Terra Incognita ("Earth Unknown")

Maps summarize man's knowledge about the earth, which 600 years ago was undocumented. At first that knowledge could not be accurately recorded. Over time, however, scientists, sea pilots, navigators, pioneers, and mapmakers developed sketches that summarized their knowledge about the earth and systems for communicating this information to others. Business engineering and reengineering projects are supported in many companies with information technology. A major thrust for many of these projects is the search for the right business process solution. The question facing many companies involved in business engineering is: How do I find the best possible solution from what R/3 has to offer?

In the search for new knowledge, man has used descriptions and plans throughout history. As plans, maps support orientation and navigation of the earth, the continents, cities, oceans, and even outer space. Today, maps comprehensively describe the whole planet. But this was not always the case. How did maps evolve into being the most important source for navigators?

The Evolution of the World Map

The European expansion that began in the late fifteenth century was based on a world geography defined by the second-century-Alexandrian scholar, Ptolemy, in his work Geographia. As his map accurately shows, Ptolemy was unaware of the existence of the Americas. His estimate of the earth's circumference was one-sixth smaller than ist actual size. He did manage, however, to illustrate the major countries and main cities of the Northern Hemisphere.

The geographer Martellus drew his map in the late fifteenth century. It shows the route taken by Diaz in his 1488 journey to the Cape of Good Hope. According to this map, the voyage around Africa to India is possible. It is clear from the map -- and in reality -- that the trip around the Cape is a long and dangerous voyage.

Maps and Columbus

In 1492 the Genovese explorer Christopher Columbus sailed westwards in the hope of reaching the Orient. Relying on the work of Martellus, Columbus assumed that the undrawn portion of the map was nothing more than ocean. This body of water was all that stood between Europe and the Orient. He did not know when and where he would find land. After his trip and thanks to the meticulous recording of navigational information, such as wind and currents, the way to the West Indies could be described. We know today that Columbus did not find America, but using exact information, he was able to return to Europe and repeat the voyage several times.

How to Navigate through the USA

Today, the geography of the USA has been completely documented. Whether leaving from large cities or small towns, there is information about how to get from one place to another. A few things you might need to know:

- What connnections are available?
- Does the departure and destination city have an airport, a train station or a bus station?
- What is the best route and transporation means under restrictions like
    - Time?
    - Cost?
    - Comfort?
    - Safety?

If a traveler reaches his destination point via Kansas City and Chicago and lands in New York, he can get a detailed map of the city and its surroundings. This is like the SAP Entity Relationship Model, with over 4,000 different cities - or entities. A customer can then rent a car and continue his journey as he likes. In the SAP system, there are so-called user exits and business application programming interfaces to numerous areas. These make it possible for individual processes to be conducted outside of the R/3 system.

How to Navigate through R/3

Business engineering means that a company works in a systematic way to tailor its application, using descriptive information, tools and technology to achieve the best solutions. To be an effective engineer, you need to have a clear picture of the business strategy and knowledge about the core tasks and business processes.

A key to successful business engineering is knowledge of a company's services and products, where they are purchased and how they are sold. Orders, requisitions and materials are exchanged between business partners. SAP describes the most important parts of a business in their product, R/3 Release 3.0, and documents these in a comprehensive map or reference model. The key business elements in this model are shown as business objects.

Business Engineering and Business Processes

A fundamental aspect in describing business applications is that the exchange of business services must be understood completely. How and in which form this happens is explained in process models. Business processes show, for example, how a customer order is handled and how the products are produced and delivered. Business objects are like major cities with sophisticated infrastructures. Between these objects, business processes act as route maps. R/3 is a roadmap for business applications. It contains over 160 business objects and more than 800 business processes.

The R/3 Reference Model, like an atlas with the main cities and main connections, describes the standard application, in all its variations, for the areas of sales, distribution, production, manufacturing, finance and human resources.

SAP gives every customer a comprehensive map for creating "best business practices." What maps were to yesterday's navigators and today's travelers are models for managers in their quest to satisfy and implement client/server business solutions.