Integrated Management Driving Excellence

24th APQO International Conference 2018
Abu Dhabi, UAE

Janardan Ghimire
IPP
Network for Quality, Productivity and Competitiveness Nepal,

Chairperson,
NATCM Nepal Pvt. Ltd.
Email: info@nqpcn.org.np and janardan@natcmnepal.com
### Journey of Quality: Global Prospective

<table>
<thead>
<tr>
<th>Duration</th>
<th>Focus</th>
<th>Early 1900</th>
<th>1940s</th>
<th>1960s</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inspection</td>
<td></td>
<td>Statistical Sampling</td>
<td>Organizational Quality Focus</td>
</tr>
</tbody>
</table>

#### 1980 and beyond

Customer driven or requirement quality

- New concept of Quality
  - Build quality into the process.
  - Identify and correct the causes of quality problems through semi and automation using software.
  - **Artificial Intelligence**

#### Old concept of Quality

Inspect for quality after production

- Build quality into the process.
- Identify and correct the causes of quality problems through semi and automation using software.
- **Artificial Intelligence**
Prior to 1906 -1908
All autos assembled by skilled craftsmen called 'fitters.' Time required to complete a Ford Fitters task was 8.56 hours.

1908
Ford Attains perfect part interchangeability eliminating the need for skilled craftsmen. Time required for a Ford "Assembler" to complete his assigned task 2.3 minutes.

1924
Shewhart identifies causes of process variation as common and special, and develops the statistical Process control (SPC) chart.

1931
Shewhart publishes his book. "Economic Control of Quality of Manufactured products.

1906
Cadillac Achieves perfect interchangeability of parts.

1913
Ford introduces the moving assembly line, reduces the Assembler's task time to 1.9 minutes.

1927
Deming meets Shewhart and sees the relevance of his ideas to management.

1939
Start of World War II.
1941
Deming teaches SPC to American war time production workers SPC widely used

1945
End of World War II

1946
SPC fades in America as pent up demand for manufactured goods seems boundless.

1950
Eiji Toyoda & Taiichi Ohno start development of the Toyota Production System (TPS). Continues to this date.

1950
Deming trains hundreds of Japanese engineers, managers, executives and scholars in SPC and Quality Concepts.

1954
Juran Conducts and Quality Management courses in Japan.

1960 & 1970s
Japan captures market shares from Western manufacturers. U.S. loses some market segments completely.

1980
NBC Airs TV documentary "If Japan Can, Why Can't We?" Brings attention to Japanese success with quality and to Deming, American industry begins to learn from Japan.
### Journey of Quality: Global Prospective

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>Ford and GM invite Deming to speak to executives. Ford listened better than GM.</td>
</tr>
<tr>
<td>1985</td>
<td>Begin inning of adoption of Total Quality Management by American organizations.</td>
</tr>
<tr>
<td>1993</td>
<td>TQM is widely taught in U.S. colleges and universities.</td>
</tr>
</tbody>
</table>
| 2010 | TQM/Lean/Six Sigma generally acknowledged worldwide as the management system of the 21st century, and are practiced by organizations across the planet.  
| | Integration of Information Technology in the Manufacturing and Services |
| 1982 | Deming Publishes "Quality, Productivity and Competitive Position" his philosophy of management based on his "Fourteen Points" |
| 1987 | U.S. Congress establishes the Malcolm Baldrige, National Quality Award  
Motorola introduces Six Sigma as a more powerful version of TQM. ISO 9000 series published. |
| 1990 | "Lean Production" as a definition of the Toyota Production System is used by the book "The Machine That changed the world". |
| 2000 | ISO 9000, the international Standard for Quality was rewritten to incorporate TQM concepts. |
Integrated Management Driving Excellence

Institutional Excellence

Quality, Environment and Occupational Health and Safety

Process

P1

P2

P4

P3

Resources

Change

Audit

IT and Knowledge

Management Risks

Methods

Plant Controls

Procedure

IT and Knowledge

Resources

Quality, Environment and Occupational Health and Safety

Process

P1

P2

P4

P3

Institutional Excellence

Integrated Management Driving Excellence
Transforming enablers

- 5s
- Kaizen
- TQM
- Six Sigma
- OHSAS 18001
- Kano Model
- WHO/GMP
- GLP/GHP/GAP/GVP

- ISO 9001
- ISO 14001
- ISO 45001
- ISO 22000
- ISO 50001
- ISO 27001
- ISO 17025
- HACCP
- FSSC
Customer Focus

- People
  - Quality is building
  - Quality is expected, not unexpected
  - Employees are empowered

- Processes
  - Continual improvement
  - Good enough is never good enough

- Measure
- Statistical Process Control
- Benchmarking
- Quality Tools
## Improvement tools

<table>
<thead>
<tr>
<th></th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>TQM</td>
<td>Experts are limited to get an excellence</td>
</tr>
<tr>
<td>TQC</td>
<td>Experts are limited to implement</td>
</tr>
<tr>
<td>Process Re-engineering</td>
<td>Experts are limited to implement</td>
</tr>
<tr>
<td>Quality Control</td>
<td>Experts are limited to implement</td>
</tr>
<tr>
<td>Zero Defect</td>
<td>Experts are limited to implement</td>
</tr>
<tr>
<td>QFD</td>
<td>Experts are limited to implement</td>
</tr>
<tr>
<td>ISO 9001</td>
<td>Added a bit value through general competency of an experts</td>
</tr>
<tr>
<td>OH&amp;S</td>
<td>Added a bit value through general competency of an experts</td>
</tr>
<tr>
<td>EMS</td>
<td>Added a bit value through general competency of an experts</td>
</tr>
</tbody>
</table>

**Few Asian countries of ISO 9001 certification status from 2014-2016**

**Few Asian countries Certification Status of ISO 14001 from 2014-2016**

Source: [https://isotc.iso.org/livelink/livelink?func=ll&objId=18808772&objAction=browse&viewType=1](https://isotc.iso.org/livelink/livelink?func=ll&objId=18808772&objAction=browse&viewType=1)
Quality, Value and organizational Excellence: Five Columns (Pillars)

Value of all Interested Parties (Internal & External)

Performance of Excellence

Change
Resources
IT & Knowledge
Process
Audit

Structured, Innovation and R & D Management

Commitment
1.1 Change Management

Be the change that you wish to see in the world.

"Change Management involves overcoming resistance to change"

- Poorly aligned (non-reinforcing) reward systems.
- Surprise and fear of the unknown.
- Loss of status or job security in the organization.
- Peer pressure.
- Mistrust.
- Institutional or Organizational politics?

Mahatma Gandhi
Purposes of Business planning

Directions

Actions

Expectations
1.2 Resource Management

RESOURCES

COMMUNICATION

- Man
- Machine
- Material
- Money
- Method
- Information Technology
- and other Technology
1.3 IT and Knowledge Management
"There is no wealth like knowledge, and no poverty like ignorance"
- Buddha

Knowledge is one of the keys to organizational success, where information technology will be required to capture and enhance knowledge.

Individual + Organization Knowledge = Company Assets
1.4 Process Management.

IDENTIFY & REVIEW

Context

CUSTOMER

Requirements

Expectations

Organization's Processes
(Support and Operation Process)

MONITOR & MEASURE

Complaints

Feedback

Product and Service

CUSTOMER

Satisfaction

Context

Inputs
Audit is Fact Finding?

“Systematic, independent and documented process for obtaining **audit evidence** and evaluating it objectively to determine the extent to which the **audit criteria** are fulfilled.”


- Internal Audit
- Supplier Audit
- Certification Audit
- Surveillance audit
The Five Columns (Pillars) needs to be managed properly to achieve an excellence
Glance of IMS Implementation

Magnus Pharma Pvt. Ltd.,
Bara, Nepal
Granulation-II

2018/12/05

Alu-Alu Machine

Source: Magnus Pharma Pvt. Ltd, Nepal
Integrated Management System (IMS) of ISO 9001, 14001, BS OHSAS 18001 and WHO/GMP

- ISO 9001: Customer Related Processes
  - Context of Organization
  - Leadership and Planning
  - Support and Operations
  - Performance Evaluation
  - Improvement

- ISO 14001: Assessment of Environmental Aspect and Impact.
  - Compliance with legislation
  - Emergency Preparedness

- BS OHSAS 18001: Assessment against the Health and Safety GMP, GLP and GDP

WHO/GMP: Improvement

23
<table>
<thead>
<tr>
<th>Departments</th>
<th>No. of standard operating procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality Assurance</td>
<td>72</td>
</tr>
<tr>
<td>Quality Control</td>
<td>52</td>
</tr>
<tr>
<td>Production</td>
<td>39</td>
</tr>
<tr>
<td>Engineering</td>
<td>13</td>
</tr>
<tr>
<td>Wash</td>
<td>14</td>
</tr>
<tr>
<td>R &amp; D</td>
<td>5</td>
</tr>
<tr>
<td>General Management</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: Magnus Pharma Pvt, Ltd, Nepal
Customer Satisfaction Report

Source: Magnus Pharma Pvt, Ltd, Nepal
Source: Magnus Pharma Pvt, Ltd, Nepal
Revenue Generation

Amount in USD

Year

2013 2014 2015 2016 2017 2018

Source: Magnus Pharma Pvt, Ltd, Nepal
Institutional/Organizational Excellence

Quality & Honesty

Leadership and Motivation

Information technology

Engagement of People (Team Work)

Focus and Process Approach

Next process is a customer

Risk and opportunities

Relationship Management & Communication

Lesson Learnt!
Legal Requirement fulfillment

- Environment
- Occupational Health and Safety
- Product Disposal Process

Improvement in Complaint Handling Process

No awareness found before IMS implementation?

Customer Satisfaction Survey and Analysis Process included

Quality Auditing and Review Meeting Process
Thank You