

Modeling and New technologies

Paul Salmon

Université de Rennes 1
Department of Economics

Introduction

- Before and after Internet ...
 - And Internet
- But not only Internet.
 - Object Oriented Programming (OOP)
 - Introduction of servers everywhere
 - File server
 - Database Server
 - Web Server ...

What does the title mean ?

- The link between the expressions « Modeling » and « New technologies » targets only the introduction of « New technologies » in our everyday modeling tools.
- My discussion has nothing to do with any new theories or economic studies on the impact of « New technologies » and so on.

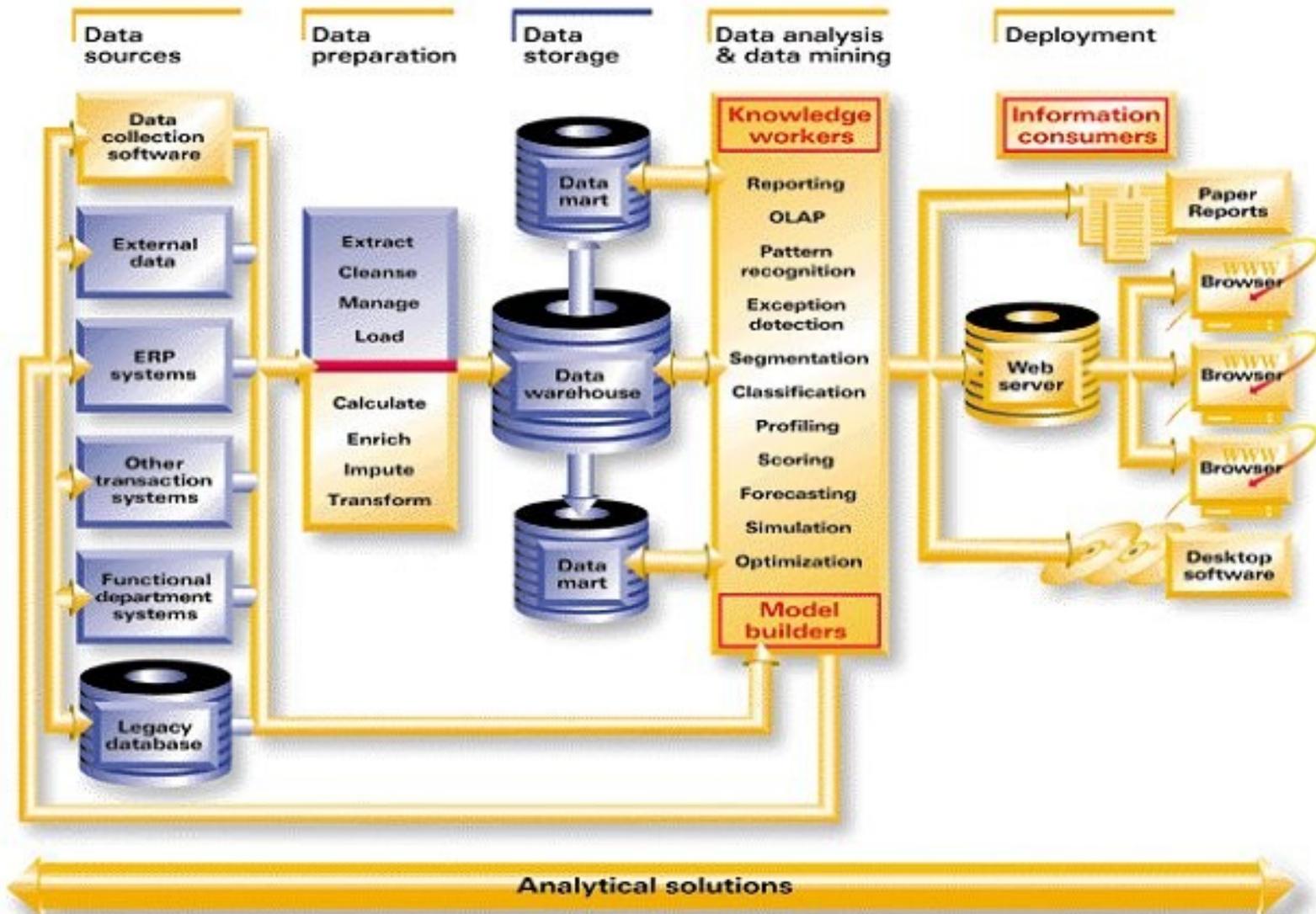
Why ?

- Circumstances
 - Courses (Computing) especially in a Corporate finance program
 - My interests for all topics connected with programming, econometrics and economics.
 - And of course modelling.
 - And for the development of « New technologies »

Corporate finance

- I am not a specialist of this topic.
- But it gives me the possibility to discover the Information system of the company and especially the different actors.
- The information system of companies become now the standard Information system for administration even universities (U of Maryland) per example.

A sketch



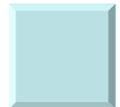
The needs of information

- For many reasons, companies need to manage data and to treat them (at first accounting).
- These managements and treatments have become in a way easier and easier with the building of ERP (Entreprise Resource Planning).
- But a problem : forecasting !



ERP ?

- This acronym simply designs a combination of computers, servers and applications (programs) on a network based and on the use of a database system to collect and to organize all kinds of information at the finest level inside a company.
- In 2010, all medium and big companies will be equipped by this type of system.



Who is on the ERP Market

- Only a few actors now :
 - SAP
 - Oracle (Peoplesoft)
 - Microsoft
 - IBM
 - and some others (small market shares)
 - The big ones have « bought » the others.

Who is on the Database Market ?

- Oracle (33 %)
- IBM (DB2 and Informix 33 %)
- Microsoft (around 15 %)
- And others (among them MySql)

Who is on Datamining Tools Market

- SAS
- SPSS
- Business Objects
- And many others
 - Companies which are specialized in the treatment of data management and treatment (Treasury, Cash management)

Forecasting

- Forecasting is consider like a « special treatment »
- But with which tools ?
- Which kinds of forecasting ?
- How companies practice forecasting today ?
- Do companies need economic modeling today ?

Value Creation

- I have told you I am not a specialist of Corporate finance, but I have a big interest for Value Creation.
- Value Creation in a few words
 - An econometric model of a company
 - Old practice (see Warren and Shelton 1970, Journal of Finance)
 - New one (Tom Copeland « Value Creation »)

A model of a country and a model of a company : same thing ?

- Yes from the point of you the modelling practices
- No from the point of view of the data
 - A company collect data from real time data to annual data
- Submodel and the model

Some remarks or constraints

- Companies (but not only) has information system which have « automatised » the process of data management and most of the basic treatment.
- For their forecasting process, they need to be connected on equivalent information system (Reuters or Bloomberg API).
- They have to use tools connected on their Information systems (Excel 2007)
- They need to get or to made new forecasts very often
- Models must be adapted quickly to new firm changes.

Some trends?

- Run an application in a Browser (Writely)
- Data are more and more available (BEA and FRED)
- Data are manage with a database
- Make a connection to a Database from your own application (Add-in in Excel)
- Update automatically the data
- Organize your own processes of work using object.
- Reorganize the process of work.
- Users
 - Programmer
 - Not a programmer

What's to do ?

- Analyze all the processes of modelling task
 - BPM (business process management)
- Use all the available technologies
- Reconsider the problem of data management
 - Data structure
 - Data format
- Build tools for the users (Programming very sophisticated « Macro ») with the computer level of the user.
- Etc.

Technology to use

- DataBase Server.
 - One for Inforum ?
- Web Server.
 - Documentation
 - Access to the model
- Language for Web and console.
 - C++ / Java / C# and others
- SQL
- XML, a universel standard ?
- Collaborative work
- Microsoft Office Systems
 - Mendicino (SAP / Microsoft)

Some examples

- FRED
- FRED Graph
- WORD Basic