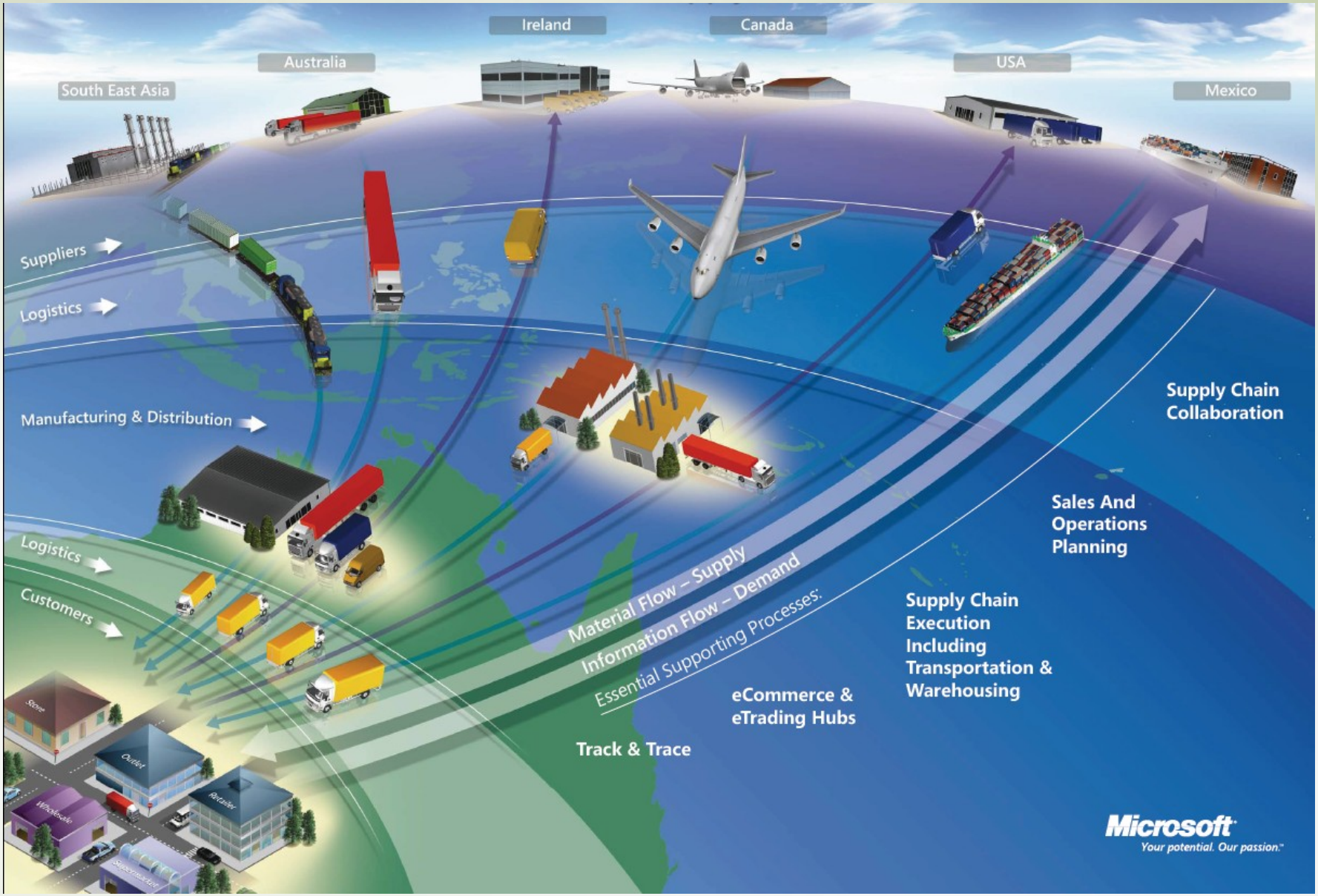
# BASIC ERP ARCHITECTURE

Skorkovský, KPH, ESF MU,Brno

12.3.2011

# What could be controlled…

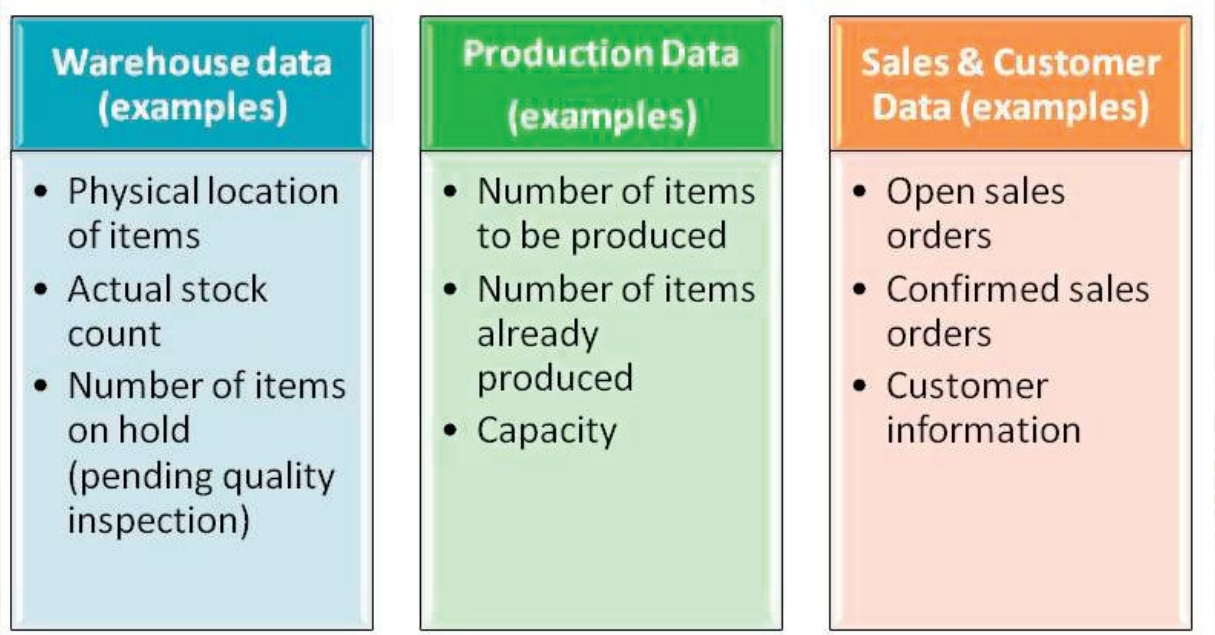


# ERP

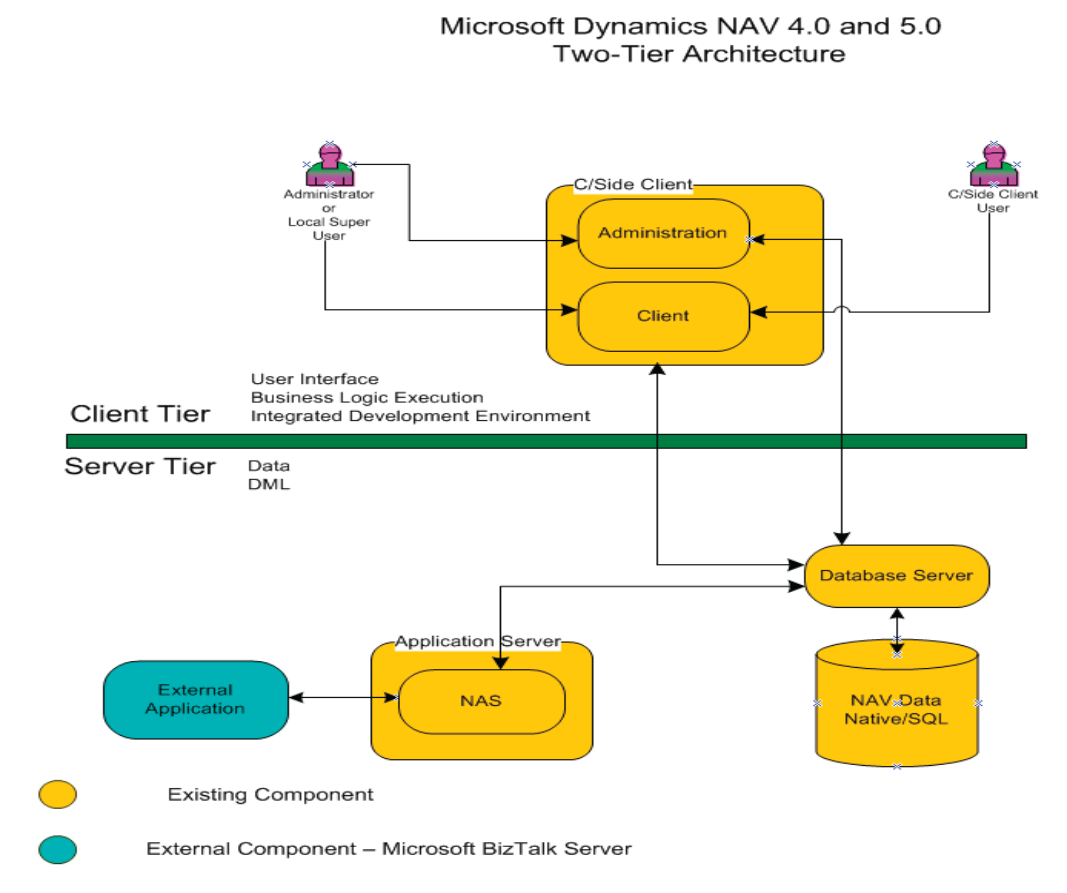
The main objective of Enterprise Resource Planning, or ERP, is to integrate all departments and functions across a company into a single system by using a common database, the value of which is to be able to have only one correct set of data.

# ISLAND SYSTEMS

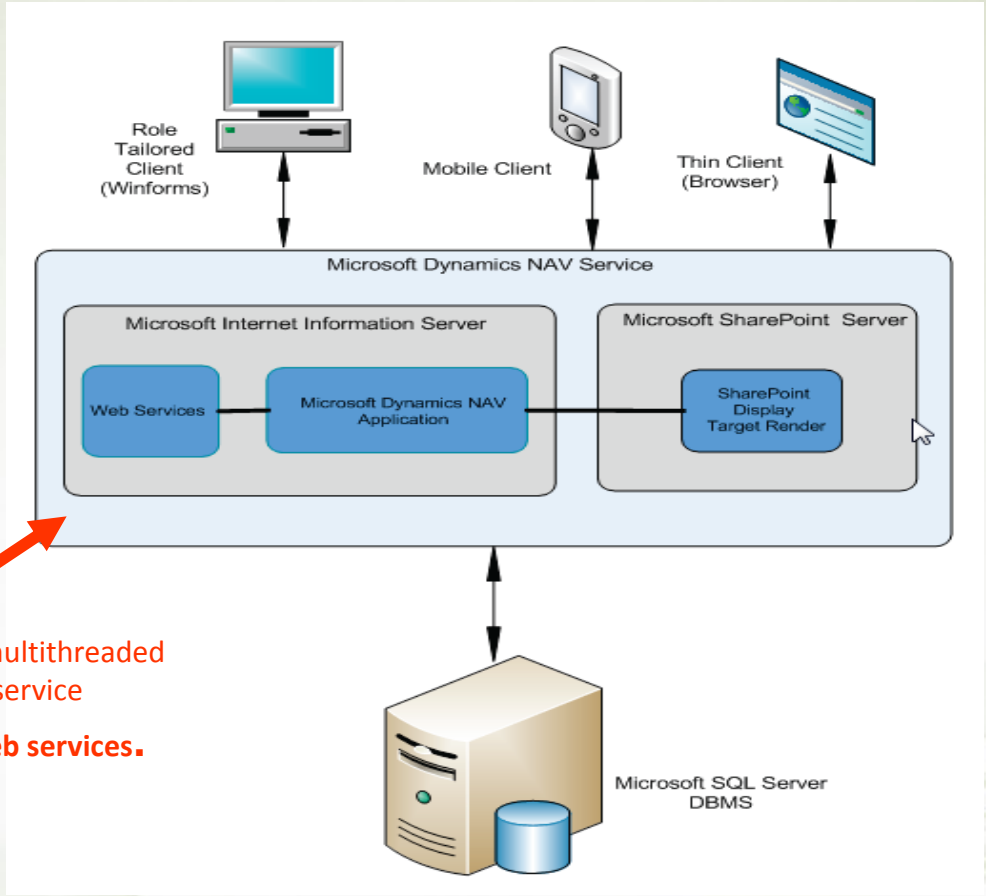
For example, records about inventory levels may be found in one database, while customer information may be found in its own separate database. Furthermore, these databases may be "island systems" (operating independently from each other and having no integration with other databases).



# Architecture 2-tier (2-vrstvy)



# Architecture 3-tier (3-vrstvy)




The second tier is the multithreaded middle tier. This is the service

tier that is based on **Web services.**

# From hell to paradise –ERP (see meaning)

You can change a business in order to copy rigid functions of the software ERP

↓

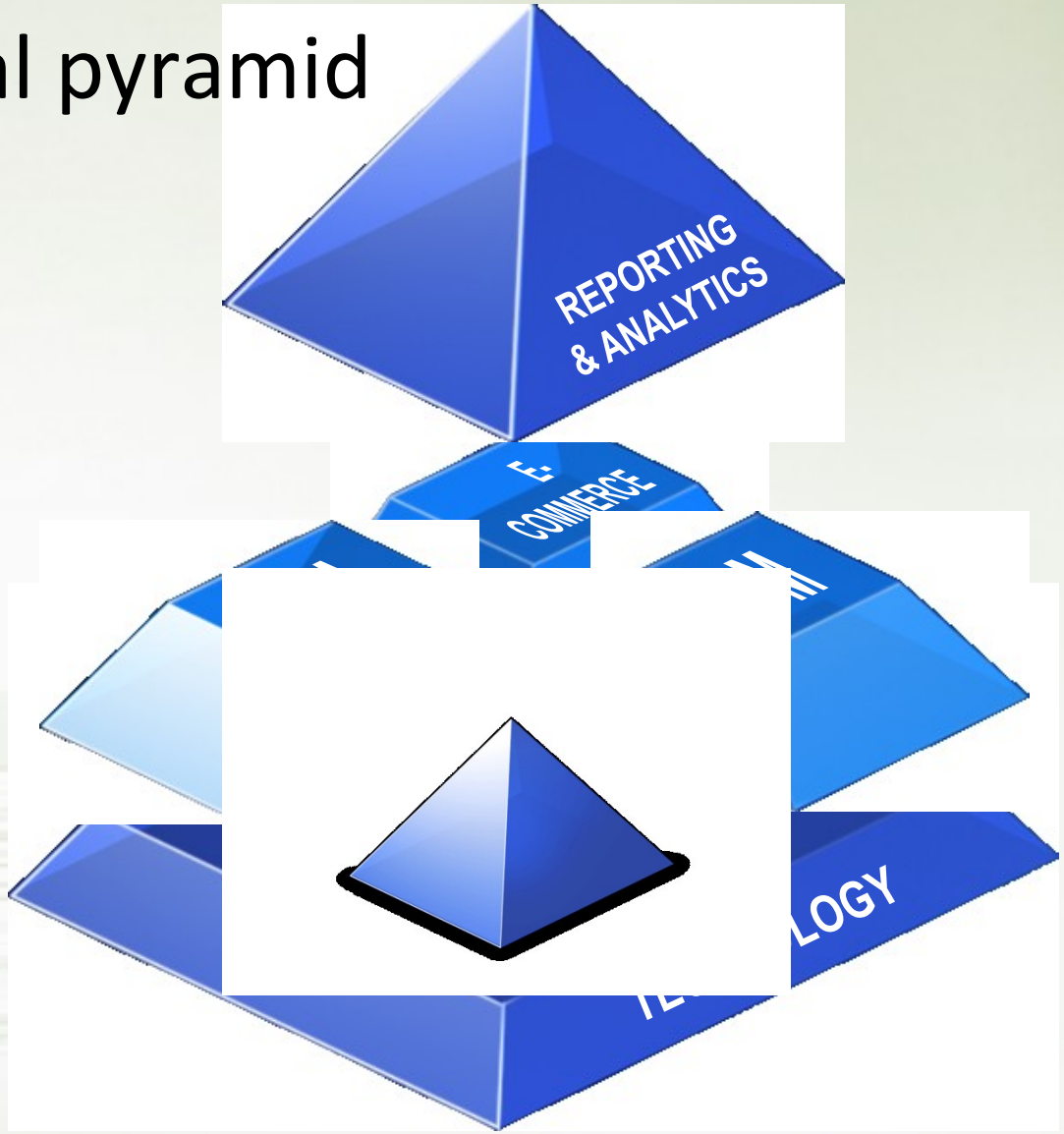
Programming

You can change a software in order to support your business

↑

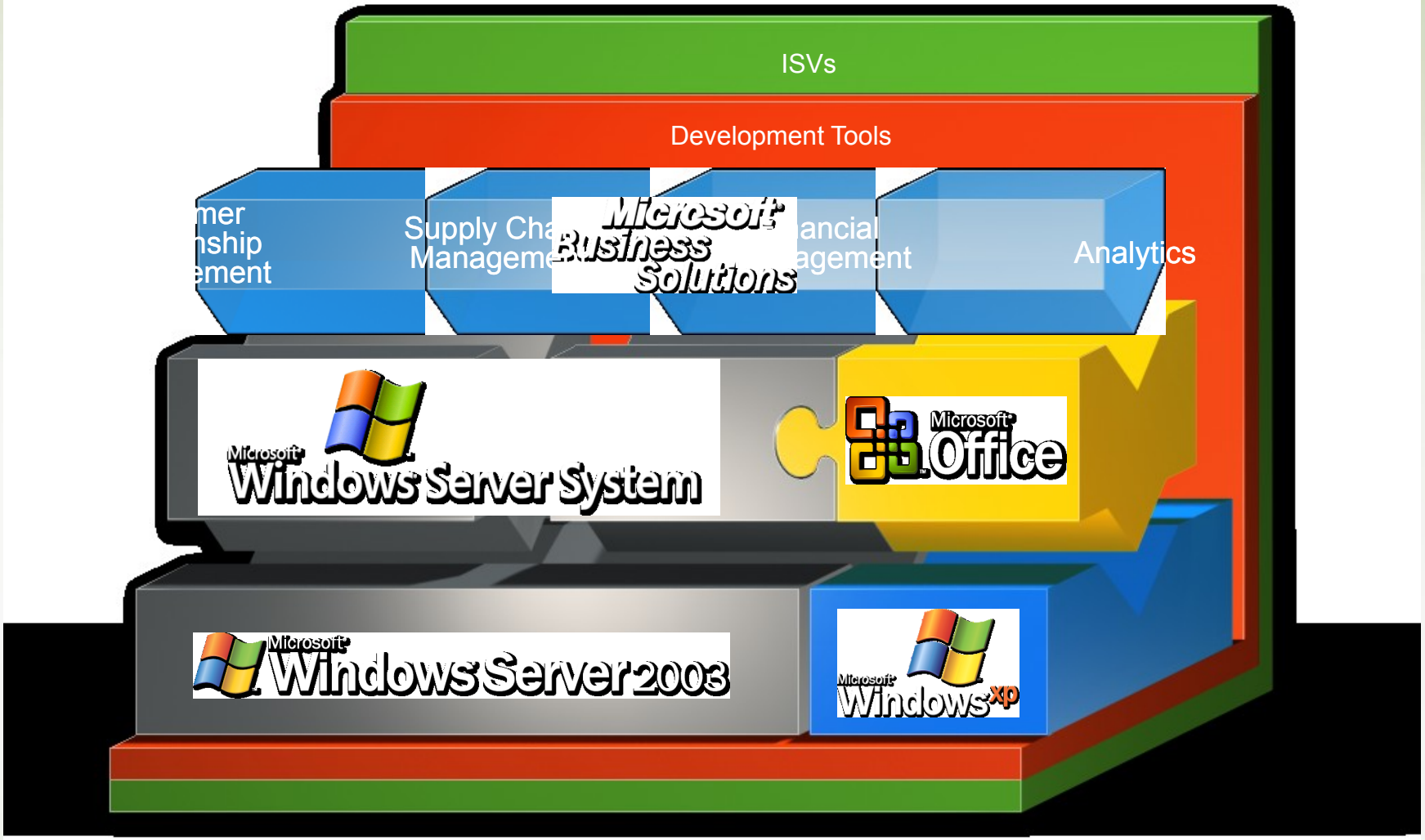
Parameter setup

# Technological pyramid




MICROSOFT
BUSINESS
SOLUTIONS
- NAVISION

# Integrated homogeneous solution



# Unique architecture

Integrated Development Environment

GUI (Windows)

Zaměstnanci

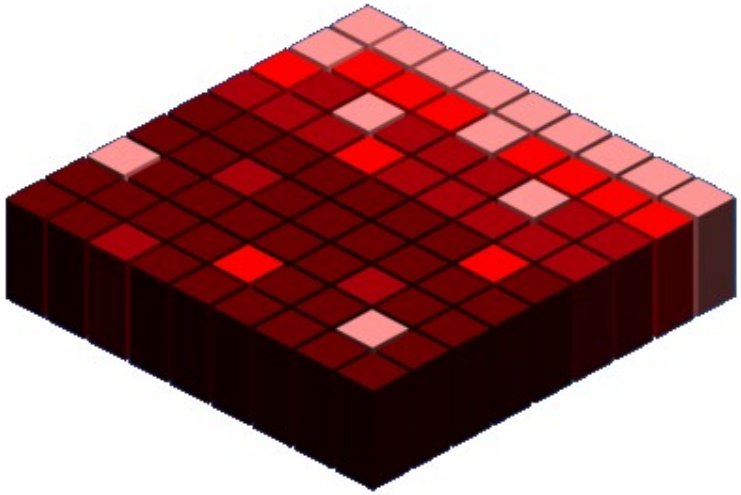
Commerce Portal

Zákazníci & obchodní partneři

Application Server

Commerce Gateway (B2B)

Externí aplikace



Database

Microsoft Navision Database Server

Microsoft SQL Server 2000

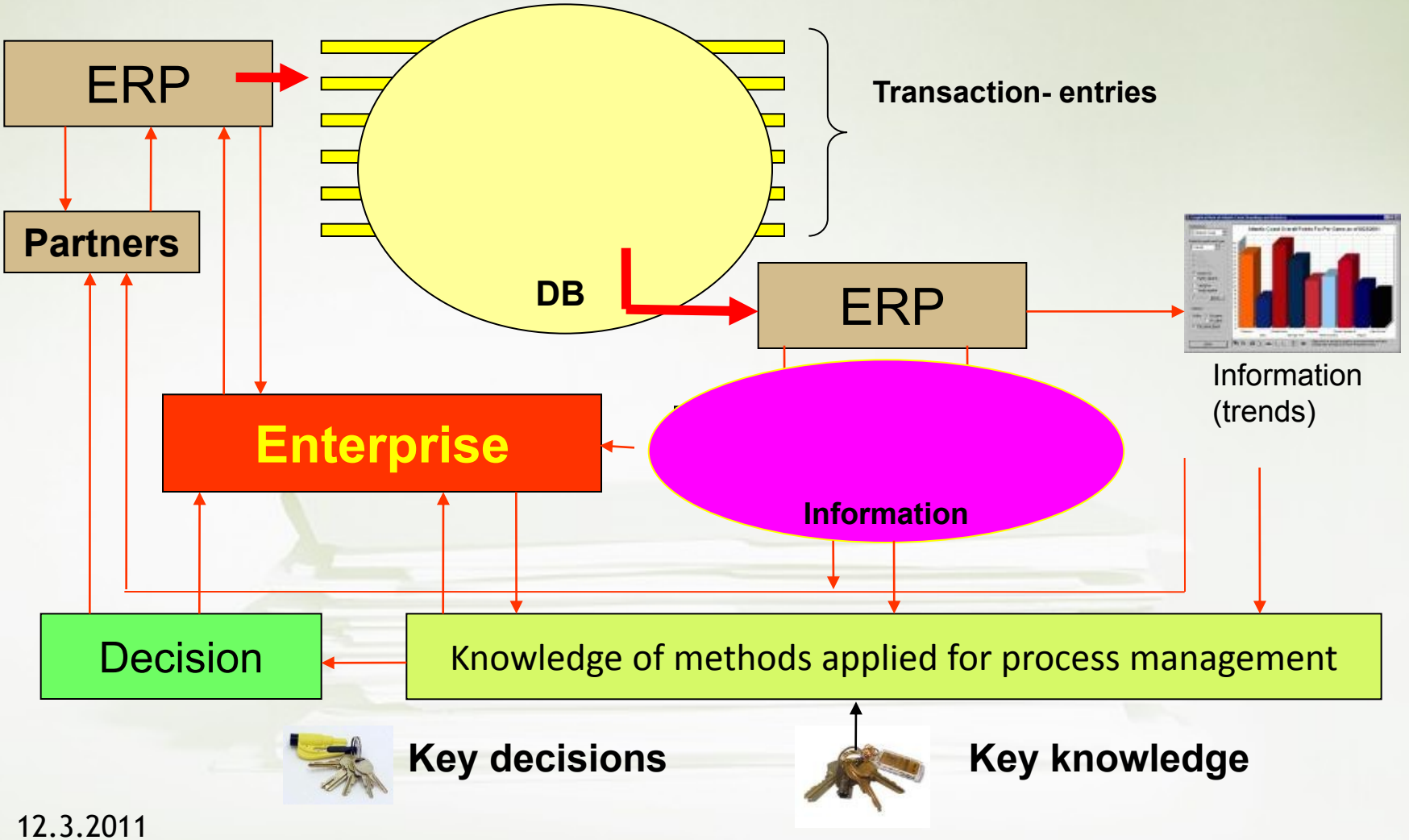
Worldwide Generic Objects

Country-specific Objects

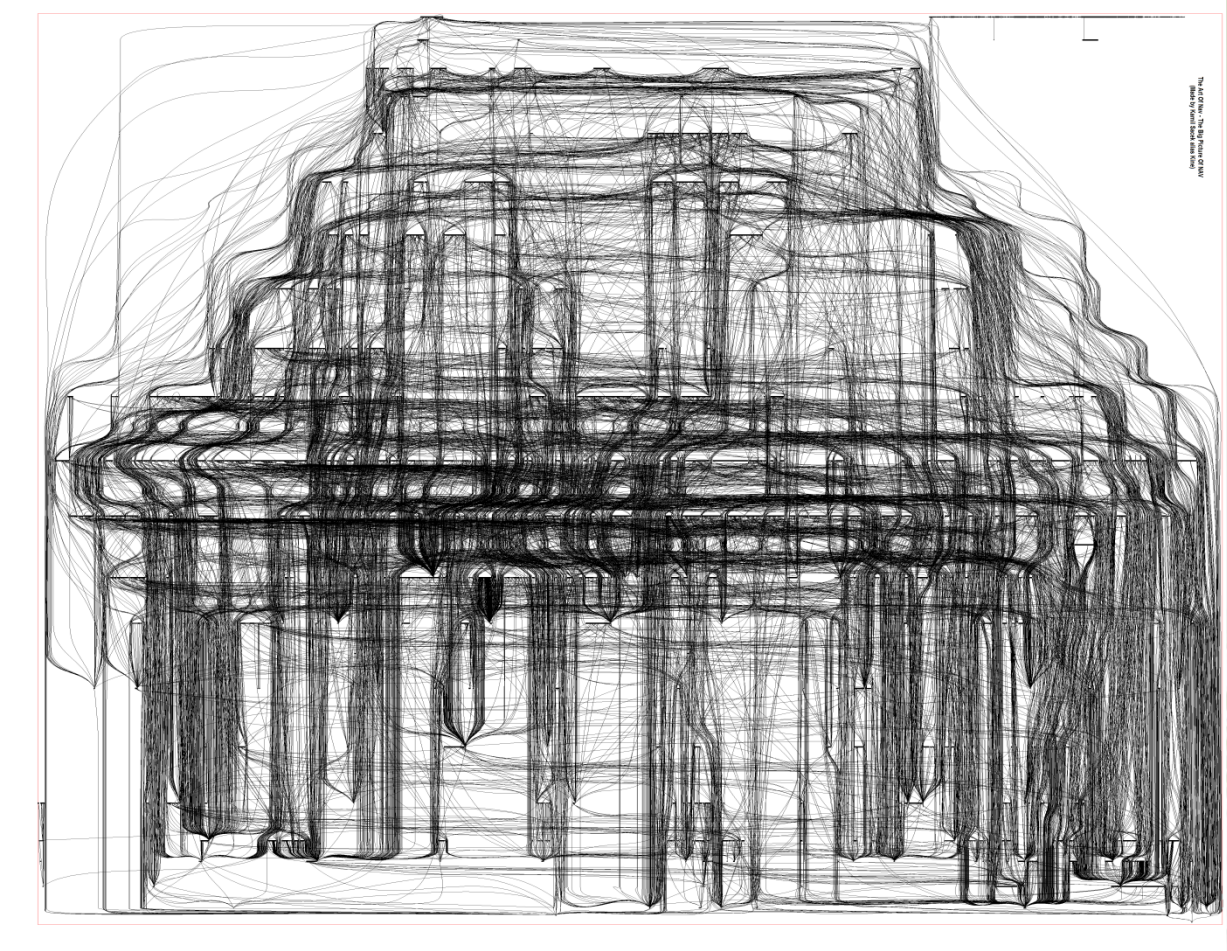
Customer-specific Objects

Vertical Solutions Objects

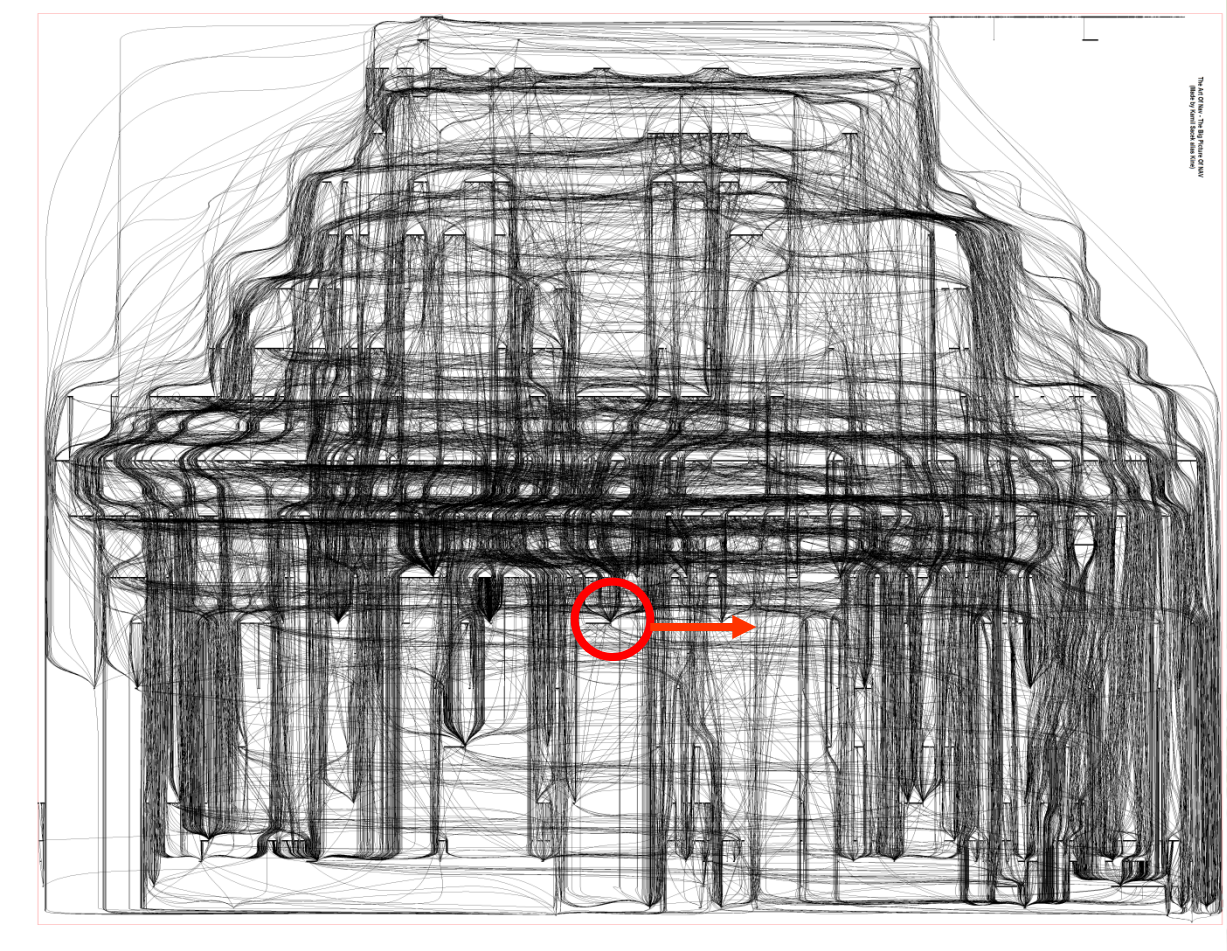
# Simplified schema of ERP usage



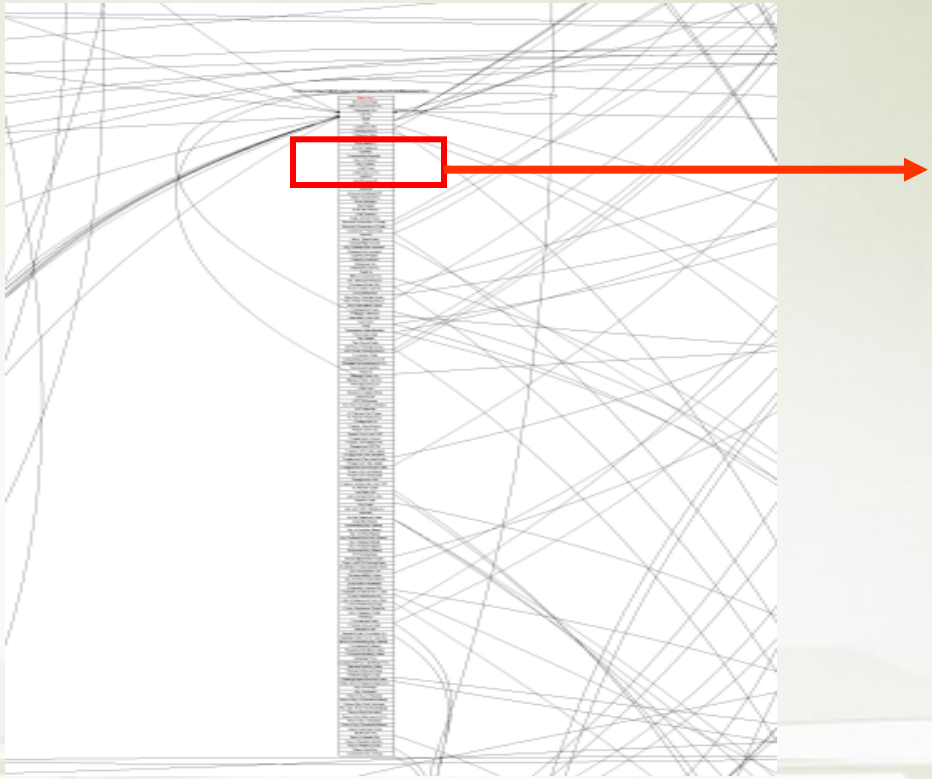
# Relations among tables I



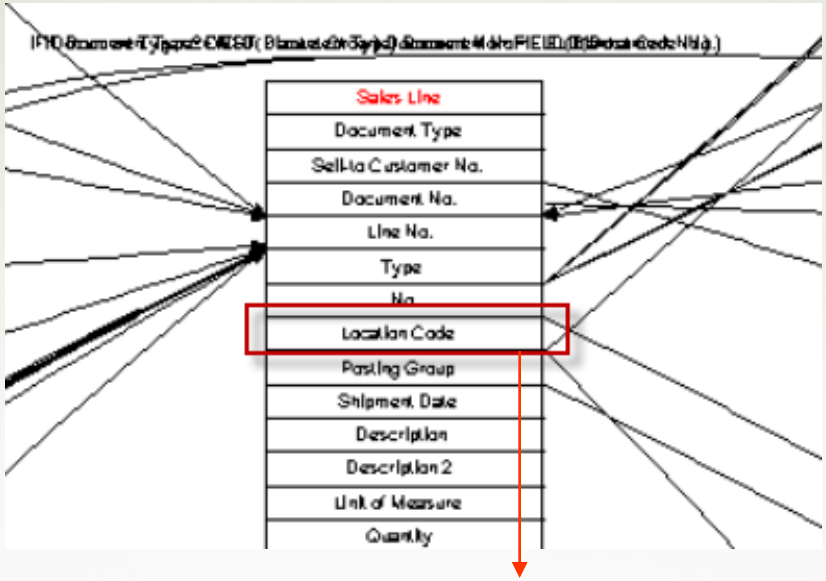
# Relations among tables II



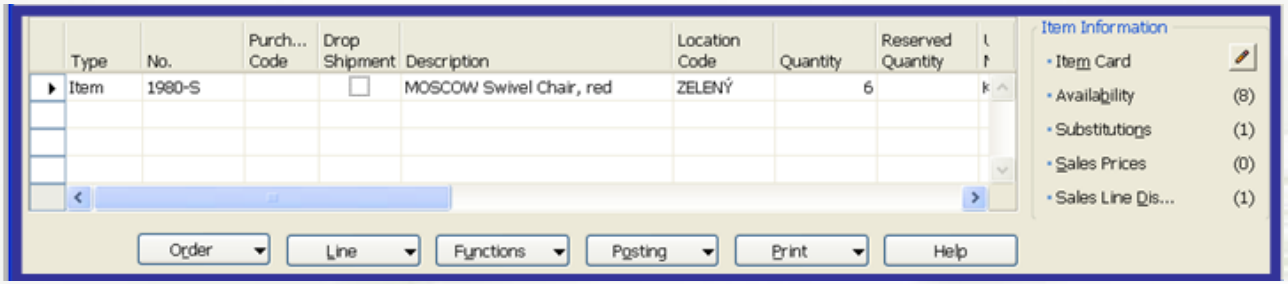
# One table and its relations I



# One table (Sales Line) and its relations II



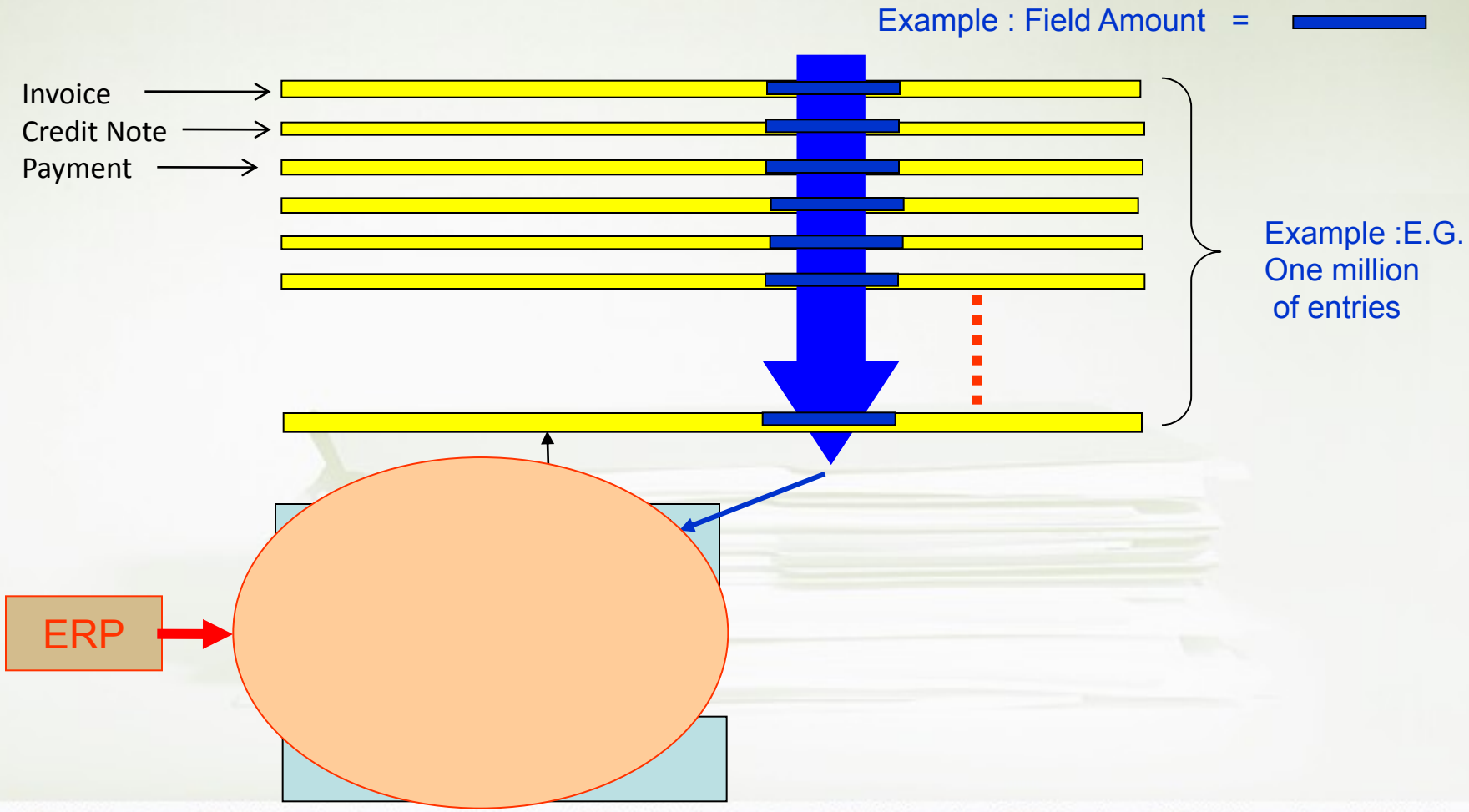

ERP NAV



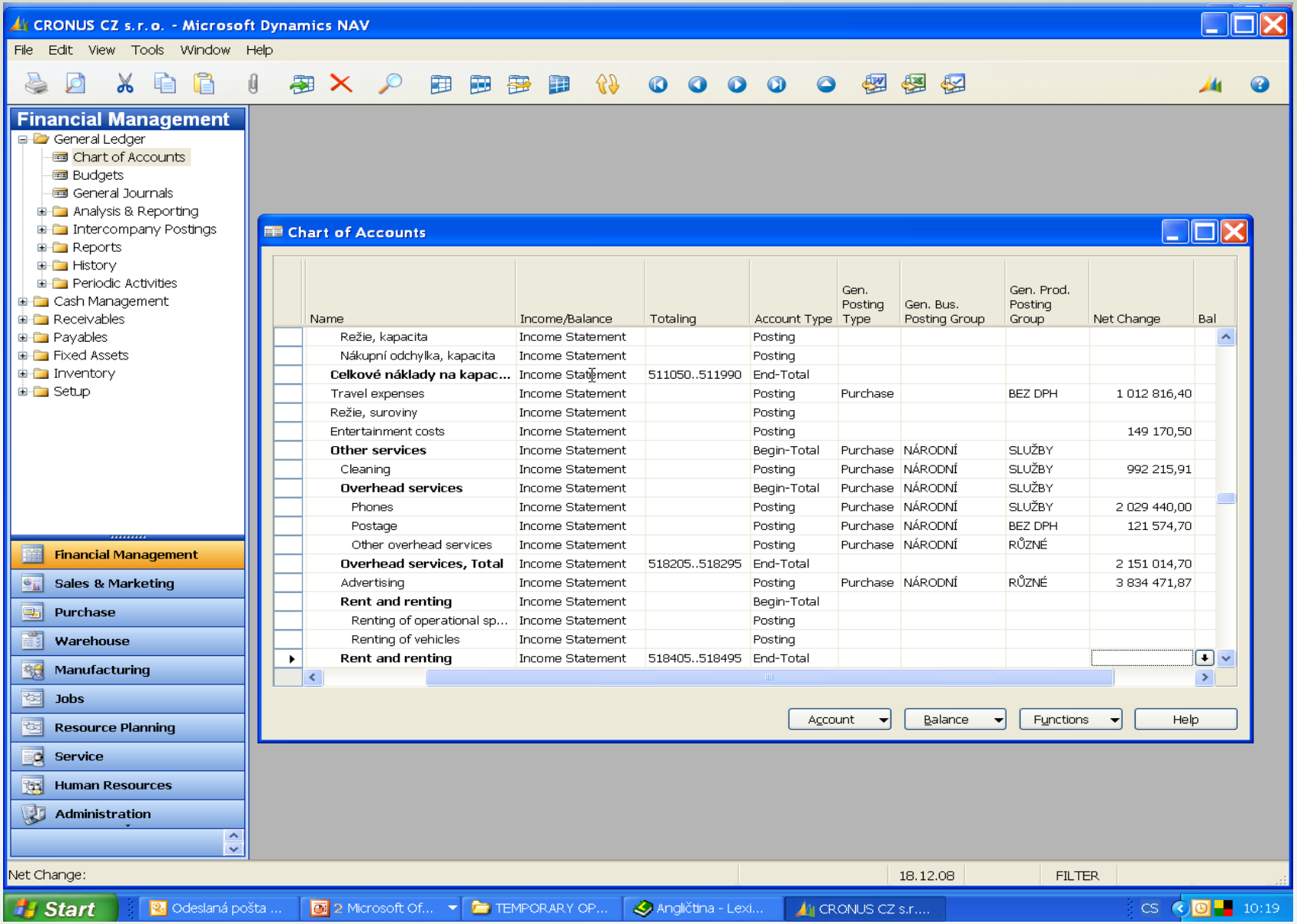
# Microsoft Dynamics NAV Sweet Points

- Windows compatible (menu, command, mutual relations to MS Office,..)
- Security (ID, passwords, roles, protocols)
- Menu and  basic modules
- Shorthand keys and HELP
- Multilanguage
- Navigate and calculation (flow) fields, finding the reason why any document was created
- Reports
- Entries, dimensions

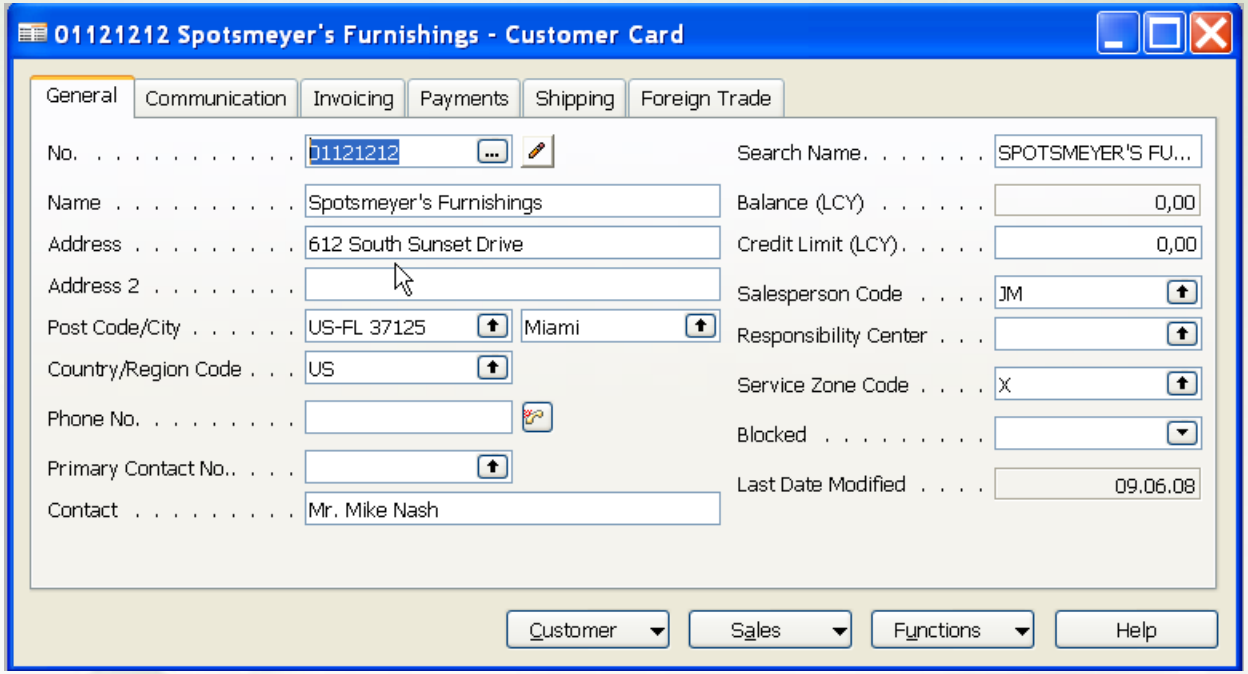
# Calculation field and entries (transactions related to cards- tables)



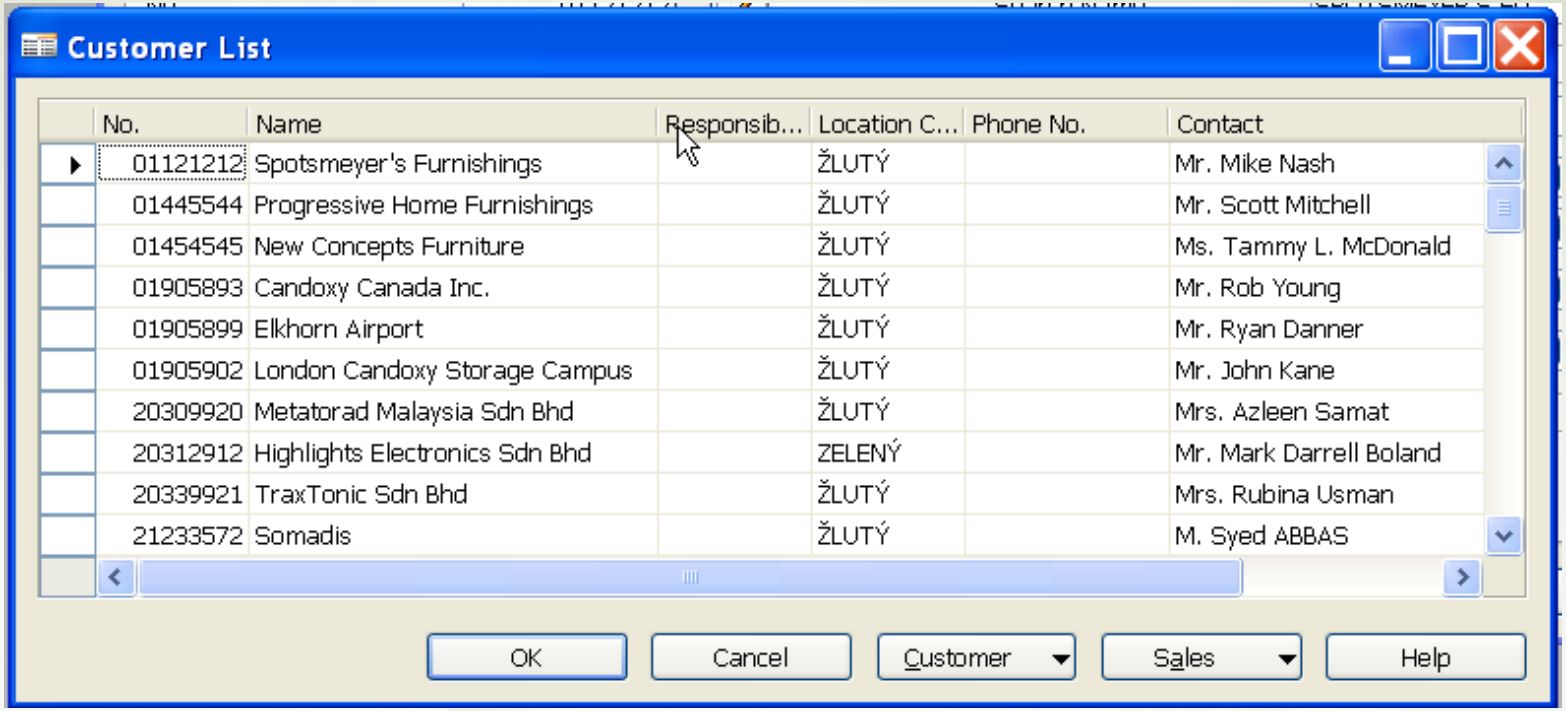
# Main form (menu, toolbar, forms)



# Main forms (card, list, form->sub-form)

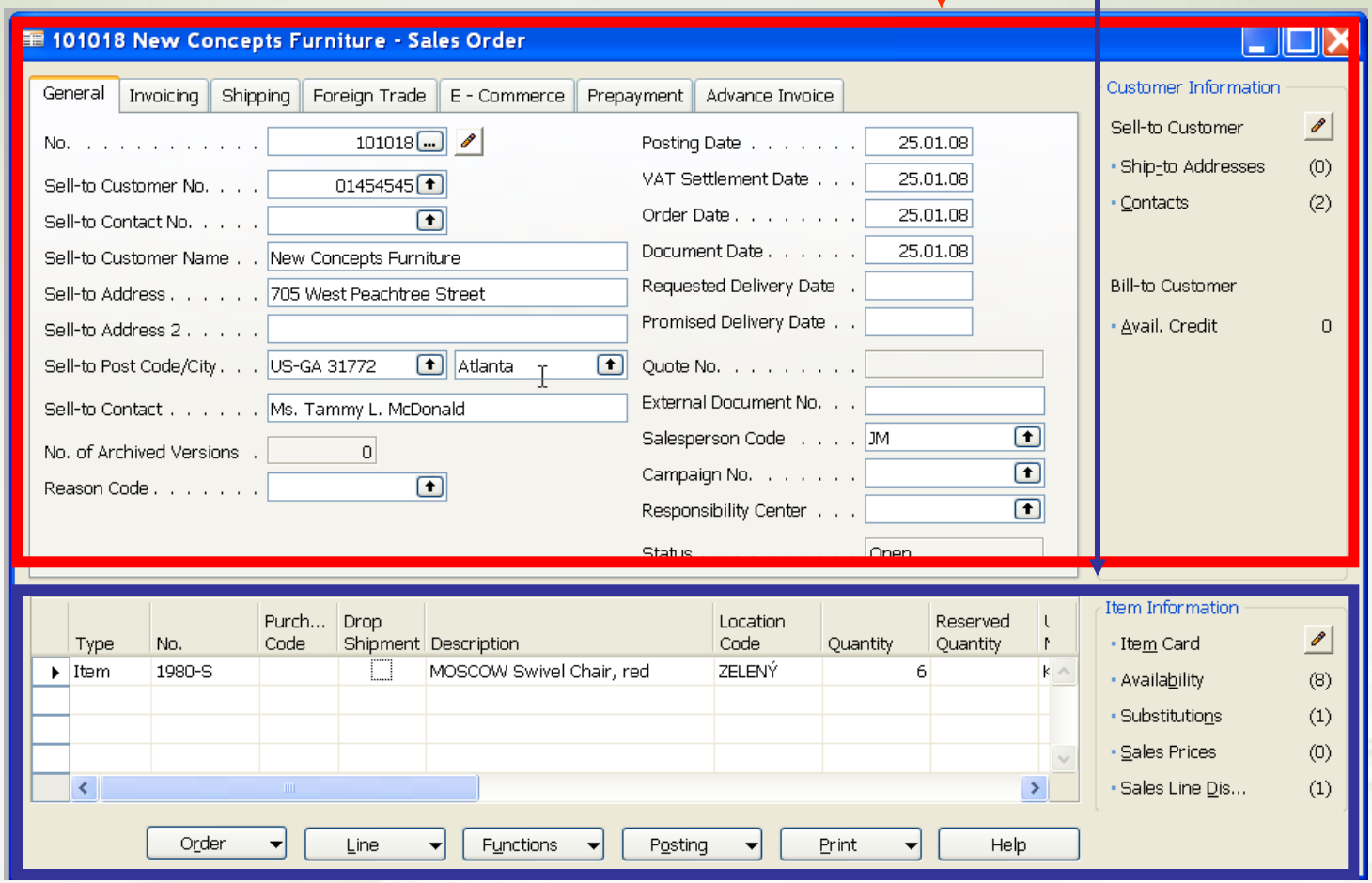


# Main forms (card, list, form->sub-form)




12.3.2011

# Main forms (card, list, form->sub-form)

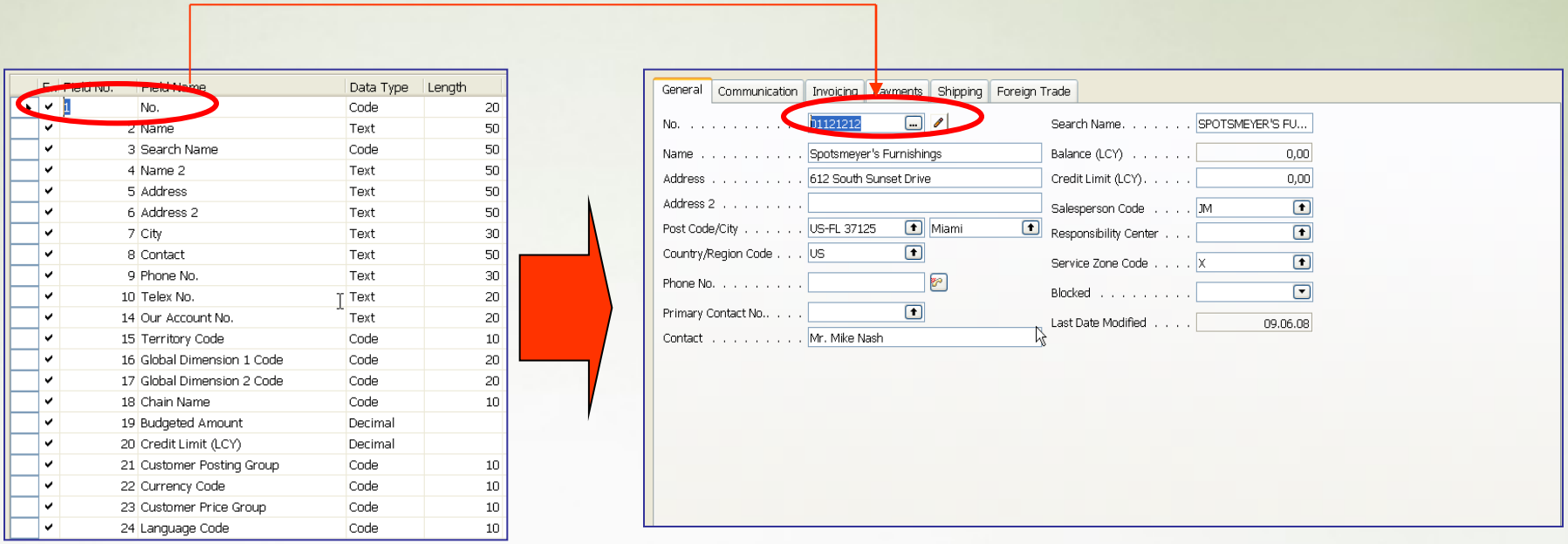



Partner

What

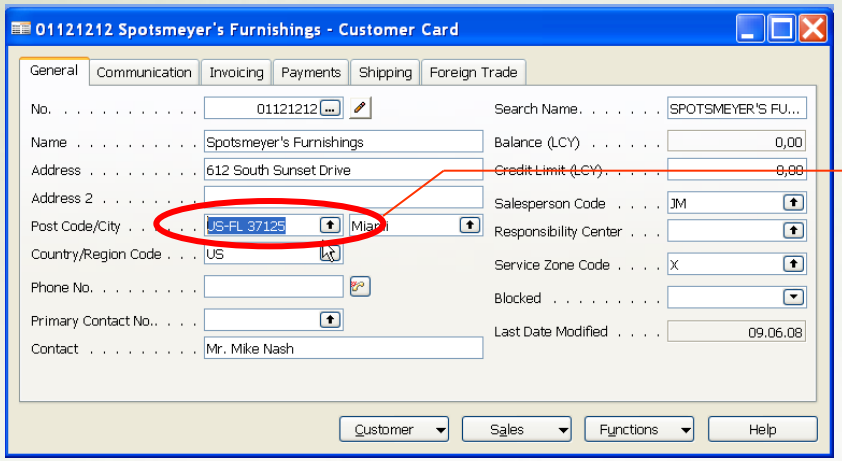
12.3.2011

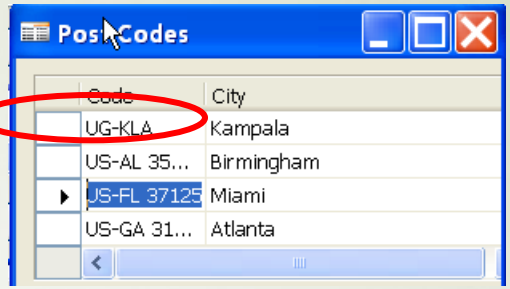
# Table->Form principle




12.3.2011

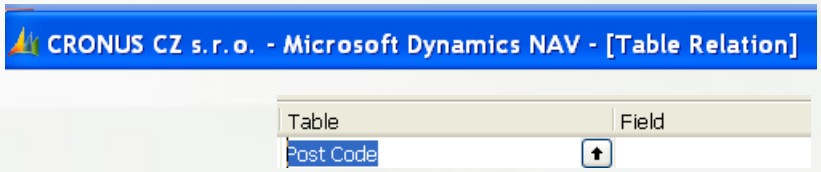
# Table **x**->Table y relations

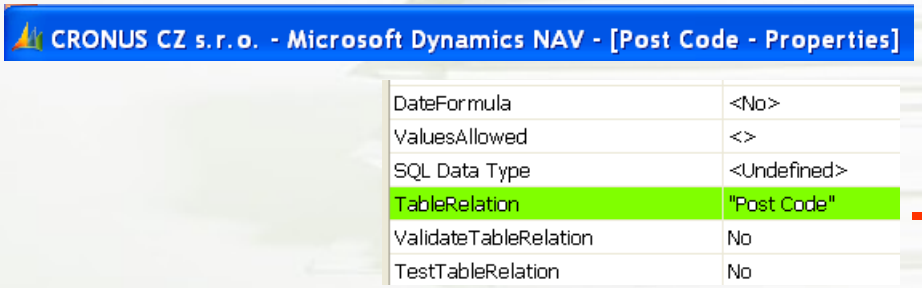



X= Customer
Y=Post Code

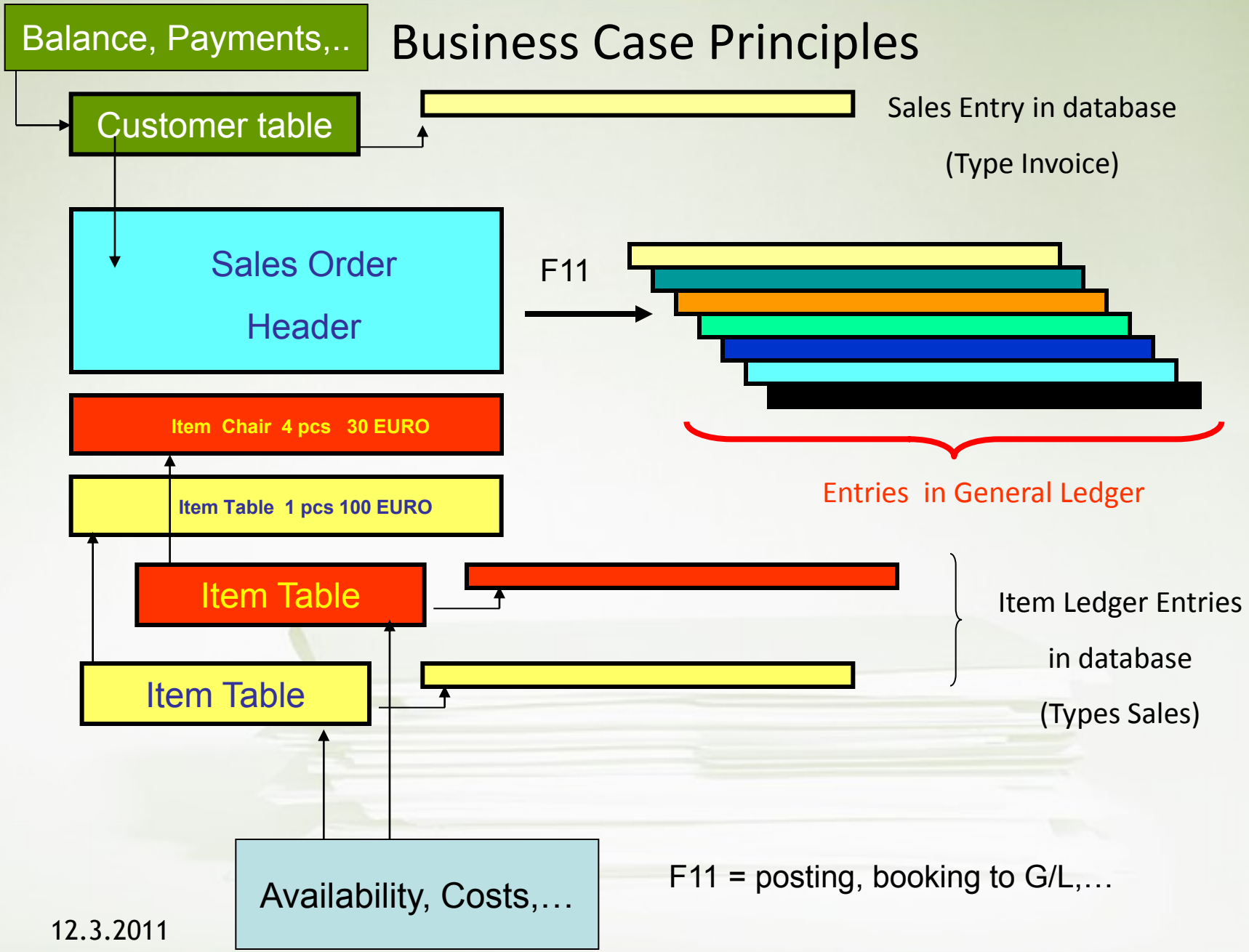
| | | | |
|---|---|---|---|
| ✔ | 84 | Fax No. | Text |
| ✔ | 85 | Telex Answer Back | Text |
| ✔ | 86 | VAT Registration No. | Text |
| ✔ | 87 | Combine Shipments | Boolean |
| ✔ | 88 | Gen. Bus. Posting Group | Code |
| ✔ | 89 | Picture | BLOB |
| ✔ | 91 | Post Code | Code |
| ✔ | 92 | County | Text |

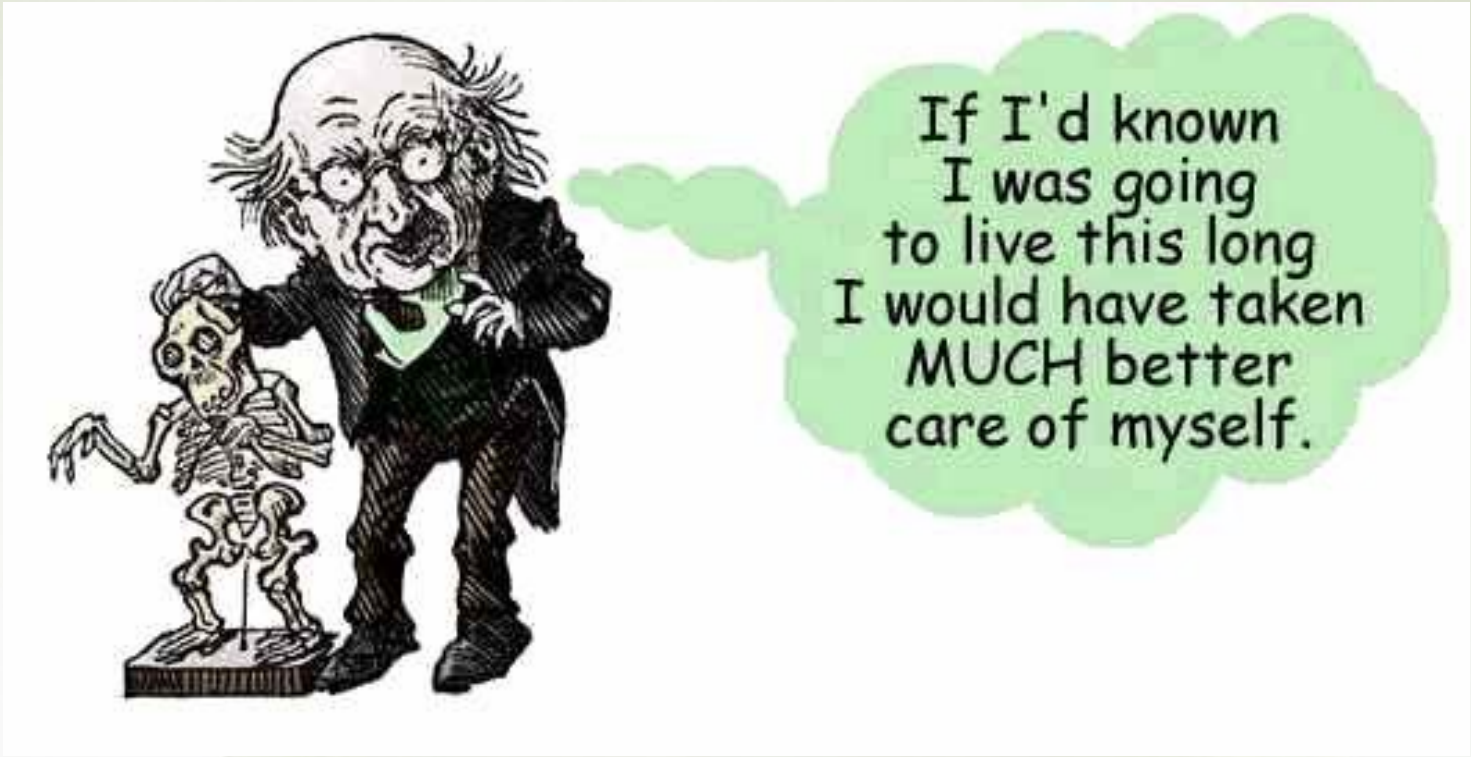



12.3.2011

# Business Case Principles




If I'd known
I was going
to live this long
I would have taken
MUCH better
care of myself.

12.3.2011