

# JICA Global Agenda for No.4 Private Sector Development

## Strategy for Africa Kaizen Initiative (AKI)



SUSTAINABLE  
DEVELOPMENT  
GOALS



Japan International Cooperation Agency (JICA) works toward the achievement of the Sustainable Development Goals (SDGs).

2023.07

# 1. Purpose of the “Cluster Strategy”

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## 1.1 Purpose of the “Cluster Strategy”

The purpose of this strategy is to contribute to improvement of competitiveness<sup>1</sup> of African companies by building a mechanism for disseminating in the African region the “Kaizen approach,”<sup>2</sup> which encompasses “Kaizen”<sup>3</sup> that started off as a quality/productivity improvement approach as well as enhancement of companies’ business management capacity and their financial access capacity. By disseminating the Kaizen approach, this strategy further aims to realize workers’ decent work, and to ultimately achieve sustainable industrial promotion in African countries.

## 1.2 Overview

African companies have weak international competitiveness, and most of them have been unable to participate in the global value chain (GVC). The background to this are African companies’ problems including low quality/productivity and inefficient business management. The Kaizen approach is an effective approach to support resolution of problems such as low quality/productivity and business management capacity and limitation of financial access. This strategy aims to continue the dissemination of the Kaizen approach in Africa and strengthen the competitiveness of African companies together with the African Union Development Agency-New Partnership for Africa’s Development (AUDA-NEPAD) and other development partners, by, for example, developing human resources that disseminate the Kaizen approach, enhancing the capacity of organizations that disseminate the Kaizen approach (hereinafter referred to as “Kaizen approach dissemination organizations”), and promoting dissemination of the Kaizen approach among companies, over the time frame until 2030.

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<sup>1</sup> This refers to a company’s capabilities to develop products and services for profit in domestic or overseas related markets.

<sup>2</sup> The Kaizen approach includes the following: ① Kaizen (the quality/productivity improvement domain; so-called on-site Kaizen)”; ② the business management domain (financial management, business strategy, human resource management, marketing, etc.); and ③ financial access (activities such as formulation of business plans and preparation of necessary materials for acquiring funds from financial institutions). Its targets are mainly SMEs in the manufacturing industry, but also include the service industry, public organizations, and large companies.

<sup>3</sup> Kaizen refers to the entire system of knowledge that includes a wide range of methods and techniques by which all members of an organization acquire an attitude to constantly pursue higher-order quality and productivity and carry out concrete activities that contribute to quality/productivity improvement. The targets of Kaizen are mainly SMEs in the manufacturing industry, but also include the service industry, public organizations, and large companies.

This strategy also contributes to improvement of companies' production management capacity and business management capacity, which is at the core of assistance under JICA Global Agenda "Private Sector Development: Fostering private enterprises and supporting economic growth in developing countries." As sustainable development of private companies, that is to say industrial promotion, is indispensable for achieving economic growth, this strategy to create a mechanism for effectively promoting growth of private companies and provide comprehensive assistance, including the business management aspect, through dissemination of the Kaizen approach contributes to the Global Agenda as well. Furthermore, the strategy also contributes to Goal 8 "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all"<sup>4</sup> and Goal 9 "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation"<sup>5</sup> of the Sustainable Development Goals (SDGs).

## 2. Current Situation and Development Approaches

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### 2.1 Current status of development issues

<Importance and challenges of private companies/SMEs in developing countries><sup>6</sup>

Growth of private companies is the engine of self-sustained industrial promotion, job creation and expansion, and higher national income. It is the foundation that supports the public finances or national revenues. Developing countries are faced with a range of challenges that often delay their economic growth. External environments which are beyond the control of private enterprises (i.e. industrial and investment policies and the business environment) need to be improved and basic knowledge, technologies, expertise,

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<sup>4</sup> Target 8.2 "Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors"; Target 8.3 "Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services."

<sup>5</sup> Target 9.3 "Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets."

<sup>6</sup> In this strategy, micro-enterprises are deemed to be included in SMEs.

financial access, and human resources, all of which are the basis for business growth, need to be learned, increased, and developed.

Small and medium-sized enterprises (SMEs) account for more than 90% of the companies worldwide, and create 50–60% of the total employment.<sup>7</sup> In developing countries as well, SMEs command an important position in terms of the numbers of companies, workers, and places of business, and the ratio of value added in the national economy (e.g., in Ghana, SMEs account for 80% of the employment and 70% of the private sector production output<sup>8</sup>).

### <Status and challenges of the industrial structures and manufacturing industries in Africa>

There are three major challenges facing the industrial structures and manufacturing industries in Africa: high dependence on extra-regional trade; low-technology industries; and low manufacturing value added.

The first challenge is the high dependence of African industries on extra-regional trade. According to the United Nations Conference on Trade and Development, the percentages of intra-regional trade in the respective regions of the world during 2015–2017 were 65% in Europe, 61% in Asia, and 47% in the Americas, but the percentage of intra-African trade was only 15%. The trade structure of African countries is highly dependent on extra-regional trade. In many African countries, most of the export items are primary products with no value added, and consumer goods necessary for everyday lives are imported from outside the region. African countries, which lack diversity in industries and have economic structures similar to their neighboring countries, have difficulty identifying their comparative advantages even under the free market. This situation makes it difficult for division of processes across national borders to develop.<sup>9</sup>

The second challenge is the low industrial level of the manufacturing industries that create value added (low-technology industries) in Africa. Based on the technologies required, OECD (2011) classifies the required technologies and industries into four categories according to what is manufactured.<sup>10</sup> Of

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<sup>7</sup> United Nations Information Centre (2018) "United Nations / Facts and Figures of the Sustainable Development Goals (SDGs) (December 24, 2018)" ([https://www.unic.or.jp/news\\_press/features\\_backgrounder/31591/](https://www.unic.or.jp/news_press/features_backgrounder/31591/)).

<sup>8</sup> Ghana (2017) "National Micro, Small and Medium Enterprises Policy."

<sup>9</sup> Ministry of Finance (2021) "Ahurika tairiku jiyū bōekiken (AfCFTA) ni yoru Ahurika keizai tōgō e no tenbō to kadai" (Outlook for and challenges of African economic integration through the African Continental Free Trade Area [AfCFTA]), *The Finance*, March 2021 issue.

<sup>10</sup> Low-technology industries: recycling; wood, pulp, paper, paper products, printing, and publishing; food products, beverages, and tobacco; and textiles, textile products, leather, and footwear

Africa's manufacturing value added as a proportion of GDP,<sup>11</sup> 58.2% is created by low-technology industries, 22.6% by medium-low-technology industries, and only 19.2% by medium-high and high-technology industries.<sup>12</sup>

The last challenge is the low value added in African manufacturing industries. Africa's manufacturing value added, which indicates the level of industrialization, is low at less than 2% of the world's total manufacturing value added. According to the Industrial Development Report<sup>13</sup> of UNIDO (2018), which focuses on manufacturing industries of countries around the world, the manufacturing value added per capita is less than \$100 in 13 countries among the 29 African countries (for reference, there is only one such country among the 17 Asian countries/regions), with the value added exceeding \$1,000 in only two countries among the 29 countries: \$1,441 in Swaziland and \$1,291 in Mauritius (for reference, there are seven such countries among the 17 Asian countries/regions: \$9,536 in Singapore, \$8,495 in Japan, \$7,336 in Republic of Korea, \$4,643 in Taiwan, \$2,533 in Malaysia, \$2,047 in China, and \$1,657 in Thailand).

### <Status and challenges of employment in Africa>

According to ILO (2015), the unemployment rate in Sub-Saharan Africa in 2015 was 7.4%, exceeding the world's 5.8%.<sup>14</sup> Even in 2023, the unemployment rate in the African region is likely to remain at 7%,<sup>15</sup> with no signs of a decline. In

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Medium-low-technology industries: building and repairing of ships and boats; rubber and plastics products; coke, refined petroleum products, and nuclear fuel; other non-metallic mineral products; and basic metals, and fabricated metal products

Medium-high-technology industries: electrical machinery and apparatus; motor vehicles, trailers, and semi-trailers; chemicals excluding pharmaceuticals; railroad equipment and transport equipment; and machinery and equipment

High-technology industries: aircraft and spacecraft; pharmaceuticals; office, accounting, and computing machinery; radio, TV, and communications equipment; medical, precision, and optical instruments (<https://www.oecd.org/sti/ind/48350231.pdf>).

<sup>11</sup> The manufacturing value added is represented by the indicator "Manufacturing, value added (MVA) (% of GDP)" in the form of manufacturing value added as a proportion of GDP. The MVA is the net output of a manufacturing industry after adding up all outputs and subtracting intermediate inputs (<https://databank.worldbank.org/metadataglossary/world-development-indicators/series/NV.IND.MANF.ZS>).

The MVA as a proportion of GDP generally represents the role of the manufacturing industry in the economy and domestic growth. The MVA per capita is a basic indicator for measuring the level of industrialization factoring in the size of the country's economy, which is statistically used, for example, for grouping countries according to their industrial development stage (<https://www.mofa.go.jp/mofaj/gaiko/oda/sdgs/statistics/goal9.html>).

<sup>12</sup> UNIDO (2018) "Industrial Development Report 2018." As an average for industrialized countries, 49.9% of the manufacturing value added is created by medium-high and high-technology industries.

<sup>13</sup> *Id.* Table 8.3.

<sup>14</sup> THE WORLD BANK (<https://data.worldbank.org/region/sub-saharan-africa>).

<sup>15</sup> ILO (2019) Africa's employment landscape – ILOSTAT (<https://ilostat ilo.org/africas-changing-employment-landscape/>).

addition, the share of youth<sup>16</sup> not in employment, education, or training is reported to reach 22%.<sup>17</sup> Furthermore, the World Bank estimates that Africa's working-age population will increase by 70% (450 million persons) from 2015 to 2035, indicating that the population seeking jobs, including the rapidly expanding youth population, will increase further.<sup>18</sup>

Nakamura (2015) points out the importance of manufacturing industries in employment as follows: "Manufacturing industries, which intensively use labor in the production processes, create many jobs. In developing countries where the average educational level of workers is not so high, the existence of labor-intensive light industries creating a large amount of simple labor are indispensable for receiving less-skilled workers shifting from the agricultural sector to the industrial sector."<sup>19</sup> However, among those newly entering the labor market in Africa, 75% are self-employed or hired by micro-enterprises, 20% work in service industries, and only 5% work in manufacturing industries, indicating the difficulty that Africa faces in creating jobs in manufacturing industries. With a prediction that less than a quarter<sup>20</sup> of Africans who will reach working age over the next two decades can find decent work, employment in Africa is presenting a problem both in terms of the number and quality of jobs.

### <Situation surrounding companies in developing countries/Africa>

With an aim to implement industrial promotion through sophistication and diversification of industries, African countries are promoting trade and investments and fostering domestic industries, and many of them have set up one-stop services that enable users to take procedures for starting a business at one spot. However, many companies fail because of inefficient business management due to lack of know-how and technologies, not being able to obtain loans from financial institutions, and other causes. For example, in Cameroon,

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<sup>16</sup> The definition of "youth" is varied. For example, the United Nations defines it to be those aged between 15 and 24, but here, the definition in the African Youth Charter, which is those aged between 15 and 35, is used ([https://www.youthpolicy.org/wp-content/uploads/library/2006\\_African\\_Youth\\_Charter\\_Eng.pdf](https://www.youthpolicy.org/wp-content/uploads/library/2006_African_Youth_Charter_Eng.pdf)).

<sup>17</sup> *Id.*

<sup>18</sup> THE WORLD BANK (2014) "Youth Employment in Sub-Saharan Africa" (<https://openknowledge.worldbank.org/bitstream/handle/10986/16608/9781464801075.pdf?sequence=1&isAllowed=y>).

<sup>19</sup> Institute for International Monetary Affairs (2015) "Hinkinsō wo kakaeru kuni ni okeru sangyō hatten no kangaekata: teishotoku/teii-chūshotoku-koku to Adamu Sumisu no keizai hattenkan" (Approach to industrial development in countries with poverty groups: low-income/lower-middle-income countries and Adam Smith's economic development perspective) ([https://www.iima.or.jp/docs/newsletter/2015/NL2015No\\_10\\_j.pdf](https://www.iima.or.jp/docs/newsletter/2015/NL2015No_10_j.pdf)).

<sup>20</sup> Modern Diplomacy (2019) "AFRICA Avoiding a Jobs Crisis in Africa is a Global Responsibility" (January 23, 2019) (<https://moderndiplomacy.eu/2019/01/23/avoiding-a-jobs-crisis-in-africa-is-a-global-responsibility/>).

60% of companies fail within three years after the start-up.<sup>21</sup> In addition, it was found that the production outputs of many micro and small enterprises in Africa have steadily increased since 2000, whereas sales and profits have dropped,<sup>22</sup> suggesting that there is a need to improve companies' business management status.

The factors causing companies to fall into such a situation can be divided into internal factors and external factors.

Internal factors include lack of managers' and workers' knowledge and skills concerning productivity improvement and lack of access to financial services. For resolving the problems of internal factors, provision of business development services (BDS) by public and financial institutions and support from financial institutions, including microfinance institutions, will be important. However, as SMEs have less management resources (particularly funds) than large companies, it is difficult for SMEs that have no achievements or collateral to obtain loans from financial institutions.

External factors include complicated administrative procedures and poor infrastructure.<sup>23</sup> JETRO (2022)<sup>24</sup> also points out, while recognizing the potential of the African market based on the population increase, that the rapid population increase "could further aggravate existing problems, such as urban expansion and shortage of infrastructure including electricity, water, schools, and hospitals, and further deteriorate the business environment." For resolving the problems of external factors, it is necessary to formulate policies, laws, and systems for developing the business environment, and to improve the abilities of government organization officials who will formulate and implement them, for example. Nevertheless, these factors also do not change immediately with actions by SMEs, and time is required to address them.

Furthermore, labor cost levels in African manufacturing industries are high compared to those in Asian countries. This not only makes Africa less appealing as a production base, but also squeezes the business management of African

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<sup>21</sup> JICA (2017) Ex-ante evaluation paper "Integrated SME Promotion Project with the Enhancement of KAIZEN in Cameroon" ([https://www2.jica.go.jp/ja/evaluation/pdf/2017.1700407.1\\_s.pdf](https://www2.jica.go.jp/ja/evaluation/pdf/2017.1700407.1_s.pdf)).

<sup>22</sup> JICA Ogata Sadako Research Institute for Peace and Development, "Aiming to Develop Industrial Clusters in Africa" ([https://www.jica.go.jp/jica-ri/ja/news/topics/special\\_topics.html](https://www.jica.go.jp/jica-ri/ja/news/topics/special_topics.html)).

<sup>23</sup> According to JETRO (2022) "FY2021 Survey on Business Conditions of Japanese Companies in Africa," when looking at risks of investing in Africa by item, among the risks relating to "development and implementation of regulation or legislation," "complicated administrative procedures" accounted for the largest share at 64.4%." As for risks related to "poor infrastructure," "electrical power" accounted for the largest share at 75.7%, and for risks related to "hiring and workforce problems," "securing human resources" commanded the largest share at 64.6%.

<sup>24</sup> JETRO (2022) "Jinkō zōka ni miru Ahurika shijō no kanōsei to kadai" (Potential and challenges of the African market from the perspective of population increase).

companies, and makes their business continuation and expansion difficult (Table 1 "Labor cost levels in major Asian and African countries (2014)" below).

Table 1: Labor cost levels in major Asian and African countries (2014)

Country	City	Labor cost (manufacturing industry) USD/month
Cote d'Ivoire	Abidjan	161~410
Kenya	Nairobi	206~738
South Africa	Johannesburg	728
Myanmar	Yangon	127
Vietnam	Hanoi	173
India	New Delhi	369
China	Shanghai	474

(Source: Created by JICA based on Ministry of Economy, Trade and Industry "White Paper on International Economy and Trade 2016")

While taking such situation into consideration, promotion of SMEs needs to be examined from multiple aspects, such as self-help efforts of companies to improve their capacity by themselves through various ingenious ideas, the presence of public organizations that support such efforts, and utilization of SME support service providers, including those of the private sector.<sup>25</sup>

## 2.2 Approach of development cooperation

### <JICA's Kaizen approach>

The Kaizen approach refers to the entire system of knowledge that includes Kaizen, which aims at quality/productivity improvement and has been implemented mainly at work sites of manufacturing industries, as well as a wide range of methods and techniques for carrying out concrete activities that contribute to improvement of the business management capacity and financial access capacity.<sup>26</sup>

<sup>25</sup> JICA (2013) "Thematic guidelines in the SME promotion domain."

<sup>26</sup> It also conforms to AUDA-NEPAD's Accelerated Industrial Development for Africa (AIDA) (<https://au.int/en/ti/aida/about>).



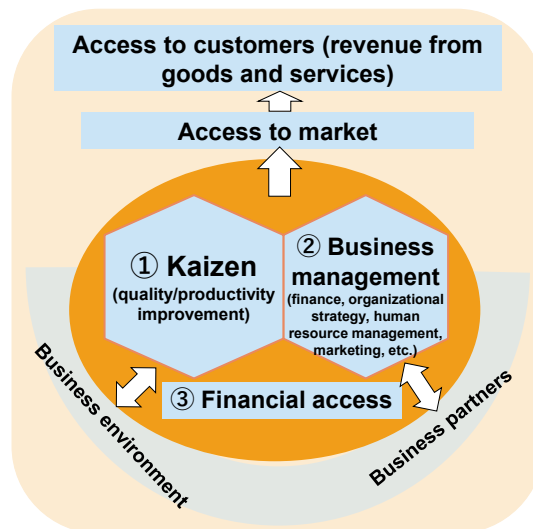


Figure 1: Outline of the Kaizen approach

JICA's Kaizen approach is as shown in Figure 1. Under this approach, companies, in consideration of the business environment and in coordination with their business partners, implement ① Kaizen (quality/productivity improvement), ② business management enhancement, and ③ enhancement of the financial access capacity, access customers through markets, and engage in improvement of firm capabilities for gaining profits from customers in exchange for goods and services. The specific contents of the approach are as follows.

- ① Capacity enhancement through Kaizen (quality/productivity improvement)  
The basic concepts and methods of Kaizen to be implemented at work sites, such as 5S, visualization, and Muda-Dori (waste elimination), can be introduced regardless of the legal personality, business type, and company size. Basic guidance will be provided for the introduction. For companies to which Kaizen has been disseminated and whose Kaizen has become mature, guidance will be provided on application of Kaizen for reinforcement of the management system for overall production activities, such as layouts, Dandori, and statistical quality control.
- ② Capacity enhancement relating to business management  
Guidance will be provided for resolution of a company's individual business management issues, such as those related to finance, business strategies, human resource management, and marketing, that will lead to increasing sales and profits, regardless of the legal personality, business type, and company size.
- ③ Capacity enhancement relating to financial access  
For SMEs, support will be provided for preparation of materials to be submitted to financial institutions, companies seeking loans will be

screened and their problems will be extracted, guidance will be provided on formulation of business plans that will pass financial institutions' examination, and SMEs will be introduced to financial institutions, regardless of the legal personality, business type, and company size. As the company side (money borrower) has problems such as "lack of skills to prepare materials for loan decisions," "lack of skills to formulate business plans for the future," and "being unable to obtain information on financial institutions and schemes," effort will be made to resolve problems of the company side in particular. Meanwhile, the financial institution side (lender) also has problems such as "lack of credit management capacity," "insufficient credit guarantee system," and "financing examination criteria which place importance on collateral in loan execution."<sup>27</sup> Therefore, support is also needed to strengthen the structure of the financial institution side. However, the Kaizen approach in this strategy will not include initiatives concerning reinforcement of financial institutions' operating structure, and activities will be conducted for providing necessary support and guidance for resolving problems of the company side (support for preparing a business plan document which comprehensively and concisely states the need for funds and the business policy, etc.).

#### **<Achievements of JICA's assistance relating to the Kaizen approach (non-African regions)>**

JICA has provided Kaizen-related cooperation in various regions, starting with Asia in the 1980s. From the 1980s to the 1990s, manufacturing industries of Japan and other countries actively advanced to the Southeast Asian region in particular. The countries in the region all faced the challenges of expansion of transactions with these entering companies and improvement of competitiveness against neighboring countries. Many of the implementing agencies already had a certain level of past experience with Kaizen, so projects in Singapore and Thailand focused on productivity improvement. On the other hand, in countries such as Indonesia, Thailand, the Philippines, and Malaysia, Kaizen was often incorporated as part of cooperation relating to elementary technologies for dies, welding, casting, etc. Cooperation in the Latin America and the Caribbean region became full-fledged in the 1990s onward, and technical cooperation projects were implemented in several countries. Many of these

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<sup>27</sup> JICA (2020) "Final report on the data collection survey for considering financial access improvement methods in the African region"  
(<https://openjicareport.jica.go.jp/pdf/12356127.pdf>).

countries conducted economic reform, with particular progress being made in trade/investment liberalization and privatization/deregulation. In these countries, cooperation has been provided with an aim to achieve quality/productivity improvement of SMEs that will face international competition due to economic reform. Such cooperation included promotion of companies' quality/productivity improvement, capacity enhancement of institutions and organizations, and building of related systems.<sup>28</sup>

### <Achievements of JICA's assistance relating to the Kaizen approach (African region)>

In Africa, technical cooperation projects have been implemented in nine countries (Egypt, Ethiopia, Kenya, Tanzania, Zambia, Ghana, Tunisia, Cameroon, South Africa), starting with a technical cooperation project for dissemination of Kaizen (quality/productivity improvement) in Tunisia (2006). Also implementing third-country training program in Japan and third countries for other African countries, JICA's achievements as of 2022 include development of about 1,400 Kaizen trainers in 27 countries including countries participating in third-country training program in Japan or third countries (Figure 2 "African countries receiving Kaizen approach assistance" below),<sup>29</sup> with approximately 18,000 beneficiary companies and more than 280,000 beneficiary company managers and workers. Since 2017, JICA has positioned the Africa Kaizen Initiative (AKI) as an international platform for disseminating the Kaizen approach in Africa. Together with related organizations and persons involved, it has promoted standardization and awareness raising of the Kaizen approach in countries where JICA does not directly implement projects. At the same time, the activities of Japan Overseas Cooperation Volunteers<sup>30</sup> and Senior Volunteers<sup>31</sup> in Africa also contribute to dissemination of the Kaizen approach.

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<sup>28</sup> Kodama Akihiko (2018) "Cooperation on Kaizen: So Far, Now, and Then?" ([https://www.jstage.jst.go.jp/article/jids/27/2/27\\_41/pdf](https://www.jstage.jst.go.jp/article/jids/27/2/27_41/pdf)).

<sup>29</sup> In some of the 27 countries which only participated in third-country training programs, Kaizen has not been sufficiently disseminated and there is a need to activate it going forward.

<sup>30</sup> According to the returnee database of Japan Overseas Cooperation Volunteers, there is a record of 16 volunteers having engaged in "Kaizen" dissemination activities in Ghana, Kenya, Zambia, Tanzania, and Botswana since 2010. If the scope is widened to include Kaizen methods "5S" and "Seiri Seiton" (sort and set), there is a record of 136 persons having engaged in "5S" dissemination activities in Uganda, Ethiopia, Ghana, Gabon, Kenya, Zambia, Senegal, Tanzania, Burkina Faso, Benin, Botswana, Madagascar, Malawi, Mali, and Morocco, and 31 persons having engaged in "Seiri Seiton" in Ghana, Kenya, Zambia, Djibouti, Sudan, Madagascar, Malawi, Mali, and South Africa.

<sup>31</sup> According to the returnee database of Japan Overseas Cooperation Volunteers, there is a record of five persons having engaged in "5S" dissemination activities in Kenya, Zambia, Senegal, and Botswana since 2010.

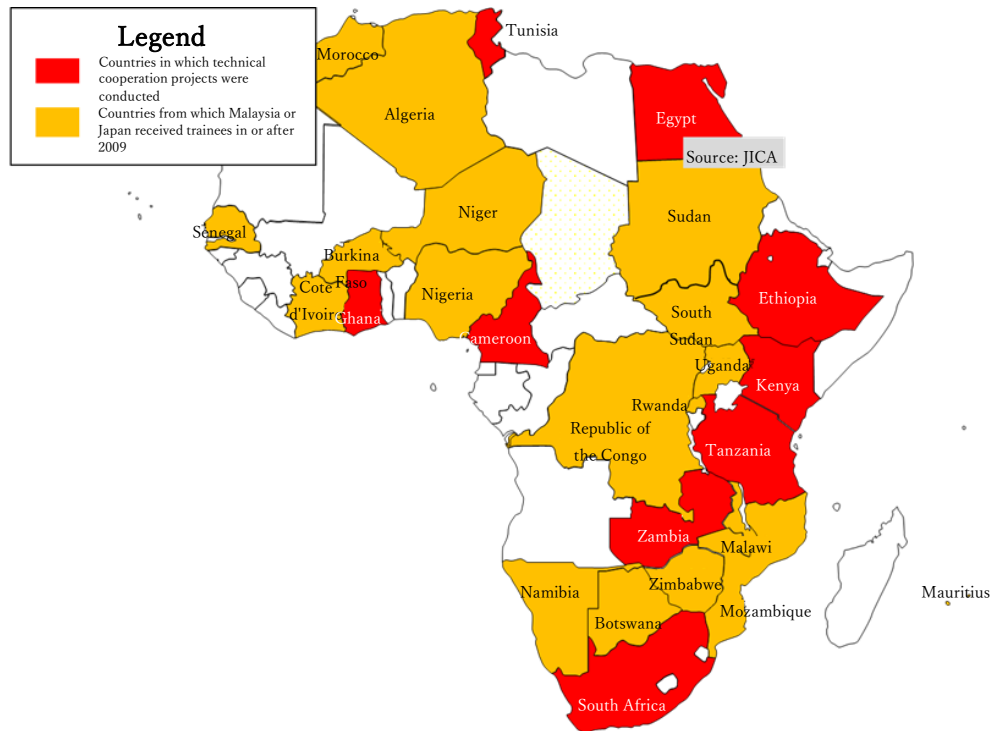


Figure 2: African countries receiving Kaizen approach assistance

Kaizen of the Kaizen approach has a past record of being applied in various sectors, including the service industry, administration, health/medical care, and education. In the health sector, for example, starting with the introduction of Kaizen in hospitals in 15 African countries through the "Clean Hospital Program," a total of 45 related technical cooperation projects and expert dispatches have been implemented as of 2022, and Kaizen activities are carried out in about 500 health and medical care facilities in 21 countries including African and Asia.<sup>32</sup>

Meanwhile, in relation to business management, efforts have been made mainly in Ethiopia, Cameroon, Ghana, and Kenya to enhance the organizational capacity of BDS-providing organizations by such measures as formulating their strategies and conducting training for their staff to enhance the BDS-providing capacity (classroom lectures and guidance for pilot companies). For example, in the "Project for Formulating a Strategic Model for Quality/Productivity Improvement through Strengthening BDS for MSEs in Ghana" (2015), the endline survey revealed that the trained staff's self-evaluation of their BDS provision/facilitation capacity improved by 77%, and 11 staff members were

<sup>32</sup> Challenges involved in Kaizen approach dissemination in the health sector include the fact that Kaizen in the health sector is intended for improving the medical care quality and patient services provided at hospitals and is unsuitable for improving the competitiveness of companies, and that public hospitals have little authority over independent budgeting and initiatives, and cannot decide on these matters at their own discretion.

certified as trainers having a sufficient capacity to provide BDS to micro and small enterprises. Moreover, in "The Republic of Cameroon Project on Quality and Productivity Improvement (KAIZEN) for SMEs" (2017), Kaizen-focused operational guidelines for BDS provision were formulated, centering on consultant training, which was the key activity of the project.

With regard to financial access, in the "Data collection survey on access to finance in the African region" (2020), factors hindering SME lending on both the demand side (SMEs) and the supplier side (financial institutions, etc.) were analyzed for Kenya and Ghana. In Ghana, a draft collaboration model with financial institutions is being examined, financial institutions that can collaborate are being identified, and necessary capacity enhancement of staff of BDS-providing organizations and of financial institutions is performed for building and operating the model. Also in Kenya, issues concerning financial access have been extracted, and the policy of future measures is being examined and organized through the "Project for enhancing enterprise competitiveness" and "Data collection survey on improvement of companies' access to finance."

#### **<AKI initiatives with AUDA-NEPAD>**

In the Heads of State and Government Orientation Committee (HSGOC) of the "New Partnership for Africa's Development (NEPAD)" held in July 2016, it was approved that the NEPAD secretariat at the time would play the role of disseminating the Kaizen approach in Africa.

The Kaizen approach dissemination in Africa accelerated, following the announcement by then Prime Minister Shinzo Abe that Japan will cooperate with NEPAD and spread Kaizen throughout Africa at the Sixth Tokyo International Conference on African Development (TICAD VI) in 2016. JICA agreed on the launch of the AKI with AUDA-NEPAD in 2017, concluded a letter of agreement, and is collaboratively promoting Kaizen approach dissemination in African countries as a ten-year initiative until 2027. As of 2022, 20 organizations from 16 countries, including countries in which projects relating to the Kaizen approach are conducted and the Pan African Productivity Association (PAPA), participate in the AKI, and about 60 persons carry out its activities as members.

The AKI has three basic policies: (1) to accelerate Africa's industrialization and economic transformation; (2) to create employment and decent work; and (3) to develop innovative human resources with competitive skills. Under these policies, the AKI has four key strategies: ① advocating at the policy level (publication of joint research/books); ② creating and strengthening the functions of centers

of excellence (COE) for Kaizen approach dissemination (promotion of cooperation in third countries); ③ standardizing Kaizen in Africa (formulation of a handbook, creation of an award); and ④ networking with Kaizen promoting institutions around the world (holding of the Africa KAIZEN Annual Conference and Award Ceremony for the Africa KAIZEN Award). In response to a recommendation at the Africa KAIZEN Annual Conference in September 2020, five working groups (WG) have been established. In each WG, parties concerned have continuously discussed development of common curricula and educational materials, institutionalization of key performance indicators (KPI), certification systems, the Africa KAIZEN Annual Conference, and the Africa KAIZEN Award, and materialization of COE, and activities are conducted under the ownership of the Africa side. In addition, the following was newly added to the AKI's key strategies in 2022: ⑤ Enhanced capacity of public private partnership for Africa's industrialization and the African Continental Free Trade Area (AfCFTA) goals.<sup>33</sup>

Meanwhile, when the AKI started, only Kaizen was assumed as the target of dissemination, but in the outcome document of the 2021 Africa KAIZEN Annual Conference, the importance of the Kaizen approach, which includes business management and financial access, was recognized, and its implementation was agreed.

Jin and Ohno (2022) states that Kaizen has become a brand of Japanese cooperation in industrial development in Africa, and the AKI aims to create a momentum to promote Kaizen among policy makers in Africa and to promote the mutual learning of good practices among African countries. In the Kaizen approach dissemination in Asia and Latin America and the Caribbean, Kaizen approach dissemination organizations disseminated the approach to companies in the respective countries, centering on methods of Kaizen, and contributed to improving the competitiveness of those companies. On the other hand, in the Kaizen approach dissemination in Africa, competitiveness improvement of companies in the respective countries is promoted by implementing extensive initiatives in entire Africa based on the AKI's basic policies and key strategies and applying the outcome in those countries.<sup>34</sup>

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<sup>33</sup> Decided at the annual conference between AUDA-NEPAD and JICA on October 31, 2022.

<sup>34</sup> Jin and Ohno (2022) "Overview: Technology Transfer for Quality and Productivity Improvement in Africa and Its Implications for Translative Adaptation," in *Promoting Quality and Productivity Improvement/ Kaizen in Africa*, Chapter 1, ed. Jin Kimiaki and Ohno Izumi (JICA Ogata Sadako Research Institute for Peace and Development).

### <Contribution of the Kaizen approach to industrial promotion>

With regard to expansion of companies' GVC participation through the Kaizen approach, Katai (2020) pointed out that, among Tier-2 suppliers supplying automotive parts to Tier-1 firms in the Mexican automotive industry, suppliers that had introduced the Kaizen approach had better positions in GVC than others.<sup>35</sup> The World Bank (2020) also showed that there is a positive association between growth in productivity and growth in GVC participation of companies.<sup>36</sup> It was also found that firms need to have a certain level of productivity to participate in GVC, but such firms' productivity further improved through the GVC participation.<sup>37</sup>

As the AfCFTA entered into effect, companies' GVC participation and industrial promotion by the Kaizen approach dissemination in Africa are expected to become accelerated through the processes in ①-④ below.

- ① Good-standing companies that have improved their competitiveness through the Kaizen approach will conduct business based on their comparative advantage in each region, and optimize their profits through competition with competitors in the industry.
- ② Trade within the African region will be promoted by the entry into effect of the AfCFTA, and intra-regional trade will become regional value chains, bringing the business networks between African companies closer. Companies that had targeted existing regional economic communities (RECs) will gain access to more extensive markets, and foreign direct investment (FDI) to the African Continent will draw further attention.
- ③ In line with the progress of the AfCFTA, markets within RECs will become activated, the environment for investment in each country will be improved, FDI and companies advancing to Africa will increase, and African companies will participate in GVC. Companies participating in GVC will receive technology transfer from foreign-affiliated companies, improve their expertise in manufacturing technologies, and further increase their competitiveness.
- ④ Through medium- to long-term participation in GVC, African companies will achieve enhancement of their production capacity, such as undertaking higher value added processes.

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<sup>35</sup> Katai (2020) "The Role of Kaizen in Participation in the Global Value Chain: The Case of the Mexican Automotive Industry," in *Workers, Managers, and Productivity: Kaizen in Developing Countries*, Chapter 8, edited by Hosono Akio, John Page and Shimada Go, Palgrave Macmillan.

<sup>36</sup> World Bank (2020) *World Development Report 2020: Trading for Development in the Age of Global Value Chains*, p.69, Fig.3.2.

<sup>37</sup> Urata, S., & Baek, Y. (2021) "Does GVC participation improve firm productivity? A study of three developing Asian countries," Asian Development Bank Institute, No. 1245, April 2021.

Industrial promotion cannot be achieved by the Kaizen approach alone, and multi-faceted support will be required, including trade promotion, improvement of the investment environment, implementation of measures for promoting specific industries, and infrastructure development. However, the Kaizen approach, which does not require large-scale investment, is a measure that can be easily introduced to micro and small enterprises even where conditions for industrial promotion are lacking. Competitiveness improvement through the Kaizen approach is an effective means for companies to absorb technologies and create new values through innovation.<sup>38</sup>

**<Initiatives by development partners>**

Development partners that provide comprehensive support for companies as with the Kaizen approach in Africa include the International Labour Organization (ILO), the World Bank(WB), United Nations Industrial Development Organization(UNIDO), and United Nations Development Programme (UNDP). The programs and target countries of the respective development partners are as shown in Table 2.

Table 2: Development partners' initiatives relating to the Kaizen approach

Development partner	Program	Target countries
International Labour Organization (ILO)	SCORE Training (*1) Start and Improve Your Business (*2)	Ghana, Kenya, Tunisia, Ethiopia, Egypt, South Africa, Cameroon, etc.
	Productivity Ecosystem (*3)	Ghana, South Africa, Tunisia, etc.
	COSHARE (*4)	Mauritius
The World Bank (WB)	1. Micro learning, support for start-ups 2. Dispatch of Japanese Kaizen consultants	Kenya, Burkina Faso, etc.
	BDS impact assessment	Ghana, Kenya, etc.

<sup>38</sup> Kodama Akihiko (2018) "Cooperation on Kaizen: So Far, Now, and Then?" ([https://www.jstage.jst.go.jp/article/jids/27/2/27\\_41/pdf](https://www.jstage.jst.go.jp/article/jids/27/2/27_41/pdf)).



United Nations Industrial Development Organization (UNIDO)	Third Industrial Development Decade for Africa (IDDA III) (2016–2025 development program)	Ethiopia, Egypt, Zambia, Ghana, etc.
United Nations Development Programme (UNDP)	Guidance to entrepreneurs, development of Kaizen consultants, provision of Kaizen programs to companies based on contracts with Kaizen consultants trained	Cameroon, Central Africa, Mali, etc.
French Development Agency (Agence française de développement, AFD)	Provision of BDS programs to companies based on contracts with Kaizen consultants trained	Cameroon
German Federal Ministry for Economic Cooperation and Development (Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung, BMZ) and German Agency for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ)	Provision of training to SMEs * Mainly vocational training for job-seekers	Morocco
Korea International Cooperation Agency (KOICA)	1. Competitiveness enhancement of the leather sector in Ethiopia through a business incubation	Ethiopia, South Africa, etc.

	center 2. Implementation of Saemaul Undong (New Village Movement; income improvement program based on rural development)	
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(Source: JICA)

- (\*1) A program for training consultants capable of providing guidance on Kaizen, quality/productivity improvement, safety, etc.
- (\*2) A training program provided according to the business maturity level, from business plan drafting for those starting a business to business expansion after starting a business.
- (\*3) A program with a broader concept than SCORE, incorporating national policies, business administration, and middle manager training based on enterprise-, sector-, and macro-level analyses.
- (\*4) A training program for the Mauritian tourism and hospitality sectors hit by the COVID-19 pandemic, aimed at effective utilization of resources with focus on safety and sanitation.

In addition, programs and target countries of development partners conducting initiatives that contribute to decent work, which is also a vision of this strategy, are as shown in Table 3.

Table 3: Development partners' initiatives that contribute to decent work

Development partner	Program	Target countries
ILO	Better Work (a program conducted in partnership with the International Finance Corporation [IFC] for promoting decent work in the apparel sector based on "Better Work Strategy 2022–2027 Sustaining Impact") <sup>39</sup>	Egypt, Ethiopia, Madagascar, etc.
United Nations (UN)	The United Nations Global Compact (an initiative conducted in collaboration between the UN and the private sector (companies/non-business entities) with an aim to adhere to the Ten Principles relating to decent work). Africa Strategy 2021–2023 also exists. <sup>40</sup>	Kenya, Nigeria, Morocco, South Africa, etc.

(Source: JICA)

The difference between the support for companies provided by development partners and the Kaizen approach by JICA is in the weight placed on human resource development.<sup>41</sup> Development partners' projects tend to place weight on achieving short-term results through direct provision of BDS to local companies. On the other hand, JICA emphasizes development of structures and mechanisms for implementing the Kaizen approach in the medium to long term in a sustainable manner. It drives corporate demand for the Kaizen approach, develops structures for developing human resources who can continue to meet that demand (hereinafter referred to as "Kaizen approach dissemination personnel") and for such personnel to develop further personnel, and considers it indispensable to build a structure through which the country supports this activity.

As discussed above, Kaizen approach initiatives are becoming widespread in

<sup>39</sup> ILO (2022) *BETTER WORK STRATEGY 2022-2027 Sustaining Impact* (<https://betterwork.org/wp-content/uploads/2022/11/Better-Work-Global-Strategy-2022-27.pdf>).

<sup>40</sup> UN (2021) *THE UNITED NATIONS GLOBAL COMPACT AFRICA STRATEGY 2021-2023* ([https://ungc-communications-assets.s3.amazonaws.com/docs/publications/UNGC\\_Mobilising%20Business%20in%20Africa\\_2021\\_2023.pdf](https://ungc-communications-assets.s3.amazonaws.com/docs/publications/UNGC_Mobilising%20Business%20in%20Africa_2021_2023.pdf)).

<sup>41</sup> "Research on Japanese Experiences of Industrial Development and Development Cooperation: Analysis of Translative Adaptation Processes" conducted by JICA Ogata Sadako Research Institute for Peace and Development over the period from July 24, 2019 to March 31, 2024 also serves as a reference for understanding the approach taken by Japan (JICA) (<https://www.jica.go.jp/jica-ri/ja/research/strategies/20190724-20240331.html>).

Africa, centering on Kaizen (quality/productivity improvement) activities, but initiatives for capacity enhancement relating to business management and financial access are still at the initial stage. As piles of problems remain to be addressed for improving competitiveness (productivity and value added) of African companies, it is necessary to accelerate the current initiatives while considering the variation in the organizational structure for and the progress level of Kaizen approach dissemination between countries and sectors.

## 3. Development Scenario and Key Concepts

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### 3.1 Development scenario

The strategy aims to achieve competitiveness improvement of African companies through Kaizen approach dissemination. This is assumed to be achievable by the following scenario (Figure 3 "Standard scenario chart" below).

Companies and Kaizen approach dissemination organizations, etc. will gain stronger confidence in the Kaizen approach as a method to effectively inspire behavior changes that contribute to improving quality/productivity, business management, and financial access capacity. With this as the starting point, Kaizen approach dissemination in companies will expand. In addition, by strengthening the structure of Kaizen approach dissemination organizations, Kaizen approach dissemination will further expand in area. As companies implement the Kaizen approach, many companies will experience competitiveness improvement, such as enhancement of business management capacity and access to finance, and companies not implementing the Kaizen approach find out about the achievements of those companies and become motivated to implement the Kaizen approach themselves. As a result, the number of companies introducing the Kaizen approach will increase. Furthermore, a mechanism by which the Kaizen approach is provided to companies and other organizations in a sustainable manner, centering on Kaizen approach dissemination organizations, will become established, and fees will be charged for the services and private resources will be utilized, making Kaizen approach dissemination more sustainable. Also, the Kaizen approach will be disseminated to the entire continent of Africa through collaboration with development partners, etc. and dissemination to third countries via COE for Kaizen approach

dissemination under the AKI.

Based on this scenario, the strategy aims to make cooperation also with new countries, while advancing cooperation with African countries that have implemented the Kaizen approach so far. In implementing individual cooperation projects, the recipient country side supports clarification of the country's own medium- to long-term development scenario based on this scenario. In addition, countries that endorse the Kaizen approach and development partners, etc. are also encouraged to apply this scenario to their respective projects.

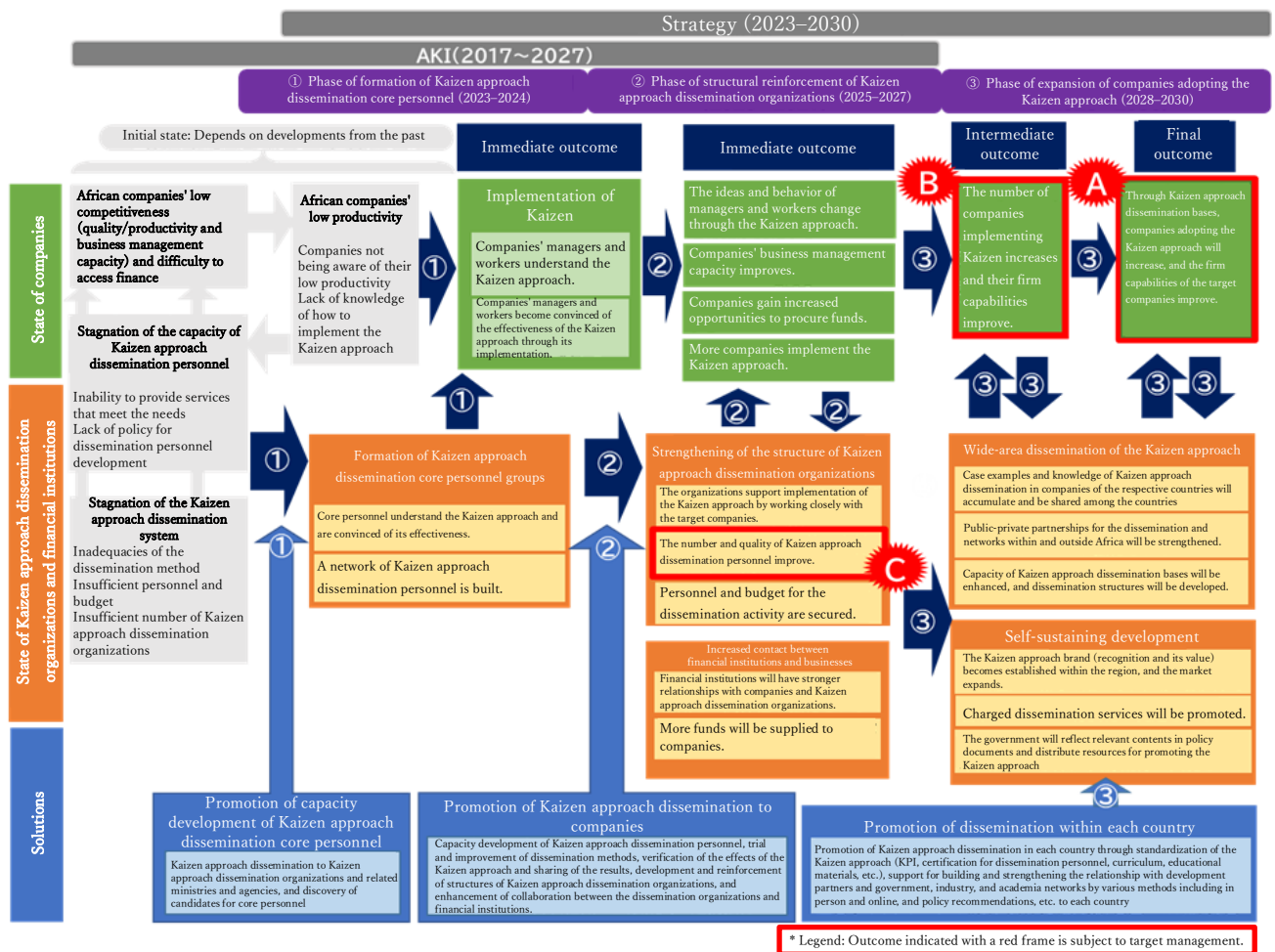


Figure 3: Standard scenario chart

[Initial state (gray parts in the standard scenario chart)]

<State of companies>

African private companies face problems including low quality/production capacity and business management capacity. This is caused by companies' internal factors such as lack of managers' knowledge, workers' skills, funds, and

information, as well as limitations from external factors such as complicated administrative procedures and poor infrastructure.

### **<State of Kaizen approach dissemination organizations and financial institutions>**

As a method to resolve internal factors and achieve competitiveness improvement, Kaizen approach dissemination by Kaizen approach dissemination organizations, etc. is effective. However, Kaizen approach dissemination organizations have many problems including insufficient quality and number of personnel, a gap between the provided services and needs of companies, unestablished dissemination methods and mechanisms, and insufficient budget. Meanwhile, financial institutions cannot acquire sufficient information necessary for making corporate credit decisions, and have problems such as low screening capacity and underdeveloped fund procurement environment.

While recognizing these circumstances, Kaizen approach dissemination is assumed to go through the following phases.

[Phase 1] Phase of formation of Kaizen approach dissemination core personnel [Flow of change shown by arrow ① (both dark blue and light blue) in the scenario chart]

For introduction of the Kaizen approach, the presence of core personnel who intend to disseminate the Kaizen approach in the country is essential. Core personnel refers to personnel who play a core role in disseminating the Kaizen approach. Core personnel belong to a Kaizen approach dissemination organization and formulate plans and build systems for Kaizen approach dissemination. Core personnel take an initiative to develop Kaizen approach dissemination personnel. Kaizen approach dissemination personnel, who are also called Kaizen trainers or Kaizen consultants, are public and private personnel who have the necessary knowledge and skills for introducing the Kaizen approach in companies and other organizations. Core personnel and Kaizen approach dissemination personnel serve as the powerful engine that spreads the Kaizen approach within the country.

In addition, through sharing of knowledge gained by implementation of the Kaizen approach and coordination between organizations, a network is formed among core personnel, Kaizen approach dissemination personnel, and personnel of financial institutions. Kaizen approach dissemination personnel try to disseminate the Kaizen approach by using this personnel network.

Company managers and workers, in collaboration with Kaizen approach dissemination organizations and Kaizen approach dissemination personnel, understand the concept and implementation method of the Kaizen approach, implement the Kaizen approach on site, and if trouble occurs, identify and resolve the problem. Companies that have introduced the Kaizen approach and realized its effects will continue to internally implement the Kaizen approach, and the concept and implementation method will spread to their client companies, etc.

As intervention (solution) for bringing about a change to the next phase, the Kaizen approach will be disseminated in Kaizen approach dissemination organizations and related ministries and agencies, and core personnel candidates will be discovered, for example.

Meanwhile, private organizations and private Kaizen trainers will play the role of core personnel and Kaizen approach dissemination personnel in some countries. In these countries, efforts will also be made to develop private Kaizen trainers.

**[Phase 2] Phase of structural reinforcement of Kaizen approach dissemination organizations [Flow of change shown by arrow ② (both dark blue and light blue) in the scenario chart]**

The number of companies adopting the Kaizen approach increases, the approach takes root as corporate culture, and the behaviors of managers and workers begin to change noticeably. Companies' business management capacity increases due to such change, resulting in expansion of opportunities to acquire funds through business formulation required for fund procurement. Such achievement will trigger other companies to also become motivated to introduce the Kaizen approach.

In parallel, Kaizen approach dissemination organizations will internally carry out improvement of the development method and further development of Kaizen approach dissemination personnel, improvement of Kaizen approach dissemination methods, and development of organizational structures for Kaizen approach dissemination, such as certification (award) systems for managing the quality of the Kaizen approach in companies adopting the Kaizen approach and the quality of Kaizen approach dissemination personnel and monitoring systems.

In countries where private Kaizen trainers take the initiative to disseminate and develop Kaizen, training/certification systems for private consultants will be established, and structures for role-sharing and mutual complement between the public and private sectors in Kaizen approach dissemination will be promoted,

such as capacity enhancement on the public side for quality management of private consultants and stimulation of demand for the Kaizen approach on the company side.

Moreover, noticeable changes in companies will cause the government to recognize the importance of the Kaizen approach, leading to formation of the foundation for supporting the Kaizen approach within the government, and will prompt examination of policies and fiscal measures, etc. As a result, personnel and budget for Kaizen approach dissemination organizations will be secured, and plans and policies for dissemination of the approach will be proposed. Kaizen approach dissemination organizations will continue Kaizen approach activities and accumulate achievements, thereby gaining social cognition and trust from industry, and will also maintain and expand networks within and outside companies.

Furthermore, financial institutions will have more contact with good-standing companies and Kaizen approach dissemination organizations, and an environment that facilitates lending for financial institutions (and facilitates borrowing for companies) will be developed, such as earning wider recognition of loan schemes and acquiring new customers. As a result, a larger amount of funds will likely flow to companies.

Meanwhile, it is extremely important for the government to support promotion of Kaizen approach dissemination in terms of policy, and to provide financial support in relation to organization and activity. To achieve this, government high officials' deep understanding of and cooperation regarding the Kaizen approach, as well as their strong leadership are indispensable.

As intervention (solution) for bringing about a change to the next phase, the following will be conducted: capacity development of Kaizen approach dissemination personnel; trial and improvement of dissemination methods; verification of the effects of the Kaizen approach and sharing of the results; development and reinforcement of structures of Kaizen approach dissemination organizations; and enhancement of coordination between the dissemination organizations and financial institutions.

**[Phase 3] Phase of expansion of companies adopting the Kaizen approach [Flow of change shown by arrow ③ (both dark blue and light blue) in the scenario chart]**

Not only achievements such as quality/productivity improvement and profitability enhancement of companies adopting the Kaizen approach, but also case examples and knowledge of Kaizen approach dissemination in companies



of the respective countries will accumulate and be shared among the countries. Through the sharing of case examples and knowledge, public-private partnerships for the dissemination and networks within and outside Africa will be strengthened. As a result, the capacity of Kaizen approach dissemination bases will be enhanced, and dissemination structures will be developed. Good practices will be widely transmitted, and the Kaizen approach will gain recognition as an effective means for enhancing firm capabilities. Due to such recognition, a certain level of demand for services relating to the Kaizen approach will be generated in the market, which will also lead to charging of fees for dissemination services. In response to such developments, the government will reflect relevant contents in policy documents and distribute resources for promoting the Kaizen approach, and the possibility for sustainable development will increase.

As mentioned above, if the effectiveness of the Kaizen approach becomes recognized and further demand is created, the government's involvement in continuous policy/financial support, etc. will increase. By sharing the Kaizen approach with development partners and other partners such as industrial organizations and research institutions, and by Kaizen approach dissemination through collaboration with these other partners and dissemination to third countries through COE, which is a hub, the number of countries in which the Kaizen approach is disseminated will increase, and the approach will be disseminated to the entire continent of Africa.

As intervention (solution) for accelerating such change, Kaizen approach dissemination will be promoted in each country through standardization of the Kaizen approach (KPI, certification for dissemination personnel, curriculum, educational materials, etc.), support will be provided for building and strengthening the relationship with development partners and government, industry, and academia networks by various methods including in person and online, and policy recommendations, etc. will be made to each country.

## 3.2 Key Concepts of Development Scenario

Of the Kaizen approach, this section describes the basis/evidence mainly for ① Kaizen (quality/productivity improvement), for which the scenario has been systematically identified. It also indicates the basis/evidence for the approach including capacity enhancement relating to ② business management and ③ financial access, based on case examples of cooperation in African countries.

JICA's *Kaizen Handbook* (2018) systematically indicates a phase-by-phase

scenario through which firm capabilities are enhanced by implementation of Kaizen, and the enhancement of business performance leads to promotion of industrial development in each country (Figure 4 "Characteristics and effects of Kaizen" below).



Figure 4: Characteristics and effects of Kaizen

As the figure illustrates, characteristics of Kaizen are as follows: ① it is a "participatory process" in which all members of the organization are encouraged to participate; ② it is gradual and "continuous activity" in which everyday accumulation of Kaizen activities produces effects; ③ the continuous activity is conducted by a "scientific approach" utilizing statistical data, etc.; ④ it can be implemented with "small investment," using knowledge rather than money; and ⑤ it is highly "versatile" and can be implemented without special technology for all business types, sectors, business scales, organizational forms, and countries.

The figure shows that Kaizen has the following direct effects, which lead to enhancement of firm capabilities: ① improvement of quality/productivity/services, reduction of cost/delivery time, etc.; ② reform of managers' and workers' mindset to make things better; ③ development of personnel who can think and act on their own; ④ formation of teamwork and promotion of communication; ⑤ formation of a strong organization that

constantly evolves and develops; and ⑥ creation of a safe and pleasant working environment. With regard to the human resource development effect of the Kaizen approach, it has been reported that Kaizen (quality/productivity) had an effect to enhance "employability,"<sup>42</sup> improved the working environment, strengthened the trust between workers (social capital),<sup>43</sup> enhanced the team spirit within the company amid the COVID-19 pandemic, and was useful for overcoming the crisis.<sup>44</sup>

By using such case examples as a reference and considering the business administration studies, particularly theories of industrial and organizational psychology,<sup>45</sup> in recent years, the values that Kaizen (quality/productivity) brings to human resources can be regarded as the following virtuous cycle (Figure 5 "Values that Kaizen brings to human resources" below). First, on-site workers will have increasing opportunities to participate in work, such as proposing ideas and have such ideas being adopted through 5S activity, QC circle, etc., and will accumulate successful experience of their own statements and behavior taking shape (①). Next, through the accumulation of successful experience, workers will have more positive feelings coming from within, they will find their work more interesting than before, and their voluntary motivation to contribute will be enhanced (②). Further, when their work performance and productivity improve, they will have more chances to attract attention or receive feedback from others, and this leads to enhanced motivation to contribute to the team or to others (③). Lastly, when workers' interactions with team members and others increase, they will come to pay attention to their workplace environment and relationship with others, which leads to a state where the workers themselves and others both work more easily due to mutual respect

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<sup>42</sup> Akio Hosono, John Page, Go Shimada (2020) *Workers, Managers, Productivity; Kaizen in Developing Countries*, Palgrave Macmillan.

<sup>43</sup> Shimada, G., & Sonobe, T. (2018). *Impacts of Kaizen Management on Workers: Evidence from Central America and the Caribbean Region* (No. 173). JICA Research Institute.

<sup>44</sup> JICA (2022) "Republic of Tunisia Project on Quality/Productivity Improvement (Q/PI) Phase 2 Project Completion Report" (unpublished).

<sup>45</sup> Various theories on motivation identified by Akie Iriyama (2019) *Management Theories of the Global Standard*, pp.341-pp.358 can be applied. Other reference materials include the following: Amy C. Edmondson, trans. Tomoko Nozu (2021) *Osore no nai soshiki* (The Fearless Organization); Gary Hamel and Michele Zanini, ed. Yuko Ariga (2020) "Mishuran no jirei ni manabu genba no senzairyoku wo hikidasu maneja no kokoroe" (Harnessing Everyday Genius: How Michelin gives its frontline teams the power to make a difference), p.50-p.59 *Diamond Harvard Business Review* (March 2021 issue); Edwin A. Locke et al., "Goal setting and task performance 1969-1980," *Psychological Bulletin*, 1981, Vol. 90. No. I, p. 125-p.152; and The New York Times, "What Google Learned From Its Quest to Build the Perfect Team" (2016) (<https://www.nytimes.com/2016/02/28/magazine/what-google-learned-from-its-quest-to-build-the-perfect-team.html>).

(securing psychological safety<sup>46</sup>) (④). In future investigations and research, whether introduction of Kaizen brings about the virtuous cycle of ①–④ will be verified.<sup>47</sup>

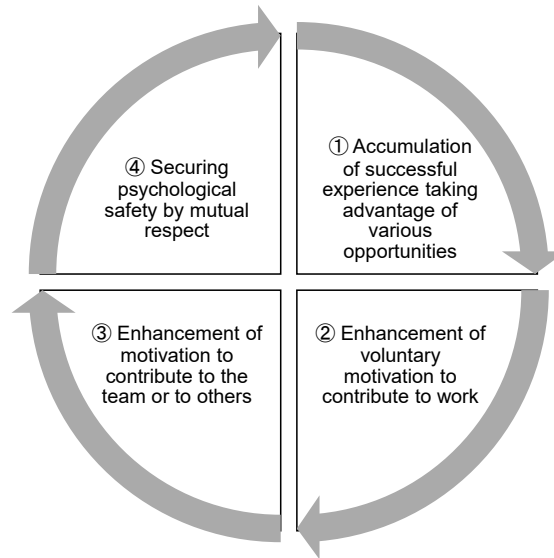


Figure 5: Values that Kaizen brings to human resources

Next, we will look at case examples of the Kaizen approach in African countries. Ethiopia promoted cooperation on the Kaizen approach with JICA from 2008 under the strong leadership of late Prime Minister Meles Zenawi Asres, and the activity has developed to a national level at present. In the "Project on Capacity Development for KAIZEN Implementation for Quality and Productivity Improvement and Competitiveness Enhancement (2015–2020)," training for government organization officials concerned ("Advanced Kaizen Training") was conducted, and the trainees subsequently performed Kaizen (quality/productivity) dissemination activity for a cumulative total of 38 companies. The target companies conducted cleaning, reviewed the inspection method and line balance, checked the equipment repair/inspection methods, introduced market research, and took other actions. Consequently, achievements were made, including reduction of the product defect rate and improvement of productivity, shortening of working time, and development of

<sup>46</sup> This is a concept proposed by Amy Edmondson in 1999, "a shared belief held by members of a team that it's OK to take risks, to express their ideas and concerns, to speak up with questions, and to admit mistakes" (<https://amycedmondson.com/psychological-safety/>). For details, see Edmondson, A. (1999). "Psychological safety and learning behavior in work teams", *Administrative Science Quarterly*, 44(2), 350–383.

<sup>47</sup> This assumes the later-mentioned impact evaluation to be conducted in Tanzania from 2023.

new products based on market research. In this project, the effects of Kaizen were calculated based on Kaizen indicators in the following six areas as the level of change of each company after the implementation of Kaizen: quality (Q), productivity (P), delivery (D), cost (C), machine maintenance (M), and institution-building (I). As a result, the indicators improved by an average of 42% overall.<sup>48</sup>

In the Tunisia Project on Quality/Productivity Improvement (Q/PI) Phase 2, after Kaizen (quality/productivity) was implemented for 99 model companies from 2016 to 2019, improvements were observed, including line productivity improvement of 58%, defect rate reduction of 60%, and space reduction of 39%,<sup>49</sup> all exceeding the project target indicator of 20%.

Meanwhile, as Shimada (2018)<sup>50</sup> indicates, various studies have confirmed that implementation of training and coaching of Kaizen (quality/productivity), etc. contributes to enhancing a company's business management capacity. Also with regard to quantitative effects on corporate performance, recent studies by Bloom et al. (2013)<sup>51</sup> and Mano et al. (2014) revealed that such training and coaching have positive impacts on gross profit and value added.<sup>52</sup>

The effectiveness of the Kaizen approach in Africa is described in detail in the research of Otsuka et al. (2018).<sup>53</sup> In addition, the study of Higuchi et al. (2019) found, as a result of a randomized comparative trial targeting small clothing manufacturers in Tanzania, that entrepreneurs who have received short-term training enhanced their business management capacity, and that the

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<sup>48</sup> The basic formula is "Kaizen Indicator = Change for the better / Room for Kaizen before Kaizen × 100." For example, in the case of Q, the indicator is calculated based on the defective rate of a product. The indicator is 0% for a state where there are no defective products. If the defect detection rate before Kaizen is 5%, and that after Kaizen is 3%, the Kaizen indicator is  $(3-5) / (0-5) \times 100 = 40\%$ . By using a similar formula, the indicator is derived based on the production amount within a given length of time in the case of P, the time actually required for delivery as against the delivery deadline in the case of D, the cost of production in the case of C, and the amount produced by or the operating time of the machine within a given length of time in the case of M.

<sup>49</sup> Other improvements include a 56% reduction of Dandori, a 59% reduction of lead time, and a 68% reduction of products in process.

<sup>50</sup> Shimada Go (2018) "Achievements and Further Issues in Kaizen Research for International Development: Deriving Policy Implications from Interdisciplinary Approach," *Journal of International Development Studies*, Vol. 27, No. 2 (November 2018). Various studies include the following: Karlan and Valdivia 2011; Field et al. 2010; Berge et al. 2012; Drexler et al. 2014; Berge et al. 2014; and Bruhn and Zia 2013.

<sup>51</sup> Bloom, N., B. Eifert, A. Mahajan, D. McKenzie and J. Roberts (2013) "Does Management Matter? Evidence from India," *Quarterly Journal of Economics*, Vol. 128, pp.1-51.

<sup>52</sup> Yukichi Mano, John Akoten, Yutaka Yoshino and Tetsushi Sonobe (2014) "Teaching KAIZEN to small business owners: An experiment in a metalworking cluster in Nairobi," *Journal of the Japanese and International Economies*, Vol. 33, September 2014, Pages 25-42.

<sup>53</sup> Keijiro Otsuka, Kimiaki Jin and Tetsushi Sonobe (2018) *Applying the Kaizen in Africa: A New Avenue for Industrial Development*, Palgrave Macmillan.

enhancement significantly continued for three years. It has also become clear that the value added significantly increases for companies that participate in training, and that such positive impact takes several years to develop.<sup>54</sup>

When an individual feels positive impact through the Kaizen approach, it creates a virtuous cycle that leads to enhancement of the individual’s job satisfaction, enhancement of the feeling of attachment to (satisfaction for) the organization, and enhancement of labor productivity (work results) of the individual/organization (Figure 6 below). This is also indicated in the purpose of this strategy, "realize workers’ decent work," in 1.1.

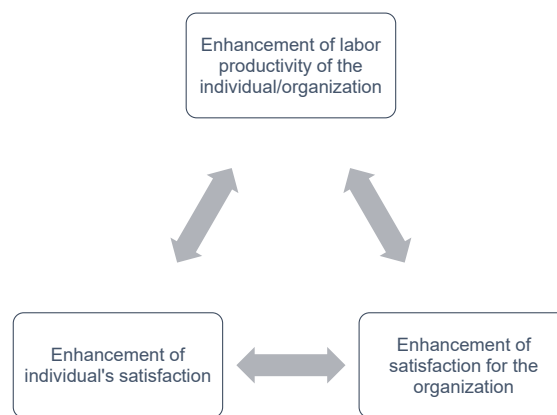


Figure 6: Virtuous cycle brought about by the Kaizen approach

In order to further verify the effectiveness of the Kaizen approach in Africa, JICA has been implementing Kaizen impact evaluation (the fact that Kaizen approach dissemination enhances companies’ productivity and that this is due to the increased centripetal force from workers to the company is verified) in the South African automotive industry since 2022. In Tanzania, Kaizen impact evaluation (the fact that introduction of a Kaizen approach to a company has positive impact on the company and workers is scientifically verified by using quantitative and qualitative data) is planned to be implemented starting in 2023 in micro, small and medium-sized manufacturing companies and service companies.

Meanwhile, with regard to capacity enhancement relating to business management of the Kaizen approach, Suzuki & Igei (2017)<sup>55</sup> demonstrated by using case examples in Thailand that the approach is effective for SMEs. In

<sup>54</sup> Yuki Higuchi, Edwin P. Mhede and Tetsushi Sonobe (2019) "Short- and medium-run impacts of management training: An experiment in Tanzania," *World Development*, Vol. 114, February 2019, Pages 220-236.

<sup>55</sup> Aya Suzuki and Kengo Igei (2017) "Can Efficient Provision of Business Development Services Bring Better Results for SMEs?: Evidence from a Networking Project in Thailand," *JICA Research Institute Working Paper*, No. 147, March 2017.

addition, Mano et al. (2011)<sup>56</sup> clarified the effectiveness of basic managerial training in Sub-Saharan Africa. Moreover, JICA's *Kaizen Handbook* (2018) also points out the importance of skills such as financial management, marketing, basic management, and critical thinking.

In regard to capacity enhancement relating to financial access, the OECD (2018)<sup>57</sup> conveys the importance of finance for SMEs and entrepreneurs, and World Bank (2008)<sup>58</sup> conveys the importance of financial policy that also affects SMEs. However, both business management and financial access lack sufficient basis and evidence compared to the case of Kaizen, and basis and evidence will be accumulated through promotion of this strategy.

## 4. Implementation Direction

### 4.1 Partnership with Partner Countries

#### (1) Characteristics of Kaizen approach dissemination in Africa

JICA has provided cooperation relating to the Kaizen approach in various regions, starting with Asia in the 1980s. A characteristic of Kaizen approach dissemination in the African region is that governments and public organizations play a significant role in the dissemination. For example, in the Asian region, the private sector took the initiative in achieving Kaizen approach dissemination. However, as companies and organizations that are capable of taking such initiative are limited in the African region, activities relating to the Kaizen approach are generally carried out under public support.

In addition, in the African region, Kaizen-related cooperation is implemented in several countries as mentioned above, and there are multiple countries that are positioned at the same dissemination level. While the curriculum for human resource development and the mechanism for dissemination differ by country, efforts are being made to standardize the Kaizen approaches by repeatedly sharing knowledge mainly on-line. As Kodama (2018)<sup>59</sup> above has identified, a

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<sup>56</sup> Yukichi Mano, Alhassan Iddrisu, Yutaka Yoshino and Tetsushi Sonobe (2011) "How Can Micro and Small Enterprises in Sub-Saharan Africa Become More Productive? The Impacts of Experimental Basic Managerial Training," The World Bank, *Policy Research Working Paper* 5755, August 2011.

<sup>57</sup> OECD (2018) "Financing SMEs and Entrepreneurs 2018: An OECD Scoreboard, Highlights."

<sup>58</sup> The World Bank (2008) *Finance for All? Policies and Pitfalls in Expanding Access*, A World Bank Policy Research Report.

<sup>59</sup> Kodama Akihiko (2018) "Cooperation on Kaizen: So Far, Now, and Then?" ([https://www.jstage.jst.go.jp/article/jids/27/2/27\\_41/pdf](https://www.jstage.jst.go.jp/article/jids/27/2/27_41/pdf)).

major characteristic regarding the African region is that work is in progress to create a Kaizen approach "market" for the entire African region based on three perspectives: service demand (the company side), supply (the dissemination organization side), and market mechanism.

## **(2) Policy for cooperation with AUDA-NEPAD**

This strategy assumes AKI, which is a collaborative initiative with AUDA-NEPAD, and ownership by that organization. Therefore, the strategy will be deployed by constantly coordinating with AUDA-NEPAD.

The current AKI activity includes deployment to not only countries in which Kaizen approach dissemination is under way, but also to countries that have not introduced the Kaizen approach and countries that have participated in JICA's third-country training program but where dissemination has not made progress, in the following respective fields: ① advocating at the policy level (publication of joint research/books); ② creating and strengthening the functions of COE (promotion of cooperation in third countries); ③ standardizing Kaizen in Africa (formulation of a handbook, creation of an award); and ④ networking with Kaizen promoting institutions around the world (holding of the Africa KAIZEN Annual Conference and Award Ceremony for the Africa KAIZEN Award). COE candidate countries are those in Group 4 of the later-mentioned Kaizen approach groups, such as South Africa, Ethiopia, Tunisia, and Mauritius, and COEs are planned to be decided in the course of future activities.

As the industrial unit of AUDA-NEPAD has several occasions to speak at various seminars on industrial promotion in the African region, it will publicize the effects of the Kaizen approach and advocate the dissemination deployment on such occasions. If countries show interest in the Kaizen approach, implementation of training, etc. will be considered in cooperation with JICA experts dispatched to AUDA-NEPAD. For example, consideration is being made to conduct Kaizen training in the Sahel region, starting with Niger, the host of the 2022 African Union Summit on Industrialization and Economic Diversification in which AUDA-NEPAD participated.

## **(3) Basic policy of cooperation with the respective countries**

### **(A) Kaizen approach dissemination in countries implementing or planning to implement Kaizen approach related projects**

Support for Kaizen approach dissemination will be provided in Kenya, Ethiopia, Ghana, Cameroon, and South Africa where technical cooperation projects were



in progress as of 2022 and Tanzania, Tunisia, and Egypt where such projects are planned to be implemented in or after 2023. Many of these countries are in the phase of expansion of Kaizen approach dissemination or the phase of establishing standardized Kaizen activities, and they are expected to play the role of COEs for future wide-area deployment. For countries that are willing to serve as COEs in the respective projects, activities for dissemination to neighboring countries are incorporated in their project activity.

In addition, for further enhancing firm capabilities, efforts will be made to provide comprehensive corporate support through new initiatives that incorporate digital technology elements in addition to the Kaizen approach.

Table 4: Kaizen approach related projects as of 2022 (in progress or planned to be implemented)

Country/project	Period	Plan for cooperation in third countries
Kenya / Project for Enhancing Enterprise Competitiveness	2020-2024	×
Ethiopia / Project on Business Development Services (BDS) Enhancement for Enterprises Growth (Technical Assistance related to Japanese ODA Loan)	2018-2022	×
Ethiopia / Project for Establishing Comprehensive Support System for Enhancing Firm Competitiveness	2021-2025	○ (Target countries undecided)
Ghana / Enterprise Development Project with Kaizen	2020-2025	×
Cameroon / Integrated SME Promotion Project with the Enhancement of KAIZEN in Cameroon	2019-2023	×
Cameroon / Integrated SME Promotion Project with the Enhancement of KAIZEN in Cameroon (Phase 2) (tentative name)	2023-2027	○ (assuming Cote d'Ivoire, Senegal, etc.)
South Africa / Quality and Productivity Improvement (Kaizen) Project	2022-2027	×

Tanzania / Corporate Enhancement Project through Business Development Service (BDS) and Quality/Productivity Improvement (Kaizen) (tentative name)	2023-2027	×
Tunisia / Industrial Promotion Project through Strategy Development (tentative name)	2023-undecided	○ (Target countries undecided)
Egypt / BDS/Kaizen Project (tentative name)	2023-undecided	Undecided

(Source: JICA)

Project formulation and cooperation policy relating to future Kaizen approach dissemination will be determined according to the following classification of African countries of Groups 1 to 4 (Figure 7 "Support for each Kaizen approach group"), and appropriate support will be provided according to the relevant group. JICA assumes a particular focus on Groups 2 to 4, and advocates dissemination to Group 1 "Countries that have not implemented Kaizen approach related projects" via AUDA-NEPAD, which often has the opportunity to communicate with these countries.

Kaizen approach group	Targets	Support contents	Number of candidate countries	Main institutions in charge
Group 1	Countries that have not implemented Kaizen approach related projects	Advocacy of the Kaizen approach	27	AUDA-NEPAD
Group 2	Countries that have not implemented Kaizen approach related projects + countries interested in Kaizen approach dissemination	Kaizen approach training		AKI-COE/ JICA
Group 3	Countries that have participated in Kaizen approach related training + PAPA member countries + countries with strong interest in the Kaizen approach	Strengthening the framework for promoting the Kaizen approach	17	JICA/PAPA
Group 4	Kaizen approach COE candidate countries (countries that have implemented Kaizen approach related projects + countries with high COE evaluation scores)	COE capacity enhancement	10	JICA

Figure 7: Support for each Kaizen approach group

[Group 1] Countries that have not implemented Kaizen approach related projects

For countries that have not implemented Kaizen approach related projects in

the past and that are not interested in the Kaizen approach, awareness-raising activities will be promoted to arouse interest in introduction of the approach.

[Group 2] Countries that have not implemented Kaizen approach related projects + countries that are interested in Kaizen approach dissemination

For countries that have not implemented Kaizen approach related projects in the past, but have developed an interest in Kaizen approach dissemination, occasions such as third-country/thematic training will be provided. If countries are expected to carry out further Kaizen approach dissemination/deployment with the presence of organizations or trainees implementing an action plan created in the training after participating in the training, consideration will be made to dispatch Kaizen approach dissemination personnel such as Kaizen trainers and Kaizen consultants to those countries from countries in Group 3 or 4 according to needs. Utilization of existing educational materials on Kaizen approach dissemination and e-learning to be developed in the future is also assumed.

(Number of candidate countries for Group 1+Group 2 as of 2022: 27 countries)

[Group 3] Countries that have participated in Kaizen approach related training, or countries that have not participated in the training but where the basic understanding of the Kaizen approach is widespread (PAPA member countries) + countries with strong interest in the Kaizen approach

If countries that have participated in training or have conducted dissemination initiatives within the country further aim to achieve organizational introduction/deployment of the Kaizen approach within the country or capacity enhancement of Kaizen approach dissemination organizations, consideration will be made to implement Kaizen approach projects in those countries according to needs. In addition, as in the case of Group 1, consideration will be made to dispatch Kaizen approach dissemination personnel, etc. from countries in Group 3 or 4, and to utilize existing resources.

(Number of candidate countries as of 2022: 17 countries)

[Group 4] Kaizen approach COE candidate countries (countries that have implemented Kaizen approach related projects + countries with high COE evaluation scores)

Countries in which development of core personnel and capacity enhancement of organizations that disseminate the Kaizen approach have been achieved will not only engage in dissemination within their own country, but will provide

cooperation to promote dissemination in their neighboring countries. In that process, standardization tools for Kaizen approach implementation activities (the Kaizen approach dissemination training curriculum and the dissemination consultant certification system) created by AKI's working group in which staff of Kaizen approach dissemination organizations in African countries participate will be utilized.

(Number of candidate countries as of 2022: 10 countries)

Meanwhile, it is important to create a support scenario for each country that suits the permeation status of the Kaizen approach in companies in the country and the country's priority order, with an eye to sustainable industrial promotion, from the viewpoint of adopting a method appropriate for the country. Moreover, due to a premise to achieve sustainable dissemination in the entire continent of Africa, consideration will be given to the balance among northern, eastern, central/western, and southern Africa so that there will be no bias among the regions. Furthermore, for countries in Groups 1 and 2 in particular, intentional dispatch of Japan Overseas Cooperation Volunteers and Senior Volunteers will be considered according to local needs, with an expectation to broaden the scope of Kaizen approach dissemination under moderate cooperation.

#### **(B) Countries that have not implemented Kaizen approach related projects and Kaizen approach dissemination utilizing other schemes**

For neighboring countries other than the countries mentioned above, e-learning materials will be utilized, thematic training will be provided, and dissemination deployment (third-country training programs) will be implemented by COEs, among other measures. In particular, e-learning materials could provide a solution to the problem of the difficulty to spread the Kaizen approach to countries other than those that have implemented JICA projects or to countries that have implemented such projects but are located outside the target area, or the problem of variation in quality among instructors. As "TICAD Center" is being constructed in Ethiopia (to be completed in 2023) under grant aid as a facility for providing training, etc., implementation of training and seminars using such facilities will be considered. While coordination with other financial assistance schemes will be considered in future discussions with the respective countries, regarding financial access, as a measure to improve financial institutions' lack of and limitations on loan funds for SMEs, funds could be secured through provision of two-step loans using yen loans and private sector investment finance could be utilized. In addition, with investment and loans for local

companies provided through private sector investment finance, it may also be possible to utilize resources of a technical cooperation project, etc. in promoting Kaizen approach dissemination in the relevant company (or an individual business conducted by the relevant company).

Shown below are past results of Kaizen approach dissemination and deployment to neighboring countries (Table 5 "Results of Kaizen approach dissemination to neighboring countries" below). Dissemination to neighboring countries will continue to be promoted in the future with countries that have implemented Kaizen approach related projects and COE candidate countries serving as hubs.

Table 5: Results of Kaizen approach dissemination to neighboring countries

COE candidate country	Recipient country	(Planned) year of implementation	Contents
Tunisia	Libya	2021	With the support of UNDP Libya, 20 persons from SMEs learned about Kaizen in a multi-faceted manner from a Kaizen approach dissemination organization and a company adopting the Kaizen approach in Tunisia
Tunisia	Senegal Democratic Republic of Congo Burkina Faso Morocco Algeria	2019	Training, an inspection visit to a company adopting the Kaizen approach, and a public relations seminar, etc. were conducted for eight consultants providing corporate guidance in Kaizen approach dissemination organizations in the respective countries.
Mauritius	Madagascar	2023	A webinar was held in coordination with the Madagascar Ministry of Public Health and an agricultural project, kick-off Kaizen training of the Kaizen Committee was conducted, etc.

South Africa	Niger Sudan	2023-	Kaizen approach dissemination training was provided for female entrepreneurs in the Sahel region (assuming invitation of experts from Mauritius, Cameroon, Burkina Faso, etc.)
Cameroon	Central Africa Mali	2019-	The following were conducted in coordination with UNDP: Central Africa: Kaizen approach training was provided for a total of more than 100 UN officials and NGO staff, local government officials, and SME staff over the period of 2019-2020. Mali: Two-week remote 5S/Kaizen approach training was provided for 200 union members and entrepreneurs in the sewing industry, etc. in 2020.
Cameroon	Some countries in western Africa	2023-	Contents under consideration
Ethiopia	Under consideration	2023-	Contents under consideration

(Source: JICA)

### (C) Consideration of support according to the status of Kaizen approach dissemination organizations

This strategy presents a standard scenario, but it adopts a policy to take flexible actions based on the situation and environment of each country. In light of the past experience of Kaizen approach related projects, Kaizen approach dissemination organizations can be roughly divided into three forms.<sup>60</sup> In

<sup>60</sup> JICA project research (2018) "Research on formulation of the standard approach for Kaizen support in the African region, Final report, p.3-25~3-29" and reference materials for duties (draft) prepared in the same research, p.2-2~2-5. (Undisclosed).

determining which form of organization should become a Kaizen approach dissemination organization in a country, a form that suits the country should be selected in consideration of the background of request, framework, etc. of that country's government.

Table 6: Three forms of Kaizen approach promoting organizations

<p>① Kaizen approach dissemination dedicated organization</p>	<p>[Outline] A dedicated organization takes charge of Kaizen approach dissemination.</p> <p>[Advantage] The organization can concentrate on dissemination activity. There are no time constraints relating to development of Kaizen trainers and provision of Kaizen guidance to companies, etc.</p> <p>[Lessons learned]</p> <ul style="list-style-type: none"> <li>▪ Establishment of a new organization should be avoided unless budget for launching a new organization, a strong initiative of the country's government high officials, and a concrete improvement plan can be expected. Use of an existing organization should be considered as much as possible.</li> <li>▪ In the case of a Kaizen approach dissemination organization established under the labor ministry, the ministry's priority policies tend to be to protect workers' rights and to solve labor-management issues. It is necessary to clarify the relationship between the organization and these policies.</li> <li>▪ The Kaizen approach is a necessary condition for industrial promotion, but not a sufficient condition. Thus, there is a need to also coordinate with BDS-providing organizations, technical support organizations, and financial support organizations, such as banks.</li> </ul> <p>Examples) EKI, Ethiopia; KIZ, Zambia; TKU, Tanzania; PQIC, Egypt; NPCC, Kenya; SPC, Singapore; and PSA, South Africa</p>
<p>② SME promotion organization</p>	<p>[Outline] An SME support organization also takes charge of Kaizen approach dissemination.</p> <p>[Advantage] As existing facilities, human resources, and networks can be used, it can be started promptly with little newly incurred cost compared to the case of establishing a dedicated organization. it is possible to provide support in a mutually complementary manner with other SME support</p>

	<p>measures such as BDS.</p> <p>[Lessons learned]</p> <ul style="list-style-type: none"> <li>▪ If the support targets are micro and small companies, the activity will raise the level of those companies, but will have little impact for the country as a whole, and the knowledge level of Kaizen trainers does not advance either. Therefore, a measure should be taken to also include large and medium-sized companies in the model companies, etc.</li> <li>▪ If the SME support organization is at a local government level, it is desirable to involve the central government or areas with high industry accumulation, in anticipation of national deployment.</li> <li>▪ When providing advanced Kaizen guidance to trainers, it is better to narrow down the expertise. It is necessary to support development of a framework in which trainers dedicated to Kaizen and those dedicated to business management techniques can effectively coordinate with each other.</li> </ul> <p>Examples) NBSSI, Ghana; APME, Cameroon; KIBT, Kenya; and SIDO, Tanzania</p>
<p>③ Technical support organization</p>	<p>[Outline] An organization that performs technology development, quality inspections, certification, and provision of technical information mainly for SMEs takes charge of Kaizen approach dissemination.</p> <p>[Advantage] Expertise on proprietary technology can be utilized in Kaizen guidance, and knowledge can be applied to guidance that takes proprietary technology into account.</p> <p>[Lessons learned]</p> <ul style="list-style-type: none"> <li>▪ When providing Kaizen guidance in a specific industry, the technical support organization plays an important role. In that case, it is more rational to aim at strengthening the competitiveness of the government's priority industries, rather than aiming to deploy Kaizen guidance to all sectors.</li> <li>▪ When utilizing expertise on proprietary technology in Kaizen guidance, the technology dissemination staff that gives instructions on proprietary technology and Kaizen trainers need to carry out technical cooperation with each other within the organization.</li> </ul>



	Examples) Technical Center TC, Tunisia; AIDC, South Africa; and INTI, Argentina
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(Source: JICA)

#### **(D) Promotion through combination of gradual innovations and radical approaches**

The Kaizen approach is an accumulation of gradual innovations, and contributes to enhancement of firm capabilities through quality/productivity improvement of the existing business and capacity enhancement relating to business management and financial access achieved by a succession of small improvements. Further, successive accumulation of the Kaizen approach leads to development of employees, and is useful for a company to take more innovative actions, try various methods, incorporate new technologies, and finally create an innovation.

While the Kaizen approach is a business management method for enhancing firm capabilities, it is also a successive activity for improving the quality of products/services, efficiency of business processes, and business management operations, and one of the most important processes in creating innovative outputs.<sup>61</sup>

Also in the World Bank's discussions on innovation paradox, etc.,<sup>62</sup> attention is paid to the need for a company's basic managerial capabilities for causing a radical innovation. In World Bank (2017), Kaizen is positioned as a foundation for achieving an innovation, as the relationship between the capabilities escalator that has been discussed in regard to the "National Innovation System" (a mechanism by which the government causes an innovation through interactions) and Kaizen, following discussions between the WB and JICA (Figure 8 "Capabilities escalator and Kaizen" below).<sup>63</sup>

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<sup>61</sup> JICA (2018) *Kaizen Handbook*.

<sup>62</sup> The World Bank (2017) *The Innovation Paradox* (<https://openknowledge.worldbank.org/bitstream/handle/10986/28341/9781464811609.pdf>).

<sup>63</sup> JICA Ogata Sadako Research Institute for Peace and Development "Achieving growth of developing countries by creating a mechanism that enables innovation: discussion at a seminar cohosted with the World Bank" ([https://www.jica.go.jp/jica-ri/ja/news/topics/20180326\\_01.html](https://www.jica.go.jp/jica-ri/ja/news/topics/20180326_01.html)).

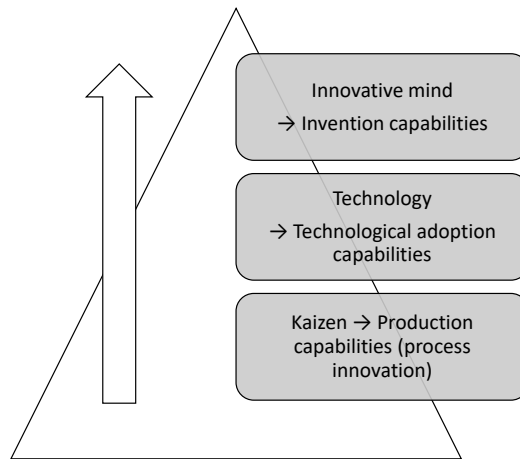


Figure 8: Capabilities escalator and Kaizen

The importance of engaging in strengthening of management capabilities is also suggested for start-up companies. Indeed, companies such as Toyota in Japan, Google in the United States, and Safaricom in Kenya were all initially start-up companies, and even today, after accomplishing dramatic growth, these companies engage in development of new businesses<sup>64</sup> while further improving the excellence of their existing businesses, and enhance their corporate maturity. This strategy expects that Kaizen approach dissemination will help to reaffirm the importance of both gradual innovation and radical innovation.

### (E) Promotion of new initiatives

Further, this strategy also assumes promotion of digitalization through the Kaizen approach, and expansion of the impact in line with financial assistance and other initiatives. In particular, Kaizen has a high affinity with digital technology from perspectives including standardization and data acquisition/analysis/visualization. In industrialized countries, there are examples of innovations applying robotics, sensors, and artificial intelligence to factory automation, and it will be possible for Kaizen to play the function of a node between hardware and digital technology in the future.<sup>65</sup>

The perspective of social inclusion, including gender equality, is also essential. While promoting dissemination, rather than having only specific people (men, for

<sup>64</sup> An example of development of a new business is Toyota's "Woven City." (<https://www.woven-city.global/>).

<sup>65</sup> Details of Kaizen and digital technology are described in the following books. Homma (2023 forthcoming) "New Industrial Landscape: Implications for Industrial Policy and Japanese Industrial Development Cooperation," in *Introducing Foreign Models for Development: Japanese Experience and Cooperation in the Age of New Technology*, edited by Ohno et al., Chapter 10. New York: Springer. Due to the characteristic of visualizing data, Kaizen has high affinity with Industry 4.0 and digitalization. It is desirable to watch the trends and make use of Kaizen.

example) involved in the Kaizen approach, women, youth, and other people with diverse attributes should be involved, in principle, while giving consideration to the culture of the country or region. This will lead to sustainable improvement of firm capabilities. To this end, relevant case examples will be collected, such as effects of Kaizen approach dissemination in a company managed by a woman or youth, or such effects in a company of which goods or services target women or youth.

In addition, when considering the actual manifestation of effect where expansion of companies' competitiveness improvement (and realization of decent work) ultimately leads to Africa's sustainable industrial promotion, it is also important to resolve the problems of external factors, including the administrative procedures and institutional infrastructure, as mentioned earlier. This strategy, while focusing on a company's internal factors, also gives consideration to other strategies that contribute to resolving the problems of external factors and coordination with development partners.

## **4.2 Activities for Maximizing Development Impacts**

### **(A) Recipient government's commitment to Kaizen approach dissemination**

In order to deploy and establish Kaizen approach dissemination in a sustainable and effective manner, it is important to foster the understanding of high-level officials of government organizations and industry-related ministries in the country, formulate policy documents that serve as the basis for introducing Kaizen approach dissemination and promoting dissemination, and to secure the personnel and budget for establishing an organization for dissemination or implementing necessary activities. Also in carrying out the initiatives set forth in "4.1 Basic policy of scenario deployment" above, actions will be taken to encourage the government to increase its commitment. Examples of cases in which Kaizen dissemination was deployed due to commitment by the recipient government are shown below.

According to Ohno (2018),<sup>66</sup> what directly prompted the Kaizen approach dissemination in Ethiopia was an intellectual exchange between late Prime Minister Meles and researchers from the Japan side, including National Graduate Institute for Policy Studies (GRIPS) at the Africa Task Force Meeting cohosted by the Initiative for Policy Dialogue, founded by Professor Joseph Stiglitz of Columbia University, and JICA in July 2008, soon after the Fourth Tokyo International Conference on African Development (TICAD IV) held in May.

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<sup>66</sup> Izumi Ohno (2018) "Industrial Policy and Kaizen: A Perspective from Japan-Ethiopia Industrial Policy Dialogue," *Journal of International Development Studies*, vol. 27, issue no. 2, pp.13-26.

Immediately after the meeting, late Prime Minister Meles requested cooperation in two main areas: Kaizen support by JICA and industrial policy dialogue with GRIPS researchers. Subsequently, the Ethiopian government took budgetary measures in October 2011, and the Ethiopian Kaizen Institute (EKI) was established as a specialized organization under the supervision of the Ministry of Industry. Hence, nationwide deployment of the Kaizen approach made rapid progress.

In Tanzania, JICA has been dispatching industrial policy advisors to the Ministry of Industry and Trade since January 2008, and has been supporting capacity enhancement for improving the environment surrounding business and proposing/implementing industrial policies including financial access. In that process, challenges concerning the quality/productivity of manufacturing industries in Tanzania came to light. Accordingly, Tanzania requested Japan's support of the Kaizen approach for its manufacturing industries, in light of Japan's experience in quality/productivity improvement.<sup>67</sup> In the project that was commenced in response, the Tanzania Kaizen Unit (TKU) was established as the core organization for disseminating the Kaizen approach, and as a policy document for promoting Kaizen dissemination, "Comprehensive Nationwide Kaizen Dissemination Plan (2020-2030)" was officially approved by the Tanzanian government and was published.

Mauritius enacted the National Productivity and Competitiveness Council Act of 1999 with an aim to drive the quality/productivity in all sectors within the country with a view to achieving sustained growth and international competitiveness of the domestic economy. Based on the contents of the Act, the National Productivity and Competitiveness Council (NPCC) was established in 1999 as the core organization for disseminating the Kaizen approach, and it started activity in 2000.

Cameroon has made the Kaizen approach one of the pillars of its SME promotion measures. The Ministry of Small and Medium-sized Enterprises, Social Economy and Handicraft (MINPMEESA) and the SME Promotion Agency take the initiative to disseminate the Kaizen approach, while collaborating with the private sector and also coordinating with development partners such as the AFD and the UNDP.<sup>68</sup> For example, public relations activity is making progress under the country's leadership. A music video for disseminating Kaizen was created in

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<sup>67</sup> JICA (2012) "United Republic of Tanzania / Report on research on formulation of a detailed plan for a project to strengthen manufacturing companies by quality/productivity improvement (Kaizen)" (<https://libopac.jica.go.jp/images/report/12126306.pdf>).

<sup>68</sup> JICA (2017) "Republic of Cameroon / Final report on the SME quality/productivity improvement (Kaizen) project: Summary" (<https://libopac.jica.go.jp/images/report/12301750.pdf>).

French and English, and was aired on existing TV as well as published on social media. The choreography and video editing and production were undertaken by SMEs in Cameroon.<sup>69</sup> In addition, MINPMEESA includes Kaizen projects in its annual plan every year, and by allocating a budget, voluntarily conducts activities such as holding various ceremonies, implementing a 5S/Kaizen Week within the ministry, proposing to host and actually hosting the 2022 Africa KAIZEN Annual Conference, and attracting media to these events.

**(B) Standardization of Kaizen activities through the "Africa Kaizen Initiative"**

As the AKI is an international platform and as the cooperative relationship between JICA and existing institutions and organizations that promote quality/productivity improvement in the African region, such as PAPA, has been established through the AKI, this framework will be utilized. Specific activities include AKI-WGs (Figure 9 "Activities of AKI-WGs"). AKI-WG1 commonizes the KPIs for measuring the effects of the Kaizen approach, WG2 standardizes the training curriculum for Kaizen approach dissemination, WG3 standardizes the certification system for personnel engaged in dissemination, WG4 studies the future AKI structures, including the Africa KAIZEN Annual Conference and the Africa KAIZEN Award, and WG5 carries out COE promotion activity. Through these WG activities, educational materials that can be used when actually conducting dissemination in the future (concretized training modules, a KPI list, measuring method guidelines, etc.) are planned to be formulated, and efforts will be made to conduct efficient and effective dissemination within the African region by making use of those achievements.<sup>70</sup>

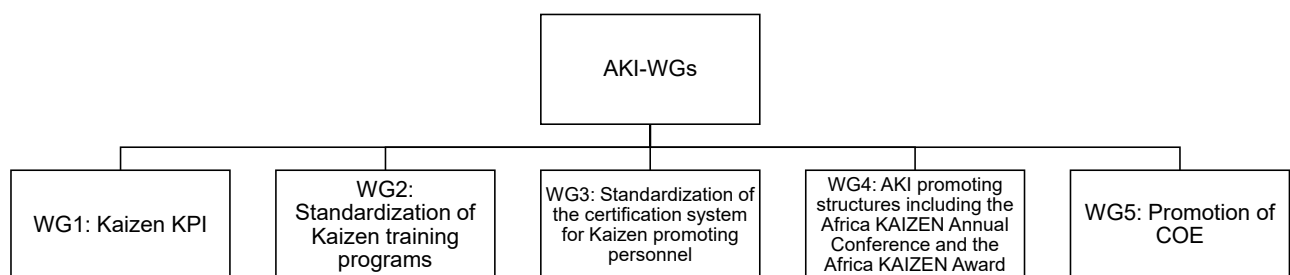


Figure 9: Activities of AKI-WGs

<sup>69</sup> Ministry of Foreign Affairs, "ODA email magazine," no. 334, published on October 12, 2016 ([https://www.mofa.go.jp/mofaj/gaiko/oda/mail/bn\\_334.html#section2](https://www.mofa.go.jp/mofaj/gaiko/oda/mail/bn_334.html#section2)).

<sup>70</sup> The outcome of the WG is reported at the quarterly stakeholder meeting in which the representatives of Kaizen approach dissemination organizations in respective countries participate and at the Africa KAIZEN Annual Conference. At the AUDA-NEPAD/JICA Annual Consultation held in October 2021, it was confirmed that contribution to the AfCFTA will be AKI's fifth strategic item.

### **(C) Coordination with development partners that support African companies**

As mentioned above, in order to coordinate with partners that provide corporate support in African countries that might collaborate in the Kaizen approach, a network will be built with the aim to create collective impact (maximization of the overall impact).

JICA has already formulated/implemented cooperative projects for dissemination in partnership with UNIDO in countries where JICA has implemented Kaizen approach dissemination. For example, through UNIDO projects, a study has been made on deployment of dissemination activity inside and outside the country, including regions where JICA staff cannot travel, and basic Kaizen training disseminated through a JICA project has been implemented in another province (Ghana) in a scaled up manner.

Meanwhile, as described in development partners' Kaizen approach related initiatives (Table 2) and initiatives that contribute to decent work (Table 3) shown above, there are many initiatives that contribute to improvement of firm capabilities and decent work. To promote collaboration on outcome targets and indicators, the scope of collaboration targets will be expanded and individual negotiations will be carried out with development partners in the respective countries.

### **(D) Coordination with Japanese-affiliated businesses in Africa**

This strategy assumes promotion of business matching between African companies that implement the Kaizen approach and the Japan Business Council for Africa, which is a platform in Japan for Africa business related companies, the Japan-Africa Infrastructure Development Association, which is a platform in Japan for the African construction sector, or the Japan-Africa Investment Committee through which major African countries promote investments from Japan, etc., and collaboration with companies advancing to Africa in JICA's private sector collaboration project.

### **(E) Collaboration with regions outside Africa**

Building of networks and sharing of knowledge among the people concerned through collaboration with other regions, such as Asia or Latin America and the Caribbean, etc., are important in that they lead to Kaizen approach dissemination in Africa.

In Asia, third-country training concerning productivity improvement, etc. for Africa has been implemented by Malaysia Productivity Corporation since 2010, and is planned to be continued in the future. In Singapore and Thailand, JICA

has provided cooperation for Kaizen approach dissemination in the past. Therefore, there is a possibility for collaborating with these countries in such ways as sharing with Africa the know-how for providing services of the Kaizen approach by using private human resources.<sup>71</sup> Collaboration has also been made from the viewpoint of evaluating and judging good-standing companies that have introduced the Kaizen approach, such as staff of the Asian Productivity Organization<sup>72</sup> serving as judges for the Africa KAIZEN Award.

In Latin America and the Caribbean, Costa Rica and Argentina, with which JICA has long cooperated, are promoting cooperation for quality/productivity improvement in Latin American and Caribbean countries. In Costa Rica, cooperation in a wide area including neighboring countries is assumed under the "Central America human resource development initiative" under ODA announced by the Japanese government in 1987. Centro de Formación de Formadores y Personal Técnico para el Desarrollo Industrial de Centroamérica (CEFOF), as an implementing agency, has implemented human resource development for providing corporate guidance in eight Central American and the Caribbean countries.<sup>73</sup> In Argentina, the National Institute of Industrial Technology (INTI), as an implementing agency, has engaged in development of personnel who provide SMEs with cross-sectoral guidance through Kaizen by way of knowledge co-creation program in Japan, dispatch of volunteers, and various technical cooperation, etc. and their capacity enhancement.<sup>74</sup> The Argentine government has independently provided economic cooperation for quality/productivity improvement to Latin American and Caribbean countries since the 1980s. From 2011, INTI has continuously implemented a third-country training program by cost-sharing based on the "Partnership Programme for Joint Cooperation between Japan and Argentina (PPJA)."<sup>75</sup> Networking for quality/productivity improvement in Latin America and the Caribbean region is also making progress, and there is an accumulation of experience which the African region can learn

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<sup>71</sup> For example, in Singapore, the Kaizen course is provided for a charge. Singapore Institute of Technology (<https://www.singaporetech.edu.sg/innovate/nace/the-kaizen-project>).

<sup>72</sup> It is an international organization established in 1961 to support productivity improvement in the Asia-Pacific region. As of 2022, it had 21 member countries and regions. Asian Productivity Organization (<https://www.apo-tokyo.org/overview/>).

<sup>73</sup> JICA (2009) "Report on the survey for formulation of ex-ante and detailed plans for the project for capacity enhancement of facilitators for quality/productivity improvement of SMEs (Central America and the Caribbean wide area)" (<https://openjicareport.jica.go.jp/pdf/11961968.pdf>).

<sup>74</sup> INTI provides online courses not only domestically, but also to third countries. The courses are charged for parties other than organizations and companies related to INTI's projects. However, most of the current educational materials are in Spanish, so if they are to be used in Africa, translation and other adjustments would be needed.

<sup>75</sup> JICA (2017) Ex-ante evaluation paper "Republic of Argentina / Project on KAIZEN Technical Assistance Network for Global Opportunities (KAIZEN TANGO)" ([https://www2.jica.go.jp/ja/evaluation/pdf/2017\\_1602297\\_1\\_s.pdf](https://www2.jica.go.jp/ja/evaluation/pdf/2017_1602297_1_s.pdf)).

from the Latin America Productivity Network<sup>76</sup> formed in 2019 under the initiative of INTI.

Case examples of extra-regional collaborations include "Quality and productivity improvement for development – Analysis of KAIZEN case examples –"<sup>77</sup> by the Global Development Network (GDN), which is a network of researchers in developing countries and industrialized countries, and JICA Ogata Sadako Research Institute for Peace and Development. This is an international research project which was continued for more than three years from 2016 by Kaizen researchers and workers from Africa, Asia, Latin America and the Caribbean who come together as one. Its outcome was compiled into *Workers, Managers, and Productivity: Kaizen in Developing Countries* in 2020.

Strengthening of networks and sharing of knowledge will continue to be promoted in the future with other regions through the following activities.

- Participation in the Africa KAIZEN Annual Conference from related organizations in Asia and Latin America and the Caribbean
- Participation in Kaizen-related events in Asia from the Africa side
- Implementation of third-country training in Malaysia or other parts of Asia
- Joint hosting of online seminars, etc. concerning the Kaizen approach

#### **(F) Platform activity**

The platform activity assumes implementation of the contents in Table 7 below. Consideration should be given to how the ownership on the Africa side, including AUDA-NEPAD, African countries, and other platform participants, should be raised. Specifically, with information sharing between related institutions/organizations and between people concerned as the basis, the Africa side will be encouraged to participate in the respective activities, their expectations and intentions will be confirmed, and an agreement will be reached on the purpose of participation. In carrying out the respective processes of activity planning, execution, review, and evaluation, importance will be placed on dialogue. In addition, collaboration will be proposed to development partners on various occasions, and efforts should also be directed to public relations, such as transmitting information on websites and social media of AUDA-NEPAD, PAPA, Kaizen approach dissemination organizations of various countries, etc. To facilitate acceptance of questions and proposals from the development partner

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<sup>76</sup> Twenty organizations that promote quality/productivity improvement of companies participate in the network from 15 Latin American and the Caribbean countries where JICA offices are located. (<https://www.jica.go.jp/publication/mundi/202010/ku57pq00002mn33v-att/10.pdf>).

<sup>77</sup> JICA Ogata Sadako Research Institute for Peace and Development (<https://www.jica.go.jp/jica-ri/ja/research/partner/20160422-20190331.html>).



side, collaboration on a regional or national level should remain flexible and the door should always be kept open for dialogue.

Table 7: Platform activity

<b>○ Human resource development and networking</b>
<ul style="list-style-type: none"> <li>● Thematic training (including third-country training): One course or more per year</li> <li>● Long-term training (related to the Kaizen approach): One course or more per year</li> <li>● Third-country training for COE: once a year</li> <li>● Africa KAIZEN Annual Conference: once a year</li> <li>● Information exchange session between JICA’s Kaizen/BDS related projects</li> <li>● AKI stakeholder meeting: once a quarter</li> </ul>
<b>○ Creation and sharing of knowledge</b>
<ul style="list-style-type: none"> <li>● Africa KAIZEN Award: once a year</li> <li>● Investigation and research / evaluation analysis (including impact evaluation and strategy monitoring):2</li> <li>● Promotion of WG activity and initiatives for Kaizen standardization based on a cooperation agreement with AUDA-NEPAD: one or more regular WG activity, sharing of WG outcome once a year or more</li> <li>● Creation and publication of standardized educational materials: one material or more</li> <li>● Sharing of the effectiveness of Kaizen in the international forum (Africa Industrialization Week, etc.): once a year</li> </ul>
<b>○ Fund mobilization</b>
<ul style="list-style-type: none"> <li>● Promotion of collaboration with development partners (ILO, UNIDO, African Union, PAPA, etc.)</li> </ul>

(Source: JICA)

## 5. Goal, Targets, and Indicators

### 5.1 Goal/Targets and Indicators

This strategy’s outcome targets and indicators are as shown in Table 8 below. The indicators for quality/productivity improvement in Table 9 will be used as indicators for measuring improvement of firm capabilities.

Table 8: Strategy's outcome targets and indicators

<p>Outcome targets and indicators</p>	<p>(1) Final goal (2030)            Through Kaizen approach dissemination bases, companies adopting the Kaizen approach will increase, and the firm capabilities of the target companies improve.            [Indicators (optional)]</p> <ul style="list-style-type: none"> <li>● Number of countries implementing Kaizen approach dissemination              *No target indicator</li> <li>● Number of companies adopting the Kaizen approach:13,600 companies              Target number achieved through JICA's cooperation: 7,200 companies (900 companies (TICAD target) × 8 years) (GA target value)              Target number achieved outside JICA's cooperation: 6,400 companies (800 companies (FY2021reference value) × 8 years)</li> <li>● Competitiveness improvement (quality/productivity, profitability, etc.) of African companies *No target indicator</li> <li>● Number of companies that entered the GVC (number of companies that newly started transactions with overseas companies or local bases of global companies)              *No target indicator</li> <li>● Increase in African manufacturing industries' share of GDP              "Contribution to SDGs"</li> <li>● Contribution to decent work *No target indicator, qualitative indicator</li> <li>● Contribution to gender equality and women's empowerment              *No target indicator, qualitative indicator</li> <li>● Contribution to creation of jobs for youth *No target indicator, qualitative indicator</li> </ul>
	<p>(2) Intermediate target (2027)            The number of companies adopting the Kaizen approach will increase and the firm capabilities of target companies improve.            [Indicators]</p> <ul style="list-style-type: none"> <li>● Number of companies adopting the Kaizen approach:8,500 companies              Target number achieved solely through JICA's cooperative projects: 4,500 companies (900 companies (TICAD target) × 5 years)</li> </ul>

	<p>Target number achieved outside JICA’s cooperative projects: 4,000 companies (800 companies (FY2021 reference value) × 5 years)</p> <ul style="list-style-type: none"> <li>● Number of countries implementing Kaizen approach dissemination: 23 countries (an annual increase of 1 to 2 countries from 16 countries (FY2022 reference value))</li> <li>● Quality/productivity of companies adopting the Kaizen approach: 30% improvement</li> <li>● Profitability of companies adopting the Kaizen approach: *○○% improvement</li> </ul>
	<p>(3) Direct target (2027)</p> <p>The framework for disseminating the Kaizen approach will be strengthened in African countries.</p> <p>[Indicators]</p> <ul style="list-style-type: none"> <li>● Number and quality of Kaizen approach dissemination personnel will improve.</li> </ul> <p>Indicators: Number of Kaizen approach dissemination personnel receiving training: 500 persons (400 persons through JICA’s cooperative projects [7 cases of JICA project training × 50 persons + thematic training 50 persons], 100 persons outside JICA’s cooperative projects), number of Kaizen approach dissemination personnel certified: 175 persons (a half of JICA project trainees)</p> <ul style="list-style-type: none"> <li>● Number of countries that strengthen the framework for sustainable dissemination of the Kaizen approach: 10 countries (7 countries through JICA’s projects + 3 new countries)</li> <li>● Number of countries implementing Kaizen approach dissemination to other countries: 5 countries</li> <li>● Number of collaborative projects with other actors: 3 projects</li> </ul>

(Source: JICA)

\* As the target outcome differs by sector or company, the indicators of quality/productivity improvement cannot be clearly defined in this strategy formulation phase. Therefore, indicators for measuring productivity are to be selected by each company with reference to the items in JICA (2018) *Kaizen Handbook* shown below. As the indicators to be used for measuring profitability also differ by sector or company, each company is to select them (target values are not set as the conditions differ by country). Both indicators are to be measured by a sample survey of companies that have received Kaizen guidance.

Table 9: Indicators of quality/productivity improvement

	Indicator	Unit	Formula	Remarks
Productivity	Production (processing)	Available quantity, number of products, weight, etc./period (month or year)		
	Standard working time	Time (minutes)		
	Manufacturing logistics	Time (minutes, hours), Distance (m)	Weight of materials / products in process × transport distance	
	Labor productivity	%	Total time / value added	
	Actual shipment utilization rate	%	Overall equipment effectiveness × shipment quantity / production quantity	Capacity utilization rate only for the products sold
	Overall equipment effectiveness	%	Hourly operating rate × performance rate × finished good ratio	Operating efficiency of production equipment
	Availability (equipment)	%	Operating time/loading time	Of the scheduled operating time,

			= (loading time - failure loss time - Dandori adjustment loss time - blade changing loss time - startup loss time) / (operating time - scheduled downtime)	the rate of time during which equipment actually operates
	Failure downtime	Time/period (month or year)		
	Number of failures	Number/period (month or year)		
	Dandori adjustment (lot change) time	Time/period (month or year)		Downtime of line/equipment for Dandori adjustment and lot change
	Performance rate (equipment)	%	Net operating time / operating time = (operating time - minor stop time / idling loss time - speed reduction	Ratio of actual production speed (quantity) to (design-based) equipment capacity

			loss time) / operating time = scheduled cycle time × production amount / operating time	
	Line organization efficiency	%	Gross total of working time of each process / (cycle time (or working time of neck process) × number of processes) × 100	Scale indicating the efficiency of operation organization of the production line
Quality	Defect rate	%	(Quantity of defective waste + quantity of defectives corrected) / production (or processing) quantity × 10	
	Number of defective waste	Number/period (month or year)		
	Non- corrected rate		1 - (quantity of defective waste + quantity of	

			defectives corrected) / production (or processing) quantity	
	Number of defectives corrected	Number/period (month or year)		
	Number of complaints	Number/period (month or year)		Number of cases in which products sold and delivered to a customer were defective and were returned, exchanged, or corrected for free
Cost	Yield	%	Amount of items produced / amount of main raw material used × 100	
	Raw material stock	Day	Amount of inventory stock / amount used per day	
	Products-in-process stock	Day	Amount of products-in-process stock / amount used	

			per day	
	Product stock	Day	Amount of product stock / sales per day	
Delivery	Delivery time observance rate	%	Quantity delivered by the scheduled date (time) / production quantity × 100	
	Number of delivery delayed products	Number/period (minutes, time or day)		
	Production lead time	Period (minutes, time or day)		
Environment	Waste reduction rate	Quantity, monetary amount		Mainly waste from the factory
	Space reduction rate	m <sup>2</sup> , monetary amount		Work space, storage space, etc.

(Source: JICA (2018) *Kaizen Handbook*)

## 5.2 Monitoring Framework

### (1) Monitoring indicators

This strategy's monitoring indicators, their definitions, and acquisition means are as shown in Table 10 below.



Table 10: This strategy's monitoring indicators, their definitions, and measuring methods

Indicator	Definition / measuring method
<p>Number of countries implementing Kaizen approach dissemination</p>	<p>Number of countries in which Kaizen activities are implemented by the developing country, JICA's cooperation (technical cooperation, training participation), or a partner (including countries newly participating in the AKI and PAPA member countries) (A country is determined to be implementing Kaizen approach dissemination if it at least has some case examples, such as utilization of a KPI or training curriculum commonized by WG, implementation of Kaizen training, or participation in such training.)</p> <p>* The number is checked based on project monthly reports / project reports, or each country's monitoring sheet, or at stakeholder meetings of AUDA-NEPAD, PAPA, or JICA, etc.</p>
<p>Number of companies adopting the Kaizen approach</p>	<p>Number of companies in which Kaizen support activity was implemented by the developing countries, JICA, or a development partner</p> <p>* The number is checked based on project monthly reports / project reports, or each country's monitoring sheet, or at stakeholder meetings of AUDA-NEPAD, PAPA, or JICA, etc.</p>
<p>Kaizen approach 30% improvement in quality/productivity of companies adopting the Kaizen</p>	<p>Productivity of companies that received Kaizen approach guidance improved by 30 % from the perspectives of productivity, quality, cost, and delivery (as the actually set items differ by company, the items are selected based on the productivity indicators set forth in <i>JICA Kaizen Handbook</i>).</p> <p>* Percentage is checked by a sample survey of companies implementing the Kaizen approach.</p>
<p>Kaizen approach Improvement in profitability of companies adopting the Kaizen</p>	<p>Profitability of companies that received Kaizen approach guidance improved (as the actually set target differs by country, sector, and company, it is to be set individually).</p> <p>* Percentage is checked by a sample survey of companies implementing the Kaizen approach.</p>

<p>Improvement in number and quality of Kaizen approach dissemination personnel</p>	<p>Number of Kaizen approach dissemination personnel developed through technical cooperation, Kaizen approach related projects, training, etc. (number trained / number certified)</p> <p>* Improvement in the "quality" of personnel is checked based on satisfaction of the certification criteria set by each country.</p> <p>* The number is checked based on project monthly reports / project reports, or each country's monitoring sheet, or at stakeholder meetings of AUDA-NEPAD, PAPA, or JICA, etc.</p>
<p>Kaizen approach Number of countries that strengthened the framework for dissemination</p>	<p>Number of countries in which the framework for Kaizen approach dissemination was strengthened, such as implementation of the Kaizen approach that suits the actual local state, improvement in the number and quality of the promoting personnel, securing of personnel and budget for the dissemination activity, mentioning of Kaizen approach dissemination in public documents, commonization of KPI, standardization of the training curriculum, and introduction of standardized certification system.</p> <p>* The number is checked based on project monthly reports / project reports, or each country's monitoring sheet, or at stakeholder meetings of AUDA-NEPAD, PAPA, or JICA, etc.</p>
<p>Number of countries implementing Kaizen approach dissemination to other countries</p>	<p>Countries implementing Kaizen approach dissemination to third countries, such as neighboring countries</p> <p>* The number is checked based on project monthly reports / project reports, or each country's monitoring sheet, or at stakeholder meetings of AUDA-NEPAD, PAPA, or JICA, etc.</p>
<p>Number of collaborative projects with other actors</p>	<p>Number of projects through which the Kaizen approach is disseminated in collaboration with development partners</p> <p>* The number is checked based on project monthly reports / project reports, or each country's monitoring sheet, or at stakeholder meetings of AUDA-NEPAD, PAPA, or JICA, etc.</p>

## (2) Monitoring implementation method

In the AKI, activity progress of each WG is shared and discussed on a quarterly basis. Besides that, an annual conference is held between JICA and AUDA-NEPAD once a year to review the activity in the past year and discuss and agree on the activity plan for the following fiscal year. As for the monitoring indicators of this strategy, actual values of the monitoring indicators are collected from AKI participant countries once a year with the cooperation of AUDA-NEPAD and PAPA, to check the progress of the strategy activity. Consideration is being made to monitor the values of PAPA non-member countries through JICA or AUDA-NEPAD.

## (3) Monitoring tables

Monitoring tables of this strategy are as shown in Tables 11 and 12.

Table 11: This strategy's Cluster-wide Goal/Targets and Indicator  
Subject of performance evaluation

Goal/Targets and Indicators	<p>(1) Final Goal Through Kaizen approach dissemination bases, companies adopting the Kaizen approach will increase, and the firm capabilities of the target companies improve.</p> <p>[Indicators (optional)]</p> <ul style="list-style-type: none"> <li>• Number of countries implementing Kaizen approach dissemination *No target indicator</li> <li>• Number of companies adopting the Kaizen approach: 13,600 companies Target number achieved through JICA's cooperation projects: 7,200 companies (900 companies (TICAD target) × 8 years) (GA target value) Target number achieved outside JICA's cooperative projects (800 companies (FY2021 reference value) × 8 years)</li> <li>• Competitiveness improvement (quality/productivity, profitability, etc.) of African companies *No target indicator</li> <li>• Number of companies that entered the GVC (number of companies that newly started transactions with overseas companies or local bases of global companies) *No target</li> </ul>
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	<p>indicator</p> <ul style="list-style-type: none"> <li>· Increase in African manufacturing industries' share of GDP *No target indicator</li> </ul> <p>"Contribution to SDGs"</p> <ul style="list-style-type: none"> <li>· Contribution to decent work *No target indicator, qualitative indicator</li> <li>· Contribution to gender equality and women's empowerment *No target indicator, qualitative indicator</li> <li>· Contribution to creation of jobs for youth *No target indicator, qualitative indicator</li> </ul>
	<p>(2) Intermediate Target</p> <ul style="list-style-type: none"> <li>· The number of companies adopting the Kaizen approach will increase and the firm capabilities of target companies improve.</li> </ul> <p>[Indicators]</p> <ul style="list-style-type: none"> <li>· Number of companies adopting the Kaizen approach: 8,500 companies <ul style="list-style-type: none"> <li>- Target number achieved solely through JICA's cooperative projects: 4,500 companies (900 companies (TICAD target) × 5 years)</li> <li>- Target number achieved outside JICA's cooperative projects: 4,000 companies (800 companies (FY2021 reference value) × 5 years)</li> </ul> </li> <li>· Number of countries implementing Kaizen approach dissemination: increased to 23 countries (an annual increase of 1 to 2 countries from 16 countries (FY2022 reference value))</li> <li>· Quality/productivity of companies adopting the Kaizen approach: *30% improvement</li> <li>· Profitability of companies adopting the Kaizen approach: *○○% improvement</li> </ul>
	<p>(3) Direct Target</p> <ul style="list-style-type: none"> <li>· The framework for disseminating the Kaizen approach will be strengthened in African countries.</li> </ul> <p>[Indicators]</p> <ul style="list-style-type: none"> <li>· Improvement in number and quality of Kaizen approach dissemination personnel</li> </ul> <p>Indicators: Number of Kaizen approach dissemination</p>

	<p>personnel receiving training: 500 persons (400 persons through JICA’s cooperative projects [7 cases of JICA project training × 50 persons + thematic training 50 persons], 100 persons outside JICA’s cooperative projects)</p> <ul style="list-style-type: none"> <li>▪ Number of certified Kaizen approach dissemination personnel: 175 persons (a half of JICA project trainees)</li> <li>▪ Number of countries that strengthen the framework for sustainable dissemination of the Kaizen approach: 10 countries (7 countries through JICA’s projects + 3 new countries)</li> <li>▪ Number of countries implementing Kaizen approach dissemination to other countries: 5 countries</li> <li>▪ Number of collaborative projects with other actors: 3 projects</li> </ul>
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(Source: JICA)

Table 12: This strategy’s Monitoring Indicators

The following indicators are applied to monitor the outcomes of respective projects and the overall progress of the strategy.

Intermediate outcomes				The number of companies adopting the Kaizen approach will increase and the firm capabilities of target companies improve.
Monitoring Indicators of Intermediate outcomes				<ul style="list-style-type: none"> <li>▪ Number of companies adopting the Kaizen approach: 8,500 companies</li> <li>▪ Number of countries</li> </ul>

				<p>implementing Kaizen approach dissemination : 23 countries</p> <ul style="list-style-type: none"> <li>• 30% improvement in quality/productivity of companies adopting the Kaizen approach</li> <li>• Improvement in the profitability of companies adopting the Kaizen approach</li> </ul>
Direct outcomes	<p>[Initial state]</p> <ul style="list-style-type: none"> <li>• Stagnation of the Kaizen approach dissemination system (inadequacies of the dissemination method, insufficient personnel and budget, insufficient</li> </ul>	<p>[Formation of Kaizen approach dissemination core personnel groups]</p> <ul style="list-style-type: none"> <li>• Core personnel understand the Kaizen approach and are convinced of its effectiveness.</li> </ul>	<p>[Strengthening of the structure of Kaizen approach dissemination organizations]</p> <ul style="list-style-type: none"> <li>• The organizations support implementation of the Kaizen approach</li> </ul>	<p>[Wide-area dissemination of Kaizen]</p> <ul style="list-style-type: none"> <li>• Case examples of implementation of the Kaizen approach by companies in the respective countries accumulate and are shared by all.</li> <li>• The Kaizen</li> </ul>

	<p>t number of Kaizen approach dissemination organizations)</p>	<ul style="list-style-type: none"> <li>• A network of Kaizen approach dissemination personnel is built.</li> </ul>	<p>by working closely with the target companies .</p> <ul style="list-style-type: none"> <li>• The number and quality of Kaizen approach dissemination personnel improve.</li> <li>• Personnel and budget for the dissemination activity are secured.</li> </ul>	<p>approach is disseminated also in development partners, industrial organizations, research institutions, etc., and the possibility for collaboration increases.</p> <ul style="list-style-type: none"> <li>• The number of countries that disseminate the Kaizen approach increases through collaboration and COEs.</li> </ul>
	<p>[Initial state]</p> <ul style="list-style-type: none"> <li>• Low competitiveness (quality/productivity and business management capacity) of African companies</li> <li>• Difficulty</li> </ul>	<p>[Implementation of Kaizen]</p> <ul style="list-style-type: none"> <li>• Companies' managers and workers understand the Kaizen approach.</li> <li>• Companies' managers and workers</li> </ul>	<ul style="list-style-type: none"> <li>• The ideas and behavior of managers and workers change through the Kaizen approach.</li> <li>• Companies' business management</li> </ul>	<p>The number of African companies implementing Kaizen increases and their firm capabilities improve.</p>

	<p>for African companies to access finance</p> <ul style="list-style-type: none"> <li>• Companies are not aware of their low productivity.</li> <li>• Companies do not know how to implement the Kaizen approach.</li> </ul>	<p>become convinced of the effectiveness of the Kaizen approach through its implementation.</p>	<p>nt capacity improves.</p> <ul style="list-style-type: none"> <li>• Companies gain increased opportunities to procure funds.</li> <li>• Companies implement the Kaizen approach.</li> </ul>	
<p>Monitoring indicators of direct outcomes</p>		<p>The number and quality of Kaizen approach dissemination personnel improve. (Indicator: number of trained/certified Kaizen approach dissemination personnel)</p>	<p>The framework for sustainable dissemination of the Kaizen approach is strengthened. (Indicator: the number of countries that strengthened the organizational framework for sustainable dissemination)</p>	<p>The number of countries implementing Kaizen approach dissemination to other countries increases. (Indicator: Number of countries implementing Kaizen approach dissemination to third countries) The number of collaborative projects with other actors increases. (Indicator: number of</p>



			n)	collaborative projects)
Solution (Output of activities)		<p>[Promotion of capacity development of Kaizen approach dissemination core personnel]</p> <ul style="list-style-type: none"> <li>• Kaizen approach dissemination to Kaizen approach dissemination organizations and related ministries and agencies, and discovery of candidates for Kaizen approach dissemination organization core personnel</li> </ul>	<p>[Promotion of Kaizen approach dissemination to companies]</p> <ul style="list-style-type: none"> <li>• Capacity development of Kaizen approach dissemination personnel, trial and improvement of Kaizen approach dissemination, verification of the effects of the Kaizen approach and sharing of the results, development and reinforcement of structures of Kaizen</li> </ul>	<p>[Promotion of dissemination within each country]</p> <ul style="list-style-type: none"> <li>• Promotion of sharing of case examples of Kaizen approach dissemination among countries, support for building and strengthening the relationship with development partners and government, industry, and academia networks</li> </ul> <p>[Promotion of dissemination in entire continent of Africa]</p> <ul style="list-style-type: none"> <li>• Policy recommendations, support for standardization of Kaizen approaches in</li> </ul>

			<p>approach dissemination organizations, and enhancement of coordination between the dissemination organizations and financial institutions.</p>	<p>Africa, support for expansion to new countries</p>
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(Source: JICA)

## Authors

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## Major References

- Kodama Akihiko (2018) "Cooperation on Kaizen: So Far, Now, and Then?," *Journal of International Developmental Studies*, 2018, vol. 27, no. 2: p. 41-53.
- JICA (2018) *Kaizen Handbook*.
- World Bank (2017) *The Innovation Paradox*.
- Otsuka Keijiro, Jin Kimiaki and Sonobe Tetsushi (2018) *Applying the Kaizen in Africa: A New Avenue for Industrial Development*, Palgrave Macmillan.
- Hosono Akio, John Page and Shimada Go (2020) *Workers, Managers, Productivity; Kaizen in Developing Countries*, Palgrave Macmillan.

- Jin Kimiaki and Ohno Izumi (2022) *Promoting Quality and Productivity Improvement/ Kaizen in Africa*, JICA Ogata Sadako Research Institute for Peace and Development.

**Attachment: JICA's Kaizen approach related projects outside the African region**

[Asia]

Period	Country	Project outline
1983-1990	Singapore	<p>"Project on Productivity Improvement for Enterprises"</p> <p>Prompted by then Prime Minister Lee Kuan Yew's request for cooperation concerning productivity improvement, the project was implemented for the purpose of a shifting from labor-intensive to a knowledge/capital-intensive industrial structure. The percentage of workers implementing productivity improvement activity increased from 54% in 1986 to 90% in 1990.</p>
1994-2001	Thailand	<p>"Project on Productivity Improvement for Enterprises"</p> <p>In response to diversification of industries and intensification of competition with neighboring countries, cooperation was provided to achieve effective implementation of productivity improvement activity by Thai companies. The project contributed to the participation of Thailand Productivity Institute (FTPI), which is the implementing agency, in formulation of the "National Productivity Strategy Plan" and to increasing the institute's profits by diversifying the institute's services for both the public and private sectors.</p>
1990s onward	Indonesia, Thailand, Philippines, Malaysia, etc.	<p>Technical cooperation was provided for Kaizen dissemination as part of cooperation relating to elementary technologies for dies, welding, casting, etc.</p>
2017-2018	Philippines	<p>"Project for Capacity Building for Financial Access in Agribusiness (Phase 1)"</p> <p>A new financing mechanism was built, and training, etc. was provided for enhancing organizational/financial literacy of SMEs and agricultural cooperatives.</p>

2021 -2023	Myanmar	<p>"Data collection survey on creation of a credit risk information database for improving SMEs' financial access"</p> <p>Data on SME finance was collected, and the applicability of a new financial access improvement method to Myanmar was investigated.</p>
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#### [Latin America and the Caribbean]

Period	Country	Project outline
1991	Costa Rica	Grant aid "Centro de Formación de Formadores y Personal Técnico para el Desarrollo Industrial de Centroamérica" (current Quality and Productivity Center [CECAPRO: Centro de Calidad y Productividad]) was established.
1992- 1997	Costa Rica	Project-type "Plan to develop industrial technology in the Central American region" Quality/productivity improvement trainers for providing training to companies were developed. The trainers conducted activity not only within Costa Rica, but also in Panama, Guatemala, Honduras, Belize, Nicaragua, El Salvador, etc.
2001 -2006	Costa Rica	"Project on Productivity Improvement for Enterprises" A "business management consultant certification test" was introduced. Eleven persons were certified as business management consultants, and deployed consulting services not only within Costa Rica, but also within the Central American region.
2004 -2006	Argentina	"SME revitalization support plan survey" A network of management technologies (MT) for providing cross-sectoral guidance, centered on Kaizen, to SMEs was formed.
2009 -2010	Argentina	"Plan for establishing a framework for dissemination of SME business management / production management technologies"

		Capacity enhancement of MT consultants was implemented, and the qualification system for the consultants was established.
2009 -2013 / 2015 -2018	Costa Rica	"Project for capacity enhancement of facilitators for quality/productivity improvement of SMEs" "Project for development of capacity enhancement system for SME support personnel" Human resources within the Central America and the Caribbean region were developed, with Costa Rican consultants as the core personnel.
2016 -2019	Dominican Republic, El Salvador	"Quality/productivity improvement project for SMEs" A training program was created and human resource development was implemented for developing senior facilitators.
2017- 2023	Argentina	"Project on KAIZEN Technical Assistance Network for Global Opportunities (KAIZEN TANGO)" The project was implemented with an aim to disseminate Japanese-style production management methods and business management methods, such as "Kaizen," to companies within Argentina, and to stimulate private sector activities, including trade and investments with Japan and other countries.
2021 -2024	Nicaragua, Guatemala	"Project for Capacity Development on Quality and Productivity Improvement in the Micro, Small and Medium Enterprises" "Project for capacity enhancement of facilitators for quality/productivity improvement of SMEs (Phase 2)" Domestic facilitators were developed by utilizing Costa Rican consultants as experts.
2022 -2025	Dominican Republic, El Salvador	Advisor on Capacity Development of MSMEs
2022 -2025	Paraguay	"Project to enhance the support framework for SMEs, micro enterprises, and entrepreneurs through BDS"

		A framework for providing support services to improve the quality/productivity of "SMEs and micro enterprises" nationwide was established, new businesses were created, and sales channels were cultivated.
2023 -2025	Honduras	"Development of facilitators for supporting quality/productivity improvement of SMEs" Domestic facilitators were developed by utilizing CECAPRO personnel as experts.

**[Middle East]**

Period	Country	Project outline
2010 -2013	Jordan	"Project on Dissemination of Quality/Productivity Improvement (Kaizen) Practices for Small and Medium Enterprises" In this project, 70% of the participant companies succeeded in introducing small group activity, workplaces were improved, and workers' enthusiasm and creativity toward work were enhanced.
2016 -2017	Saudi Arabia	"Data collection survey on Kaizen dissemination in Saudi Arabia (Kaizen dissemination)" The practicability of introducing and implementing Kaizen activities in public organizations was checked.
2017 -2018	Saudi Arabia	"Data collection survey on Kaizen dissemination in public organizations of the Kingdom of Saudi Arabia" The survey was conducted with an aim of deploying Kaizen dissemination. The commitment of Kaizen pilot organizations (SASO and KFMC) was fostered, and improvement of productivity and service quality was achieved.