

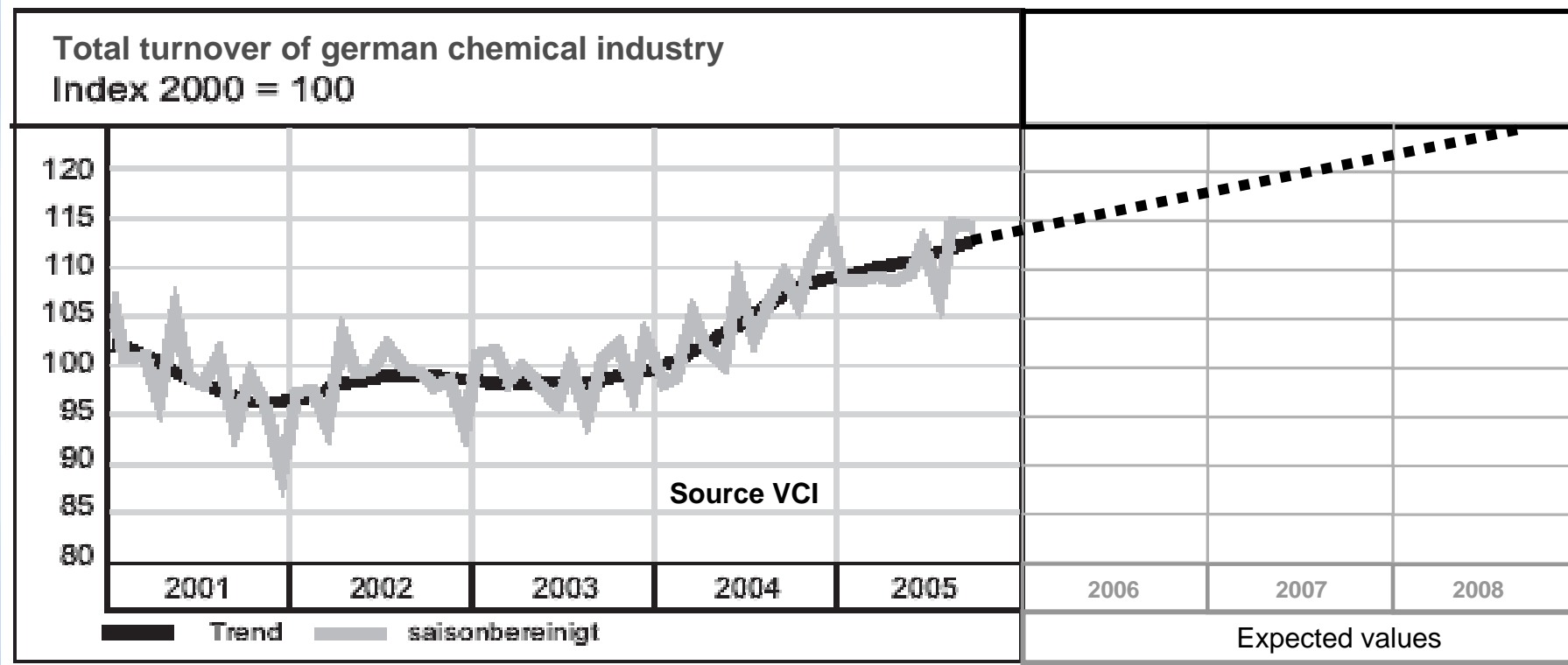
Trends in Process Automation

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Economic Trends

- Chemical production is growing at a high rate
- European demand aids the German chemical industry
- In 2006 the continuing stable trends in the chemical industry will stimulate demand for automation products (Source Kegel ZVEI)

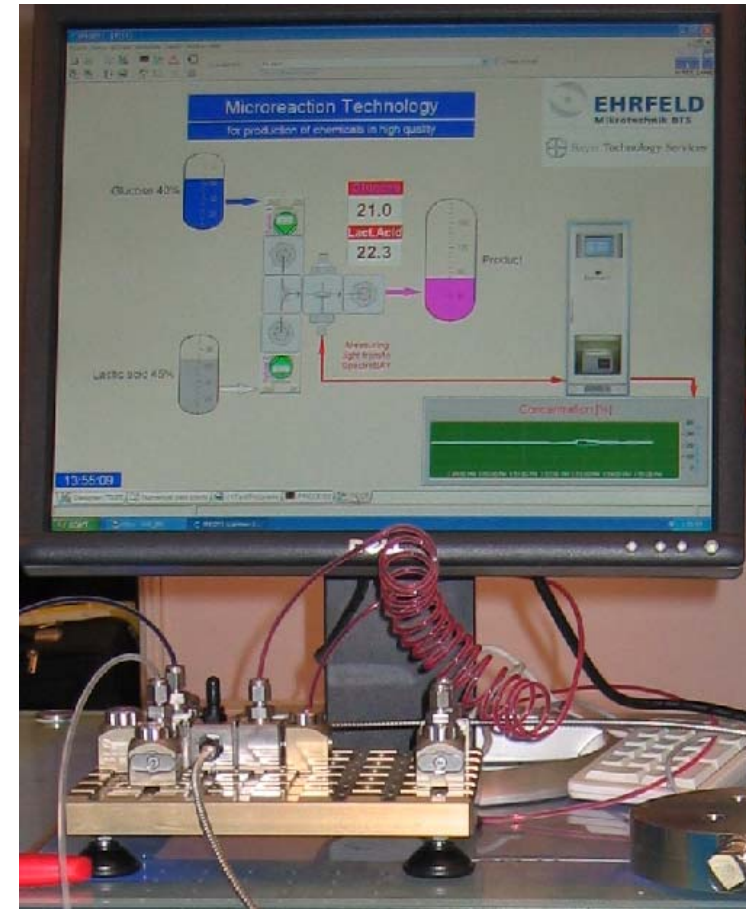
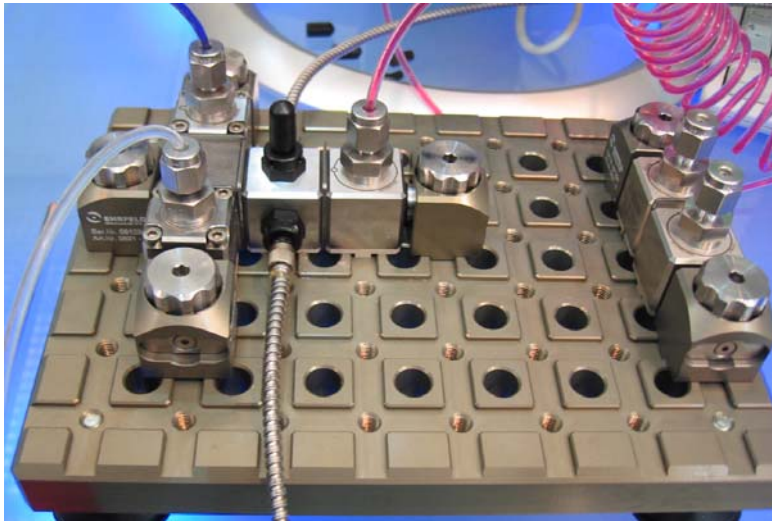


Trends in Process Engineering

- The trend away from chemical to biotechnological processes is not only occurring in pharmacy (red biotechnology), but also in classical chemical process technology (white biotechnology). New biochemical processes have led to a spate of patents that have triggered investment in new plant.
- Renewable feedstocks are becoming increasingly more important due to ever more expensive crude oil and natural gas. More bioethanol and biodiesel plants are being built in Europe.
- High oil and gas prices mean continuing investment in exploration, transport and pretreatment of crude oil and natural gas. This is an important catalyst for growth in the process industry.

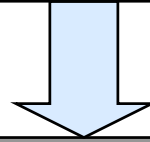
Trends in Technology

- Microprocessing technology has created completely new methods of production, which will also have influences to automation.



Trends in Automation Technology

Automation by Process Parameters T, P, L, F ...
A deluge of data but little information



Process control based on quality

PAT
MES

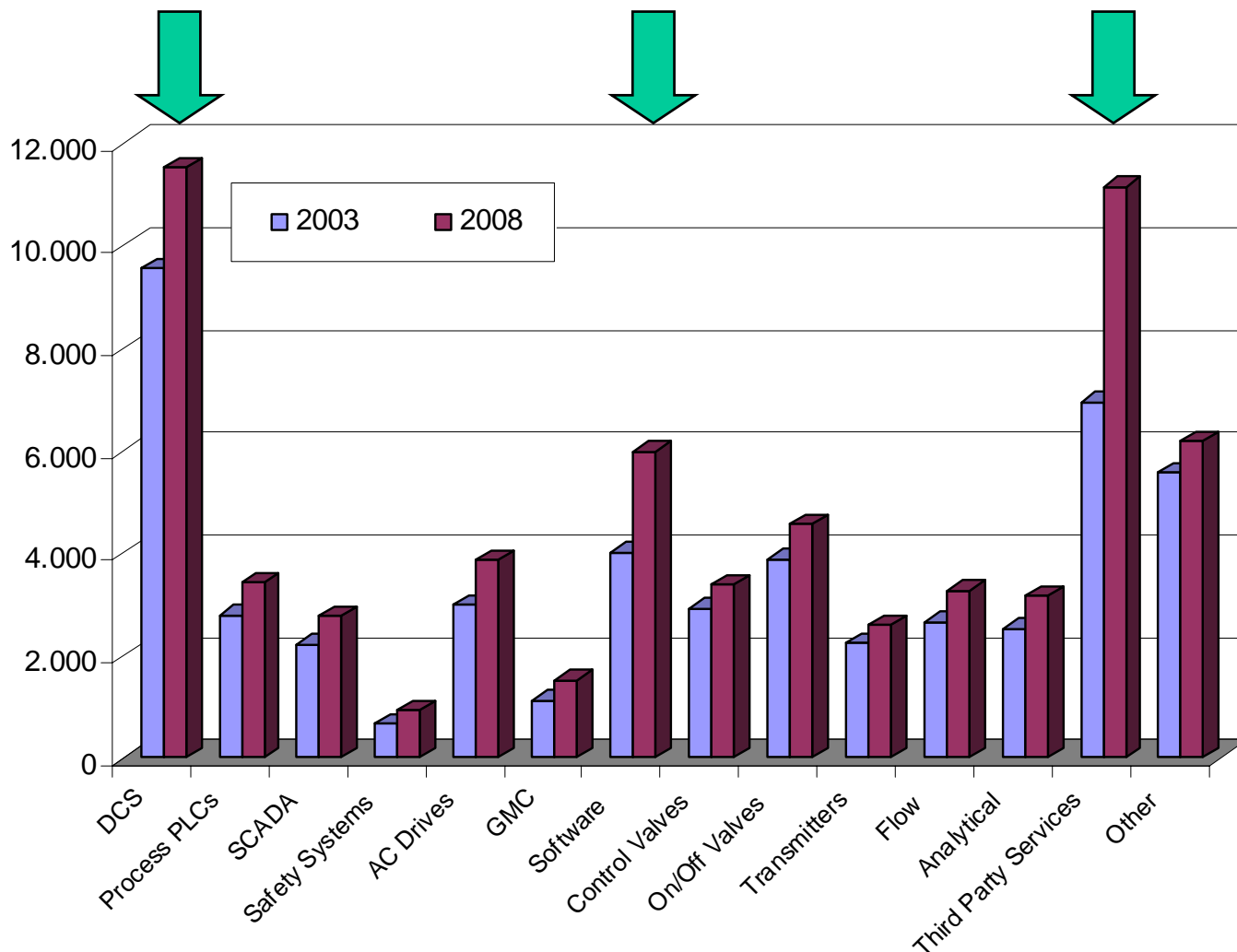
Leading by process models

OTS
APC

Intelligence in the field
Condition Monitoring
Asset Management
Wireless

Automation of global networks
RFID ...
Supply Chain Management

Process Automation Turnover in million US-\$



Source ARC

NAMUR expert round tables at AICHEMA

Automation Forum Achema 2006

Topic	Mo, 15 May 2006	Tu, 16. May 2006	We, 17. May 2006	Th, 18 May 2006	Fr, 19. May 2006	Time
Communication	K 15 free	K 16 IT Security for process technology (Kai Binder)	K 17 Wireless automation (Frank Jablonski)	K 18 Web-based process control – chance or risk? (Frithjof Klasen)	K 19 Field busses and no end (Lary O'Brian)	10:00 - 11:00
Plant control	B 15 Achieving Real-time Performance with ERP and MES: Interoperability, Architecture and Operations (Valentijn de Leeuw)	B 16 Material identification and tracking in production and logistics (Ludger Brüll)	B 17 Trends in process safety (David Humphrey)	B 18 MESA D-A-CH forum (Hasso Drathen)	B 19 Plant asset management in practice – wish and reality (Christian Dietrich)	11:15 - 12:15
Process control	P 15 Trainings simulators (Jens Bausa)	P 16 Performance optimization (Guido)	P 17 Process control (Matt)	P 18 Process control (Matt)	P 19 Alarm management (Uwe Grundmann)	12:30 - 13:30
Explosion protection	E 15 Experiences with the application of the ATEX directives concerning mechanical apparatus (Francois Schlessinger)	E 16 Overview about status of CEN standardization for mechanical apparatus (Rainer Grätz)	E 17 mechanical apparatus on the global market place (Friedrich Klütsch)	E 18 Explosion surveillance in Germany and in the EU (Ursula Aich)	E 19 The explosion protection document in accordance with the EU directive 1999/92 – theory and practice (Christoph Thust)	13:45 - 14:45
Measuring	M 15 FDA PAT initiative (Thomas Schmidt)	M 16 Combustion optimization by continuously measuring at the example of the cement industry (Ulla Reutner)	M 17 Diagnostic of field devices (Johannes Prock)	M 18 Online analytics (Astrid Rehorek)	M 19 free	15:00 - 16:00

**NAMUR-Forum
Hall 10.1**

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Trends in Process Automation

NAMUR member companies at ACHEMA

BASF	Hall 1.2 Hall 5.1 Hall 8.0	Booth C9-D12 Booth D39-D40 Booth S30-S32
Clariant	Hall 1.2	Booth F23
Degussa	Hall 1.2	Booth A26-B28
TH Aachen, Prozesstechnik	Hall 1.2	Booth G23-H25
Henkel	Hall 4.1	Booth C7
Bayer Technology Services	Hall 9.1 Hall 10.2	Booth B33-C36 Booth K3-N13
Bayer Industry Services	Hall 9.1	Booth B33-C36
Linde	Hall 9.1	Booth D29-E40
Lurgi	Hall 9.1	Booth F33-G40
...	Hall 9.1	Booth H33-J40
...	Hall 9.1	Booth K18-K20
...	Hall 9.1	Booth H13-H17
...	Hall 9.1	Booth K18-K20
...	Hall 9.1	Booth K18-K20
Infraserv Höchst	Hall 9.1	Booth D13-E16
Lang und Peitler	Hall 9.1 Hall 10.2	Booth J16-J18 Booth K3-N14
Chemserv Linz	Hall 9.1	Booth H21-H24
Infracor Marl	Hall 9.1	Booth B20-B24
Ciba Speciality Chemicals	Hall 9.2	Booth E28
EXAM BBG	Hall 10.1	Booth K34-K35
Fraunhofer	Hall 10.1	Booth H31-J31
Probis	Hall 9.2	Booth F37-F38
Sasol	Hall 4.1	Booth K2-K3

Thank you

