

Lecture-1

Difference between business intelligence and knowledge management

The major difference between business intelligence and knowledge management is the scope of activities involved in each area. Business intelligence focuses solely on capturing data, manipulating the data and analyzing the data. Whereas knowledge management would perform business intelligence activities while also pursuing the creation of new knowledge.

Table: Activities of knowledge management and business intelligence

S NO.	Knowledge Management	Business Intelligence
1	Capture data	Capture data
2	Organize data	Organize data
3	Analyze data	Analyze data
4	Aggregate data	Aggregate data
5	Apply data	Apply data
6	Create new knowledge	No equivalent action
7	Knowledge dispersion	No equivalent action

Explanations: The differences between business intelligence and knowledge management are subtle, they are not readily apparent because both areas of study contain similar processes. Both business intelligence and knowledge management perform similar activities in collecting data, organizing the data, analyzing data, aggregating data, and applying data to generate solutions to help make business decisions. However knowledge management includes two other activities that business intelligence lacks. These activities are the creation of new knowledge and the dispersion of knowledge throughout an organization. This is where knowledge management encompasses the activities of business intelligence.

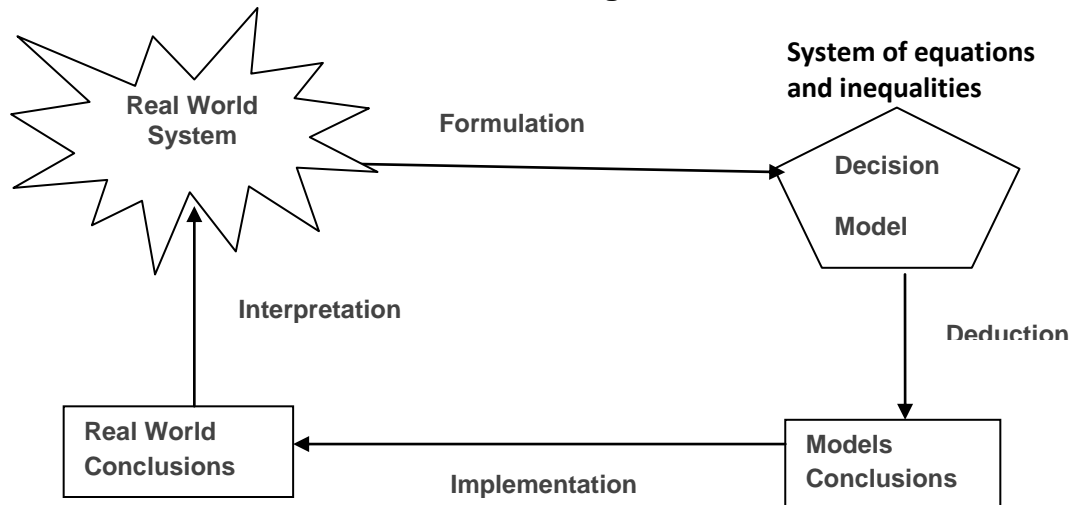
There are several companies emerging to provide services for both business intelligence and knowledge management. Business intelligence firms, such as The Center for Business Intelligence, Microstrategy, and SAP; sell their services as decision support for executive decision makers. These businesses sell and implement software that captures data, manipulates it into useful information and applies the information to answer specific questions, show trends, create reports or forecast future events.

Industry offers little in the way of knowledge management services. Perhaps this is because knowledge management encompasses many activities that are classified as business intelligence.

Introduction to Decision Models

Decision modeling refers to the use of mathematical or scientific methods to determine an allocation of scarce resources which improves or optimizes the performance of a system. The terms operations research and management science are also used to refer to decision modeling.

Decision Modeling Process



Applications of Decision Models

There are several systems to which decision models have been applied include:

1. Financial systems

- Portfolio optimization, security pricing (e.g., options, mortgage-backed securities), cash flow matching (e.g., pension planning and bond refunding)

2. Production systems

- oil, steel, chemical, and many other industries

3. Distribution systems

- airlines, paper, school systems, and others

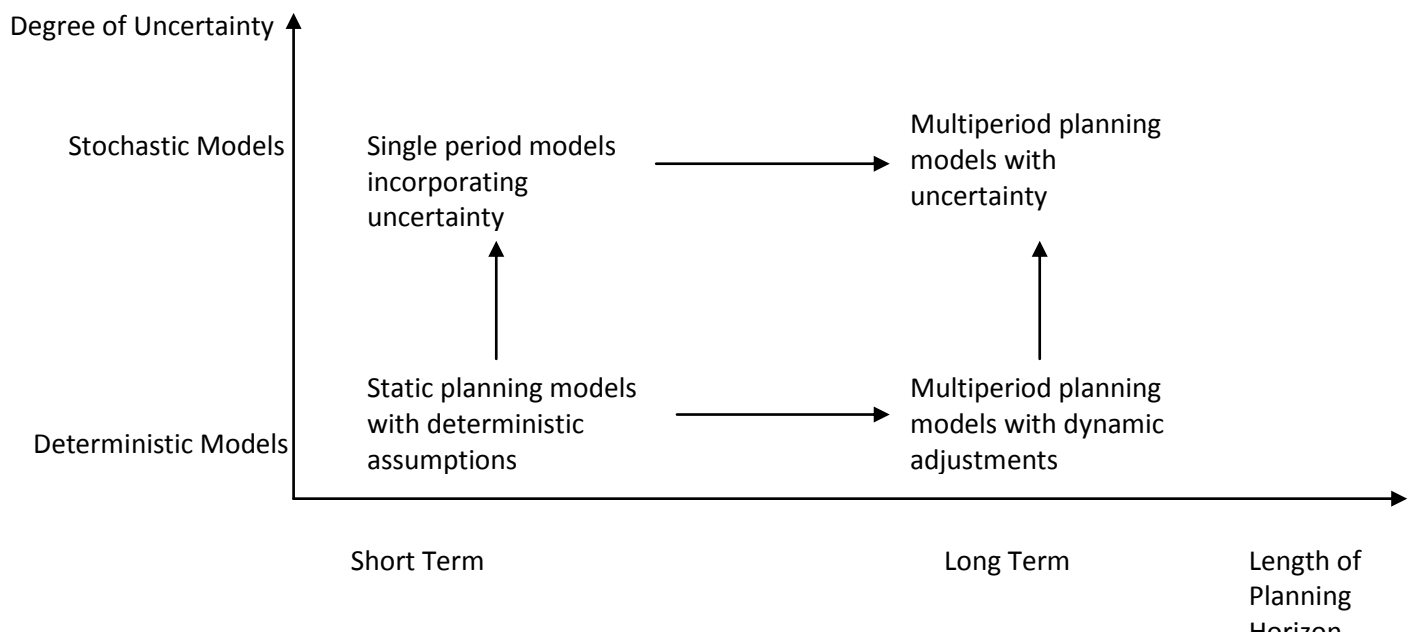
4. Marketing systems

- sales force design, forecasting new product sales, telecommunications strategies, brand choice, merchandising strategies

5. Graduate school admissions

- Example: The director of CBS admissions uses linear programming to aid in the admissions process

Overview of Decision Models



Solution tools

1. Optimization
 - Linear programming, Integer programming, Nonlinear programming
2. Simulation