



Ministry of SMEs  
and Startups



KEMENTERIAN KOPERASI DAN  
UKM  
REPUBLIK INDONESIA



Kementerian PPN/  
Bappenas

Project for Supporting the Transformation of  
Indonesian Factory Sharing by Adopting Smart  
Factory concept and Training Specialized  
Manpower Manufacturing Industry (4-year/5.8  
Million USD)

Republic of Indonesia

# Project Concept Paper

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<b>Applicant Information</b>	
<b>Name</b>	Henra Saragih S.H., M.H., M.Kn.
<b>Position</b>	Head of Law and Cooperation Bureau, Ministry of Cooperatives and SMEs
<b>Organization</b>	Ministry of Cooperatives and SME, Republic of Indonesia
<b>Telephone</b>	+62 822 1647 5835
<b>E-mail</b>	<a href="mailto:kerjasamakukm@gmail.com">kerjasamakukm@gmail.com</a>
<b>Address</b>	Jalan H. R. Rasuna Said Kav. 3-4, South Jakarta12940, Indonesia

## PROJECT CONCEPT PAPER (PCP)

SECTION 1. BASIC PROJECT INFORMATION		
1.1	<b>Country</b>	Republic of Indonesia
1.2	<b>Title</b>	Project for supporting the transformation of Indonesian Factory Sharing by adopting Smart Factory concept and training specialized manpower
1.3	<b>Location(s)</b>	<ol style="list-style-type: none"> <li>1. Cikarang</li> <li>2. Taman Tekno, BSD</li> <li>3. Bekasi</li> <li>4. Karawang</li> <li>5. North Sulawesi</li> <li>6. East Nusa Tenggara</li> <li>7. East Borneo</li> <li>8. Aceh</li> <li>9. Central Java</li> </ol>
1.4	<b>Duration</b>	4 years (2023-2026)
1.5	<b>Budget (total)</b>	US\$ 5.8 Million
1.6	<b>Objectives</b>	Promoting the new economic revival of Indonesia through the expansion of 'smart' manufacturing basis through integrated, systematic, and sustainable SMEs management.
1.7	<b>Beneficiary</b>	Indonesian SMEs and labor force in the manufacturing industry
1.8	<b>Implementing organization</b>	Ministry of Cooperatives and SMEs (MoCSME)

SECTION 2. PROJECT RATIONALE	
	<p><b>SITUATION ANALYSIS:</b> Please provide a brief introduction to the current social and economic situation related to the Project (geographic region and beneficiaries, etc.)</p> <p>Please describe the problem or critical issue which the project seeks to resolve, how the problem was identified, and how will the Project address the problem. If relevant, analysis on gender equality needs to be described.</p>
2.1	<p>SME is dominating Indonesian business and has become economic backbone. However, almost 98% of business are dominated by micro business scale, only 0,01% belong to large scale of business and 0.09% medium business. As one of major economies in the world, which becomes a part of G20, Indonesia has huge potential to be a developed country. With 64 million SMEs actor and 127.124 cooperatives, Indonesian SMEs has contributed to provide 97% of workforce and has contributed to 61% of its GDP.</p>

	<p>In respond to 4IR where the use of technology, digitalization and Innovation are inevitable in every sector of economy which placed the competitiveness into higher level. This era also impacted to sector of Industry as well SME, Therefore, Indonesia government launch the program of “Making Indonesia 4.0” by Ministry of Industry as way of Improving competitiveness to global market. Six sectors were chosen as focus to be developed due to its economic impact, share to GDP, trade, investment and multiplier effect to other industry, they are:</p> <ol style="list-style-type: none"> <li>1. Food and beverages</li> <li>2. Automotive industry</li> <li>3. Textile</li> <li>4. Electronic</li> <li>5. Chemical</li> <li>6. Agriculture (Fisheries, Plantation, and Husbandry)</li> </ol> <p>The Implementation of Fourth Industrial revolution (4IR) forced every economic sector to use technology, digitalization and automation to produce High quality product and large number of production but has affordable or competitive price. Dealing with the issue, SME sector would become the most vulnerable actor on Indonesia economy that need to be protected and improved due to its limited capacity of human resource, capital and finance to enter industrial revolution. Therefore, the implementation of smart factory for SME has become one of solutions to deal with the 4IR.</p> <p>To support the acceleration of 4IR, Indonesian Government would endorse these 10 initiatives:</p> <ol style="list-style-type: none"> <li>1. Improvement of the flow of goods and materials</li> <li>2. Redesign of the industrial zone</li> <li>3. Accommodating sustainability standards</li> <li>4. Empowering MSMEs</li> <li>5. Building a national digital infrastructure</li> <li>6. Attract foreign investment</li> <li>7. Enhancing the quality of human resources</li> <li>8. Development of an innovation ecosystem</li> <li>9. Incentives for technology investment</li> <li>10. Harmonization of rules and policies</li> </ol> <p>These initiatives are expected to eradicate the barrier faced by Industry during the transformation to industrial revolution, including the issue of cross sectoral barriers.</p>
<p><b>2.2</b></p>	<p><b>COUNTRY DEVELOPMENT STRATEGIES AND POLICIES:</b> Please describe how the Project relates to other relevant national development strategies and policies, and provide the ongoing status of their implementation, results and effects, if any.</p> <p>In order to utilize the opportunity along with the development of 4IR, Ministry of Cooperatives and SME Republic of Indonesia as the stakeholder concerning to develop Indonesian SME tries to endorse the SME to develop their business scale to higher grade. The effort to develop SME are implemented on 6 (Six) National</p>

	<p>Strategic Program of MSME Development as follows:</p> <ol style="list-style-type: none"> <li>1. Market Access enhancement for Products and Services improvement</li> <li>2. Competitiveness of Products &amp; Services</li> <li>3. Finance &amp; Investment Acceleration</li> <li>4. Capacity development of human resource management</li> <li>5. Opportunity and Ease of doing business</li> <li>6. Cross Sectoral Coordination (One Gate Policy)</li> </ol> <p>This project is in line with the Ministry of Cooperatives and SMEs Strategic Plan and the National Strategy of MSMEs Development (2020-2024). There are four major targets government would like to accomplish, as follows:</p> <ol style="list-style-type: none"> <li>1. Modern cooperatives</li> <li>2. Informal to formal transformation of SMEs</li> <li>3. Incorporating MSMEs to value chain</li> <li>4. Productive entrepreneurship development</li> </ol> <p>The project would be expected to support the implementation of smart factory technology into Indonesian SMEs, including to support the implementation of factory sharing program, in six (6) main manufacturing sectors. As the country with the expertise on smart factory development, through the project, Korean are expecting to be able to share the experience and assistance to intervene the implementation of smart factory in Indonesia.</p> <p>The assistance could be given to adress the issue of human resource quality, financing, government incentive policy, technology and knowledge transfer and cooperation to implement smart factory, particularly to MSME.</p>
2.3	<p><b>JUSTIFICATION FOR INTERVENTION:</b> Please describe how the need for the Project was determined, and what the rationale/justification for the Project (why the Project is considered to be the most effective way the problem is resolved.).</p> <p>The implementation of this project could support the National Strategy of Ministry of Cooperatives and SMEs, focusing on the development of 6 (six) main manufacturing sectors, i.e. food and beverages, textile, electronic, chemical, automotive industry, agriculture (fisheries, plantation, husbandry). The 6 sectors were prioritized due to its significant share to GDP, trade volume, market access, and investment. Providing assistance to MSMEs to implement smart factory will increase their product quality, quantity of production and competitiveness.</p>
2.4	<p><b>LESSONS LEARNED:</b> Please describe what lessons Partner Country has drawn on (from Partner Country's own and other's past experience) in designing this Project.</p>

Ministry of Cooperatives and MSME concern to develop MSME in various sector including in 6 (six) main manufacturing sectors and to Improve their quality and production. Due to Korea experience and knowledge on developing MSME product based on innovation and digitalization, we highly intended to looking for deeper knowledge and understanding about these following matters:

1. How does smart factory technology able to improve product quality and quantity of related sector.
2. Transfer knowledge and technology of smart factory sharing to MSME in improve their competitiveness.
3. Human resource training and assistance on smart factory operation on related sector.
4. Incentives needed by MSME to implement Smart Factory
5. Mutual Cooperation to develop smart factory implementation for MSME.

### SECTION 3. PROJECT DESCRIPTION

**Objective/Outcome/Output:** Please outline the objectives, the expected outcomes, and outputs of the Project.

**Project objective:**

Supporting the transformation of local Indonesian factories and Factory Sharing into Smart Factory & training specialized manpower in Indonesia, based on the related experience of Korea, for the innovation of manufacturing industry in Indonesia. Promoting Indonesia's sustainable growth based on the creation of quality jobs through highly advanced technology education, and the transfer of various technology such as smart factory facilities and solutions, etc.

- (IDN) Development of Indonesian manufacturing foundation (factory sharing), thus encouraging the revitalization of related industries.
- (KOR) Market expansion of Korean companies with smart factory-related technology to Southeast Asia.

\*Mainly focusing on the 6 main industrial sectors: Food & Beverage, Automobile, Fiber & Textile, Electronics, Petrochemistry, Agriculture (Fisheries, Plantations, Husbandries)

**Project outputs:**

Development MSMEs (factory sharing) by adopting the Smart Factory technologies in Indonesia

**Project outcomes:**

- Adoption of smart factory manufacturing technologies to Indonesian SMEs (for 30 local companies).
- Nurturing and training human resources for the operation of smart factories in Indonesia: **100 Specialized people and 30 operating people** (consist of related parties in the government and businesses)

3.1

**Performance Index**

Performance Index		Achievements and Targets			
		2023	2024	2025	2026
Improvements in manufacturing process		Establishment of the Center	10 Companies	10 Companies	10 Companies
Workforce	Specialized	10 people	30 people	30 people	30 people
	Operating	-	10 people	10 people	10 people

**Activities:** Please describe what will be carried out in terms of planned activities, their timing and duration, and who will be responsible for each activity. It should indicate the sequence of all major activities and implementation milestones.

3.2

1. Discovering local businesses that are in need of smart factory and the related technology by forming an organization consisting of representatives from the respective ministries\* and SMEs-related institutions\*. (Indonesia)  
\*Ministry of Cooperatives and SMEs, Ministry of Industry, Ministry of Fisheries, Ministry of Agriculture, Local Government  
\*\*APINDO, KADIN, GBC
2. Discovering and forming a 'pool' of suppliers, comprised of INNOBIZ SMEs and non-INNOBIZ SMEs possessing quality technology in the smart factory platform, for their entry into Indonesian market. (Korea)
3. Supporting the 'smart' improvement of production / manufacturing processes of targeted local Indonesian SMEs factories.
4. Adoption of 'Smart Factory Support Center' for training specialized workforce through education in theories and actual work practices by utilizing the existing facilities.

**Yearly Activity Plan**

1. 1<sup>st</sup> year (US\$ 1 M): Discovering the demand in both countries & creating the foundation for project implementation.
2. 2<sup>nd</sup> year (US\$ 1.6 M): Installation of pilot factory & development of 'smart' factory facilities for SMEs manufacturing industries.
3. 3<sup>rd</sup> year (US\$ 1.6 M): Advancement and improvement of 'smart' factory facilities for each company
4. 4<sup>th</sup> year (US\$ 1.6 M): Leveraging the trained workforce into local companies & stabilization process

3.3

**Budget:** Please provide a brief requirement by activities. The budget requirement is not a full and well-defined. The detailed budget requirement will be fully elaborated after the PCP is selected. Nevertheless, this information is to help KOICA to better understand the project.

Main Content	Details	Yearly Timeline											
		2023			2024			2025			2026		
<b>Transformation into Smart Factory &amp; Improvements in production process</b>	Discovering and evaluation of Indonesian companies (dispatch Korean companies possessing smart factory technology, to Indonesia)												
	Supporting local Indonesian SMEs manufacturing industries for transformation into Smart Factory (integration with core technology of smart factory)												
<b>Training specialized workforce</b>	Workshop for skilled Indonesian workforce (assembly, production, inspection, etc.) in Korea												
	Training / education course for specialized workforce (in combination with theories and actual work practices)												
	Establishment & management of Smart Factory Support Center												

\* The Schedule above can be changed subject to situations.

<b>Korean Government</b>	Discovering local demand		Cost: 0.3M USD ('23) *Dispatching Korean smart factory companies to Indonesia
	Factory Facilities	Equipment	Cost: 3.7 M USD ('25-'26) *(Hardware) Machines, Robots, Sensors, 3D Printers, Assembly/Packing/Delivery line facilities *(Software) IoT Network, MES/SCM/ERP, Cloud System
	Education & Training		Cost: 0.5 M USD ('23-'26) *Local training/workshops for smart factory technology-specialized labor force & teaching materials. *Workshop for the engineers in Design/Production/Technology field
	Smart Factory Support Center		Cost: 1.3 M USD ('23-'26) *(Management cost) Cost of project management & monitoring *(Theory Education) Cost of purchase and management of lecturing equipment *(Work practice education) Cost of purchase and management of education equipment

	<p><b>Indonesian Government</b></p>	<ul style="list-style-type: none"> <li>- Suggesting the site and building structures for the construction of smart factory (leverage existing manufacture facilities, etc.)</li> <li>- Office furniture, Rents, Labor cost &amp; Operational cost <b>(tbc to be used by factory or training center?)</b></li> <li>- Tax exemption / customs clearance / local delivery service and certification of the Equipment</li> <li>- Other administrative and legal assistance and support regarding the matters related to this Project.</li> </ul> <p>*Further discussions and coordination needed between both parties.</p>
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\*CBA rate for 1USD-476.95AMD

<p><b>SECTION 4. STAKEHOLDER ANALYSIS</b></p>	
<p><b>4.1</b></p>	<p><b>TARGET BENEFICIARY:</b> Please describe the following information: a) direct and indirect/wider beneficiary group, b) number of beneficiary, with gender segregation if necessary (e.g. 300 children rather than children in 3 schools), c) how the target group was identified, d) why they were selected as target group, e) how intended beneficiaries have been involved in Project design, and their expected role in Project implementation and evaluation. If relevant, the target group needs be disaggregated by sex.</p> <p>The beneficiary of this project is 30 SMEs in 6 (six) main manufacturing sectors, i.e. food and beverages, automotive industry, electronic, chemical, and textile, agriculture (fisheries, plantations, husbandries).</p>
<p><b>4.2</b></p>	<p><b>OTHER STAKEHOLDERS:</b> Please describe other stakeholders (e.g. partner government agency, international organization, NGO, donor agency, etc.), if any, including a) name/group, b) respective role(s) and cooperation/coordination mechanism, etc.</p> <p>The project will be Implemented by Ministry of Cooperatives and SME Republic of Indonesia as well as coordinator project. During the Implementation, Ministry of Cooperatives and SME will cooperate and coordinate with the following stakeholders and organizations:</p> <ol style="list-style-type: none"> <li>1. Ministry of Cooperatives and SMEs</li> <li>2. Ministry of Industry</li> <li>3. Ministry of Fisheries</li> <li>4. Ministry of Agriculture</li> <li>5. Local Government</li> <li>6. APINDO</li> <li>7. Indonesian Chamber of Commerce and Industry</li> <li>8. Green Business Center (GBC)</li> <li>9. Other related stakeholders</li> </ol>
<p><b>SECTION 5. PROJECT MANAGEMENT AND IMPLEMENTATION</b></p>	



5.1	<p><b>PROJECT MANAGEMENT:</b> Please describe a) who will be responsible for planning and management of the Project operations as well as coordinating other bodies and organizations associated with the Project, b) what arrangements will be established to ensure that there will be effective coordination with other relevant programs and activities.</p>
	<p>Henra Saragih S.H., M.H., M.Kn., Head of Law and Cooperation Bureau, Ministry of Cooperatives and SMEs</p>

**\*The following documents as annex, are required to be submitted with the PCP**

Annex: Detailed Project Location Map (Jabodetabek Area)



**Annex: Project Location Map**

