

# **Podnikové informační systémy**

## **ERP II**

**(SCM - Supply Chain Management,  
CRM - Customer Relationship Management,  
BI – Business Intelligence)**

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# Obsah

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- *Hlavní funkční principy ERP II*
  - *definice*
  - *kategorie*
  - *funkcionalita*
- *CRM*
- *SCM*
- *BI*

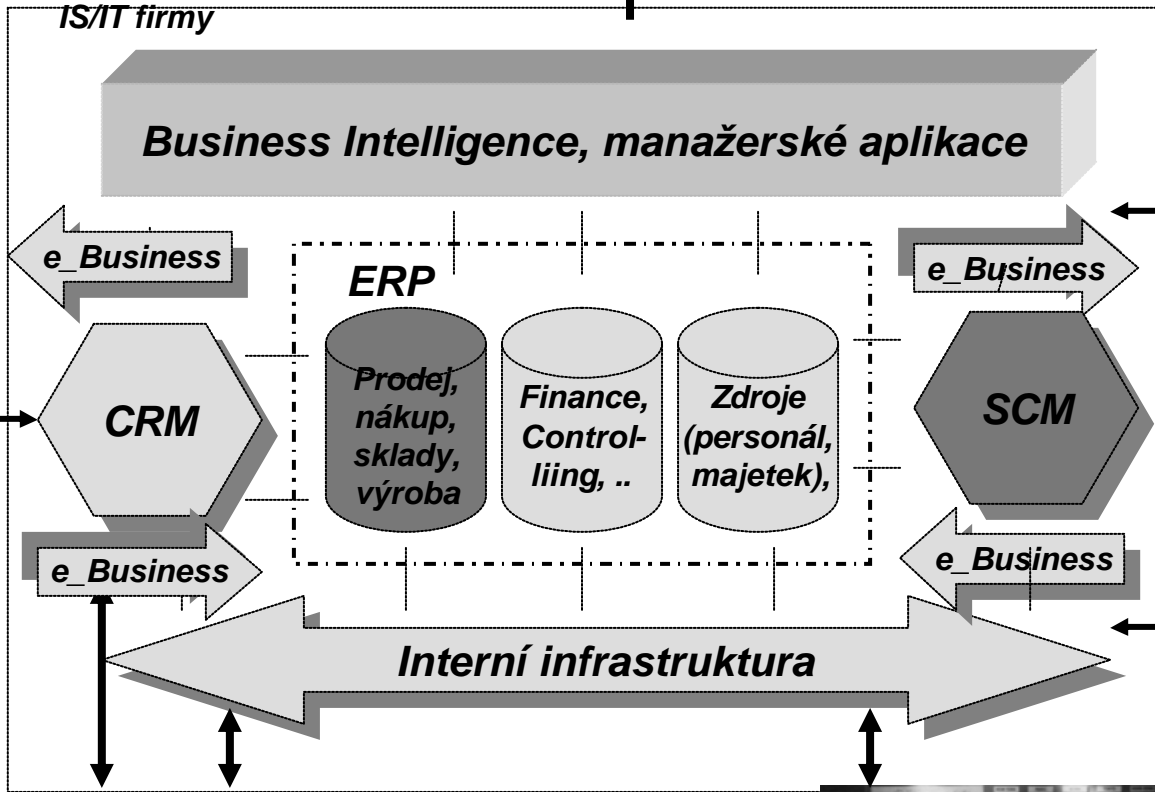
# Aplikacní architektura PIS – ERP II



Vlastníci,  
management



Zákazníci



Dodavatelé,  
obchodní  
partnery



Obchodníci,  
referenti,  
obchodní zástupci,  
kontaktní centrum



# SCM - definition

(SCOR – Supply Chain Operation Reference Model)

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- **Supply chain management (SCM) is the combination of art and science that goes into improving the way your company finds the raw components it needs to make a product or service and deliver it to customers.**
- **The following are five basic components of SCM.**

# SCM - definition (SCOR)

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- **1. Plan** – This is the strategic portion of SCM. You need a strategy for managing all the resources that go toward meeting customer demand for your product or service. A big piece of planning is developing a set of metrics to monitor the supply chain so that it is efficient, costs less and delivers high quality and value to customers.
- **2. Source** – Choose the suppliers that will deliver the goods and services you need to create your product. Develop a set of pricing, delivery and payment processes with suppliers and create metrics for monitoring and improving the relationships. And put together processes for managing the inventory of goods and services you receive from suppliers, including receiving shipments, verifying them, transferring them to your manufacturing facilities and authorizing supplier payments.

# SCM – definition (SCOR)

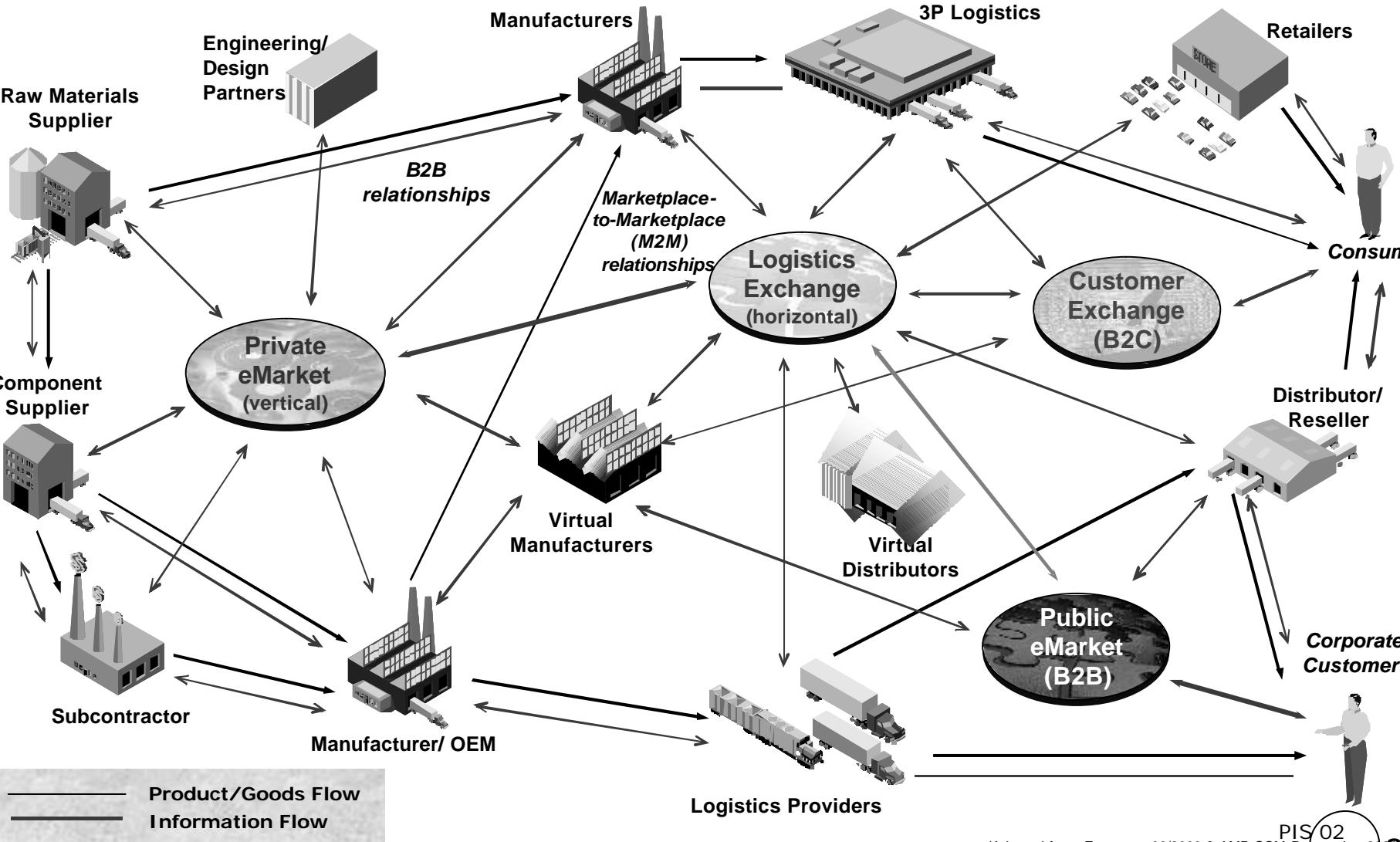
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- **3. Make** – This is the manufacturing step. Schedule the activities necessary for production, testing, packaging and preparation for delivery. As the most metric-intensive portion of the supply chain, measure quality levels, production output and worker productivity.
- **4. Deliver** – This is the part that many insiders refer to as logistics. Coordinate the receipt of orders from customers, develop a network of warehouses, pick carriers to get products to customers and set up an invoicing system to receive payments.
- **5. Return** – The problem part of the supply chain. Create a network for receiving defective and excess products back from customers and supporting customers who have problems with delivered products.

# What is the goal of installing supply chain management software? (SCOR)

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- Before the Internet came along, the aspirations of supply chain software devotees were limited to improving their ability to predict demand from customers and make their own supply chains run more smoothly. But the cheap, ubiquitous nature of the Internet, along with its simple, universally accepted communication standards have thrown things wide open.
- Now, you can connect your supply chain with the supply chains of your suppliers and customers together in a single vast network that optimizes costs and opportunities for everyone involved. This was the reason for the B2B explosion; the idea that everyone you do business with could be connected together into one big happy, cooperative family.





# What is the goal of installing supply chain management software? (SCOR)

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- Of course, reality isn't quite that happy and cooperative, but today most companies share at least some data with their supply chain partners. The goal of these projects is greater supply chain visibility. The supply chain in most industries is like a big card game. The players don't want to show their cards because they don't trust anyone else with the information.
- But if they showed their hands they could all benefit. Suppliers wouldn't have to guess how many raw materials to order, and manufacturers wouldn't have to order more than they need from suppliers to make sure they have enough on hand if demand for their products unexpectedly goes up. And retailers would have fewer empty shelves if they

# What are the roadblocks to installing supply chain software? (SCOR)

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- *Gaining trust from your suppliers and partners.*
- *Internal resistance to change.*
- *Many mistakes at first.*

# What is the impact of globalization on the Supply Chain?(SCOR)

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- „The extended supply chain is a clever way of describing everyone who contributes to a product.
- So if you make text books, then your extended supply chain would include the factories where the books are printed and bound, but also the company that sells you the paper, the mill where that supplier buys their stock, and so on.
- It is important to keep track of what is happening in your extended supply chain because with a supplier or a supplier's supplier could end up having an impact on you (as the old saying goes, a chain is only as strong as its weakest link).
  - For example, a fire in a paper mill might cause the text book manufacturer's paper supplier to run out of inventory. If the text book company knows what is happening in its extended supply chain it can find another paper vendor.

# What are some emerging technologies that will affect the Supply Chain? (SCOR)

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The most notable is Radio Frequency Identification, or RFID.

RFID tags are essentially barcodes on steroids. Whereas barcodes only identify the product, RFID tags can tell what the product is, where it has been, when it expires, whatever information someone wishes to program it with.

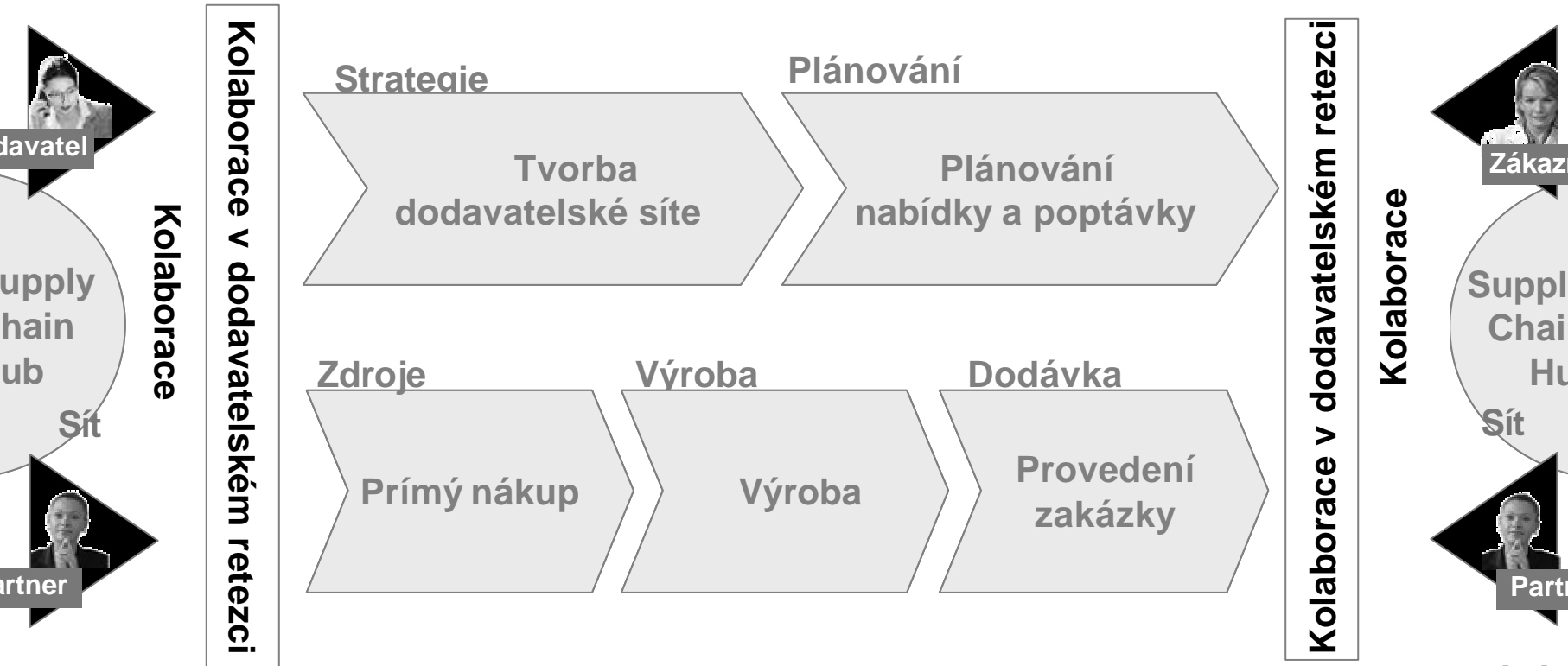
RFID technology is going to generate mountains of data about the location of pallets, cases, cartons, totes and individual products in the supply chain. It's going to produce oceans of information about when and where merchandise is manufactured, picked, packed and shipped.

It's going to create rivers of numbers telling retailers about the expiration dates of their perishable items—numbers that will have to be stored, transmitted in real-time and shared with warehouse management, inventory management, financial and other enterprise systems. In other words, it is going to have a really big impact.

# Príklad mySAP SCM řešení

Merení

Management výkonnosti dodavatelského retezce



Management událostí v dodavatelském retezci

# Prodejní zakázka v R/3

Sales document Edit Goto Extras Environment System Help

**Create Standard Order: Overview**

Standard Order  Net value 80.109,40 EUR

Sold-to party 1000 Becker Berlin / Calvinstrasse 36 / D-13467 Berlin-Hermsdorf

Ship-to party 1000 Becker Berlin / Calvinstrasse 36 / D-13467 Berlin-Hermsdorf

Purch.order no. SCM PO date

Sales Item overview Item detail Ordering party Procurement Shipping Reason for rejection

\*\*\*\*\*

Req. deliv.date D 19.12.2000 Deliver.plant

Complete dlv. Total weight 7,000 KG

Delivery block  Volume 18,750 M3

Billing block  Pricing date 12.12.2000

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Payment card  Exp.date

Payment terms ZB01 14 Days 3%, 30/2... Incoterms CIF Berlin

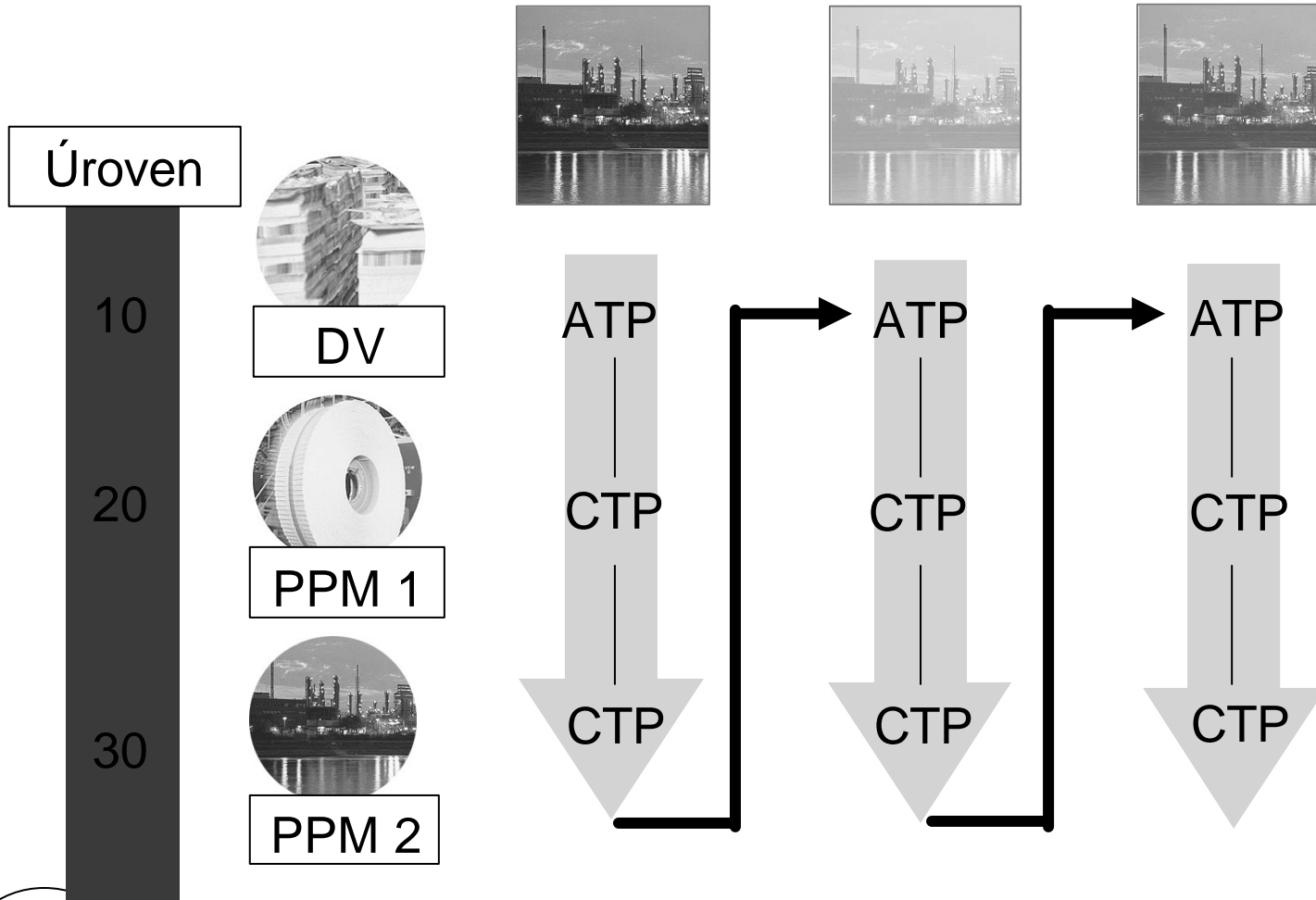
All items

Item	Material	Order quantity	SU	S	Description	Customer material no.	ItCa	DG...	HgLvlt
10	P-102		12	PC	✓ Pumpe PRECISION 102		TAN		
20	P-104		5	PC	✓ Pumpe PRECISION 104		TAN		
30	P-103		8	PC	✓ Pumpe PRECISION 103		TAN		
—									

TCO (1) (800) iwdf0015 INS

# Zmena metody výroby

## Kontrola všech úrovní výroby v každé lokaci



DV = Dokončená výroba / PPM = PP Model / CTP = Capable To Promise

# Grafická plánovací tabule

The screenshot displays the SAP APO (Advanced Planner and Optimizer) interface. The main window is titled "APO DS-Plantafel Planversion PS\_1". The interface is divided into several sections, each with a callout box:

- Optimalizace**: Callout pointing to the "Optimieren..." button in the top toolbar.
- Strategie**: Callout pointing to the "Strategie" button in the top toolbar.
- Sít zakázek**: Callout pointing to the "Terminierungsprotokoll" button in the top toolbar.
- Výstražný monitor**: Callout pointing to the "Ressourcenteilbild" (Resource Allocation Diagram) chart.
- Prehled komponent**: Callout pointing to the "Produkteilbild" (Product Structure Diagram) chart.
- Ukazatelé**: Callout pointing to the "Produktbestand" (Product Inventory) chart.
- Sklady**: Callout pointing to the "Produktbestand" chart.

The interface includes a top menu bar with options like "APO Plantafel", "Einsätze", and "Einstellungen". Below the menu is a toolbar with icons for navigation and actions. The main area contains three charts: "Ressourcenteilbild", "Produkteilbild", and "Produktbestand". The "Produktbestand" chart shows inventory levels for various products over time, with a table on the left listing product details.

Produkt	Prod. Bezeichnung
PS_BEIPACK	Beipackzettel Deutsch
PS_BEIPACK	Beipackzettel Englisch
PS_GRUNDS	Grundstoff_Pharma
PS_KOMPON	Einsatzstoff_A
PS_KOMPON	Einsatzstoff_B

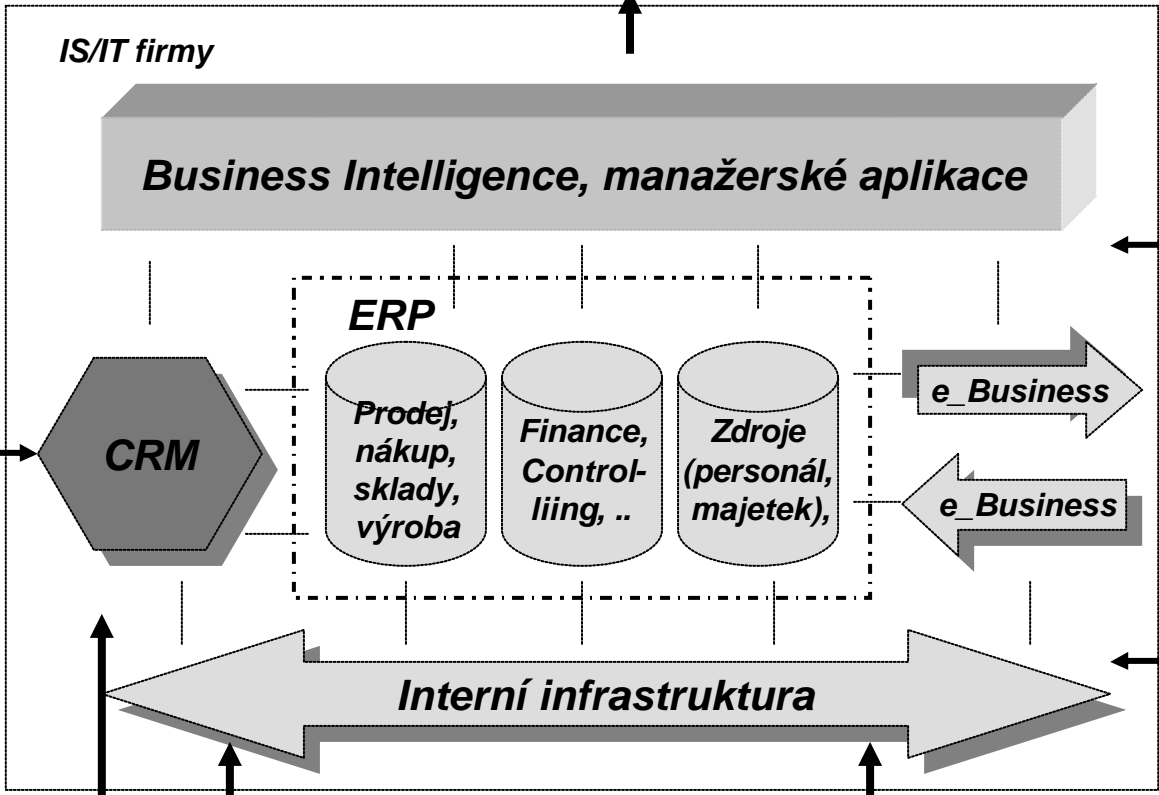
The bottom status bar shows the date "26.09.2000", time "19:00:00", and user information "Änd", "APY (1) (001)", "hpcc003", "INS". The Windows taskbar at the very bottom shows the Start button and several application icons.



# Aplikacní architektura



Vlastníci,  
management



Zákazníci



Dodavatelé,  
obchodní  
partnəri

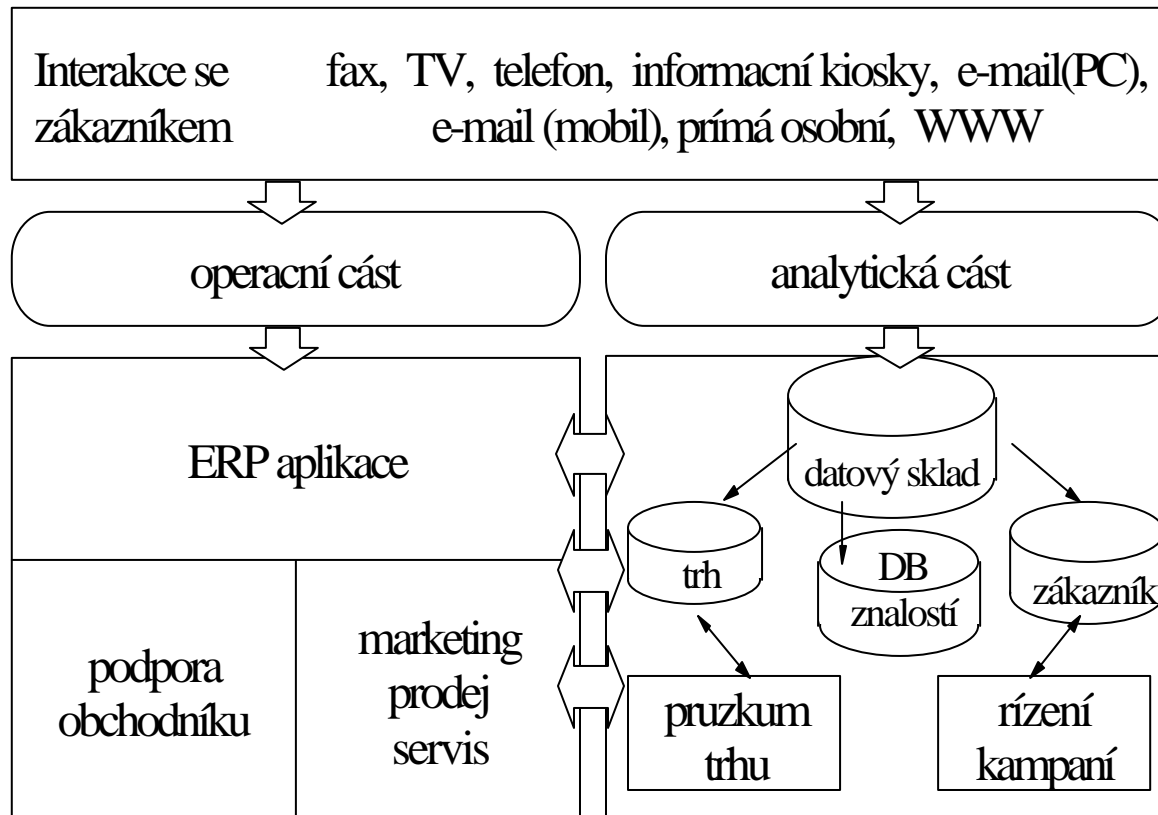


Obchodníci,  
referenti,  
obchodní zástupci,  
kontaktní centrum

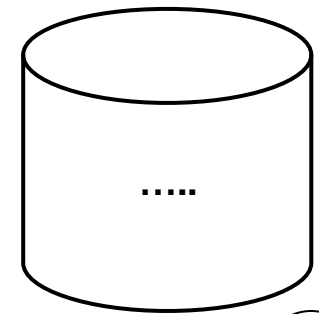
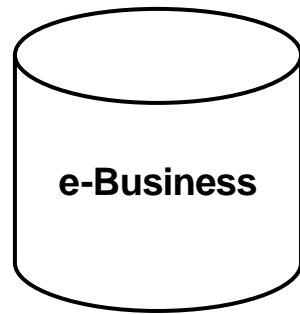
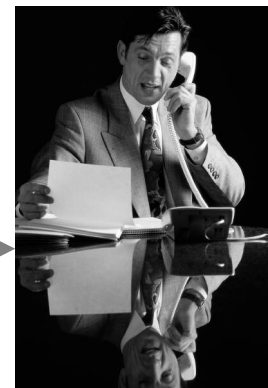
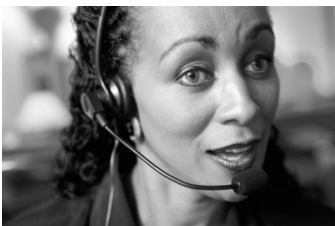


# CRM – Customer Relationship Management

- *komplex technologií (aplikacního a základního software, technických prostředku), podnikových procesu a personálních zdrojů určených pro řízení a průběžné zajišťování vztahu se zákazníky firmy, a to v oblastech podpory obchodních činností, zejména prodeje, marketingu a podpory zákazníka a zákaznických služeb ,*



# Architektura CRM



# CRM – Customer Relationship Management

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- *operacní část CRM :*
  - *aplikace podporující práci obchodníka (Sales Force Automation – SFA) - nástroje řízení kontaktu, podpora obchodní činnosti, jako napr. řízení obchodních případů,*
  - *automatizace marketingu (Enterprise Marketing Automation – EMA) segmentace, vytváření marketingového plánu,*
  - *aplikace zákaznických služeb a podpory (Customer Service and Support – CSS) - nástroje určené k řízení kontaktních center, podpora komunikace CRM přes web*
- kontaktní centra:
  - zkrácení čekání volajících zákazníku,
  - zmenšení tenze zákazníku z čekání,
  - zachycení informace o ztracených voláních,
  - spojení zákazníka s příslušným agentem,
  - zprostředkování pracovníkům centra maximum informací o volajícím zákazníkovi,
  - konzultace agentu s kolegy bez ztráty kontaktu s volajícím,
  - zefektivnění následujících kontaktu s volajícím,
  - udržení kvalitní zákaznické databáze

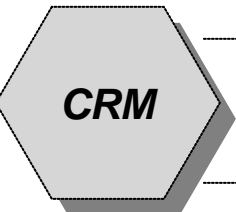
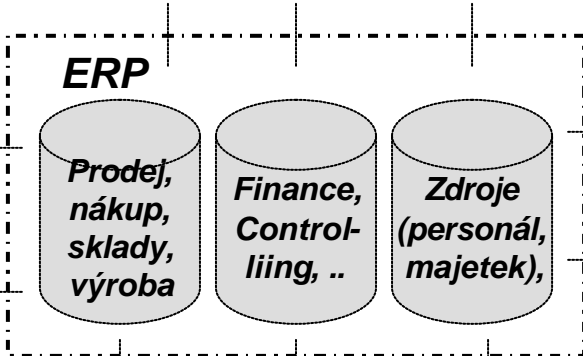
# Aplikacní architektura



Vlastníci,  
management

IS/IT firmy

Business Intelligence, manažerské aplikace



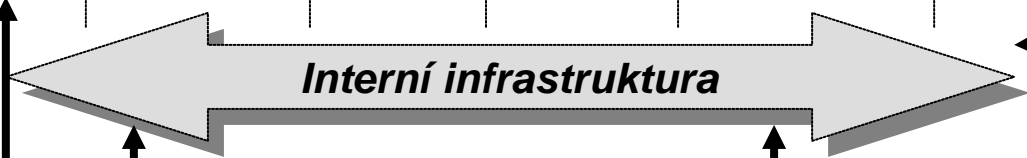
Zákazníci

e\_Business

e\_Business



Dodavatelé,  
obchodní  
partnery



Interní infrastruktura



Obchodníci,  
referenti,  
obchodní zástupci,  
kontaktní centrum

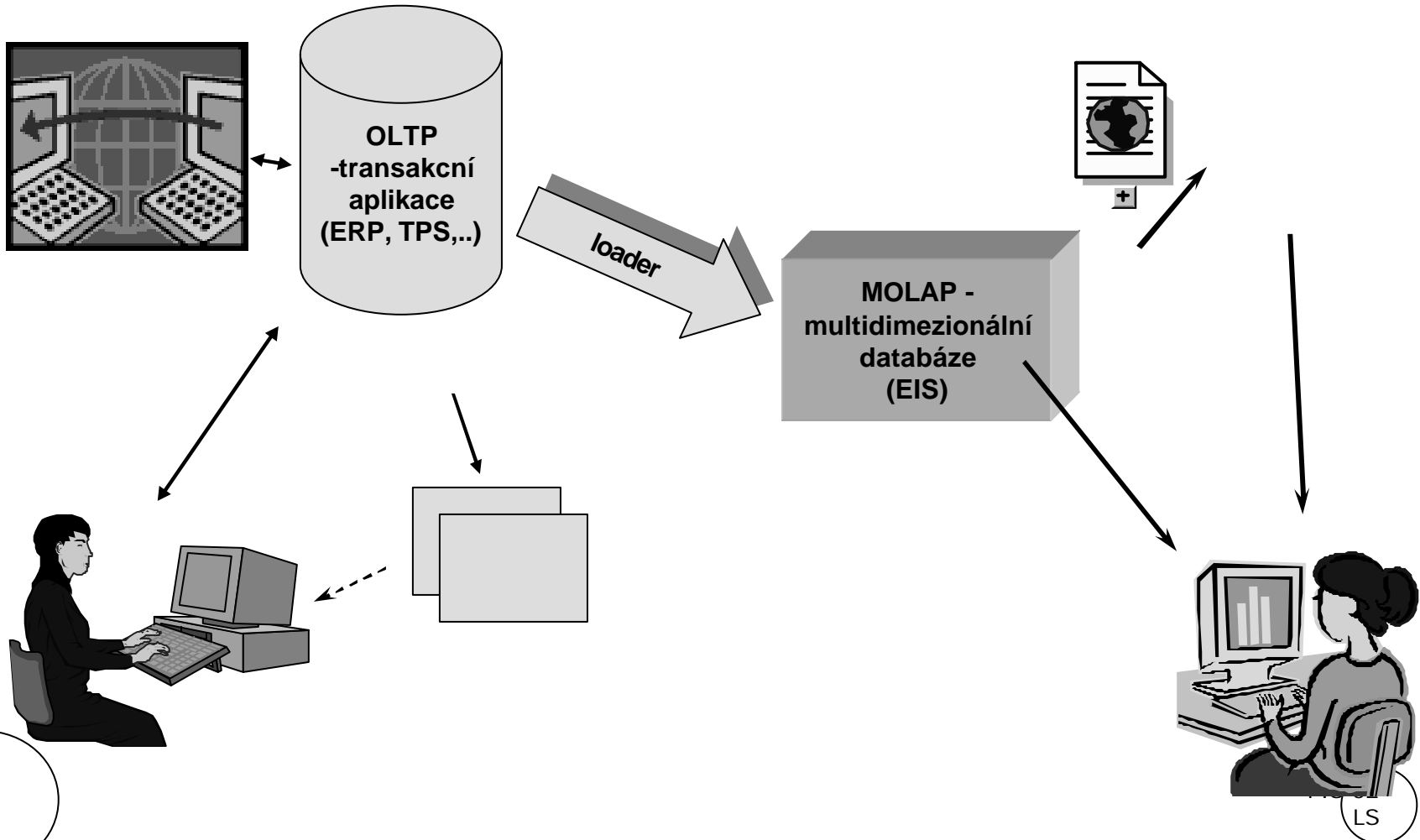


# Základní principy BI

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- Business Intelligence zavedl v roce 1989 Howard J. Dresner, analytik společnosti Gartner Group : „Sada konceptu a metod určených pro zkvalitnění rozhodnutí firmy“
- Business Intelligence je výraz pro:
  - procesy, znalosti, aplikace,
  - platformy, nástroje, technologie,
- které podporují porozumění datům, jejich vztahům a trendům
- BI poskytuje společnostem prostředky pro sber a analýzu dat, které usnadňují reporting, dotazování a ostatní analytické činnosti

# Základní principy BI



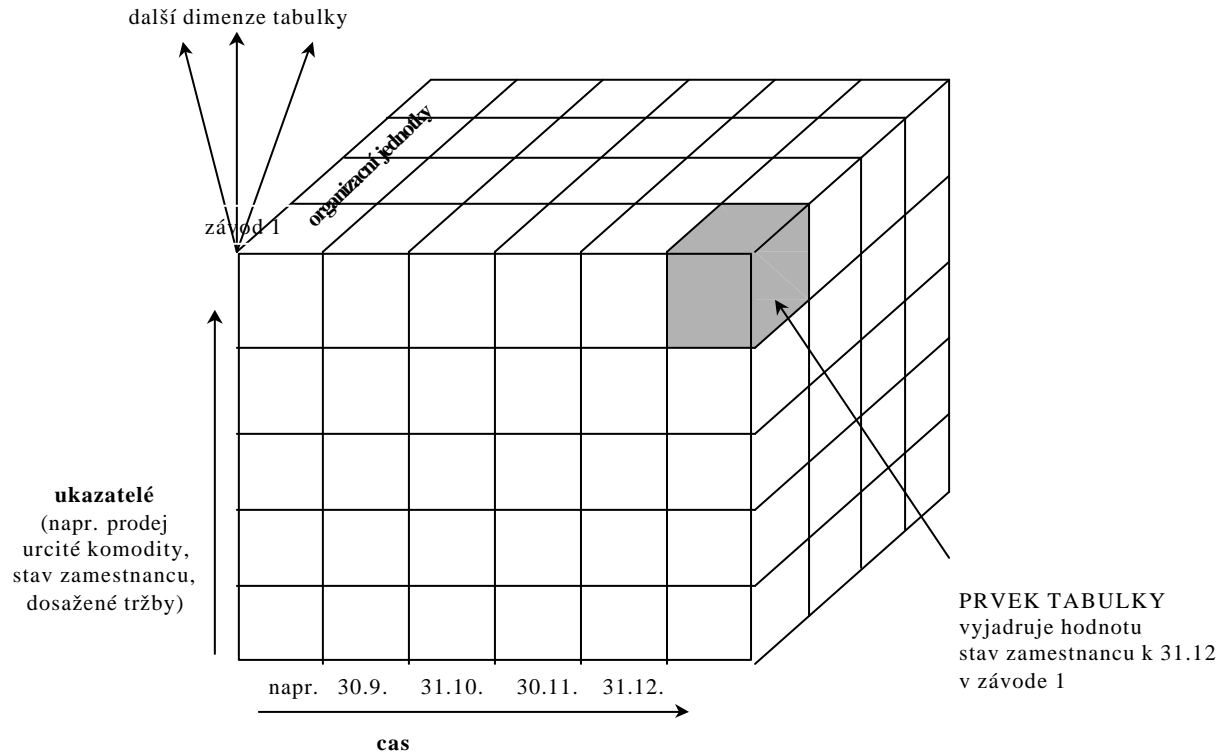
# Základní principy BI

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- Analytické a rozhodovací úlohy v řízení firmy s odpovídající datovou, organizační i technologickou infrastrukturou – manažerské aplikace, datové sklady a tržiště, dolování dat, ... - vytváří se postupně od poloviny 80. let.
- Cíl, smysl – řešit problémy informačních – transakčních - systému (nedostatek nebo nedostupnost analytických informací) - a tedy vytvořit prostor pro zkvalitnění řízení firmy,
- multidimenzionalita a OLAP technologie (On-line Analytical Processing),
- zdroje dat - produkční databáze transakčních systému, minimálně manuální vstupy,
- specifické projekční postupy a provozní procedury,



# Architektura multidimenzionální databáze – OLAP kostky



# Komponenty BI řešení a jejich vazby

