

Gurus in the area of Quality Management

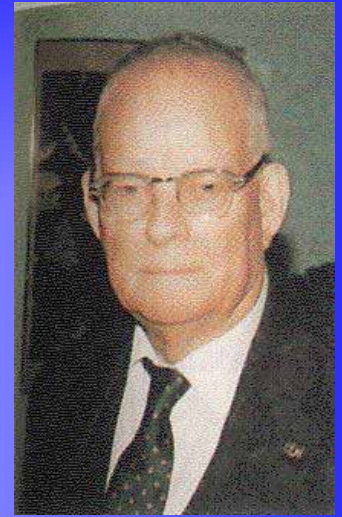
MUHAMMAD ASIF

THE AIM OF TODAYS LECTURE IS TO

*Take advantage of received wisdom on
TQM*

Learn the philosophies of quality gurus

W. EDWARDS DEMING



- Statistics professor, specialized in sampling
- Went to Japan after WW II
- Helped Japanese focus on and improve quality
- System (not employees) is cause of poor quality
- Fourteen Points

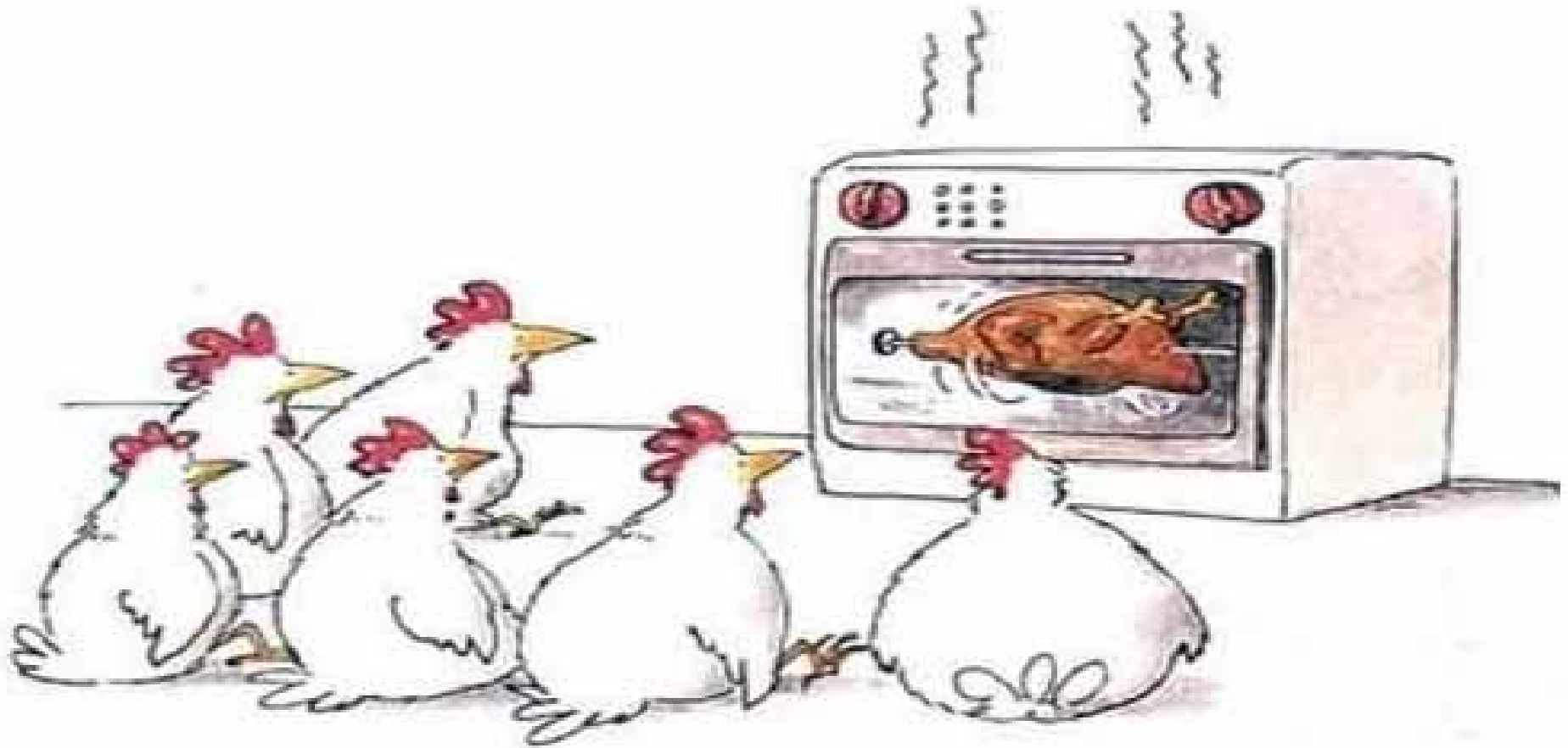
DEMING'S PARADIGM

1. Intrinsic & extrinsic motivation
2. Management needs to improve and innovate processes to create results
3. Optimize the entire system toward its aim
4. Cooperation is better than competition

Deming's 14 Points

1. Create & publish the aim & purpose of organization
2. Learn new philosophy of prevention
3. Cease mass inspection
4. Select a few suppliers based on quality
5. Constantly improve systems
6. Institute vigorous training
7. Instill leadership among supervisors

8. Eliminate fear among employees



9. Eliminate barriers between departments
10. Eliminate slogans only system
11. Remove numerical quotas
12. Enhance worker pride
13. Institute education & development
14. Implement these 13 points

TAGUCHI

- Before Taguchi, goalpost view of quality existed, anything that falls within specifications is OK.
- Taguchi rejected above belief, there is loss in deviating from nominal value with in specification limits

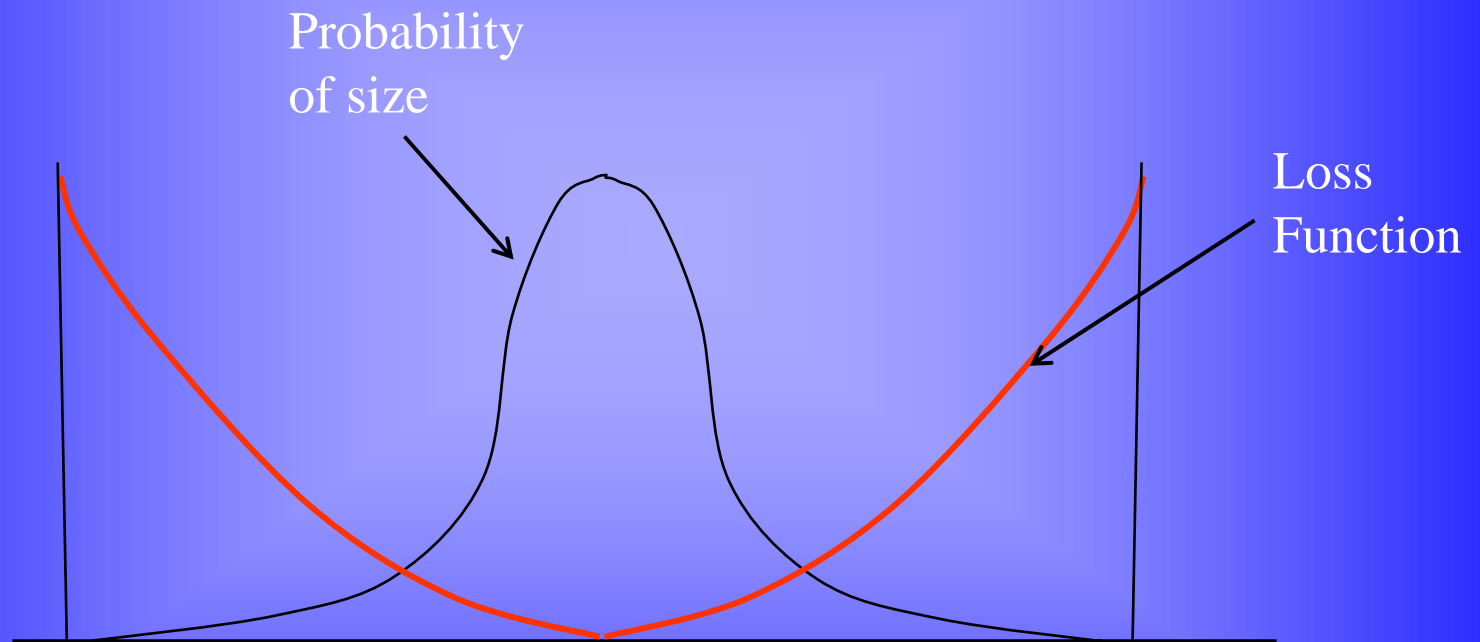
Conventionally

Cost of poor quality = No. of items outside specs. x Cost of rework/scrap.

Short-term costs may simply be those of non-conformance, any item manufactured away from nominal would result in some loss to the customer or the wider community*

1. Through early wear-out,
2. Difficulties in interfacing with other parts,
3. Itself wide of nominal.

Loss Function



Loss Function

$$L = K(y - m)^2$$

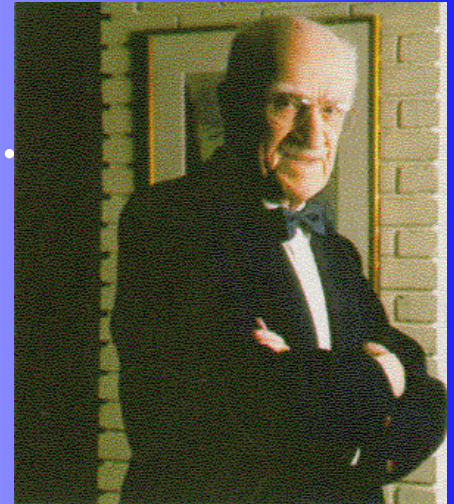
- $K = C/d^2$
- C = Cost of exceeding specification limits
- d = allowable deviation from the nominal value used to determine the specification limits
- L = Loss
- m = nominal value
- y = value of a quality characteristics for a particular item

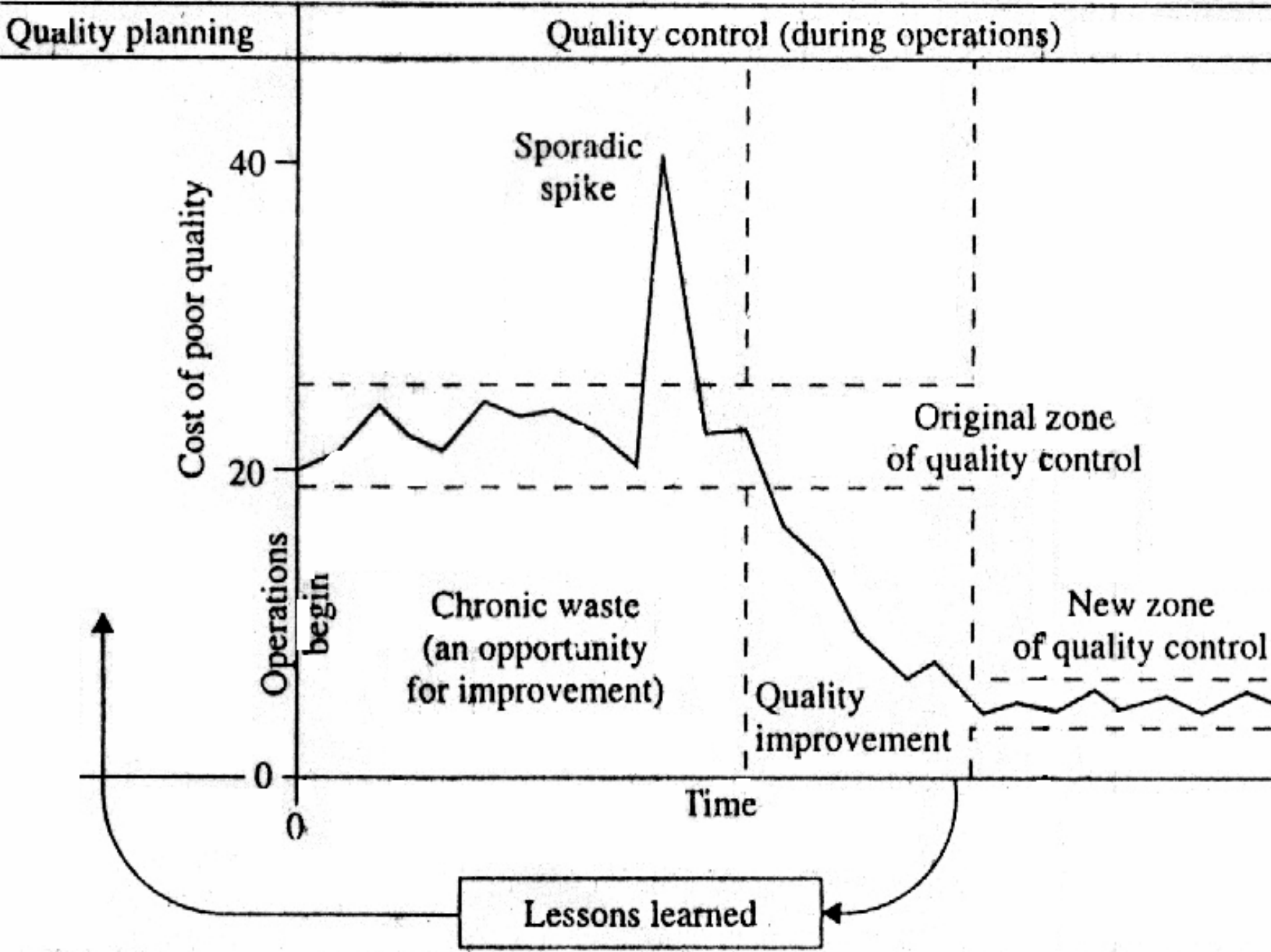
Joseph Juran

- 80% of defects are controllable
- Renowned for his quality trilogy.

QUALITY TRILOGY:

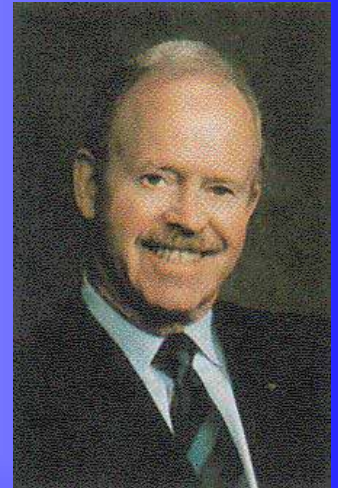
- Quality Planning.
- Quality Control.
- Quality Improvement





Philip B. Crosby

- **“QUALITY IS FREE”**
- Management must be firmly behind any quality plans
- Do it right the first time



ISHIKAWA:

- The Japanese engineer
- Continuously improve the quality
- The organization which does not make a change in 06 months is a dead organization

*THOSE WHO CAN'T CHANGE
THEIR MINDS CAN'T CHANGE
ANYTHING*

(George Bernard Shaw)