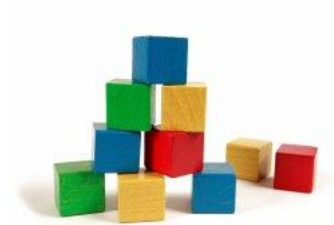**Warsaw University of Life Sciences - SGGW**
Dr Mariusz Maciejczak

Principles of Management

www.maciejczak.pl

Basic reading

The presentation has been prepared based on the book

Decision Making

– Solving problems
– Taking actions
– Reaching goals

choices from two or more alternatives

6-3

The Decision-Making Process

Problem Identification	Identification of Decision Criteria	Allocation of Weights to Criteria	Development of Alternatives
"My salespeople need new computers"	Price Weight Warranty Screen type Reliability Screen size	Reliability 10 Screen size 8 Warranty 5 Weight 5 Price 4 Screen type 3	Acer Compaq Gateway HP Micromedia NEC Sony Toshiba

Analysis of Alternatives	Selection of an Alternative	Implementation of an Alternative	
Acer Compaq Gateway HP Micromedia NEC Sony Toshiba	Acer Compaq Gateway HP Micromedia NEC Sony Toshiba	Gateway	Evaluation of Decision Effectiveness

6-4

Decision Making

- Decisions
  - choices from two or more alternatives
  - all organizational members make decisions
- Decision-Making Process
  - a comprehensive, 8-step process
  - *Step 1 - Identifying a Problem*
    - *problem* - discrepancy between an existing and a desired state of affairs
      - must be such that it exerts pressure to act
      - manager is unlikely to characterize a situation as a problem unless s/he has resources necessary to act

6-5

Decision Making (cont.)

- Decision-Making Process (cont.)
  - *Step 2 - Identifying Decision Criteria*
    - *decision criteria* - what's relevant in making a decision
  - *Step 3 - Allocating Weights to the Criteria*
    - must weight the criteria to give them appropriate priority in the decision
  - *Step 4 - Developing Alternatives*
    - list the viable alternatives that could resolve the problem without evaluating them
  - *Step 5 - Analyzing Alternatives*
    - each alternative is evaluated against the criteria

6-6

Assessed Values of Notebook Computer Alternatives Against Decision Criteria

Model	Reliability	Screen Size	Warranty	Weight	Price	Screen Type
Acer TravelMate734TL	8	3	5	10	3	5
Compaq Presario 1800 XL186	8	5	10	5	6	5
Gateway Solo 2550 LS	10	8	5	10	3	10
Hewlett-Packard Omnibook 900	8	5	5	10	3	10
Micromedia Computers Millenium 3000	6	8	5	10	6	10
NEC Direct Versa Note VX 14.1	10	8	5	5	3	10
Sony Vaio PCG-X18	2	10	5	10	10	10
Toshiba Satellite Pro 4280	4	10	5	10	10	5

Evaluation of Laptop Computer Alternatives Against Criteria and Weights

Model	Reliability	Screen Size	Warranty	Weight	Price	Screen Type	Total
Acer TravelMate734TL	80	24	25	50	12	15	206
Compaq Presario 1800 XL186	80	40	50	25	24	15	234
Gateway Solo 2550 LS	100	64	25	50	12	30	281
Hewlett-Packard Omnibook 900	80	40	25	50	12	30	237
Micromedia Computers Millenium 3000	60	64	25	50	24	30	253
NEC Direct Versa Note VX 14.1	100	64	25	25	12	30	256
Sony Vaio PCG-X18	20	80	25	50	40	30	245
Toshiba Satellite Pro 4280	40	80	25	50	40	15	250

Decision Making (cont.)

- Decision-Making Process (cont.)
  - *Step 6 - Selecting an Alternative*
    - choosing the best alternative from among those considered
  - *Step 7 - Implementing the Alternative*
    - *implementation* - conveying the decision to those affected by it and getting their commitment to it
      - participation in decision-making process inclines people to support the decision
      - decision may fail if it is not implemented properly
  - *Step 8 - Evaluating Decision Effectiveness*
    - determine whether the problem is resolved

6-9

Decisions in the Management Functions

Planning

What are the organization's long-term objectives?

What strategies will best achieve those objectives?

What should the organization's short-term objectives be?

How difficult should individual goals be?

Organizing

How many employees should I have report directly to me?

How much centralization should there be in the organization?

How should jobs be designed?

When should the organization implement a different structure?

Leading

How do I handle employees who appear to be low in motivation?

What is the most effective leadership style in a given situation?

How will a specific change affect worker productivity?

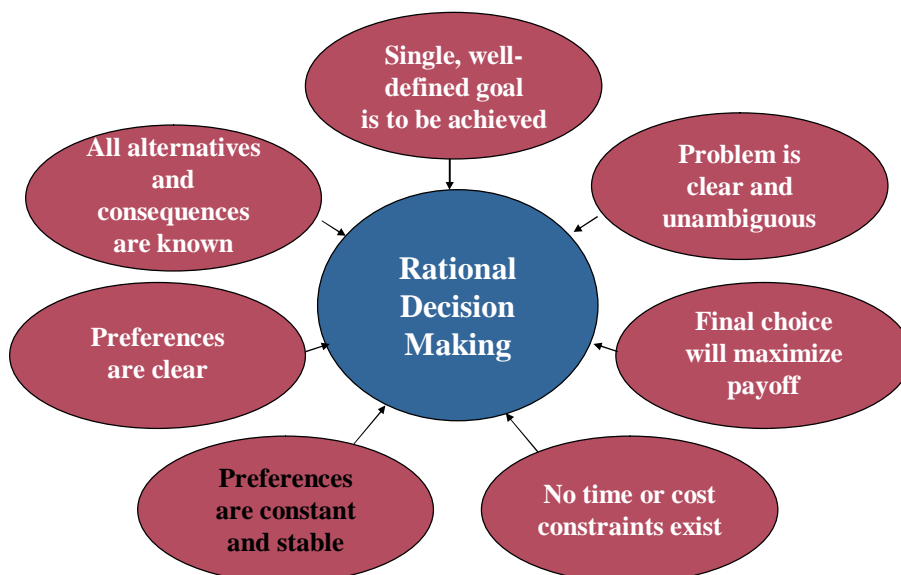When is the right time to stimulate conflict?

Controlling

What activities in the organization need to be controlled?

How should those activities be controlled?

When is a performance deviation significant?

What type of management information system should the organization have?

The Manager As Decision Maker

- Rational Decision Making
  - decisions are consistent, value-maximizing choices within specified constraints
  - managers assumed to make rational decisions
  - *Assumptions of Rationality* - decision maker would:
    - be objective and logical
    - carefully define a problem
    - have a clear and specific goal
    - select the alternative that maximizes the likelihood of achieving the goal
    - make decision in the firm's best *economic* interests
    - managerial decision making seldom meets all the tests

6-11

Assumptions Of Rationality

Single, well-defined goal is to be achieved

All alternatives and consequences are known

Problem is clear and unambiguous

Rational Decision Making

Final choice will maximize payoff

Preferences are clear

No time or cost constraints exist

Preferences are constant and stable
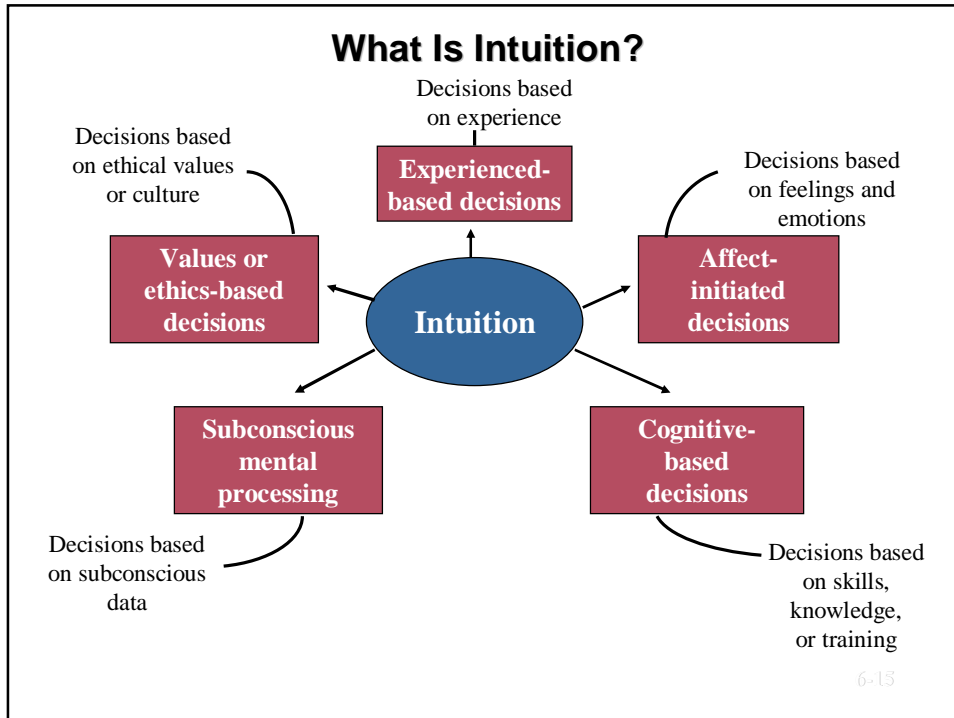
6-12

The Manager As Decision Maker (cont.)

- Bounded Rationality
  - behave rationally within the parameters of a simplified decision-making process that is limited by an individual's ability to process information
  - *satisfice* - accept solutions that are "good enough"
  - *escalation of commitment* - increased commitment to a previous decision despite evidence that it may have been wrong
    - refusal to admit that the initial decision may have been flawed

6-13

The Manager As Decision Maker (cont.)

- Role of Intuition
  - *intuitive decision making* - subconscious process of making decisions on the basis of experience and accumulated judgment
    - does not rely on a systematic or thorough analysis of the problem
    - generally complements a rational analysis

6-14

What Is Intuition?

Decisions based on experience

Decisions based on ethical values or culture

Experienced-based decisions

Decisions based on feelings and emotions

Values or ethics-based decisions

Intuition

Affect-initiated decisions

Subconscious mental processing

Cognitive-based decisions

Decisions based on subconscious data

Decisions based on skills, knowledge, or training

6-15

The Manager As A Decision Maker (cont.)

- Types of Problems and Decisions
  - *Well-Structured Problems* - straightforward, familiar, and easily defined
  - *Programmed Decisions* - used to address structured problems
    - minimize the need for managers to use discretion
    - facilitate organizational efficiency
    - *procedure* - series of interrelated sequential steps used to respond to a structured problem
    - *rule* - explicit statement of what to do or not to do
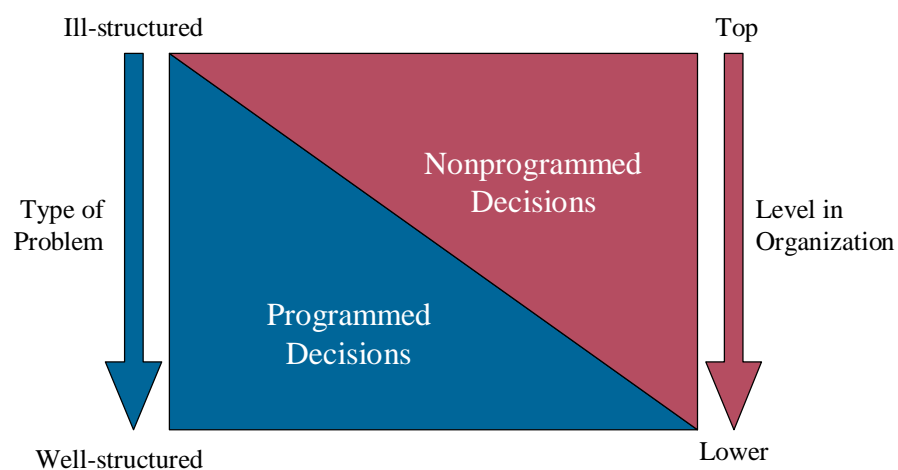   - *policy* - guidelines or parameters for decision making

6-16

The Manager As A Decision Maker (cont.)

- Types of Problems and Decisions (cont.)
  - *Poorly-Structured Problems* - new, unusual problems for which information is ambiguous or incomplete
  - *Nonprogrammed Decisions* - used to address poorly- structured problems
    - produce a custom-made response
    - more frequent among higher-level managers
  - few decisions in the real world are either fully programmed or nonprogrammed

6-17

Types Of Problems, Types Of Decisions, And Level In The Organization

Ill-structured   Top

Type of Problem   Level in Organization

Nonprogrammed Decisions

Programmed Decisions

Well-structured   Lower

6-18

9

The Manager As A Decision Maker (cont.)

- Decision-Making Conditions
  - *Certainty* - outcome of every alternative is known
    - idealistic rather than realistic
  - *Risk* - able to estimate the probability of outcomes stemming from each alternative
    - *expected value* - the conditional return from each possible outcome
      - multiply expected revenue from each outcome by the probability of each outcome

The Manager As A Decision Maker (cont.)

- Decision-Making Conditions (cont.)
  - *Uncertainty* - not certain about outcomes and unable to estimate probabilities
    - psychological orientation of decision maker
      - *maximax* choice - optimistic
        - » maximizing the maximum possible payoff
      - *maximin* choice - pessimistic
        - » maximizing the minimum possible payoff
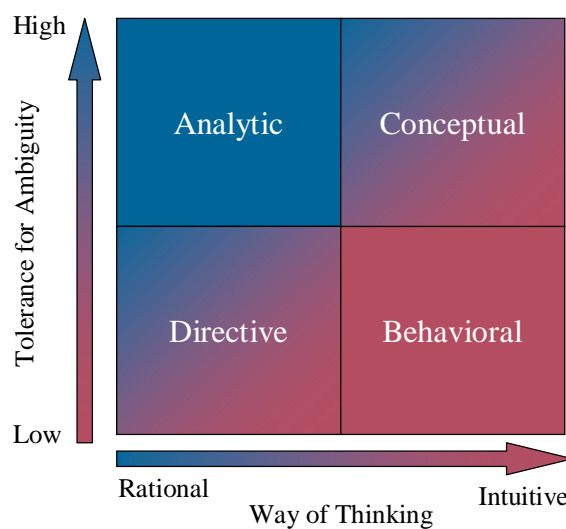   - *minimax* - minimize the maximum "regret"
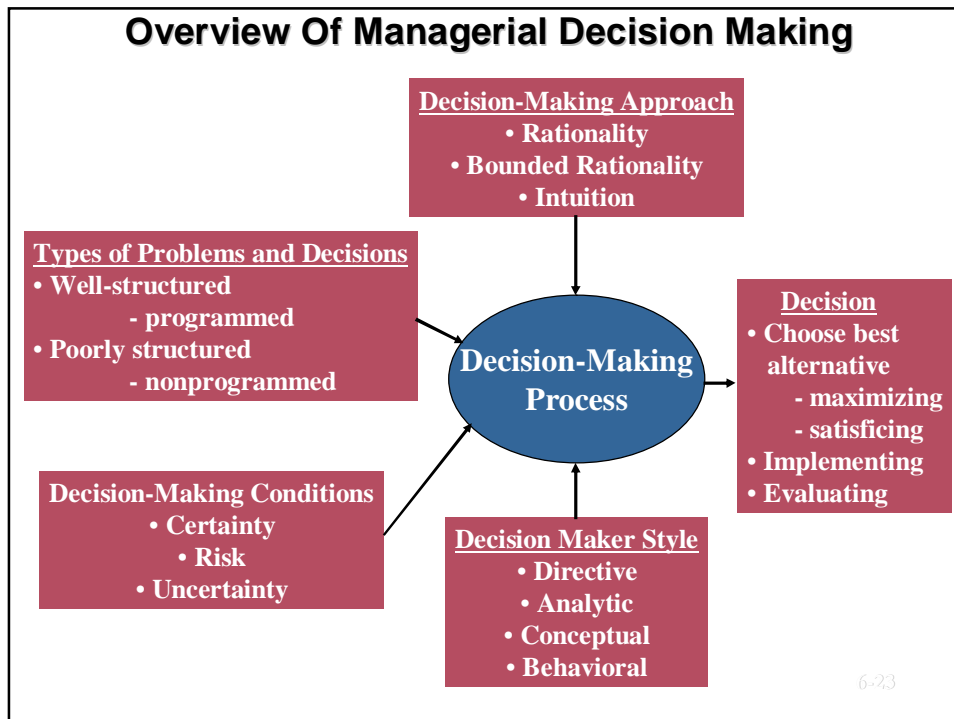
The Manager As A Decision Maker (cont.)

- Decision-Making Styles
  - two dimensions define the approach to decision making
    - *way of thinking* - differs from rational to intuitive
    - *tolerance for ambiguity* - differs from a need for consistency and order to the ability to process many thoughts simultaneously
  - define four decision-making styles
    - *Directive* - fast, efficient, and logical
    - *Analytic* - careful and able to adapt or cope with new situations
    - *Conceptual* - able to find creative solutions
    - *Behavioral* - seek acceptance of decisions

6-21

Decision-Making Styles

	Rational ← Way of Thinking → Intuitive
High (Tolerance for Ambiguity)	Analytic / Conceptual
Low	Directive / Behavioral

6-22

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Overview Of Managerial Decision Making

Decision-Making Approach
• Rationality
• Bounded Rationality
• Intuition

Types of Problems and Decisions
• Well-structured
    - programmed
• Poorly structured
    - nonprogrammed

Decision-Making Conditions
• Certainty
• Risk
• Uncertainty

Decision-Making Process

Decision
• Choose best alternative
    - maximizing
    - satisficing
• Implementing
• Evaluating

Decision Maker Style
• Directive
• Analytic
• Conceptual
• Behavioral

6-23

Homework – making the decission

- Using the tools and techniques of decission making described at the www.mindtools.com or others please in the final groups from classes (3 people)
- 1. find a business problem
- 2. solve it applying decission model (identifying, alternatives development, selection of one alternatives, taking decision under certain risks)
- 3. write a joint report in an academic format (introduction, data and methods, results, discussion, conclussions, bibliography)
- Send the report to mariusz@maciejczak.pl and bring it printed out to the class
- Deadline – next class 23.03.09