BASIC ERP ARCHITECTURE

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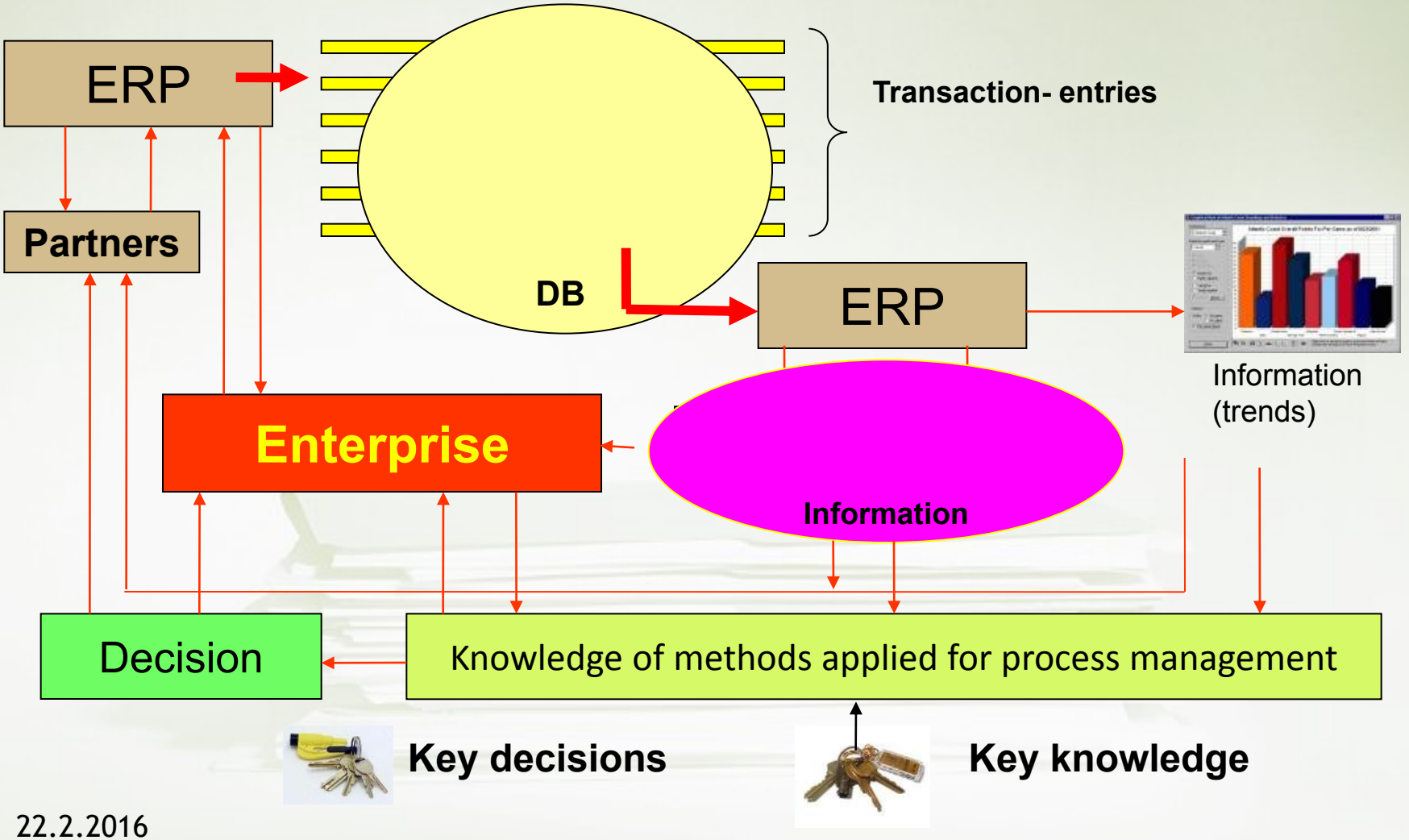
22.2.2016

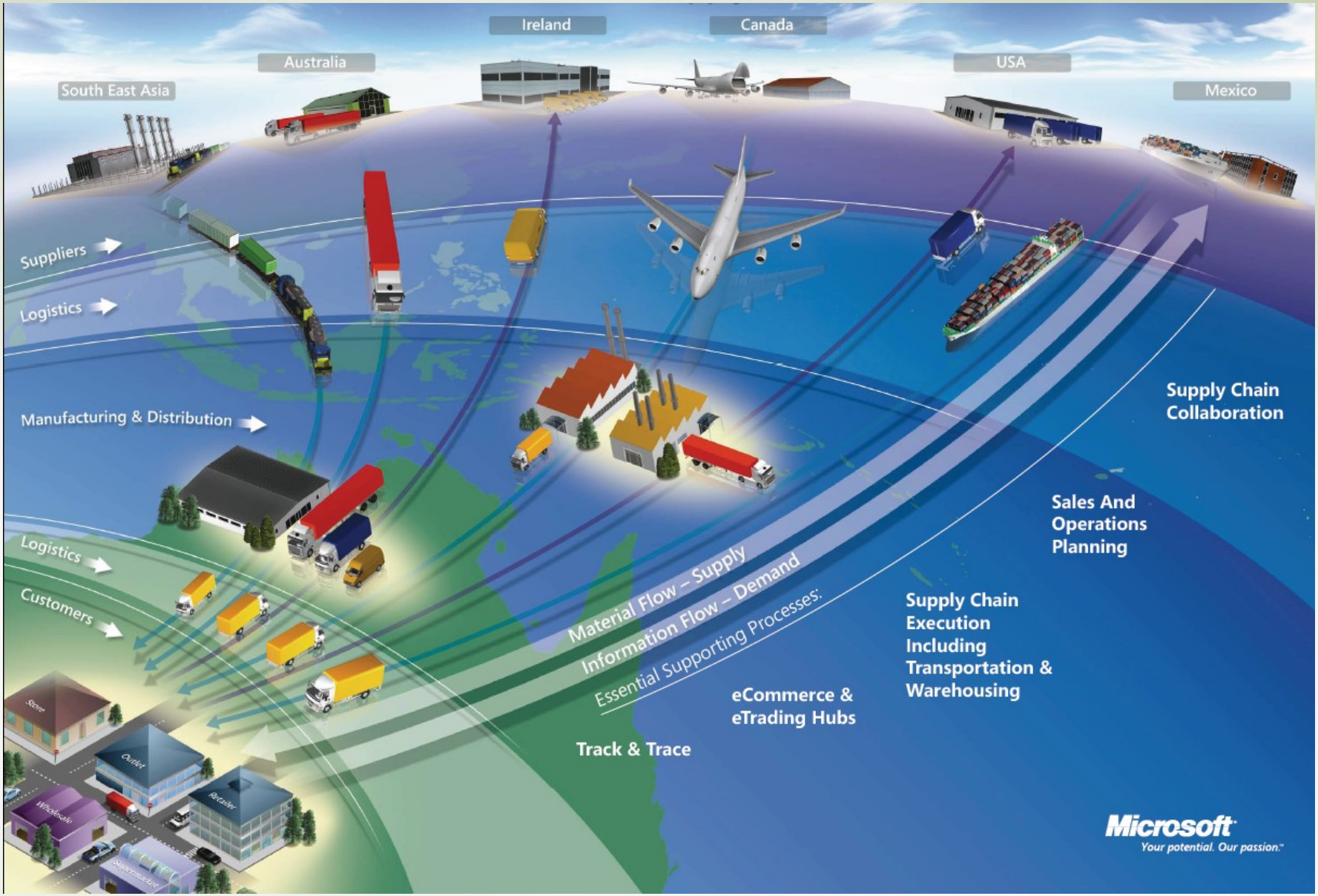
Simplified schema of ERP usage



Methods

- Theory of constraint
- Critical chain
- DBR
- Ishikawa Fishbone Diagram
- Boston matrix and PLC
- Magic Matrix (Gartner)
- Use of ERP analytic tools
- Pareto analysis
- SWOT (basic and advanced)
- MRP,MRP-II,CONWIP,
- Advanced Planning and scheduling
- Linear programming
- Methods of quality management

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.

Isolated Data Islands

Accounting Island

Management

Marketing

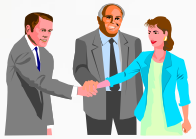
Marketing & Sales Islands

Accounting

Production Island

Customer Orders

Sales Representatives



Customers

Production Planning

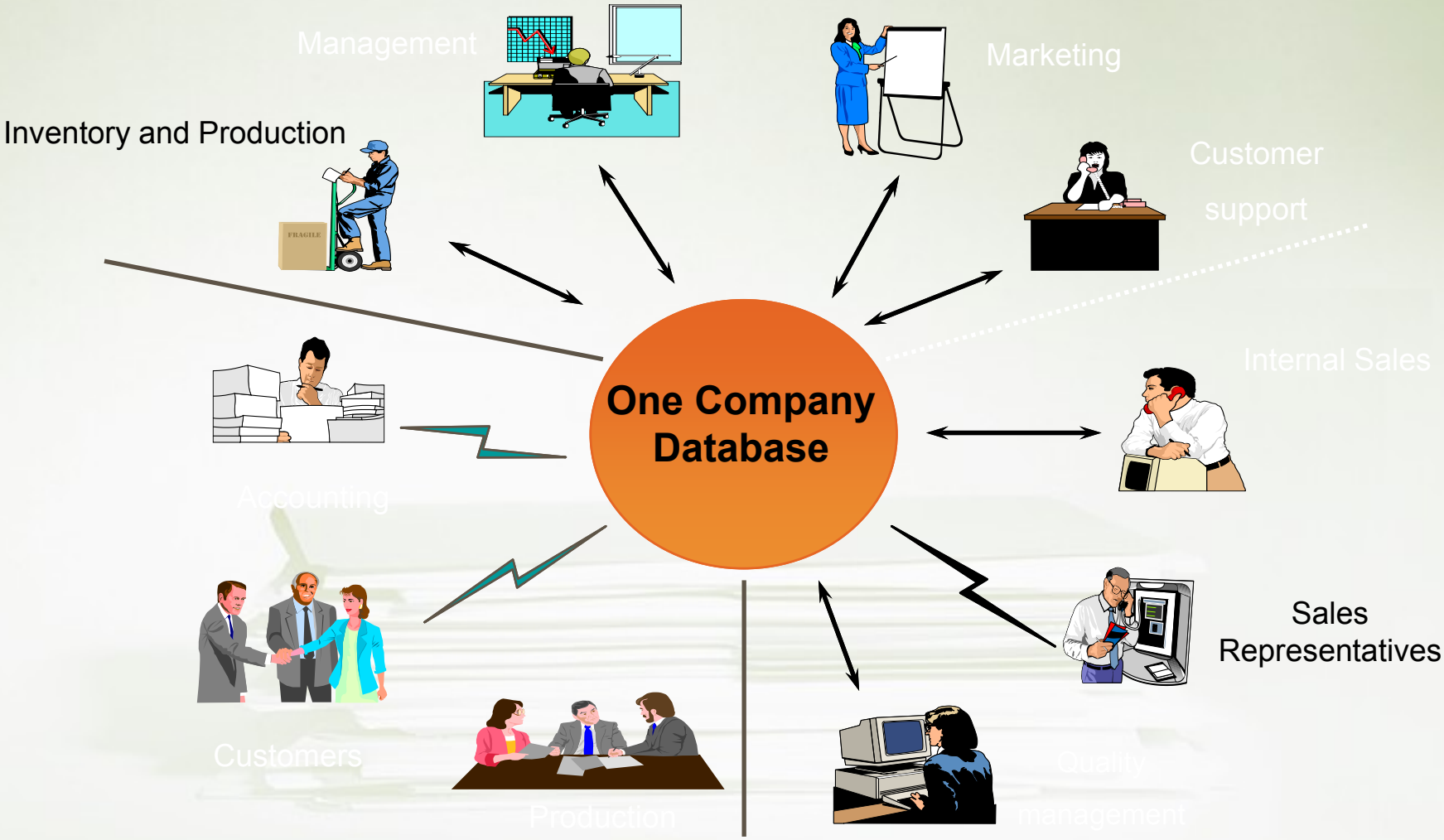
Island of Deliveries

Quality Management

Quality Management Island

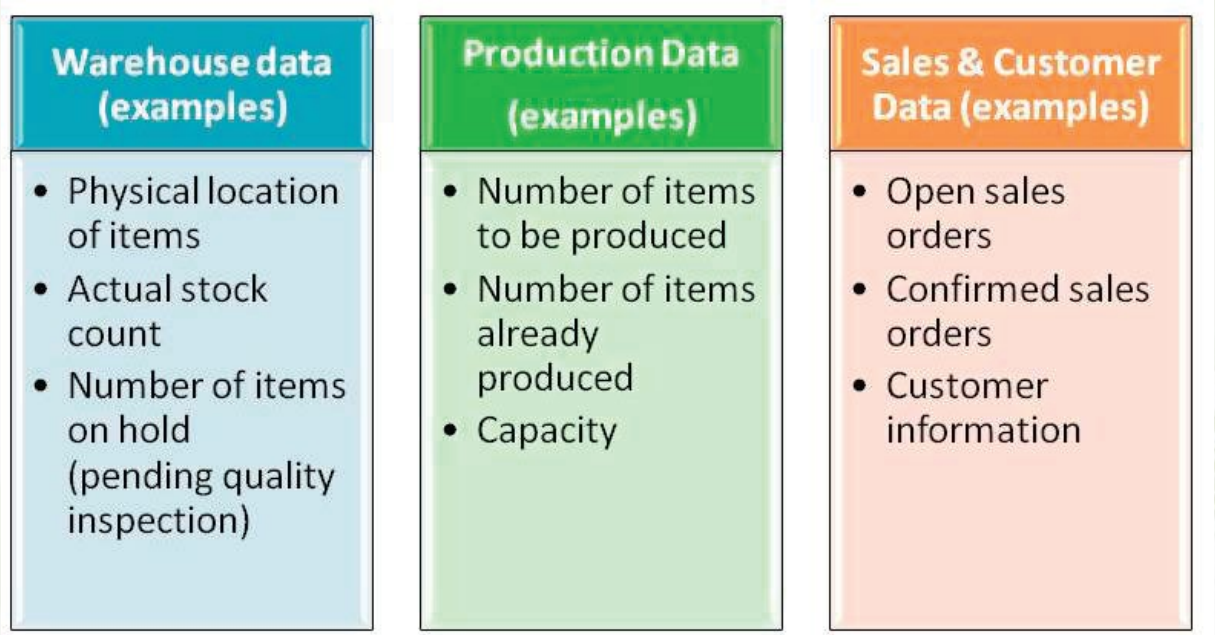
Inventory and Production

One Solution • One Database • All Microsoft

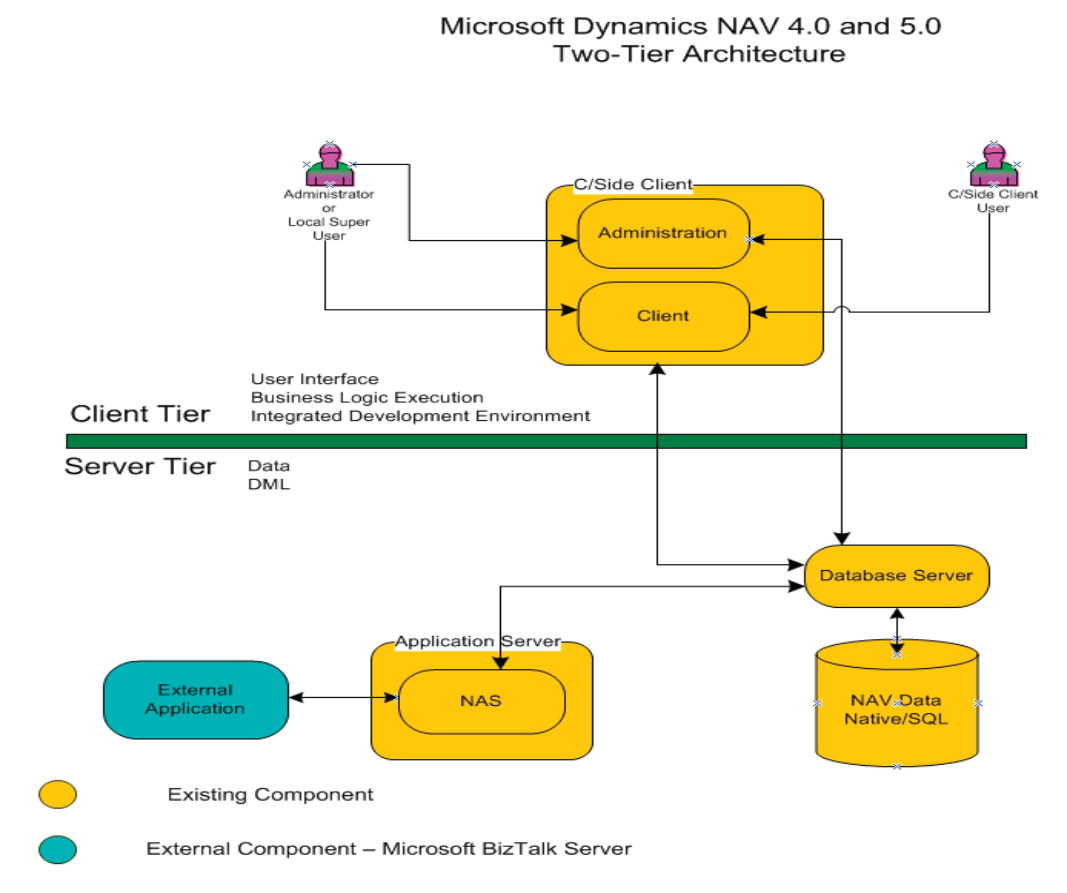


ISLAND SYSTEMS

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).



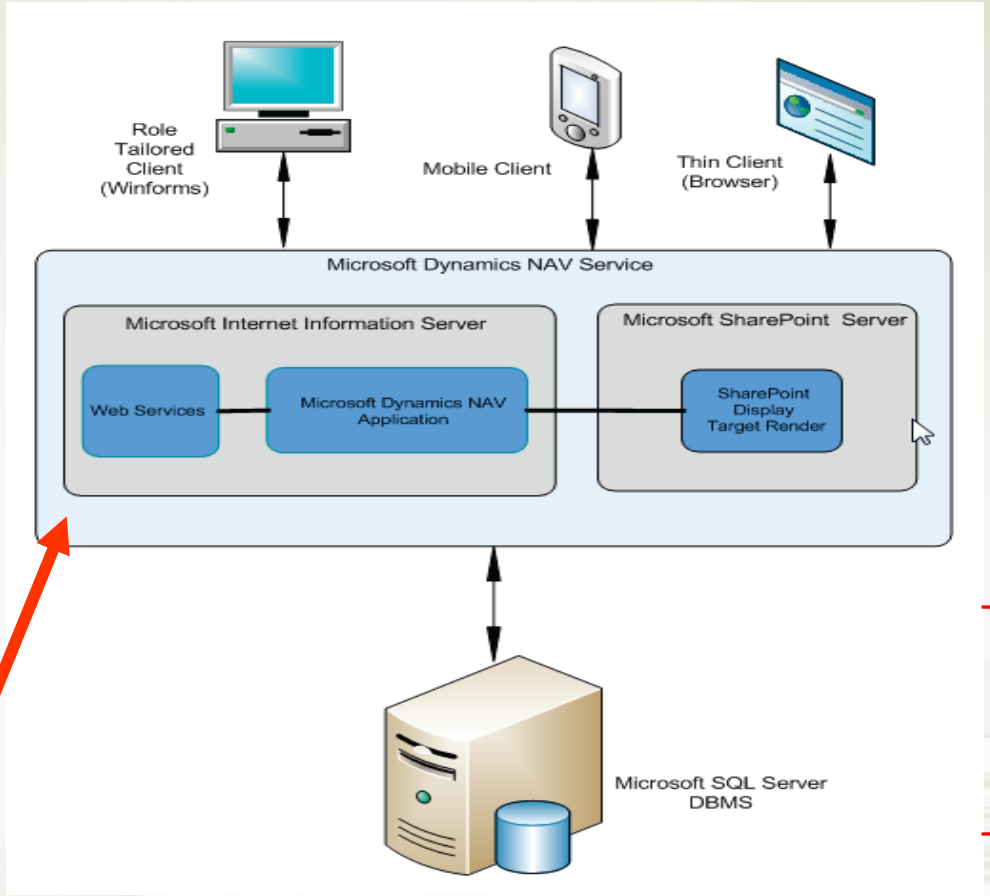
Architecture 2-tier (2-vrstvy)



Klientská vrstva

Databáze a aplikace

Architecture 3-tier (3-vrstvy)



Klientská vrstva

Střední vrstva (servers)

Databáze

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)

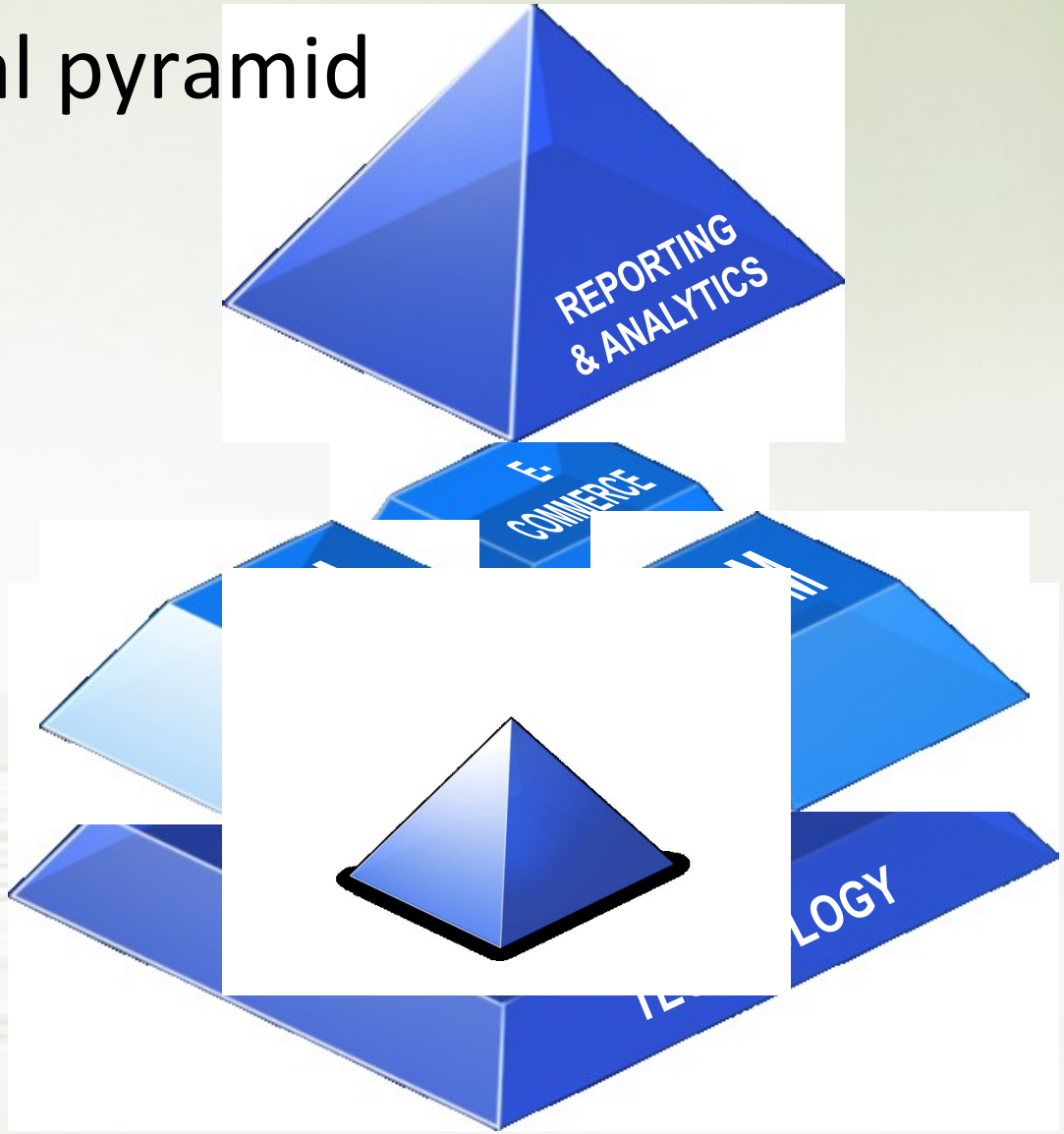
You can change a business in order to copy rigid functions of the software ERP

Programming

You can change a software in order to support your business

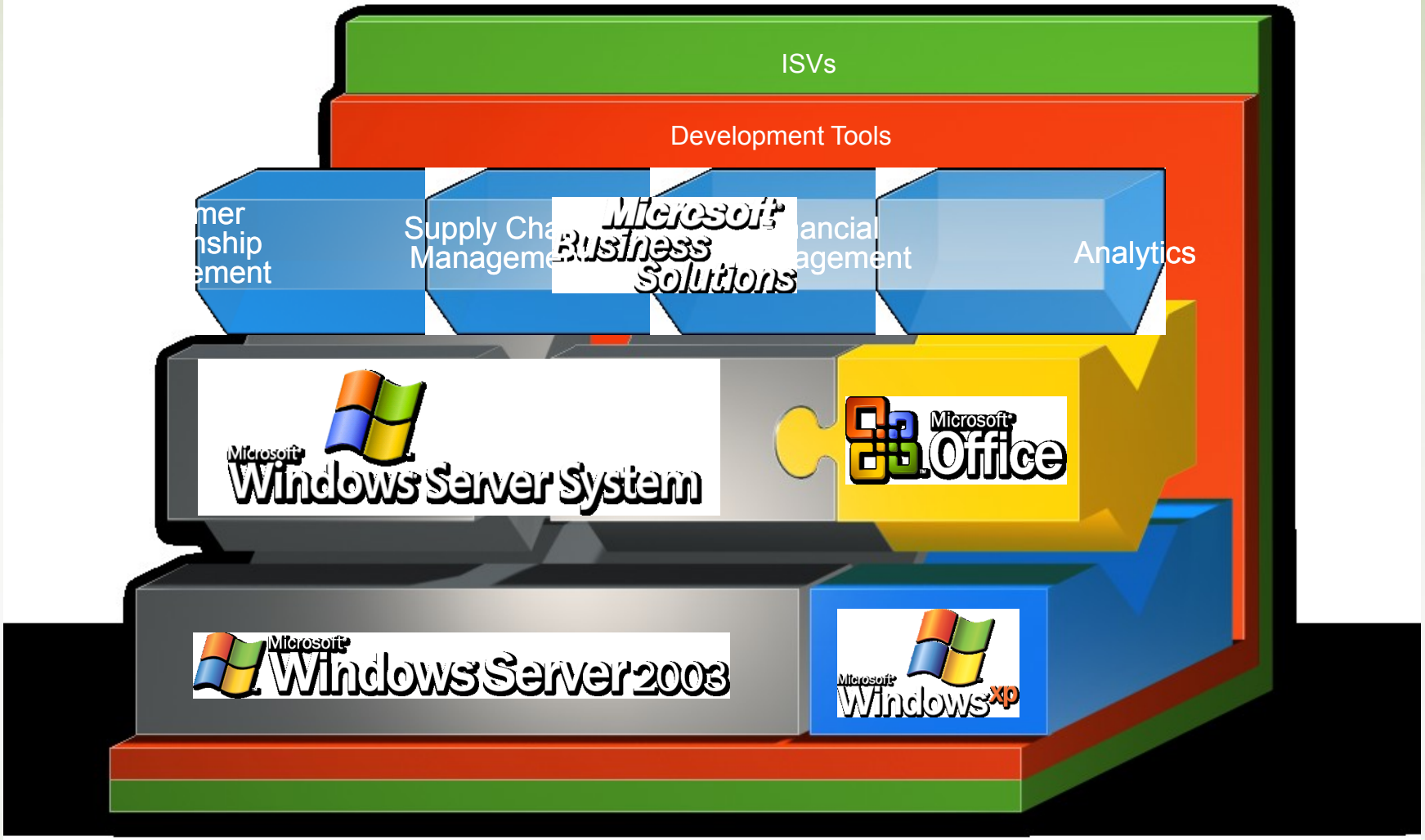
Parameter setup

Technological pyramid



MICROSOFT
BUSINESS
SOLUTIONS
- NAVISION

Integrated homogeneous solution



Unique architecture

Integrated Development Environment

GUI (Windows)

Zaměstnanci

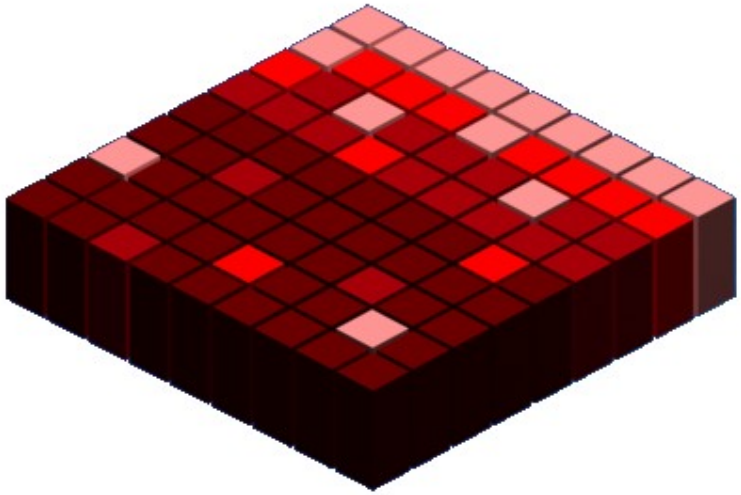
Commerce Portal

Zákazníci & obchodní partneři

Application Server

Commerce Gateway (B2B)

Externí aplikace



Database

Microsoft Navision Database Server

Microsoft SQL Server 2000

Worldwide Generic Objects

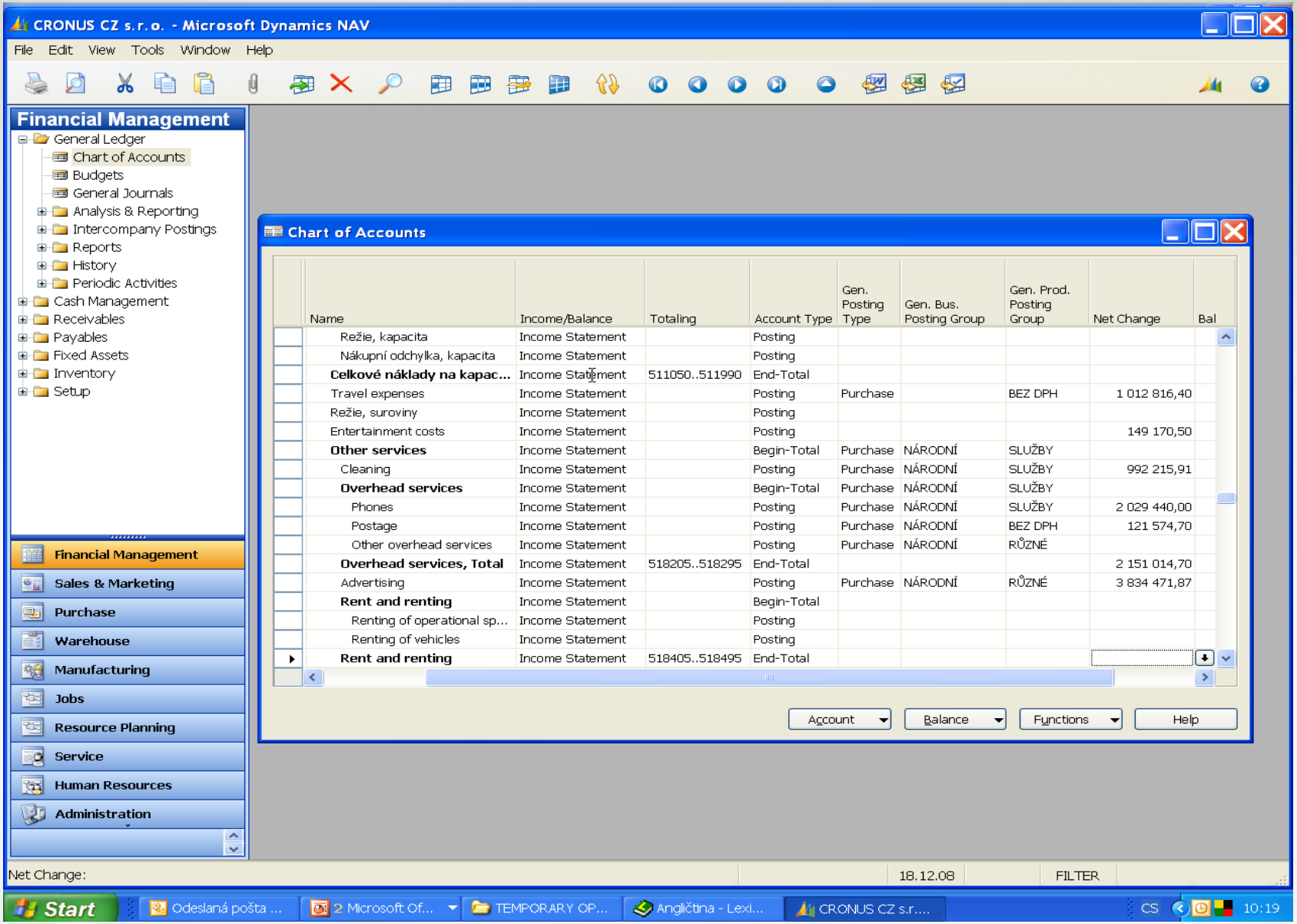
Country-specific Objects

Customer-specific Objects

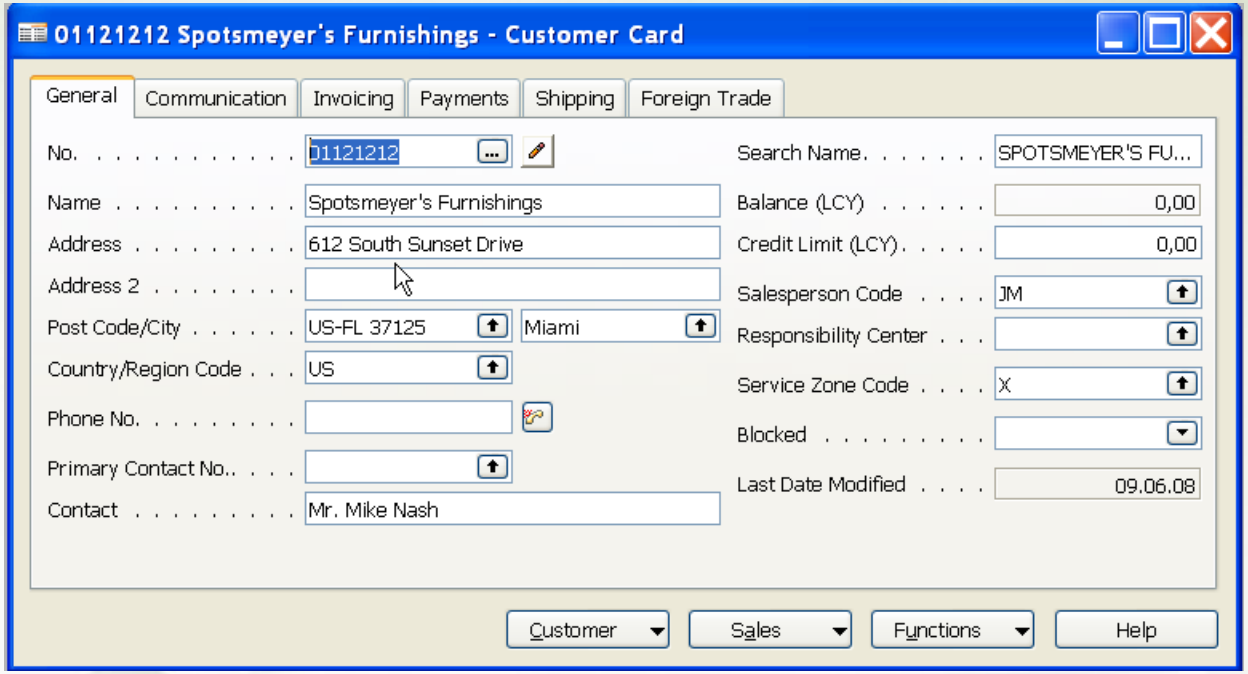
Vertical Solutions Objects

See live systém NAV

Main form (menu, toolbar, forms)



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



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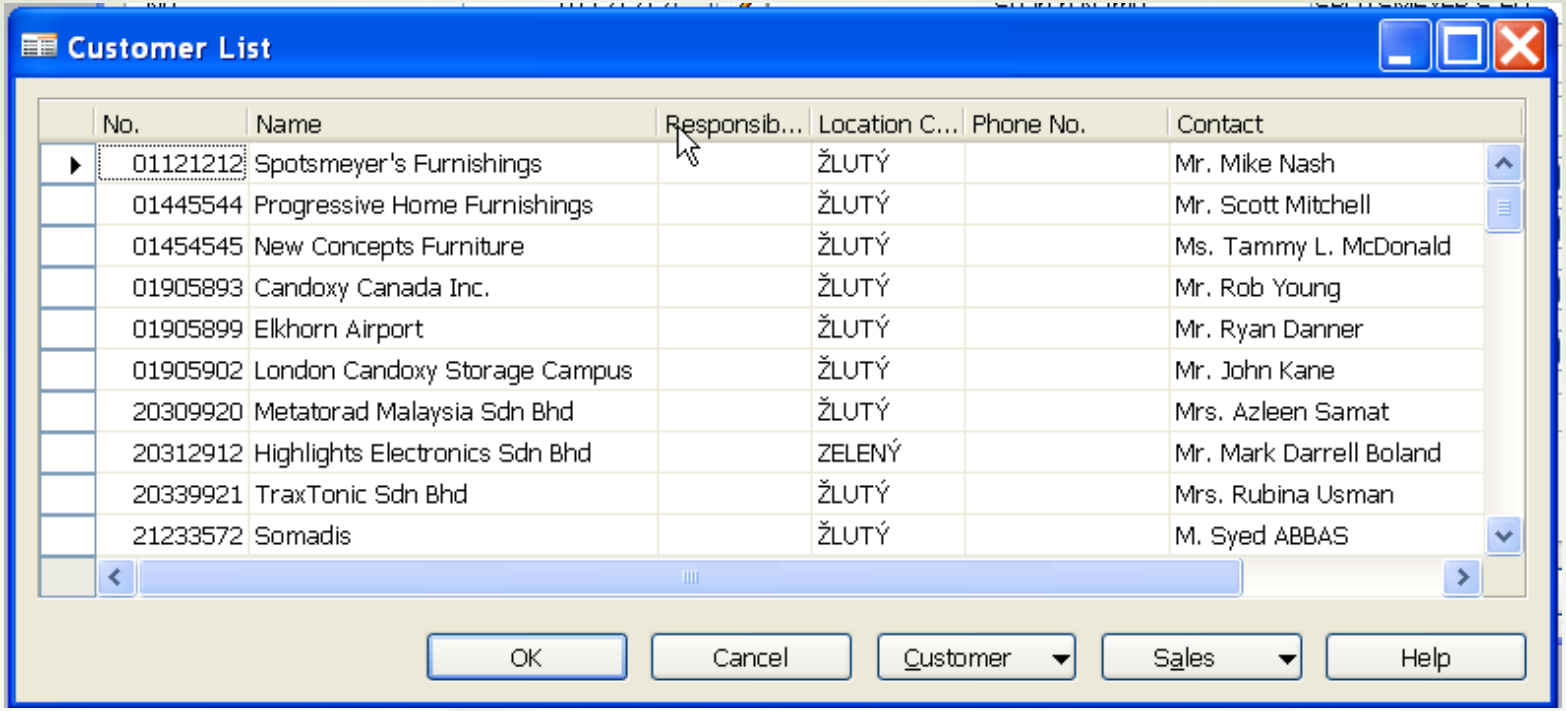

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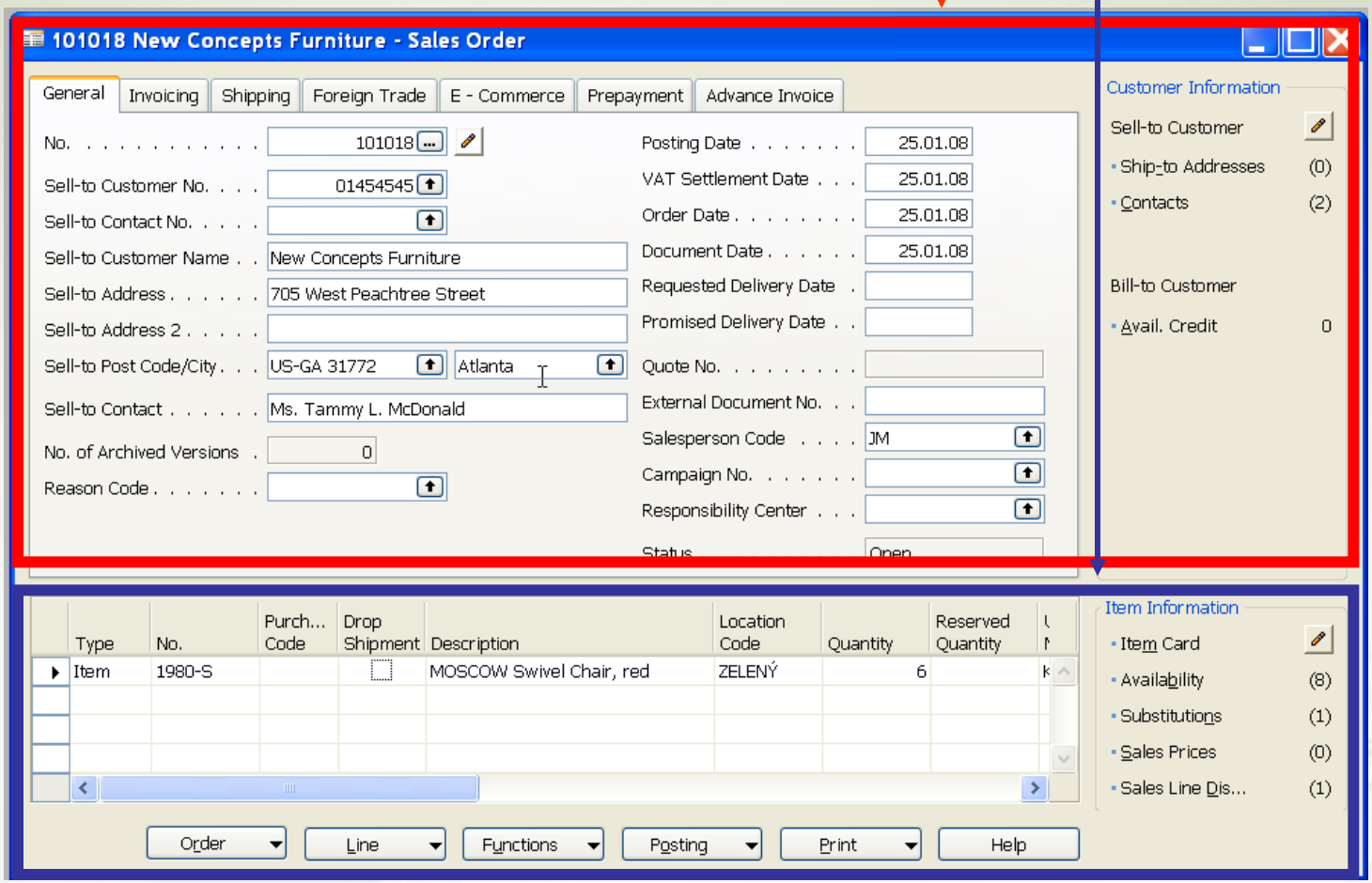
Main forms (card, list, form->sub-form)



Partner

What

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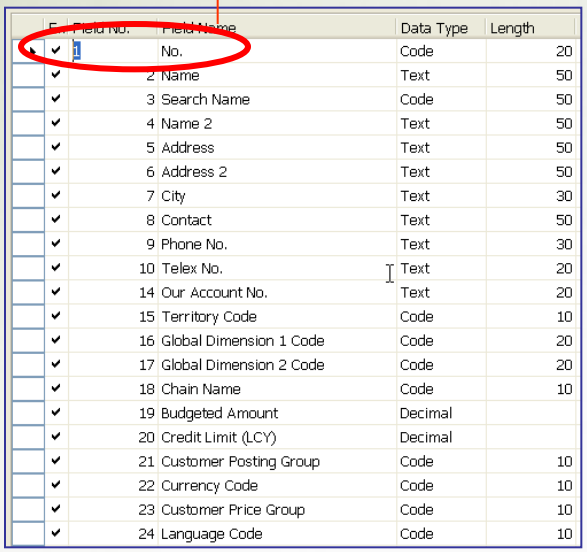
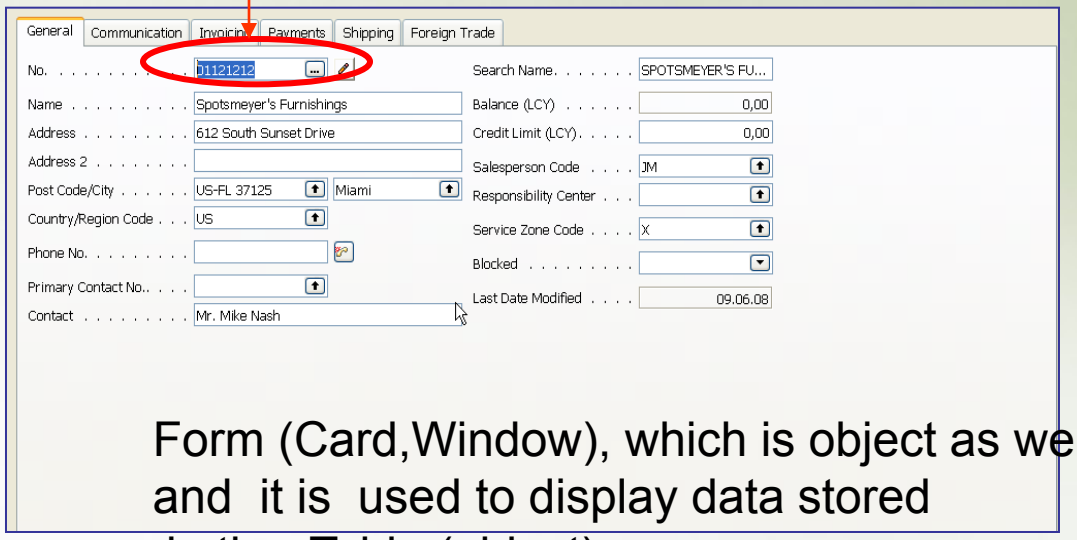
Table->Form principle



F	Field No.	Field Name	Data Type	Length
▸ ✔	1	No.	Code	20
✔	2	Name	Text	50
✔	3	Search Name	Code	50
✔	4	Name 2	Text	50
✔	5	Address	Text	50
✔	6	Address 2	Text	50
✔	7	City	Text	30
✔	8	Contact	Text	50
✔	9	Phone No.	Text	30
✔	10	Telex No.	Text	20
✔	14	Our Account No.	Text	20
✔	15	Territory Code	Code	10
✔	16	Global Dimension 1 Code	Code	20
✔	17	Global Dimension 2 Code	Code	20
✔	18	Chain Name	Code	10
✔	19	Budgeted Amount	Decimal	
✔	20	Credit Limit (LCY)	Decimal	
✔	21	Customer Posting Group	Code	10
✔	22	Currency Code	Code	10
✔	23	Customer Price Group	Code	10
✔	24	Language Code	Code	10



Form (Card,Window), which is object as well and it is used to display data stored in the Table (object)

Specification of fields in Table (object)

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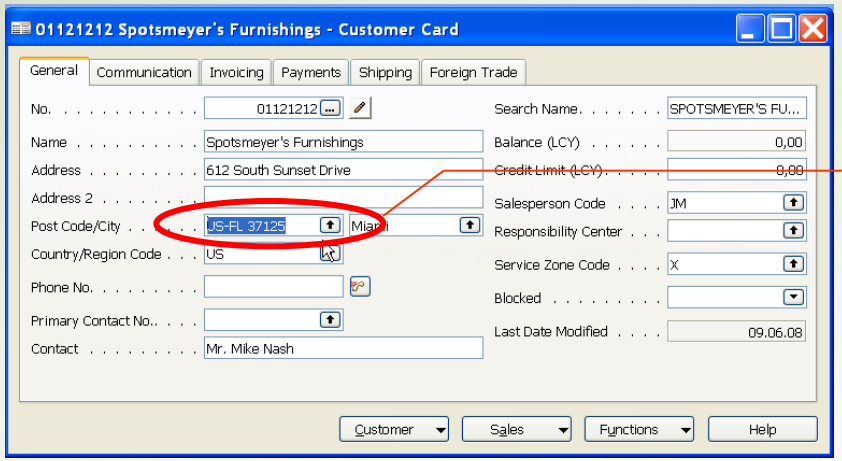
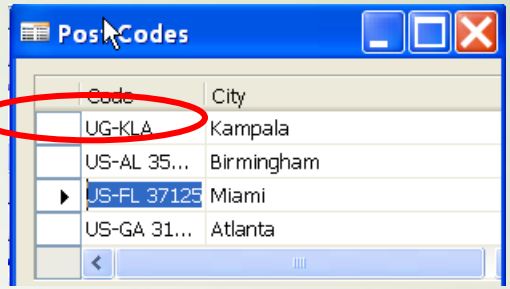
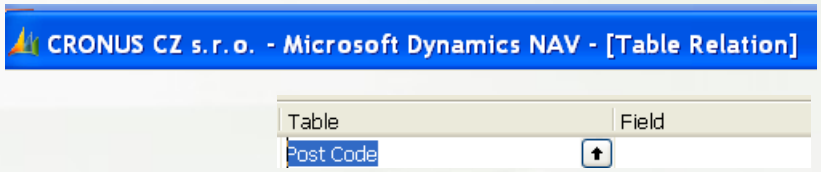
Table **x**->Table y relations

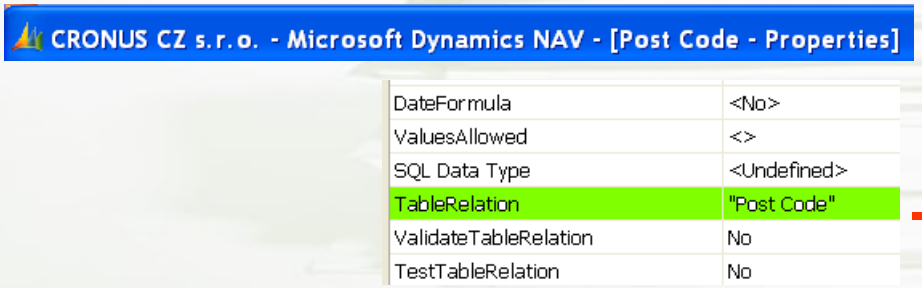




X= Customer
Y=Post Code

✔	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





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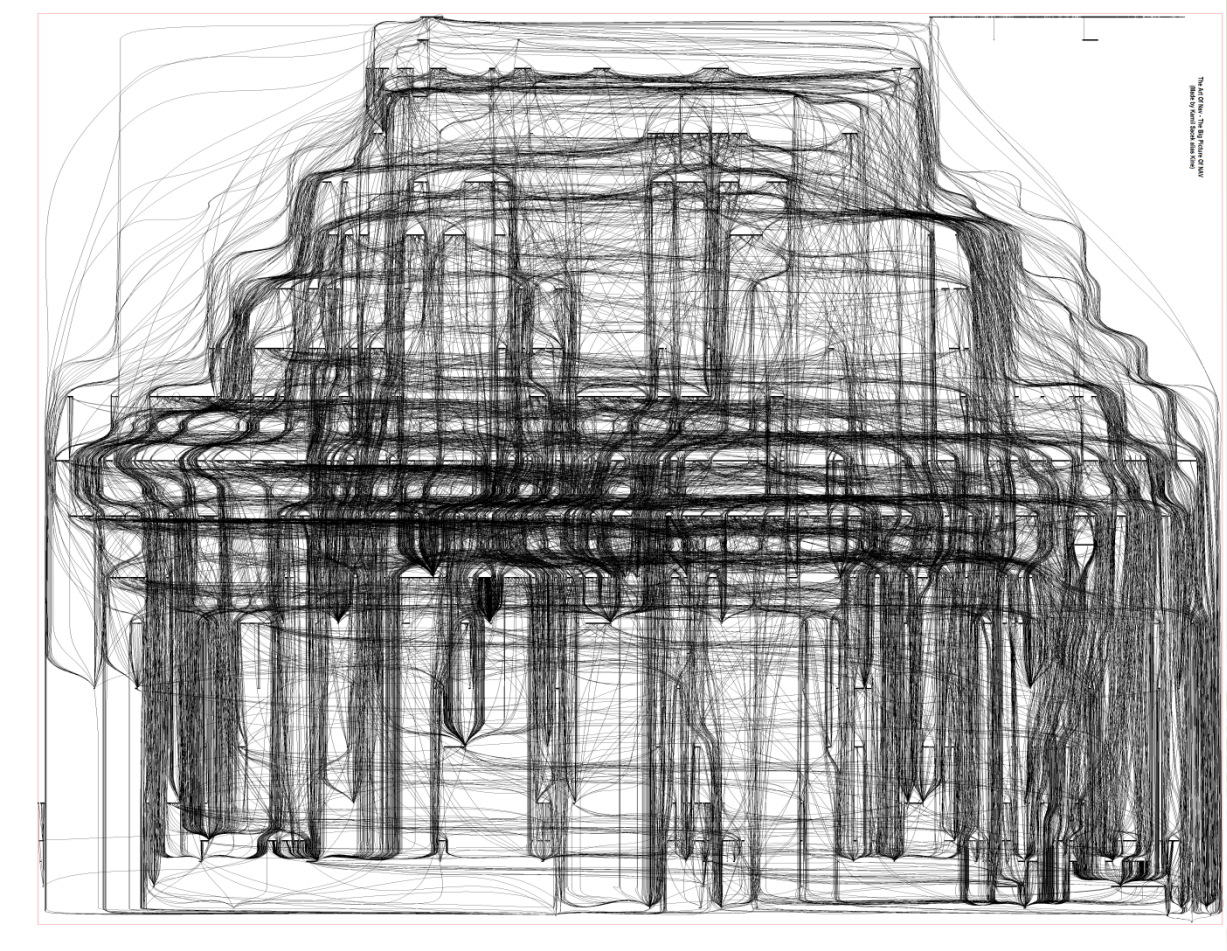
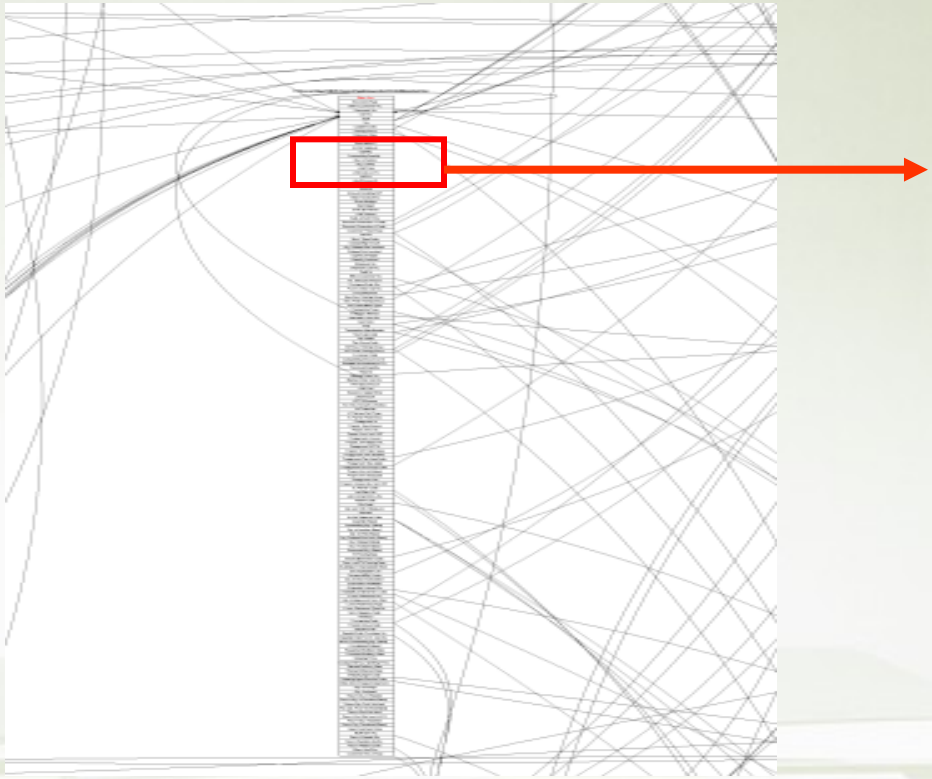
Relations among tables I

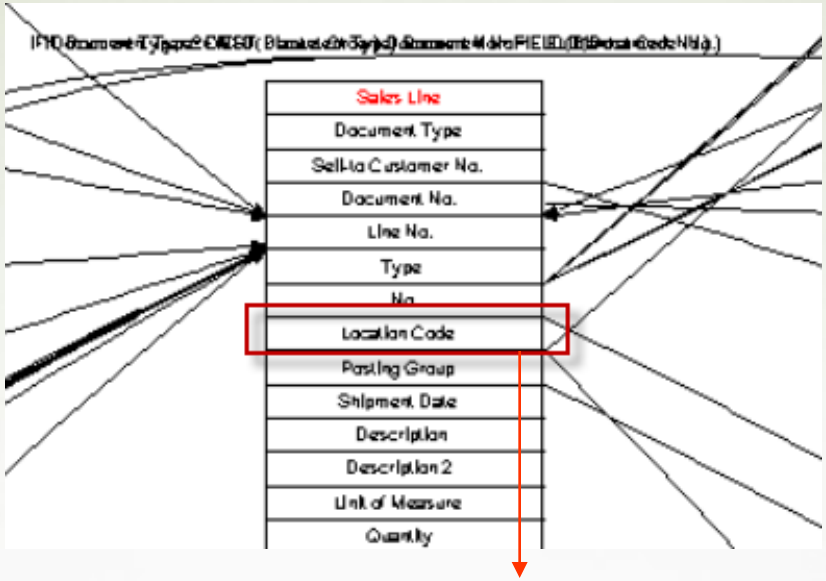


Relations among tables II

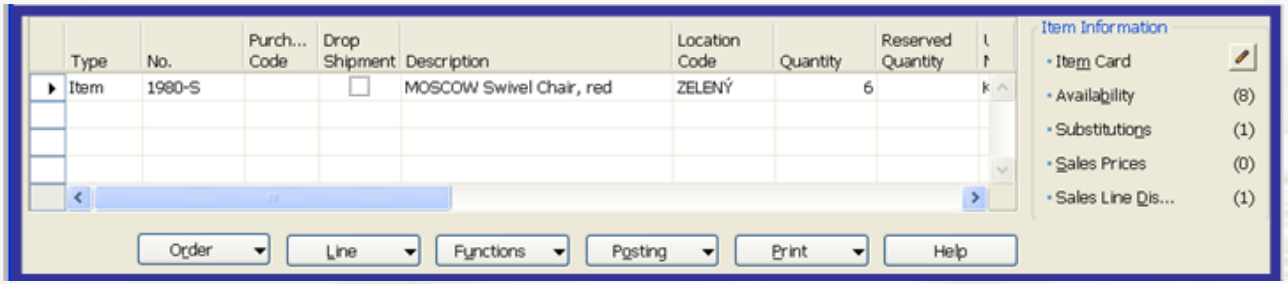
One table and its relations I



One table (Sales Line) and its relations II



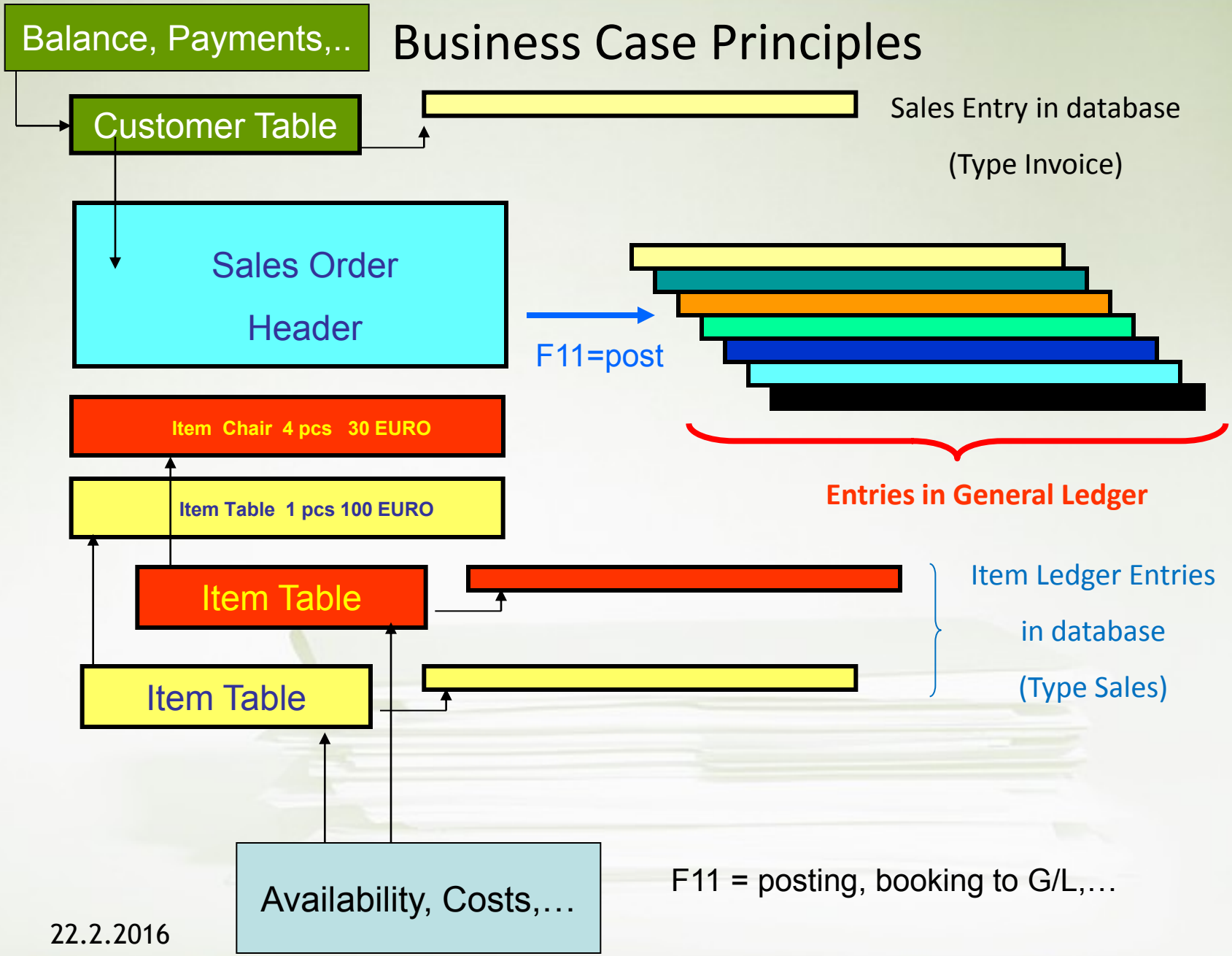
ERP NAV



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

Business Case Principles



Thanks for your attention