

The logo of Galgotias University is a stylized 'G' composed of three curved, overlapping bands in shades of yellow, blue, and red, set against a light pink circular background.

DSS Development Platforms

GALGOTIAS
UNIVERSITY

DSS Development Platforms

- **General-purpose programming language**
- **Fourth-generation language (4GL)**
- **OLAP with a data warehouse or large database**
- **DSS integrated development tool (generator, engine)**
- **Domain-specific DSS generator**
- **Use the CASE methodology**
- **Integrate several of the above**

Hardware Selection

- **PCs**
- **Unix workstations**
- **Network of Unix workstations**
- **Web servers**
- **Mainframes**

- **Typically use existing hardware**

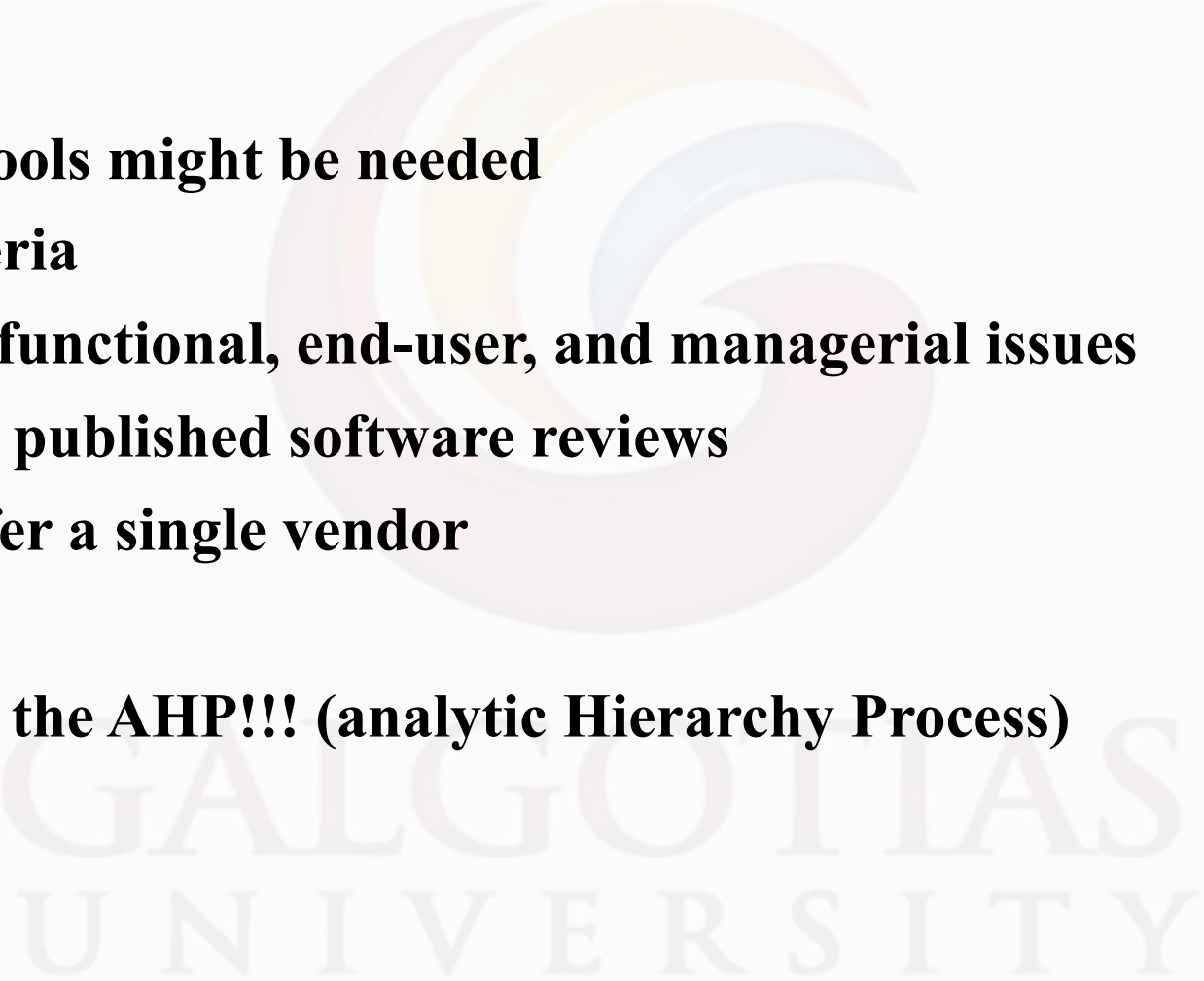
Software Selection

Complex because

- **At start, information requirements, etc. are unknown**
- **Hundreds of packages**
- **Software updated rapidly**
- **Price changes**
- **Many people involved in decision**
- **Language capability problems**

(More)

GALGOTIAS
UNIVERSITY

- 
- The logo for Galgotias University is a large, faint watermark in the background. It features a stylized 'G' composed of three overlapping curved shapes in shades of yellow, orange, and blue. Below the 'G', the words 'GALGOTIAS' and 'UNIVERSITY' are written in a light grey, serif font, stacked on two lines.
- **Different tools might be needed**
 - **Many criteria**
 - **Technical, functional, end-user, and managerial issues**
 - **Inaccurate published software reviews**
 - **Might prefer a single vendor**

 - **Maybe use the AHP!!! (analytic Hierarchy Process)**

Team-Developed DSS

- **Substantial effort**
- **Extensive planning and organization**
- **Some generic activities**

- **Group of people to build and to manage it**

Size depends on

- **Effort**
- **Tools**

GALGOTIAS
UNIVERSITY

Team-Developed Versus User-Developed DSS

- **DSS 1970s and early 1980s**
- **Large-scale, complex systems**
- **Primarily provided organizational support**
- **Team efforts**

GALGOTIAS
UNIVERSITY

End-User-Developed Systems

- **Personal computers**
- **Computer communication networks**
- **PC-mainframe communication**
- **Friendly development software**
- **Reduced cost of software and hardware**
- **Increased capabilities of personal computers**
- **Enterprise-wide computing**
- **Easy accessibility to data and models**
- **Client/server architecture**
- **Now OLAP**

Balance

GALGOTIAS
UNIVERSITY

Organizational Placement of the DSS Development Group

- 1. Information services (IS) department**
- 2. Highly placed executive staff group**
- 3. Finance or other functional area**
- 4. Industrial engineering department**
- 5. Management science group**
- 6. Information center group**

End-user Computing and User-Developed DSS

- **End-user Computing (end-user development): development and use of computer-based information systems by people outside the formal information systems areas**
- **End-users**
 - **At any level of the organization**
 - **In any functional area**
 - **Levels of computer skill vary**
 - **Growing**

User-Developed DSS Advantages

- 1. Short delivery time**
- 2. Eliminate extensive and formal user requirements specifications**
- 3. Reduce some DSS implementation problems**
- 4. Low cost**

GALGOTIAS
UNIVERSITY

User-Developed DSS Risks

- 1. Poor Quality**
- 2. Quality Risks**
 - **Substandard or inappropriate tools and facilities**
 - **Development process risks**
 - **Data management risks**
- 3. Increased Security Risks**
- 4. Problems from Lack of Documentation and Maintenance Procedures**

Issues in Reducing End-User Computing Risks

- **Error detection**
- **Use of auditing techniques**
- **Determine the proper amount of controls**
- **Investigate the reasons for the errors**
- **Solutions**
- **Spreadsheet errors**
 - **Should use same controls as normal IS**

Developing DSS: Putting the System Together

- **Development tools and generators**
- **Use of highly automated tools**
- **Use of prefabricated pieces**

- **Both increase the developer's productivity**

DSS Development System Includes

- **Request (query) handler**
- **System analysis and design facility**
- **Dialog management system**
- **Report generator**
- **Graphics generator**
- **Source code manager**

(more)

- **Model base management system**
- **Knowledge-base (management) system**
- **Object-oriented tools**
- **Standard statistical and management science tools**
- **Special modeling tools**
- **Programming languages**
- **Document imaging tools**

GALGOTIAS
UNIVERSITY

DSS Development System Components

- **Some may be integrated into a DSS generator**
- **Others may be added as needed**
- **Components used to build a new DSS**
- **Core of system includes development language or DSS generator**
- **Construction by combining programming modules**
- **Windows environment handles the interface**

References

- *Decision Support Systems and Intelligent Systems*”-Efraim Turban, Jay Aronson E., Ting-Peng Liang, 7th Edition, Pearson Education.
- "*Decision Support Systems in the 21st century*”-George M .Marakas , 2nd Edition, PHI.



Thank You