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A Case Study of Indonesia Electric Motorcycle in the Local Content Capabilities

Meldi Rendra
Department of Industrial Engineering, Telkom University Bandung
Jl. Telekomunikasi 1, Terusan Buahbatu, Kab. Bandung, Jawa Barat, Indonesia
meldirendra@telkomuniversity.ac.id

Abstract

Firms always compete to add efficiency and effectiveness in generating products by links on supply-related costs or access to subtle knowledge to gain value added. Firms connect an island of industrial parts and knowledge to utilize supplementary unity in industrial clusters. Competitors in industrial clusters outperform and strive to get evidence in the success levers. Good levers indicate excellent research, capacity, and transfer knowledge impacting inter-structured shift of success. Disseminative capability methods investigate and focus on the capabilities of the knowledge interaction as transfer performance. Partner will charge some of the key knowledge to transfer with know-how from industrial relevant work by communicating and deploying the practical grounding of fields. The concept will explain a picture of the knowledge giver and relevant measures of the capabilities. The knowledgeable process will present the theoretical stream of disseminative capabilities. Research findings have found the implication of disseminative capabilities and empirical results of Indonesia-styled weaknesses and strengths in deploying transfer knowledge. It will be helpful in the successful transfer of knowledge to gain a competitive advantage as a lesson learned. This case study will evaluate Karawang's manufacturing industry readiness for the electric motorcycle supply chain involves assessing infrastructure, technology, regulatory support, and workforce skills to determine its ability to meet market demands and international standards.

Keywords: disseminative capabilities, absorptive capabilities, technology adaption, open innovation, technology transfer

Abstrak

Perusahaan selalu bersaing untuk meningkatkan efisiensi dan efektivitas dalam menghasilkan produk dengan menghubungkan biaya yang terkait dengan pasokan atau akses ke pengetahuan yang halus untuk mendapatkan nilai tambah. Perusahaan menghubungkan pulau-pulau bagian industri dan pengetahuan untuk memanfaatkan kesatuan tambahan dalam kluster industri. Pesaing dalam kluster industri melebihi dan berusaha mendapatkan bukti dalam faktor kesuksesan. Tuas yang baik menunjukkan penelitian yang sangat baik, kapasitas, dan transfer pengetahuan yang berdampak pada pergeseran terstruktur dalam kesuksesan. Metode kemampuan penyebaran menyelidiki dan fokus pada kemampuan interaksi pengetahuan sebagai kinerja transfer. Mitra akan mengenakan beberapa pengetahuan kunci untuk ditransfer dengan know-how dari pekerjaan yang relevan di industri dengan berkomunikasi dan menerapkan landasan praktis dalam bidang tersebut. Konsep ini akan menjelaskan gambaran pemberi pengetahuan dan ukuran relevan dari kemampuan. Proses berpengetahuan akan mempresentasikan aliran teoritis kemampuan penyebaran. Temuan penelitian telah menemukan implikasi kemampuan penyebaran dan hasil empiris dari kelemahan dan kekuatan ala Indonesia dalam menerapkan pengetahuan transfer. Ini akan membantu dalam mentransfer pengetahuan dengan sukses untuk mendapatkan keunggulan bersaing sebagai pelajaran yang dipelajari. Studi kasus ini akan mengevaluasi kesiapan industri manufaktur Karawang dalam rantai pasok kendaraan motor listrik dengan menilai infrastruktur, teknologi, dukungan regulasi, dan keterampilan tenaga kerja untuk menentukan kemampuannya memenuhi permintaan pasar dan standar internasional.

Kata kunci: *kemampuan diseminatif, kemampuan serap, adaptasi teknologi, inovasi terbuka, transfer teknologi*

I. INTRODUCTION

Collaboration in developing a new model industry, after the electrical combustion-based disruption of motorcycle platforms will be an opportunity for Indonesia Industries. When the opportunity comes for the market, industries should make a lot of preparation in disseminative capabilities to complete industrial recipes in

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activities that output the best result of the process. Knowledge bank to transfer produces a clear ecosystem for motorcycle industries to survive and be sustainable. Opportunity, knowledge transfer, and preparation of the ecosystem will push the side of the commercial to be applied.

The advancement of spare part companies that jointly manufacture elements of motorcycles for collaborating in product development seems a strategy for industry growth. The technique of collaboration in product development as background will influence efficiency or effectiveness and contingent related risks. Cost which is deployed by element of material bridges reduction of expenses. Competitiveness emerges in industrial capabilities to make alliance settings jump to higher phases of advanced manufacturing.

Indonesian Automotive Industry is possible and can exist. Japanese knowledge transfer has been a success factor in the transfer process between primary industries and supporting industries. Support of SME networking becomes our expectation with the strength to get a lucky situation in our ideas to develop and shift a combustion motorcycle to an electric motorcycle. Indonesian industries will process outstanding jobs in the works of electric motorcycles. Statements inspire the optimism and hope of the industries from little bits to giant steps impacting highly to fulfill a dream of an industrial country. The hope of the industrial nation by little bits to giant steps, the industry needs disseminative capabilities. Disseminative capabilities depend on technology delivery and innovative part and context knowledge of the absorptive receiver. Context knowledge considers the content of technology transfer that shows the commerce value [1]. Commerce value needs sensitive investigation to calculate business aspects to strengthen the orientation of profit from disseminative capabilities. Orientation of profit allows the developed investigation of work correctly with a sustainable framework [2]. The practical implication is a result of a developed investigation that offers the local partners elaborating detailed skills and knowledge. The contribution of knowledge and theory can make it easier to understand the task [3]. After understanding task release, the local partners need a comfortable array to scale up. Process examination of the interaction depends on the way of technology adoption [4].

Human resources in disseminative capabilities need a relevant workforce. Workforce background with the industrial culture refers to professionals who make better decisions [5]. Emerging technology always shows the human value better than a nonhuman aspect. Management system technology is the only one to upgrade human value. System technology adopts knowledge literacy to develop the business continuously [6]. Factors of system technology give effects of highly competitive value for cybersecurity business instances to get a new model technology with a high impact on profit [7]. Technology adoption at a high rate level is a sign that businesses work at a continuous level of innovation. Innovation presents in digital technology that produces products with a good impact. We can measure the critical impact with a tool of performance [8]. So that innovation can use feedback from the input and process. Labor incentives in innovation and disseminative capabilities need work design to design the performance [9]. Labor depends on a psychological aspect that motivates and upgrades the quality of work. The quality of work gives factors of the curriculum of knowledge and skill that the local partners must fulfill. It is shown in the body of knowledge on the adoption of specific capabilities [10]. The body of knowledge always uses technology 4.0 to have a high impact on industry and the environment. Resource consumption nowadays works properly with obstacles of the environmental aspect [11]. Obstacles and barriers become enemies for enablers and innovation, which is a trade-off stage that must be relevant to the choice. Future research works with the contrary of obstacles and how the innovation can show up [12].

Valuable insights with collaboration are new ways of a global industry that depend on the supply chain network. The awareness of open innovation will be presented by properties of an industrial ecosystem [13]. Open innovation has had a new agenda worldwide. The dependency of many countries to take competitive advantages has brought many genuine innovations in the transfer of technology [14]. Transfer of technology is a behavior of adopting or dying to compete with competitors, or in other words, it is a problem of advanced technology or efficiency in management works. Lean practices nowadays become practices of industry [15]. The novel study describes how novelty works in disseminative capabilities. We need firstly detailed technology and have social challenges come to an employee in technical aspect [16]. Indonesian technology SMEs already produce the idea of added value from Japan-based motorcycles and cars well-known for many vehicles in Southeast Asia. At the time, Part-product portfolio and quality of the resources arose for capable alliances to break through production costs in manufacturing components and deficiency in an assembly line. This collaboration launches joint development for this vehicle concept, and Japanese

companies would have a high cost to develop many of the components. Therefore, local consortiums were needed to make a solution lacking the supporting components that realize the transportation industry. The leading producers and consortiums held knowledge exercises. The idea of knowledge transfer became an essential capability to develop and produce component technology in good practices. Problems appeared to be the gap in culture to handle the knowledge and how to upgrade the way and techniques inefficient mode. Team members of the alliances must first improve the industrial mentality to comprehend completely and correctly the way to get knowledge transfer. Practical relevance and certain aspects focus on how to realize the sender's capabilities and capture the knowledge transfer of the highest quality. The past product developments in the industrial landscape need to overcome leaks of human resource skills and flexibility of creating the supporting product with costs and riskiness limitations. Competence became a critical issue in checking the points of limitations, leveraging, and potential of joint casualties from work.

Indonesia's industrial problem, especially the motorcycle industry, is the need or point to transfer knowledge and skills. The paper at hand takes this calling on the question into problems and investigates mechanisms of the knowledge transfer process. Significantly, the capabilities to know how knowledge interacts from sender to receiver in measuring the impact of capabilities. Research relevance goes to a significant augmentation in the number of values, creating an advantage in product development. The phenomenon of R&D collaboration is a dominant step in cooperative product development. The share of joint ventures always increases to high tech partnership but decrease to medium-tech and low-tech trend. Firms battle to push efficiency and effectiveness, in other words, working to short time to market, share cost in the development step, and subdue the national entry barrier. Many of the trade-offs in the phenomenon of R&D collaboration are access to critical, significant knowledge, resource constraints, and market potentiality.

Collaborating companies jointly create excellent products by mixing talented capabilities and sharing risks and costs. Knowledge bases Interlink becomes a Leash of knowledge transfer to survive and outperform competitors to be a success factor. The challenge is to combine the knowledge bases and organize the teamwork to enable fresh information and know-how stream.

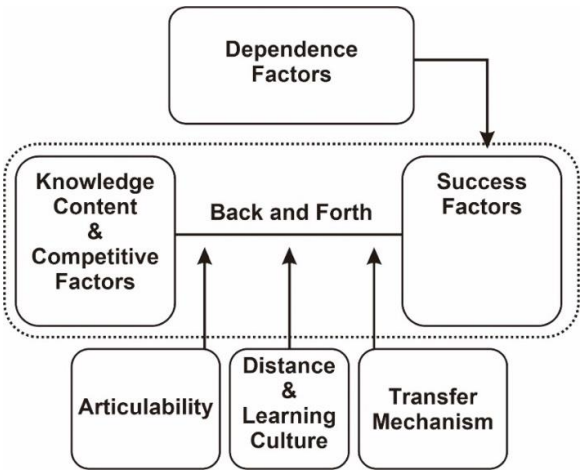


Figure 1. Research focuses on knowledge levers

Japan Wheel Technology company has taught and applied more knowledge to Indonesian SME partners to give knowledge by category. The contents of knowledge, articulable, distance, mechanism, and learning culture) have an imbalance of knowledge beneficiary and capabilities background. At least two collaborators do a reciprocal interaction to exchange knowledge that influences the transfer of knowledge and receiver characteristics.

In Figure 1 Disseminative capacity or transfer, capabilities are identified or recognized as the best-practicing determinants to motivate and share knowledge islands to become high willingness, commitment, trustworthiness, tolerance, knowledge transfer experience, and size profitability. Many aspects contextualize knowledge transfer from the quality of people, organization, new nomenclature, technology, and receipts of transfer purposes to be able to push whether the strategy of contents is proper, valuable, and on the point of the context. With the theory of the disseminative, the charge works of identifying before-uses and after-uses to find the formula for creating specific know-how for partner interaction. Product development always comes from a transfer of knowledge with the phenomenon of transformation and integration to benefit each other.

Assessing Karawang's manufacturing industry for its readiness to participate in the electric motorcycle supply chain is a complex endeavor. It necessitates a comprehensive evaluation of critical factors such as infrastructure, technological capabilities, regulatory support, and workforce proficiency. The success of this evaluation will determine Karawang's ability to not only meet the growing market demand for electric motorcycles but also adhere to international standards. Infrastructure, including production facilities and logistics networks, must be modernized and adapted

to accommodate electric vehicle manufacturing. Technological readiness is crucial, encompassing battery assembly lines, electric motor manufacturing capabilities, and charging infrastructure. Regulatory support and policies play a pivotal role in creating an environment conducive to electric vehicle manufacturing. Additionally, a skilled and adaptable workforce is essential to navigate the evolving landscape of electric vehicle production. Evaluating and enhancing these components is paramount in positioning Karawang as a vital player in the electric motorcycle industry.

II. RESEARCH METHOD

A. Disseminative Capabilities Model

The project work uses a method in terms of adopting the relevant skills and knowledge to take advantage of the industrial project. Research outlines a fresh skill and knowledge to be integrated into business and manufacturing by using product development, technology and process, sustainability, and assembly finishing products. Disseminative capabilities in terms of the fourth dimension, sender-receiver relation, transfer process, sender-receiver imbalance, and sender-receiver balancing, illustrate the time and space to fulfill a gap of the side capacity from sender-receiver in open innovation of manufacturing agenda [14].

Local partner has fixed social capital (see Figure 2) of traditional culture, skill, organization, and knowledge. The leading company will examine the feasibility of local companies capturing needed knowledge. The baseline of the local partner contributes to receiving the transfer knowledge that the leading company calculates and formulizes the syllabus of transferred knowledge. We compare the absorption level with the dissemination level so that we can capture the lesson learned from the phenomena. Most critical research questions construct the relation of the disseminative capabilities dimension with the success of product development. Disseminative capabilities work across divisional institutions and will be presented in the main dimensions, which can be seen in Figure 2.

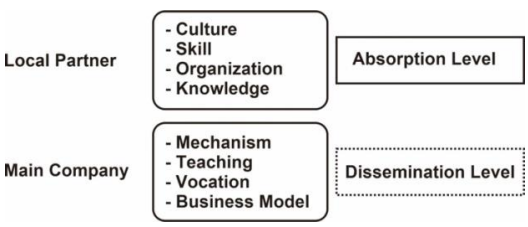


Figure 2. Disseminative capabilities model

B. Internal and External Validity

The research uses multiple sources that data can be valid using critical information. Onsite interviews, observations, project plans, and many production charts can construct information. My draft was internally reviewed by practices academia from the draft study report. To ensure traceability, we make a chain of evidence, which is all the information that has been deployed. Study material mechanism works back and forth style to construct validity. Significant propositions are derived from hypotheses to ensure correctly explained building.

External validity uses the theory of logic model that sets the ideal relationship. We check the technical component, feasibility study, and a clear underlying theory. Fieldwork, my findings, and case contextualization collect documentation. Reliability is presented by providing minutes, summaries, study reports, and secondary data.

III. RESULT AND DISCUSSION

A. *Industrial Culture and Transfer Mechanism*

Karawang Industrial SME culture has been formed by Japanese-styled work. APEK (Asosiasi Pengusaha Engineering Karawang) working backgrounds are 34% on a percentage of Japanese local companies (Indonesia-based Kaisha, JLC), 52% on the percentage of Japanese abroad companies (Japan-based Kaisha, JAC), 5% on the percentage of Japanese styled training (JST), and 9% on the percentage of Indonesian local company (ILC), (see Figure 3). They had a performance to execute dimensions of all provisional knowledge of the industry: interacting system, product development, and working process. The case study describes the transfer mechanism to enable the main company (Japan Kaisha) to intervene and manufacture electric motorcycles in collaboration with APEK. The main company may handle degrees of knowledge and deploy many transfer mechanisms in changing settings.The capability can combine transfer knowledge with kind and field differed from knowledge bases. The process of specific knowledge exists in the value chain that APEK can ensure success with the degree of innovations. APEK's strength can work with new tools with development to shorten the development cycle. Inherited knowledge operates in rich methods for designing new product development to realize the main company niche product. Successfully integrating specific knowledge will be achievable with relevant industrial culture. The critical step requires specific knowledge in collaboration with the procedure and exchange that contains know-how to transfer knowledge and understand quickly.

Table 1. SWOT Analysis

Strength	**Weakness**
Strong local content	Non-bankable
Good knowledge	Low competency
Well Trained	No industrial part
Customer satisfaction	Weak synergy
Good flexibility	Low government support
	Low human capital
Opportunities	**Threat**
High competitiveness	High abroad competition
Good regulation	Exclusive vendor
Free trade area	Macroeconomics climate
University collaboration	

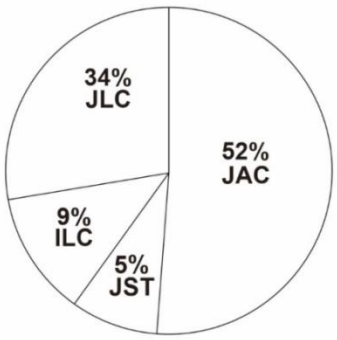
Mechanism realizes with joint knowledge between local partners and the leading company. The constellation of exchange and transfer becomes the existence of a valuable knowledge base. Trust and confidence work in process and progress to conduct intensive transfer and prove the performance.

This is undertaken and easier to convince reliability and capability in the earlier project and focus on effort into growing capabilities and insights in SWOT analysis, which can be seen in Table 1. APEK has spent time to grow its skill base that excludes poorly transferring knowledge and perspective. Given the fact, that APEK made a collaboration for 32 years with components, modules, jigs and fixtures, and Japanese-styled culture. Solid reputations reflect the capabilities and contribution to coexist-production.

The attitude of handling problems reflects the critical transfer and timely consumed situation and how to approach difficulties, time, and specific tasks. Transfer success results from knowledge assets, organization, new product deployment, and meeting the project timeline, which describes the industrial culture and transfer mechanism.

B. Selecting Skills and Knowledge

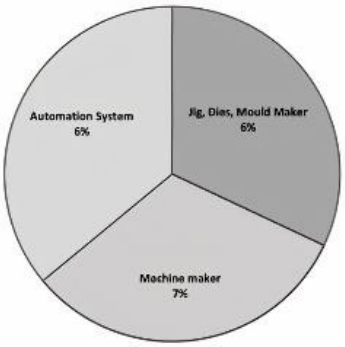
In the investigations, APEK participants who used to speak Japanese made reliability and trust of knowledge transfer enabling successfully. This is an indication that culture bridges knowledge and understanding to utilize underlying knowledge to become targeted activities.

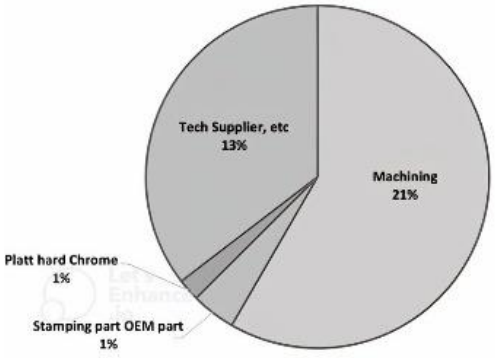


***JAC** Japanese Abroad Co, **JLC** Japanese Local Company, **JST** Japanese Styled Training, **ILC** Indonesia Local Co.

Figure 3. APEK working background

Machine Name	Quantity	Fuction
Avaibility of Precision Machine		
Jig, Dies, Mould Maker	8	Precision part
Machine maker	8	Replication product
Automation System	9	Productivity Scale
Avaibility of Main Machining		
Machining	28	Boring / Polishing
Stamping part OEM part	2	Forming
Platt hard Chrome	1	Aesthetic
Tech Supplier, etc	17	Micropart
Avaibility of Supporting Machine		
Fabrication	39	Assembly
Construction	13	Structure of Mechanics
Maintenance	10	Sustainability
Total	135	





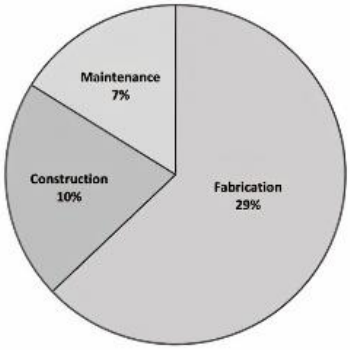


Figure 4. Main skill and technology driver

Table 2. Knowledge exchange

Local Partner Skill	Knowledge Exchange	Resulted Capabilities
Partner Skill Bases	Knowledge Transfer	Valuable Skill Bases
Traditional Project Skill	Modern Project Knowledge	Knowledge Success
De-contextualize Skill	Encode Knowledge	Knowledge Success
Linearity of Work	Deploying Feedback	Back and Forth Skill Bases
Short Term Relation	Utilizing Relational Capital	Long Term Relation
Static Knowledge	Transfer Approach	Dynamic Knowledge

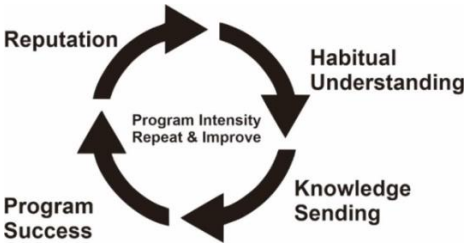


Figure 5. Improving and empowering cycle

The foundation of language can be based and relevant on its transfer of knowledge due to mental restrictions. After that, critical skills must be focused on to elaborate ideas for integrated projects. There are critical skills that provide high quality to figure out what to do when problems are all coming, moving to a comprehensible solution.

Table 2 Knowledge Exchange shows the process of how local partner transforms prom traditional skill bases into valuable skill. The knowledge exchange arose from the production context in the shop floor facility. At that time, Development capabilities are filled by many cases in collaborating situations to realize the whole load to realize the target. APEK is already involved in production near the leading company to supply components by manufacturing with lathe-mill tools, welding, cutting machines, bending machines, spraying, etc. APEK are trustworthy partners on many projects that put a variety of time and specific product challenges. A closer observation at APEK can list issues from Table 1. APEK has worked with 500 project association members who have collaborated in the development of specific component modules, which can be seen in Figure 4. EOMs need skill and knowledge in deep and large scales or levels in primary skill and technology driver, which can be seen in Figure 4, to push and understand the know-how process. APEK participants understand an edge in the know-how of all segments of that product. The participants in the focus group discussion elaborate on all production processes: forming, stamping, milling, bending, cutting, etc., becoming basic skills of participants. Material knowledge and properties also provide additional fundamentals to their expertise. In production planning and Japanese-styled management, the participants deploy a simple way to provide guidelines for production.

Knowledge from the sender with deep and perceived comprehension. A well-versed situation indicates technically manageable on the production floor to be able to know detailed drawing, master production planning, Kanban system, resource shift, particle treatment, and decision-making concepts. The receiver party plays a key role in collaborating readily. Besides, the Sender party with Japanese leadership is credible to transfer the knowledge fully understood and proven vocational style.

C. Production Floor and Continuous Improvement

Process of disseminative and absorptive need adjustment for distinctive purposes of engineering, manufacturing, and operating. Specific faults or rework are a sign of going to maturity collaborations. Knowledge sender based on behavioral and intensive vocation knows how continuous improvement works properly.

The participants confirmed the cycle of improvement and empowerment. The early step results in a need for more interpretation from the knowledge receiver. Tracing a lack is a positive way to empower repeatedly with the contrary of negative impact. The unsatisfactory and incomplete transfer needs a self-continuous cycle to improve and discover a high-quality improvement. The development phase is a start to interpenetrate and monitor the findings that solve the problem and the next steps. The participants, with peer discussion, explore the core of the problem and struggle with transfer success. Peer Discussion designs the new knowledge and how the joint transfer works properly and answers much skepticism. In progress, sometimes skeptical conditions became a barrier syndrome to applying for transfer. Willingness and bushido mentality increased the understanding of technique, method, tool, and perspective.

Figure 5 in a closer observation sketch about the obstacle of the early phase can become the most significant issue in processing the transfer of knowledge. Program intensity and repeat improvement can be block mentality, even earlier to collaborate that different knowledge must be captured. Transfer of knowledge needs an intensive mode that the knowledge and skill can meet. The

long-running process and detailed requirements become the point to be able to adopt the program's success. In the next step, APEK needs a process of habitual understanding to explore many jobs to produce specific products. It is easier to compare with program intensity that needs highly motivated conditions and focusing intensely. The success stage will make APEK inherit good management, purchasing, and new joint product processes. Therefore, the leading company continuously invest much valuable knowledge to local partners in term of efficiency and effectiveness.

D. Business Acceptance and Ratio

Referring to business feasibility, sale capacity, capital capacity, and education profile which can be seen in Table 2, Table 3, and Table 4, we can elaborate on which business acceptance to PD collaboration notes confidence level and how cost-benefit calculation appears as a good profit comparing to the same case for the OEMs. OEMs need economic scale to deploy business with big expenditure capital. The ecosystem can be maintained by an international supply chain to absorb many products by APEK. Without an international supply chain, business by APEK failures cause internal saturation. The international supply chain will improve the business by new knowledge transfer regularly so that APEK increases knowledge level yearly. The OEM industry must improve its skills and knowledge to get the confidence of its collaborators.

Table 3. Sales capacity

Sales Capacity / Years	Total	Potential Market
< 600.000.000 IDR	10 Company	6.000.000.000 IDR
600.000.000 IDR – 2.400.000.000 IDR	19 Company	13.500.000.000 IDR
2.400.000.000 IDR – 6.000.000.000 IDR	15 Company	53.000.000.000 IDR
6.000.000.000 IDR – 12.000.000.000 IDR	8 Company	72.000.000.000 IDR
>12.000.000.000 IDR	11 Company	132.000.000.000 IDR

Table 4. Capital capacity

Capacity/Capital	Total	Number of Employees
< 250.000.000 IDR	19 Company	190 Employees
250.000.000 IDR – 500.000.000 IDR	15 Company	225 Employees
500.000.000 IDR – 1.000.000.000 IDR	8 Company	160 Employees
>1.000.000.000 IDR	11 Company	825 Employees

Table 5. Education Profile

Educational Profile	Percentage
Elementary School / Junior Highschool	34%
Senior Highschool	60%
Polytechnic	5%
Bachelor	1%

Table 6. Percentage of Added Value

Machine Name	%	Added Value Coefficient by Profit	Percentage of Value
Fabrication	29%	3	87%
Machining	21%	5	104%
Maintenance	7%	3	22%
Machine Maker	6%	10	59%
Stamping part OEM part	1%	5	7%
Platt Hard Chrome	1%	5	4%
Tech Supplier, etc	13%	5	63%
Automation System	7%	10	67%
Jig, Die, Mould Maker	6%	10	59%
Construction	10%	3	29%

There are relations between knowledge improvement with trustworthy business. Japan successfully brought together Indonesian - Collaboration in the organizational function of technical carriers and candidate receivers. Five decades in Indonesia, Japan could build knowledge between sender and reciprocate in collaborating within receiver-sender knowledge.

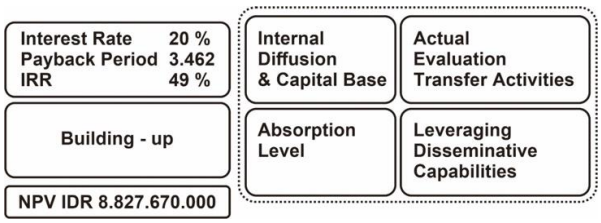


Figure 6. Business ratio and feasibility

A business model with added value percentage, which can be seen in Table 5, a total of 501%, and modeling in cash flow, investment, business ratio, and profit are explained in Figure 5. Also, how the ultimate action needs to develop so that the business can be executed. APEK has made consolidation of transfer knowledge with business aspects, sustainability of knowledge, process diffusion, etc. It is cycled to execute every project to become a new leveraging process for serial dissemination of knowledge by coaching, training, vocational education, and project team. Business measures and procedures are based on Figure 6, and the underlying points are to be calculated.

E. Technical Aspects and Low-Cost Components

APEK succeeded in building an ecosystem of technical collaborators with more profound knowledge that is proven in production and can convince the partner. APEK can produce evidence from business transactions, all components, excluding battery. The cost of components is very competitive and is considered a valuable component that explains how disseminative capabilities meet absorptive capabilities. Nevertheless, this capability is separate from the set of thinking propositions in the design of products and work that has a high impact on the industry. APEK has contributed to opening a low labor market in the industry on the performance of absorptive capabilities. It is a distinctive phase of inter-organizational knowledge success in the business part, and the comparative side can be applied. Also, the receiver can absorb processes of encoding messages or technology transfer from the carrier. Technology transfer will only succeed if the technical aspect meets the business aspect, although the receiver understands the technology context and ongoing successful novice issues.

APEK can produce components manufactured by the Karawang Park Ecosystem as a result of the transfer of different skills and knowledge with existing and new capabilities (see Figure 7). This, in turn, organization of collaboration is required with knowledge exchange. APEK, through the market, must bond with each other to manage valuable skills and knowledge. Big Industries need excellent collaboration and an ecosystem for sustainable

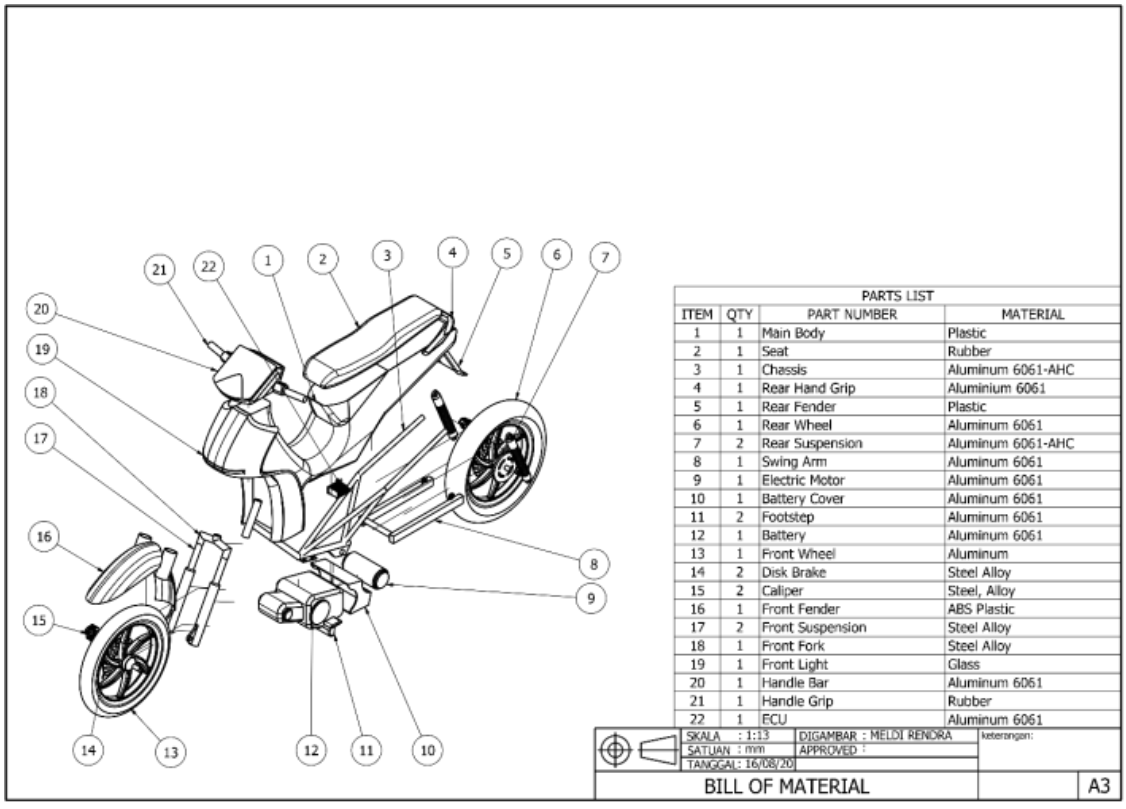


Figure 7. Completed component from absorptive capabilities

business. The competitive mode was just conducted in the past; nowadays, penetrating knowledge in collaboration is a new perspective to gain over time. At the time, knowledge based on economy is considered to be a great perspective in terms of quality, applicability, and future business satisfaction.

IV. CONCLUSION

Selecting transfer knowledge involves social capital from the receiver. The receiver background has worked in a Japanese company that has adopted a work culture and mindset, accelerating the process of knowledge transfer from the sender. The effectiveness and efficiency of the transfer process depend on the communication aspect of engineering, addressing a message to contextualize how the knowledge can operate on the shop floor and to think logically in production and process, especially in Japanese-styled management. Knowledge limitation depends on a critical key of leverage that gives magnitude. Avoiding overloaded material is a task that only addresses good material selection to enrich the knowledge. Adequate material transfer can be addressed so that the carrier-receiver relation becomes effective and efficient to realize. Knowledge transfer works to ensure specific tasks are assigned to elected people with appropriate knowledge. Appraisal for the knowledge base is beneficial to identify the gap between the receiver portfolio and the sender portfolio and how to execute strengths and weaknesses at the given task. APEK has knowledge assets to be mixed with the leading Japanese company to push added value fully deployed in production and business. New technology and knowledge are always required to ensure continuous improvement to fill the gap between market demand and technology capabilities. Sender always has an interest and sensitivity to fluctuating markets and a tendency to make specific programs to elaborate absorptive capabilities and disseminative technology. The structure of knowledge is deployed to mix from receiver-sender portfolios that combine organizational aspects to present new added value as the attribute in the market. Rightly adjusted transfer can resolve many ideas of portfolio concretizing in component requirements. Phenomena of business must fulfill the sender-receiver expectations and feasibility of techniques that derivate component development and develop contextual skill and knowledge.

Relation effort and profit impact to the business that decreases negative list (tight schedule, limited resources, neglecting input, surrender) and increase transferring contextual knowledge. The completion trap presents when there is a conflict between transfer and contextual knowledge to enable added value. To avoid a lack of contextual knowledge, APEK found optimum/maximum capability from the knowledge sender, which explored and resolved detailed specifications and completed knowledge. In the Findings, successful transmission of knowledge relates to trade-offs between certain margins and details of specifications. APEK tries to get an optimum/maximum in contextual business. Businesses must capture extensive knowledge, documents, on-site operation, and sender-receiver-solving tasks and prevent interaction-poor processes in anticipation of tasks. Market tendencies are derived by the value chain product life cycle in new compound designs in research schedules in relative absorptive capacity.

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