



EFFICIENT MARKETING

Effective Monitoring and Optimization of Shelf Availability in all Stores of a Chain

OSA Day September 2008



Shelf Availability / Out-of-Stocks

- ✓ Daily situation: Customer stands in front of the shelf, the product is not available because it is either not on the shelf or sold out
- ✓ Out-of-Stocks lead to disappointed customers, to lost sales and therefore, to reduction of turnover (mostly for a chain a significant amount)
- ✓ The disappointment of the customer is even bigger, when the customer went to the store especially because of the advertised promoted product and does not find the offer on the shelf



How big is the challenge?

Overview Shelf Availability / Out-of-Stocks in Week 24 to 31

	Promoted Goods	Regular Goods	Total Assortment
Week 24 to 31 Lost turnover during 8 weeks	1.58 Mio. €	4.10 Mio. €	5.68 Mio €
Average OOS in % calculated based on turnover	11.0%	3.9%	
Variance of OOS by stores and weeks	1% - 35%	1% - 20%	
Expansion of lost turnover for total year (300 stores and 52 weeks)	10.27 Mio. €	26.65 Mio. €	36.92 Mio. €

Example of a chain with 300 stores shows the huge challenge for retailers



Where is the Out-of-Stock problem?



> 98% optimization in supply chain

< 95%

- Most retailers have an automated supply chain. They've invested a lot of money the last few years to put in automatic replenishment methods and ERP systems. In this way the supply chain from factory/manufacturer to distribution centre and finally to the shop backstore warehouse is optimized for 98% or more(= ECR Europe figure)
- The last 50 meters, from the backstore warehouse to the shelf however, does not have the 98% or more reliability. It will normally not get higher then 95%. THIS is where SHELFMONITOR can efficiently measure the OOS and the availability of goods for consumers to buy

The Challenge is significant ...

- ✓ EFFICIENT MARKETING measures shelf availability in Food / Drug / DIY / C&C / etc.
- ✓ EFFICIENT MARKETING measures continuously hundreds of stores

	Promoted Goods	Regular Goods	Total Assortment
Variance of out-of-shelf in % by stores	1.6% - 23.9%	1.9% - 11.2%	

- Best measured chain by EFFICIENT MARKETING → 2.2% OOS
- Worst measured chain by EFFICIENT MARKETING → 8.9% OOS



Requirements for reducing OOS

We must be capable to:

✓ measure OOS at store level effectively and accurately

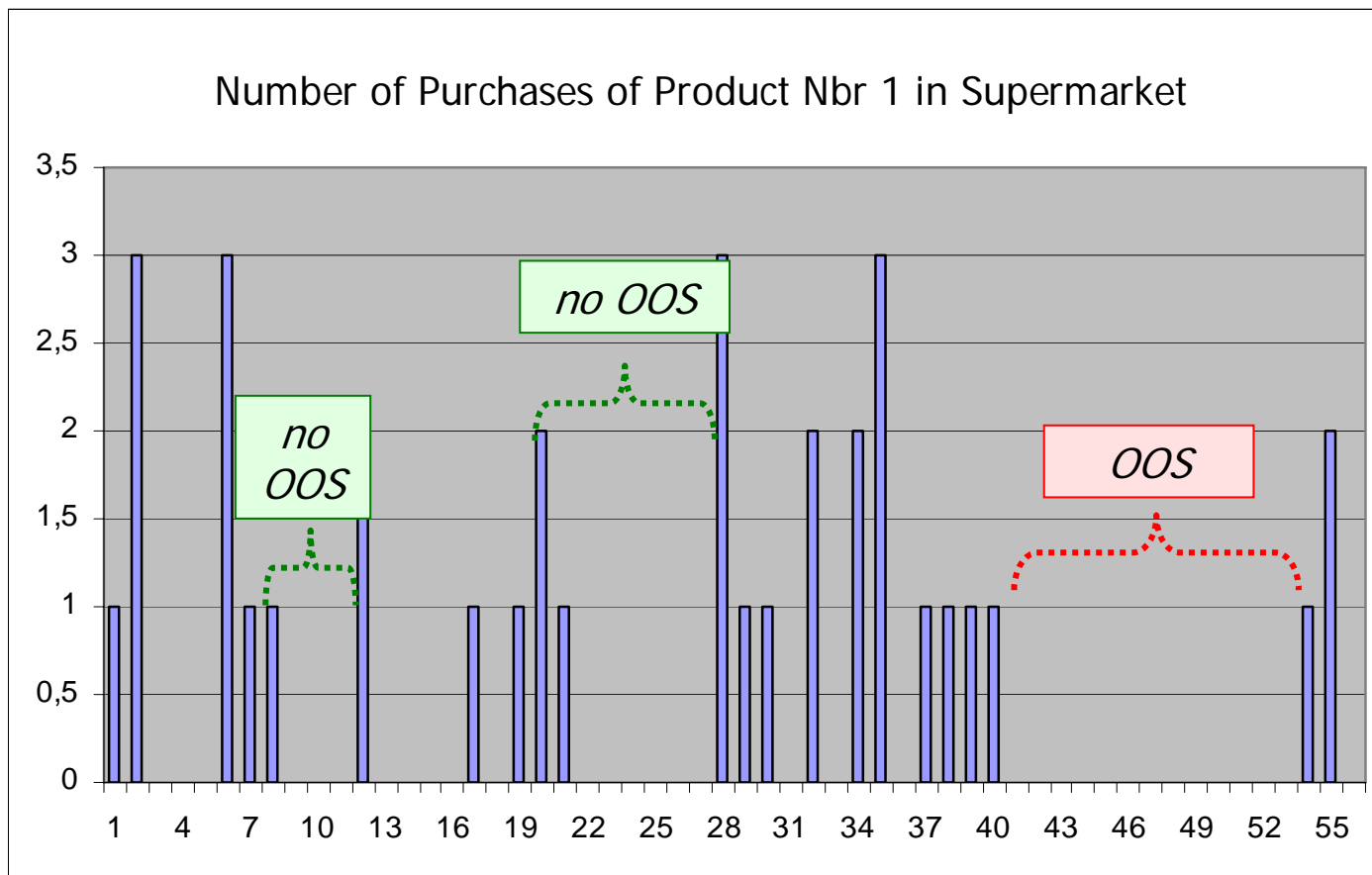
➔ In order to control and manage at chain level, retailer and manufacturer need to know the total impact of OOS in all stores:

- Exact start of Out-of-Shelf occurrence
- Exact end of Out-of-Shelf occurrence
- Length of Out-of-Shelf in days
- Missed sales of article due to OOS
- Missed turnover of article due to OOS
- Missed margin due to OOS*



Measure OOS at store level **effectively and accurately**

- ✓ The following chart shows for product XXX the number of purchases by day over a period of 55 consecutive sales days in a supermarket
- ✓ Product Yoghurt, flavor XX: **Out-of-stock between days 41 and 54**



Prerequisites for reducing OOS

- ✓ EFFICIENT MARKETING has developed a new method measuring shelf availability accurately with basket data (checkout slip data)
- ✓ The method is extremely effective and costs only few € per store and week (depending on the assortment range of the store) and can measure selected or all products over the entire assortment in each store of the chain
- ✓ There is an option to run the system in selected or all stores real time and to take action to remove out-of-stock immediately → SHELFMONITOR STORE
- ✓ Input data needed:
 - ◆ detailed basket data (checkout slip data)
 - ◆ promotion calendar
 - ◆ article, category and store master



How reliable are the results from SHELFMONITOR?

- ✓ The functioning of SHELFMONITOR is based on statistical principles, and some statistical errors are unavoidable
- ✓ The experience with various retailers show that we are able to correctly identify as much as 95% of missed sales and turnover. Consequently, the statistical errors will not reduce the usability of SHELFMONITOR at all
- ✓ Furthermore, in an initial phase it is possible to verify the accuracy by comparing the results from SHELFMONITOR with manual audits
- ✓ Such comparison has shown that SHELFMONITOR is a valuable and efficient instrument for managing shelf availability

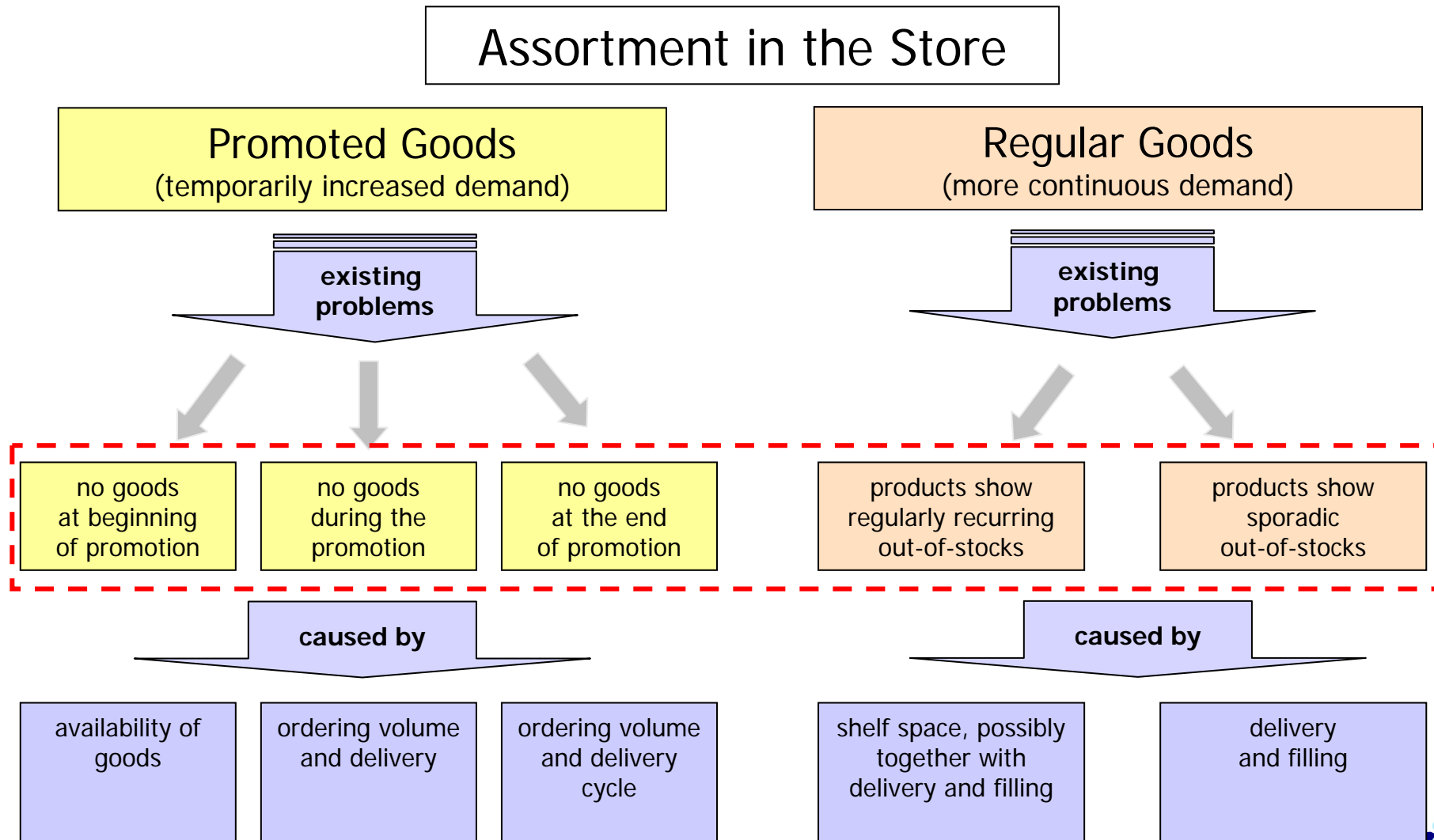


What needs to be measured for OOS?

- Out-of-shelf is not equal out-of-shelf because shortage occurs due to different reasons
- ✓ To find out weaknesses of the last 50 meters from the backstore warehouse to the shelf, it is important to identify articles for which OOS occur due to similar reasons
- ✓ Practical examples:
 - ◆ No promoted goods in the shelf at the start of the promotion period → caused by availability of goods
 - ◆ OOS during promotion period → caused by order volume and delivery
 - ◆ If regular goods show continuously recurring OOS, possible causes must be identified (available shelf space, possibly together with delivery and filling)



Shelf Availability in the Store/Out-of-Stocks



List of measured OOS facts

- ✓ Available key information:
 - Exact start of Out-of-Shelf occurrence
 - Exact end of Out-of-Shelf occurrence
 - Distinction between promoted and non promoted
 - Additional flags for promotions → OOS at start/during/end
 - Length of Out-of-Shelf in days
 - Missed sales of article due to OOS
 - Missed turnover of article due to OOS
 - Missed margin due to OOS*
- ✓ Additional information for planning:
 - ◆ Sales per day if 'In Stock'
 - ◆ Quality of the basket: average number of articles, turnover and margin
- ✓ Trending of OOS information:
 - Classification of each OOS by week (end of OOS period)
- ✓ All key information is shown per article and store, as well as over selected periods and stores and total chain

Turning into action ...

✓ SHELFMONITOR:

The screenshots show the following reports and data:

REGALMONITOR Artikelbericht RETAILER XX

Normalware - Übersicht entgangene Verkäufe durch Lagerlücken aller Normalwaren-Produkte nach Filialen
 verursacht durch Regalplatz, Belieferung oder Nachfüllen

Berichtsperiode (1 Wochen)	Filiale	Filialbez	Region / Bezirk	Anzahl LL	Durchschn. LL Dauer	Max. Anzahl entgangener Artikel mit LL	Anzahl Käufe	Entgangene Menge	Entgangener Umsatz	
18.2005.30	TOTAL			532	52	309	171	2.81	249	21320
19.2005.30	5622	Adresse / Ort	Hr. Meier	34	2	27	5	2.58	32	2480
20.2005.30	4316	Adresse / Ort	Hr. Müller	36	4	24	8	2.32	33	1592



Questions to be answered ...

- ✓ Key performance indicators of shelf availability by store (short and medium term)
 - ◆ What is the turnover lost due to OOS at chain level over x months?
 - ◆ Which stores show the best shelf availability with the smallest turnover lost due to OOS?
 - ◆ Which stores show the worst shelf availability with the largest turnover lost due to OOS?
 - ◆ What is the difference between the best group of stores and the worst group of stores?
 - ◆ In which stores the employees must be guided to perform better in order to realize the turnover potential?
 - ◆ Is the trend in stores with high OOS increasing or decreasing?
 - ◆ Where do we find major problems (promoted goods or regular goods)?



Questions to be answered ...

✓ Regular goods:

- ◆ What is the size of the OOS problem for regular goods?
- ◆ Which articles show regularly recurring OOS?
- ◆ Which articles show sporadic OOS?
- ◆ Is the core assortment available to the customer at any time?
- ◆ Which top products of the core assortment show OOS?
- ◆ etc.

✓ Promoted goods:

- ◆ What is the size of the OOS problem during a promotion week at chain level?
- ◆ Which promoted articles show OOS? When do they show OOS (start/during/end of promo)? What is the turnover lost?
- ◆ Which stores are involved? Which stores show few or no OOS?
- ◆ What would have been the sales volume needed to avoid OOS?
- ◆ etc.



Example: Benchmarking stores and store staff

→ Which stores show the worst shelf availability and high turnover lost due to OOS?

Filiale	Filialbez	Region / Bezirk	Entg. Umsatz Aktionsware durch LL	Entg. Umsatz Normalware durch LL	Entg. Umsatz total durch LL	Anteil in % entg. Umsatz durch LL (Basis Gesamtumsatz Geschäft)	Anteil in % kumuliert	Anteil entg. Umsatz Aktionsware in % im jeweiligen Geschäft	Anteil entg. Umsatz Normalware in % im jeweiligen Geschäft
	Gesamt Vertriebsschiene		4201734	11456476	15658210	5,95		26,83	73,17
039	Shop 039	14	99027	71244	170271	11,67	1,09	58,16	41,84
222	Shop 222	15	37385	87262	124647	9,94	1,88	29,99	70,01
085	Shop 085	14	29347	199300	228647	9,38	3,34	12,84	87,16
069	Shop 069	14	31238	167887	199125	9,38	4,62	15,69	84,31
217	Shop 217	12	75671	313806	389476	9,12	7,10	19,43	80,57
313	Shop 313	12	64614	322056	386670	8,97	9,57	16,71	83,29
321	Shop 321	11	104360	316085	420445	8,80	12,26	24,82	75,18
052	Shop 052	12	49101	210936	260037	8,37	13,92	18,88	81,12
071	Shop 071	15	30492	139596	170088	8,21	15,00	17,93	82,07
049	Shop 049	12	31445	111169	142613	8,10	15,92	22,05	77,95
312	Shop 312	16	59309	238573	297882	8,05	17,82	19,91	80,09
315	Shop 315	15	39599	230751	270350	8,04	19,54	14,65	85,35
316	Shop 316	14	54386	322542	376928	7,94	21,95	14,43	85,57
423	Shop 423	11	16576	38685	55261	7,90	22,30	30,00	70,00
319	Shop 319	11	56635	288359	344994	7,84	24,51	16,42	83,58
063	Shop 063	14	48612	123848	172460	7,59	25,61	28,19	71,81
031	Shop 031	11	26890	90228	117118	7,51	26,36	22,96	77,04
018	Shop 018	14	43193	174637	217830	7,42	27,75	19,83	80,17
084	Shop 084	12	139140	701598	840738	7,41	33,12	16,55	83,45
089	Shop 089	11	49481	138457	187938	7,32	34,32	26,33	73,67

→ few stores (13%) are causing 34% of the problem!



Example: Benchmarking stores and store staff

→ Which stores show the best shelf availability and low turnover lost due to OOS?

Filiale	Filialbez	Region / Bezirk	Entg. Umsatz Aktionsware durch LL	Entg. Umsatz Normalware durch LL	Entg. Umsatz total durch LL	Anteil in % entg. Umsatz durch LL (Basis Gesamtumsatz Geschäft)	Anteil in % kumuliert	Anteil entg. Umsatz Aktionsware in % im jeweiligen Geschäft	Anteil entg. Umsatz Normalware in % im jeweiligen Geschäft
Gesamt Vertriebschiene			4201734	11456476	15658210	5,95		26,83	73,17
029	Shop 029	16	19605	45767	65373	3,87	95,49	29,99	70,01
068	Shop 068	15	10081	29562	39643	3,76	95,75	25,43	74,57
240	Shop 240	11	28879	26565	55444	3,75	96,10	52,09	47,91
420	Shop 420	11	19229	16221	35450	3,72	96,33	54,24	45,76
092	Shop 092	11	13179	49609	62788	3,67	96,73	20,99	79,01
021	Shop 021	12	13735	32497	46232	3,53	97,02	29,71	70,29
221	Shop 221	15	9906	32202	42107	3,52	97,29	23,53	76,47
411	Shop 411	11	13017	38053	51070	3,50	97,62	25,49	74,51
412	Shop 412	13	9745	38531	48276	3,48	97,93	20,19	79,81
046	Shop 046	15	10195	27968	38162	3,39	98,17	26,71	73,29
096	Shop 096	11	11791	25127	36918	3,33	98,40	31,94	68,06
028	Shop 028	16	11188	35172	46360	3,30	98,70	24,13	75,87
062	Shop 062	11	2263	23535	25798	3,26	98,87	8,77	91,23
419	Shop 419	14	11867	38553	50421	3,22	99,19	23,54	76,46
239	Shop 239	14	6673	30539	37213	3,15	99,43	17,93	82,07
236	Shop 236	13	5327	8527	13854	3,09	99,51	38,45	61,55
421	Shop 421	11	7423	7848	15271	2,67	99,61	48,61	51,39
242	Shop 242	11	8465	14768	23233	2,67	99,76	36,44	63,56
235	Shop 235	11	3914	16103	20017	2,61	99,89	19,55	80,45
424	Shop 424	14	7582	10005	17587	2,41	100,00	43,11	56,89

→ few stores (13%) are causing only 6% of the problem!



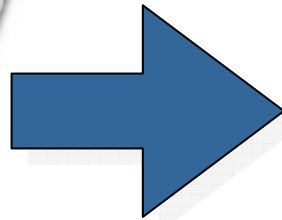
SHELFMONITOR provides you ...

- ✓ Systematical measurement of OOS in all stores
- ✓ Overview of OOS per store & financial impact
- ✓ Trace possible causes of OOS per store
- ✓ Benchmark stores / store staff
- ✓ Reduce OOS percentage
- ✓ Better plan order quantities for promotion
- ✓ Efficient, independent & objective method
- ✓ No infrastructure investment (HW&SW) needed
- ✓ Very cost effective -> only few € per shop & week

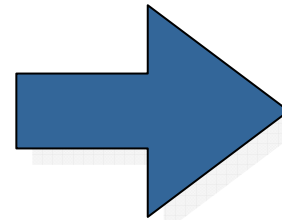
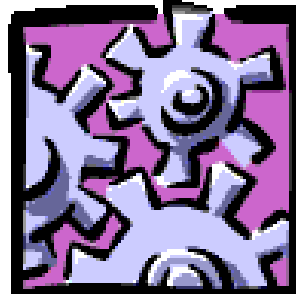


Ongoing process to control OOS

- ✓ Four steps process:
 1. Measure OOS at store level effectively and accurately
 2. Analyse problems
 3. Detect causes
 4. Solve problems
- ✓ Simple and efficient method (no big projects)



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Article No.	Cat Name	OOS	Actual Stock
10000001	ARTICLE 00001	10	100
10000002	ARTICLE 00002	5	50
10000003	ARTICLE 00003	15	150
10000004	ARTICLE 00004	8	80
10000005	ARTICLE 00005	12	120
10000006	ARTICLE 00006	7	70
10000007	ARTICLE 00007	9	90
10000008	ARTICLE 00008	6	60
10000009	ARTICLE 00009	11	110
10000010	ARTICLE 00010	4	40





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