



Presentation on Tanzanian Model

KAIZEN Service Provision to Industrial Clusters “KAIZEN x Cluster”

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Advanced KAIZEN Trainer

Serving Tanzanian MSMEs at SIDO since 2006.

MBA Corporate Management from Mzumbe University.

PGDBA from College of Business Education.

BA in Economics from Bugema University, Uganda.

Specialized in enterprise development, rural industrialization and productivity improvement.

Conducted training to many Tanzanian MSMEs in business management, marketing, investment project appraisal, international trade requirements, etc.

Provided KAIZEN consulting to 17 firms.

Key Messages

- **Cluster Development Approach** has been promoted in Tanzania as a way for industrialization.
- KAIZEN is meaningful to individual firms. In addition to that, dissemination of KAIZEN concept and implementation can be enhanced by utilizing the framework of industrial cluster.
- Therefore, we have tried to **combine Cluster Development Approach with KAIZEN.**
- There are signs to justify **the effectiveness of this approach**, despite data limitation.
- “KAIZEN x Cluster” can be **applicable** to other African countries.

Outline

1. Cluster development in Tanzania
2. Concept & objectives of “KAIZEN x Cluster”
3. Flow
4. Pilot modality
5. Pilot examples & achievements
6. Lessons & recommendations

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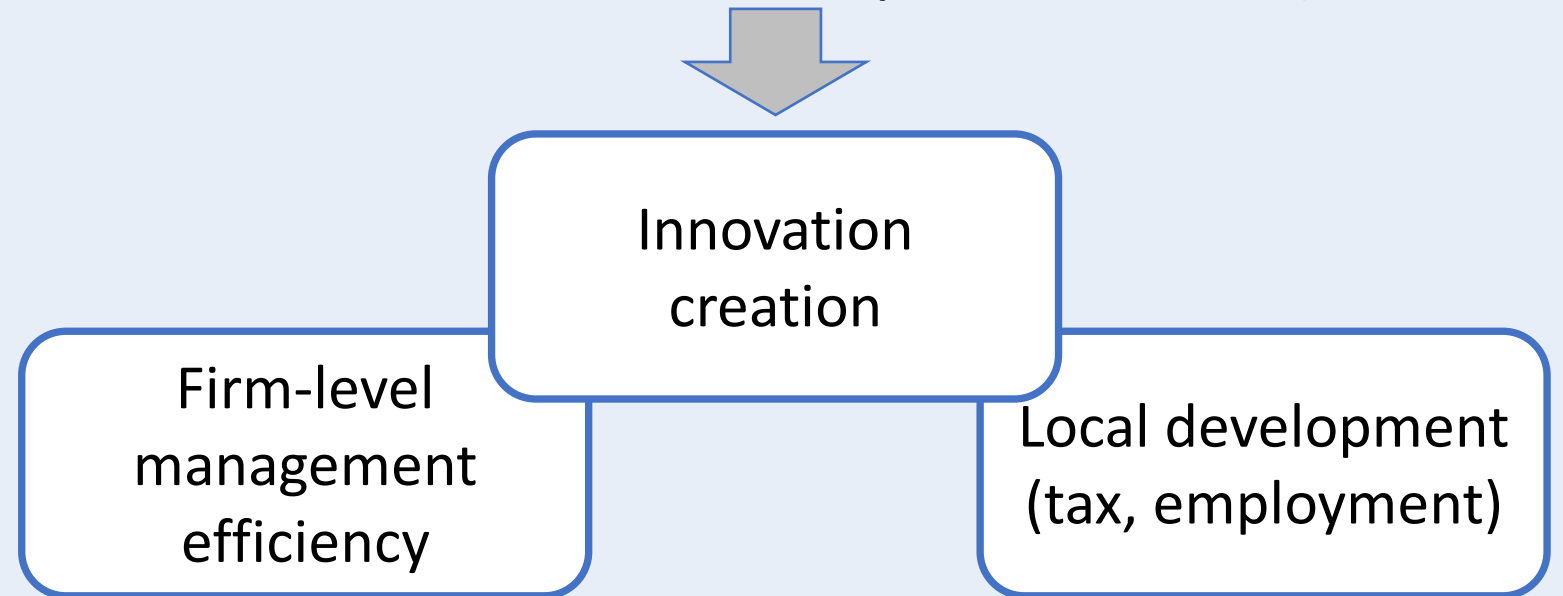
Why Cluster Development?



- Information sharing leads to knowledge sharing.
- Cooperation and collaboration enable more options than those achievable individually.
- Increased visibility attracts value chain actors and supporting institutions. (Support provision becomes easier for service providers, too)

“A geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities”

(Michael Porter)

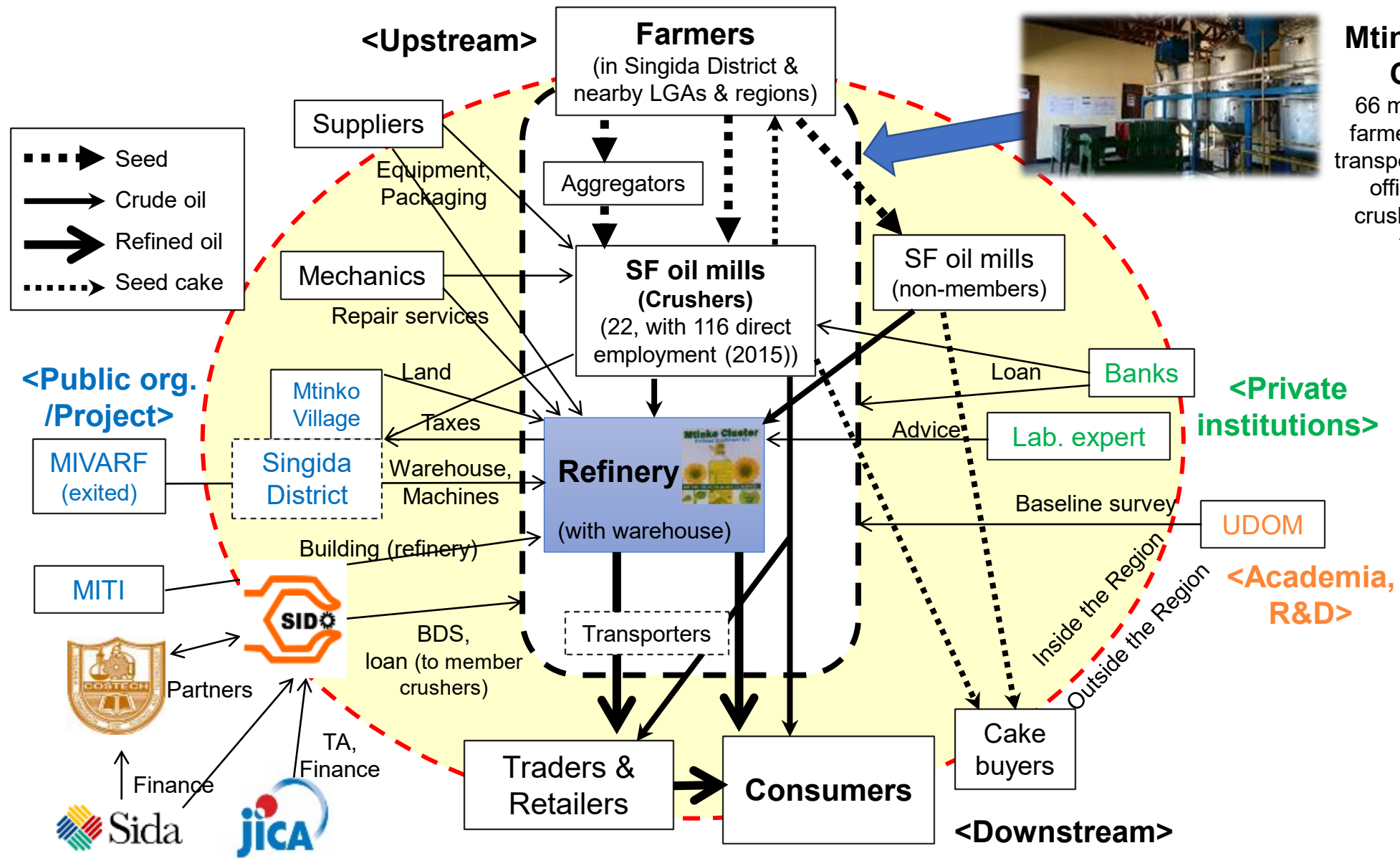


About 59 clusters have been supported by SIDO in collaboration with other stakeholders.



- Sunflower oil
- Rice milling
- Grain milling (e.g., maize)
- Grape processing
- Honey processing
- Food products
- Seaweed
- Dried fish
- Milk processing
- Leather products
- Metal engineering
- Clothes
- Sisal products

Many stakeholders are found in a cluster.



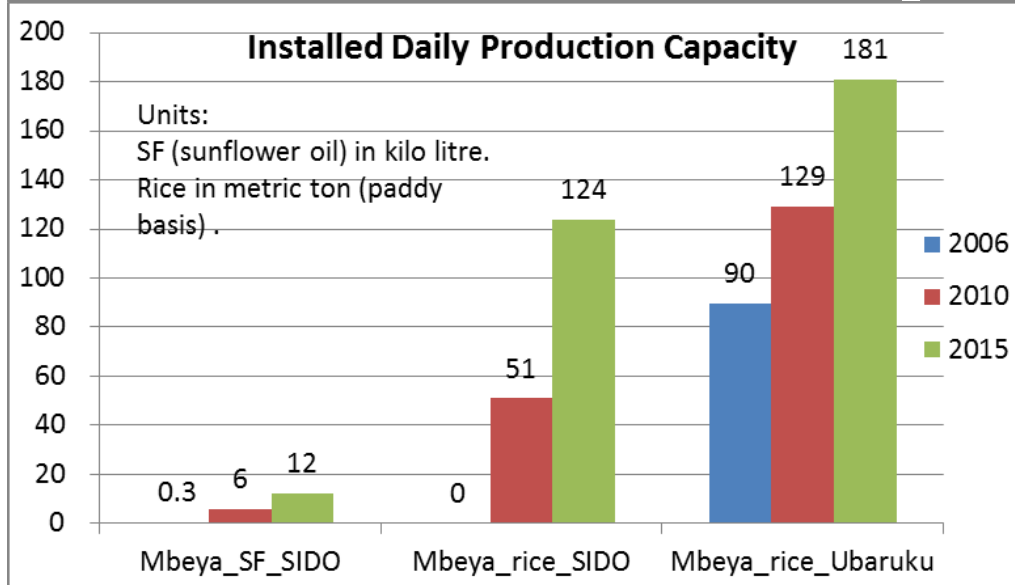
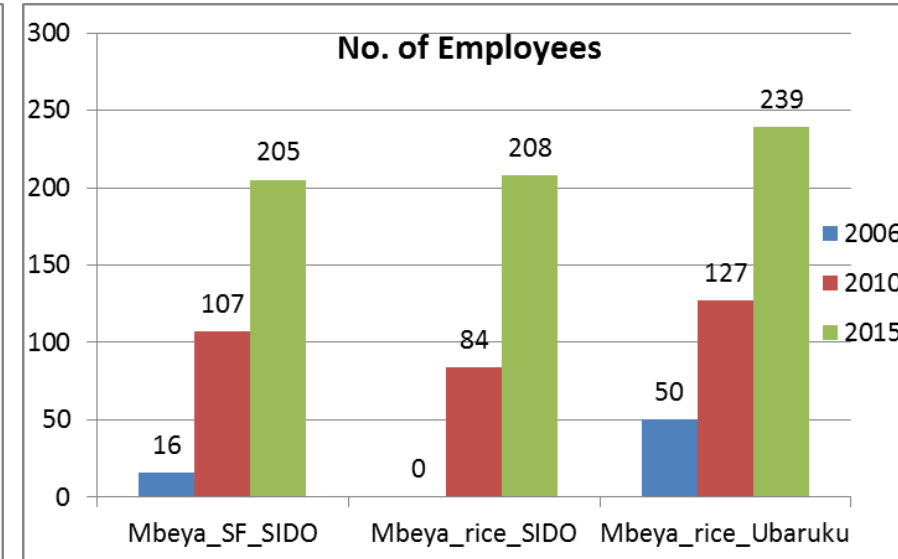
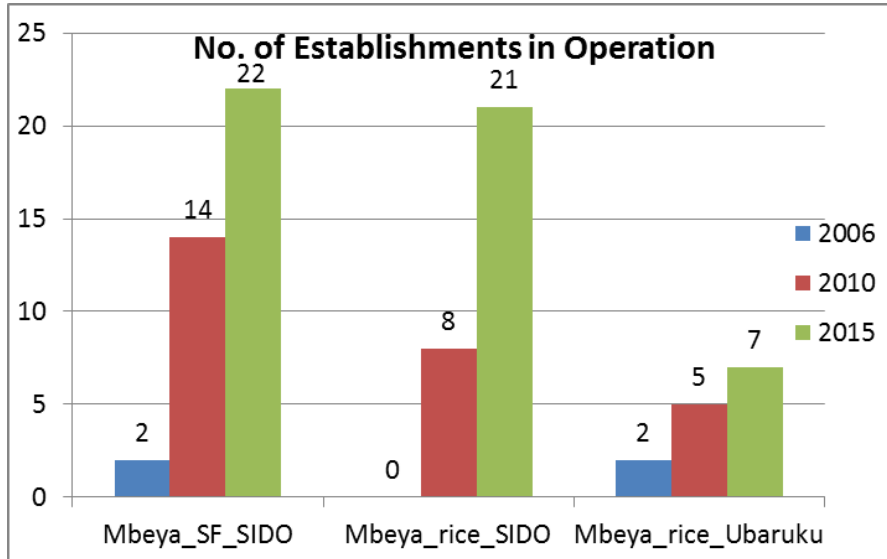
Mtinko SF Oil Cluster

66 members incl. farmers, crushers, transporters & village officials (Many crushers are also farmers)



(MITI) Min. of Industry, Trade and Investment. (MIVARF) Marketing Infrastructure, Value Addition and Rural Finance Support Programme. (UDOM) Univ. of Dodoma.

Growth is visible in clusters.



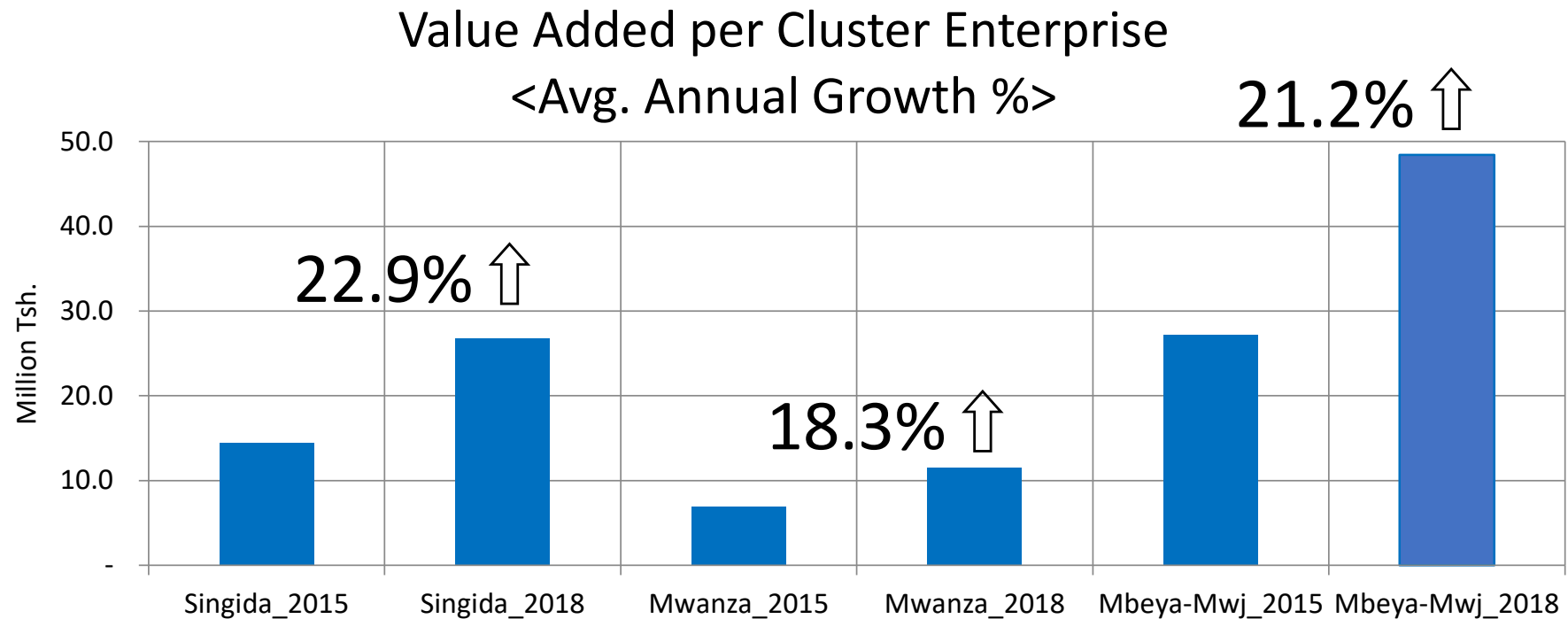
From 2010 to 2015 in 3 spearheading clusters,

- ✓ **No. of SMEs increased by 85%.**
- ✓ **Employment increased by 105%.**
- ✓ **Installed production capacity increased by 40-143%.**

Source: Short survey by SIDO (Nov. 2015).

Note: "SF" = sunflower oil processing.

Economic growth of cluster firms is faster than national economy.



Parameters	Annual growth	Parameters	Annual growth
Nominal GDP growth	13.1%	Gross VA growth (Singida)	4.0%
VA growth (Food processing)	4.0%	Gross VA growth (Mwanza)	4.0%
VA growth (Leather & leather products)	4.0%	Gross VA growth (Mbeya)	4.0%

Singida: Sunflower oil cluster in Mtinko, Singida. **Mwanza:** Leather product cluster in Mwanza City. **Mbeya:** Paddy processing cluster in Mwanjelwa, Mbeya City.

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5. Pilot examples and achievements
6. Recommendations

Background



- Cluster Development Approach was bearing fruits.
- Challenge: Upgrading **firm-level management efficiency** and **product quality**.
- Knowing that KAIZEN program was bringing success to industries, the Government of Tanzania found it necessary to **empower cluster with KAIZEN** so that challenges can be solved in clusters.

2 Objectives of “KAIZEN x Cluster”

1

To disseminate KAIZEN concept and promote KAIZEN implementation widely

in addition to the ordinary ways to reach individual firms.

2

To position KAIZEN services as a typical BDS tool for industrial clusters

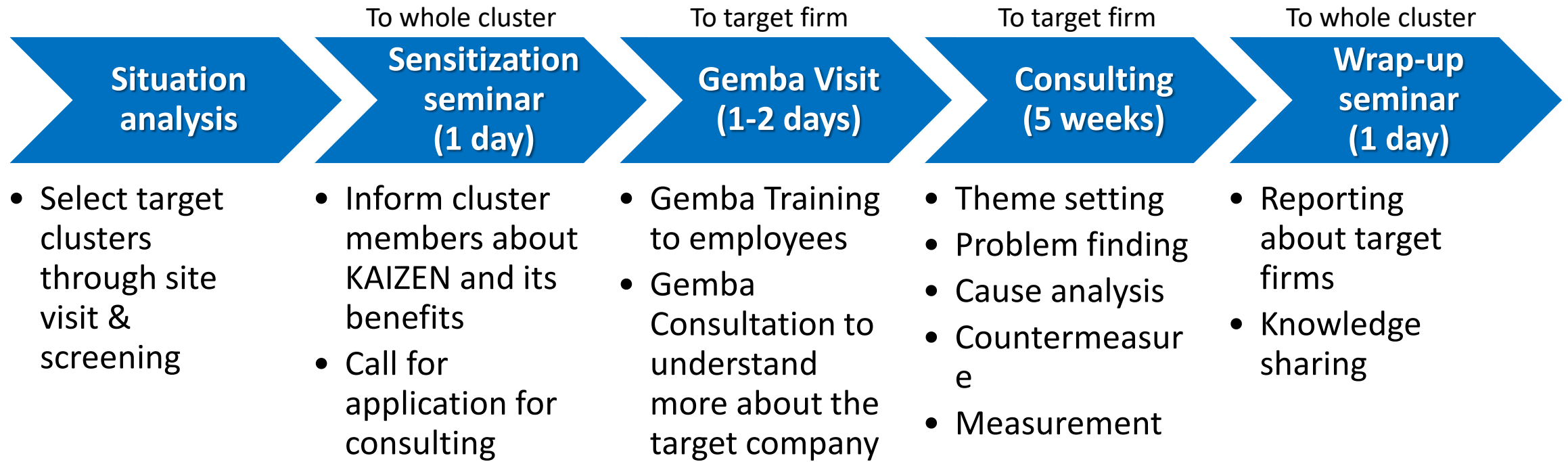
in attempt to increase competitiveness of the clusters.

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Two methods: ① Standard Method and ② M&E Visit & Advice Method.

①



②



- Sensitization & Gemba Training covered:
- ✓ Introduction to KAIZEN
 - ✓ 5S+1
 - ✓ Muda-dori
 - ✓ Why-why analysis

During consulting, at least one KPI is selected from the list.

5S	Quality	Productivity
Free space rate (%)	Defective rate (%)	Production volume per unit time (pieces/hour, tons/day, etc.)
Time required for picking an item (sec.)	Yield rate (%)	Production lead time (hours, days, etc.)
5S score		

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- Selection of the target clusters was conducted by TKU and JICA experts.
- Evaluated against criteria (e.g., location, no. of cluster members, concentration, readiness, etc.).

Region	Target Clusters	Reasons for selection	KAIZEN Trainers
Dodoma	UWAZAMAM (Grape)	Many beneficiaries. Different segments of VC involved. Many trainers available. A cooperative of 150 members.	Sempeho Manongi, Meitalami Nyangusi, Crispin Kapinga, Richard Benaya
Mbeya	Mbeya Rice Group (MRG)	Many beneficiaries. 30 milling machines operated by 22 processors. 1,800 persons working directly and indirectly in 15 sub-groups.	Francis Stewart, Baraka Israel, Stanley Kibakaya, Jane Lyatuu
Morogoro	Metal Engineering Cluster Initiative (MECI)	Has basic experiences in Kaizen. Expansion to other members is realistic. 68 members (60 micro/small & 8 medium). 450 employment in total.	Allen Mhidze, Lilian Godwin, Joan Nangawe, Grace Makoye, Emmanuel Zakayo
Kagera	SIDO Karakana (metal, carpentry, etc.)	100+ micro businesses concentrated in one location, and considered ready for M&E Visit & Advice Method.	Nina Nchimbi, Peter Kilima, Maneno Maporo, John Lelo

- Planned for 3 batches (of Gemba Visit & Consulting) in 3 regions for Standard Method.
- Morogoro Team managed to complete consulting to 16 companies in 3 batches.
- Kagera Team conducted 3 visits as planned under M&E Visit & Advice Method.



UWAZAMAM



Dane Holdings

**GRAPE/WINE
(Dodoma)**
2 Batches
2 Enterprises



TANZIM



Morogoro Engineering

**MECI (Metal -
Morogoro)**
3 Batches
16 Enterprises

Gama Metal Works, Ugele,
EB Metta, OAK, Wayango,
Dedu, MB Technology, C&F
Workshop, Mark Point,
Morogoro Diocese, Milton
Lyimo, VIJANA, SE Furniture,
Dulla

**Pilot
Clusters**

**MRG (Rice -
Mbeya)**
1 Batch
1 Enterprise



Abel C Rice Milling

**Karakana
(Metal &
carpentry -
Kagera)**



- Trainers used standard materials (customized to fit the local context).
- Various formats were utilized. Modification is ongoing based on the pilot exercise.
- Trainers reported activities and findings from each visit.
- Japanese experts gave advice through weekly Zoom meeting.

Steps	Formats and Materials Used	
Situation Analysis	<ul style="list-style-type: none"> ● Checklist for Cluster Selection 	
Sensitization Seminar	<ul style="list-style-type: none"> ● Presentation material for sensitization (incl. announcement for consulting service) 	<ul style="list-style-type: none"> ● Questionnaire (baseline) ● Questionnaire (feedback) ● Application form
Target firm selection	<ul style="list-style-type: none"> ● (Fee table) ● Agreement form 	
Gemba Visit & Consulting	<ul style="list-style-type: none"> ● Materials for Gemba Training ● (List of KAIZEN indicators) ● 5S Total Evaluation Sheet ● Questionnaire (endline) 	<ul style="list-style-type: none"> ● Report formats: <ul style="list-style-type: none"> • <i>Google Forms for report to Japanese experts</i> • <i>KAIZEN Consulting Service Record</i> • <i>KAIZEN Implementation Report (in Word and PPT)</i>
(Kagera) M&E visit & advice	<ul style="list-style-type: none"> ● Presentation material for sensitization 	<ul style="list-style-type: none"> ● Other training materials as necessary



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Increased space by 24% and reduced time to find items by 90%.

Company	Oak Metal Works (est. 2006)
Location	Morogoro (Saba Saba area)
Employees	12
Business	Metalwork (cooking stove, gates, doors, etc.)

Problems	Limited working space, long time to pick items, dirty & dangerous work place, low morale
KAIZEN theme	Space creation Target: Increase work space by 16.7% (Create 20 m ² more)
Measures taken	<ul style="list-style-type: none"> Weekly sorting, arranged items, cleaning based on timetable Making KAIZEN board and racks for storage Demarcating storage areas
KPI	16.7% (20 m ²) → 40.8% (49 m ²) (≈ USD63/mo.)
Other achievements	<ul style="list-style-type: none"> Sold unnecessary items to gain TZS100,000 (= same as monthly rent). Time to find items reduced from 30 min. to 3 min. (≈ USD724/mo.)

Before



After



Increased working space by 53 %.

Company	Abel C Rice Milling (est. 2006)
Location	Mbeya (Mwanjelwa area)
Employees	5
Business	Rice milling

Problems Limited working space, unnecessary items, unorganized layout.

KAIZEN theme Space creation & layout improvement
Targets: Create passage of 60 cm, increase working space from 7 m² to 15 m².

Measures taken

- Sorting and shining
- Improving layout and visualizing areas
- Using pallets to handle rice bags

KPI Passage 0 → 100 cm.
Working space 7 → 15 m²

Other achievements

- Changed mindset of workers and customers.

Before



After



Saved lead-time by 35% for filling bottles. Tripled free space.

Company	Dane Holdings Limited (est. 2016)
Location	Dodoma (Nkulabi, 35 km from Dodoma City)
Employees	13
Business	Manufacturing wine (red, white & fortified)

Problems	Inefficient filling process.
KAIZEN theme	Lead-time reduction in filling process Target: Reduce time of filling 1 carton (330 ml. x 56 bottles).
Measures taken	<ul style="list-style-type: none"> 5S implementation Improving work flow and layout change by considering ergonomics
KPI	20 → 13 minutes (≈ USD118/day)
Other achievements	<ul style="list-style-type: none"> Increased free space from 10% to 30%. Improved layouts in other areas (e.g., tanks, storage, kitchen, etc.) Improved sealing process from hot water to machine.

Before

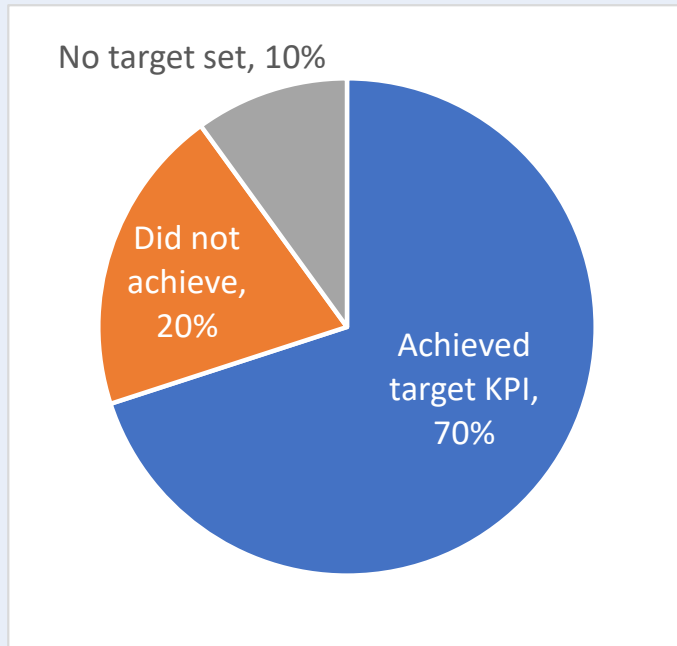


After



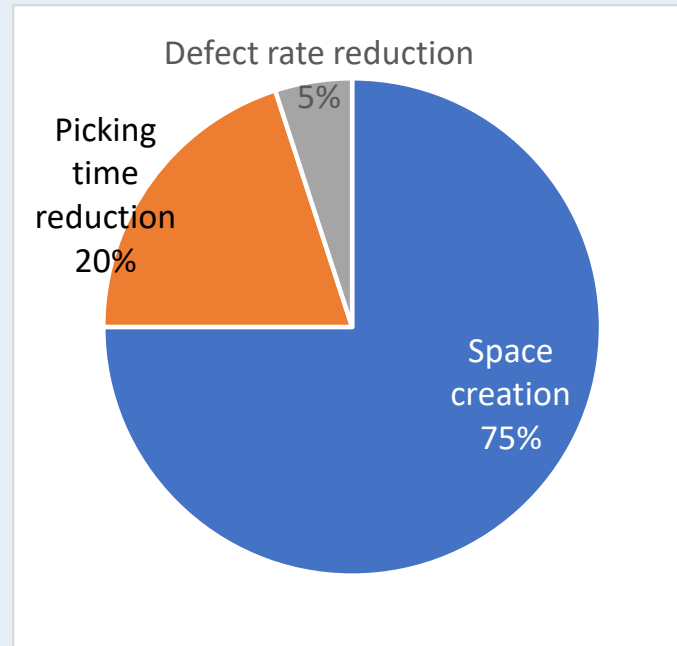
Outputs of KAIZEN consulting are inspiring.

- **70%** of KPI targets were achieved.



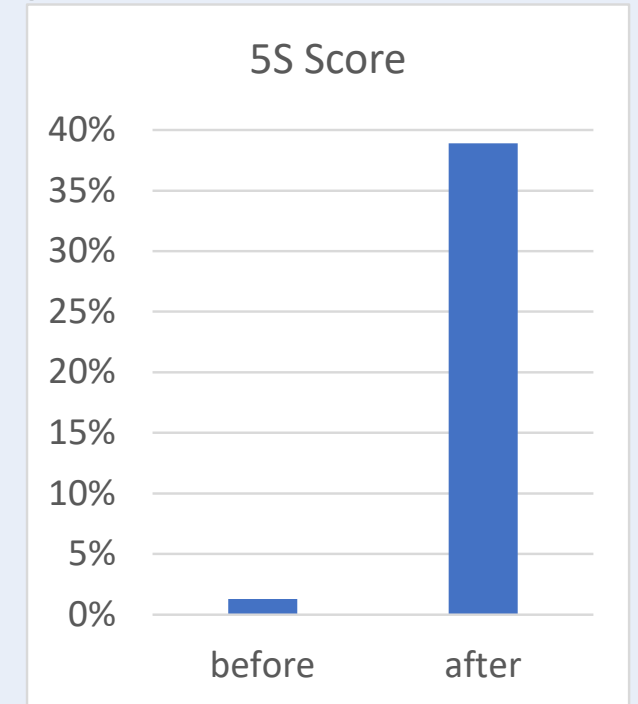
In Morogoro

- **75%** were for space creation.



In Morogoro

- 5S score improved by **38 points**.



In Morogoro

Other output

- Cash revenue from sales of unnecessary items.

Impacts are emerging in 3 areas.

On firm-level business

- **Production efficiency** increased.
- Customer satisfaction is increased.
- Attracted other supporters (e.g., banks)
- **Impact is valued at USD2,283 per mo.** (TZS 5.3M) for 16 companies at MECI in Morogoro (*1).

**USD143
SAVED**
Per month
Per company

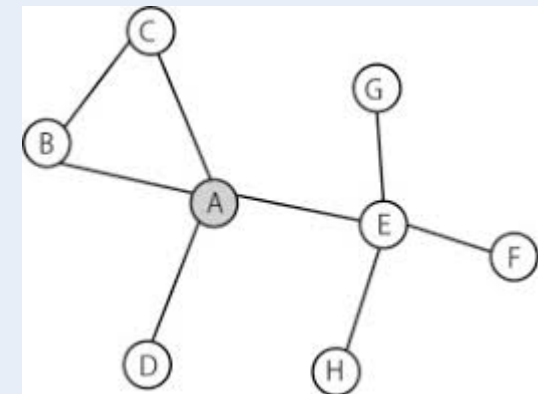
On cluster development

- Reducing middlemen **increased orders** to cluster members.
- Thinking of **applying KAIZEN along VC.**
- Mindset change is positive for **joint works.**



On KAIZEN dissemination

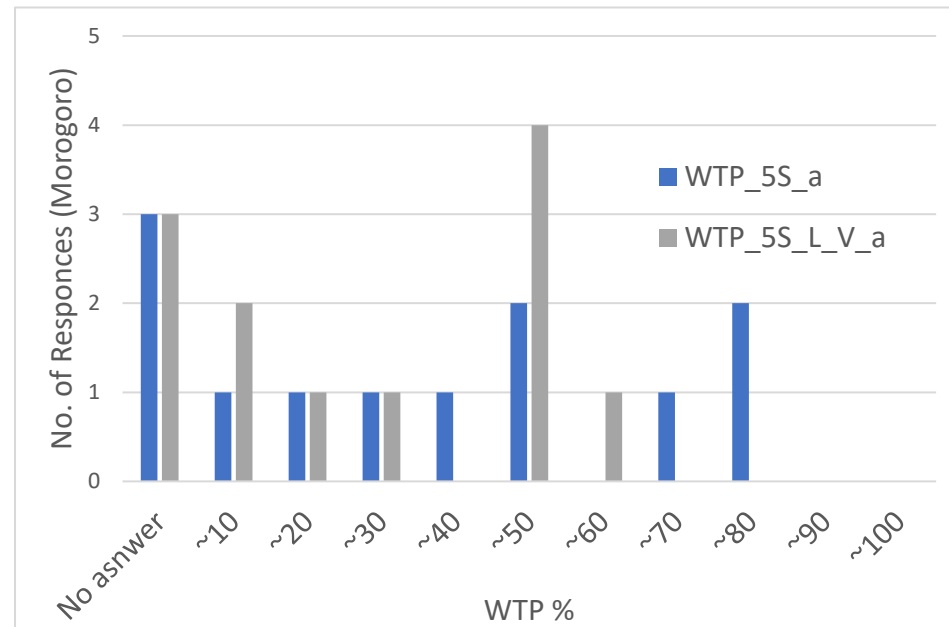
- Sensitization and consulting provision can be done **efficiently.**
- Nearby firms are **attracted to KAIZEN** by seeing positive results.
- **Consulting know-how** is accumulated.



(*1) Converted to the profit generated by saved time (e.g., fixing an engine takes 30 min. at the profit of TZS30,000), or assuming saved space is rented at TZS5,000/m².

However, there are challenges, such as...

- **Perception** of KAIZEN that it is for large firms.
- Some firms (workers) **do not want to give up time** for production.
- **Decision making** takes time if owner and management are separate.
- Some firms are **hesitant** to give data.
- Many firms are **not willing to pay**, or willing to pay less.



WTP_5S_a: 5S: Gemba Training + Consulting (5 weeks), TZS 180,000 (Pre-paid)

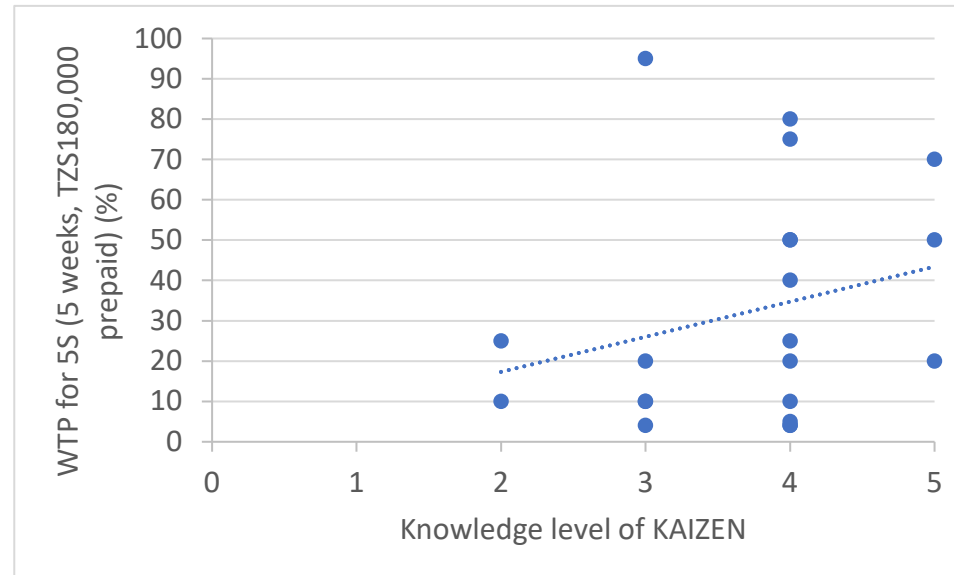
WTP_5S_L_V_a: 5S + layout change & visualization: Gemba Training (GT) + Consulting (7 weeks), TZS 230,000 (Pre-paid)

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Lessons

- **Linking KAIZEN with cluster development approach** is positive in terms of both KAIZEN dissemination and cluster development, along with firm-level efficiency.
- The flow and 2 methods are found to be **practical**, with some adjustments.
- Taking into account **seasonality (business cycle)** of cluster firms is necessary.
- The more the industries **understand KAIZEN**, the more they are willing to pay for KAIZEN consulting.



Recommendations

- **Adopt KAIZEN x Cluster initiative** to promote industrialization.
- Identify existing clusters and **introduce KAIZEN concept**. KAIZEN can be an entry point of thinking about development along horizontal & vertical VC.
- Consider how to **sustain the system financially**.
- Show **good examples and expected benefits** to beneficiaries and policy makers.
- To do so, **data taking and analysis** are critical.

Thank you very much
Asante sana
Arigato gozaimasu
Merci Beaucoup

KAIZEN Kwa Mabadiliko Endelevu!