Quality and Productivity Improvement:
JICA’s *Kaizen* assistance

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Today’s presentation

• Part 1 reviews kaizen, productivity and quality improvement.

• Part 2 shows JICA’s assistance in various countries.
Kaizen

- A Japanese philosophy that focuses on continuous improvement through all aspects of life.
- In business: incremental & continuous improvement with the involvement of the entire workforce
  - “If no money, use your brain”: An effort to improve productivity, quality and cost without additional investment (= no new machines) first
  - Participatory: Top/senior management, middle management, supervisors, and workers – all need to participate to continuously improve.
  - Bottom-up: specific ideas of improvement come from the front-line (e.g. factory floors).
  - Emphasis on process as well as results.

Kaizen & Innovation

- *Kaizen* and innovation complement each other.
Quality improvement is …

  - By adopting appropriate principles of management, organizations can increase quality and simultaneously reduce costs – by reducing waste, rework, staff attrition and litigation while increasing customer loyalty.
  - The key is to practice continual improvement and think of manufacturing as a system, not as bits and pieces.
  - Introduced PDCA (= Plan-Do-Check-Act) cycle
Productivity is, above all, an attitude of mind. It is an attitude that seeks the continuous improvement of what exists. It is a conviction that one can do better today than yesterday, and that tomorrow shall be better than today. Further, it requires constant efforts that adapt economic activities to ever-changing conditions, and the application of new theories and new methods. It is a firm belief in the progress of humanity.

(from the report of Rome Conference, 1958 -European Productivity Agency)
Japan’s Productivity Movement

• Three principles of Japan Productivity Centre (Est. in 1955)
  – Expansion of employment
  – Cooperation of labour & management
  – Fair distribution of the fruits of productivity
    • Among employers, workers and consumers

• “Productivity movement”
  • Movement (noun): “… 3. a group of people working to advance a shared cause. 4 a series of organized actions to advance a shared cause.” (Oxford English Dictionary)
Kaizen = Quality & Productivity Improvement
Examples of *Kaizen* activities

- QC circles
  - “7 tools”
  - *Muda* (= waste) elimination
- 5S
  = *seiri* (sort), *seiton* (systematize), *seiso* (sweep),
    *seiketsu* (standardize), *shitsuke* (self-discipline)

- Layout improvement
- Shortening of setup times
- … and more:
  - suggestion box, TPM, TQM, JIT, *Kanban*, TPS
JICA’s assistance

- JICA has assisted in capacity development of quality/productivity organizations.
  - Start-up stage: Hungary, Brazil, Egypt
  - Development stage: Singapore
  - Transformation stage: Thailand
- Pilot/demonstration + action planning: Tunisia
- Regional: Central America (Costa Rica)
- Others
  - As a project component
  - Experts, group training
CD in start-up stage (1)

  - Hungarian Productivity Center (est. 1994)
  - Outputs:
    - In-company facilitators trained
    - Company-level cases collected
    - PR/promotion implemented
    - C/P’s technical capacities upgraded
    - Network expanded

  - On-going
CD in start-up stage (2)

  - JICA support in Paraná State, one of 5 institutes est. by the Gov.
    - JICA’s role: capacity building
    - Staff training: Seminars/training → OJT
  - Developed a Brazilian concept of “Systemic Productivity”
- After the project, IBQP became a “non-profit private entity” in 2002.
CD in development stage

- Singapore (1983-90): Productivity Development Project
  - National Productivity Board (NPB; est. 1972)
  - JICA assisted in enhancing NPB capacities for:
    - Management and supervisory training;
    - Training in labour-management relations and small group activities;
    - Occupational safety and health;
    - Promotion of productivity;
    - Development of Resource Centre; and
    - Planning and research
  - Through TOT, staff upgrading & training material dev.
NPB Singapore has evolved …

- JICA’s assistance to NPB seen as a successful case of transferring “productivity technology”.
- NPB acquired capacity to provide productivity training for other countries.
  - For JICA
    - Third-country group training course on productivity delivered by NPB from 1990-95.
    - Courses on productivity management organized for 17 SADC countries from 1997-2002.
- NPB has evolved:
  - Productivity & Standards Board (PSB) in 1996
  - SPRING (Standards, Productivity & Innovation Board) in 2002
CD in transformation stage

    - Gained more autonomy to better serve the private sector.
  - JICA supported in enhancing FTPI staff capacity in:
    - Productivity consulting services
    - HRD & labour-management relations consultancy
    - Research
    - Productivity campaigns & promotional activities

- 1997 Asian economic crisis highlighted its importance.
Pilot/demonstration & planning

• Tunisia (2006-08): “Study on the Master Plan for Quality/Productivity Improvement”
  – Identifying pilot enterprises
  – Consultant training (incl. OJT)
  – Material development
  – Master Plan & Action Plan
    • To expand to other business processes
      – Component quality, design quality, market quality
    • To spread out

→ Project on Quality/Productivity Improvement (2009-2012)
Other forms of assistance

• Long-term & short-term experts

• Training courses:
  – In Japan
  – In 3rd countries
  – Through JICA-Net

• Kaizen as a project component
  – Indonesia (to be presented by Mr. Homma)
  – Bangladesh
    • Demonstration of Kaizen techniques

• Regional approach
  – Central America (in Costa Rica)
Example of Kaizen results

• Bangladesh

Table 1.2-17 Summary of Improvement (%)

<table>
<thead>
<tr>
<th>Company</th>
<th>Spinning</th>
<th>Weaving</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M/C stoppage</td>
<td>Production</td>
</tr>
<tr>
<td>A</td>
<td>38.8</td>
<td>18.4</td>
</tr>
<tr>
<td>B</td>
<td>24.2</td>
<td>13.6</td>
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<tr>
<td>C</td>
<td>53.8</td>
<td>6.2</td>
</tr>
<tr>
<td>D</td>
<td>65.9</td>
<td>5.6</td>
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<tr>
<td>Average</td>
<td>45.7</td>
<td>11.0</td>
</tr>
</tbody>
</table>

Note: Performance in six months from January 2008

• Tunisia
  – 8 enterprises achieved more than 20% productivity increase, 3 achieved >50% increase.
  – Another cut nonconformity rate from 20% to 0%
  – Another reduced die replacement from 110 min. to 70 min.
    Cf. out of 27 enterprises
Lessons

• Kaizen can bring about results for companies with commitment.

• Dual roles of Kaizen centres:
  – Private: Services to companies
  – Public: Propagation/dissemination (e.g. campaigns)

• Challenges:
  • Trained C/P staff could become attractive enough to be recruited by the private sector.
  • Once enough understanding formed, a public-private entity may be appropriate.
    – To better serve the private sector
    – For the management of the centre (e.g. finance, HR)
  • Need to consider how (& when) to develop and mobilize private sector consultants
In summary …

• Kaizen is “an attitude of mind”
  – Not just a management technique
• Kaizen is participatory:
  – Frontline knows the best. → Use your brains as well as your hands.
• Various “tools” exist.
  – 5S, QC circles, …
• JICA has provided support in capacity development.