Programmed versus Non-programmed Decisions

- Programmed decisions
  - Structured situations with well defined relationships
  - Quantifiable
  - Management information system
  - Easy to computerize

- Non-programmed decisions
  - Rules and relationships not defined
  - Problem is not routine
  - Not easily quantifiable

Problem Solving Approaches

- Optimization: find the best solution
- Satisficing: find a good solution
- Heuristics: rules of thumb
An Overview of Management Information Systems

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Output of an MIS: Five types of reports

- Scheduled reports
- Key-indicator reports
- Demand reports
- Exception reports
- and drill-down reports.

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Scheduled Reports

- Repeatedly generated at a predefined time, e.g. at the end of each week.
- Examples:
  - Weekly payroll summary
  - Monthly sales

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Key-Indicator Reports

- Summarize important numbers, which reflect the overall situation.
- Examples:
  - Sales volume
  - Average margin
  - Percentage of returns, etc.

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Demand Reports

- Generated once the specific information is needed.
- Example: List of past sales to a key customer prior to visiting him

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Output of an MIS

- Exception reports list exceptional events.
- Hybrid report types are possible, e.g. a scheduled key-indicator report.

ERP, TPS, MIS: Fuzzy Borders

TPS / Order Processing  MIS / Sales Reports  Core ERP

Comprehensive ERP Suite: mySAP ERP etc.

“Reports”

- Bad, but common: Printout
- Better: Machine-readable message, which can be used as input for another computer system

Bill of Materials
5 pcs ABC
2 pcs XYZ

Functional Aspects of an MIS

Overview of a Manufacturing MIS
Master Production Scheduling and Inventory Control

When and how much to order?
• Economic Order Quantity (EOQ)
• Reorder Point (ROP)
• Material Requirements Planning (MRP)

MRP – Material Requirements Planning
• Determines the amount of parts needed.
• Demand between products can be interrelated.

MRP – Input
• Master Production Schedule (MPS)
• Bill of Material (BOM): lists the component part numbers for each part
• Inventory status data

MRPII – Manufacturing Resource Planning
• Includes requires workstation time, employees, and other resources.
• Capacity restrictions are included in the planning process.

Characteristics of a DSS

Thank you!

The slides will be available on the internet at http://ruby.fgcu.edu/courses/mhepp/ (-> CRN10033)