Pre-history of business computing
Early history of business computing

1960s  Focus on inventory management and control in production environments

LEO I (Lyons Electronic Office) in 1951. First computer specifically focused on business.

Early history of business computing

1970s  MRP software debuts to assist in production scheduling and inventory mgmt.
(More) contemporary history of business computing

1980s  MRPII expands focus of previous systems into management of entire production process

1990s  ERP systems apply same data collection and handling mechanisms organization-wide

Evolution of Business Computing

MRP--Materials Requirement Planning (1970s)

MRPII--Manufacturing Requirements Planning (1980s)

ERP--Enterprise Resource Planning (1990s)
Enter SAP

SAP pioneered the ERP software market.
Five former IBM employees in Manhheim, Germany founded SAP in 1972.

Systemanalyse und Programmentwicklung

Systems Applications and Products (now), System Analysis Program Development (then)

3 Goals:

SAP Software Timeline

1973 "System R" (real-time data processing) released to market. (Later came to be called "R/1")

1978 "R/2"
SAP Software Timeline

1992/93 SAP R/3--3 tiered architecture
- Database, application, user interface (client)
- Open architecture
- Improved user interface

1994 and beyond
- Enhancements and additional modules to R/3
- Various "marketing names": SAP ECC, SAP Business Suite, mySAP, mySAP Business Suite, mySAP.com, SAP ERP, SAP Business Suite (preferred current names)

SAP ERP 3-tiered Client-server architecture
Client-server system

Nothing important is saved on your PC. Only things saved on the server are saved, and they are saved for good.

http://sap.uwm.edu/UWMDefault.htm

SAP ERP Product Evolution

Graphic copyright SAP
Who is SAP today?

SAP AG

World’s Largest Business Software Company
World’s Third-largest Independent Software Provider
Annual revenues exceeding $10 billion.

Company Statistics

51,400 employees in more than 50 countries
1,500 Business Partners
75,000 customers in more than 120 countries
12 million users
100,600 installations

SAP Software Applications

Small & Medium Size Solutions:

**Business One**

1-50 employees. SE (Small Enterprise) focus.
Bought (not made) by SAP. Not sold by SAP directly.

**Business by Design**

50-100/500 employees. SME (Small, Medium Enterprise) focus.
Based on Service Oriented Architecture (SOA).

**SAP All-in-One**

100/500-1000 employees. ME (Medium Enterprise) focus.

SAP ERP Modules & Business Suite

SAP R/3
Client/Server
ABAP Basis

SAP ERP
SAP Business Suite

SAP Industry Solutions—Best Practices

- Aerospace & Defense
- Automotive
- Banking
- Chemicals
- Consumer Products
- Defense & Security
- Engineering, Construction
- Healthcare
- High Tech
- Higher Education
- Industrial Machinery
- Insurance
- Life Sciences
- Logistics Service

- Media
- Mill Products
- Mining
- Oil & Gas
- Pharmaceuticals
- Postal Services
- Professional Services
- Public Sector
- Railways
- Retail
- Telecommunications
- Utilities
- Wholesale Distribution
Varied Deployment Environment

Microsoft, SAP partnership to add SAP functionality directly to Microsoft Office products


ERP System Functional Details

ERP Systems are large-scale applications that run on top of database systems for storage and data management.

  SAP typically used with Oracle, DB2, or MS SQL.
  Basic SAP installation--over 28,000 tables.

ERP Systems are not "install and go." Configuration required.

  Configuration: making the standard software fit your business processes.
  SAP: over 8,000 configuration decisions.
  ERP Configuration Management--full time job
ERP System Functional Details

Systems are large-scale distributed applications that need system level administration and control.

- Performance tuning, network and equipment management, redundancy and backup, development and test systems, transport.
- SAP "Basis Administration", "NetWeaver Administration" non-trivial for large company with significant infrastructure.
- SAP Configuration, Development

Other types of Enterprise Applications

- **BI** -- Business data and analysis software to improve decision making.
- **CRM** -- Facilitates customer interaction (customer sales and service)
- **SCA** -- BI applied to resource acquisition and distribution.
- **SCE** -- Automating execution of manufacturing process.
- **SCM** -- Integration of entire manufacturing process from resource acquisition to final distribution.
### Other types of Enterprise Applications

<table>
<thead>
<tr>
<th>Application</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCP</td>
<td>BI focused on strategic forecasting of demand for goods and effective inventory management.</td>
</tr>
<tr>
<td>APS</td>
<td>BI focused on strategic execution, i.e. translating company goals into operational decisions.</td>
</tr>
<tr>
<td>SEM</td>
<td>Shipping and routing of outbound goods.</td>
</tr>
<tr>
<td>TMS</td>
<td>Raw and finished goods storage management.</td>
</tr>
<tr>
<td>WMS</td>
<td></td>
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</tbody>
</table>

### Other major ERP software vendors

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Applications</td>
<td>Oracle, JD Edwards, PeopleSoft, Siebel, Retek</td>
</tr>
<tr>
<td>Microsoft Business Solutions</td>
<td>Dynamics (Great Plains), Navision, Axapta, Solomon</td>
</tr>
<tr>
<td>The Sage Group</td>
<td>Sage Software – Accpac ERP, PeachTree</td>
</tr>
<tr>
<td>SSA Global Technologies</td>
<td>BAAN</td>
</tr>
</tbody>
</table>
References and Links

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