



German hospital pilot project:
ROI with putting GS1 Standards in place
GS1 Healthcare Conference Toronto
Bettina Bartz, GS1 Germany GmbH

Pilot hospital: Herz Zentrum Bad Krozingen

- Heart Centre Bad Krozingen in Baden-Württemberg, Germany
- Specialised in cardiology, heart surgery, vascular surgery and angiology
- All together the heart centre has 256 beds



HERZ  ZENTRUM
BAD KROZINGEN

DRG (diagnoses related groups) – accounting/calculation

- The hospitals target in participating in this project was to cut down the processes of the cost unit accounting.
- Why use of cost unit accounting?
 - To be used for benchmarking
 - Data has to be delivered to InEK, according to legislative rules

Example:

BuchDat	KoA	Bezeichnung	BzGr	Menge	Betrag	SKZ	BelegNr	Belegdatum	Hk	HBA	BuA	BP	Buchungstext	KSt
04.09.2006	413305	Wahlleistg. Telefon 16%		0	-0,26		6015687	02.09.2006	F	SB	W	8	earnings Chip-Karten-Telefon	90109
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04.09.2006	413305	Wahlleistg. Telefon 16%		0	-0,26		6015687	02.09.2006	F	SB	W	8	earnings Chip-Karten-Telefon	90109
04.09.2006	413305	Wahlleistg. Telefon 16%		0	-0,17		6015687	02.09.2006	F	SB	W	8	earnings Chip-Karten-Telefon	90109
04.09.2006	413305	Wahlleistg. Telefon 16%		0	-4,31		6015687	02.09.2006	F	SB	W	8	earnings Chip-Karten-Telefon	90109
04.09.2006	413305	Wahlleistg. Telefon 16%		0	-1,3		6015687	02.09.2006	F	SB	W	9	earnings Chip-Karten-Telefon	90109
08.09.2006	416301	IV DAK: DRG		0	-4.089,00		6016141	07.09.2006	F	SB	W	9	F57A IV DAK: DRG	92985
08.09.2006	416302	IV DAK: Drug-Eluting-Stent		0	-x.xxx,00		6016141	07.09.2006	F	SB	W	8	IV DAK: Drug-Eluting-Stent	92985
14.09.2006	560000	Skonti	st	5	xx,xx		63487	31.08.2006	F	ER	B	8	Skonto Lieferant A	92019
14.09.2006	560000	Skonti	st	2	xx,xx		63485	07.09.2006	F	ER	B	8	Skonto Lieferant A	92019
14.09.2006	560000	Skonti		0	-xx,xx		88	14.09.2006	F	AZ	W	9	Skonto St?	92019
14.09.2006	661340	Stent-Implantate 7%	st	2	x.xxx,00		63485	07.09.2006	F	ER	B	8	Lieferant A	92019
14.09.2006	661340	Stent-Implantate 7%	st	5	x.xxx,00		63487	31.08.2006	F	ER	B	8	Lieferant A	92019
18.09.2006	661340	Stent-Implantate 7%	st	1	.xxx,00		8610	31.08.2006	F	SB	B	8	Ausgangsrechnung	92019

Situation 2006

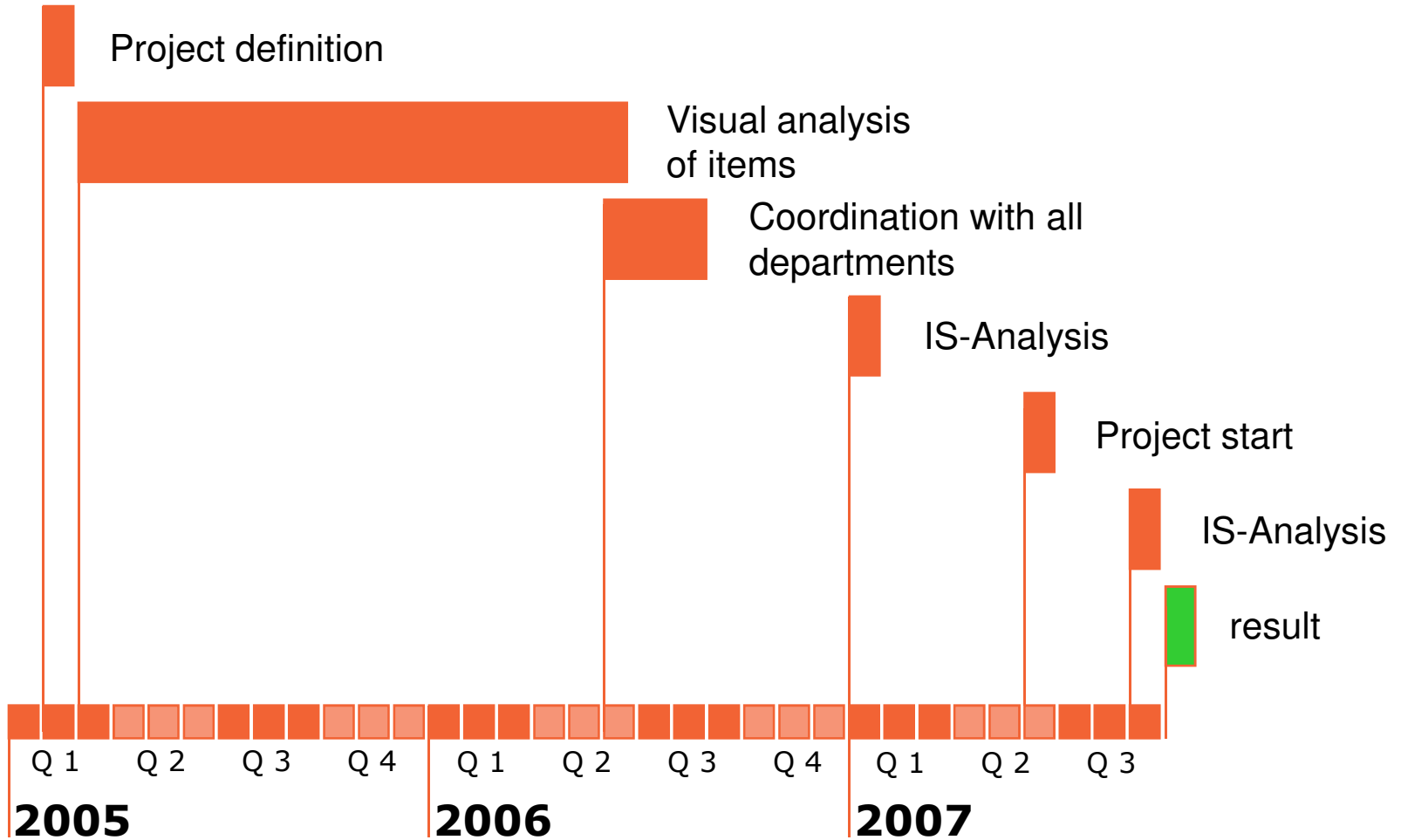
- ~ 65% of the medical demand will be collected by unit of output (patient)
- This will be done manually after allocation with the medical devices

Cutting out of the labels out of the packaging and sticking on a report in the department

- Pass over to the accounting department
- Collection of the reports which goods have been used
- ▲ High error rate due to loss of labels or wrong mapping
- ▲ Need for immediate action

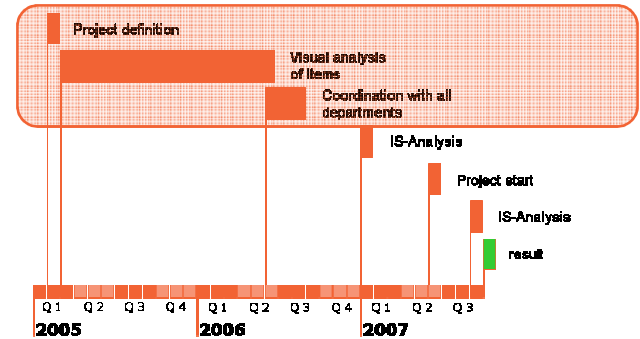
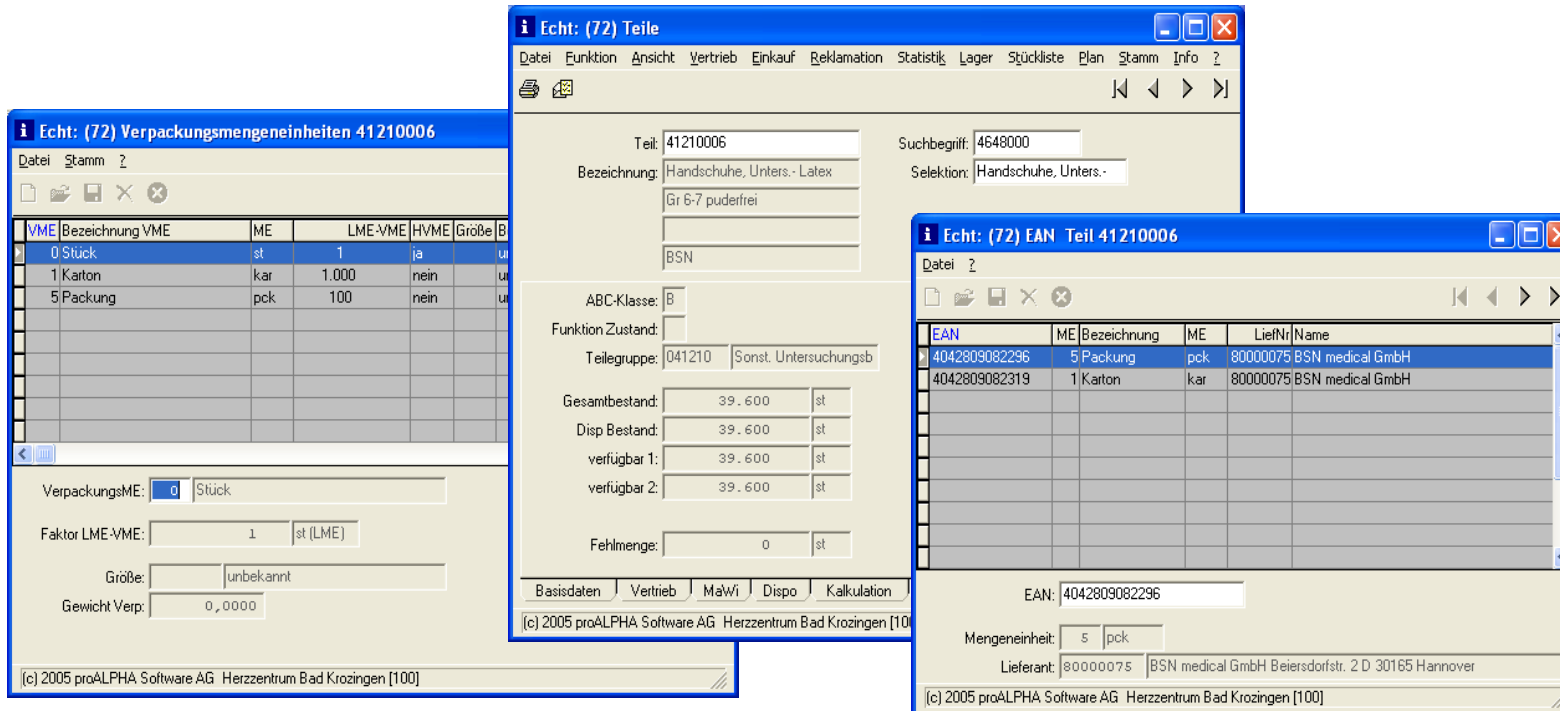


Time frame of the project



1. step - preparation

- Compilation of all relevant EAN data from suppliers
- Trial run in the warehouse for medical devices

The image shows three overlapping screenshots of SAP software interfaces:

- Top-left window:** 'Echt: (72) Verpackungsmengeneinheiten 41210006'. It displays a table of packaging units (VME) with columns for VME, Bezeichnung, ME, LME-WME, HVME, and Größe. The table shows:

VME	Bezeichnung	ME	LME-WME	HVME	Größe
0	Stück	st	1	ja	
1	Karton	kar	1.000	nein	
5	Packung	pck	100	nein	
- Top-right window:** 'Echt: (72) Teile'. It shows material details for '41210006' (Handschuhe, Unters.-Latex, Gr 6-7 puderfrei, BSN). Fields include Teil, Bezeichnung, Suchbegriff, Selektion, ABC-Klasse, Funktion Zustand, Teilegruppe, Gesamtbestand, Disp Bestand, verfügbar 1/2, and Fehlmenge.
- Bottom-right window:** 'Echt: (72) EAN Teil 41210006'. It displays a table of EAN data with columns for EAN, ME, Bezeichnung, ME, and Lieferant/Name. The table shows:

EAN	ME	Bezeichnung	ME	Lieferant/Name
4042809082296	5	Packung	pck	80000075 BSN medical GmbH
4042809082319	1	Karton	kar	80000075 BSN medical GmbH



2. step – is analysis I

- IS-Analysis

- Cut out of the labels and sticking on a report within the department

(ca. 2-3 Mins per single action)

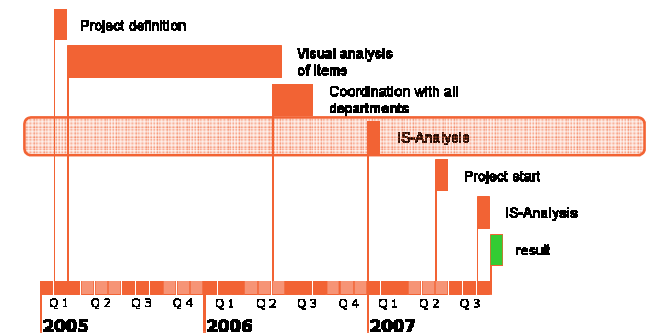
- Pass over to the accounting dep

(via internal letter post 1 day)

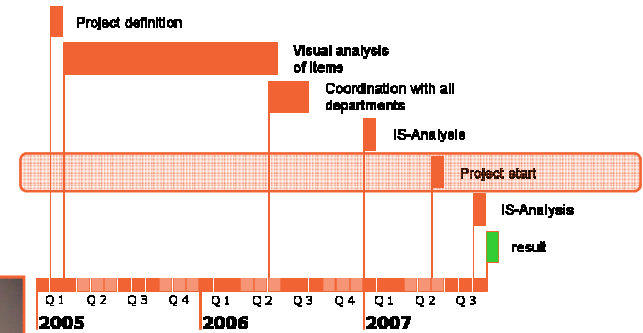
- Collection of the reports

ca. 90 Sec. Per single action (5 articles)

- = per single process about 240 secs. * 1260 incidents = ca. 84 h p.a.



3. step – project start



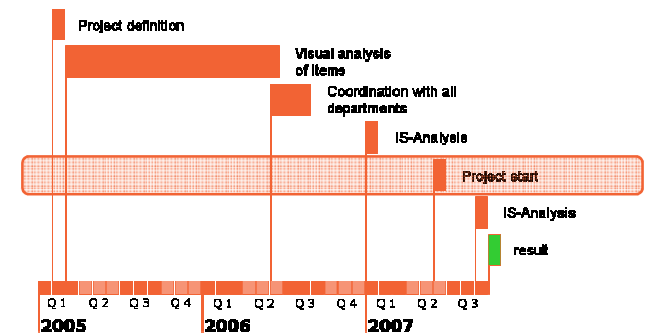
3. step – project start

○ Problems

- Within the cardiological creditors other bar codes are common
 - Batch/lot or serial number can only be collected via an extra processing step
 - In some cases it is a must for accounting of consignment stocks = difficulties for user by applying different types of bar coding systems

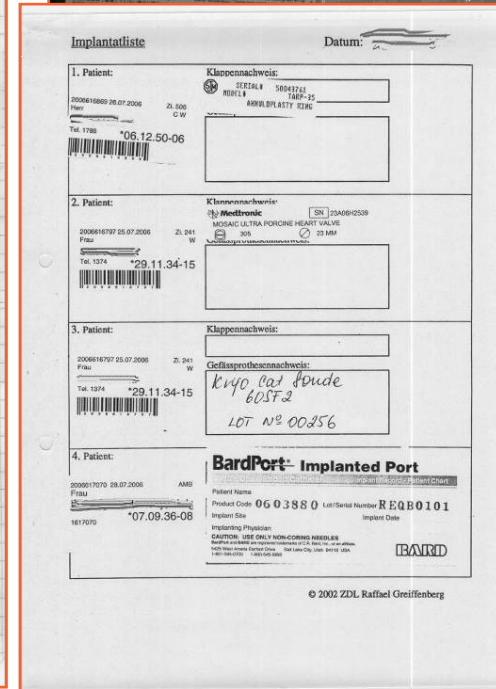
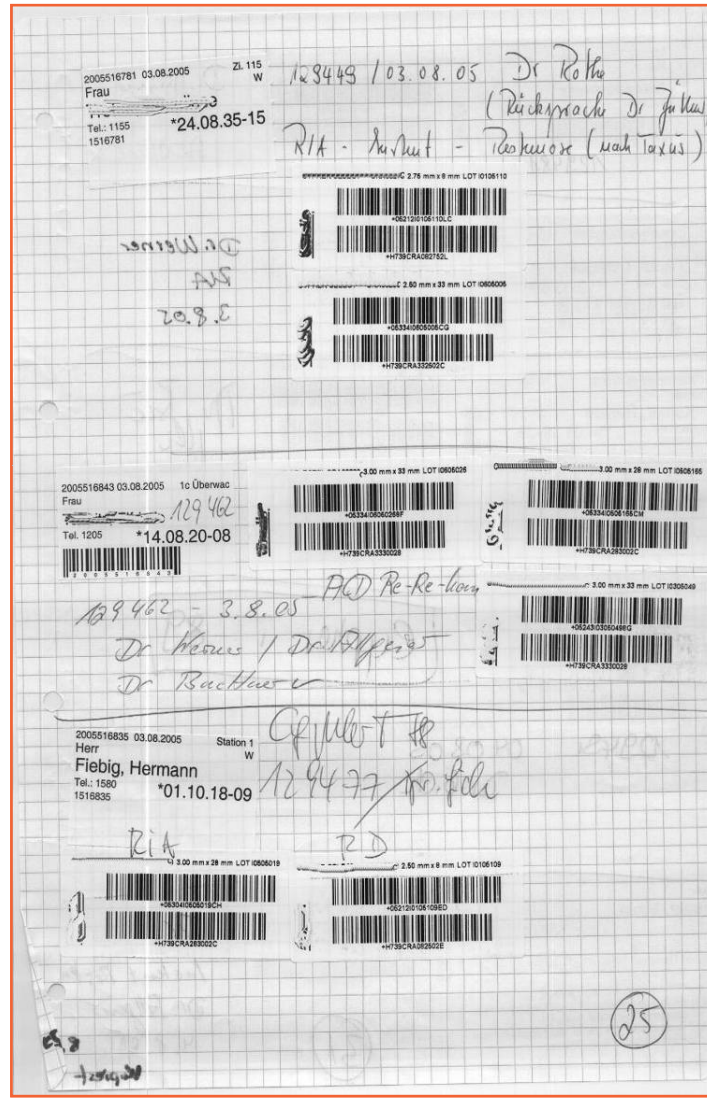
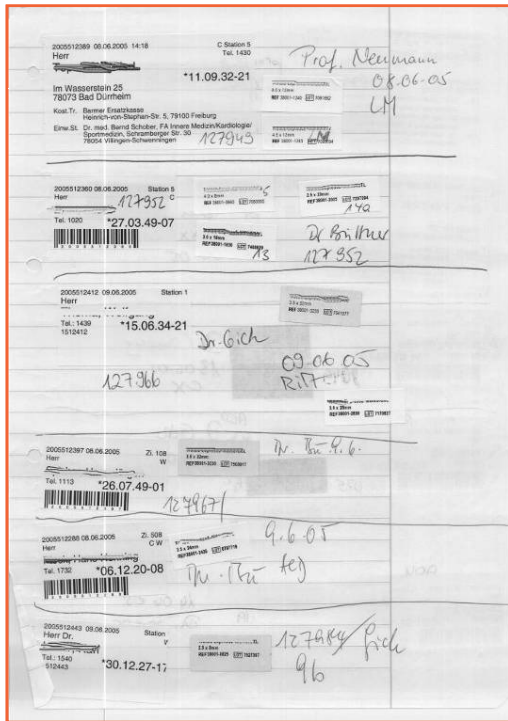
- Large fraction of suppliers without using barcodes on their products
 - mapping product vs. patient within the department is impossible
 - Project execution would be therefore impossible due to the fact that everything has to covered manually
 - solution I: post manual labelling of all items ;-(
 - solution II: extra mapping list with articles and rearranged article number

- To some extent same bar code on the single item as well on the sales unit (risk for mixing up the parcels)



Initial situation

○ Example:



4. step – is analysis II

Number of processes 2		controlling, manual work		1 process = 1 MT			
	average effort per process	Nos. processes	total time and effort	total effort per process	cost rate p. hour	total costs	savings in %
before	7:48:00	2	15:36:00	15,60	30,00 €	468,00 €	
afterwards	0:00:00	2	0:00:00	0,00	30,00 €	0,00 €	
savings	7:48:00		15:36:00			468,00 €	

Nos. of processes 90		Article master data EAN-updating		1 position per article			
	Aver. effort per position	Nos. positions	total time and effort	total effort per process	cost rate p. hour	total costs	savings in %
before	0:00:00	90	0:00:00	0,00	24,00 €	0,00 €	
afterwards	0:00:20	90	0:30:00	0,50	24,00 €	12,00 €	
savings	-00:00:20		-0:30:00			-12,00 €	

4. step – is analysis II

Nos. of processes ca. 1.260		Documentation in the specialist dep.			4,4 positions per process		
	average effort per process	Nos. processes	total time and effort	total effort per process	cost rate p. hour	total costs	savings in %
before	0:03:10	1260	66:30:00	66,50	21,00 €	1.396,50 €	
afterwards	0:00:42	1260	14:42:00	14,70	21,00 €	308,70 €	
savings	0:02:28		51:48:00			1.087,80 €	78%

Nos. of processes ca. 1.260		Collection of the reports in the accounting dep.			4,4 positions per process		
	average effort per process	Nos. Processes	total time and effort	total effort per process	cost rate p. hour	total costs	savings in %
before	0:01:25	1260	29:45:00	29,75	24,00 €	714,00 €	
afterwards	0:00:00	1260	0:00:00	0,00	24,00 €	0,00 €	
savings	0:01:25		29:45:00			714,00 €	100%

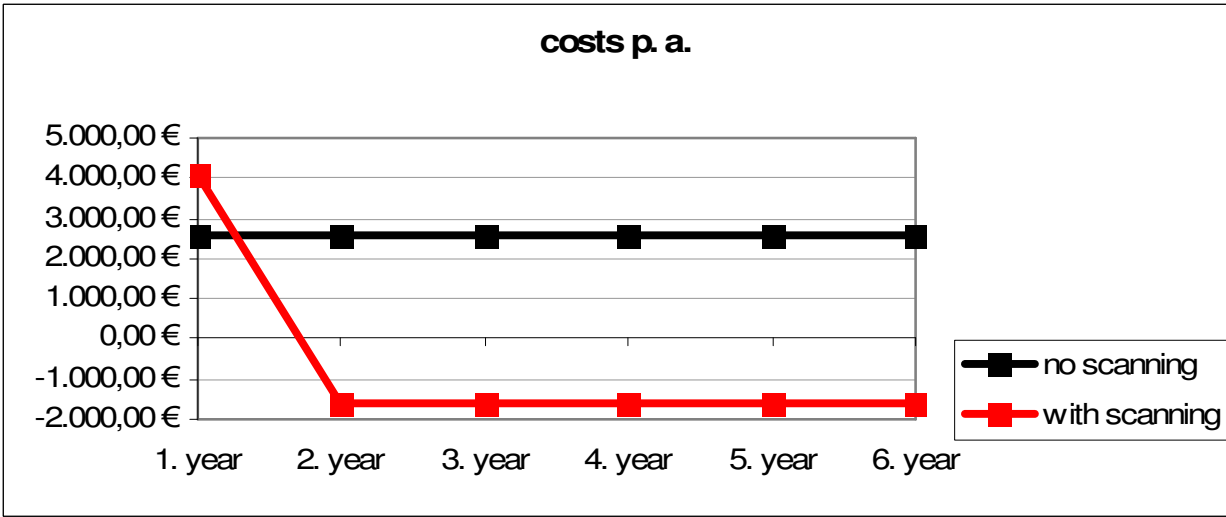
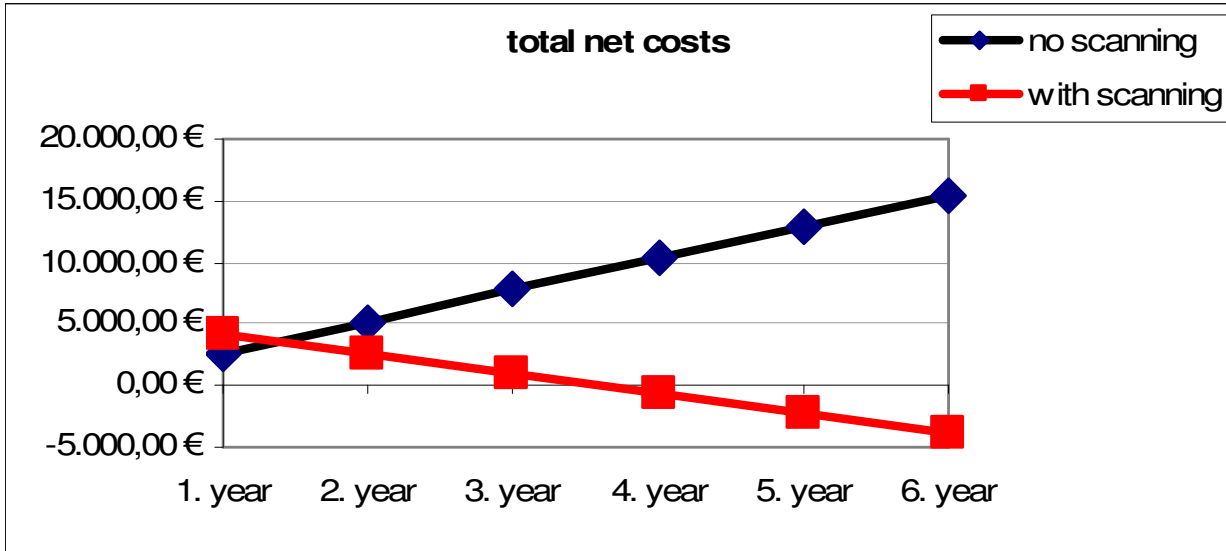
4. step – is analysis II

Nos. of cases ca. 942		Compensation for complete data to InEK			2,03 per case	
		Nos. cases				total earnings
before		0				0,00 €
afterwards		942				1.912,26 €
earnings						1.912,26 €

total overview							
	total time and effort	direct total costs	earnings	result	man-days	man-years	
before	111:51:00	2.578,50 €	0,00 €	2.578,50 €	13,98	0,06	
afterwards	15:12:00	320,70 €	1.912,26 €	-1.591,56 €	1,90	0,01	
savings	96:39:00	2.257,80 €	1.912,26 €	4.170,06 €	12,08	0,05	

savings							
	total before	single costs	total afterwards	savings			total costs
1. year	2.578,50 €	5.651,55 €	-1.591,56 €	-1.481,49 €			4.059,99 €
2. year	2.578,50 €		-1.591,56 €	4.170,06 €			

4. step – is analysis II



Benefits

- Documentation of the used up material in real time for cost objective accounting possible
- Data transfer into medical documentation possible
- Orders can be released fully automatic. Arrangement work is void completely (when complete documentation) => enormous additional saving of time!
- Inventory monitoring by purchase possible
- Stocktaking, by existing data and hardware, only approx. 1.5 h instead of 6-7 hours.

Contact

Bettina Bartz

Senior-Projektmanagerin

Healthcare Manager

Business Solutions & Consult

GS1 Germany GmbH, Cologne

phone: +49(0)221 94714-439

eMail: bartz@gs1-germany.de

