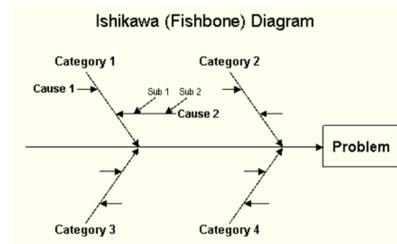


- Pareto diagrams**: distinguishes between what's important and what's not important
- Scatter diagrams**: identifies whether there is evidence of a connection between two sets of data
- Why-Why analysis**: Ask why something happened until you know the cause
- Cause and effect diagrams (Ishikawa, Fishbone)**: What, When, Where, How and Why
- Flow charts**



- 1 Define an improvement strategy
- 2 Get top management support (Understanding and belief)
- 3 Manage it (design, plan, control) and build up repository
- 4 Decide whether you might want us: Quality circle, Quality improvement team, Task force
- 5 Reward the improvement people
- 6 Train people

*Is a comprehensive and flexible system for achieving, sustaining and maximizing business success. It's driven by close understanding of customers needs, disciplined use of facts, data, and statistical analysis, and diligent attention to managing, improving, and reinventing business processes*

- Six Sigma**
  - Customer driven
  - DMAIC - Define/Measure/Analyse/Improve/Control approach
  - Process redesign
  - Process control (PSC)
  - Evidence based problem solving
  - Structured training & Organisation of improvement
  - Green, Black & Master Black Belts
  - Monitor & Review Benefits
- Continuous improvement & Breakthrough improvement

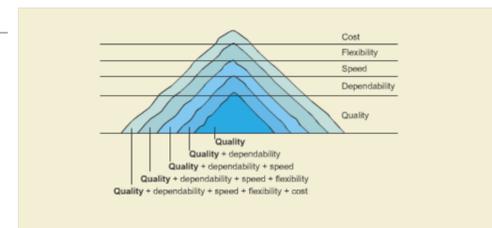
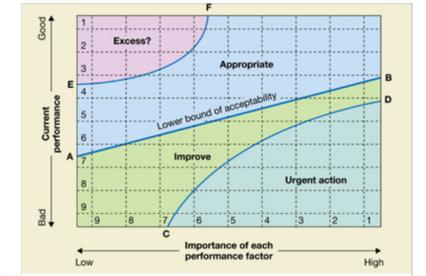
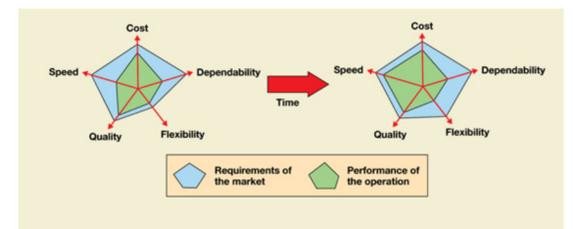
**Work-Out approach**

**Improvement techniques**

**Improvement**  
 Study Guide section 15

**Gap in Current vs. required performance leads to improvement**

- Measure**
  - Quality, Speed, Dependability, Flexibility, Cost
  - Aggregation --> Diagnostic at the bottom, strategic at the top
  - Balanced scorecard
    - Financial
    - Customer
    - Internal processes
    - Learning & Growth
  - Benchmarking
    - Internal
    - External
    - Non-competitive
    - Competitive
    - Performance
    - Practice
    - Effective benchmarking**
      - Careful planning
      - understand your own business processes
      - look at information in the public domain
      - develop questions carefully
  - Set targets
    - Absolute targets --> 100 of 100
    - strategic --> 96 of 100
    - External performance based --> 80 of 100
    - Historically based targets --> last year + 10%
  - GAP Measurement
    - Importance-Performance matrix: Excess, Appropriate, Improve, Urgent action
    - Sandcone theory: Quality --> Dependability --> Speed --> Flexibility --> Cost



**improvement path**

- 1 **Breakthrough improvement**
  - innovation based
  - dramatic change
  - BPR - Business process reengineering**
    - designed around what customer add value and NOT function
    - Rethink in cross functional manner (around customer)
    - Dramatic improvements
    - Have those who use the output perform the process
    - Put decision points where the work is performed
- 2 **Continuous improvement**
  - never ending small incremental improvement steps **KAIZEN**
  - Organizational abilities: Getting the CI habit, Focusing on CI, Spreading the word, CI on the CI system, Walking the talk, Building the learning organization
  - Constituent behaviours
  - Enablers
  - Improvement cycle models: PDCA, DMAIC

