

WEEK 8



PROCESS IMPROVEMENT

&

CONTINUOUS IMPROVEMENT

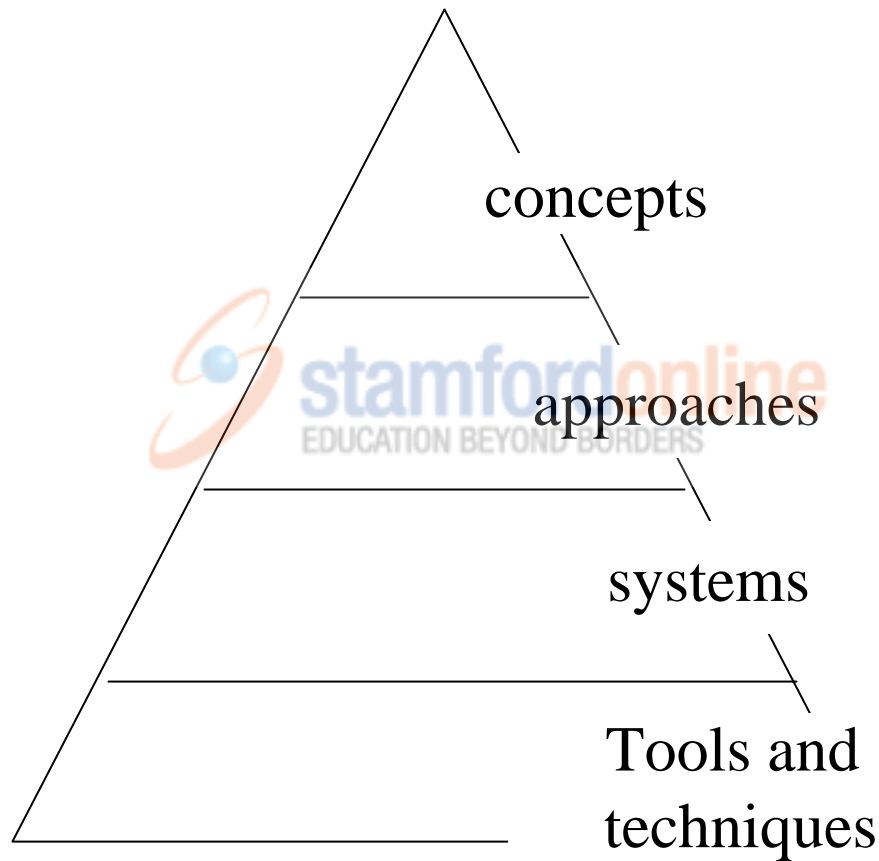
Five modern improvement approaches

- Continuous elimination of errors, defects and waste and their associated value adding activities to improve the quality of production and services is essential for all organizations;
- Few organizations can afford the time needed to learn how to improve by experience and many tend to buy a branded package.

Approaches: systematically defined

- The quality management discipline is a broad and diverse area which encompasses many control and improvement activities;
- Each approach can be used to make improvement in organization;
- It requires resources of training and hiring additional resources;
- Methods and skills applied to particular task.

The interconnection pyramid



Approach 1: TQM

- Creation of the term TQC used the term TQM to describe their approach to the management and improvement of quality;
- Claimed that companies approached the management of quality rarely claimed that their companies had to improve.

General agreement of TQM:

- Set of principles (customer focus, leadership, involvement of people, process approach, system approach to management) used to create a decision;
- Comprises a number of elements – planning and organization, use of tools and techniques, education, involvement, teamwork;
- There is no defined set of tools and techniques.

Approach 2: Total productive maintenance

- Characteristics of TPM:
 1. Integration of maintenance and production departments;
 2. Small teams of operators/maintenance staff;
 3. Training is undertaken to make operators feel like equipment;
 4. Developed good habit.



The seven key steps of a TPM

1. Initial cleaning to identify problems with equipment;
2. Counter measures at the source of problems;
3. Set maintenance, cleaning and lubrication;
4. General inspection;
5. Autonomous inspection;
6. Orderliness and tidiness;
7. Full autonomous maintenance.

Approach 3: Lean manufacturing

- Can be considered to be an essential element of all the main improvements approaches;
- It was first practiced in Toyota;
- More efficient in conjunction with a target to make specific way of thinking, consisting of a set of methods;
- It is also considered as a stand alone mode;
- It is used to eliminate waste in business.

Tools in lean:

- Value: providing the customer with the right product for the right price and time;
- Value stream: the set of actions from product /service concept to realization, order to delivery, raw material to finished goods;
- Flow: seamless movement through a series of value creating steps;
- Pull: acting only to satisfy customer needs;

- Perfection: continuously and relentlessly, along with the associated reduction in defects.

Approach 4: Business process Re-engineering

- Enables an organization to make a radical and revolutionary examination of the way in which it operates and how work is done;
- BPR is an integrated approach;
- It comprises a set of principles;
- Applied and associated with downsizing.

Principles in BPR

1. Strategic in concept
2. Customer focused
3. Output rather than input focused
4. Process responsibility
5. Cross functional in nature
6. Involves internal and external customer relationship
7. Clear communication and visibility
8. Technology

Approach 5: Six sigma

- To improve the performance of key process;
- Define problem solving to improve productivity;
- DMAIC – define, measure, analyses, improve and control;
- Time scale involvement;
- Emphasis on project by project saving;
- Training is primarily in statistical methods and analysis.

Summary

- TQM and TPM emerged from Japanese experience in mid 1960 – 1970;
- Problem to implement;
- Give a clear change of structure;
- Step by step process involved.

Comparison

- TQM and TPM aim at widespread involvement and commitment throughout compared to implementing unit BPR;
- TQM and TPM are far less restrictive in their change process than BPR and six sigma;
- BPR and Six sigma give better and faster result than TQM and TPM;

- BPR uses hierarchical and top down finance but TQM uses polar system finance;
- TQM enables anyone at any level to improve their daily work on a step by step basis but BPR consists of an overall complex;
- BPR and Six sigma involve little stress compared to Japanese term TQM and TPM where employees feel stressful;
- TQM and TPM aim at overall long term involvement and attitude change but BPR is more on short term planning.

Which improvement approach is best?

- It is difficult to measure which approach is the best; it depends on management and how they are going to use the resources;
- If an organization can easily change the internal system and procedure, TQM is the right choice;
- They must focus on the actual process of the change they are adopting as it will soon become unpredictable, and secondly the achievement change will bring is unlikely as promised.

