

SISTEM PENDUKUNG MANAJEMEN

- sistem pendukung manajemen
- pendukung pengambilan keputusan
- bagaimana teknologi komputer dapat membantu manajer menjalankan tugasnya

Referensi lihat SAP : [5] Bab 1, [7] Chapter 1

Penunjang Keputusan dan dukungan terkomputerisasi

- **Management Support Systems (MSS)**
Computerized technologies



- **Objectives**
 - Support managerial work
 - Support decision making

Overview

Teknologi komputer dapat membantu para manajer menjalankan tugasnya.

- **Perubahan struktur organisasi**
- **Kebutuhan Transformasi Bisnis**
- **Perubahan metode manajemen**

Mengapa dukungan terkomputerisasi ?

- **kompetisi**
- **kecepatan**
- **The *MANAGERS* are always responsible for decision making**

The Nature of Managers' Work

[Make Decisions!] Mintzberg (1980) (Table 1.1) Roles

- **Interpersonal**
 - **Figurehead**
 - **Leader**
 - **Liason**
- **Informational**
 - **Monitor**
 - **Disseminator**
 - **Spokesperson**
- **Decisional**
 - **Entrepreneur**
 - **Disturbance Handler**
 - **Resource Allocator**
 - **Negotiator**



**Managers *need* information and *use* computers
to support decision making**

Pengambilan Keputusan Manajerial & SI

- **Manajemen** adalah sebuah proses untuk mencapai tujuan organisasi dengan menggunakan berbagai sumber daya.



- **Sumber daya : *Input***
- **Pencapaian tujuan : *Output***
- **Tingkat sukses organisasi :**

$$\textit{Produktivitas} = \textit{Outputs} / \textit{Inputs}$$

Manajemen

- *Manajemen adalah pengambilan keputusan.*
- *Manajer adalah pengambil keputusan.*
- **Perubahan cepat saat ini, menjadikan lingkungan bertambah kompleks.**
- **Trial-and-error: pendekatan yang tidak baik.**
- **Lihat gambar 1.1 : faktor yang memengaruhi pengambilan keputusan**
 - **Teknologi Informasi/ komputer**
 - **Kompleksitas struktural/ kompetisi**
 - **Pasar internasional/ stabilitas politik / konsumerisme**
 - **Perubahan/ fluktuasi**

Manajer dan Dukungan Komputer

- *Teknologi Informasi : penting untuk bisnis.*
- **Dukungan teknologi yang meluas perlu diimplementasikan.**

Aplikasi Komputer yang berkembang dari SPT dan SIM ke aplikasi yang proaktif ini (SPK) :

- **Data access**
- **Online analytical processing (OLAP)**
- **Internet / Intranet / Web**

Alasan mengapa sistem pendukung keputusan terkomputerisasi diperlukan :

- **Kecepatan komputasi**
- **Peningkatan/ perbaikan komunikasi**
- **Peningkatan produktivitas**
- **Dukungan teknis**
- **Akses data warehouse**
- **Dukungan kualitas**
- **Berdaya saing**
- **Mengatasi keterbatasan kognitif dalam pemrosesan dan penyimpanan**

Teknologi Pendukung Keputusan

Management Support Systems (MSS)

- **Decision Support Systems (DSS)**
- **Group Support Systems (GSS)**
- **Enterprise (Executive) Information Systems (EIS)**
- **Enterprise Resource Planning (ERP) and Supply-Chain Management (SCM)**
- **Knowledge Management Systems**
- **Expert Systems (ES)**
- **Artificial Neural Networks (ANN)**
- **Hybrid Support Systems**
- **Intelligent DSS**

Kerangka Kerja Pengambilan Keputusan

- **Figure 1.2 (Gorry and Scott Morton, 1971)**

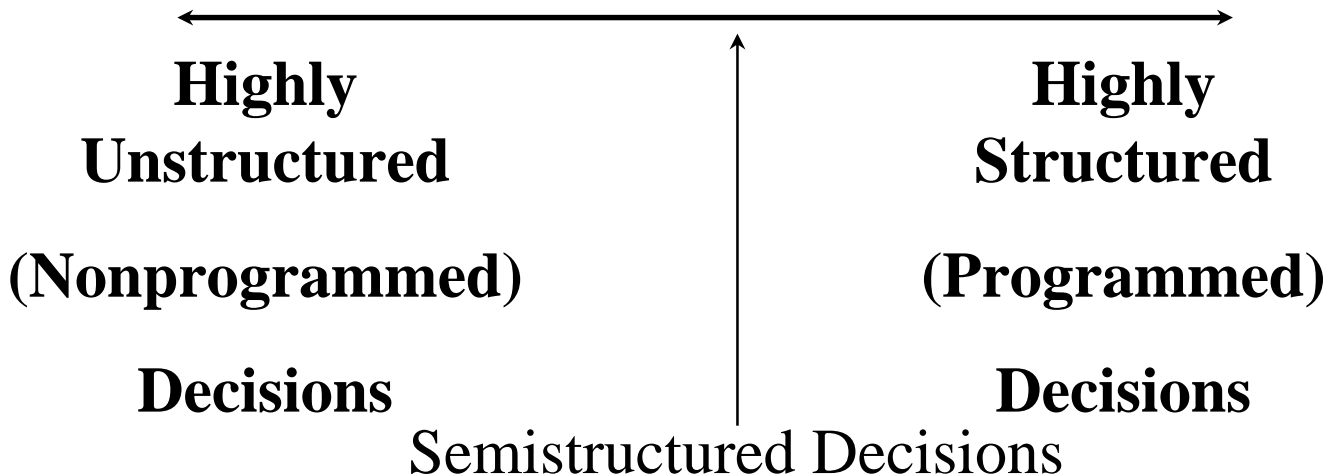
Combination of

- **Simon (1977) Taxonomy**
- **Anthony (1965) Taxonomy**

Type of Control

Type of Decision	Operational Control	Managerial Control	Strategic Control
Structured			
Semistructured			
Unstructured			

Simon : proses pengambilan keputusan berupa suatu kontinum



Three Phase Decision-making Process

- Intelligence--searching for conditions that call for decisions
- Design--inventing, developing, and analyzing possible courses of action
- Choice--selecting a course of action from those available

- *Unstructured problem* has no structured phases
- *Semistructured problem* has some (or some parts with) structured phases
- *Structured problem* has *all* structured phases
 - Procedures for obtaining the best solution are known
 - Objectives are clearly defined
 - Management support systems can be useful
- *Unstructured problems* often solved with human intuition
- *Semistructured problems* in between
 - Solve with standard solution procedures and human judgment
- A Decision Support System can help managers understand problems in addition to providing solutions
- Goal of DSS: Increase the effectiveness of decision making

Anthony's Taxonomy (1965)

- Menggambarkan 3 kategori luas yang meliputi semua aktivitas manajerial :
 - Perencanaan strategis
 - Kontrol manajemen
 - Kontrol operasional

Lihat gambar kerangka kerja PK. (figure 1.2)

- DSS for semistructured and unstructured decisions
- MIS and management science approaches insufficient

Computer Support for Structured Decisions



- Since the 1960s
- Repetitive in nature
- High level of structure
- Can abstract and analyze them, and classify them into prototypes
- Solve with quantitative formulas or models
- Management Science (MS) / Operations Research (OR)

Management Science

Scientific approach to automate managerial decision making :

1. Define *problem*
2. Classify *problem*
3. Construct mathematical *model*
4. Find and evaluate potential solutions
5. Choose and recommend a solution

Modeling: Transforming the real-world problem into an appropriate prototype structure

Mengapa SPK ?

Perceived benefits

- decision quality
- improved communication
- cost reduction
- increased productivity
- time savings
- improved customer and employee satisfaction

Alasan Utama

- Unstable economy
- Difficulty in tracking numerous business objectives
- Increased competition
- Electronic commerce
- Existing systems did not support decision making
- IS Department is too busy
- Special analysis
- Need accurate information
- Organizational winner
- New or timely information needed
- Mandated by management
- Cost reductions
- End-user computing

Evolutionary View of CBIS

1. Time Sequence

- mid-1950s Transaction Processing Systems (TPS)
- 1960s MIS
- 1970s Office Automation Systems
DSS
- 1980s DSS Expanded
Commercial applications of expert systems
Executive Information Systems
- 1990s Group Support Systems
Neural Computing
Integrated, hybrid computer systems

2. Computer evolved over time

3. Systemic linkages in how each system processes data into information

Relationship among these and other technologies
(Figure 1.3)

Relationship Among Technologies

- Each technology unique
- Technologies interrelated
- Each supports some aspects of managerial decision making
- Ever expanding role of information technology improving management
- Interrelationship and coordination evolving

Kesimpulan

- DSS has many definitions
- Complexity of managerial decision making is increasing
- Computer support for managerial decision making
- Several MSS technologies including hybrids