



SIEMENS

Industrial IT Dataflows in het labo

KVCCV Seminar – 8 December 2009 - Grobbendonk

- SIMATIC IT Unilab manages the workflow in laboratories and optimizes the collection, analysis, processing and reporting of laboratory data.
 - Increased lab productivity & efficiency
- SIMATIC IT Unilab is a modular system that can be configured to the specific needs of each laboratory
 - Covers QC – R&D – Service laboratory requirements
 - Direct availability of quality data across the plant via integration with the production management system
 - Electronic Lab Notebook
 - Project management, Cost calculation, ...
 - Covers laboratory requirements in different industry sectors
 - Food & Bev (microbiology, HACCP, ...)
 - Pharma (stability, 21CFR11, ...)
 - Drinking water (sample route planning, recipients mgmt, ...)
 - ...

- Multi-site access and central data consolidation
 - automatically generated Certificate of Analysis
 - fast and easy quality data retrieval
 - Supporting multi-plant, multi-language, multi-time zone
 - accurate and flexible reporting
 - dashboard visualization / KPI calculation
- Controlled web access for internal and/or external parties resulting in
 - better customer service
 - reduced lab administration
 - outsourcing of analyses

Electronic Lab Notebook SIMATIC IT ELN

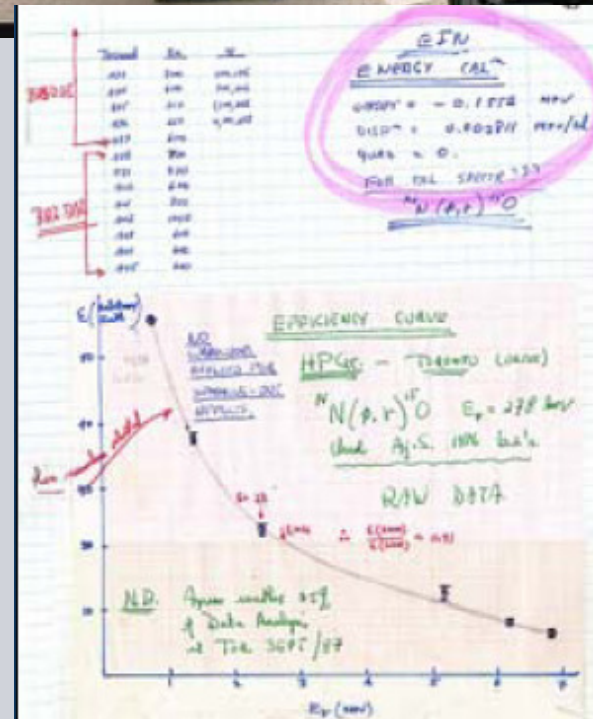
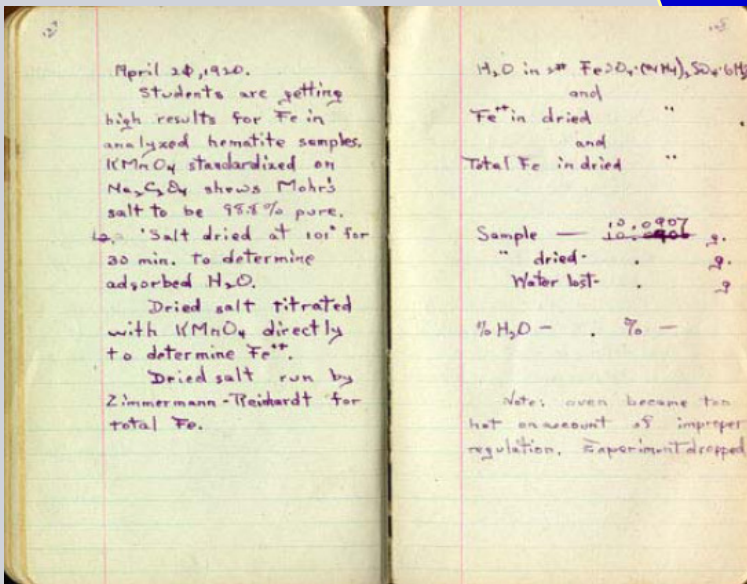
SIEMENS



100 years ago



Today



Electronic Lab Notebook SIMATIC IT ELN

SIMATIC IT R&D Suite, Database <vm2_RnD10>

File Edit View Task Page Tools Define Window Help Infocard

MyNotebook

page 4

Experiment description ak-2006-exp6d ak-2006-exp7d

Background This experiment was initiated because a number of customer complaints seem to indicate that the new packaging material starts to leak when exposed to direct sun light for a few days.

Consumer Value Perception New benefits

Start experiment ak-2006-exp6a ak-2006-exp6b ak-2006-exp6c Start experimen

ak-2006-exp7a ak-2006-exp7b ak-2006-exp7c

ExperimentSet-up

Lab results

Sample : ak-2006-exp6a

Info Cards Properties

Group	Sample	Type	Plant	Customer	Supplier	Status	#R
<input type="checkbox"/> 01-100 Additives / Contamination						Accepted	0
<input type="checkbox"/> 01-100 Chemical-Physical Analysis						In Execution	0
<input type="checkbox"/> 01-100 Nutritional Data						Available	0

Parameter	Low Spec	Result	Unit	High Spec	Status	# R.
<input type="checkbox"/> Energy kJ		12	kJ		Available	0
<input type="checkbox"/> Protein		4,3	g		Available	0
<input type="checkbox"/> Carbohydrates			%		Available	0
<input type="checkbox"/> Sodium			g		Available	0

01-100 Storage / Distribution Available 0

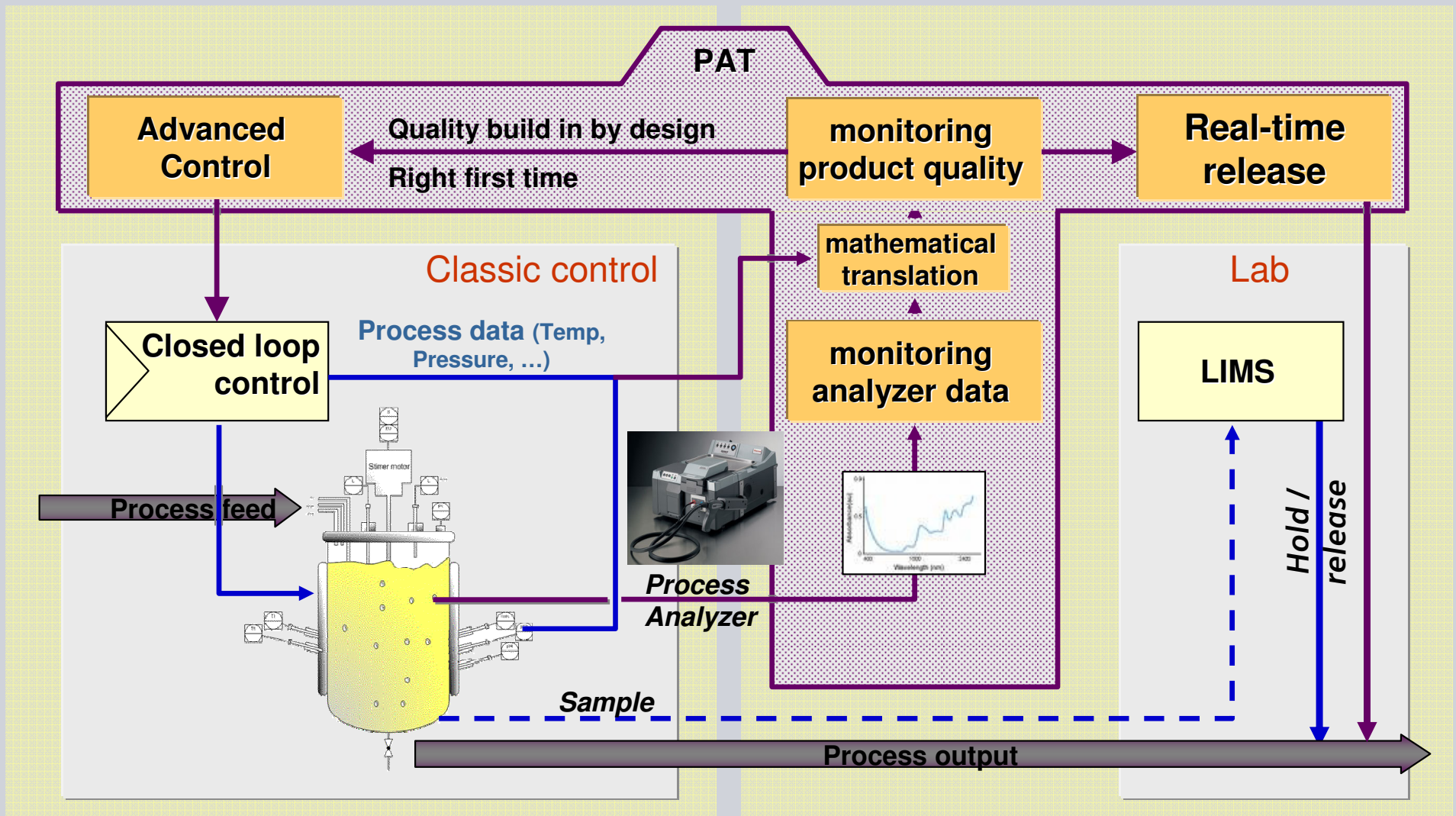
01-100 Dimensions/Weight Available 0

01-100 Infectious and Toxicology Available 0

01-100 Indicator/Utility Micro Organisms Available 0

Task My Notebook

Process Analytical Technology SIMATIC SIPAT



Process Analytical Technology

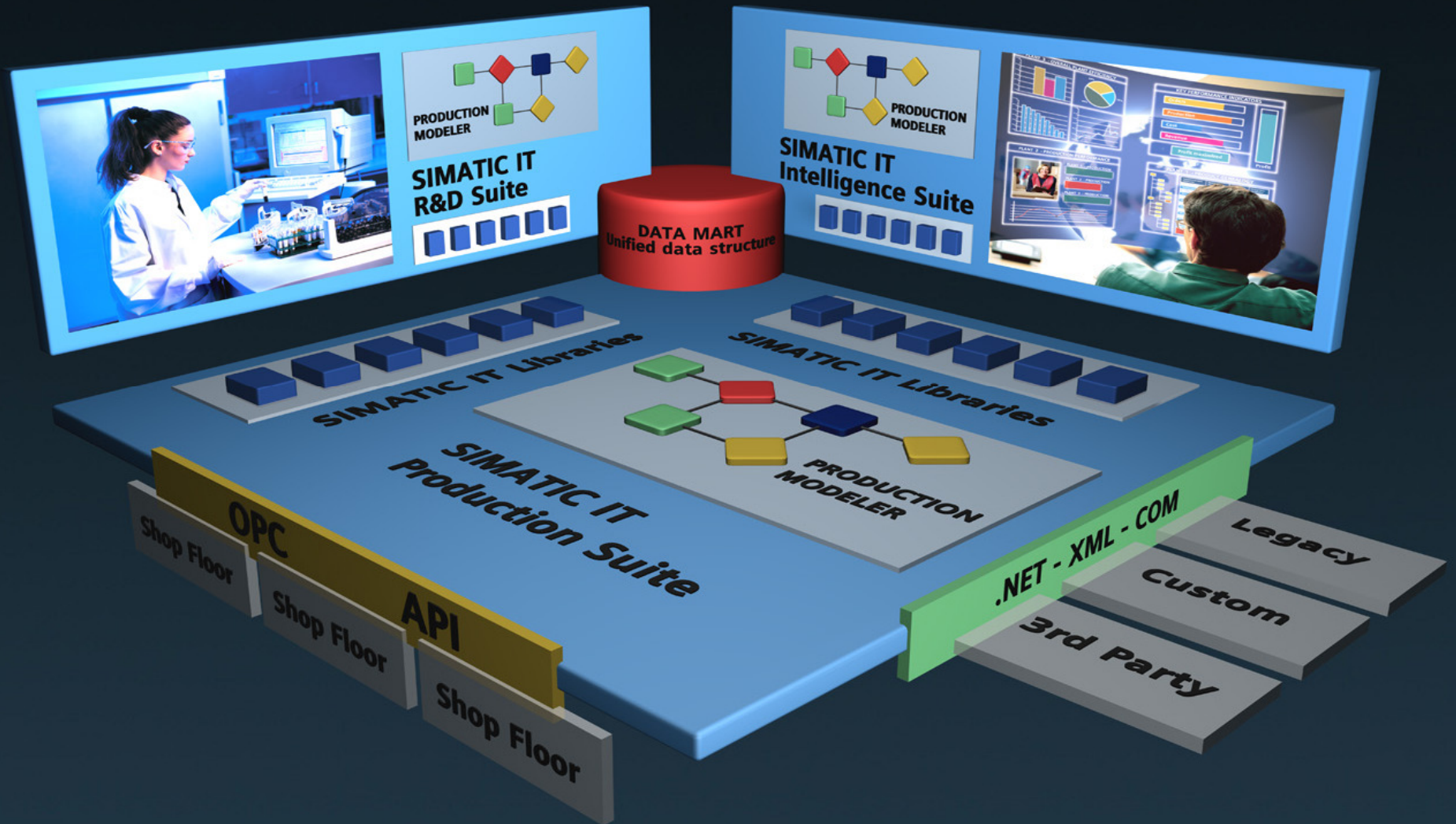
SIMATIC SIPAT



- Improved process understanding leads to better process control which lowers waste production as well as product recalls
- Allows shifting from Quality by Control to Quality by Design
- End product quality can be predicted
- First Time Right production
- Enabling Real Time Product Release (RTPR)
- Stimulating innovation
- Breaking down the walls between R&D and production

Reporting - Dashboarding SIMATIC IT Report Manager

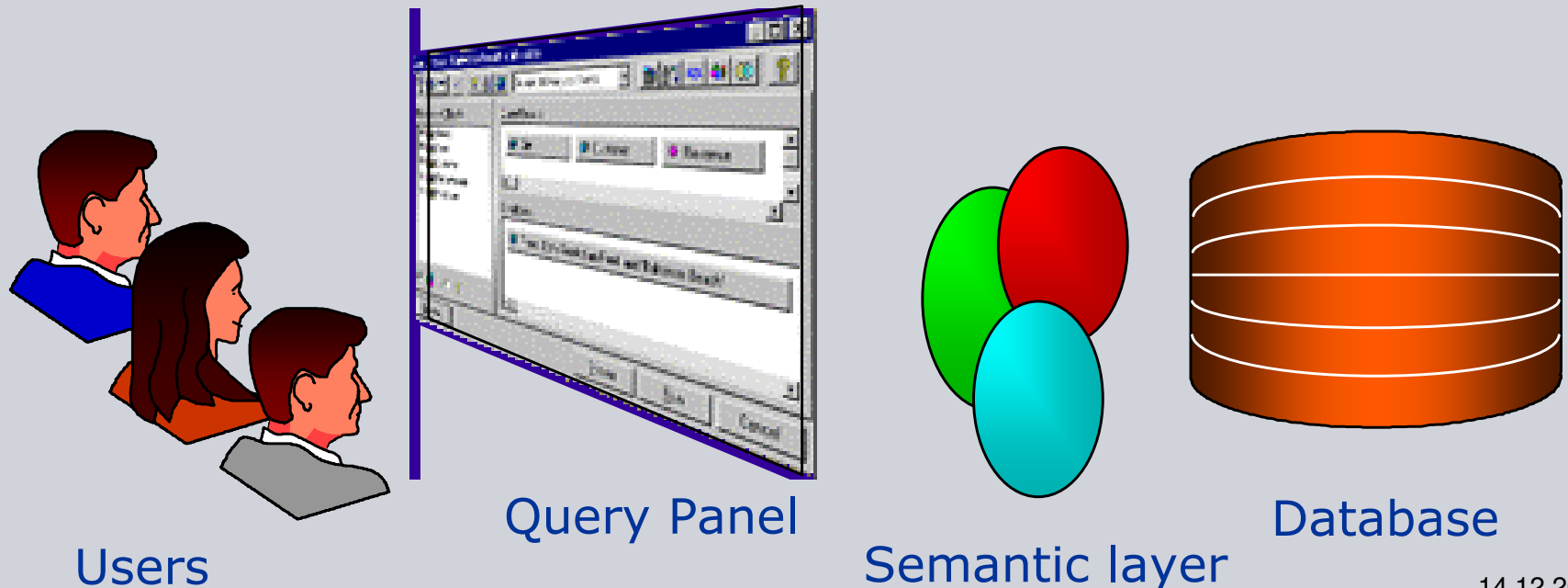
SIEMENS



Reporting - Dashboarding

SIMATIC IT Report Manager

- Value of all data management systems is directly related to the ease of retrieving the right data out of them
- Requires flexibility, user-friendliness, direct data access, ...
- Typical reports: CoA, monthly reports, status reports, ...and many others
- Dashboards translate data in an attractive way into business information
- Let's have a look !



Rapportering - voorbeeld

QC Lab dashboard - Current status

Current status

Process capability

Exceptions - London

Product quality

Parameters OOS	4%	5%	●	↓
Salmonella detected	1	0	●	↑
Capability Fat	94%	95%	●	↓
Overall capability	96%	95%	●	↓

Overall capability (L7D)



Lab quality & productivity

Reanalysis Count	11	10	●	↓
Methods throughput	2135	2000	●	↓
Calibrations due	2	4	●	●
Samples Pending	743	500	●	↑
Samples overdue	743	0	●	↑

Capability Fat



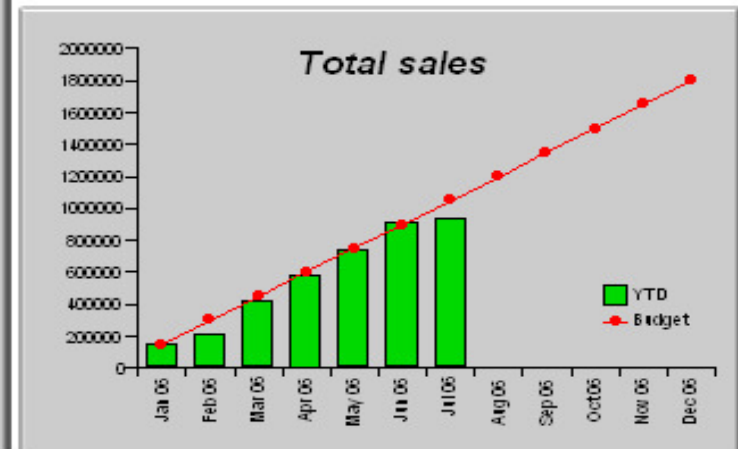
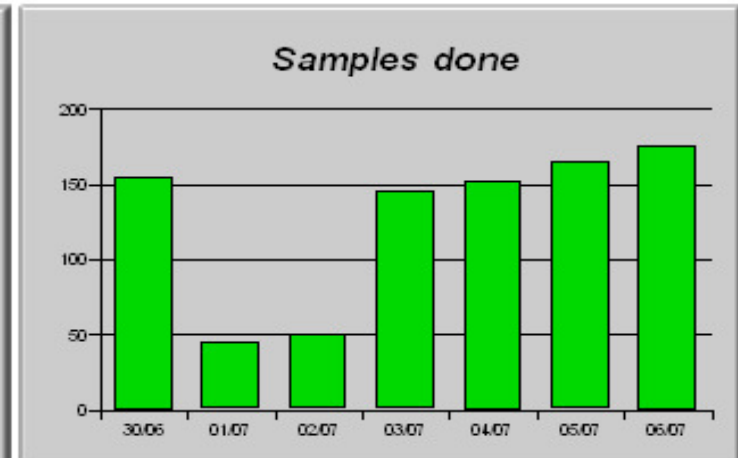
ALERTS

Sample 060920-022 : Salmonella detected !!!
 Batch DFZ-1132 (product P1) on hold
 HPLC 3 calibration overdue > 5 days
 SQC : Fat 8 consecutive increasing values for "Low fat cheese"

Rapportering - voorbeeld

Lab dashboard - July 6 2006

	Value	Plan	Status	Trend
Customer satisfaction				
Overdue samples	19	27		
Lead time (last 30 days)	5	5		
Samples Pending	716	750		
Productivity				
Equipment usage	69	65		
Headcount usage	83	80		
Methods Throughput	220	225		
Reanalysis Count (last 7 days)	7	10		
Profitability				
Net Sales (last 7 days)	44,325	37,500		
Quality				
Calibrations due in 1 week	1	2		



Alerts

- 06/07/2006 Sample overdue > 7 days
- 05/07/2006 SQC alarm : 8 consecutive increasing values

[20060628-024](#)

[20060705-053](#)

Thank you for your attention!

Jan Verelst
Sales Executive
Industrial IT

Halsesteenweg 31
9402 Ninove
Belgium

Phone : +32 54 312 712
Fax : +32 54 324 660
Mobile : +32 475 432.560

E-mail : jan.verelst@siemens.com

www.siemens.com/industrial-it