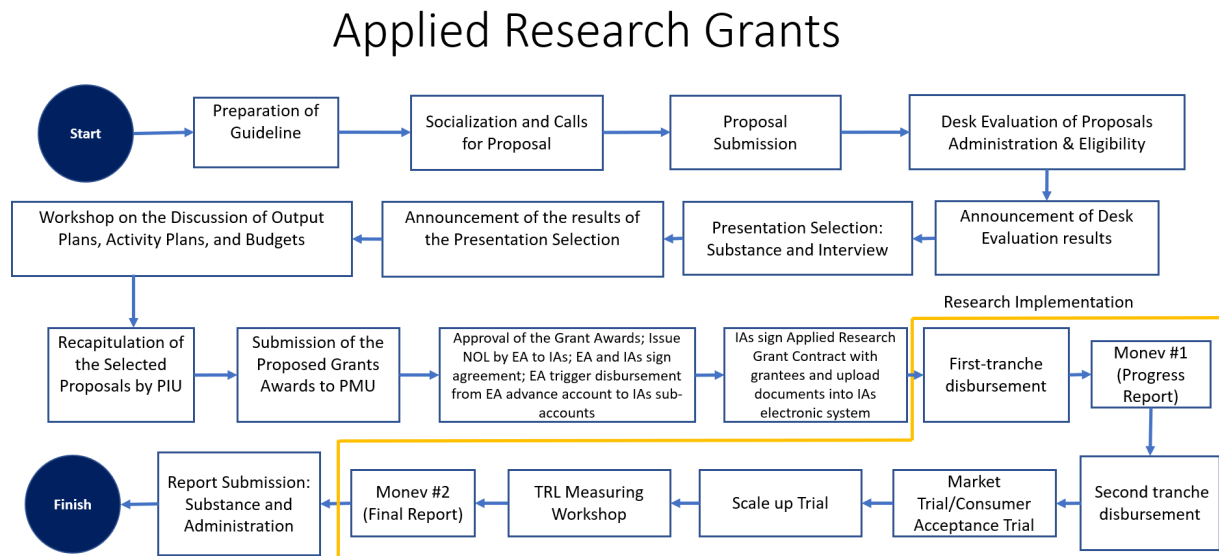
1. The Promoting Research and Innovation through Modern and Efficient Science Park project (PRIME STEP) will receive ¥20,487.11 million financing from the Asian Development Bank (ADB) to support the government's strategy to commercialize research and development (R&D) and improve the success rate of startup incubation in four project universities. The project executing agency is the Ministry of Education Culture Research and Technology (MOECRT). There will be four project implementing agencies: Bandung Institute of Technology (ITB), Bandung, West Java; Gadjah Mada University (UGM), Yogyakarta; IPB University (IPB), Bogor, West Java; and University of Indonesia, Jakarta. The project will have the following outcome: quality and relevance of R&D and innovation system in four Science and Technology Parks (STPs) improved. The project outputs are (i) Facilities for R&D and innovation in four science and technology parks upgraded; (ii) the four science and technology parks' R&D administration, partnerships, and startup incubation strengthened; and (iii) capacity of the four STPs and the MOECRT strengthened.

2. The project will assist four STPs in ITB, IPB, UGM and University of Indonesia to upgrade advanced R&D and startup incubation facilities, provide grants to strengthen R&D collaborations with the private sector and foster promising startups, and upgrade domain expertise of STPs' researchers and capability of research administration staff. It will support each STP to focus on disciplinary fields that are aligned with the Indonesia priority economic sectors. ITB will focus on engineering (transport and energy), Information and communication technology, disaster prevention technology, and food and health technology; UGM on health and pharmaceutical, agro-industry, and renewable energy; IPB on agro-processing, functional food technology, and natural cosmetics and pharmaceuticals; and University of Indonesia on medical device technology, drugs and functional food innovation, and engineering innovation including artificial intelligence and renewable energy.

B. Objectives of the Applied Research and Startup Incubation Grants

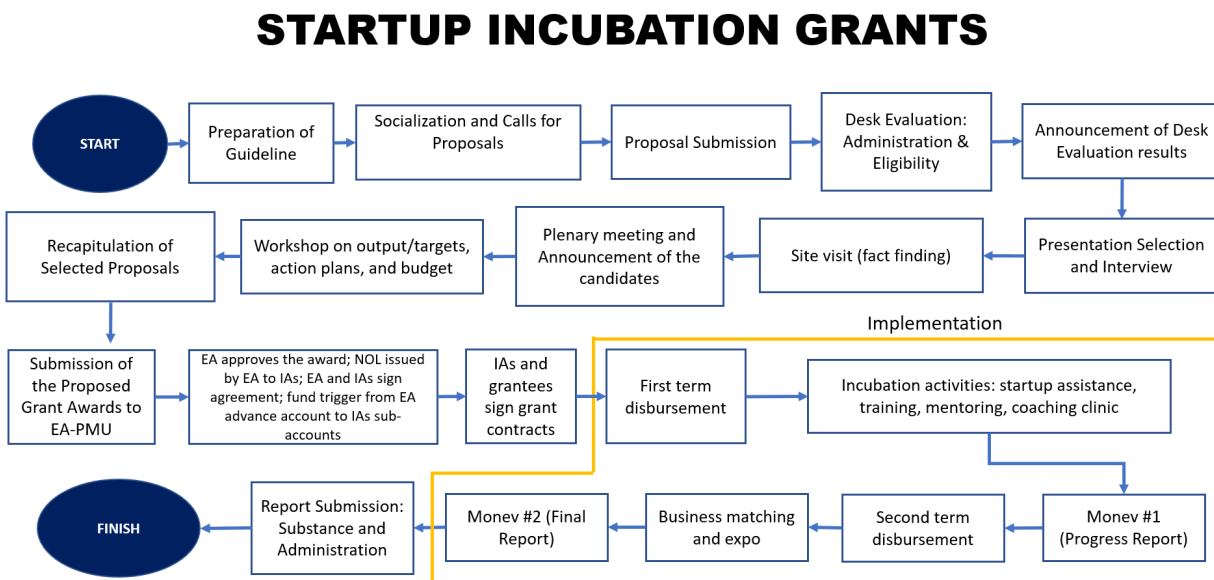
3. Under output 2, two grant schemes will be provided, one for applied research and the other for startup incubation. Overall, both grants have the objective of making result of R&D and innovation more tangible with successful commercialization or market valuation as a key outcome. The applied research grants' specific objective is to stimulate research and development with the aim that the output will be used by industry and community. To that end, the research should have good collaboration partners either from companies, communities, and renowned international research institutions. Under the startup incubation grants, the specific objective is to finance and provide other resources (mentors, market access, facilities) to startup companies so that these companies can successfully grow into financially viable companies. Figure A2.1 shows the process flow of applied research grants and Figure A2.2 shows the process of startup incubation grants.

Figure A2.1: Applied research grants process flow



Source: MOERCT

Figure A2.2: Startup incubation grants process flow



Source: MOERCT

C. Principles for the Applied Research and Startup Incubation Grants

4. The grants will be administered by the project implementing unit (PIU) of each STP, which will have autonomy to allocate the applied research and startup incubation grants to fund selected proposals under applied research and startup incubation activities. The number of grantees to be

awarded shall not exceed each STP's total project allocation (loan proceeds and government) in a given fiscal year for grants as agreed with MOECRT. The universities shall ensure that under the applied research grant, no prior grant has been given by any other sources to support the same applied research in terms of activities, items, output, and outcome. For applied research grant, current practices of financial disbursement in Indonesia will be adopted, i.e., 70% of required budget will be disbursed upon signing of contract, and 30% upon completion of the research project. For startup incubation grant, this will be based on the disbursement plan submitted by each startup grantee. The project universities in administering the grants should ensure para. 81 of the PAM on anti-corruption requirements should be adhered to for all grant contracts. The administration of the grants should uphold the principles of openness, transparency, fairness, and competitiveness.

D. Application and Review Process

5. Both applied research grants and startup incubation grants applications will be opened annually during the project implementation period in the four project universities. They will announce a call for proposals specifying the opening and closing dates of the application (recommend to be one month) under the university website and other university promotion media. The application process will be managed at the STP level where application can be submitted online or, if done manually should use officially application form. The STPs should organize at least one round of briefing session for each grants scheme to brief interested applicants on the eligibility requirement, selection criteria, and application process no later than a week after the call for proposal is announced. No application will be accepted once the call for proposal date is closed.

1. Eligibility Requirements

6. Each STP will follow a common eligibility requirement for the applicants to apply for applied research grants (Table A2.1), and for startup incubation grants (Table A2.2). For applied research grants, the eligibility requirements include principal investigator, tenure of lecturer or research staff with the project university, team size and expertise, and higher technology readiness level (TRL) from 7 to 9. For startup incubation grants, the eligibility requirements include status of startup members (lecturers, students or alumni of the project university), team size and expertise (at least 3 members), technology-based solution, and level of TRL. The grants applicants will prepare technical and financial proposals. The financial proposal cannot exceed the ceiling amount stipulated by the university. The specific requirement(s) of each STP regarding research grants and startup incubation grants proposals are devised based on subject matter area, and each university's regulation.

Table A2.1: Eligibility Requirement for Applied Research Grants

1	Principal Investigator must be PNS (civil servant) or Dosen PTNBH (permanent lecturer of PTNBH) with functional position of Lecturer (Lektor) and Doctoral Degree, or Senior Lecturer (Lektor Kepala) and Master Degree. A lecturer with candidacy to be Civil Servant or to be permanent lecturer of PTNBH (CPNS/ calon dosen tetap PTNBH) status must have a recommendation letter from the faculty
2	Principal investigator must have: <ul style="list-style-type: none"> (i) at least 3 years of research experience and track record of at least one publication, or one patent filed (ii) competence in publishing scientific publications in reputable journals, (iii) a track record of collaborating with universities and other research institutions with evidence of a letter of support
3	Principal investigator and research team must:

	(i) involve lecturers from multidisciplinary areas, representatives from industry partners, (national or international) collaborative research partners, and students (must be at least in 5 th semester or post-graduate level of relevant field of study); (ii) include at least one female member; (iii) not be involved in any other research funded by other funding agencies during the research period.
4	Research proposal must include proposed collaboration with industry, community, or international research institutions. The industry, community or international research institution should have an established MOU with the university.
5	If private sector is proposed to provide contribution in cash or in kind, the company must: (i) not be in ADB's sanctions list, (ii) adhere to Indonesia's anti-money laundering law, and anti-corruption regulation, (iii) declare not to put research team members in a situation tantamount to a conflict of interest with the company
6	Proposed research topics must be aligned with focus sectors of the university as identified by the project or the announced thematic areas in the call for proposal
7	Applied research grants proposal must: (i) be based on the scope of STP, (ii) produce research output(s) in higher TRL of 7 to 9, (iii) declare not to use research outputs and outcomes for defense and military purposes.

Source: Project universities.

Table A2.2: Eligibility Requirements for Startup Incubation Grants

1	Team leader of startup applicant must be from the respective university (either a permanent faculty member or student or alumni) and team members should have multi-disciplinary skillset
2	Startup entity applying for the grant must have already passed the pre-incubation startup stage, and running for at least 6 months
3	Startup entity must already be a registered legal entity as per the law of Republic of Indonesia
4	Startup entity must be based and registered in the STP of the respective university
5	Startup entity must have a business plan endorsed by STP clearly identifying the use of the grant
6	The financial plan on the use of fund for the startup entity should be within the ceiling stipulated by the University
7	The startup entity signs undertaking to absolve the University, Ministry, and ADB from any lawsuit should the event of litigation arise
8	Startup entity should not be involved in business related to defense, military, or any illegal businesses as defined under the law of Indonesia
9	Proposed startup incubation business/ technology solution should be from TRL 5 to 9

Source: Project universities.

2. Selection Process

7. **Review and selection committee.** Each STP will organize a selection committee, whose members will deliberate on the evaluation criteria (para. 8) that will be used to evaluate the application received for applied research grants and the start-up incubation grants review and selection process annually. The selection committee will comprise of members with relevant technological disciplinary from the university and/or from the industry representative body. External experts, if included in the selection committee, will have at least 3 years of experience in research and development value chain which can also be in the technical field or business areas such as in marketing section or market research company. The STP should be the secretariat of the review and selection committee by supporting the collation of the evaluation result, ensuring all evaluation of proposals are evaluated, recording the result of the evaluation in proper record, and ensuring all committee members signed off the final result of the evaluation (*berita acara hasil evaluasi*).

8. **Evaluation criteria.** The selection committee of each STP-PIU will review the proposals for applied research grants and startup incubation grants based on technical design of the project,

and the capacity of the grant applicant to undertake the proposed research or startup incubation successfully. Table A2.3 provides the indicative criteria, which the selection committee may identify from, for evaluating grant proposals annually. Before the evaluation process starts, the selection committee will decide on the number of criteria and the corresponding weight of each criterion depending on the guidelines of the call for proposals each year. A rubric will be established based on the criteria and weightage to provide objectivity. The committee shall also evaluate the monetary value of each proposal to ensure that each proposal is within industry or practicing community benchmark.

Table A2.3: Indicative Evaluation Criteria

Applied Research Grants		Startup Incubation Grants	
(i)	Proponent's capacity (qualification of principal investigator and members)	(i)	Proponent's capacity (qualification of principal/lead and members)
(ii)	Alignment with priority cluster/s	(ii)	Alignment with priority cluster/s
(iii)	Technology readiness level (TRL)	(iii)	Innovation readiness level
(iv)	Co-funding with industry especially for higher level TRL	(iv)	Expected enterprise value
(v)	Collaboration with private sector, communities, or reputable research institutions	(v)	Potential revenues
(vi)	Contribution to the achievement of STP's key performance indicators (KPI)	(vi)	Contribution to the achievement of STP's KPIs
(vii)	Commercialization potential	(vii)	Commercialization potential
(viii)	Monetary value of the proposed research	(viii)	Sustainability
		(ix)	Monetary value and disbursement plan of the proposed startup grant requested

KPI = key performance indicator, STP = science and technology park, TRL = technology readiness level.

Source: Project universities.

3. Award of Grants

9. The STP-PIU will submit the final consolidated results of the applied research and startup incubation grants and the required budget allocation for grants to the project management unit (PMU) of MOECRT. The PMU will review compliance of the eligibility requirements, evaluation criteria, and selection procedures (paras. 7-8). For applied research grant, in situation where there is contribution from private sector company (in cash or in kind), the university is required to prepare an agreement to be signed by the university and the private sector company based on the guidelines provided in Annex 1. MOECRT through the Directorate of Higher Education and Research will issue a decree of approval for the use of applied research and startup incubation grants upon confirmation that the selection and award procedures have been complied with. The PMU will also generate a No Objection Letter (NOL) should the documentation from each PIU are in order. Upon receipt of NOL from MOECRT, the university will sign a contract with the awarded grantees (Annex 2: Template grant contract – Applied Research Grants; Annex 3: Template grant contract-Startup Incubation Grants).

E. Monitoring, Evaluation, and Audit of Grants Implementation

10. The representative of ADB and MOECRT shall be granted unlimited access to review the data, output, financial, and expenditure statements of both applied research and startup incubation grants. ADB and MOECRT representative will have unlimited access to review the applied research and startup grants contracts; and applied research partnership agreement with private sector companies. A consolidate progress report of all applied research and startup incubation activities and use of grant shall be submitted on a half-yearly basis.

ANNEX 1: MINIMUM TERMS FOR PARTNERSHIP AGREEMENTS FOR APPLIED RESEARCH GRANTS

1. The legal department of the university should prepare the applied research partnership agreement between the university and the private sector company providing contribution in cash or in kind (also called, party providing contribution);
2. The university shall ensure, and the parties providing contribution shall warrant in the partnership agreement, that the latter, their shareholders/parent, directors, key officers or key personnel, are not in ADB's complete sanctions list or subject of a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations;
3. The purpose, objectives, mutual benefits, and the value of contribution shall be articulated in an applied research partnership agreement and entered into by all parties concerned;
4. The applied research partnership agreement shall clearly identify all parties to the undertaking;
5. The applied research partnership agreement shall spell out the nature of business, place of operation of the business, and provide document regarding the registration of business;
6. The applied research partnership agreement shall clearly spell out the roles and responsibilities of all parties including making appropriate declarations and commitments pertaining but not limited to the following:
 - (i) The parties providing contribution in cash should specify the source/s of fund, and declare adherence to the anti-money regulations of the Republic of Indonesia
 - (ii) The parties providing contribution should declare that they will not put the university research team with whom they are working with in a conflict-of-interest situation
 - (iii) The parties involved should clearly specify and commit to provide their contribution in cash or in-kind
7. No ADB financing or asset under ADB financing shall be transferred to the parties providing contribution;
8. The applied research partnership agreement should spell out the ownership of the intellectual property rights, products and solutions produced by the collaboration; and
9. The applied research partnership agreement should provide measures for conflict and dispute resolution.

ANNEX 2: DRAFT TEMPLATE APPLIED RESEARCH GRANT CONTRACT

**APPLIED RESEARCH GRANT CONTRACT
PRIME STEP APPLIED RESEARCH GRANT FOR YEAR**

Between

INSERT NAME OF UNIVERSITY

and

..... (INSERT NAME OF PRINCIPAL INVESTIGATOR)

**Number :(INSERT FORMAT: Unique Identification Number/University
Abbreviation/PS/Year)**

On this day, date Month, Year Two Thousand Twenty Three (.... -02-2023),
the undersigned:

- 1. PARTY A: INSERT NAME OF UNIVERSITY REPRESENTATIVE** : EXAMPLE: The Commitment Officer or The Head of the Science and Technology Park, IPB University who acts in that position based on the Decree of the Chancellor of the IPB University Number 000/IPB/PS/2023 dated (INSERT DATE), and is therefore legally acting for and on behalf of the IPB University, hereinafter referred to as PARTY A.
- 2. PARTY B: INSERT NAME OF PRINCIPAL INVESTIGATOR** : Principal Investigator is Responsible for the conducting the applied research “.....(INSERT: title of applied research).....”, having his/her address at, hereinafter referred to as the PARTY B.

PARTY A and the PARTY B jointly declare the following matters:

- Whereas the PARTY A is (INSERT: Name of University), a State Universities Legal Entity (PTNBH) with its primary address at (INSERT: Address of the University), which organizes the activities of the Tridharma of Higher Education as the main task which includes education, research and community service; and is the implementing agency of the Promoting Research Innovation through Modern and Efficient Science and Technology Parks (PRIME STEP) project responsible to award the applied research grant.

- Whereas the PARTY B is the Principal Investigator in (Principal Investigator Work Unit) that conduct applied research “..... (INSERT: Title of applied research)”.

Based on the foregoing, PARTY A and PARTY B hereinafter collectively referred to as the “PARTIES”, have agreed to enter into a contract to implement the prospective applied research project (INSERT: Title of the project), hereinafter referred to as the “Contract”, with the following provisions:

ARTICLE 1: SCOPE

1. The PARTIES intend to cooperate with the Prospective Applied Research Grant Program for the Year in accordance with their respective capacities.
2. PARTY A as the Implementing Agency for the PRIME STEP project administering the applied research grant for the Year in accordance with the Work Plan and Budget for the Year X University will provide administrative assistance, monitoring and evaluation in accordance with this Contract.
3. PARTY B as the Principal Investigator will conduct an applied research project “.....” (INSERT: Title of the applied research) in accordance with the action plans, outputs and targets that have been agreed upon by the PARTIES in **schedule 1** (ATTACH: Schedule 1 at the end of the contract which should provide the breakdown of activities and use of fund), which are an integral part of this Contract.

ARTICLE 2: APPLIED RESEARCH GRANT

1. The prospective applied research project for the year (INSERT: Year) is financed from the Budget (INSERT: PRIME STEP loan number) for the Fiscal year (INSERT: Fiscal Year for the applied research).
2. The amount of grant to be given to the PARTY B as referred to in Article 1 Paragraph 3 of this Contract is Rp.....(INSERT: Numeric value (..... INSERT: Alphabetical value in Rupiah).
3. PARTY B will use the applied research grant for the year (INSERT: Year of the grant) as referred to in Paragraph 1 of this Article in accordance with the Scope of Article 1 of this Contract.

ARTICLE 3: GRANT DISTRIBUTION PERCENTAGE AND MECHANISM

1. The disbursement of the applied research grant for the Year (INSERT: Year) from PARTY A to PARTY B will be made by direct transfer from the Directorate of Finance and Accounting of PARTY A to the bank account of the PARTY B on:

PARTY B Account number:..... (INSERT PARTY B Bank Account Number)

Name of Beneficiary on Account: (INSERT: PARTY B Name on account)

Bank name: (INSERT Bank Name)

2. Disbursement of grant as referred to in paragraph (1) of this Article will be carried out in 2 (two) stages, with the following conditions:
 - i. First tranche disbursement of 80% (eighty percent) of the total contract value, namely 80% x Rp..... = Rp..... (.....rupiah), which will be paid no later than 2 (two) weeks after the signing of this Contract and after the PARTY B completes all the required documentation for disbursement of the grant;
 - ii. The second tranche of disbursement of grant is 20% (twenty percent) of the total contract value, which is 20% x Rp..... = Rp..... (..... rupiah) is paid no later than 2 (two) weeks after monitoring and evaluation of the progress report of applied research activities are declared eligible and achieved.

ARTICLE 4: OWNERSHIP OF INTELLECTUAL PROPERTY

1. Intellectual Property (IP) generated under this Contract will become the property of the PARTY A.
2. The IP protection process as referred to in paragraph 1 of this Article will be coordinated by the Science and Technology Park (STP) of (INSERT: Name of the University).
3. Principal Investigator's rights to IP generated under this Contract are regulated in accordance with the policies and regulations that apply at (INSERT: Name of the University).

ARTICLE 5: RIGHTS AND OBLIGATIONS

1. Rights of the PARTY A:
 - i. receive reports on the implementation of applied research activities, progress of the implementation of applied research activities, and financial reports from PARTY B;
 - ii. obtain data and information from the results of applied research activities carried out by PARTY B based on the Article 1, Para 3, and schedule 3 of this contract;
 - iii. monitor and evaluate the applied research activities carried out by PARTY B;
 - iv. obtain original products and/or dummy products, product photos, and promotional kits from PARTY B which are the outcomes of applied research project in accordance with this Contract.
2. Obligations of PARTY A:
 - i. facilitate PARTY B in the preparation of the applied research budget plan, financial administration reports, and action plan.
 - ii. disburse to PARTY B the applied research grant in the amount and manner as stated in Article 2 and Article 3 of this Contract.
3. Rights of PARTY B:
 - i. receive grant for the applied research (INSERT: Title of the applied research) for the Year (INSERT Year) from PARTY A in the amount and manner as stated in Article 2 and Article 3 of this Contract.
 - ii. obtain facilitation from PARTY A for the preparation of applied research budget plan , financial administration reports, and action plan.

4. Obligations of PARTY:
- i. carry out and complete all stages of activities in accordance with the the action plan as shown in schedule 1.
 - ii. use the applied research grant in accordance with the applied research budget plan that has been agreed upon by the PARTIES.
 - iii. submit activity reports and financial reports to PARTY A along with physical and administrative evidence for the use of applied research grant that have been received from PARTY A in accordance with the budget plan and action plans that have been agreed upon by the PARTIES in accordance with applicable laws and regulations.
 - iv. submit a report on the progress (progress) of the implementation of the activities to PARTY A.
 - v. provide product prototypes in the form of original products, dummy products, product photos, and promotional kits arising from the applied research to PARTY A as an outcome of the prospective applied research carried out in accordance with this Contract.

ARTICLE 6: DURATION

1. The period of implementation of activities in accordance with this Contract is until the completion of activities 100% (one hundred percent) commencing from the date of and ends until the date of

ARTICLE 7: ANTICORRUPTION

The Parties acknowledge and agree that:

1. The Contract will be partly or wholly financed by one or more loans from the Asian Development Bank (ADB), and as such, ADB's Anticorruption Policy (1998, as amended to date) and its Integrity Principles and Guidelines (2015, as amended from time to time) apply to the Contract and the activities under the Contract.
2. Firms or individuals who are debarred or temporarily suspended by ADB are ineligible to participate in ADB-financed, -administered, or -supported activities.
3. ADB has the right to audit and inspect the records and accounts of the Parties and all contractors, suppliers, consultants, and other service providers, including their respective subcontractors, as they relate to the activities under the Contract.
4. ADB reserves the right to investigate directly, or through their agents, any alleged corrupt, fraudulent, collusive or coercive practices or other integrity violations relating to the activities under the Contract and take remedial action, as necessary.
5. The Parties shall cooperate with any such investigation and extend all necessary assistance for satisfactory completion of such investigation.

ARTICLE 8: INTEGRITY WARRANTIES

PARTY B declares and warrants that:

1. The proceeds from this Contract will not be diverted to the financing of terrorism or other illicit purposes; nor will such proceeds be used directly or indirectly, to provide support to individuals or entities associated with terrorism or other illicit purposes.
2. It complies, and shall continue to comply, with all applicable laws in the execution of this Contract, including any applicable foreign or domestic anti-bribery, anti-corruption, anti-money laundering, anti-terrorism financing, sanctions or any other applicable laws, rules and regulations.
3. It is not temporarily suspended or debarred, by ADB or subject of a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.
4. It has not engaged, and will not engage, in corrupt, fraudulent, collusive or coercive practices or other integrity violations, as defined in ADB's Anticorruption Policy (1998, as amended to date) and its Integrity Principles and Guidelines (2015, as amended from time to time), in connection with this Contract.
5. No fees, gratuities, rebates, gifts, commissions or other payments have been given or received in connection with the Contract, other than those disclosed below:

Name of Recipient
Address
Reason
Amount

6. It does not have any conflict of interest with PARTY A or the latter's personnel in connection with this Contract.
7. It further undertakes to immediately inform PARTY A if any situation were to occur at a later stage in connection with the matters described in paragraphs 1 to 6 above.
8. It understands that, if any of the warranties above are false, or are breached at any time during the duration of the Contract, it may result in the termination of the Contract, and ADB reserves its right to take remedial action against PARTY B or other relevant parties under ADB's policies and procedures. Such remedial actions may include being declared ineligible to participate in ADB activities. In the event that ADB will make inquiries to determine whether an integrity violation has occurred in connection with this Contract, PARTY B shall cooperate with such inquiries by amongst others, responding to questions or producing any necessary documents.

ARTICLE 9: FORCE MAJEURE

1. This contract does not apply in the event of Force Majeure circumstances such as natural disasters, wars, epidemics, changes in government regulations that affect or other circumstances that are naturally unavoidable and beyond human capabilities.

ARTICLE 10: NON-PERFORMANCE, MISUSED OF GRANT, AND CONFLICT RESOLUTION

1. The parties agree that non-performance of this contract and/or misused of grant by PARTY B will be subject to university internal investigation as per the university regulation and through a committee chaired by at least a vice-rector.

2. The parties agree that any commencement of internal investigation will trigger the freezing of grant disbursement until such investigation is complete and Principal Investigator is cleared of any non-performance or misused of grant.
3. In the event where a non-performance or misused of grant has been established, PARTY B is required to return any portion of the unused grant. As per the guideline of the university, PARTY B may have to return the used portion of the grant. The report of the investigation shall be submitted to the Project Management Unit of the Ministry of Education, Culture, Research and Technology.
4. In the event of a conflict on the contract not related to non-performance or misused of grant, the PARTIES agree to conduct deliberation and consensus in its resolution which can be mediate through the official university conflict resolution mechanism.

ARTICLE 11: EFFECTIVE AND CLOSING

1. This contract is effective upon signing by PARTY A and PARTY B on the day, date, month and year (INSERT: Day, month, year) as mentioned in this contract, and is made in 3 (three) copies, each having the same legal force, and both of which are stamped for the purposes of PARTY A and PARTY B.
2. The contract is closed upon:
 - i. completion of the applied research activities
 - ii. delivery of the final outputs and outcome as agreed in this contract
 - iii. article 8 para 3 takes place

FIRST PARTY,

SECOND PARTY,

(INSERT: Name of Representative)
(INSERT: Official Title of Signatory)
(INSERT: Name of university)

.....
(INSERT: Name and Official Title of
Principal Investigator)

ANNEX 3: DRAFT TEMPLATE STARTUP INCUBATION GRANT CONTRACT

**STARTUP INCUBATION GRANT CONTRACT
PRIME STEP STARTUP INCUBATION GRANT FOR YEAR**

Between

INSERT NAME OF UNIVERSITY

And

..... (INSERT NAME OF LEAD FOUNDER OF STARTUP)

Number :/IPB/PS/2023

On this day, date Month xxx year Two Thousand Twenty Three (.... -02-2023), the undersigned:

PARTY A: INSERT NAME OF UNIVERSITY REPRESENTATIVE : EXAMPLE: The Commitment Officer or The Head of the Science and Technology Park, Bogor Agricultural University who acts in that position based on the Decree of the Chancellor of the IPB University Number 000/IPB/PS/2023 dated (INSERT DATE), and is therefore legally acting for and on behalf of the IPB University, hereinafter referred to as PARTY A.

PARTY B: INSERT NAME OF STARTUP ENTITY LEAD REPRESENTATIVE : Startup Entity is responsible for the implementing the startup incubation proposal “.....(INSERT: title of startup incubation proposal).....”, having his/her address at, hereinafter referred to as the PARTY B.

PARTY A and the PARTY B jointly declare the following matters:

- Whereas the PARTY A is (INSERT: Name of University) with its primary address at (INSERT: Address of the University), a State Universities Legal Entity (PTNBH), which organizes the activities of the Tridharma of Higher Education as the main task which includes education, research and community service; and is the implementing agency of the Promoting Research Innovation through Modern and Efficient Science and Technology Parks (PRIME STEP) project responsible to award the startup incubation grant.
- Whereas the PARTY B is the Startup Incubation Entity (INSERT: Startup Incubation Company Name) located (INSERT: Address of Startup Entity) that

carry out startup incubation proposal “..... (INSERT: Title of startup incubation proposal)”.

Based on the foregoing, PARTY A and PARTY B hereinafter collectively referred to as the “PARTIES”, have agreed to enter into a contract to implement the prospective startup incubation proposal (INSERT: Title of the proposal), hereinafter referred to as the “Contract”, with the following provisions:

ARTICLE 1: SCOPE

1. The PARTIES intend to cooperate with the PRIME STEP Startup Incubation Grant program for the Year in accordance with their respective capacities.
2. PARTY A as the Implementing Agency for the PRIME STEP project administering the startup incubation grant for the Year in accordance with the Work Plan and Budget for the Year (INSERT: year). University (INSERT: Name of the University) will provide administrative assistance, monitoring and evaluation in accordance with this Contract.
3. PARTY B as the Startup Incubation Entity will implement the startup incubation proposal“.....” (INSERT: Title of the startup incubation proposal) in accordance with the startup business plans, outputs, targets, and use of grant that have been agreed upon by the PARTIES in **schedule 1** (ATTACH: Schedule 1 at the end of the contract which should provide the breakdown of activities and use of fund), which are an integral part of this Contract.

ARTICLE 2: STARTUP INCUBATION GRANT

1. The prospective STARTUP INCUBATION GRANT for the year (INSERT: Year) is financed from the Budget (INSERT: PRIME STEP loan number) for the Fiscal year (INSERT: Fiscal Year for the STARTUP INCUBATION GRANT).
2. The amount of grant to be given to the PARTY B as referred to in Article 1 Paragraph 3 of this Contract is Rp.....(INSERT: Numeric value (..... INSERT: Alphabetical value in Rupiah).
3. PARTY B will use the startup incubation grant for the year (INSERT: Year of the grant) as referred to in Paragraph 1 of this Article in accordance with the Scope of Article 1 of this Contract.

ARTICLE 3: GRANT DISTRIBUTION PERCENTAGE AND MECHANISM

1. The disbursement of the Startup incubation grant for the Year (INSERT: Year) from PARTY A to PARTY B will be made by direct transfer from the Directorate of Finance and Accounting of PARTY A to the bank account of the PARTY B on:
 PARTY B Account number:..... (INSERT: PARTY B Bank Account Number)
 Name of Beneficiary on Account: (INSERT: PARTY B Name on account)
 Bank name: (INSERT: Bank Name)
2. Disbursement of grant as referred to in paragraph (1) of this Article will be carried out in accordance to schedule 1 attached to this contract.

ARTICLE 4: OWNERSHIP OF INTELLECTUAL PROPERTY

1. Intellectual Property (IP) generated under this Contract will become the property of the PARTY A.
2. The IP protection process as referred to in paragraph 1 of this Article will be coordinated by the Science and Technology Park (STP) of (INSERT: Name of the University).
3. Startup Incubation rights to IP generated under this Contract are regulated in accordance with the policies and regulations that apply at (INSERT: Name of the University).

ARTICLE 5: RIGHTS AND OBLIGATIONS

1. Rights of the PARTY A:
 - i. receive reports on the implementation of Startup Incubation activities, progress of the implementation of Startup Incubation activities, and financial reports from PARTY B.
 - ii. obtain data and information from the results of Startup Incubation activities carried out by PARTY B based on the Article 1, Para 3, and schedule 3 of this Contract.
 - iii. monitor and evaluate the Startup Incubation activities carried out by PARTY B.
 - iv. Receive evidence of progress in startup incubation activities in the form of business contract, revenue statement, incoming cash flow into PARTY B bank account from business activities
2. Obligations of PARTY A:
 - i. facilitate PARTY B in the preparation of the applied research budget plan, financial administration reports, and action plan.
 - ii. disburse to PARTY B the applied research grant in the amount and manner as stated in Article 2 and Article 3 of this Contract.
 - iii. provide mentor to guide the startup incubation entity.
 - iv. support PARTY B in market linkages and network and provision of startup incubation space and facilities
3. Rights of PARTY B:
 - i. receive grant for the startup incubation proposal (INSERT: Title of the applied research) for the Year (INSERT Year) from PARTY A in the amount and manner as stated in Article 2 and Article 3 of this Contract.
 - ii. obtain facilitation from PARTY A for the preparation of startup incubation business plan, budgetary plan , financial administration reports, and action plan.
 - iii. receive support from PARTY A in the form of mentorship, market linkages and network, and use of startup space and facilities.
4. Obligations of PARTY B:
 - vi. carry out and complete all stages of activities in accordance with the the business plan and action plan as shown in schedule 1.

- vii. use the startup incubation grant in accordance with the startup incubation business plan and budget plan that has been agreed upon by the PARTIES.
- viii. submit activity reports and financial reports to PARTY A along with physical and administrative evidence for the use of startup incubation grant that have been received from PARTY A in accordance with the business plan, budget plan and action plans that have been agreed upon by the PARTIES in accordance with applicable laws and regulations.
- ix. submit a report on the progress (progress) of the implementation of the activities to PARTY A.
- x. provide evidence of business case which can be in the form of business contract, revenue statement, incoming cash flow into PARTY B bank account from business activities.

ARTICLE 6: DURATION

1. The period of implementation of activities in accordance with this Contract is until the completion of activities 100% (one hundred percent) stipulated in Schedule 1 of the Contract commencing from the date of and ends until the date of

ARTICLE 7: FORCE MAJEURE

1. This Contract does not apply in the event of Force Majeure circumstances such as natural disasters, wars, epidemics, changes in government regulations that affect or other circumstances that are naturally unavoidable and beyond human capabilities.

ARTICLE 8: ANTICORRUPTION

The Parties acknowledge and agree that:

1. The Contract will be partly or wholly financed by one or more loans from the Asian Development Bank (ADB), and as such, ADB's Anticorruption Policy (1998, as amended to date) and its Integrity Principles and Guidelines (2015, as amended from time to time) apply to the Contract and the activities under the Contract.
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3. ADB has the right to audit and inspect the records and accounts of the Parties and all contractors, suppliers, consultants, and other service providers, including their respective subcontractors, as they relate to the activities under the Contract.
4. ADB reserves the right to investigate directly, or through their agents, any alleged corrupt, fraudulent, collusive or coercive practices or other integrity violations relating to the activities under the Contract and take remedial action, as necessary.
5. The Parties shall cooperate with any such investigation and extend all necessary assistance for satisfactory completion of such investigation.

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PARTY B declares and warrants that:

1. The proceeds from this Contract will not be diverted to the financing of terrorism or other illicit purposes; nor will such proceeds be used directly or indirectly, to provide support to individuals or entities associated with terrorism or other illicit purposes.
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3. It is not temporarily suspended or debarred, by ADB or subject of a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.
4. It has not engaged, and will not engage, in corrupt, fraudulent, collusive or coercive practices or other integrity violations, as defined in ADB's Anticorruption Policy (1998, as amended to date) and its Integrity Principles and Guidelines (2015, as amended from time to time), in connection with this Contract.
5. No fees, gratuities, rebates, gifts, commissions or other payments have been given or received in connection with the Contract, other than those disclosed below:

Name of Recipient
Address
Reason
Amount

6. It does not have any conflict of interest with PARTY A or the latter's personnel in connection with this Contract.
7. It further undertakes to immediately inform PARTY A if any situation were to occur at a later stage in connection with the matters described in paragraphs 1 to 6 above.
8. It understands that, if any of the warranties above are false, or are breached at any time during the duration of the Contract, it may result in the termination of the Contract, and ADB reserves its right to take remedial action against PARTY B or other relevant parties under ADB's policies and procedures. Such remedial actions may include being declared ineligible to participate in ADB activities. In the event that ADB will make inquiries to determine whether an integrity violation has occurred in connection with this Contract, PARTY B shall cooperate with such inquiries by amongst others, responding to questions or producing any necessary documents.

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1. The parties agree that non-performance of this Contract and/or misused of grant by PARTY B will be subject to university internal investigation as per the university regulation and through a committee chaired by at least a vice-rector.
2. The parties agree that any commencement of internal investigation will trigger the freezing of grant disbursement until such investigation is complete and PARTY B is cleared of any non-performance or misused of grant.
3. In the event where a non-performance or misused of grant has been established, PARTY B is required to return any portion of the unused grant. As per the guideline of the university, PARTY B may have to return the used portion of the grant. The report of

the investigation shall be submitted to the Project Management Unit of the Ministry of Education, Culture, Research and Technology.

4. In the event of a conflict on the Contract not related to non-performance or misused of grant, the PARTIES agree to conduct deliberation and consensus in its resolution which can be mediate through the official university conflict resolution mechanism.

ARTICLE 11: EFFECTIVE AND CLOSING

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2. The Contract is closed upon:
 - i. completion of the applied research activities
 - ii. delivery of the final outputs and outcome as agreed in this Contract
 - iii. article 8 para 3 takes place

FIRST PARTY,

SECOND PARTY,

(INSERT: Name of Representative)
(INSERT: Official Title of Signatory)
(INSERT: Name of university)

.....
(INSERT: Name and Official Title of
Principal Investigator)

TERMS OF REFERENCE FOR PROJECT MANAGEMENT CONSULTANT (KEY POSITIONS)

A. Background

1. The project will support the government's strategy to downstream research and development (R&D) and improve the success rate of startup incubation of four science and technology parks (STPs). The four STPs operate under public higher education institutions (HEIs) of Bandung Institute of Technology (ITB), Gadjah Mada University (UGM), IPB University (IPB), and University of Indonesia.¹ These are prioritized under the National Medium-Term Development Plan (RPJMN) 2020–2024.² The RPJMN 2020–2024 is part of the vision and mission of the President of the Republic of Indonesia as affirmed by the Presidential Regulation Number 18 of 2020 issued on 27 January 2020.

2. The project will assist the four STPs to setup advanced R&D and startup incubation facilities; provide grants to strengthen R&D collaboration with the private sector and foster promising startups; and upgrade domain expertise of STPs' researchers and capability of research administration staff. Under the project, each STP will focus on disciplinary fields that are aligned with the Indonesia priority economic sectors. ITB will focus on engineering (transport and energy), info-communication technology, infrastructure and disaster, and food and health technology; UGM on health and pharmaceutical, agro-industry, and renewable energy; IPB on agro-processing, functional food technology, and natural cosmetics & pharmaceuticals; and University of Indonesia on medical device technology, drugs & functional food innovation, and engineering innovation including Artificial Intelligence and renewable energy.

B. Project Description

3. **Impact and outcome.** The project is aligned with the following impact: competitiveness of Indonesia's economy and sustained economic growth strengthened through R&D and innovation (footnote 3). The project will have the following outcome: quality and relevance of R&D and innovation system in four STPs improved. The project has three outputs, namely: (i) facilities for R&D and innovation in four science and technology parks upgraded ; (ii) the four science and technology parks' R&D administration, partnerships, and startup incubation strengthened; and (iii) capacity of the four STPs and the MOECRT strengthened.

4. **Output 1: Facilities for R&D and innovation in four science and technology parks upgraded.** Advanced research and product development facilities in four STPs under ITB, UGM, IPB and University of Indonesia will be set up. These STPs will focus on technological fields prioritized under the government strategy. Advanced R&D equipment will be procured, and research facilities will be established³ according to research equipment requirements. These facilities will undergo regulatory certification.⁴ R&D translation and diffusion facilities for incubating startup companies including co-working spaces and fab labs for prototyping will be scaled up. This output will also support one new building in IPB for halal food innovation, incorporating gender-sensitive, socially inclusive⁵, and climate and disaster-resilient features.

¹ ADB's Higher Education and Technology Innovation project is supporting the Institute of Technology Sepuluh Nopember, the fifth HEI STP prioritized under the policy.

² Government of Indonesia. 2020. *National Medium-Term Development Plan (RPJMN), 2020–2024*. Jakarta.

³ Minor works such as electrical wiring, repainting, replacement of windows and ventilators will be carried out.

⁴ These include international standard organization (ISO) certification such as ISO9000 and ISO14000, Hazard Analysis Critical Control Point (HACCP), Halal certifications, etc.

⁵ Examples of gender-sensitive and inclusive features may include lactation rooms, pregnancy-friendly furniture, well-lit public areas, security camera system in public areas, etc.

Overall, this output will help to improve the maturity level⁶ of these four STPs from *madya* (intermediate) to *utama* (advance) level.

5. Output 2: The four science and technology parks' R&D administration, partnerships, and startup incubation strengthened. This output will support the strengthening of existing competitive funds⁷ that will (i) finance market-oriented R&D (Technological Readiness Level 5 to 9) and support collaborations and co-solutions development between the four STPs, enterprises and communities; (ii) finance technology startup incubation programs at the four STPs; (iii) support and promote outreach activities on innovation, and (iv) recruit more female mentors to support females to join startup incubation. The call for proposals, review, selection, and award of the grants will adhere to the respective university grant procedures (paras. 26-30). This output will also support the implementation of the triple helix model and strengthen R&D collaboration of the four STPs with reputable international research institutions through joint research and staff exchange.

6. Output 3: Capacity of the four STPs and the MOECRT strengthened. This output will (i) enhance capability of researchers, including female researchers, at the four STPs through international post-doctorate programs; (ii) train STP administrators in implementing the triple-helix model; and (iii) train MOECRT and the STP officials on financial management, procurement, gender, and safeguards based on ADB requirements. MOECRT's monitoring and evaluation system will also be strengthened to collate and analyze project data, including sex-disaggregated data for policy and decision-making.

C. Purpose and Objectives of Assignment

7. The PMU will recruit seventeen (17) individual consultants and administrative assistants for the PMC to support the PMU to fully coordinate with all PIUs, closely monitor the progress, provide advice on the relevant fields and to prepare consolidated progress reports of the projects. The purpose of the PMC assignment is to enhance the assurance of sound project implementation, monitoring, and reporting by providing management support to the PMU in preparation, monitoring, evaluation, control and documentation of the implementation of PRIME STEP project in four STPs – IPB, ITB, UGM and University of Indonesia.

8. The key experts of the PMC includes: (i) project management specialist, (ii) project monitoring & evaluation (applied research and innovation); (iii) gender specialist; (iv) civil works quality assurance supervision; (v) procurement specialist; (vi) financial specialist; (vii) environmental specialist; and (viii) short-term consultants and resources (STP specialists). Key technical experts and resource persons will likewise be hired to support the project achieve its outputs and activities.

D. Scope of Services

9. There will be five core tasks of the PMC (i) planning, administration, and management of

⁶ STP maturity covers broad dimensions from infrastructure facilities to soft components and is assessed based on the following five indicators: input, process, output, outcome, and impacts. Under an advance STP, S&T system has become a complete and mature ecosystem supporting regional economic impacts especially in stimulating technology transfer and innovation activities, startup development, and offering of services to industry.

⁷ Examples are the Matching Fund launched in 2021 for R&D, Pra-startup grant, and Wirausaha Merdeka for developing entrepreneurship among university students.

the PRIME STEP project, (ii) technical and management advice to the PMU and PIUs, (iii) ensuring compliance of the project implementation to the ADB guidelines, requirements, and government regulations, (iv) monitoring, and (v) reporting.

10. The services to be provided by the PMC include, but are not limited to, the following:

- (i) assist the PMU to prepare annual work program and budget based on inputs from the respective PIUs and process the work plan for DIPA⁸ processing;
- (ii) review the detailed engineering design (DED) as prepared by the respective PIUs, and provide necessary advice.
- (iii) ensure that the green building and climate changes measures are incorporated in the design and construction;
- (iv) assist the PMU in day-to-day project management and coordination with the respective projects in the universities;
- (v) review the submitted project related documents from each PIU and ensure that the documents fully meet with the requirements and are in compliance with ADB guidelines prior to forward them to the respective stakeholders, including ADB.
- (vi) review bid evaluation and consultant selection reports, prior to the submission to ADB.
- (vii) prepare and maintain the Project Master Schedule for overall PRIME STEP project implementation;
- (viii) prepare and monitor consolidated contract awards and disbursement projections and actual achievements;
- (ix) establish a project performance monitoring system (PPMS), to monitor progress of the respective project at the universities, including: physical, financial, permits, project source of funds, and regularly update of the project cost.
- (x) support the PMU to ensure that the provision of funds from all financing resources are provided timely;
- (xi) establish and maintain the implementation of project environmental management and monitoring plan. Provide training to PIU, PMSC and contractors on environment management requirements. Provide advice on any environmental or safety issues related to the project implementation. Prepare semi-annual environment monitoring report;
- (xii) Monitor implementation of the gender action plan (GAP) and ensure all targets and actions are implemented timely, and prepare GAP implementation reports
- (xiii) prepare quarterly and annual progress reports;
- (xiv) conduct quarterly meetings with PIUs and PMSCs and conduct site visits whenever needed;
- (xv) provide technical supports to PMU/PIUs for procurement, engineering, management, monitoring & evaluation.
- (xvi) prepare draft consolidated financial reports for external auditing purposes
- (xvii) ensure that all loan and project covenants are fully complied
- (xviii) closely monitor the implementation of in-country and overseas training to be conducted by each university, and
- (xix) assist the PMU in preparation of final project completion report.

11. The individual experts under the PMC are required to provide inputs as indicated in Table A3.1 below.

⁸ Annual budget plan for the project

Table A3.1: Inputs of Individual Experts under the PMC

	Minimum Qualifications	Expected Inputs	Indicative tasks
1	Project Management Specialist		
	The specialist will preferably have a master's degree in education, engineering, public administration, or related field in social sciences with relevant experience in managing foreign assisted projects. S/he will have relevant experience of a minimum 15 years and should be fluent in English, both oral written. The Team Leader should have strong organization skills and ability to work in a team-oriented, dynamic and diverse environment with a proven track record of working effectively within multidisciplinary teams.	60 person-months	The Specialist shall also play a role as Team Leader of the PMC. S/he should coordinate the PMC team members to implement the tasks as cited in paras 10 and 11 effectively. S/he will be responsible for overall co-ordination of team activities and will be directly responsible to the PMU Manager. The main responsibility will be to monitor the project activities in IPB, ITB, UGM, and University of Indonesia and ensure that the projects can be completed on time and within the available budget. The team leader should be proactive in updating project costs regularly and identify any possible loan savings or shortfalls as early as possible. The Team Leader shall provide technical guidance to all members of the team. S/he will have overall responsibility in technical advisory, management and monitoring all tasks under the contract, setting up technical guidance and standards as necessary.
2	Procurement Specialist		
	The Specialist should preferably have a master's degree in public administration, law, or other related field with around 10 years of experience in public procurement practices and procedures, and around 5 years of procurement experience under ADB or WB funded projects. S/he has to be fluent in English, both written and oral. The consultant shall have experience in drafting contractual agreements and other related documents/agreements and in resolving legal issues related to public procurement in Indonesia. S/he shall have good knowledge of the institutional, technical, and commercial aspects of procurement; demonstrated experience in contract management at managerial level.	20 person-months intermittent	The specialist shall prepare draft bidding documents to be used for the procurement in MOECRT, IPB, ITB, UGM and University of Indonesia, using ADB Standard Bidding Documents, provide advice to the respective procurement committees during the tendering process and evaluations, and ensure that the procurement is implemented in accordance with ADB procurement policies and regulations. Provide inputs to the Team Leader for the preparation of progress reports.
3	Project Performance Monitoring Specialist		
	The specialist will preferably have a master's degree in civil engineering or architecture with relevant experience in managing foreign assisted projects. S/he will have relevant experience of a minimum 10 years and should be fluent in English, both oral written. The specialist should have	20 person-months, intermittent	The Specialist should develop master project schedule consolidating the individual S curve of the respective projects, develop an effective reporting format consolidating all project activities, project cost, cost as planned in the PAM, actual cost and disbursement.

	Minimum Qualifications	Expected Inputs	Indicative tasks
	experiences in developing project performance management system (PPMS), tracking interrelation between project activities, costing, and disbursement, prepare project master schedule and other related project management and monitoring tools.		<p>The specialist shall update the project cost periodically, and update contract awards and disbursement projection.</p> <p>With the assistance from project administrative assistant prepare draft consolidated quarterly report, and discuss it with the team member before issuance to the PMU.</p>
4.	Financial Management Specialist		
	The Specialist should have a bachelor's degree in accounting, business administration, finance and about 8-10 years of relevant experience in financial management of international financed projects. Preference will be given to those who are certified public accountants or have other recognized accounting certification. S/he will monitor the financial management system of the project, and establish a sound accounting practice and system to manage the resources available to the Project.	60 person-months	<ol style="list-style-type: none"> Prepare good quality and timely submission of quarterly financial reports and annual project financial statements; Record and manage fund flow in accordance with component and expenditure categories funded by the project; Closely monitor the flow of submitted invoices by the respective projects and proactively follow up of any delays occurred; Identify any issues in the financial management system for project implementation and recommend measures to address the issues identified; Develop project performance management system and update it regularly. Provide input to team leader for the preparation of quarterly progress reports
5	Environmental Specialist		
	The specialist will preferably have a master in environmental management, natural sciences or a related field with demonstrated work experience in environmental management of construction projects. S/he will have relevant experience of about 10 years. S/he must be thoroughly familiar with Indonesia's regulatory framework for environmental management. S/he should have accreditation from the government as an environmental specialist as per the EIA Regulations in Indonesia and should be fluent in English and Bahasa Indonesia.	10 person-months, intermittent	The Specialist will be responsible for ensuring that proper environmental and social management, mitigation and monitoring measures are implemented as part of this project. The Specialist should monitor the IPB contractor's conformity with environmental and social impact controls including implementation of the environmental management plan (EMP) by the contractors and its compliance. The following duties related to environmental mitigation will include: (a) prepare the IEEs for IPB including the EMP contained therein to reflect final detailed engineering design; (b) ensure that all the environmental mitigation measures required to be implemented are incorporated in the contract documents; (c) provide training to PMU and PIU staff, the PMC and the contractors on EMP supervision, monitoring and reporting requirements; (d) supervise and monitor the implementation of EMP, (e) prepare the semi-annual environmental monitoring reports in English, (f) support the PIUs in establishing and administering site-specific grievance redress mechanisms; and (h) in the event of occurrence of any unexpected environmental impacts, coordinate with the PMU to recommend necessary mitigation measures to the PIU.
6	Gender Specialist		

	Minimum Qualifications	Expected Inputs	Indicative tasks
	The specialist will preferably have a bachelor in social science or related field with demonstrated work experience in gender and development, specifically gender mainstreaming in education. S/he will have relevant experience of about 10 years.	20 person-months, intermittent	The Specialist is to undertake actions to ensure the activities and indicators in the gender action plan (GAP) are implemented and reported by the concerned PIUs, including leading any capacity building initiatives to improve gender awareness in general and understanding of GAP among the project team and/or partners. Actual action shall be included in the GAP Quarterly Progress Monitoring Report. Review the project design to ensure access for all are included.
7	Civil works QA Supervision		
	The specialist will preferably have a master's degree in civil engineering or architecture with relevant experience in managing building construction project teams. S/he will have relevant experience of about 10 years and should be fluent in English. S/he will have relevant experience of about 8 years, with a valid professional engineering license. The responsibility is to ensure quality assurance of civil works and compliance with detailed engineering design, and technical specifications.	6 person-months, intermittent	The consultant shall have experience in structural quality control, construction materials laboratory tests, construction problem solving, and project reporting. The tasks include but are not limited to: (i) check the proposed site management by the contractor; (ii) supervise all construction works and ensure that the materials, methodology, and phasing of the works are in line with technical specifications and agreed work methodology; (iii) certify all materials to be used in the Project prior to construction; (iv) check the required permits obtained by the contractors prior to construction; (v) ensure construction safety in each step of implementation of the contractors; and (vi) check and certify completed works for payment purposes
8	Administrative Assistants		
	The admin assistants should have a minimum of bachelor degree in any relevant fields with at least of 5 year experience in supporting project administration. The candidate should be fluent in English and familiar with project reporting. Mastering Microsoft program is mandatory requirement.	60 person - months	The assistant shall support the team members in preparing reports, finalizing documents, and ensure timely submission of quarterly progress report. The assistant shall also support the team members in arranging visits to project locations and conducting regular as well as ad-hoc meetings.

Source: Asian Development Bank

12. **Reporting.** The PMC will give support towards the effective and efficient fulfilment of this function by assisting the PMU in this activity. The following reports will be delivered:

No.	Tasks	Responsible Consultant (s)	Volumes
1	Inception Report	Team Leader; all PMC members shall provide inputs	TBD
2	Quarterly Progress Reports and Annual Progress Reports	Team Leader; all PMC members shall provide inputs	TBD
3	Advice on Detailed Engineering Design (DED)	Team Leader, Environmental Specialist, Gender Specialist	TBD
4	Draft Bidding Documents, Advice to Bid Evaluation Reports	Procurement Specialist, Environmental Specialist, Gender Specialist, Civil works QA Supervision	TBD
5	Financial Management Reports (Quarterly)	Financial Management Specialist	TBD

No.	Tasks	Responsible Consultant (s)	Volumes
6	Project Performance Monitoring System (PPMS)	Team Leader and all PMC members	TBD
7	Consolidated Un-Audited Project Financial Statements	Financial Management Specialist	TBD
8	Environmental Monitoring Reports (Semi-annually)	Environmental Specialist	TBD
9	Gender Action Plan Reports (Quarterly)	Gender Specialist	TBD
10	Civil works quality assurance	Civil works QA Supervisions Specialist	TBD
11	Ad-hoc Reports	All PMC members	TBD
12	Final Report and Project Completion Report	Team Leader with the support from all PMC members.	TBD

E. Client's Input, Counterpart Personnel

13. The PMU shall provide the following:
- (i) All available documents, reports, data and all other information related to the proposed assignment.
 - (ii) Any letters or assistance required by the consultants in obtaining all necessary permits and authorizations for carrying out the services.
 - (iii) The PMU will assign counterpart personnel to supervise and work with PMC.

F. Others

14. Each individual consultant will be contracted by the MOECRT. The provision of office space and its associated operational cost, car rental, and other consumables will be provided by PMU.

TERMS OF REFERENCE FOR CONSULTING FIRM: HALAL BUILDING CONSTRUCTION MANAGEMENT SERVICES

A. Background

1. The proposed project will support the government's strategy to develop science and technology parks (STPs) to downstream research and development (R&D) and innovation towards sustainable economic development. More specifically, it will support four STPs out of five higher education institutions (HEIs) prioritized under the National Medium-Term Development Plan (RPJMN), 2020–2024 (RPJMN 2020-2024), namely, IPB University (IPB, formerly known as Bogor Agriculture University), Gadjah Mada University (UGM), Institute of Technology Bandung (ITB), and University of Indonesia. The development of STPs is part of the vision and mission of the President of the Republic of Indonesia and is affirmed by the Presidential Regulation Number 18 of 2020 issued on 27 January 2020. Indonesia is also strengthening its national innovation system by providing new fiscal incentives for R&D, large investments in digital infrastructure, and new funding mechanisms to support public research.

2. The Ministry of Education, Culture, Research and Technology (MOECRT) through the Directorate General of Higher Education for Research and Technology (DGHERT) will be the executing agency. The Rector of each university (IA) will establish a project implementation unit (PIU) at the Science and Technology Park (STP), which will be endorsed by the DGHERT. The project implementation period is expected to be from July 2022 to December 2028. As of 01 August 2022, the project is under preparation and remains yet to be approved by ADB.

3. **Impact and outcome.** The project will be aligned with the following impact: competitiveness of Indonesia's economy and sustained economic growth achieved through R&D and innovation. The outcome will be quality and relevance of R&D and innovation system in four STPs improved.

4. The Government of Indonesia has requested a regular loan of ¥20,487.11 million from ADB's ordinary capital resources to help finance the project. The project has three outputs:

- (i) **Output 1: Facilities for R&D and innovation in four science and technology parks upgraded.** The output will set up advanced research facilities in four STPs under IPB, ITB, UGM, and University of Indonesia. These STPs will focus on technological fields prioritized under the government strategy. Advanced R&D equipment will be procured, and research facilities will be retrofitted according to research requirements, ensuring gender-sensitive, socially inclusive, and climate and disaster-resilient features. These new facilities will undergo regulatory certification. This output will also scale up R&D translation and diffusion facilities for incubating startups including co-working spaces and fab labs for prototyping. This output may support one new building in IPB for halal food innovation. Overall, this output will help to improve the maturity ratings of these four STPs from *pratama* (primary), *madya* (intermediate) to *utama* (advanced) level.
- (ii) **Output 2: The four science and technology parks' R&D administration, partnerships, and startup incubation strengthened.** This output will support the strengthening of existing competitive funds that will (i) co-finance market-oriented R&D and support collaboration between the four STPs and **enterprises**; (ii) finance technology startup incubation programs at the four STPs; and (iii) support and promote outreach activities on innovation. This output will also improve R&D collaboration of the four STPs with reputable international research institutions

through joint research and staff exchange, and support the implementation of the triple helix model.

- (iii) **Output 3: Capacity of the four STPs and the MOECRT strengthened.** This output will (i) strengthen capability of **researchers**, including female researchers, at the four STPs through international post-doctorate programs; (ii) train STP administrators in implementing the triple-helix model; and (iii) train MOECRT and the STP officials on financial management, procurement, gender, and safeguards based on ADB requirements. MOECRT's monitoring and evaluation system will also be strengthened to collate and analyze project data, including sex-disaggregated data for policy and decision-making.

1. About the IPB University

5. IPB is a state-run agricultural university founded in 1963 and located in Bogor, West Java, Indonesia. IPB's Science Techno Park was established in 2015 under BLST (PT. Bogor Life Science Technology), the IPB Holding Company. Since 2019, it has become the Directorate of Science Technology, and Business Incubator Area (DKSTIB IPB) under the Deputy Chancellor for Innovation, Business, and Entrepreneurship, and in 2020 become STP IPB. The vision of STP IPB is to become a Science Techno Park that excels in the fields of Tropical Agriculture, Food, Bioscience, and Marine in Southeast Asia. To upgrade the innovation facilities in the IPB's Science Techno Park, industrial equipment will be procured through the PRIME STEP and installed from 2023 to 2025. There are three processing lines to be procured and placed at the Teaching Industry Building, namely (1) Bakery and Biscuit Line, which is scheduled in 2023; (2) Cereal Food Line; (3) Weaning Food Line, both are scheduled to be installed in 2025. One other processing line, Simplicia, is scheduled to be installed in 2024 and placed at the Technology Business Incubator 1 (TBI 1). Besides that, a Seed Production Line will be procured and installed in 2025 and placed at the Agribusiness and Technology Park (ATP). The laboratory equipment to be procured and installed at some buildings in the Science and Technology Park IPB are (1) Food Laboratory (installation schedule in 2023); and (2) Molecular and Product Stability Laboratory (installation schedule in 2026). These will be placed at Teaching Industry Building. A set of Pre-Clinical Testing Laboratory will be procured in 2023 and located at CRC (Collaborative Research Centres) building. Furthermore, the Cosmetic and Pharmacy Laboratory (installation schedule in 2024) and the Halal Authentications Laboratory (installation schedule in 2025) will be installed at the Halal Incubator

6. Building after completing construction at the end of 2024. One existing building to be used for business incubator activities needs minor internal refurbishment works. Refurbishment works will be limited to internal works such as electrical wiring, painting, repairs to the roof, etc. No asbestos containing materials were identified during building inspections conducted in June 2022 and such refurbishment works should not represent significant risks to occupational health and safety.

2. Halal Incubator Building at IPB University

7. In addition, a new Halal Incubator Building will be constructed in STP IPB. The building is five-story building with a basement. Total building area is 4,800 m² (each floor 800 m²) and the floor wise details are:

- (i) **Basement** includes parking, generator, warehouse;
- (ii) **1st floor** includes, front desk (lobby), Business center room, Innovative product/service display room, Consultation room and sample reception;

- (iii) **Floors 2 and 3:** Halal test/ analysis/certification lab includes Protein analysis, Lipid analysis, - DNA analysis, Alcohol analysis, Quick test (rapid test), Test results evaluation room;
- (iv) **4th floor** includes Management room, Meeting room, Outdoor space; and
- (v) **5th floor** includes Halal and expert study room, Training/discussion room, Auditorium.

8. The workflow for construction of IPB Halal Incubation Centre is as follows:

3. Construction of IPB Halal Incubation Center

Table A4.1: Construction of IPB Halal Incubation Center

No	Activity	Year 2022				Year 2023				Year 2024			
		May	June	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.	Confirm site of the Halal Incubator	X											
2.	Bidding civil works consulting services (detailed engineering design)	X	X	X									
3.	Determination of façade and plan of the Halal Incubator Building			X									
4.	Public Work Ministry's Technical Recommendations			X									
5.	DED Planning for Building Construction			X	X								
6.	Preparation of STP and WWT Teknik Technical Studies				X								
7.	Preparation of Technology approval for Waste Treatment Plan and EIA Revision			X	X	X	X						
8.	Determination of Site plan Revision & Building Construction Licensing						X						
9.	Pre-DIPA Bidding: Halal Incubator Building Construction Management Services					X	X						
10.	Bidding: Halal Incubator Building Construction Management Services					X	X						
11.	Bidding: Halal Incubator Building Construction					X	X						
12.	Contract for building construction management service						X						
13.	Implementation of building construction (include WWT & STP)						X	X	X	X	X		
14.	Bidding for the procurement of Halal custom furniture and equipment									X			
15.	Deliver and turn over civil work											X	

B. Objective of the Assignment

9. The objective of the assignment is to assist PIU and IPB in supervising the construction of IPB campus and facilities and ensuring that IPB campus and facilities comply with national and international standards, codes, norms, and practices, and meet quality, performance, environmental, health and safety standards for sustainable operation of IPB. Specifically, the consulting firm will:

- (i) review detailed design of IPB campus and facilities, including associated engineering calculations; detailed architectural and engineering designs, drawings, and notes; bills of quantities; technical specifications; cost estimates; networks for power, water supply, sewage, communications, and associated permits; personnel and construction equipment requirements; construction schedule and plan; environmental, health and safety management plans; seek clarifications, discuss, and request corrective actions from design and civil works

- contractors in consultation with PIU, STP, and IPB regarding the detailed design of IPB campus and facilities;
- (ii) prepare and update construction supervision plan and quality check tools;
- (iii) supervise progress and quality of construction works by conducting frequent and regular visits to the IPB campus site (a) prior to the commencement of land preparation; (b) pre-, final, and post-commissioning stages of IPB campus and facility construction works; identify and discuss any defects in the construction works with design and civil works contractors in consultation with PIU, STP, and IPB, and request corrective actions;
- (iv) assist PIU, STP, and IPB in inspecting and accepting the construction works; and
- (v) inspect IPB campus and facilities during the operational phase covered by the warranty period; identify and discuss any construction defects and request corrective actions from design and civil works contractor in consultation with PMU, STP, and IPB.

C. Consulting Service Requirements

10. An indicative total of 120 person-months of national consulting services will be engaged through a firm to provide construction supervision and quality assurance for Halal Incubation Center at IPB. The firm will be selected using the quality- and cost-based selection (QCBS) method (quality and cost ratio of 80:20) and the simplified technical proposal. A time-based contract will be used. The consulting services to be provided by the firm are summarized in the table and further detailed below:

D. Summary of Consulting Service Requirements

Table A4.2: Summary of Consulting Requirements

Position – National	Number	Person-Month
Key Expert: Team Leader	1	12
Key Expert: Architect Expert/ Arsitektur	1	8
Key Expert: Structure/ Civil Engineering Expert	1	8
Key Expert: Mechanical Expert	1	6
Key Expert: Electrical Expert	1	6
Key Expert: OHS Expert	1	12
Key Expert Subtotal	6	52
Non-Key Expert: Architectural Supervisor	1	8
Non-Key Expert: Structure/ Civil Supervisor	1	12
Non-Key Expert: Mechanical Supervisor	1	6
Non-Key Expert: Electrical Supervisor	1	6
Non-Key Expert: Quality Control	1	12
Non-Key Expert: CAD Operator/ Draftman	1	12
Non-Key Expert: Administrasi Keuangan	1	12
Non-Key Expert Subtotal	7	68
Total	13	120

Source: Asian Development Bank

E. Qualification Requirements and Tasks of Key Experts

Table A4.3: Qualification Requirements and Tasks of Key Experts

<p>Team Leader (national, 12 person-months, Bogor City, West Java Province)</p> <p>The team leader should have a minimum master's degree of Civil Engineering or Architecture, a recognized professional qualification/ license; at least 8 years of experience in planning managing, and supervising the construction of public facilities, especially technical and higher education institutions with teams of engineers.</p>	<p>The team leader will develop a work plan; guide and coordinate the work of team members in carrying out the assignment; maintain close coordination and communication with PIU, STP, and IPB, relevant government agencies, and other stakeholders; and ensure the quality and timeliness of outputs. Further, the team leader will:</p> <ul style="list-style-type: none"> (i) review the detailed design of IPB campus and facilities, personnel and construction equipment requirements, construction schedule and plan, environmental, health and safety management plans; seek clarifications, discuss and request corrective actions from design and civil works contractors in consultation with PIU, STP, and IPB; (ii) prepare and update construction supervision plan and quality check tools; (iii) manage and coordinate construction supervision, quality check, and inspection processes according to various plans; ensure proper management of construction costs; prepare reports on construction supervision, quality check, and inspection activities; (iv) supervise the implementation and reporting of environmental, health and safety management plans by civil works contractors; and (v) review civil works contractors' reports, claims, proposed changes and variations, and recommend approval, revision, or rejection to PIU, STP, and IPB.
<p>Architect Expert (national, 8 person-months, Bogor City, West Java Province)</p> <p>The expert should have a minimum bachelor's degree; a recognized professional qualification/ license; at least 4 years of experience in detailed design of public facilities and landscapes, preferably technical and higher education institutions, in environmentally sustainable, and climate resilient, and socially inclusive manners; and proficiency in CAD or BIM software and 3D and parametric object-based design.</p>	<p>The architect will:</p> <ul style="list-style-type: none"> (i) review the detailed design of IPB campus and facilities; recommend measures to enhance the environmental sustainability, climate resilience, and social inclusiveness of IPB campus and facilities; and (ii) conduct visits to the IPB campus site and supervise progress and the quality of construction works; identify design and construction defects and recommend corrective actions.
<p>Structure/ Civil Engineering Expert (national, 8 person-months, Bogor City, West Java Province)</p> <p>The expert should have a minimum bachelor's degree in civil and structural engineering; a recognized professional qualification/license; at least 4 years of experience in engineering and structural design of public facilities, including technical and higher education institutions, and supervising structural aspects of construction works; and proficiency in CAD and structural design software.</p>	<p>The engineer will:</p> <ul style="list-style-type: none"> (i) have overall responsibility for all structural designs and their specifications and related tasks while designing the structures based on the finalized approved architectural designs (ii) review the detailed design of ASU campus and facilities; recommend measures to strengthen structural aspects of IPB facilities in an environmentally sustainable and climate resilient manner; (iii) conduct visits to the IPB campus site and supervise progress and the quality of construction works; identify design and construction defects and recommend corrective actions; and (iv) work closely with the other team members especially Architects, Electrical and Mechanical Engineers and be responsible for all structural design and structural elements, including safety aspects of the final designs

	and final construction drawings, as approved by the client.
<p>Mechanical Expert (national, 6 person-months, Bogor City, West Java Province)</p> <p>The expert should have a minimum bachelor's degree in mechanical engineering; a recognized professional qualification/license; at least 4 years of experience in design and supervision of mechanical components of construction works, including energy efficient HVAC systems; and proficiency in CAD or BIM software.</p>	<p>The engineer will:</p> <ul style="list-style-type: none"> (i) review the detailed design of IPB campus and facilities; recommend measures to improve energy efficiency of HVAC systems and other mechanical components of IPB campus and facilities; and (ii) conduct visits to the IPB campus site and supervise progress and the quality of construction works; ensure that energy efficiency measures are adopted in HVAC systems and mechanical components of IPB campus and facilities.
<p>Electrical Expert (national, 6 person-months, Bogor City, West Java Province)</p> <p>The expert should have a minimum bachelor's degree in electrical engineering; a recognized professional qualification/license; at least 4 years of experience in design and supervision of electrical systems for construction works, including green buildings and renewable energy; and proficiency in CAD or BIM software and building management system.</p>	<p>The engineer will:</p> <ul style="list-style-type: none"> (i) review the detailed design of IPB campus and facilities; recommend measures to improve energy efficiency of electrical systems for IPB campus and facilities; and (ii) conduct visits to the IPB campus site and supervise progress and the quality of construction works; ensure that renewable energy and energy efficiency measures are adopted in IPB campus and facilities.
<p>OHS Expert (national, 12 person-months, Bogor City, West Java Province)</p> <p>The expert should have a minimum bachelor's degree in occupational health and safety related field; a recognized professional qualification/license; at least 3 years of relevant experience in Construction OHS</p>	<p>The expert will:</p> <ul style="list-style-type: none"> (i) examine the workplace for environmental or physical factors that could affect employee health, safety, comfort, and performance; (ii) ensure health and safety of workers, trainers and everyone on IBP; (iii) conduct inspections of equipment, construction site to identify any hazards and recommend corrective actions in consultation with other experts; and (iv) monitor the impact of construction works on the environment and local settlements and provide information for the monthly progress and other required reports

Source: Asian Development Bank

F. Qualification Requirements and Tasks of Non-Key Experts

Table A4.4: Qualification Requirements and Tasks of Non-Key Experts

<p>Architectural Supervisor (national, 8 person-months, Bogor City, West Java Province)</p> <p>The architectural supervisor should have a minimum undergraduate degree in architecture; and at least 3 years design of public facilities and supervising construction works.</p>	<p>The supervisor will:</p> <ul style="list-style-type: none"> (i) draft detailed design and plans for the construction keeping in mind the climate resilience and environment sustainability; and (ii) conduct field visits to develop designs/plans to fit the requirements
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<p>Structure/ Civil Supervisor (national, 12 person-months, Bogor City, West Java Province)</p> <p>The civil supervisor should have a minimum undergraduate degree in civil engineering; and at least 3 years of experience in engineering and design of public facilities and supervising construction works.</p>	<p>The supervisor will:</p> <ul style="list-style-type: none"> (i) review and assist the structure expert in carrying out day to day construction; (ii) Keep records of important construction plans and designs; and (iii) Conduct periodic visits to site to ensure that the time-lines of the project are maintained
<p>Mechanical Supervisor (national, 6 person-months, Bogor City, West Java Province)</p> <p>The mechanical supervisor should have a minimum undergraduate degree in mechanical engineering; and at least 3 years of experience in engineering and design of public facilities and supervising construction works.</p>	<p>The supervisor will:</p> <ul style="list-style-type: none"> (i) conduct periodic inspection of the mechanical works to ensure that the quality standards are met; (ii) day to day monitoring of construction operations to ensure conformance to client specifications; and (iii) Identify challenges in ensuring quality and recommend corrective actions in consultation with experts and team leader
<p>Electrical Supervisor (national, 6 person-months, Bogor City, West Java Province)</p> <p>The electrical supervisor should have a minimum undergraduate degree in electrical engineering; and at least 3 years of experience in engineering and design of public facilities and supervising construction works.</p>	<p>The supervisor will:</p> <ul style="list-style-type: none"> (iv) conduct periodic inspection of the electrical works to ensure that the quality standards are met; (v) day to day monitoring of construction operations to ensure conformance to client specifications; and (vi) Identify challenges in ensuring quality and recommend corrective actions in consultation with experts and team leader
<p>Quality Control (national, 12 person-months, Bogor City, West Java Province)</p> <p>The quality control consultant should have a minimum undergraduate degree in Civil Engineering; at least 3 years of experience in conducting quality control of public facilities and construction works.</p>	<p>The quality control consultant will:</p> <ul style="list-style-type: none"> (i) conduct periodic inspection of the site/ works to ensure that the quality standards are met; (ii) Monitor construction operations to ensure conformance to client specifications; and (iii) Identify challenges in ensuring quality and recommend corrective actions in consultation with experts and team leader
<p>CAD Operator/ Draftsman (national, 12 person-months, Bogor City, West Java Province)</p> <p>The CAD operator should have a minimum undergraduate degree in civil or architectural engineering; at least 3 years of experience in generating designs and blueprints for construction of public facilities.</p>	<p>The operator will:</p> <ul style="list-style-type: none"> (i) work closely with experts to draft technical drawings and blueprints; (ii) implement feedback from engineers, architect and other experts; and (iii) conduct site visits to incorporate specific requirements into the designs
<p>Administrasi Keuangan (national, 12 person-months, Bogor City, West Java Province)</p> <p>The administrasi keuangan should have a minimum undergraduate degree in accounting or economic engineering; at least 3 years of experience in working on construction of public facilities.</p>	<p>The administrasi keuangan will:</p> <ul style="list-style-type: none"> (i) prepare financial statements (ii) maintain consolidated project accounts (iii) submit financial reports to PIU, IPB and STP as per the commitment to the client

Source: Asian Development Bank

G. Reporting Requirements

11. The firm will submit to PIU, IPB, and STP the following:
 - (i) **Monthly workplan** which will be aligned with the construction plans of design and civil works contractors and agreed with PIU, IPB, and STP in terms of activities,

approaches, timelines, and personnel schedules, and will be submitted on the first day of each month.

- (ii) **Monthly construction supervision report** which will describe details of construction supervision and quality assurance activities conducted against the monthly workplan; delays, cost overruns, changes, and other problems identified, and corrective actions taken; and any suggestions, and will be submitted on the first day of each month.

12. The team leader will ensure the quality, timely completion, and submission of monthly workplans and construction supervision reports, with clearly defined inputs from each team member.

H. Expression of Interest

13. The firm should submit the following documentation together with the expression of interest:

- (i) company registration certificates and special licenses valid for the period covering 2022–2025; and
- (ii) copies of certificates of project completion and acceptance or equivalents from previous projects.

I. Proposal Preparation

14. In the **technical proposal**, the firm should prepare a detailed description of how it proposes to carry out construction supervision and quality assurance in a section of its proposal called “Approach and Methodology”. The firm should be explicit in explaining how it will carry out the assignment, how it anticipates and will overcome challenges, by describing its experience with similar assignments in India.

15. The key expert positions are required, whereas the firm will determine the number of non-key expert positions in the team and propose required person-month allocation to each non-key expert in the technical proposal. The firm should include in a section called ‘Personnel Schedule’ all key and non-key experts required in accordance with the proposed “Approach and Methodology”.

16. Only one curriculum vitae must be submitted for each key and non-key expert included in the proposal. Only the curriculum vitae of the key expert will be scored as part of the evaluation of technical proposals. The curricula vitae of non-key experts will not be scored but will be reviewed, and individually approved or rejected for every non-key expert position in the proposal.

17. All positions proposed for both key and non-key experts must be included and budgeted in the **financial proposal**, in accordance with the person-month allocation required for each as defined by the firm.