QUALITY MANAGEMENT
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PETRA BENEDEK

ASSISTANT LECTURER

DEPARTMENT OF MANAGEMENT AND BUSINESS ECONOMICS
FACULTY OF ECONOMIC AND SOCIAL SCIENCES
BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS
BENEDEK@MVT.BME.HU

Agenda

- Review
- TQM philosophy
- TQM principles
  - Total Commitment
  - Employee Empowerment
 - Leadership vs. Management

Short review

- Primary purpose: coordination of activities
- Aim: make the quality management system focus on the broader production chain and error prevention
- Applied methods are quality projects and systems
- Quality professionals are responsible for quality planning, quality programs and continuous quality assessment
- All departments involved are responsible for quality

The development of quality
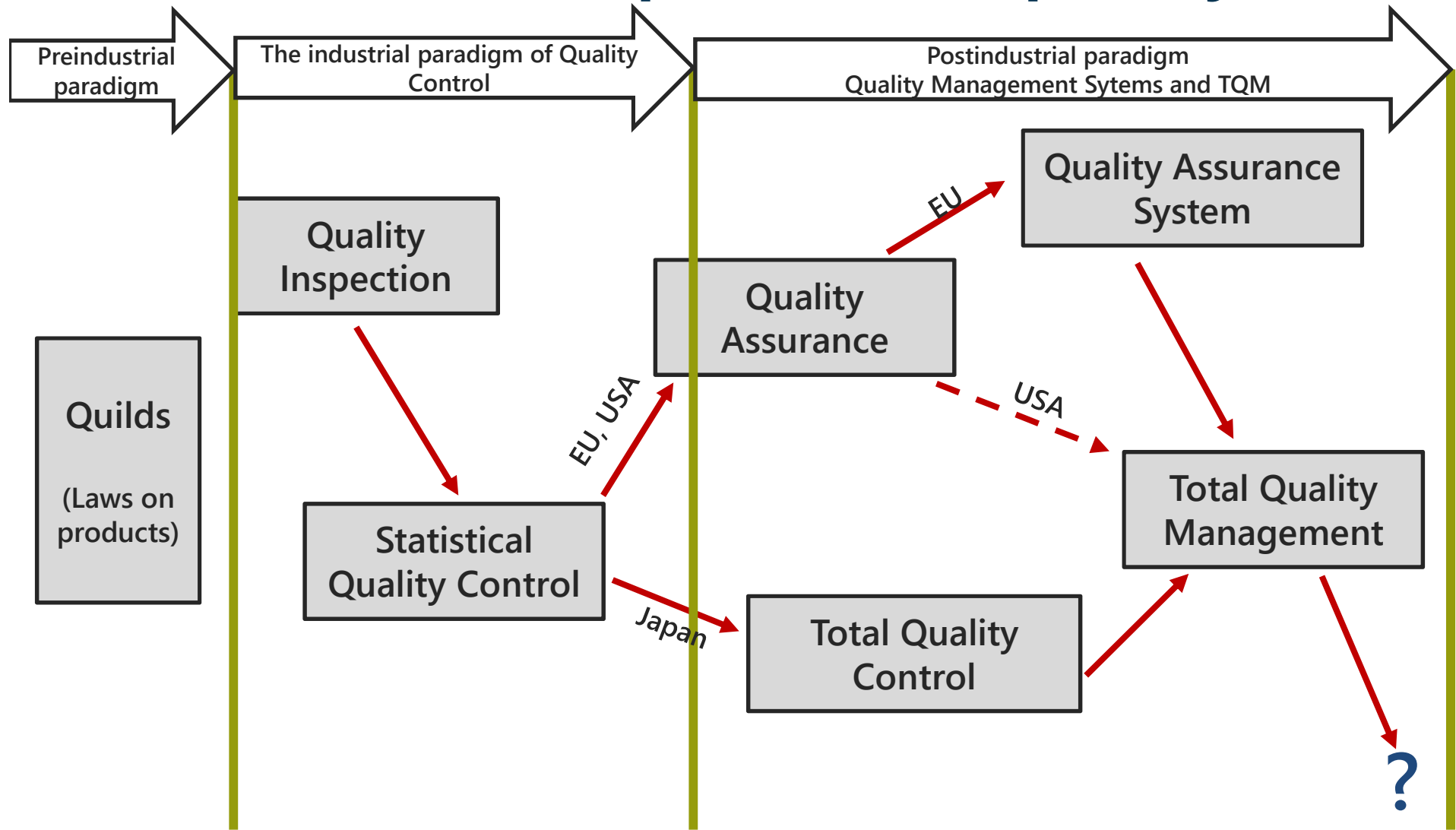
Principles of Quality	Traditional Quality Assurance	Total Quality Management
Definition	Product driven	Customer driven
Priorities	Emphasis is on cost and output	Emphasis is on outcome and quality is the means
Decisions	Short-term goals are emphasized	Short-term and long-term goals are emphasized
Objective	Detect errors	Prevent errors
Costs	Quality increases costs	Quality reduces costs and improves productivity
Errors are due to	Special causes which result from workers' mistakes and inefficiency	Common causes which result from failure of top management to manage effectively

Principles of Quality	Traditional Quality Assurance	Total Quality Management
Responsibility for Quality	Inspection centres and quality control departments	Involves every member of the organization
Organization culture	Numerical targts are used and employees can be singled out for their mistakes	Continuous improvement is emphasized and team work is the approach
Organizational structure and information flow	Top-down and bottom-up approach, bureaucratic and restricts information flow, rigid	Horizontal approach, provides real time information, flexible
Decision making	Top-down approach	Team approach is used with team members comprising of employees

TQM

Reasons To Learn About TQM

- Engineers need to understand that **management is a PART of engineering** - it is not apart from engineering

- Engineers need to be creative in improving the engineering PROCESS, and recognize that **"quality" is not extra features**

- Engineers need to **think beyond issues of technology**, and learn the means whereby people, processes and technology come together

Origins of TQM

- **USA after World War II:**
  - Increasing demand for consumer goods: focus on quantity instead of quality
- **Other countries (Japan, Korea):**
  - Economic revolution
  - More innovative, cost-effective
- **By 1980: US lost its domination as world supplier, appearance of foreign competitors**
  - Better cost-efficiency, better understanding of customers' needs

**Management must change the way
if they want to survive**

TQM's quality definition

A basic business strategy that provides **goods and services** that completely satisfy both **internal and external customers** by meeting their **explicit and implicit expectations**

Total Quality Management

- **Quality as a business strategy**
  - Meeting customers' always changing needs
- **Continuous improvement with active participation of all employees**
- **QM principles and tools used everywhere in the organization**

TQM Philosophy

A core definition of TQM describes a management approach to long–term success through customer satisfaction.

In a TQM effort, all members of an organization participate in improving processes, products, services, and the culture in which they work.

TQM is the art of managing the whole to achieve excellence.

TQM Fundamentals

1. The **customer** makes the basic determination of quality (outcome)

2. **Top management** must provide leadership and support for all quality initiatives

3. Preventing **variability is the key** to producing high quality

TQM Fundamentals (continued)

4. Quality goals are a moving target, thereby requiring a commitment toward **continuous improvement – continuous change**

5. Improving quality requires the establishment of effective metrics. We must speak with **DATA AND FACTS** not just opinions

Involvement

- "... to the best of our knowledge, every successful quality revolution has taken place with the involvement ofsenior management, with NO EXCEPTION ..."
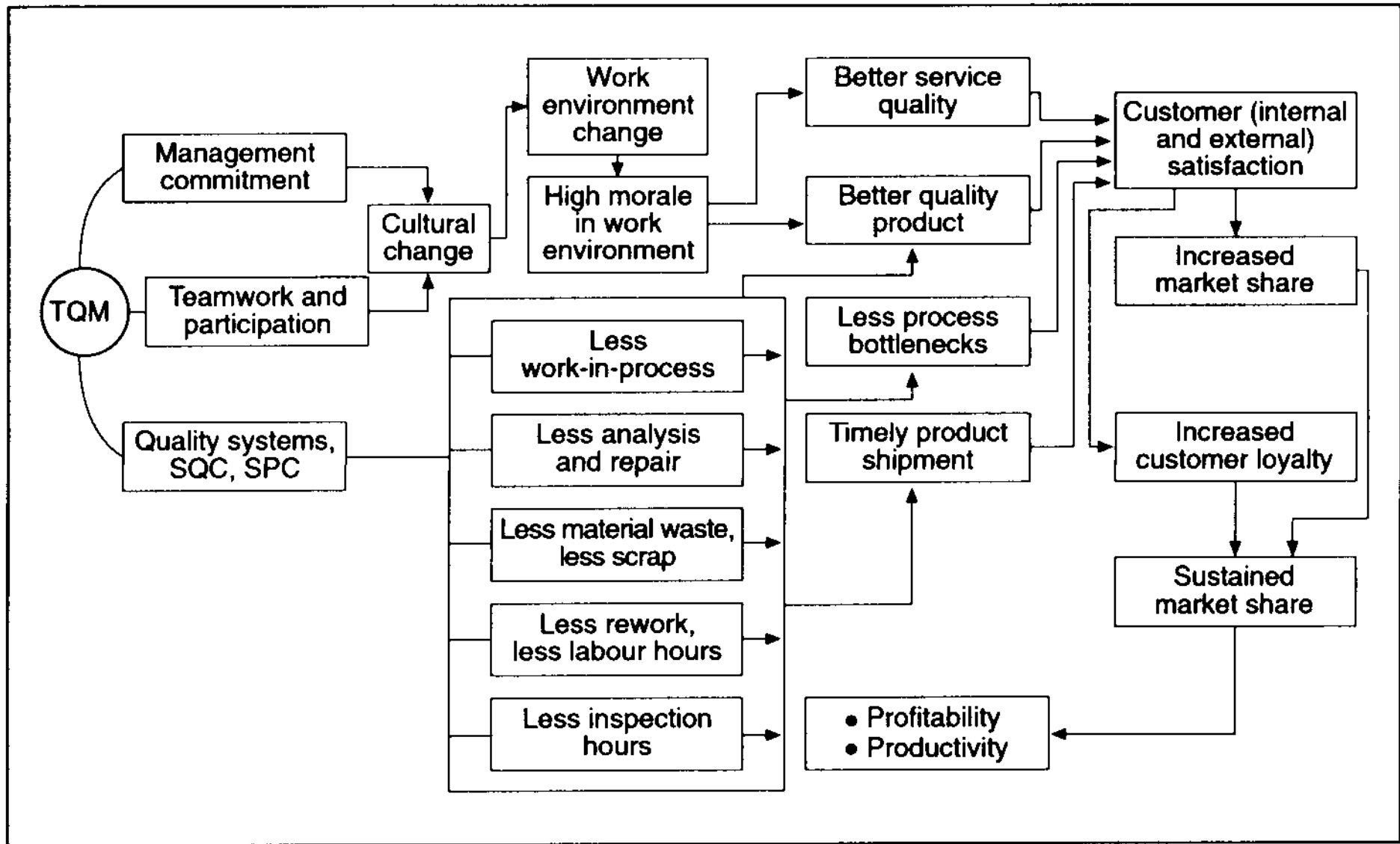
TQM in Service Companies

- Principles of TQM apply equally well to services and manufacturing
- Services and manufacturing companies have similar inputs but different processes and outputs
- Services tend to be labor intensive
- Service defects are not always easy to measure

Goal

TQM

Principles

| Customer focus | Process improvement | Total involvement |

Supporting elements

| Leadership | Supportive structure | Communication |
| Education and training | Reward and recognitions | Measurement |

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Principles

1. **Customer focus:**
   - Concept of internal and external customer
   - Collection, understanding, analysis and fulfillment of customer requirements
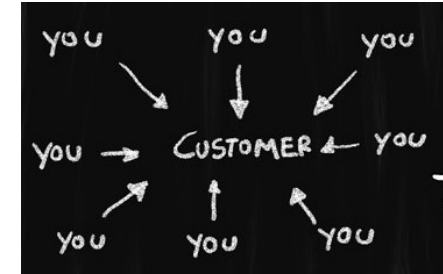
2. **Process improvement:**
   - Work is the result of a series of interrelated steps and activities that result in an output.
   - Reduce the variability of the output and improve the reliability of the process

3. **Total involvement:**
   - Active leadership of senior management
   - Utilizing the talents of all employees
   - Building long-term partnerships with suppliers
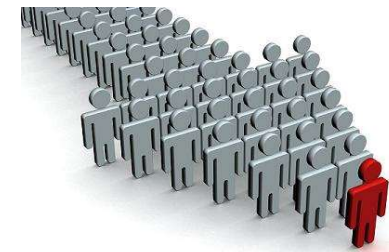
Supporting elements 1.

- **Leadership:** role of senior managers as advocates, teachers, and leaders

- **Education and training:** quality is based on the skills of every employee and his or her understanding of what is required

- **Supportive structure:** senior managers may require support to bring about the change necessary to implement a quality strategy
  - Consultants, small support staff

Supporting elements 2.

- **Communication:** communicate to all employees a sincere commitment to change, a way to overcome resistance to change
  - Bottom-up flow of information
- **Reward and recognition:** teams and individuals who successfully apply the quality process must be recognized and possibly rewarded
  - Examples and role models for others
- **Measurement:** the use of data becomes topmost in installing a quality management process

https://www.youtube.com/watch?v=gwHngq4Bw0w

Customer Focus

Organizations depend on their customers and therefore should understand current and future customer needs, meet customer requirements, and strive to exceed customer expectations

It requires more money to attract a new customer than it requires to keep a customer you already have...

KEEP the present customer HAPPY ☺

- The identification of customer needs and expectations requires systematic thorough, and continuous COMMUNICATION

- The most important aspect of this process is to listen to the customer

- Once customer needs are identified, these needs must be MONITORED continuously to ensure that the product and/or service still satisfies them
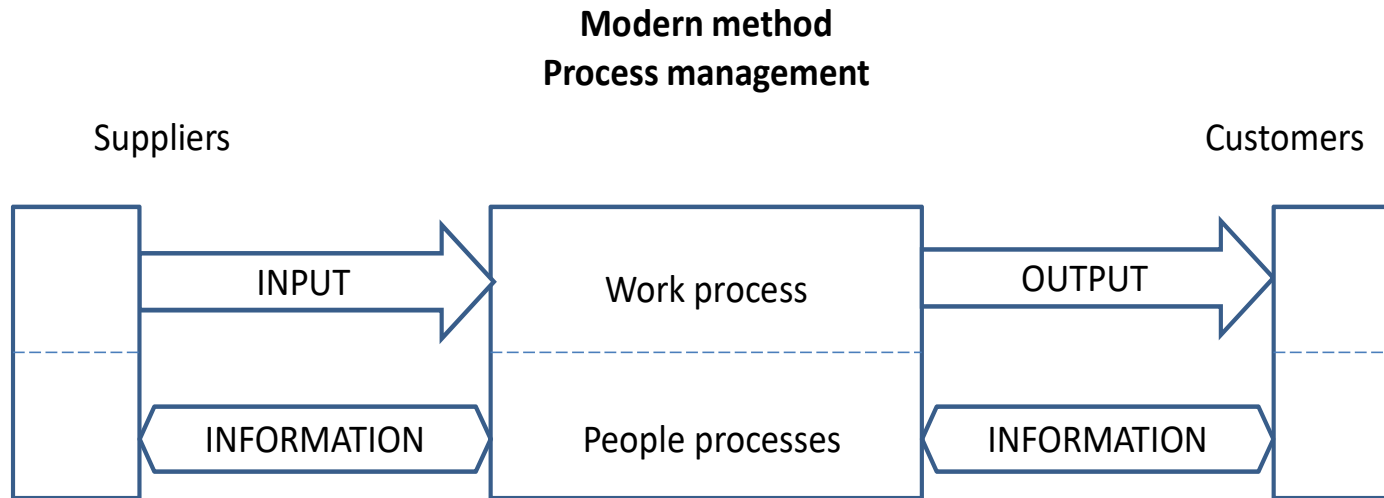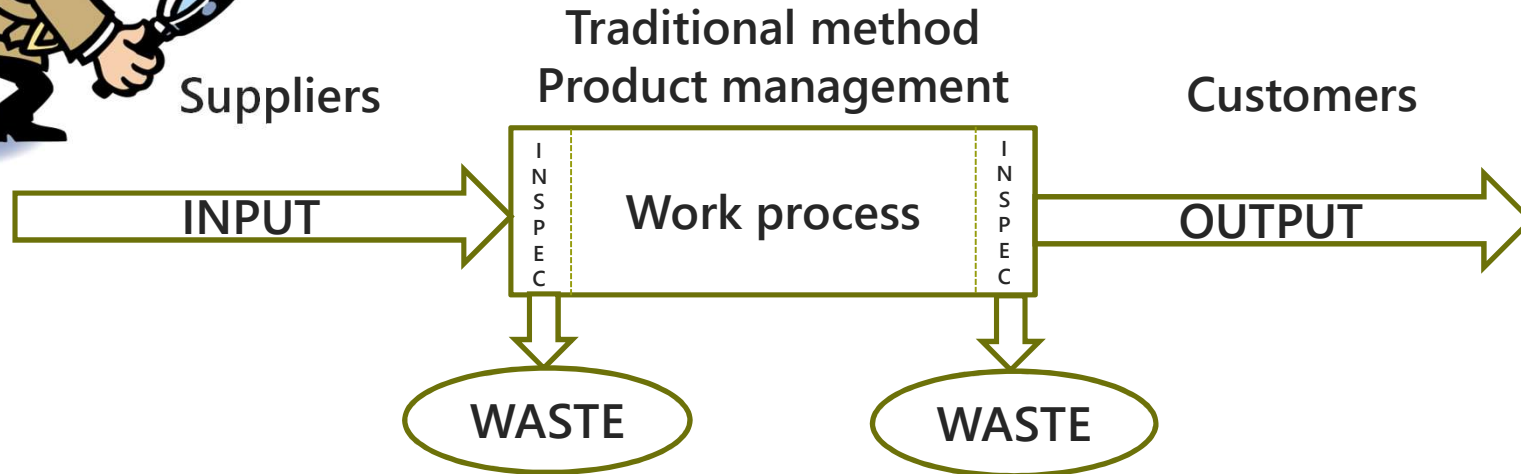
Continuous Improvement

A desired result is achieved more effectively when related resources and activities are managed as a <u>PROCESS</u>

Continuous improvement is a permanent objective of the organization

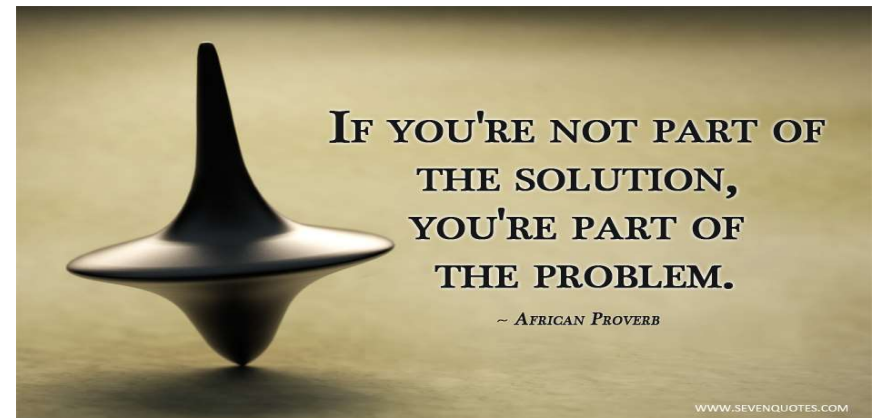In the race for quality, there is no finish line

Product vs. Process

Traditional method
Product management

Suppliers

Customers

INPUT → INSPEC → Work process → INSPEC → OUTPUT

WASTE   WASTE

Modern method
Process management

Suppliers

Customers

INPUT → Work process → OUTPUT

INFORMATION — People processes — INFORMATION

Total Commitment

Leaders establish unity of purpose, direction, and the internal environment of organization; they fully involve people in achieving the organization's objectives

The difference between an average and an outstanding company is the LEADERSHIP they have

IF YOU'RE NOT PART OF THE SOLUTION, YOU'RE PART OF THE PROBLEM.

~ AFRICAN PROVERB

WWW.SEVENQUOTES.COM

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Strategic and Systematic Approach to Management

- **Identifying, understanding, and managing a SYSTEM of interrelated processes for a given objective will contribute to the effectiveness and efficiency of the organization**

- **FACTUAL approach to decision making: decisions and actions are based on the analysis of data and information**

Quality Guru - W. Edwards Deming

- **Advocated Statistical Process Control (SPC)**
  - Methods which signal shifts in a process that will likely lead to products and/or services not meeting customer requirements
  - Emphasized an overall organizational approach to managing quality
  - Demonstrated that quality products are less costly than poor quality products
  - Identified 14 points critical for improving quality
- **The Deming Prize**
  - Highest award for industrial excellence in Japan

Deming's 14 Points for Management

1. Create and publish to all employees a statement of the aims and purposes of the company. The management must demonstrate their commitment to this statement
2. Learn the new philosophy
3. Understand the purpose of inspection – to reduce the cost and improve the processes
4. End the practice of awarding business on the basis of price tag alone
5. Improve constantly and forever the system of production and service
6. Institute training
7. Teach and institute leadership
8. Drive out fear. Create an environment of innovation
9. Optimize the team efforts towards the aims and purposes of the company
10. Eliminate exhortations for the workforce
11. Eliminate numerical quotas for production.
12. Remove the barriers that rob pride of workmanship
13. Encourage learning and self-improvement
14. Take action to accomplish the transformation.

Leaders

„Managers are people who do things right and leaders are people who do the right thing. Both roles are crucial, and they differ profoundly. I often observe people in top positions doing the wrong things well."

- Warren Bennis and Burt Nanus

Manager vs. Leader

Manager	Leader
Focuses on present	Looks toward the future
Prefers stability	Appreciates change
Orients toward the short term	Orients toward the long-term
Focuses on the procedure	Engages in a Vision
Asks „what" and „how"	Asks „why" and „what"
Prefers to control	Knows how to delegate
Is happy in complexity	Prefers simplicity
Uses the rational mind	Trusts intuition
Works within the context of the organization and the business	Takes social and environmental contexts into consideration

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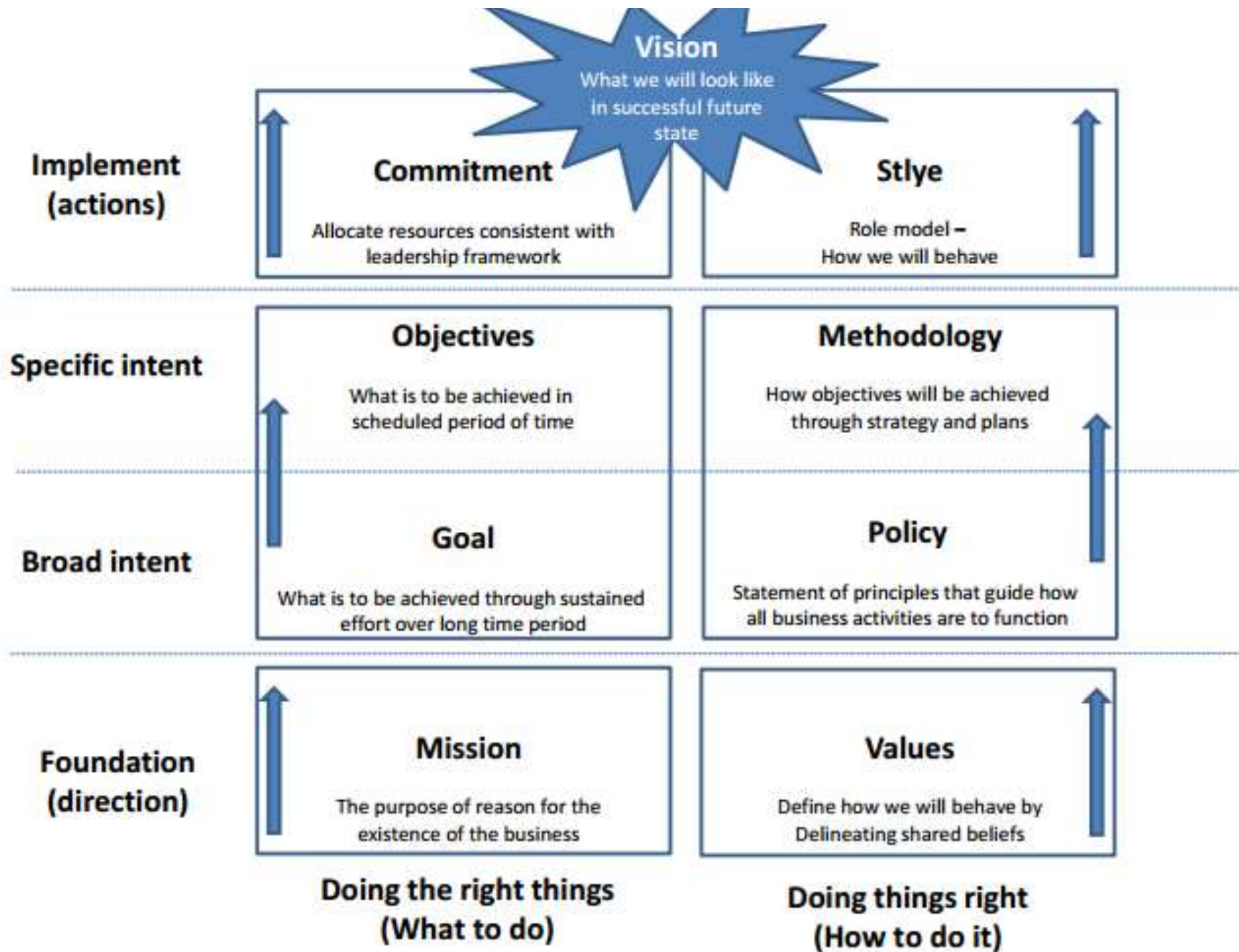
Mission

Why do we exist?

An easy to understand statement, mostly just one paragraph long and describes why the organization was created and what its primary functions are

Vision

Who we **wish to be**?

The vision declares what the company intends to do **in the future**.
The vision is usually phrased as soon as the mission statement is completed, and it is done in cooperation.
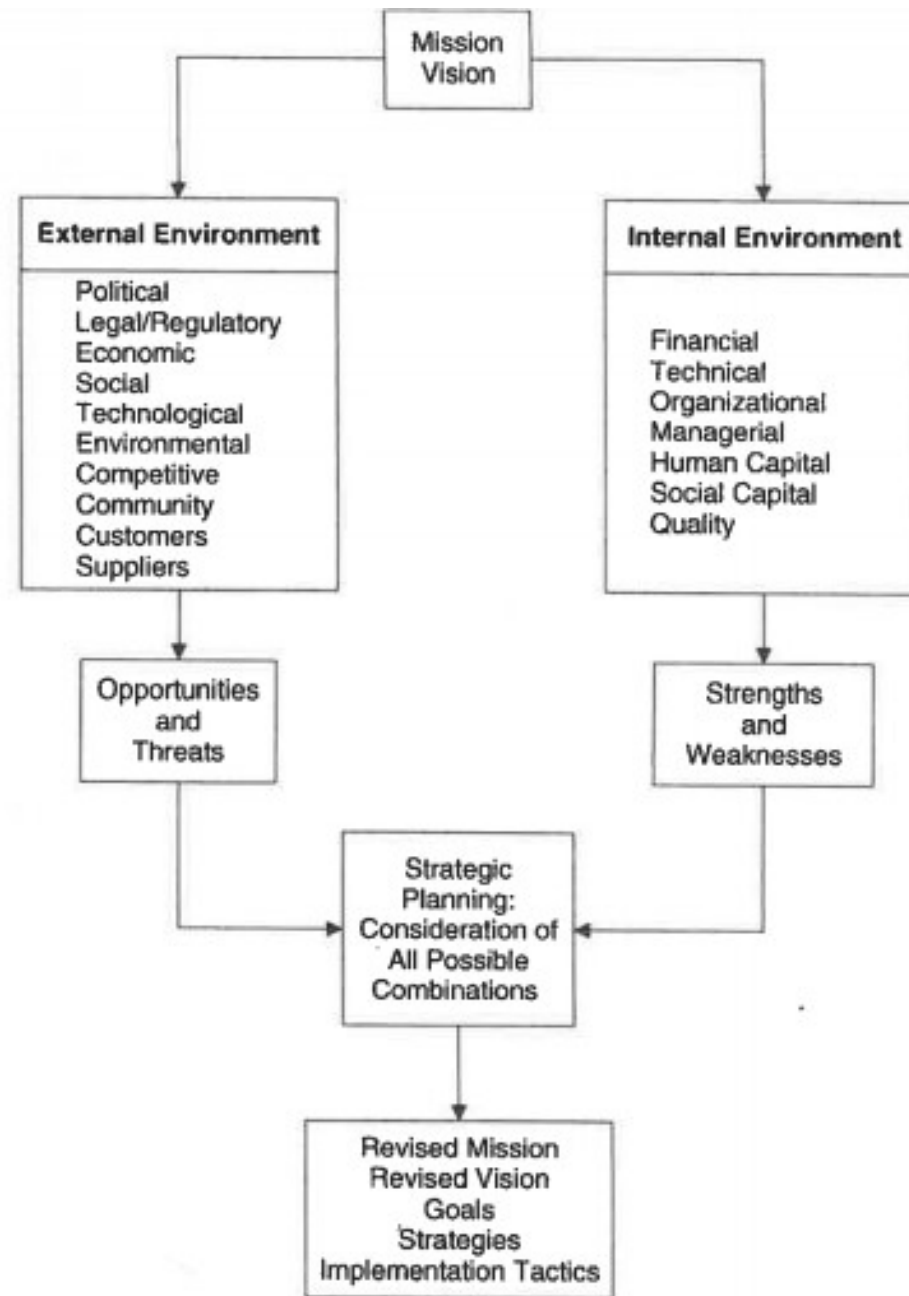
Values

What is important to us? What do we believe in? What do we expect everyone to respect?

In our statements, we declare our true values.

If they do not correspond to reality, publicizing them will only be an obstacle.

Values cannot be simply declared; they must be supported by example.

Policies, goals, methods

Policies - What work do we want from our employees? What policies (guidance) can we provide to individuals in the organization on how to provide the product and service to customers?

Goals - What should we do? What are the long-term and short-term results that can achieve mission and vision?

Method, Methodology - How will we achieve our vision and meet our goals and objectives?

Objectives

- They are definite and concrete
- Expected results or achievements are described, not activities or behaviors
- Measurable (quantifiable)
- They set a specific deadline or period
- Challenge, but reachable

- S as specific – definite, precise and clear
- M as measurable
- A as attainable – feasible, accessible
- R as relevant
- T as time based

GRPI model for effective teams
Goals Roles Processes and Interpersonal Relationships
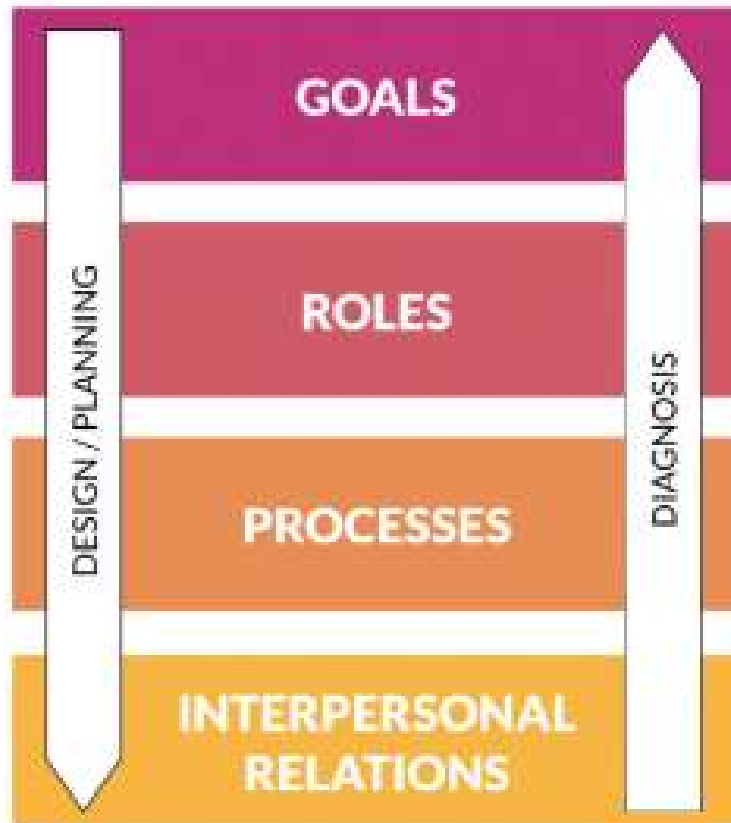
GOALS — What the team wants to achieve.

ROLES — What needs to be done and who will do it.

PROCESSES — How the team collaborates and communicates.

INTERPERSONAL RELATIONS — How the team members interact on a personal level.

DESIGN / PLANNING

DIAGNOSIS

Leadership guidelines

1. Leaders base their decisions on data
2. A good leader is: resource, trainer, and assistant
3. Leaders are actively involved in the processes
4. Leaders are committed to engagement
5. Leaders are trusted. They make the best of everyone and encourage personal development
6. Leaders say „thank you"

Management vs. Leadership

Management	Leadership
Plans	Vision
Budget	Strategy
Coordination	Risks
Staffing	Inspiration
Guiding	Delegation
Monitoring	Care
Controlling	
ACHIEVING RESULTS	IMPROVING SYSTEMS

Responsibilities

- Commitment to TQM
- Policies, plans, goals and objectives
- Communication
- Managing Resources
  - Human
  - Physical
  - Information
  - Partners
  - Environmental
  - Financial
- Managing customers
- Managing production processes
- Meausurement, evaluation and development

The „new" workforce

- **Highly educated, competent**
  - Subordinates might know more about the actual job than their managers
- **Traditional hierarchical approach is not working any more**
  - Authority is not enough
  - How to motivate them?
- **Achievements of Japanese firms build on participation**

Employee Involvement

People are the essence of an organization and their full involvement enables their knowledge and experiences to be used for the organization's benefit

Employees are a company's greatest asset

Quality comes from within; it comes from the hearts and the minds of the people

Creating autonomy

Alignment

Performance

Trust
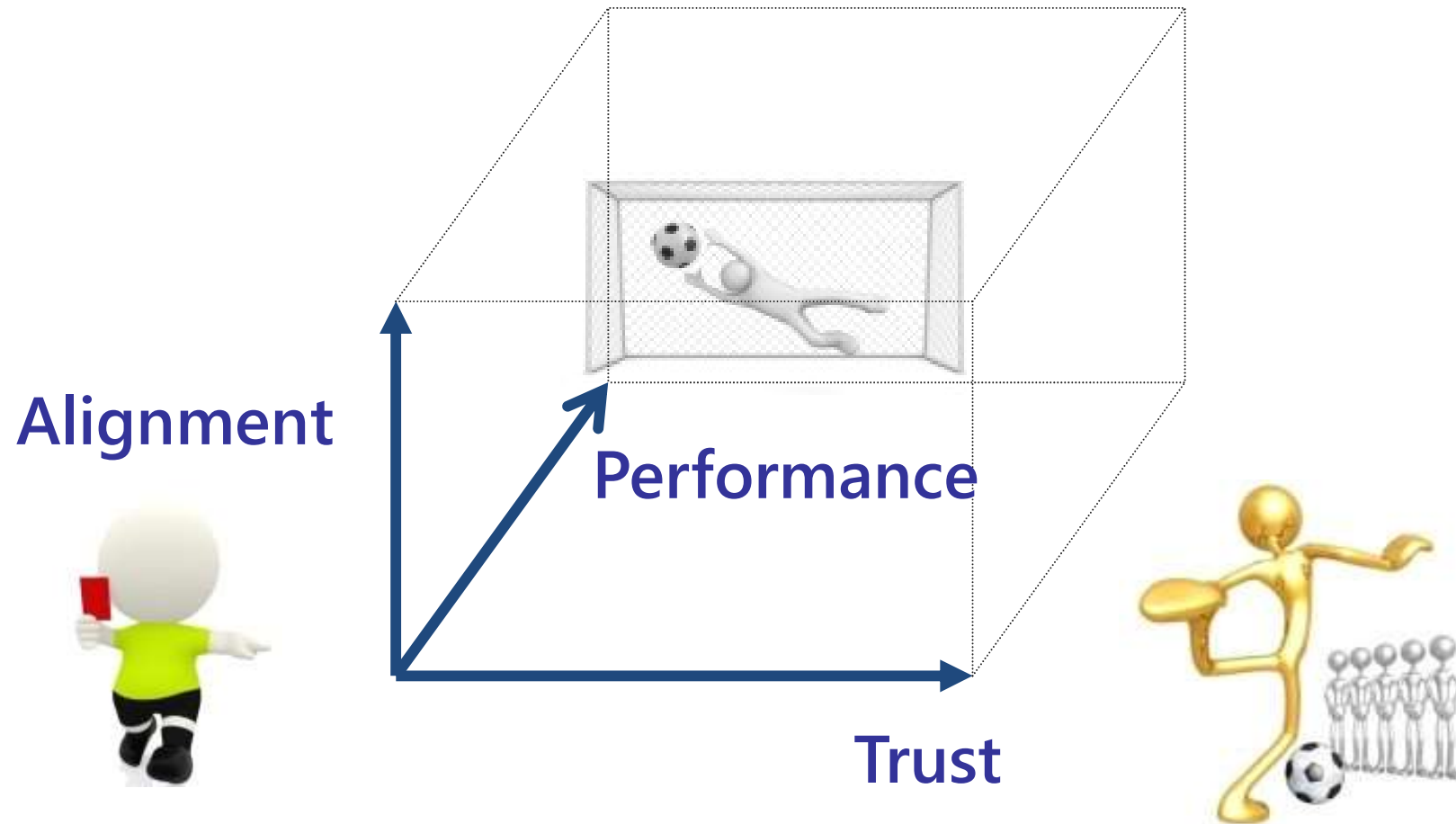
Performance: Providing materials, methods, machines and the right ability, skills, knowledge. This is usually no problem, and many organizations overdo it.

Empowerment dimensions

- ## Alignment
  - Knowledge and support of the vision, the values, goals and objectives

- ## Capability
  - Ability, skills, knowledge to do the job

- ## Mutual trust
  - Employees need to **trust** management and feel that management trusts them

Empowerment matrix

Alignment (vertical axis)

Trust (horizontal axis)

Burocracy	**Empowerment**
Paralysis	**Chaos**
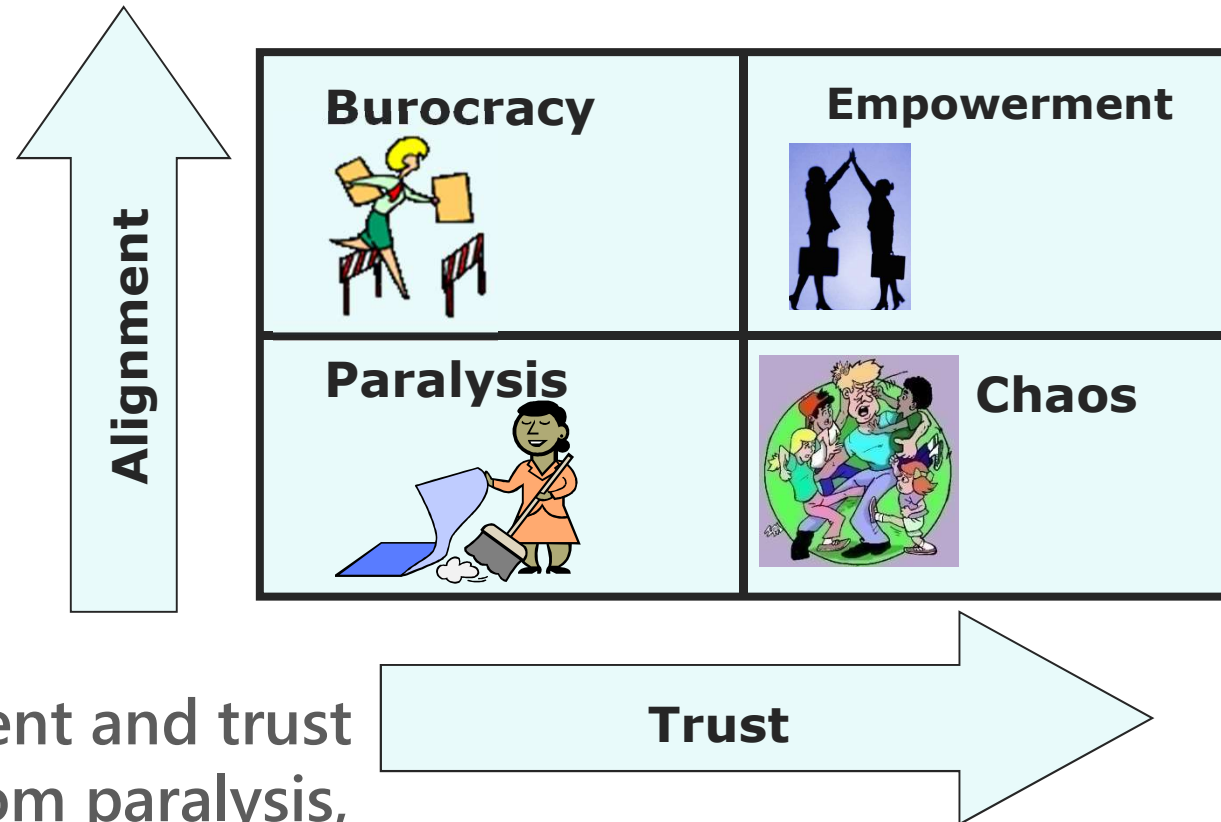
Without alignment and trust we will suffer from paralysis, from bureaucracy or chaos

Management styles

Traditional	Empowerment
based on power, instruction, control, bureaucratic, the decision goes through the entire corporate structure	authorizing employees and groups to make independent decisions
a lot of instructions to solve a problem	opportunity to work independently
expect knowledge, feel the power of management	stimulates knowledge, enables responsibility
management is separated from employees	management shows trust in its employees
LEADER: a person with power over different levels	LEADER: a link between different levels, defining directions

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What to do?

- **Enforce the concept of employee engagement and a high level of commitment**
- **Follow some basic principles to create an atmosphere that encourages their team and gives employees greater authority**

Implementation of TQM

For TQM to be successful, the organization must concentrate on the following key elements:

Obstacles to TQM

- Lack of company-wide definition of quality
- Lack of focus on strategic planning and core competencies
- Lack of trained workers or poorly installed equipment
- Competitive markets
- Poor plans and scheduling specifications, poorly defined work scope
- Bad attitudes, outdated organizational cultures, no real employee empowerment
- Lack of competent managers and leadership

Benefits of TQM

- Better defined project scope and objectives

- Greater communication of objectives

- Teamwork

- Effective planning and scheduling

- Appropriate training

- Improved quality of materials, equipment

Total
Quality
Management

Beyond the TQM

- SixSigma
- Lean management
- TPM

Continuous Improvement

Summary

- **TQM Philosophy and Principles**

- **Total Commitment**
  - Employee Empowerment
  - Leadership vs. Management

Midterm - examples

- Which dimensions are to be achieved to empower the workforce?

- The vision declares what the company intends to do in the future – true or false?

- Describe the 3 main principles of the TQM philosophy briefly

Thank you
for your attention

Petra BENEDEK

Assistant Lecturer

Dept. of Management and Business Economics
Faculty of Economic and Social Sciences
Budapest University of Technology and Economics

benedek@mvt.bme.hu