

# ERP Project Activities

Skorkovský, ESF MU, Department of Business Economics , version 20140917

# Countries from where you probably came

- France
- Greece
- Uruguay
- Germany
- Ukraine
- Kazakhstan
- 



# Teacher

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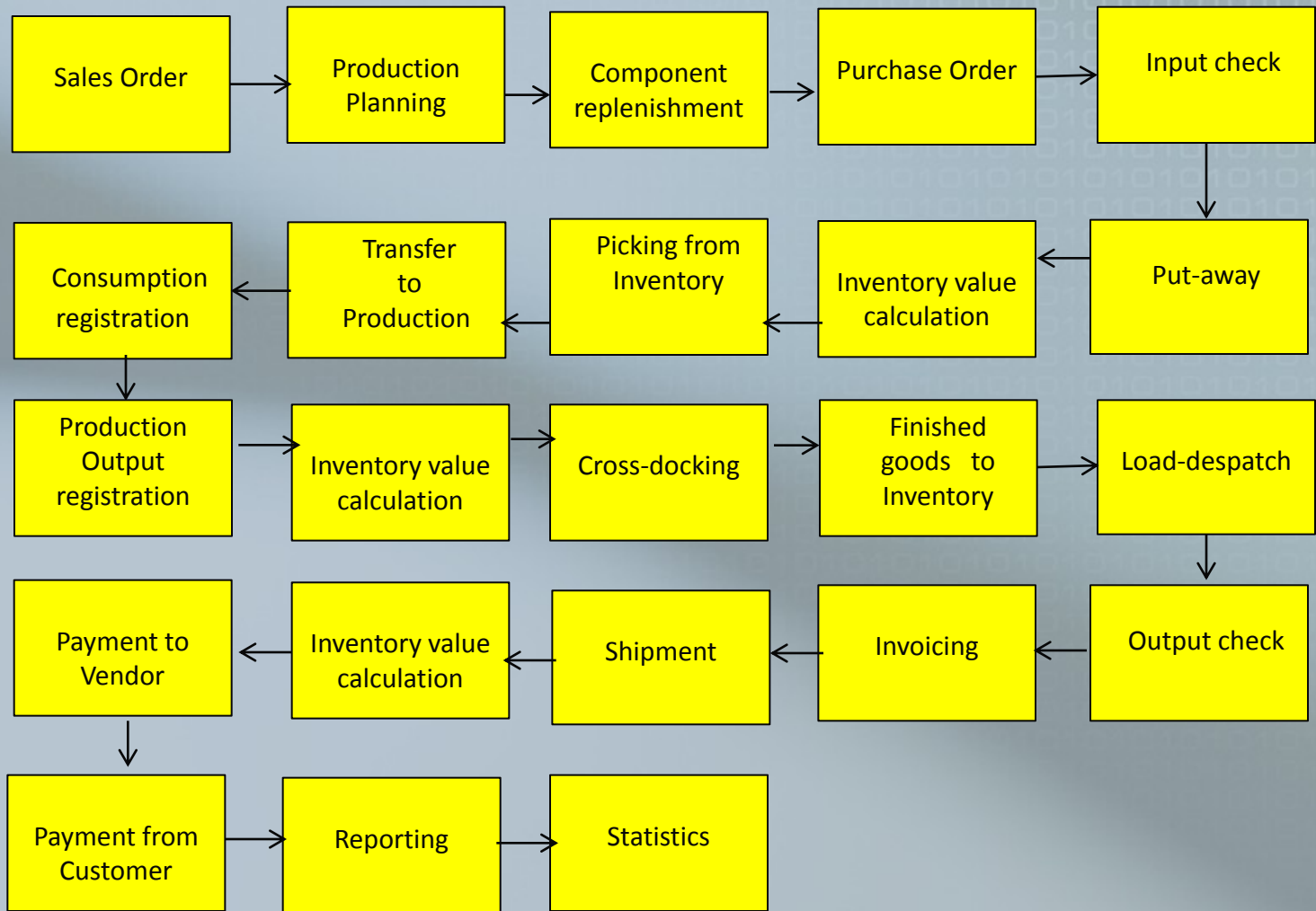


# Your main task (not organised set of processes)

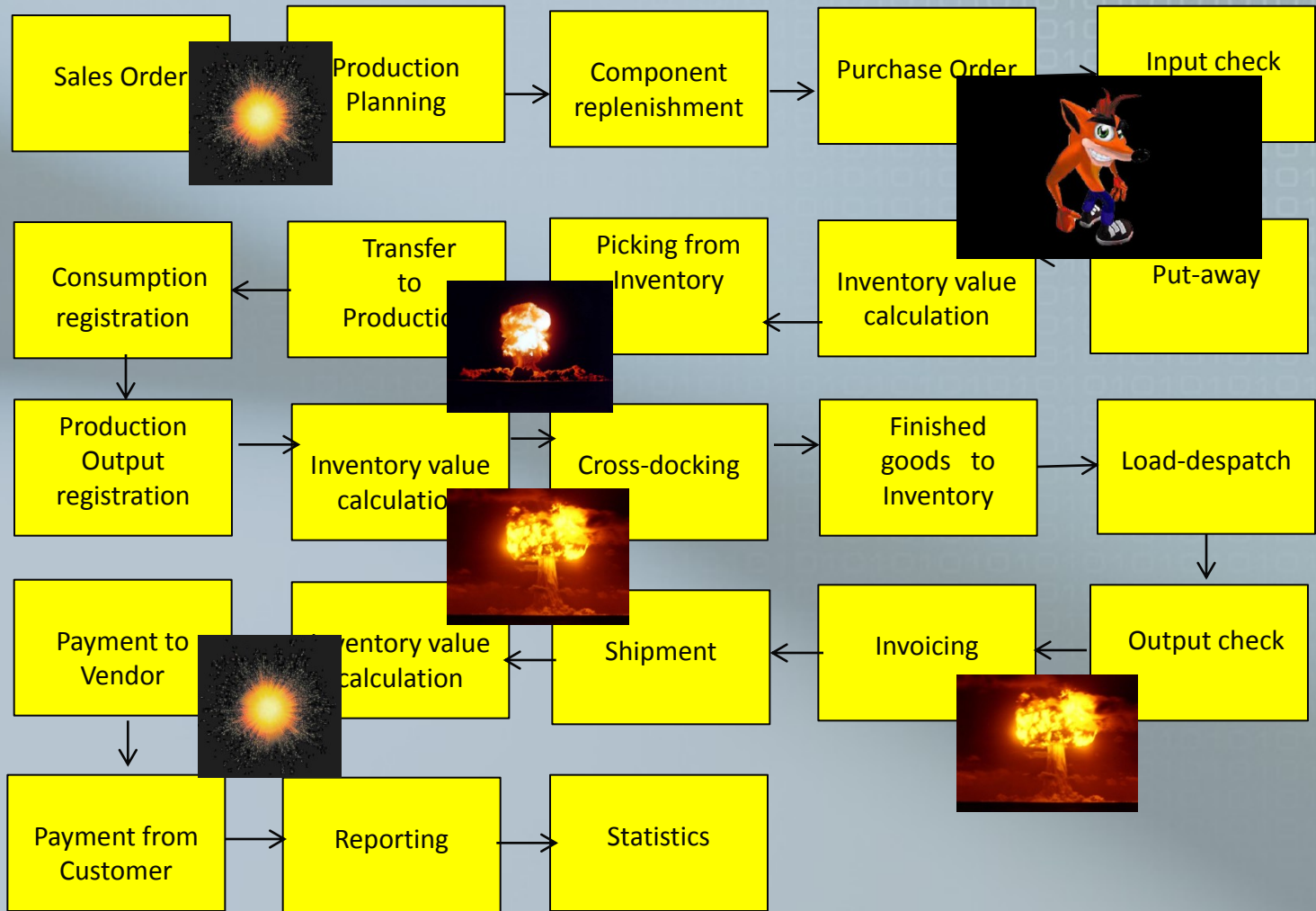
Load-despatch	Purchase Order	Reporting	Statistics
Consumption registration	Production Output registration	Inventory value calculation	Output check
Delivery	Production Planning	Sales Order	Component replenishment
Transfer to Production	Put-away	Cross-docking	Input check
Finished goods to Inventory	Picking from Inventory	Invoicing	Payment



# Your main task (organised set of processes)

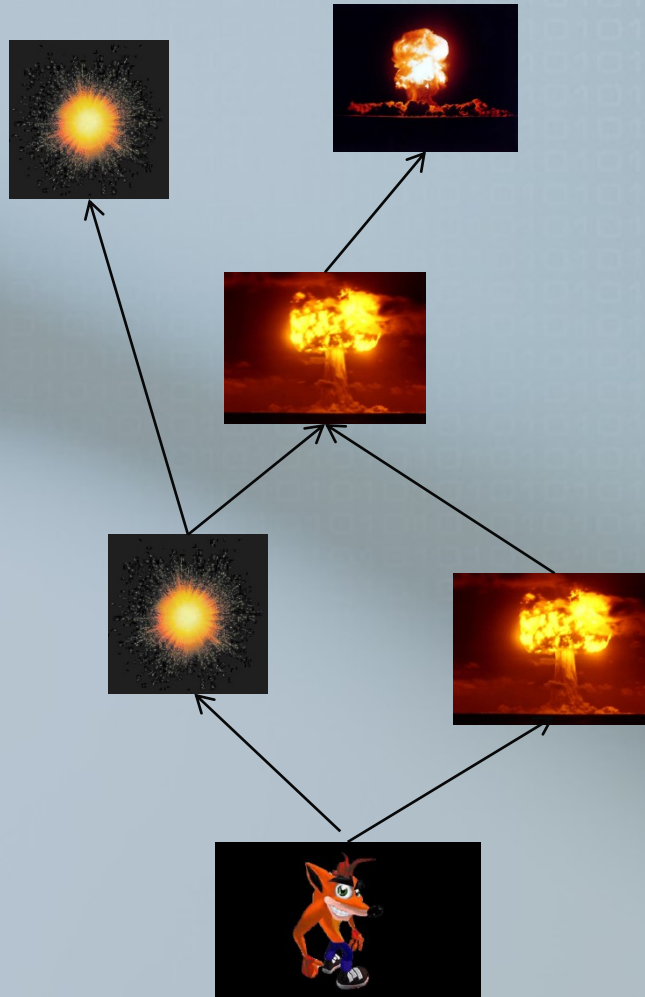


# Your main task (possible problems, bottlenecks,..)



# Your main task

(Search problems - **HOW** ??? Measure impacts - **HOW** ??? and Destroy - **HOW** ???)

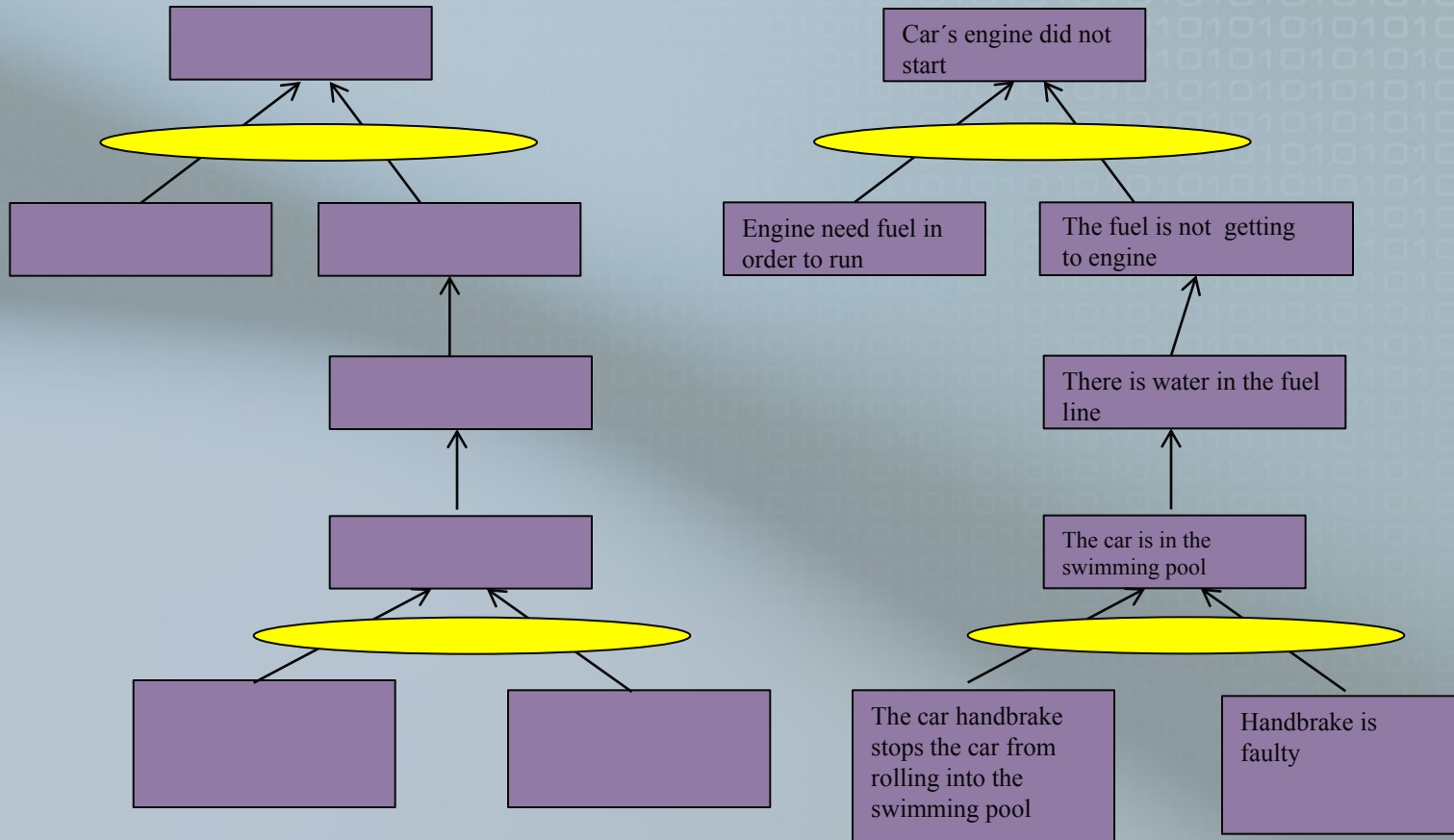


# Some events and some undesirable effects

- The car is in the swimming pool
- The fuel is not getting to the engine
- Handbrake is faulty
- There is water in the fuel line
- Car 's engine did not start
- Engine need fuel in order to run
- The car handbrake stops the car from rolling into the swimming pool



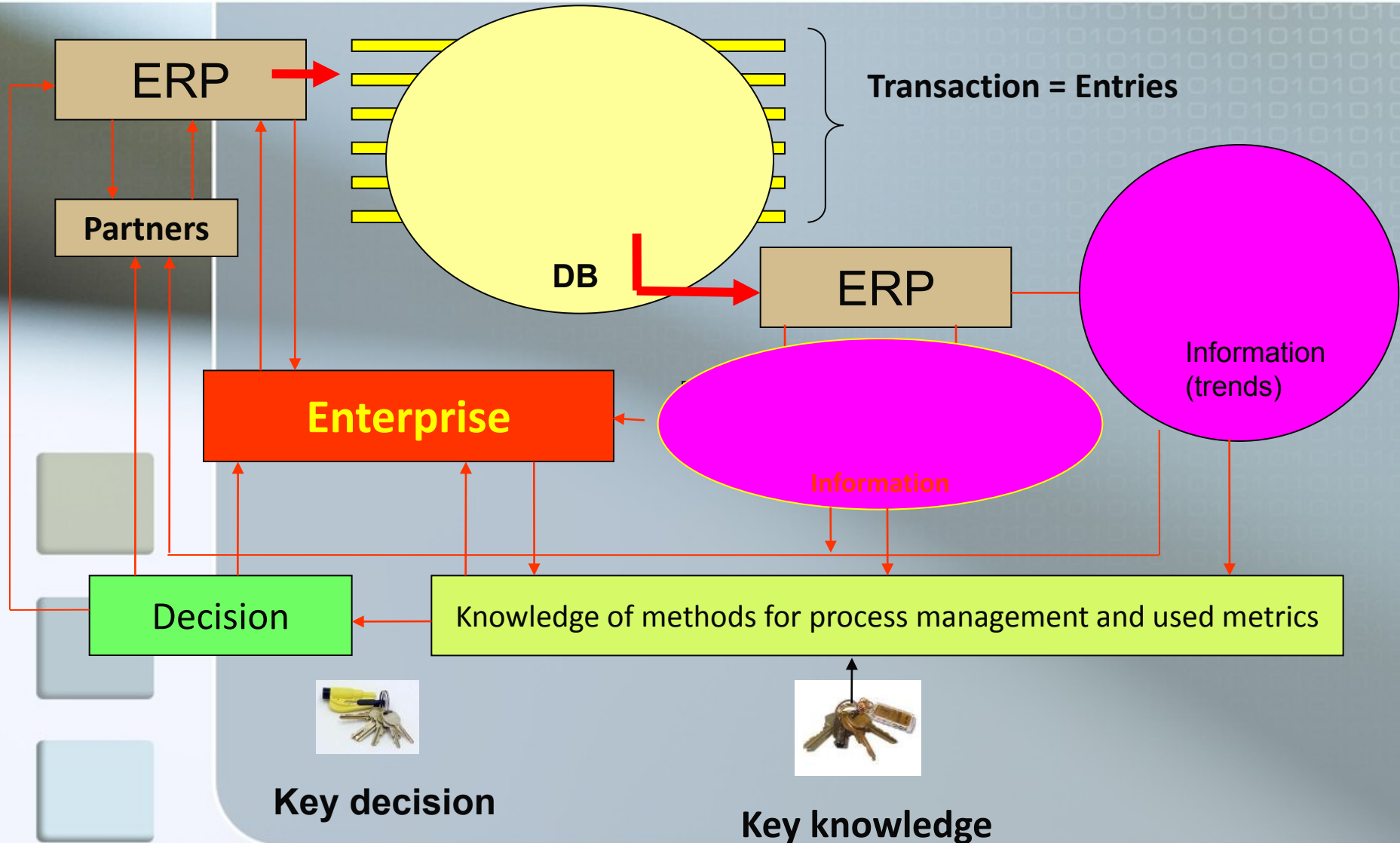
# Your main task – model problem



# Methods (not sorted so far !!!!!!!! )

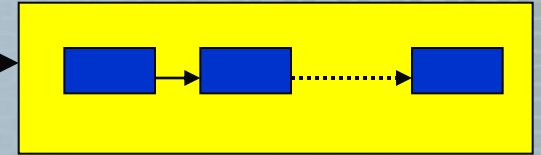
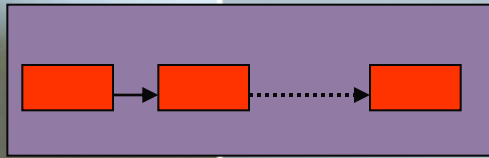
- Theory of Constraints – **how to control efficiently**
- Critical Chain – **project management issue**
- Ishikawa Fishbone Diagram – **quality management**
- Pareto Analysis - – **quality management**
- OLAP (On-Line Analytic Processing)- **data management**
- Kepner –Tregoe method –**decision making**
- MaxMax and MaxMin (Hurwitz) - **decision making**
- SWOT – **marketing, analysis**
- ERP Statistics and reporting – **mail tool**
- Balanced Scorecard – **company strategy**
- Little ´s law – **production planning**
- And many, many more.....

# Simplified diagram of ERP usage

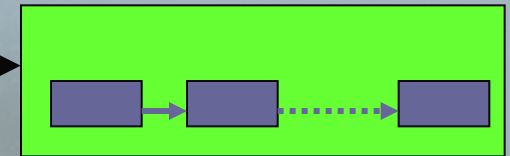
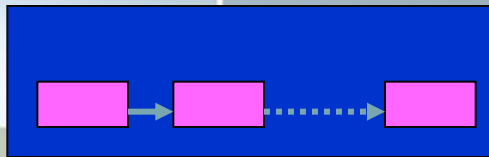


# Purchase

# Sales



Processes

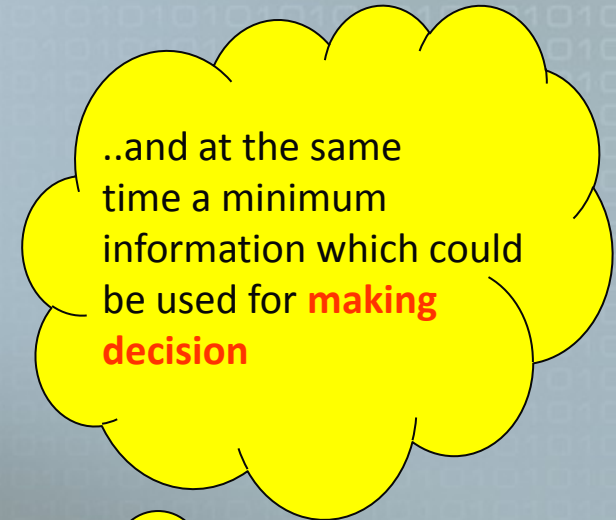


Quotes->Net change calculation->  
->Order->Vendor batch tracking ->  
->Input Quality check->Receive, Put-away->  
->Invoicing ->Payment

Orders->Sub-Load and Load->  
->Batch tracking  
->Output Quality check->Picking ->Shipment  
-> Invoicing -> Applying payments

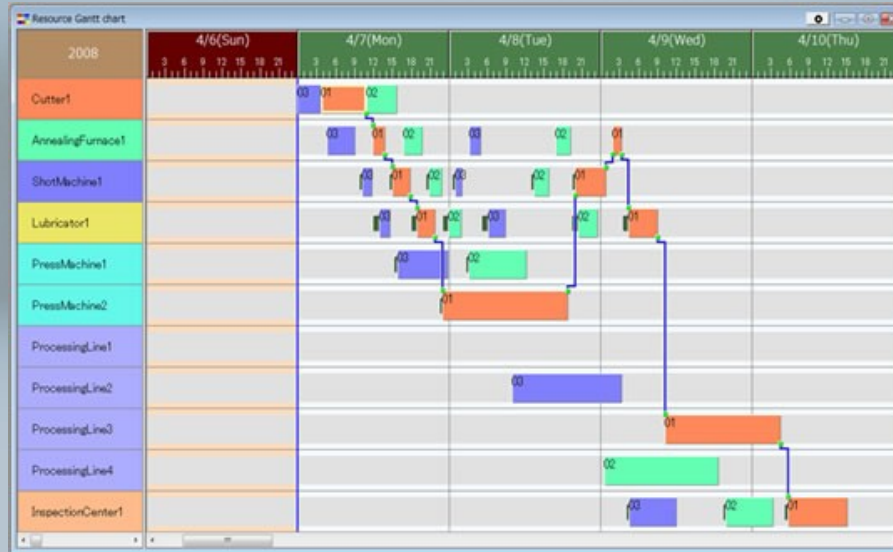
ERP

# Main problem (one of many)



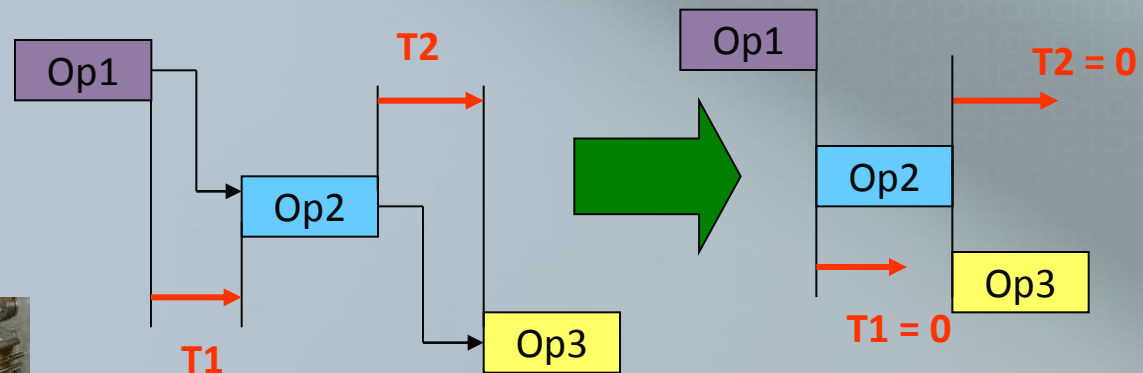
# Main problem II (need of reliable data)

We need finite capacity scheduling (APS)



$$T1 + T2 = X$$

$$Opt = \text{Min}(X)$$



# Why we cannot manage it ?



Unclear priorities, bad = **SOP**, ...

(**SOP** = Standard Operation Procedures)

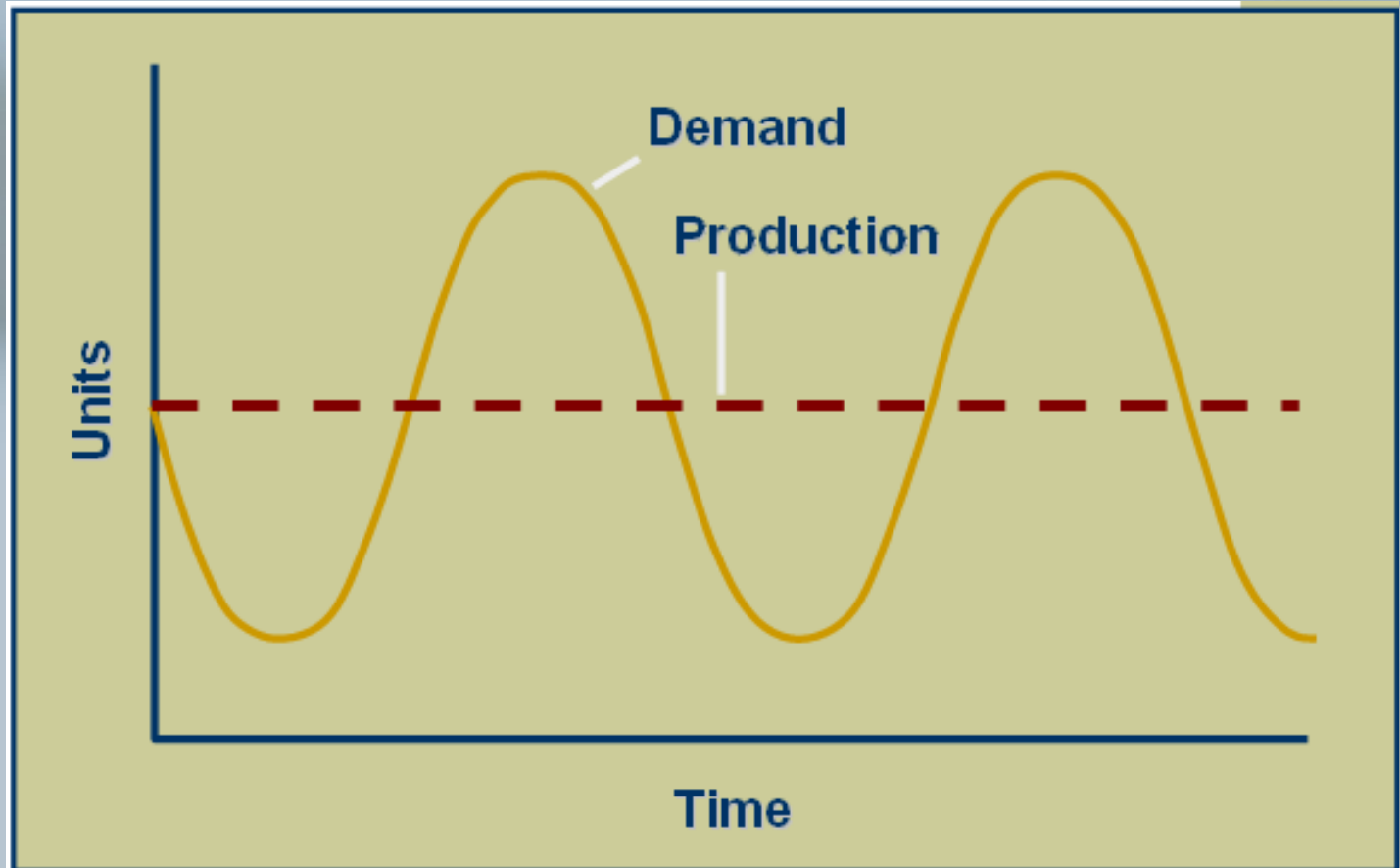
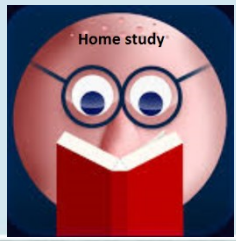
# SOUTH AFRICAN project

**SEE extra powerpoing file**

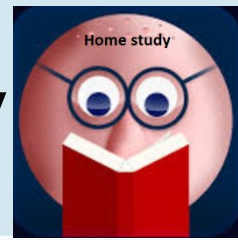




# Level production



# Level production strategy



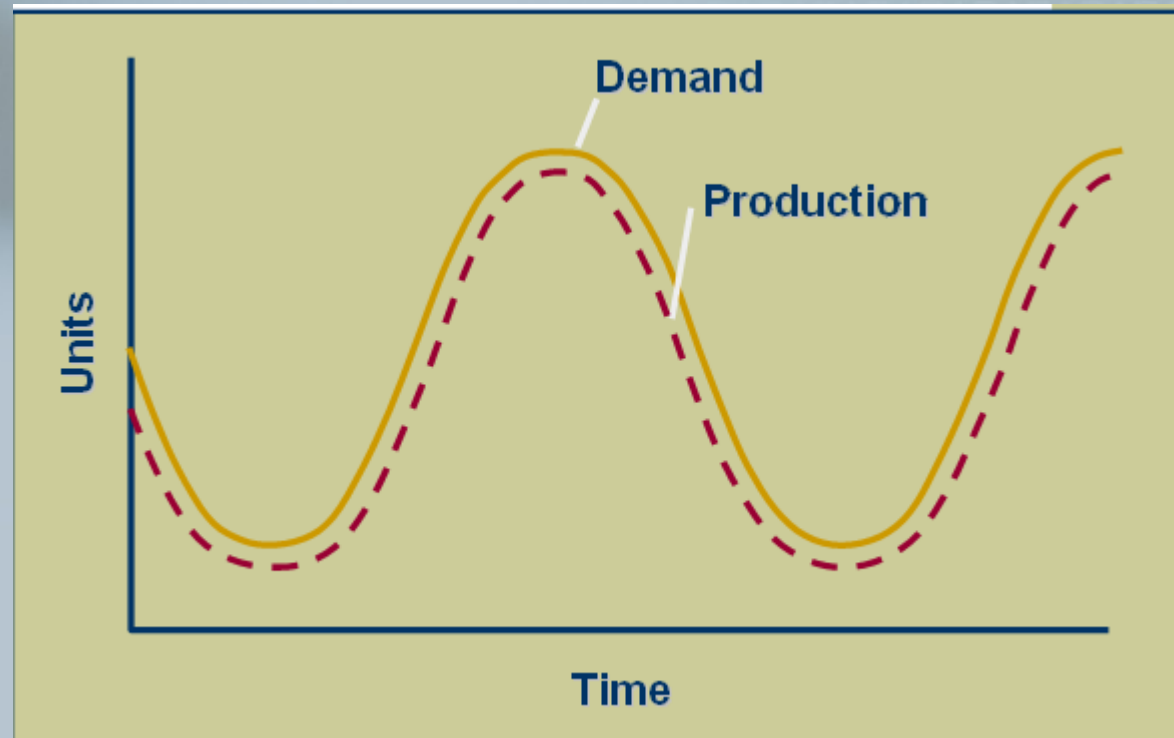
Period	Sales Forecast (kg)	Production plan (kg)	Inventory (kg)
Spring	80 000,00	100 000,00	20 000,00
Summer	50 000,00	100 000,00	70 000,00
Fall	120 000,00	100 000,00	50 000,00
Winter	150 000,00	100 000,00	0,00
		400 000,00	140 000,00

Hiring cost/worker	100,00
Firing cost/worker	500,00
Production cost/kg	2,00
Inventory carrying cost /kg	0,50
Production cost/kg/worker/quarter Production capacity of one worker	1000,00
Beginning work force (workers)	100,00

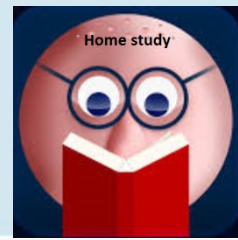
**Russell & Taylor**  
**Operations Management**  
 Sixth Edition , p.586-595

**Cost of Level Production Strategy**  
 $(400,000 \times \$2.00) + (140,000 \times \$0.50) = \$870,000$

# Chase demand



# Chase demand strategy



Period	Sales Forecast (kg)	Workers needed	Workers hired	Workers fired
Spring	80 000,00	80,00	0,00	20
Summer	50 000,00	50,00	0,00	30
Fall	120 000,00	120,00	70,00	0
Winter	150 000,00	150,00	30,00	
			<b>100,00</b>	<b>50,00</b>

## Cost of Chase Demand Strategy

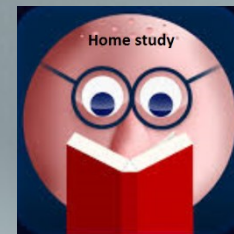
$$(400,000 \times \$2.00) + (100 \times \$100) + (50 \times \$500) = \$835,000$$

# Chase demand without optimization (Chase demand strategy)

Chase demand				Cost	835000
Workers start	100				
Products/worker/Quarter	1 000	Production cost	2,00	Firing cost	500
Inventory start	0	Inventory cost	0,50	Hiring cost	100
			Demand/1000		
<b>QUARTER</b>	Demand	Production	Need for workers	Hired	Fired
Spring	80000,00	80000,00	80	0	20
Summer	50000,00	50000,00	50	0	30
Autumn	120000,00	120000,00	120	70	0
Winter	150000,00	150000,00	150	30	0
<b>Total</b>	<b>400000,00</b>	<b>400000,00</b>		<b>100,00</b>	<b>50,00</b>

## Cost of Chase Demand Strategy

$$(400,000 \times \$2.00) + (100 \times \$100) + (50 \times \$500) = \$835,000$$



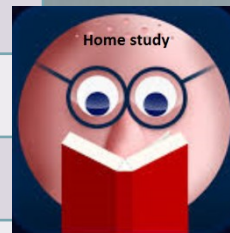
# Chase demand with optimization (step one)

Page 594 Ruseel and Taylor										
Chase demand							Cost	0		
Workers start	100									
Product/worker/Q	1 000		Production cost	2,00		Firing cost	500			
Inventory start	0		Inventory cost	0,50		Hiring cost	100			
Q	Demand (P)	Production (V)	Inventory(I)	Workerd needed (PD)	Hired (H)	Fired (F)	Demand constraints (OP)	Production constraints (OV)	Workforce constraints (OD)	
1	80000,00	0,00	0,00	0	0	0	0	0	100	
2	50000,00	0,00	0,00	0	0	0	0	0	0	
3	120000,00	0,00	0,00	0	0	0	0	0	0	
4	150000,00	0,00	0,00	0	0	0	0	0	0	
Celkem	400000,00	0,00	0,00		0,00	0,00				
		<p style="text-align: center;">↑</p> <p>Solver will put solution here</p>						<p style="text-align: center;">↑</p> <p>These cells contain constraint formulas : Example 14.3.</p>		

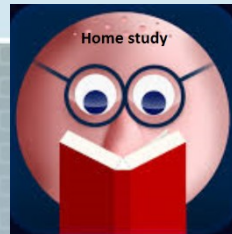


# Chase demand with optimization (step two) – constraints formulas

		Demand		
Demand constraints	V1-I1	80000		
	I1+V2-I2	50000		
	I2+V3-I3	120000		
	I3+V4-I4	150000		
		<b>Workers needed = PDi</b>		
Production constraints	1000*PD1	1000* PD1		
	1000*PD2	1000* PD2		
	1000*PD3	1000* PD3		
	1000*PD4	1000* PD4		
		H=hired, F= fired		
Workforce constraints	$100+H1-F1=PD1$			
	$PD1+H2-F2=PD2$			
	$PD2+H3-F3=PD3$			
	$PD3+H4-F4=PD4$			



## Chase demand with optimization (step three) – setup of the objective function



$$\begin{aligned} \text{Minimize : } & 100*(H1+H2+H3+H4) + \\ & 500 *(F1+F2+F3+F4) + \\ & 0,50* (I1+I2+I3+I4) + \\ & 2*(V1+V2+V3+V4) \end{aligned}$$

This formula is necessary to put to excel (cell cost)

Nacist externi data		Pripojeni			Seradit a filtrovat			
H3		fx =H7*F14+H6*G14+F7*D14+F6*C14						
A	B	C	D	E	F	G	H	
Page 594 Ruseel and Taylor								
Chase demand							Cost	0
Workers start		100						
Product/worker/Q		1 000	Production cost		2,00	Firing cost		500
Inventory start		0	Inventory cost		0,50	Hiring cost		100



# Chase demand with optimization (step four) – setup of the solver

The screenshot shows the 'Parametry Řešitele' (Solver Parameters) dialog box in Microsoft Excel. The dialog box is set up for a linear programming problem. The 'Nastavit cíl:' (Set Objective) field is set to '\$H\$3', which is the 'Cost' cell in the spreadsheet. The 'Na:' (To: Of) field is set to 'Min' (Minimum). The 'Na základě změny proměnných buněk:' (By Changing Variable Cells) field is set to '\$C\$10:\$G\$13', which is the yellow-shaded area in the spreadsheet. The 'Omezující podmínky:' (Subject to the Constraints) field contains the constraints 'OD = PD', 'OP = P', and 'OV = V'. The 'Nastavit proměnné bez omezujících podmínek jako nezáporné' (Make Variable Non-Negative) checkbox is checked. The 'Vyberte metodu řešení:' (Select a Solving Method) dropdown is set to 'Simplex LP'. The 'Metoda řešení' (Solving Method) section provides instructions: 'Modul GRG Nonlinear vyberte pro hladké nelineární problémy Řešitele. Modul LP Simplex zvolte pro lineární problémy Řešitele a modul Evolutionary pro nehladké problémy Řešitele.' The 'Řešit' (Solve) button is highlighted in blue.

Inventory(I)	Work
0,00	
0,00	
0,00	
0,00	
0,00	

Cost: 0

Parametry Řešitele

Nastavit cíl: \$H\$3

Na:  Max  Min  Hodnota: 0

Na základě změny proměnných buněk: \$C\$10:\$G\$13

Omezující podmínky:

- OD = PD
- OP = P
- OV = V

Nastavit proměnné bez omezujících podmínek jako nezáporné

Vyberte metodu řešení: Simplex LP

Metoda řešení

Modul GRG Nonlinear vyberte pro hladké nelineární problémy Řešitele. Modul LP Simplex zvolte pro lineární problémy Řešitele a modul Evolutionary pro nehladké problémy Řešitele.

Nápověda **Řešit** Zavřít





# A simple business case....(example)

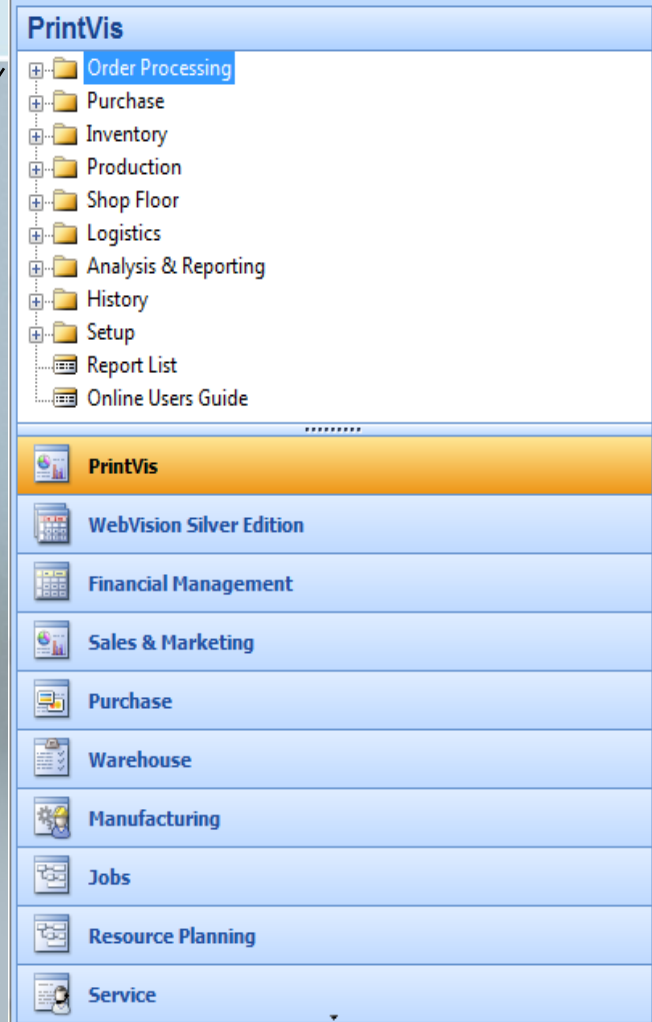
- Printing Company in Upper Lower Corner village somewhere in backwoods has a small problem :
- They use for managing printing procedures :
  - a very basic economic system **Sunshine** written by Six grade student (a son of the owner) – written in Pascal
  - another different systems for quotes calculation, logistics, production planning and control written in :
    - v obsolete FOX PRO
    - by 3 different programmers from 3 different companies
    - MS Office



# Solution fully integrated to standard ERP package

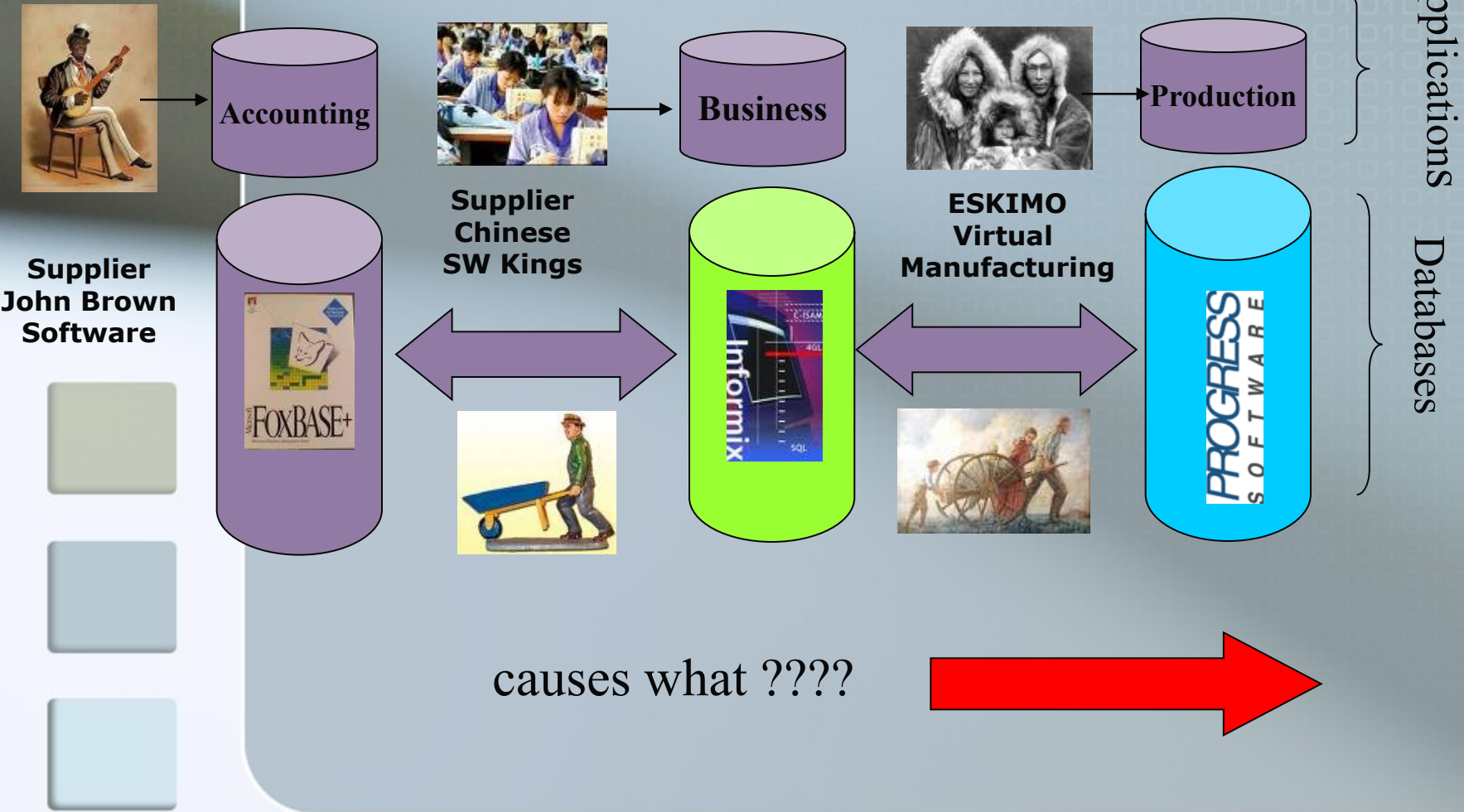
Accounting  
Controlling  
Logistic  
Purchase  
Sales

One  
database



The screenshot displays the PrintVis software interface. At the top, a navigation menu lists several modules: Order Processing, Purchase, Inventory, Production, Shop Floor, Logistics, Analysis & Reporting, History, Setup, Report List, and Online Users Guide. Below this menu is a main content area with a yellow header labeled 'PrintVis'. Underneath, a list of modules is shown, each with a small icon: WebVision Silver Edition, Financial Management, Sales & Marketing, Purchase, Warehouse, Manufacturing, Jobs, Resource Planning, and Service.

# Actual situation (example)



# Effects

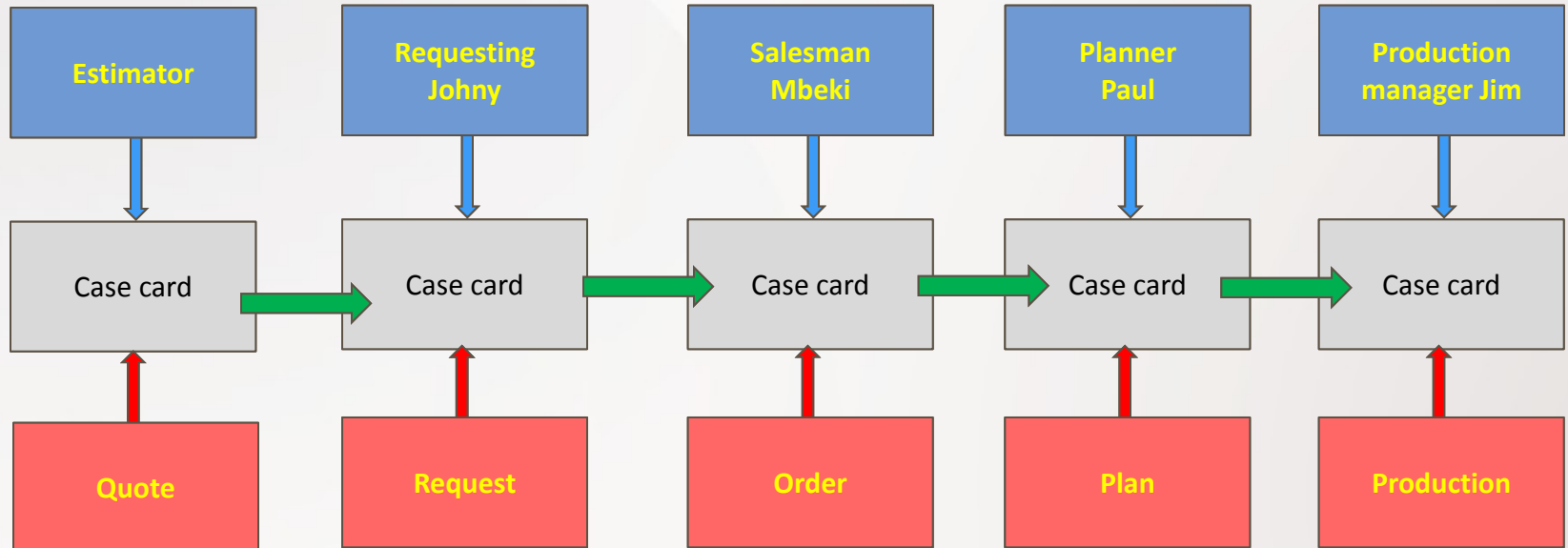
- difficult upgrades of applications
- difficult communication between different applications
- reduplicated data (redundant data)
- non actual data->bad decisions
- etc.

# A simple business case (printing industry)...example - benefits

## Competitive market could requires for instance :

- **fast reaction** to quotes
- variable quotes and their immediate costing (calculation) → **price variability**
- **shortening of delivery times**
- shortening lead times and cycle times → **fast reaction**
- reduction of inventory values (paper, colors) → **higher liquidity**
- quality improvement → **8D reports should be used**
- processes driven by flexible workflow → **flexible op management**
- exact evaluation of finished jobs (production orders) in order to know real costs → **better cost control**
- feed backs to external and internal signals such as :
  - reasons of quotes dismissals (**why ????????**)
  - reason of unexpected costs (**why ????????**)

# PrintVis Workflow (in order to find easily e.g. Flexo order)





# A simple business case....

- Competitive markets also requires :
  - Modern and efficient SW tools to control these processes :
    - **prepress**: desktop publishing, computer to plate, ...
    - **purchase** of material (paper, colors,..)
    - **imposition** (how to put locate texts on the paper )
    - printing using different technologies (sheets, rotary press,..)
    - production planning and shop floor control
    - finishing operations such as
      - cutting
      - gathering
      - stitching
  - flexible invoicing
  - on-line accounting and so on and so on

} special printing operations

# Printing machine



# A simple business case....

- **Bottlenecks (TOC) – Threats (SWOT) :**
  - obsolete information system, which requires all time some changes, patches,...
  - all parts of information system form an heterogeneous is IT tools heterogeneous hydra : finance management, costing, production, inventory, HR,..., which **never provides user with real picture of the business !!!!!**
  - inaccurate data from one application is inherited by another one, so the picture of the business always late
  - Costing depends on human failing factors
  - one author of every single subsystem
  - these authors **never meet each other** to coordinate their efforts...

# A simple business case....

## ■ Bottlenecks (TOC) – Threats (SWOT) :

- internet auctions favour competitors which are cheaper and faster
- the size of paper and colour purchase orders are based on inexact assessment of purchasers (if we have a lot of orders, types of papers, various machines and so on, the optimum assignment of the purchase batches sizes is beyond ability of human being with paper and pencil)

Gaza gate →



# A simple business case....

- Messiah arrives and says : “ I have for you this :“
  - modern and flexible and **standard** ERP system
  - background of IT company with tradition and experience
  - background of global IT vendor
- On the other hand an arriving messiah did not offer:
  - the knowledge of printing industry
  - printing application fully integrated with **standard** ERP
- Arriving applicant must :
  - understand processes in printing industry (or any other base on chosen branch)
  - be able to write printing application using development tools (languages) of standard ERP system
  - implement the solution
  - **OR** instead of **these three blue marked points** to find already existing vertical solution for printing industry, which is used all over the globe



# A simple business case....

## Finding a vertical is right !

- Let say, that we have found a foreign company having already **Print SOLUTION** developed (NovaVision), which was implemented 200-times and in different languages



One database only

Other standard

ERP modules :

Service Management

Human Resources

Business Analytics..

Accounting

Logistics

Purchase and Payables

Sales and Receivables

Standard production

CRM

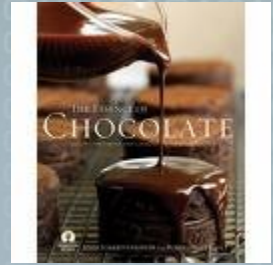
# A simple business case....project management – introduction

## ■ Live Meeting:

- application setup
- basic functions and a „sweet points“
- business case workflow (all the stages)

■ Customer was happy and awaited consequential actions

■ Vendor signs a contract about localisation and selling in pre-determined geographical areas



# A simple main form of printing application **PRINT** integrated to ERP Navision

**Order 20050 James Dailey Ltd. - Case Card**

General Invoicing Shipment Foreign Trade Info Other All **Order**

Sell-To No. 20000 ID 80 Quote no. . . . .

Sell-to Name James Dailey Ltd. Order No. . . . . 20050 11.01.04

Sell-To Address 153 Thomas Drive Invoice Number . . . . . Show de...  
Search

Sell-To Postal Code/City GB-CV6 1GY Coventry Cogy Salesperson . . . . . SOS Sonny Salesman  
Customer

Sell-To Phone . . . . . Fax . . . . . Estimator . . . . . Coordinator . . . . . NWS  
Order

Sell-To Contact Mr. James Dailey Responsible . . . . . NWS NWS Superuser

Your Reference . . . . . Status Code . . . . . ORDER Order confirmati...  
Next Status

Old order number . . . . . Deadline . . . . . 12.01.04 PLAN  
Change Status

Order Type . . . . . Rejection Code . . . . . Eco-label . . . . .

Product Group . . . . . 400 Brochures

Job Name . . . . . test imposition

J..	V..	A..	Type	U..	Product	Te...	Quan...	Pa...	For...	C..	C..	Paper	Job Name	External Description
				R..	Group	Job			Code	F..	B..			
▶	1	1	✓	Order			400	4	1.000	32	A5	4 4	223	test impositi... 1.000 brochures in format A5 a...

Job New Ver. ▶ New Job ▶ Order ▶ Milestones Job Items Print...  
Job ▼ Estimating Planning Specifications Shipments Invoice/Draft Nápořěda



# Another form of printing application **PRINT** integrated to ERP Navision (imposition and colours)

299 - Technical specifications for: sheet / pieces / imposition

Sheet No. . . . . 1 of 2

Job Item No. . . . . 1 of 1

Paper Item No.  223

Description . . . . .

Satin Princess

Quantity . . . . . 1000 1000

Paper Quality . . . . . PAPER

Colors Front .  4 Varnish Front .

Colors Back . . . . . 4 Varnish Back .

Grammage . . . . . 115,00

Different Colors... 4 Colors

Paper Sheet For... 640

Pages with ...  32 Total/subject 32

Format Code .  A5

Depth . . . . . 210 Conjugate ... 1

Width . . . . . 147 Conjugate ... 2

Imposition ...  IMP-002

Printing met...  Work and Turn

Pages in Sh...  32 Reverse Pla...

Printed sheet/ful... 1

Job Items on th... 1

Qty in block. . . . . 1 Replace. . . . . 0

Automatic Resid...

Sheet Format code

Sheet Depth. . . . . 640

Sheet width . . . . . 900

End Quantity . . . . . 1000

Scrap . . . . . 830

Sheet . . . . . 1830

Quantity of She... 1

Total . . . . . 1830

Jo...	Qua...	Addition...	Colors Fr.
▶ 1	1000	1000	

1	16	13	4
32	17	20	29

Sheet New Job Item Processes Procesflow Sheet Param... Pages Zavřít Nápořád

# A simple business case....

- Some reasons which persuaded ERP vendor to sign a contract with vendor of vertical solution PRINT:
  - local market analysis (SWOT, GAP Analysis, BPM, BSC, Pareto, Ishikawa Fishbone diagram, TOC, CCPM....)
  - expectation of repetitive sales – promising market segment -> CRM application (pains and benefits)
  - analysis of the competitors-> CRM
  - possible co-operation with other PRINT experts abroad (sales of services)



# Project entries..

## ■ **Activities**

- acquire necessary printing industry knowledge
- introduction training provided by supplier of PRINT application (vertical solution)
- team building
- budget (costs „**business plan**“- revenues)
- language localization **ENG->CZE**
- modification ERP and a **Print** for Czech conditions (market specifications and legislation)
- cope with inner application

# Project entries..

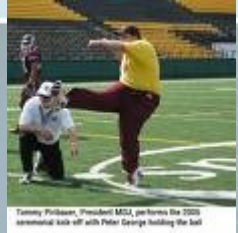
## ■ Activities

- translation of marketing material (fact sheet) and its printing in compliance with predefined templates
- creation of PWP presentation for selling
- prospect prediction – segments of market
- naming of benefits „selling against“
- presentation to chosen prospects and reaction to questions- use of feedbacks to improve knowledge of printing industry
- **Print** price list generation

# Project entries..

## ■ Activities

- „Kick-Off“ meeting
  - when, who, what and why (Kick-Off)
  - PWP presentation
  - invitation, graphic design
  - selling invitation and follow-up
  - Kick-Off
  - mapping of interests, business strategy modification and resource planning





# Project entries...

## ■ Activities

- Contract signature with pilot customer
- System implementation (only some important activities are mentioned here.. )
  - feasibility study, analysis, target solution draft .....
  - introduction training
  - system customization – *will be shown in Dynamics NAV*
  - tests of introduced modifications
  - data transfers and setup of technological „master data“
  - generation and selling licences and HW tools such as servers, ...
  - change management

# Project entries...

## ■ Activities

**System implementation** (only some important activities are mentioned here.. )

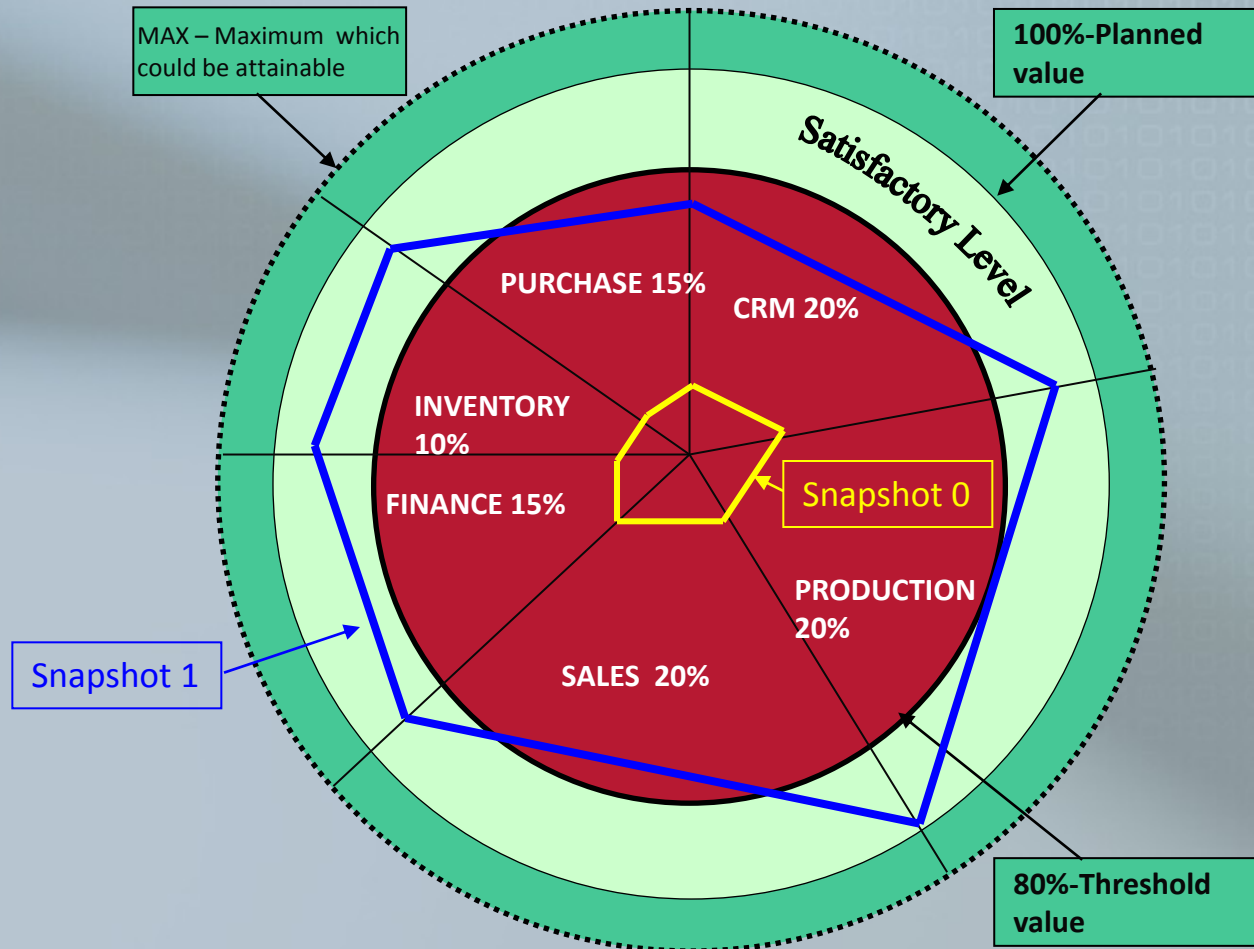
- training with real data in the ERP system
- stock taking and transfer of balances on accounts
- sharp start
- support and surveillance



**Necessary knowledge for project management**



# Project successful ? (from Snapshot 0 ->Snapshot 1)



# Another possible project.



- Hotel chain Rocco Forte \* \* \* \* \*
- Where? (Great Britain 2x, Scotland 1x, Germany 2x, Prague 1x, Rome, Florence, CH, Russia ....)
- SW choice (chosen company for delivery standard accounting package of ERP and cooperation with author of hotel vertical solution : Serenissima Informatica, Padova)
- Choice of local partner (CZ MS Dynamics NAV partner X : requirements -> stability, knowledge of international business, languages, references- testimonial abroad, ..)
- Milano (server farm for all hotels )
- All hotels using same chart of account (USoA=Uniform System of Accounts) – simple consolidation (IFRS)
- Choice of hotel SW and accounting SW

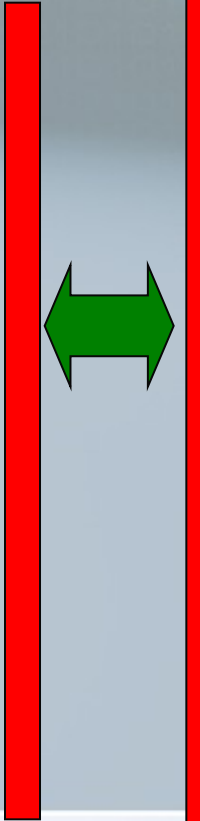
# Another possible project...



# Another possible project



# Basic Concept (survey)



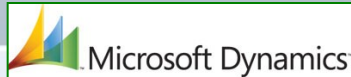
**General Ledger**

- Chart of Accounts
- Bank Accounts
- Budgets
- Account Schedules
- Analysis by Dimensions
- Payment Order
- Bank Statement
- Payment Journals
- General Journals
- Cash Register Documents
- Intercompany Postings
- Reports
- VAT Return
- Issued Payment order
- Issued Bank Statement

**General Ledger**

- Fixed Assets
- Sales & Receivables
- Relationship Management
- Service Management
- Purchases & Payables
- Inventory
- Warehouse Management
- Manufacturing
- Capacity Requirements Planning
- Resources
- Jobs
- Human Resources
- Commerce Portal

**SERENISSIMA**



**PRÍZNANÍ VAT report**  
k dani z pridane hodnoty

za zdaňovací období: měsíc 9 čtvrtletí rok 2005

1. Příloha daně § 94  X 2. Osvědčení identifikovaní k dani § 98

3. Nepříloha daně § 195, 6, § 109

**B. ODDÍL - daň z pridane hodnoty**

I. Prošetřete (X) nevznikla-li daňová povinnost

II. Povinnost přiznat daň za

	Základ daně	Daň na výstupu
1. měsíčně/čtrtvletě zdanitelných plnění s místem plnění v tuzemsku		
210 se základní sazbou daně	50	10
215 se sníženou sazbou daně	10	1
2. početní zůstatek z jiného členského státu (§ 19 a § 17 odst. 6 písm. c) mimo § 19)		
220 se základní sazbou daně	242	47



**Dataport**



# Translation of text strings used for communication Protel<->Dynamics NAV to Czech language (necessary knowledge of terminology and language)



	B	C	D	E
745	57002	Option String	Period,Fiscal Year	Období,Fiskální rok
746	57002	Field Name	Accrued/Deferred Amount Type	Typ částky na časovém rozlišení
			,Accrued Income,Accrued Charge,Deferred	,Příjmy příštích období,Výdaje příštích období,Náklady
747	57002	Option String	Charge,Deferred Revenue	příštích období,Výnosy příštích období
748	57002	Field Name	Changed Original Data	Původní data změněna
749	57002	Field Name	Journal Template Name	Název šablony deníku
750	57002	Field Name	Document Type	Typ dokladu
751	57002	Option String	,Order,Invoice,Credit Memo	,Objednávka,Faktura,Dobropis
752	57002	Field Name	Journal Batch Name	Název listu deníku
753	57002	Field Name	Line No.	Číslo řádku
754	57002	Field Name	G/L Entry No.	Číslo věcné položky
755	57002	Field Name	Processed Flag	Číslo věcné položky
756	57002	Field Name	Deferred Posting	Odložené zaúčtování
757	57002	Field Name	To be Deferred	Zahrnout do příštích období
758	57002	Field Name	Document No.	Čís. dokladu
759	57002	Field Name	Line No.	Číslo řádku
760	57002	Field Name	Account No.	Číslo účtu
761	57002	Field Name	Account Description	Název účtu
762	57002	Field Name	Balance Account No.	Název rozvahového účtu
763	57002	Field Name	Balance Account Description	Rozvahový účet - popis
764	57002	Field Name	Amount	Částka
765	57002	Table	Accr/Def Amount Journal Header	Hlavička deníku pro částky na časovém rozlišení
766	57002	Text Constant	No journal line data found !	V řádku deníku nebyla nalezena žádná data !
767	57002	Text Constant	Date in Closed Period	Datum v uzavřeném období
768	57002	Text Constant	Initial Date not in Actual Fiscal Year	Počáteční datum nespadá do stávajícího fiskálního roku
769	57002	Text Constant	Final Data < Initial Data	Konečné datum < Počáteční datum
770	57002	Text Constant	Journal Amount Missing	V deníku chybí částka
771	57002	Text Constant	Type Not allowed with Def. Amount Delayed Posting	Tento typ není povolený pro opožděné zaúčtování Odložené částky
772	57002	Text Constant	Def.Posting not allowed with Journaling Period = Period	Zaúčtování Odložené částky na časové rpzlišení není povoleno pokud se perioda zápisu = Období
773	57002	Text Constant	Account Type %1 not valid for Deferred	Typ účtu %1 není platný účtování Odložené částky na časové rozlišení
774	57003	Field Name	Section Type	Typ sekce
775	57003	Option String	,Sale,Purchase,G/L Ledger	,Prodej,Nákup,Hlavní kniha

# Balance sheet (generation using accounting schemes – will be introduced to students )



## Income Statement

**General Ledger**

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**SERENISSIMA**

Název . . . . . ROZVAHA04 **Accounting scheme**

Číslo řady	Popis	Typ s...	Součet
001	AKTIVA CELKEM	Vzorec	B001+K001
002	Pohledávky za upsany základni kapitál	Vzorec	B002+K002
003	Dlouhodobý majetek	Vzorec	B003+K003
004	Dlouhodobý nehmotný majetek	Vzorec	B004+K004
005	Zřizovací výdaje	Vzorec	B005+K005
006	Nehmotné výsledky výzkumu a vývoje	Vzorec	B006+K006
007	Software	Vzorec	B007+K007
008	Ocenitelná práva	Vzorec	B008+K008
009	Goodwill (+/-)	Vzorec	B009+K009
010	Jiný dlouhodobý nehmotný majetek	Vzorec	B010+K010
011	Nedokončený dlouhodobý nehmotný majetek	Vzorec	B011+K011
012	Poskytnuté zálohy na dlouhodobý nehmotný ...	Vzorec	B012+K012
013	Dlouhodobý hmotný majetek	Vzorec	B013+K013
014	Pozemky	Vzorec	B014+K014
015	Stavby	Vzorec	B015+K015
016	Samostatné movité věci a soubory movitých ...	Vzorec	B016+K016
017	Pěstitelské celky trvalých porostů	Vzorec	B017+K017
018	Základní stádo a tažná zvířata	Vzorec	B018+K018
019	Jiný dlouhodobý hmotný majetek	Vzorec	B019+K019
020	Nedokončený dlouhodobý hmotný majetek	Vzorec	B020+K020
021	Poskytnuté zálohy na dlouhodobý hmotný ma...	Vzorec	B021+K021
022	Oceňovací rozdíl k nabytému majetku (+/-)	Vzorec	B022+K022
023	Dlouhodobý finanční majetek	Vzorec	B023+K023
024	Podíly v ovládaných a řízených osobách	Vzorec	B024+K024
025	Podíly v účetních jednotkách pod podstatným...	Vzorec	B025+K025
026	Ostatní dlouhodobé cenné papíry a podíly	Vzorec	B026+K026
027	Půjčky a úvěry - ovládající a řídicí osoba, po...	Vzorec	B027+K027
028	Jiný dlouhodobý finanční majetek	Vzorec	B028+K028
029	Pořizovaný dlouhodobý finanční majetek	Vzorec	B029+K029
030	Poskytnuté zálohy na dlouhodobý finanční m...	Vzorec	B030+K030
031	Oběžná aktiva	Vzorec	B031+K031
032	Zásoby	Vzorec	B032+K032
033	Materiál	Vzorec	B033+K033
034	Nedokončená výroba a polotovary	Vzorec	B034+K034
035	Výrobky	Vzorec	B035+K035

Období: 15. 11. 2007

**ROZVAHA**  
v plném rozsahu  
ke dni 15. 11. 2007  
(v Kč - z. des. místo)

IC: 7777 7777

Období: 5  
Létsko: CZ-493 01

Označení	AKTIVA	Číslo řádku	Běžné období			Minulá úč. období
			Brutto	Korekce	Netto	
a	b	c	1	2	3	4
	AKTIVA CELKEM	001	29 239 952,44		29 239 952,44	191 977 933,78
A.	Pohledávky za upsany základni kapitál	002				
B.	Dlouhodobý majetek	003				-7 240 944,94
B. I.	Dlouhodobý nehmotný majetek	004				
B. I. 1.	Zřizovací výdaje	005				
2.	Nehmotné výsledky výzkumu a vývoje	006				
3.	Software	007				
4.	Ocenitelná práva	008				
5.	Goodwill (+/-)	009				
6.	Jiný dlouhodobý nehmotný majetek	010				
7.	Nedokončený dlouhodobý nehmotný majetek	011				
8.	Poskytnuté zálohy na dlouhodobý nehmotný majetek	012				
B. II.	Dlouhodobý hmotný majetek	013				-7 240 944,94
B. II. 1.	Pozemky	014				
2.	Stavby	015				-4 626 154,70
3.	Samostatné movité věci a soubory movitých věc	016				-418 116,03

Seznam účtů:	Podpisový záznam statutárního orgánu účetní jednotky nebo podpisový záznam ředitele společnosti, pokud je účetní jednotkou
Titulní firma účetní jednotky:	Podpis ředitele

# Uniform System of Accounts

No.	Name	Income/Balance	Account Type	Mapping	Account synte	Analytic	Czech description
0047500	Other Debtors - Insurance Advances Premium Payment	Balance Sheet	Posting		381	100	Náklady příštích období - pojištění zaměstnanců
0067700	Prepaid rent	Balance Sheet	Posting		381	200	Náklady příštích období - nájemné
0069000	Prepaid Insurance	Balance Sheet	Posting		381	300	Náklady příštích období - pojištění budovy a odpovědnosti
0069500	Prepaid Licences & Permits	Balance Sheet	Posting		381	310	Náklady příštích období - licence a povolení
0070000	Prepaid Maintenance Contracts	Balance Sheet	Posting		381	400	Náklady příštích období - provozní náklady
0070300	Prepaid Sales & Marketing	Balance Sheet	Posting		381	500	Náklady příštích období - Sales & Marketing
0070350	Prepaid - Property taxes	Balance Sheet	Posting		381	600	Náklady příštích období - daň z nemovitosti
0141000	Financing Costs	Balance Sheet	Posting		381	700	Náklady příštích období - náklady na financování
0141100	Brand	Balance Sheet	Posting		381	800	Náklady příštích období - rebranding
0155000	Pre Opening Cost	Balance Sheet	Posting		381	900	Náklady na zprovoznění hotelu
0250010	GRNI - Stores	Balance Sheet	Posting		383	100	Výdaje příštích období - stock
0250050	GRNI Non Stores	Balance Sheet	Posting		383	200	Výdaje příštích období - non-stock
0249000	Deferred Income	Balance Sheet	Posting		384	100	Výnosy příštích období
0249100	Deferred Income Other	Balance Sheet	Posting		384	200	Výnosy příštích období - jiné
0249500	Deferred Income - Subscription	Balance Sheet	Posting		384	300	Výnosy příštích období
0021000	Guestledger (Accrued Income)	Balance Sheet	Posting		385	100	Příjmy příštích období - newfakturované tržby
0048500	Accrued Income - other	Balance Sheet	Posting		385	200	Příjmy příštích období - ostatní

**Accrued Revenues** (revenues generated in the future periods)

**Income** (still not created)

General Ledger

Customer





# Accrued and Deferrals

Deferrals : It means when You receive an Invoice for Service;  
Service provided partially in one Fiscal Year, and Partially for the following Fiscal Year.

**Ex.** : In November You receive an Invoice for IT Service provided from November 2007 until June 2008.

You have to charge 2 Months for 2007 and 6 Months for 2008 Fiscal Year.

In other words Deferred Costs happens when You receive in advance an Invoice for Services provided in the future. It's possible to have the same also for **Revenues**

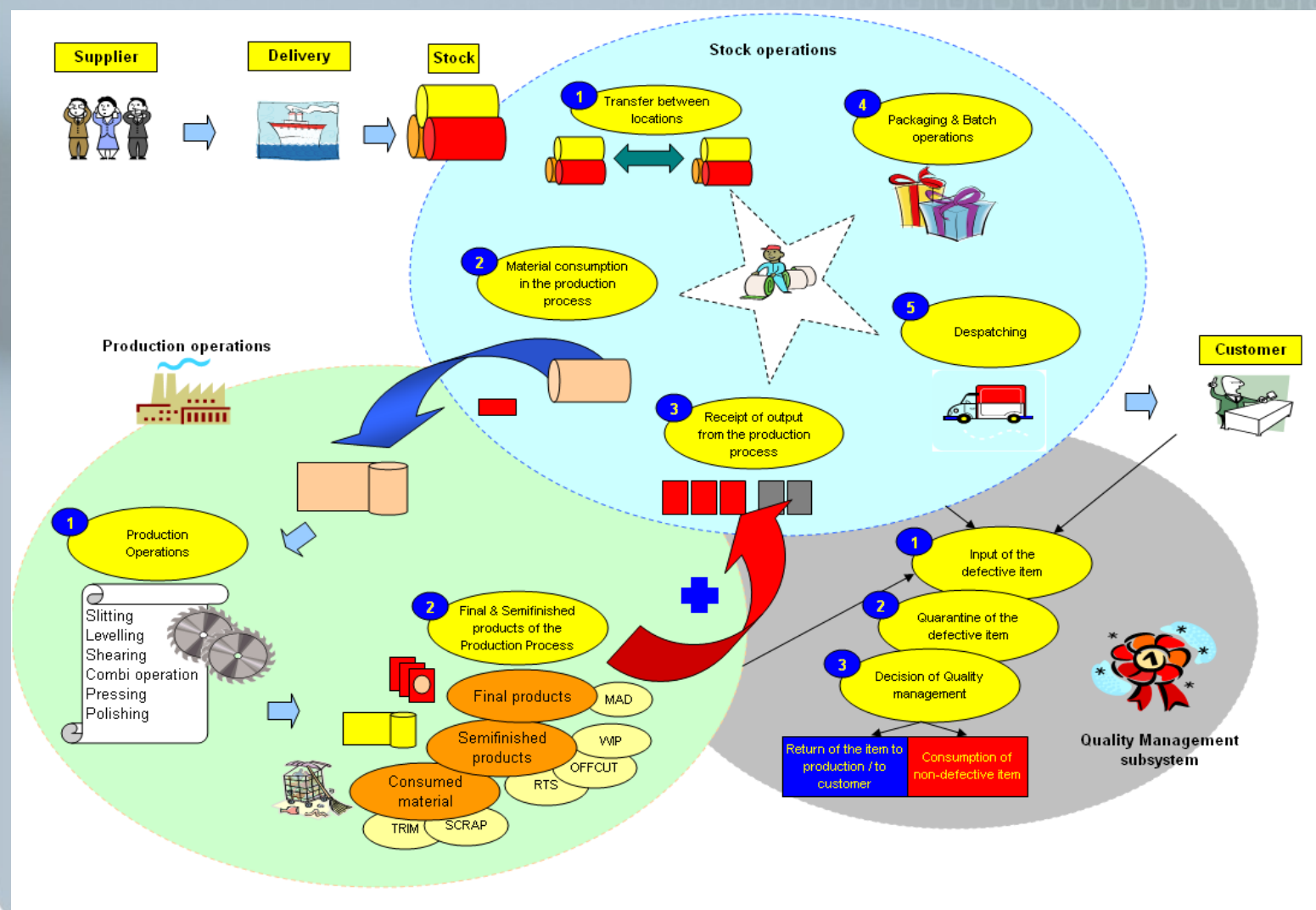
Accrued :

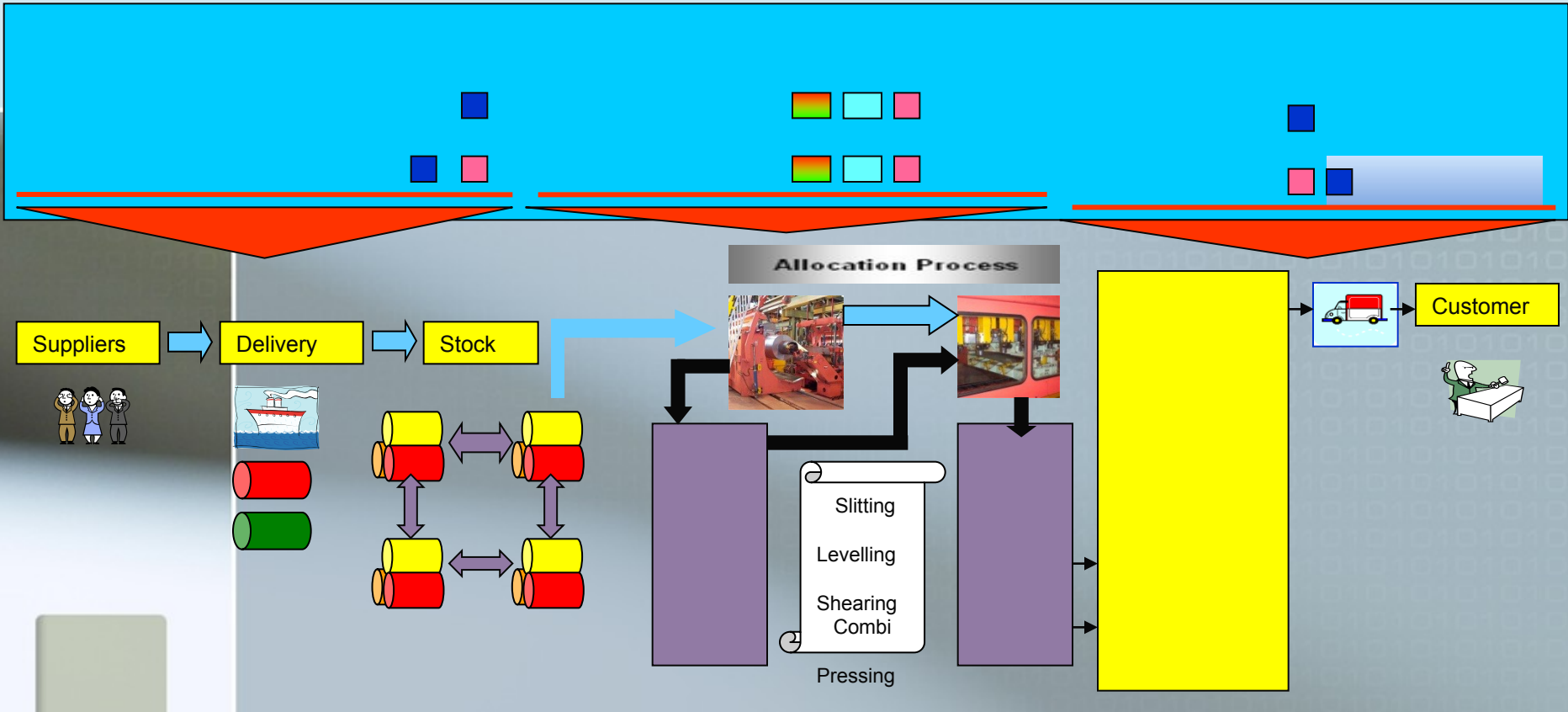
**Ex.** : In May 2008 You receive an invoice for Services provided from November 2007 until May 2008. Normally You have to charge in advance, Cost for Services for November and December 2007 without any Invoice, and You balance this Cost with special Accounts.

This happens very often in Hotel management because, for management control, they have to produce every month Profit & loss report. It's more or less like a Year close done on every Month.

In other words **Accrued Costs** happens when You receive an Invoice for Services **after the Service was provided.** The same can happens also for revenues.

# Another possible project –Automotive, Appliances, packaging industry

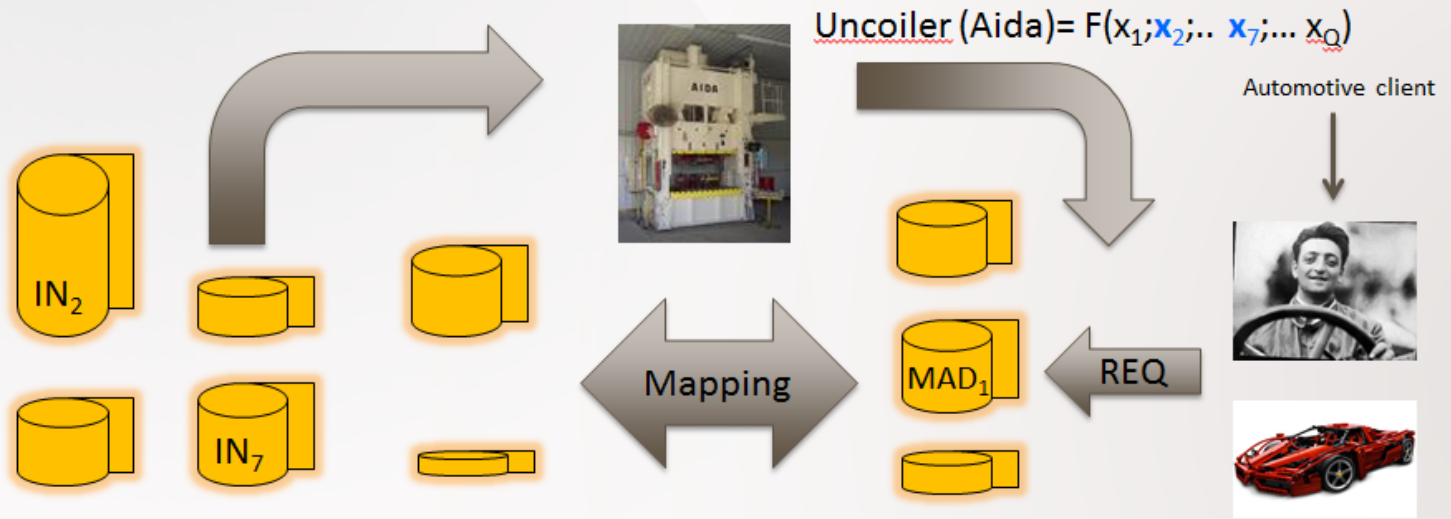




Bespoke Functionality

# Mapping principles

**Models** (batch, product, part, subassembly, requirement, driven by sets of parameters)



$$IN_i = F(x_1; x_2; \dots; x_7; \dots; x_N)$$

$$\text{Material awaiting dispatch} \rightarrow MAD_1 = F(x_1; x_2; \dots; x_7; \dots; x_Q)$$

Parameter values

$x_2$ =Material	$x_7$ =Weight
ALU	Value
Stainless steel	

Mapping = we can produced  $MAD_1$  from e.g.  $IN_2$  and  $IN_7$   
**MAD=Material Awaiting Dispatch**

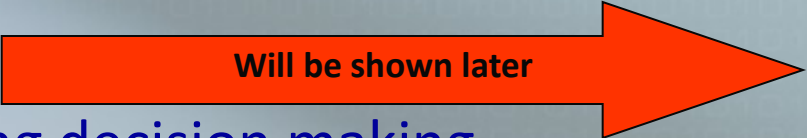
Parameter driven batch

$x_2$ =Material ID, OD	ALU 400 mm
$x_7$ = Weight Profil	<10 tones Coil

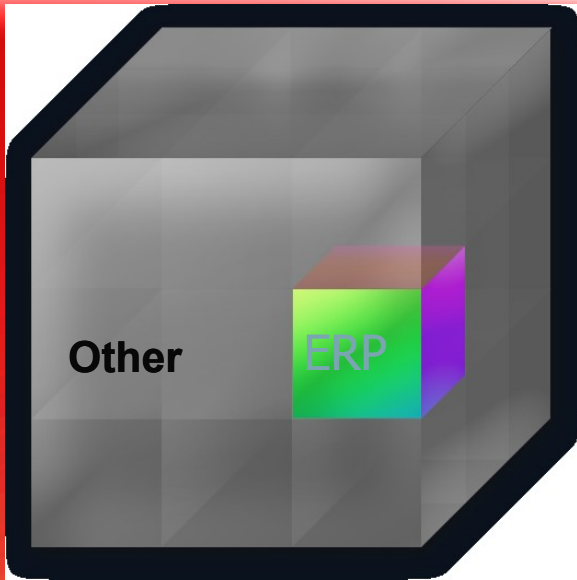
# Knowledge of methods, which are necessary for project management and process management

- **Theory of Constraint** (will be introduced-72 slides)-**seminar work!!!!**
  - Critical chain methodology
  - Thinking tools
  - Throughput Accounting ->go to wikipedia
- **Balanced Scorecard** (will be introduced)
- **SWOT a Gap Analysis** (You should know it,I guess.. )
- **Quality management** (Ishikawa and Pareto- will be introduced)
- **ERP system and its logic** (will be introduced- 28 hours)
- **Logistics** (warehouse management)
- **Finance Management and Controlling**
- **Production Management** (MRP, MRP-II, JIT and DBR)
- **Decision making tools** (Kepner Tregoe-will be introduced)

# Knowledge of methods, which are necessary for project management and process management

- Legal aspects of contracts
- Cost management
- Foreign languages
- Basic knowledge of IT architecture **will be introduced**
- Methods used for project management
- Business Analytics  **Will be shown later**
- Methods supporting decision making
- Risk management
- Basics of marketing

# Business Analytics – some reason why to discuss



- The data is not all in the ERP
- The tools are rigid and hard to learn
- The tools don't reflect how we work today
- They don't span the continuum of needs

# Information Overload

# IM/c





# What Users Need



## CEO

“I need to know that the people in my organization have the right goals in place to understand and **execute on the strategic initiatives** of the company.”



## VP, Operations

“I need better visibility into my cost of operations so I can **target specific cost reduction opportunities** that won't have a negative impact.”



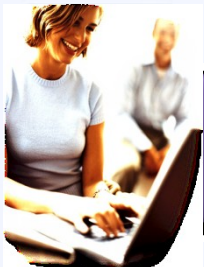
## CFO

“I need to improve our analytics capabilities so we can understand our current business performance and **do a better job of planning** for the future.”



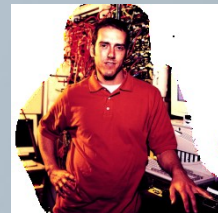
## VP, Sales and Marketing

“I need better visibility into our pipeline performance so I can **focus on deals** that help me grow business with my most profitable customers.”



## Sales Rep

“I need to have the right demographic information so I can **better target my opportunity prospecting**.”



## Customer Support Rep

“I need better access to information to **make better decisions** on cross-sell and up-sell opportunities.”

# Managing Through the profit valley

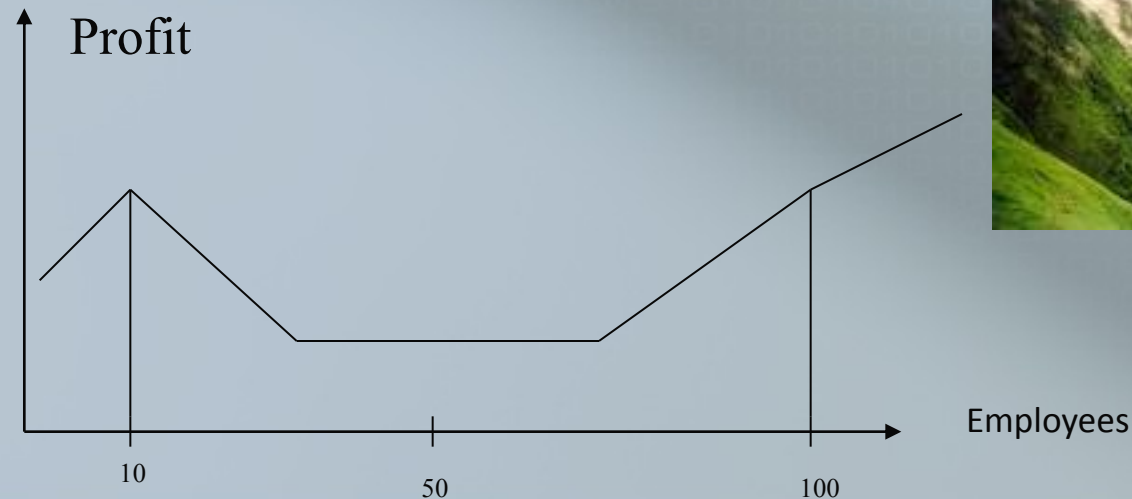
- Initially, most partners business are run by one or two founders, who manage every part of the business : sales and marketing, project management, service delivery management, accounting, sub-load and load, collection, HR and many many more....



Those guys are responsible for performing all day-to-day functions of their business

# Managing Through the profit valley

- As their business grows over 10 employees, it is impossible to perform all their role properly.
  - Cash flow becomes erratic (chaos)
  - Projects go offside,
  - Filling pipeline is a struggle
  - Revenue stays still strong but profitability drops
- Company is trapped in the „Profit Valley“



# Managing Through the profit valley

- How to escape the profit valley?
- How to avoid it ?
- First key
  - Maintain revenue velocity and the momentum of the new customer adds. You cannot afford to take the foot of the gas if you want to climb out of the valley
  - The portfolio of the customers must be some smaller and some larger
- Second key
  - Maintain high level of service quality to avoid discounting and efficiency factor
  - Sure Step methodology of project Management
  - Help desk
  - Right tools and right people



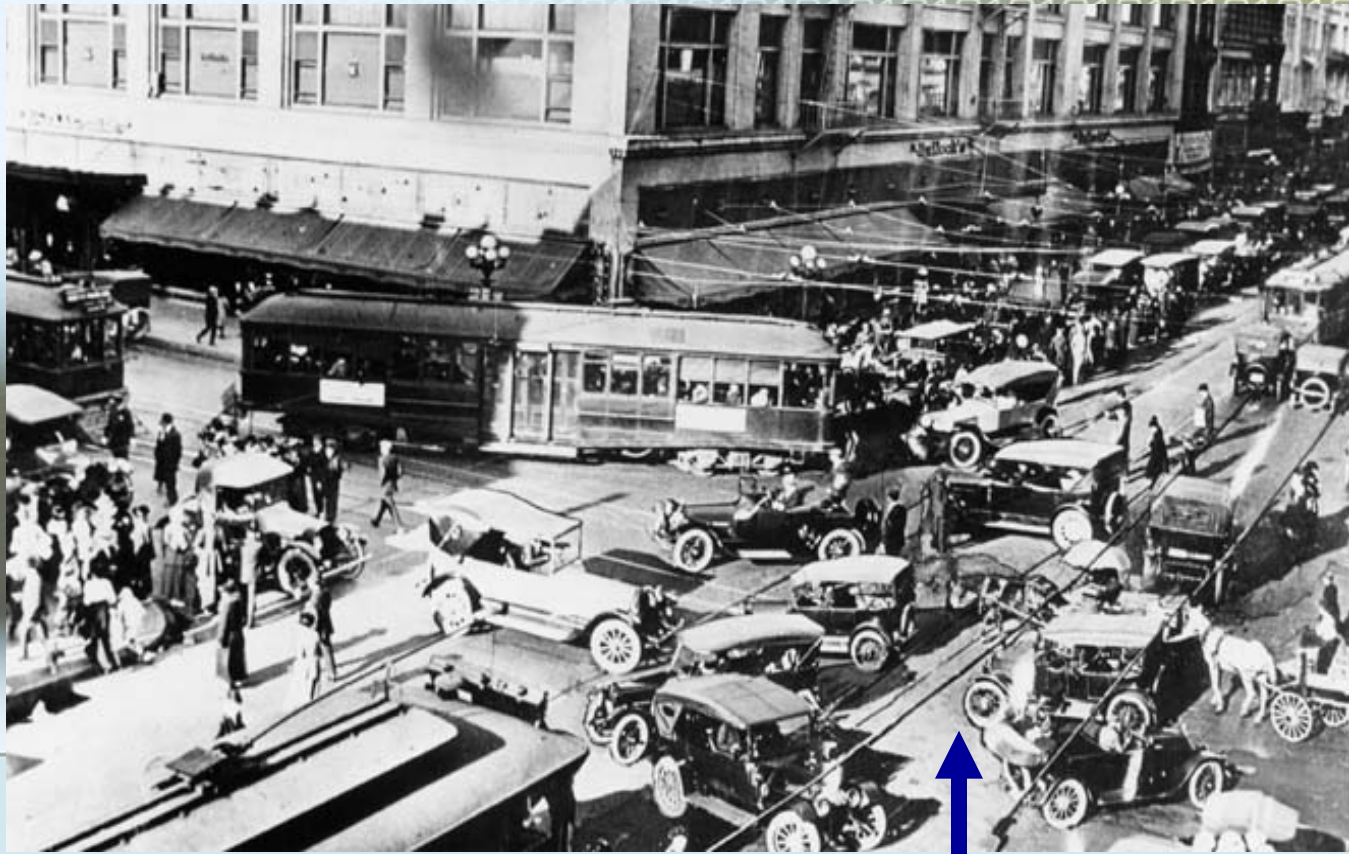
# Managing Through the profit valley

- Third key
  - Financial management control and cash flow is the king
  - Invoice quickly and pay consistently (but not early !!! )
  - To maintaining Cash- to-Cash cycle as short as possible
- Fourth key
  - Software package handling all aspects of financial customer relationship and project management
- Cash-to-Cash Cycle will be shown during TOC and Critical chain chapters



# Managing Through the profit valley

		Business control needs		
		Financials	General Management	Project
Specific Structural requirement	Driving Business Objectives	Max cash flow, Collecting early, paying not early	Maintaining revenue velocity, good Marketing machine	Reduce scope creep Efficiency factor Utilisation
	Personnel required	Full time CFO with excellent knowledge	Key staff (no job hopping)	Mixed team (juniors and seniors)
	Processes required	Rigorous FM driven by Key business objective above	Continuous Recruiting and training	Application of the Good project Methodology (Sure Step)
	Systems required	Dynamics NAV	Dynamics CRM	Project Management Software



## Thanks for Your Attention

Will be placed on IS.MUNI.CZ in  
the study materials

If everyone pulls at  
the different end of the rope,  
than your project results  
will be a mess...  
(see rule 99 %)