terms (I):
management systems (I)

- **Country of Origin: USA:**
  - Substantial Liability Risks for Products and Production
  - “learning by doing” as Education Model

- **Quality Management Systems:**
  - Broad-based Penetration
  - “Snowball”-Effect
terms (2):
management systems (2)

- Broadening of Customer-Supplier-Relationship:
  - Widespread Introduction of Quality Management Systems parallel to the Trend towards Outsourcings
  - Problems of Transaction Costs
  - Problems of Delegation
  - Need of Moral Minimum Standards
Increasing Complexity in Organization and Technology:

- Reduction of Complexity?
- Recommendation: Inner Complexity of a System has to be High!
- Goal: Managing Complexity Despite Increasing
- Consequence: Attribution of Responsibility of Organizational and technical Complexity
- Management System: Contribution to Manage Complexity
terms (4): management systems (4)

- Bionic Comparison: Management System of Animals:
  - Vision
  - Collection and Analyzing of Market Data
  - Organizational Structures and Procedures
  - Self-Regulation of Sub-Systems
  - Information System
  - Reward and Motivation System
  - Controlling System
  - For a smooth Cooperation a Collective Body of Rules and Regulations is Required!
Management Systems in Organizations Viewed as a Process with the following System Elements and Steps:

- Policy
- Planning
- Implementation and Operation
- Checking and Corrective Action
- Management Review
Model of a Management System:

- Kontinuierliche Verbesserung
- Bewertung durch die oberste Leitung
- Umweltpolitik
- Planung
- Implementierung und Durchführung
- Kontroll- und Korrekturmaßnahmen

Source: DIN EN ISO 14001, 1996
terms (7): management systems (7)

- Definitions according Management Systems:
  - Management System
  - Policy
  - Performance
  - Aspect
  - Objective
- 7 Designing Rules for Management Systems:
  ① Information of Merits and Basic Rules
  ② Information of Blue Print of the Organization
  ③ Gamut of Responses and Compliance with Guidelines
7 Designing Rules for Management Systems:

4. Continuous Improvement

5. Allow of Self-Organization

6. Create an Interface for Gathering and Release of Information

7. Organize Evolution and Learning
terms (10): management systems (10)

- Benefit of Management Systems:
  - Control of Organizational Behavior in Advance
  - Preservation of further Existence and Developabilty
  - Mapping of Market and Framework Conditions
  - Operation of Tasks and Checking
  - Learning and Storage of Knowledge
  - Foresight and Safeguarding
terms (II): management systems (II)

- Wishful Thinking and Reality:
  - Questions of Efficiency and Effectiveness
  - Causes of Failures of Benefits of Management Systems:
    - Divers Isolated Management Systems
    - No Guiding Systems
    - Too Abstract Basic Principles
    - No Continuous Goal Setting
    - Lack of Knowledge about the Factors of Influence
Economic Lifecycle Assessing (Product Lifecycle):

- Introduction
- Growth
- Maturity
- Saturation
- Decline
- Post-Carriage
Software-Lifecycle Assessing:

- Problemstellung
- Analyse/Entwurf
- Änderungen
- Implementierung
- Test
- Einführung
- Pflege/Wartung

Source: http://upload.wikimedia.org/wikipedia/commons/7/7b/Softwarelebenszyklus.png
Service Lifecycle Assessing:

Source: http://de.it-processmaps.com/media/einfuehrung_itil_prozesslandkarte_v3.pdf
Lifecycle Assessing of Physical Products:

- Lifecycle
- Typical Stages of a Product Lifecycle:
  - Energy and Resource Extraction
  - Preproduction
  - Production
  - Transport
  - Distribution
  - Product Use/Consumption
  - Disposal of Waste
- Lifecycle Assessing of Physical Products (process orientated):

Source: DIN EN ISO 140040, 2006
Continuous Improvement/Continuous Improvement Process (CVP):

- Continuous Improvement
- Continuous Improvement Process
- Origin in Quality Management in the 1950ies by W. E. Deming
PDCA-Cycle by Deming:

Source: Kaminske/Brauer, 2003, S. 296
- **Stakeholder:**
  - Management of Internal and External Relationships of Organizations
  - Stakeholder
  - Claims against the Organization:
    - Material
    - Immaterial