Chapter 18
Executive Information Systems

1. Describe what executive information systems are

Type of DSS that aims to meet ad hoc information needs of top executives

-DSS that assists top executives in ad hoc analyses of current performance and projected operations

-computerized system that gives executives easy access to internal and external information relevant to their critical success factors

-system that helps executives request and monitor key information from both internal and external sources via customized presentations

Common Traits
-used directly by top-level executives
-designed to require little or no training of users
-designed to be "easy" to operate, often being customized to the needs of an individual executive user
-able to present information in textual, tabular, and/or graphical ways
-able to access and combine information from a broad range of sources both within and outside of the organization
-able to select, filter, compress, and track critical success factor or key indicator information, and
-able to do status reporting, exception reporting, trend analysis, and drill-down investigation

2. Explain how and why executive information systems are developed

HOW AN EIS FITS IN AN ORGANIZATION
-EIS draws on MISs and commercial databanks and information services
-executive has other information sources (non-computer and computer-based)

EVOLUTION OF EISs
- early EISs: narrow capabilities, very top executive
  -took data from MISs (mainly operational, accounting)
  -organized it into visual tables and graphs
  -presented it directly to executives, allowing drill down
  -called electronic "briefing books"

TRENDS

-Lower level managers should get information consistent in form and content with top executives
-analyses should be possible in addition to retrieval (more dynamic, flexible than briefing book)
-achieve competitive advantage by making information directly available to executives in related organizations (external EIS users)
new EIS features: analyses, multimedia communication, artificial intelligence

Five approaches to determining and satisfying these needs

1. By-product method
   - little effort spent trying to determine needs
   - top executive gets collection of reports that are by-products of ongoing operations

2. null method
   - no formal, systematic effort to supply info
   - they informally collect information from trusted sources

3. Key indicator method
   - health of organization gauged in terms of a set of key financial indicators
   - information about each collected on a continuing basis
   - executive is made aware of only those indicators where performance is off target as basis for corrective discussions
   - key indicator information made available via flexible visual displays (e.g., electronic boardroom)
     - in full
     - by exception
     - graphically

4. Total Study method
   - executives sampled about their total information needs
   - results compared to what existing computer systems produce
   - where gaps exist, subsystems are developed to fill them

5. Critical success factor method
   - CSF: area of activity in which satisfactory results will ensure organizational competitiveness
   - identified through formal executive interview process
   - first, uncover executive goals
   - then, CFSs that underlie them
   - then, agree on how to measure/report progress on goals and CSFs
   - EXAMPLE: return on investment as chief goal, with several CSFs
     - strengthening customer relations
     - supporting the sales force in the field
     - improving productivity
     - securing R&D support from the government
     - developing new products
     - acquiring new technological capabilities
     - improving production facilities

kinds of information needed
   - cost accounting information
   - information from external sources (e.g., customers)
   - coordinated information from diverse internal sources
   - objective measures and subjective assessments for CSFs
-information about current results (short-run performance), as well as building for the future

3. Identify factors that should be considered when development of and executive information system is proposed.

Usually done by a professional developer

Factors for successful development
- an executive sponsor who is informed and committed
- an operating sponsor
- appropriate EIS development personnel
- appropriate EIS development tools
- effective data management
- clear linkage of EIS to organization's objectives
- management of organizational resistance
- management of EIS evolution and spread

TOOLS AND METHODS

-intrinsic and extrinsic tools
- prototyping
- evolutionary development
  - feature expansion
  - more users
  - importance of rapid deployment of a working EIS

EIS Limitations
-Economic (average development cost $365,000 [1991])
-TECHNICAL
  - information transferal from many sources
  - currency of information
  - quality of information
-ORGANIZATIONAL
  - biased agenda and/or time horizons
  - loss of managerial synchronization
  - organizational destabilization
-EIS FAILURES

CONDITIONS LEADING TO EISs
- pulled by executive needs
- pushed by technical advances