

ERP Project Activities

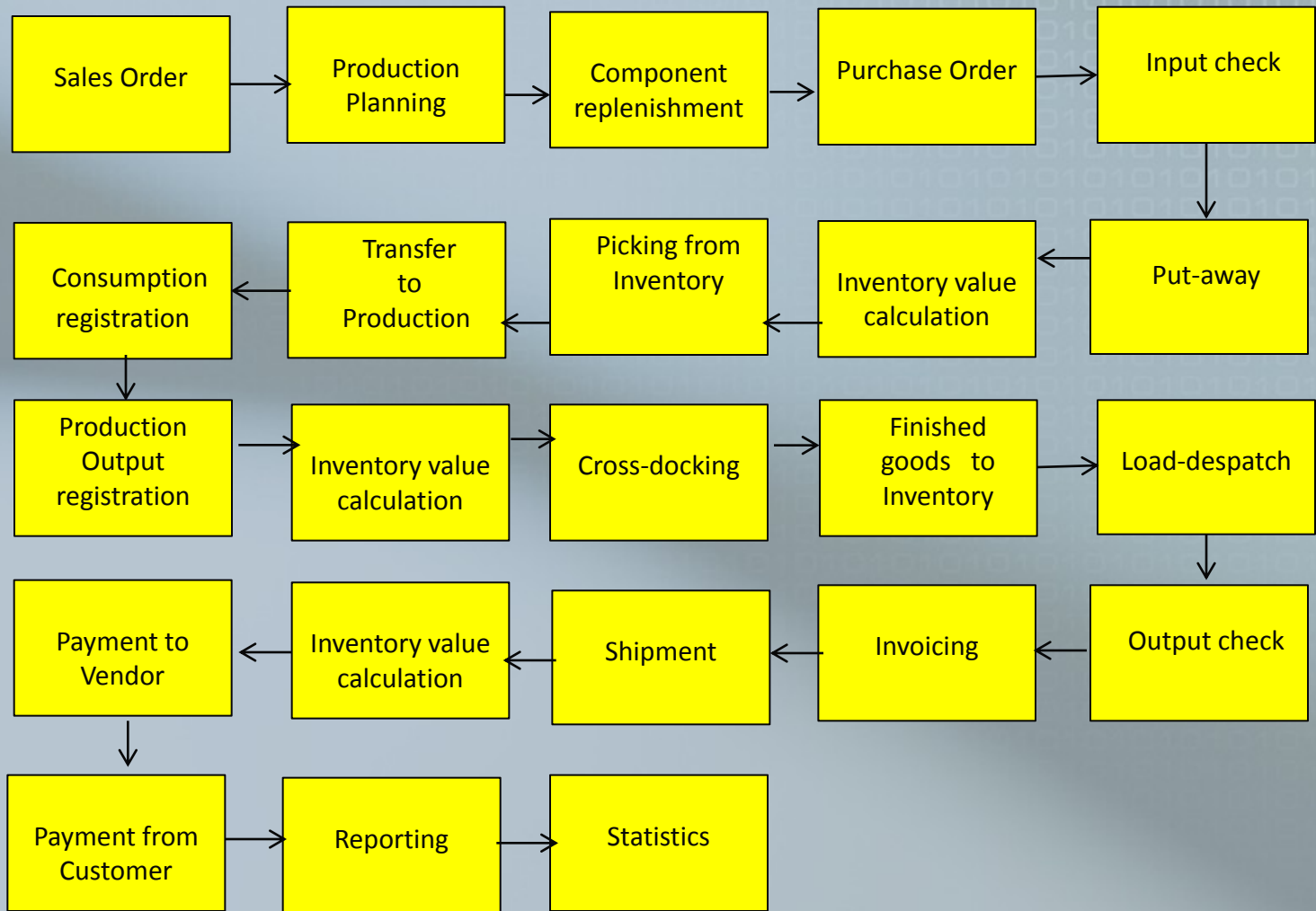
Skorkovský, ESF MU, Department of Business Economics , version 20160226

Your main task (not organised set of processes)

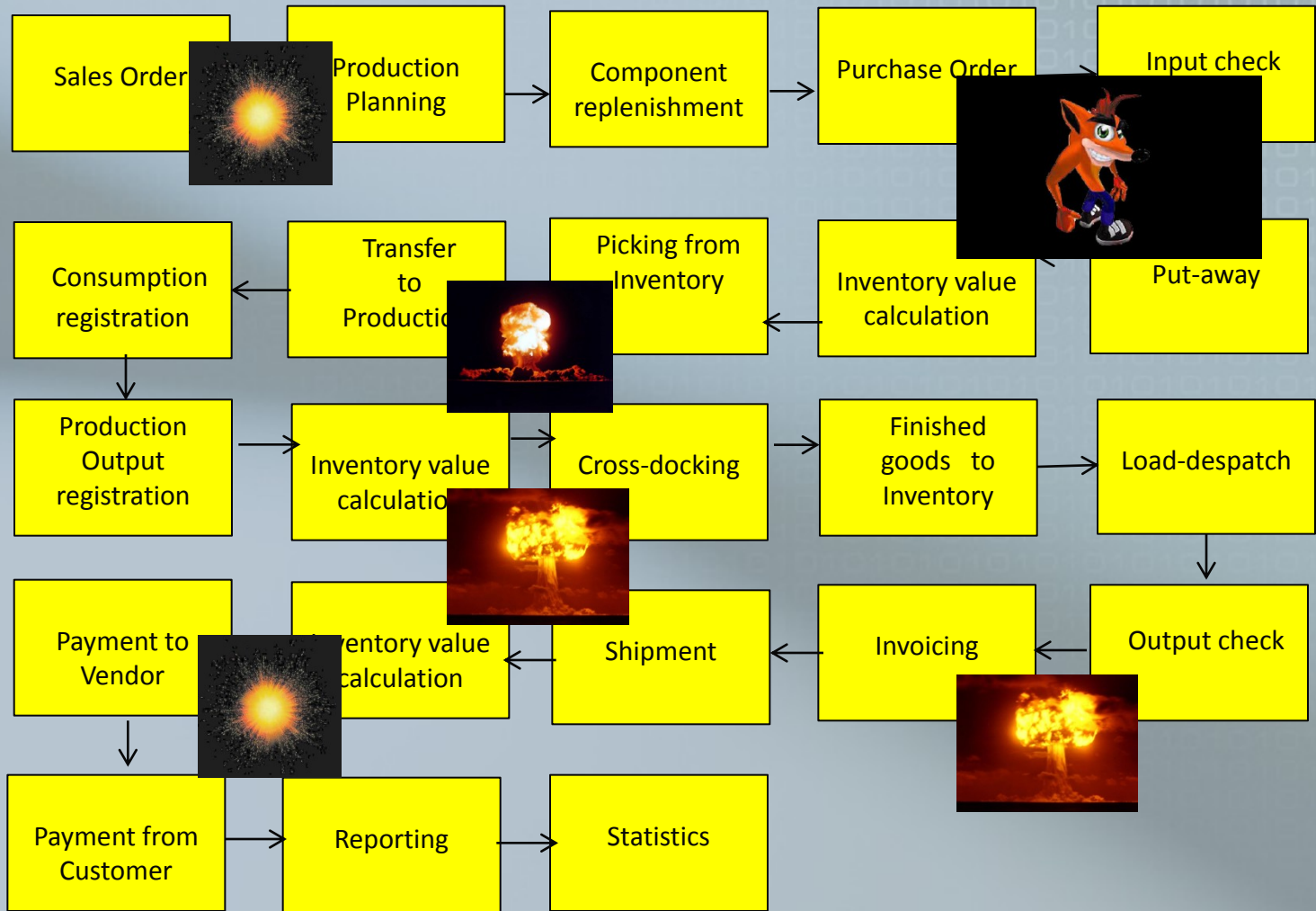
Load-despatch	Purchase Order	Reporting	Statistics
Consumption registration	Production Output registration	Inventory value calculation	Output check
Delivery	Production Planning	Sales Order	Component replenishment
Transfer to Production	Put-away	Cross-docking	Input check
Finished goods to Inventory	Picking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



Your main task (organised set of processes)

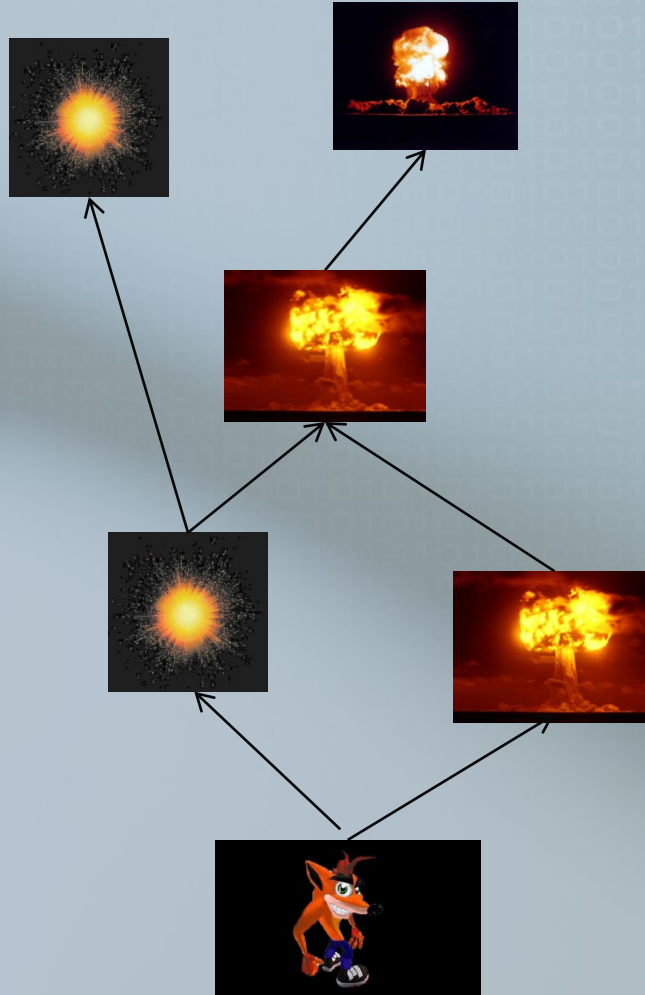


Your main task (possible problems, bottlenecks,..)



Your main task

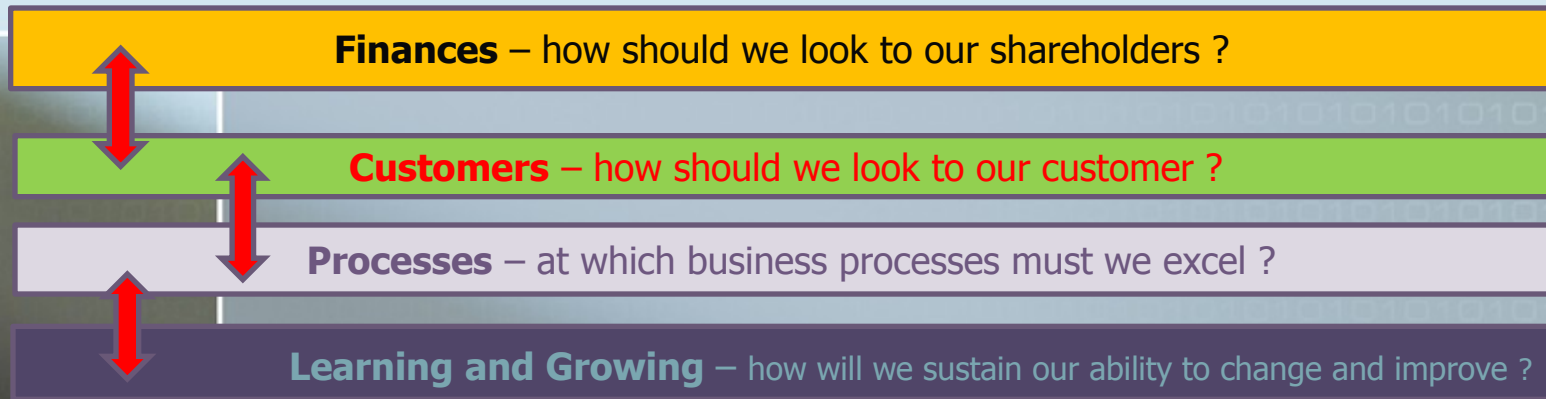
(Search - **HOW** ??? Measure impacts - **HOW** ??? and Destroy - **HOW** ???)



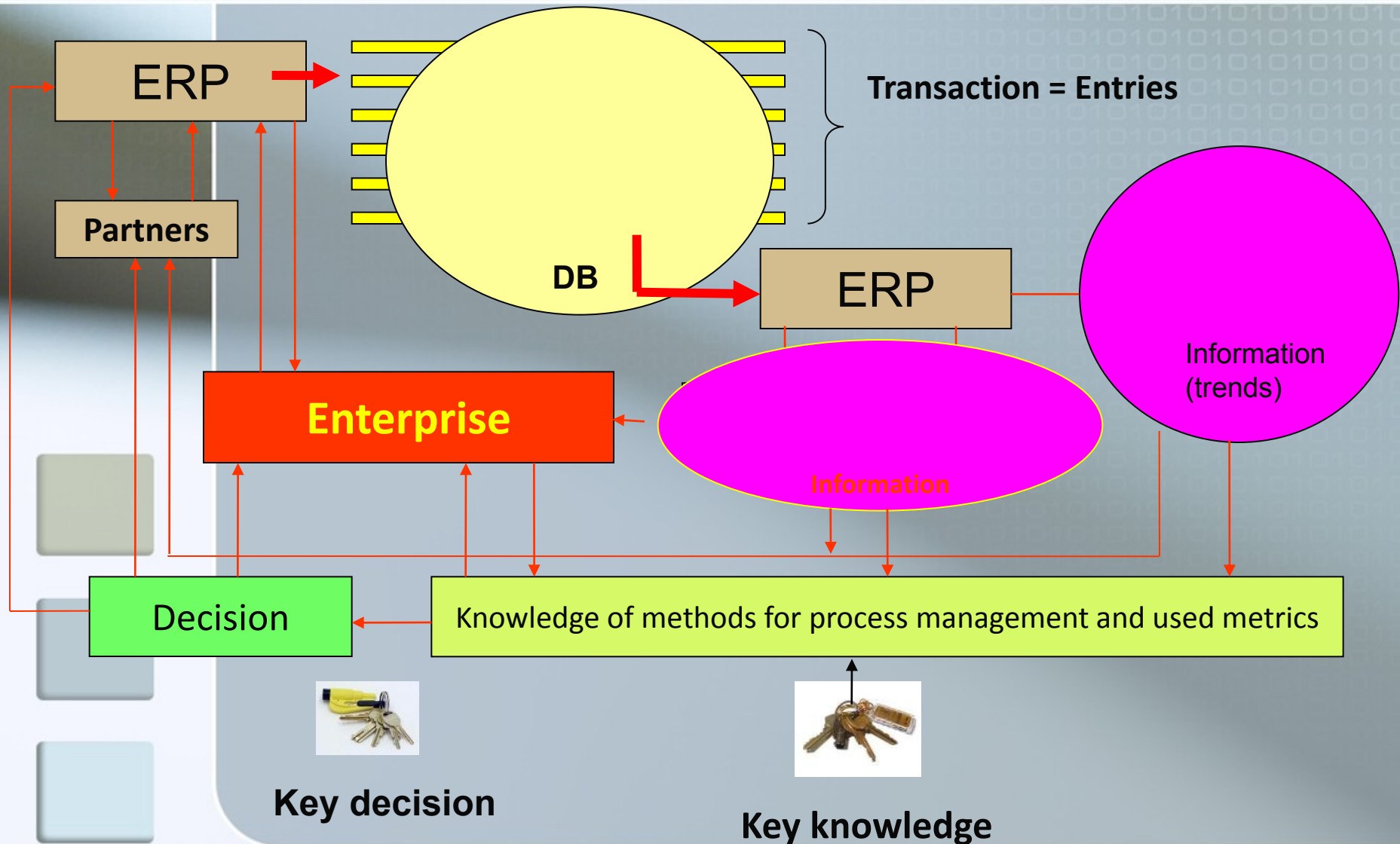
Methods (not sorted so far)

- Theory of Constraints
- Critical Chain
- Drum Buffer Rope
- Ishikawa Fishbone Diagram (Quality management)
- Pareto Analysis (ABC and stock)
- OLAP (On-Line Analytic Processing)
- Kepner –Tregoe method
- MaxMax and MaxMin (Hurwitz)
- ERP Statistics and reporting
- Little 's law
- Balanced Scorecard
- And many, many more.....

BS and OM – slide from Balanced Scorecard show (will be presented again in BS context)

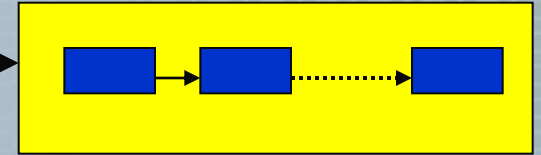
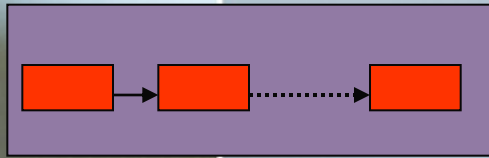


Simplified diagram of ERP usage

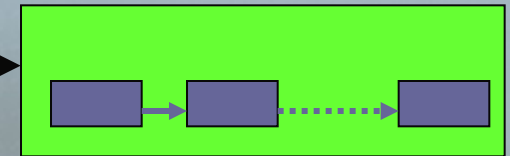
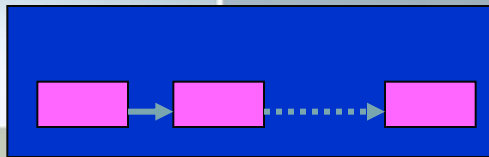


Purchase

Sales



Processes

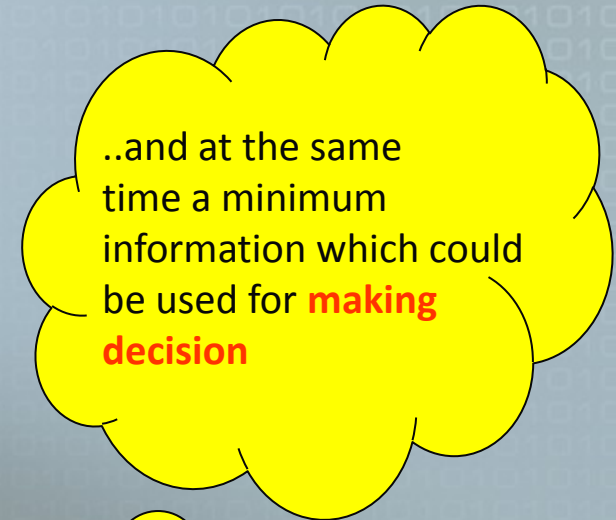


- Quotes->Net change calculation->
- >Order->Vendor batch tracking e->
- >Input Quality check->Receive, Put-away->
- >Invoicing

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

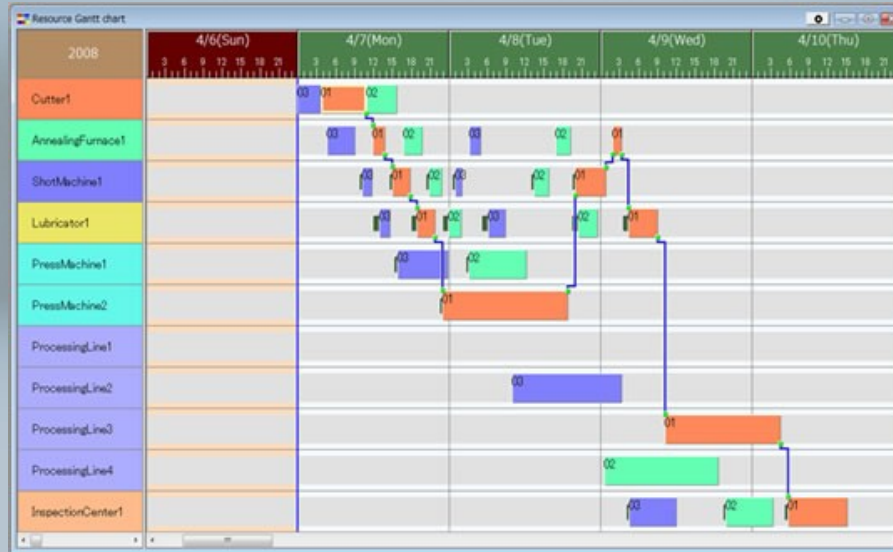
ERP

Main problem (one of many)



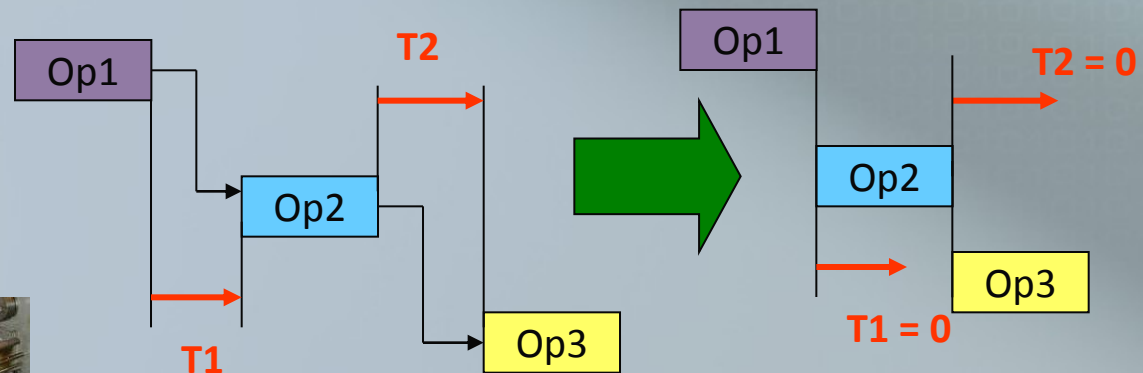
Main problem II (need of reliable data)

We need finite capacity scheduling (APS)

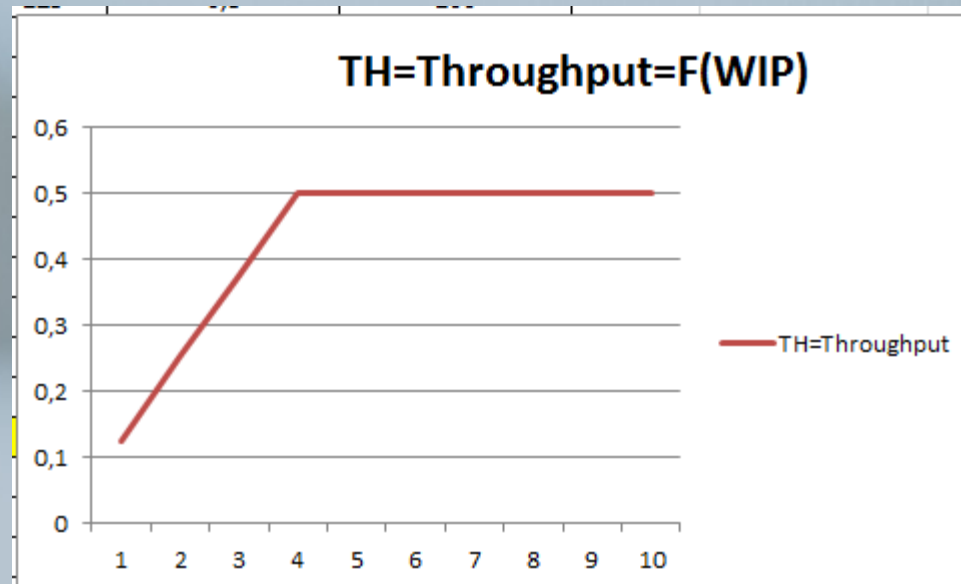


$$T1 + T2 = X$$

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

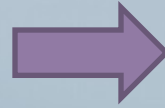


Basic problem II.



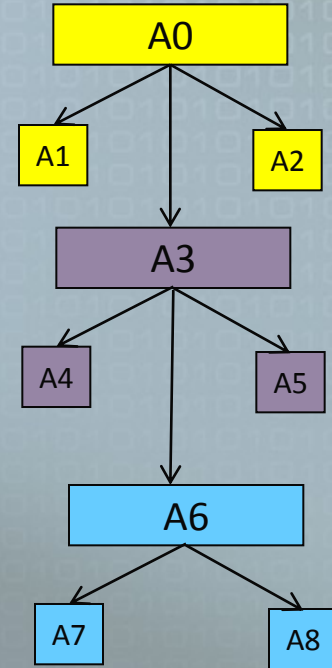
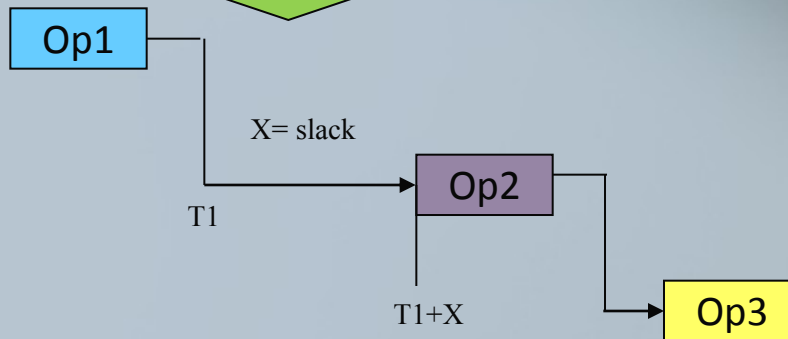
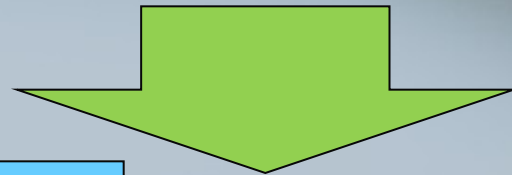
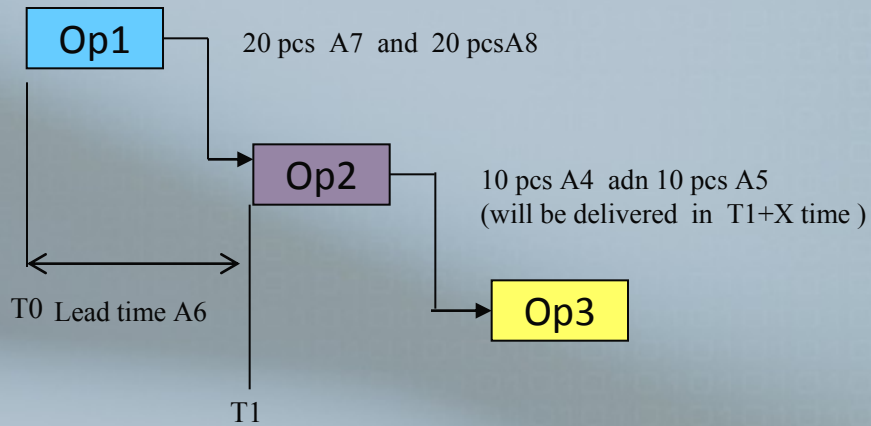
Little's Law

Basic problem IV.

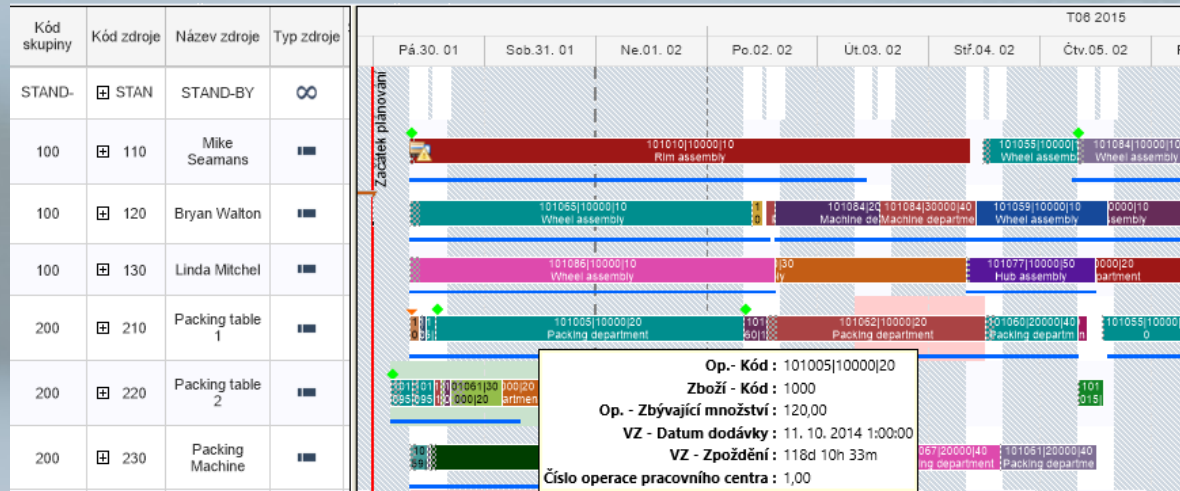


(**Black** -> White, **Setup time=60 minut**)
(White->**Black**, **Setup time = 20 minut**)

Basic problem (availability of components) V.



Basic problem (availability of components) V.



Prod. Order Routing

Operati... No.	Type	No.	Description	Starting Date-Time	Ending Date-Time	Setup Time	Run Time	Material Fixed Date
10	Work Center	100	Wheel assembly	18. 8. 2014 14:41	22. 8. 2014 8:31	110	12	23. 8. 2014 0:00
20	Work Center	200	Packing department	27. 8. 2014 8:31	1. 9. 2014 14:46	15	15	10. 9. 2014 0:00
30	Work Center	300	Painting department	1. 9. 2014 14:46	4. 9. 2014 10:46	10	20	
40	Work Center	400	Machine department	4. 9. 2014 11:11	5. 9. 2014 12:21	10	8	

APS result ->18.8.->23.8. a 27.8.->10.9

Why we cannot manage it ?



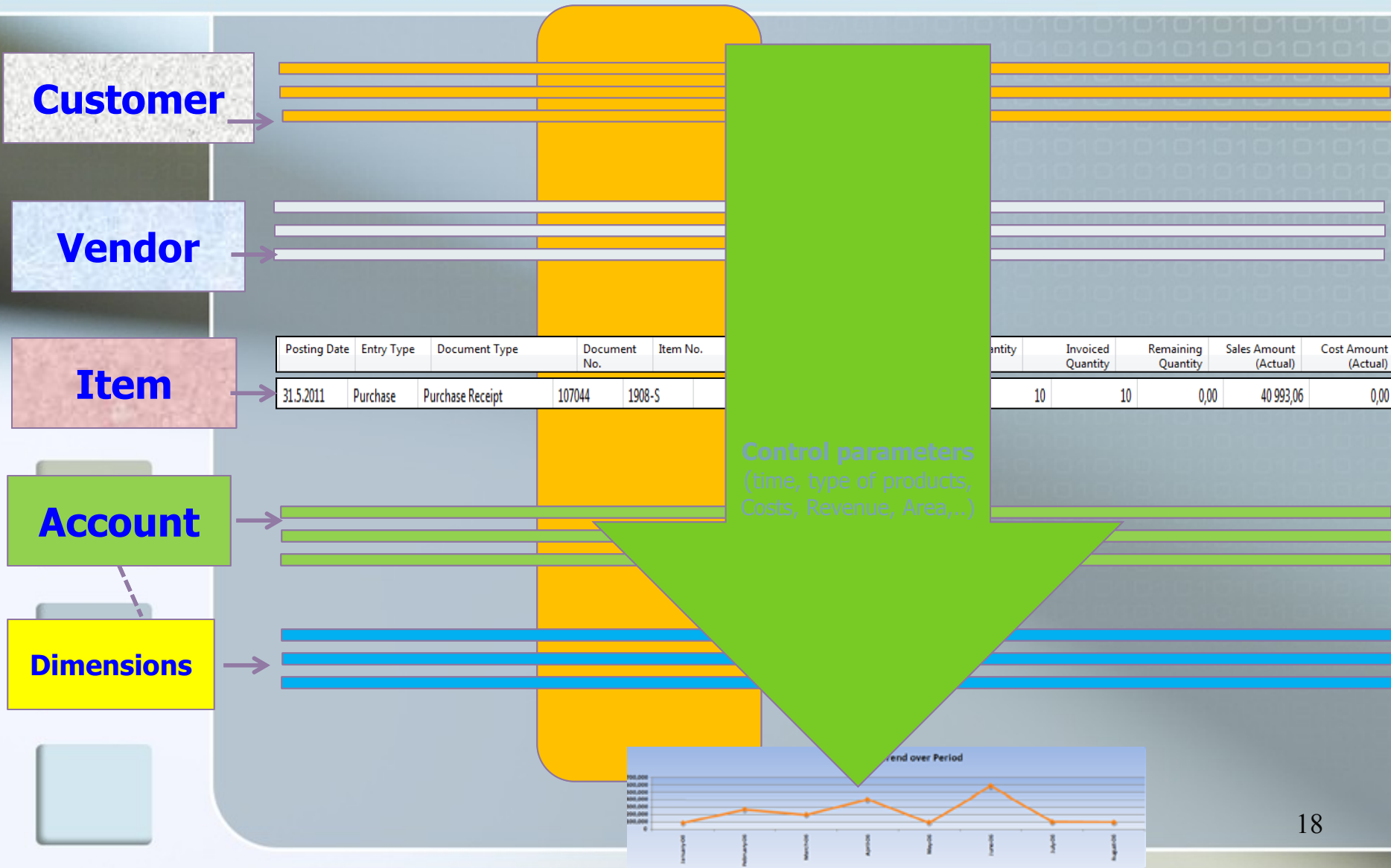
Unclear priorities, bad = **SOP** ,...

(**SOP** = Standard Operation Procedures)

Reporting (NAV tools or JETs)



Main principles (source tables and their entries)



- Working capital – setup of the accounting schedule from NAV

WC Working Capital Analysis - Účetní schéma

Název WC

Číslo řady	Popis	Typ s...	Součet	Typ řady	T...	Z...	Tučně	Nová strana
		Účty		Pohyb	Č..	A..		
	Working Capital Analysis	Účty		Pohyb	Č..	A..	✓	
1	Goods all	Součty	139995	Pohyb	Č..	A..		
2	Receivables	Součty	315995	Pohyb	Č..	A..		
3	Cash total	Součty	211995	Pohyb	Č..	A..		
4	Banks all	Součty	221995	Pohyb	Č..	A..		
TR	Receivables	Vzorec	1+2+3+4+5	Pohyb	Č..	A..	✓	
		Účty		Pohyb	Č..	A..		
5	Short bank credits	Účty	231000	Pohyb	Č..	A..		
6	Splatné závazky, celkem	Součty	321995	Pohyb	Č..	A..		
7	Prepayments	Účty	324100	Pohyb	Č..	A..		
8	Associate liabilities	Součty	368995	Pohyb	Č..	A..		
TP	Payables	Vzorec	5+6+7+8	Pohyb	Č..	A..	✓	
		Účty		Pohyb	Č..	A..		
▶	Working capital	Vzorec	TR TP	Pohyb	Č..	A..	✓	

Účetní sg... Funkce Tisk Nápověda

Some chosen analysis

Working capital – Show of the results from NAV

WC - WC - Náhled účetního schéma

Obecné Filtry dimenzí Možnosti

Název účetního schém... WC Filtr data 01.01.08..31.03.08

Název rozložení sloupce . WC Filtr rozpočtu

Číslo řady	Popis	Net change (0)	Net change (-3M)	Net change (-6M)	Net change (-9M)
	Working Capital Analysis				
1	Goods all	22 734 286,66	22 868 622,95	35 133 928,96	34 203 102,87
2	Receivables	8 896 962,33	15 620 590,10	13 095 293,10	-2 424 454,90
3	Cash total	-28 167,60	36 920,70		
4	Banks all	7 249 513,07	-161 688,80		-2 694 006,24
TR	Receivables	30 460 492,90	57 101 259,84	34 005 343,10	25 923 710,64
5	Short bank credits	-8 392 101,56	18 736 814,89	-14 223 878,96	-3 160 931,09
6	Splatné závazky, celkem	-12 766 412,03	-9 171 504,29	-3 876 790,60	295 083,40
7	Prepayments				
8	Associate liabilities				
TP	Payables	-21 158 513,59	9 565 310,60	-18 100 669,56	-2 865 847,69
	Working capital	9 301 979,31	66 666 570,44	15 904 673,54	23 057 862,95

1 7 31 3 12 < > Funkce Nápověda

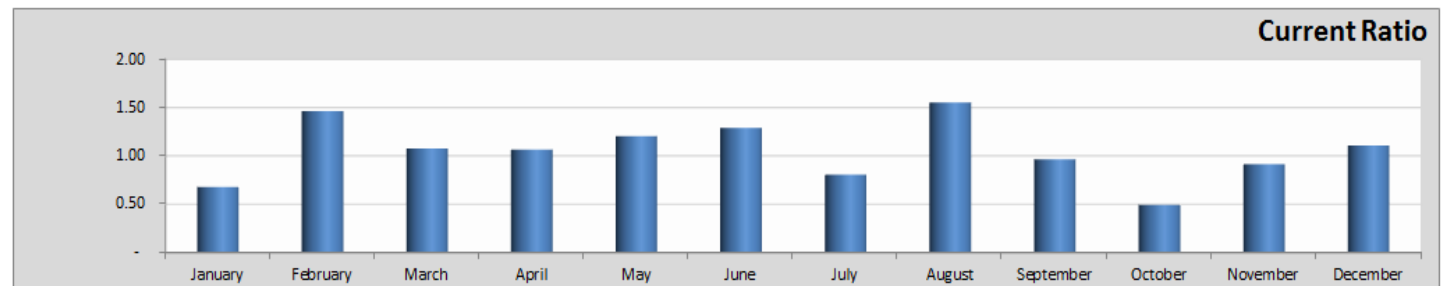
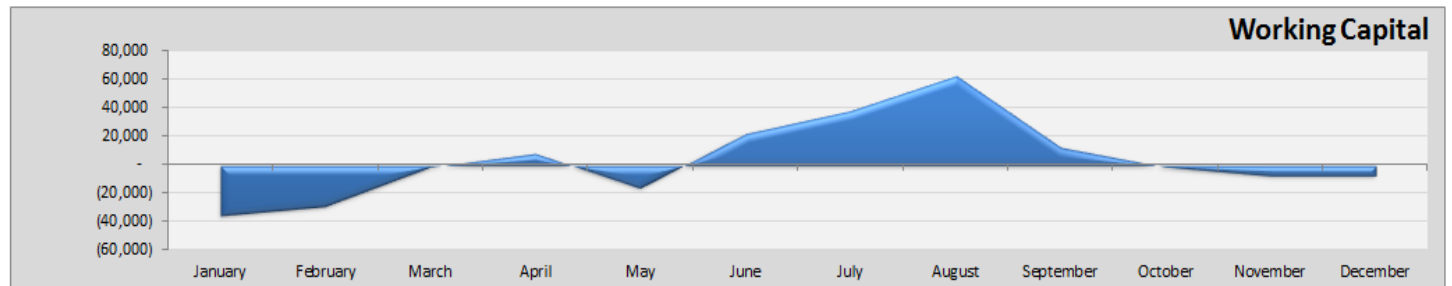
Some chosen analysis

Working capital – Show of the results from JETs

Working Capital & Current Ratio

Report Date 8/23/2011

2011												
	January	February	March	April	May	June	July	August	September	October	November	December
Current Assets	74,405	(90,939)	(16,110)	136,096	(92,528)	101,144	(155,777)	174,615	(363,170)	1,015	72,525	(72,789)
Current Liabilities	109,902	(62,118)	(14,989)	127,587	(76,890)	78,566	(193,757)	112,467	(376,168)	2,070	79,494	(65,841)
Working Capital	(35,497)	(28,821)	(1,121)	8,508	(15,638)	22,579	37,980	62,148	12,998	(1,055)	(6,969)	(6,948)
Current Ratio	0.68	1.46	1.07	1.07	1.20	1.29	0.80	1.55	0.97	0.49	0.91	1.11



Some chosen analysis

Inventory - Dashboard

Company

JetCorp, Belgium

JetCorp, North America

Location

Amsterdam Warehouse 1

Amsterdam Warehouse 2

Item Category

Awards & Recognition

Bags & Totes

Product Group

Flashlights

USB Drives

Year

2007 2008

2009 2010

Quarter

2010 Q1 2010 Q2

2010 Q3 2010 Q4

Month

2010 May 2010 Jun

2010 Jul 2010 Aug

Inventory Value

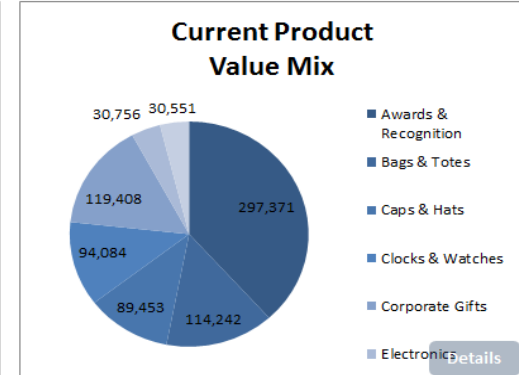
2010

■ Awards & Recognition ■ Bags & Totes ■ Caps & Hats

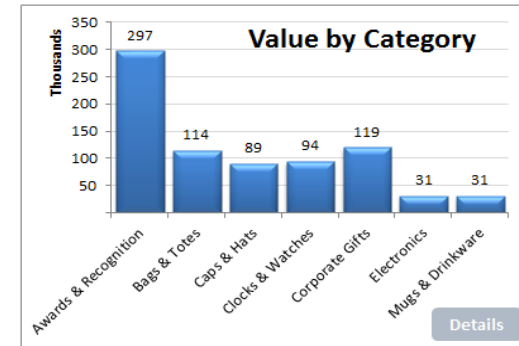
■ Clocks & Watches ■ Corporate Gifts ■ Electronics

■ Mugs & Drinkware

[Details](#)



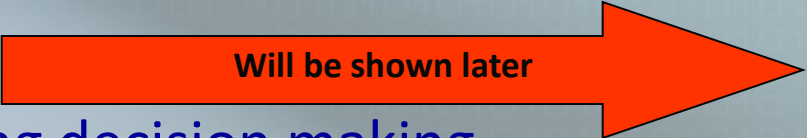
Average Inventory Value	Period	Prev. Yr	Variance	%	Grand Total
⊕ Awards & Recognition	188,840	200,797	-11,957	-5.95%	188,840
⊕ Bags & Totes	72,551	83,459	-10,908	-13.07%	72,551
⊕ Caps & Hats	56,765	63,983	-7,218	-11.28%	56,765
⊕ Clocks & Watches	57,043	63,353	-6,310	-9.96%	57,043
⊕ Corporate Gifts	73,856	81,520	-7,664	-9.40%	73,856
⊕ Electronics	19,293	18,451	842	4.56%	19,293
⊕ Mugs & Drinkware	19,052	16,732	2,320	13.86%	19,052



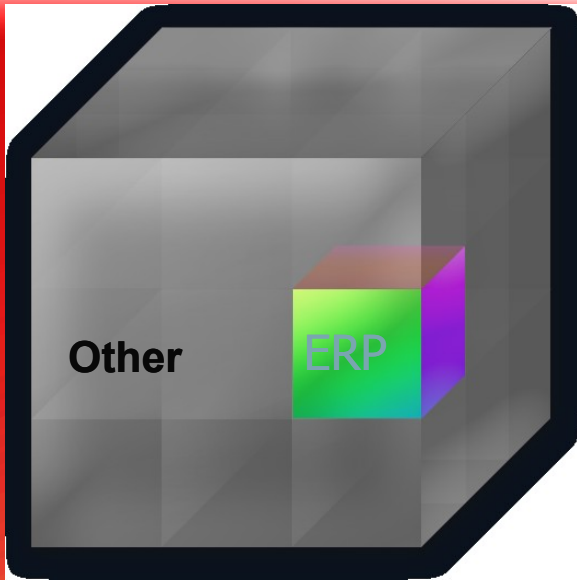
Knowledge of methods, which are necessary for project management and process management

- **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**
- **MS Office (Word, Power-Point and Excel)**
- **ERP system and its logic** (will be introduced- 28 hours)
- **Logistics** (part of ERP operations)
- **Finance Management and Controlling** (part of ERP operations)
- **Production Management (MRP, MRP-II, JIT and DBR)**
- **Market Analysis** (part of ERP operations)

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

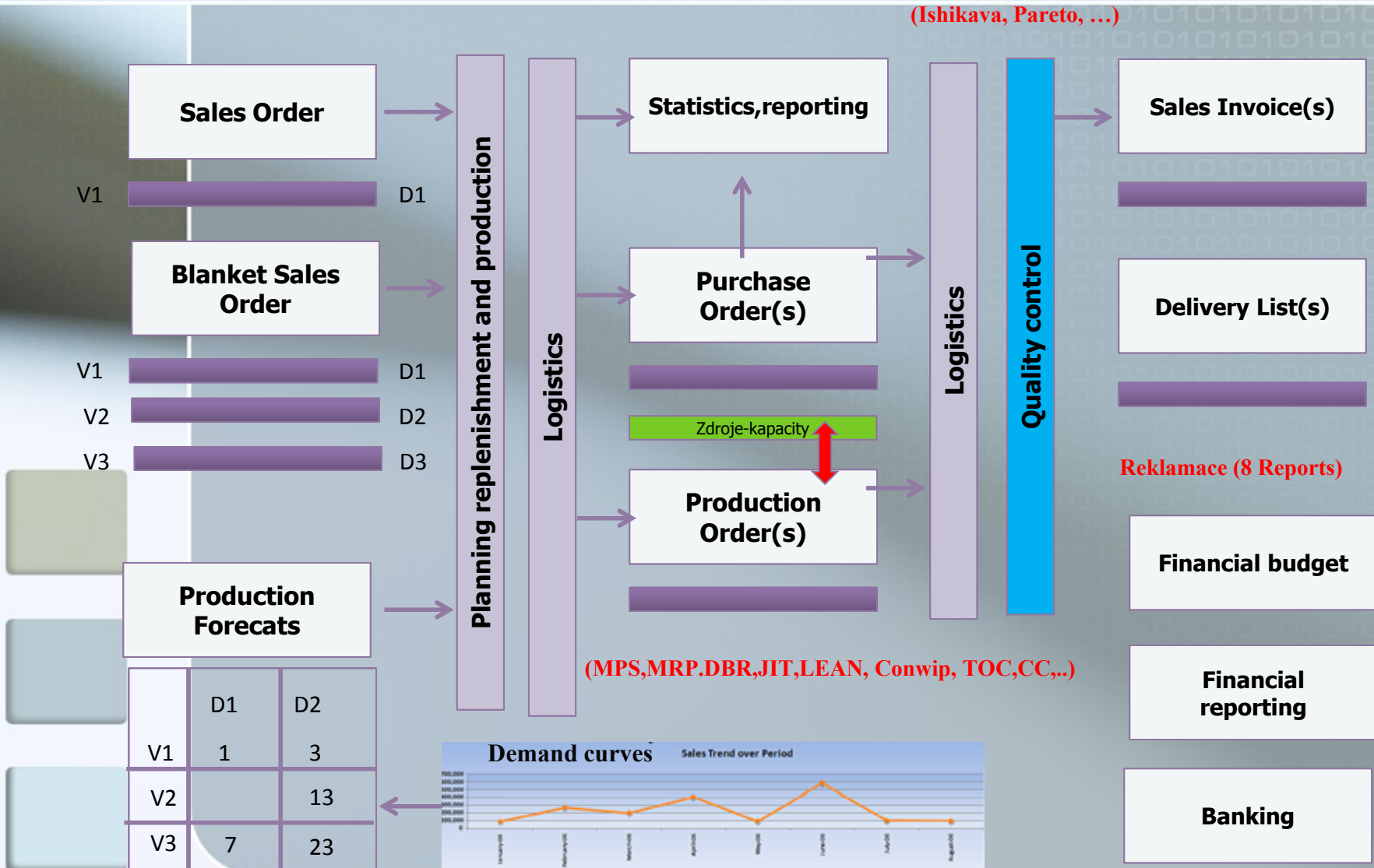
Business Analytics – some reason why to discuss



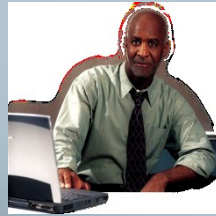
- The data is not all in the ERP
- The tools are rigid and hard to learn
- The tools don't reflect how we work today
- They don't span the continuum of needs

Financial management

Balance Scorecard, ERP, Business Intelligence (OLAP),...-



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."



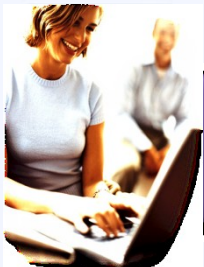
CFO

"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."



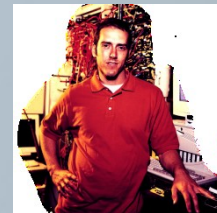
VP, Sales and Marketing

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



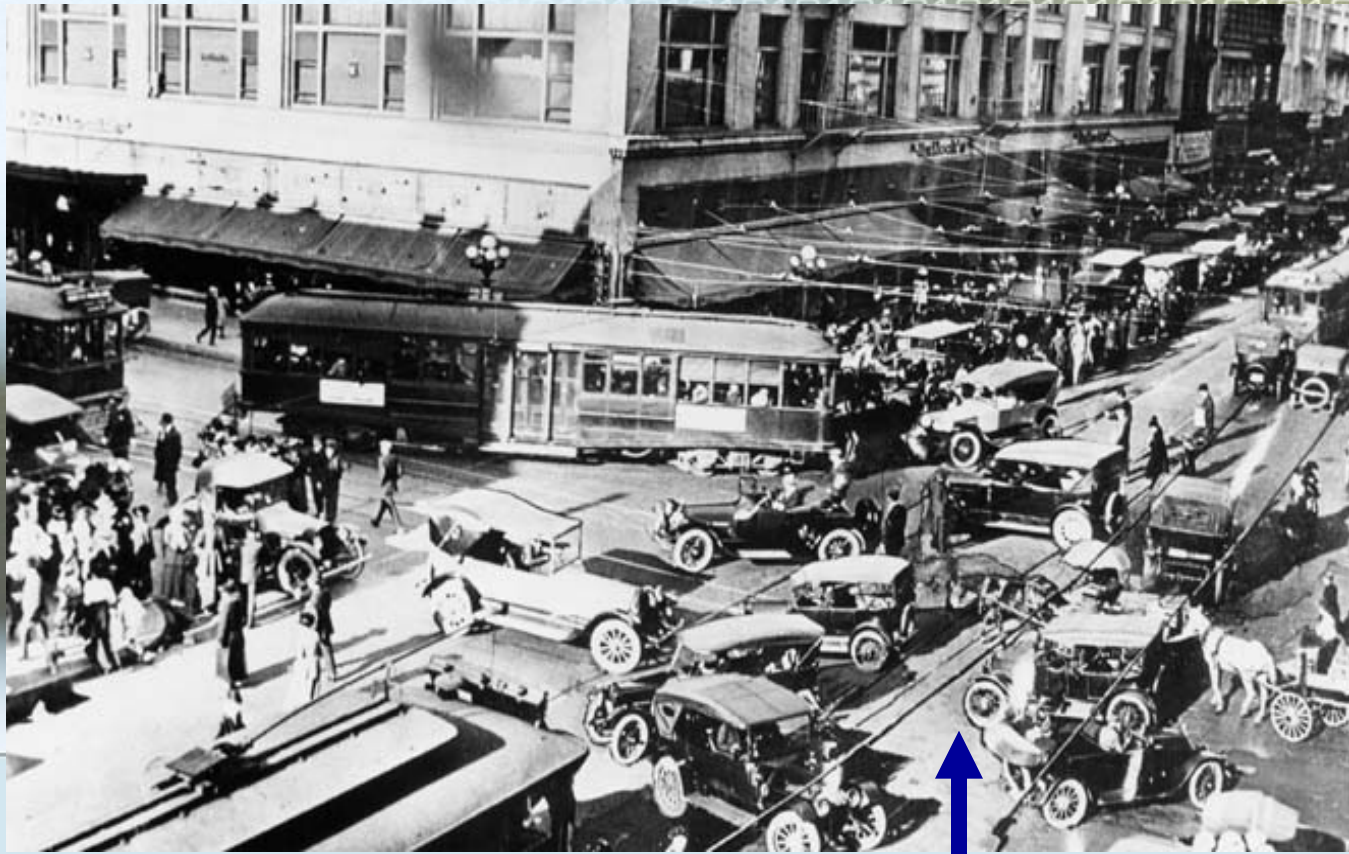
Sales Rep

"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."



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 %)