



MAIL



EXPRESS



LOGISTICS



FINANCE

Mail Operations – On the Road to Excellence

Dr. Uwe Rabe, Bonn, 22 August 2003

1. Turnaround 1991-2001

2. Customer and Employee Satisfaction

3. Automation and Optimization

4. Wages

5. IT and Management Control Systems



1. Turnaround 1991-2001

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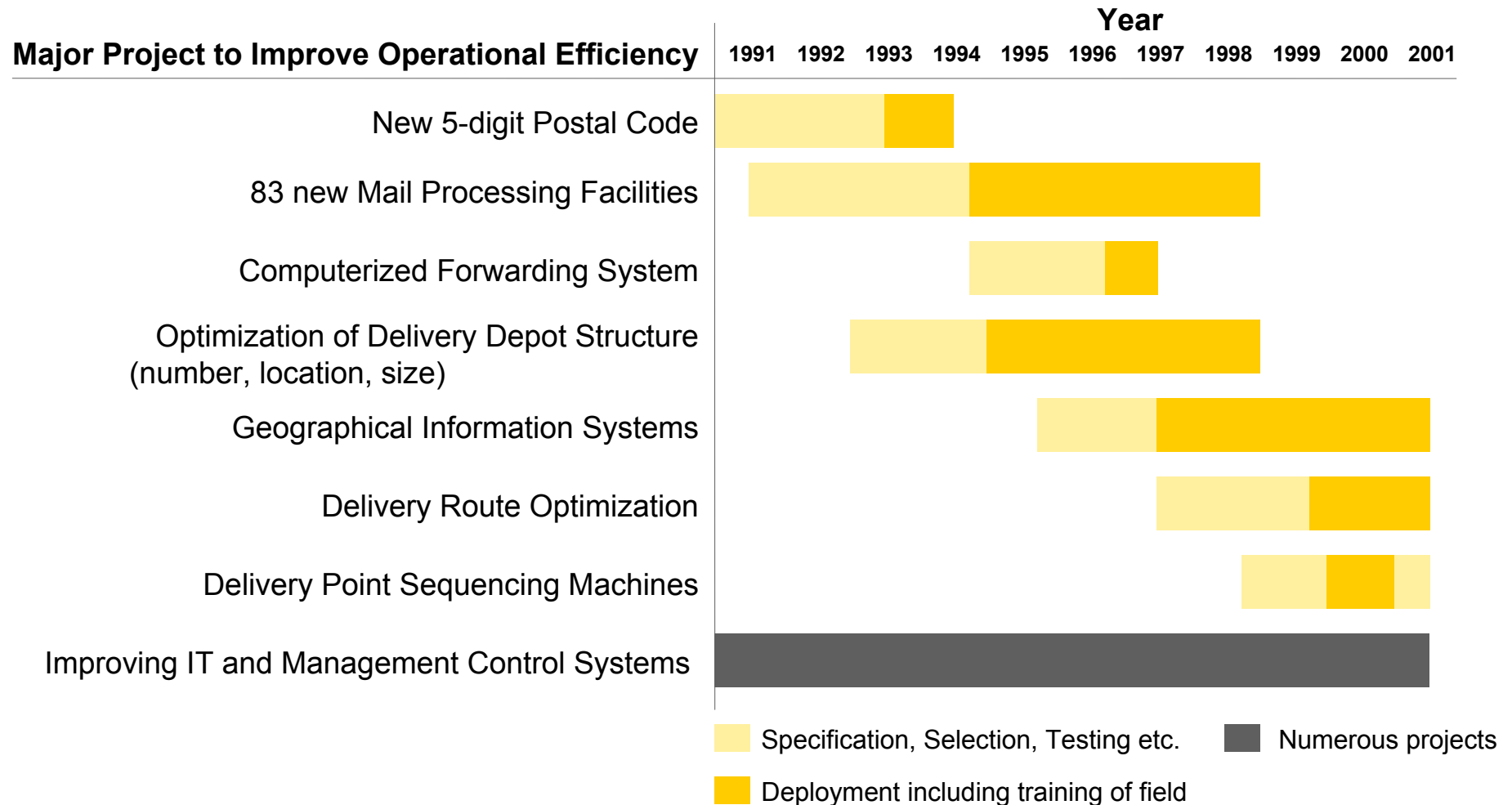
5. IT and Management Control Systems

1. Turnaround 1991-2001 (1)

- Dr. Zumwinkel took control after Postal Reform I was effective on 1 July 1989.
- Unification of Germany on 3 October 1990.
- Postal system in East Germany characterized by:
 - Transmission time of no concern
 - Infrastructure totally run down
 - Heavily overstaffed
(no official unemployment)
 - 80% female employees



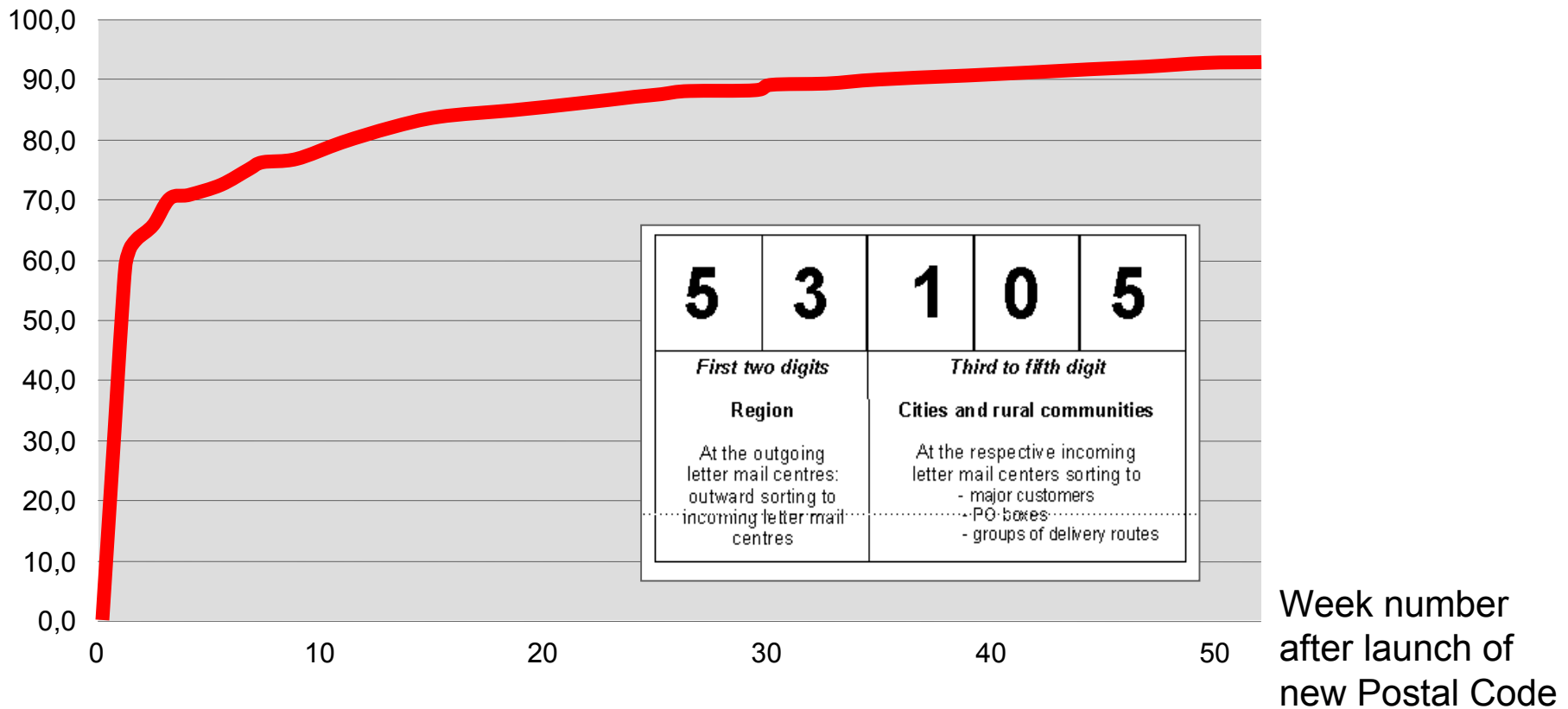
1. Turnaround 1991-2001 (2)



1. Turnaround 1991-2001 (3)

- Because of partly identical postal codes in West and in East Germany, we had to introduce a new 5-digit postal code system, which became effective 1 July 1993:

Acceptance Rate (portion of incoming mail with new code) %



1. Turnaround 1991-2001 (4)

- The letter mail logistics **prior** to building new processing facilities was characterized by
 - a large diversity of formats
 - more than 1.000 processing sites
 - geographical separation of outward and inward sortation
 - approx. 150.000 transport routes per day
 - degree of automation 24%
 - J+1-performance < 75%

New letter mail formats to foster automation:

Letter Mail Format	Specification			
	Length up to mm	Width up to mm	Thick-ness up to mm	Weight up to g
Standard (S)	235	125	5	20
Compact (C)	235	125	10	50
Large (L)	353	250	20	500
Maxi (M)	353	250	50	1000

1. Turnaround 1991-2001 (5)

- The cost-minimizing number of processing facilities was determined so that $J+1 = 95\%$. Outward and inward processing for the respective region takes place in the same facility.
- Benefits:
 - Going outside the big cities saved real estate costs
 - 2/3 of all transport routes obsolete
 - more automation
 - Single-story building reduced maintenance costs

BZ Duisburg



1. Turnaround 1991-2001 (6)

In our mail centers we employ the most modern sorting equipment:

- OCR machines, video encoding machines, secondary sorting machines, flat sorting machines, etc.

OCR machine



Secondary sorting machine



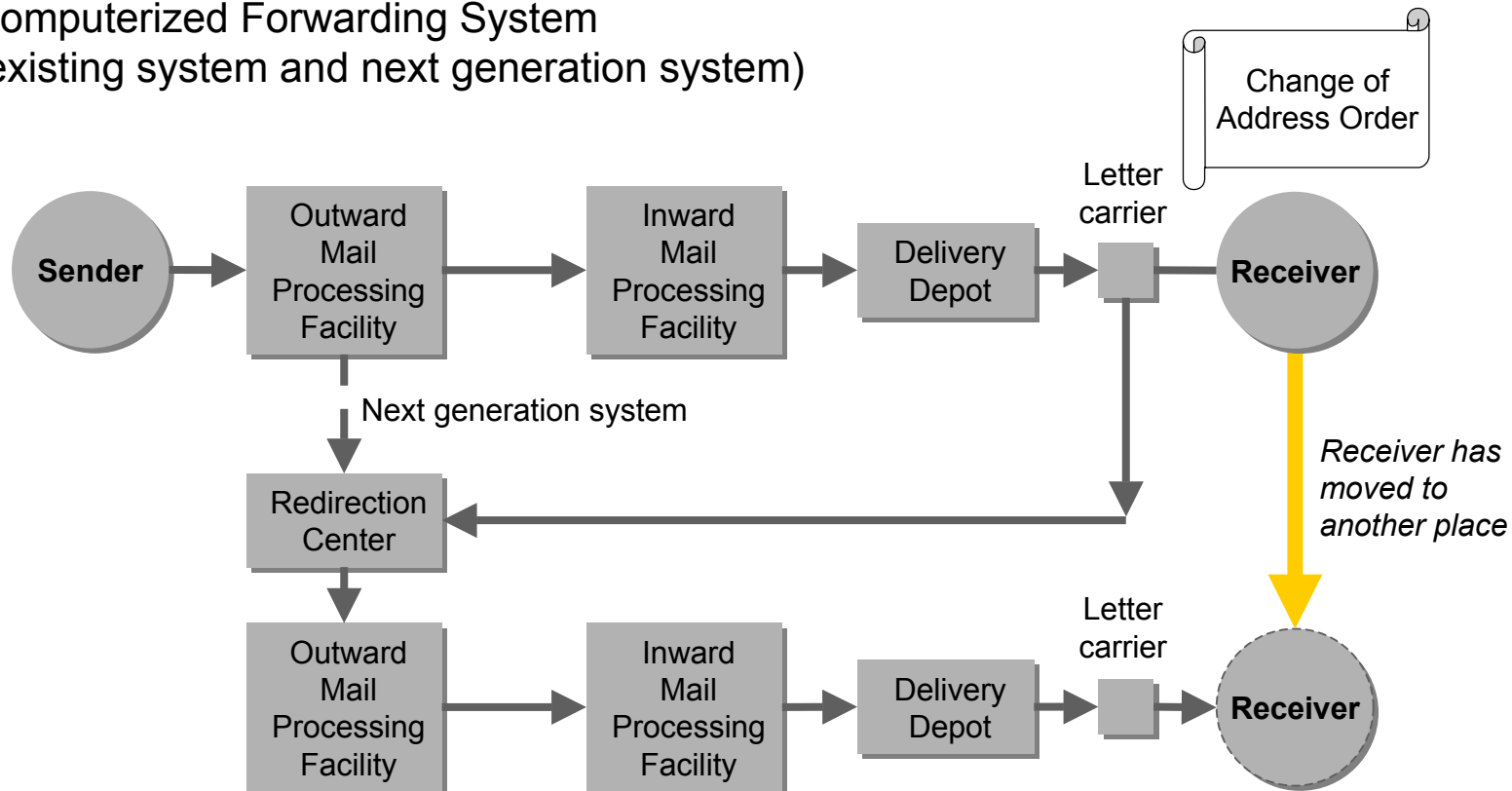
Flat sorting machine



1. Turnaround 1991-2001 (7)

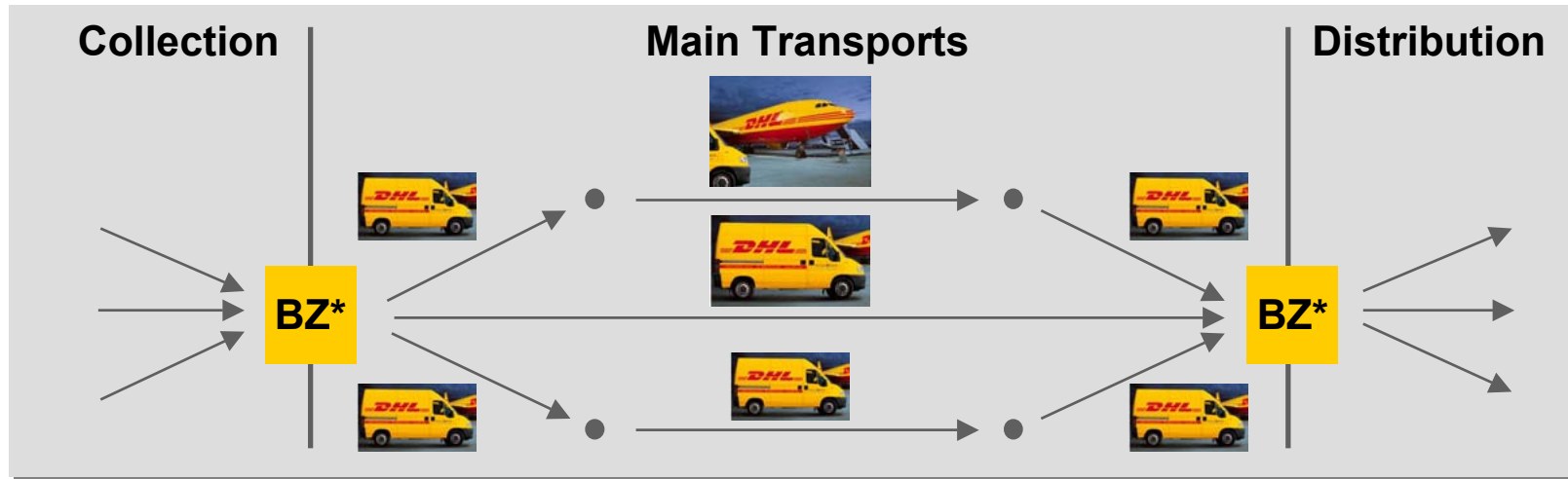
- We implemented a computerized forwarding system in 1996 and are currently specifying the next generation system:

Computerized Forwarding System
 (existing system and next generation system)



1. Turnaround 1991-2001 (8)

We now have 4 different transportation networks: mail (J+1), mail (J+4), daily newspapers (J+0/1), parcels (J+1) with adequate management control systems:



* BZ = Mail center (Briefzentrum)

1. Turnaround 1991-2001 (9)

Delivery Depot Optimization:

- We implemented in 1994 an operations-research based depot optimization method, which brought the number of depots down from 11.500 to 3.450.

Delivery Route Optimization:

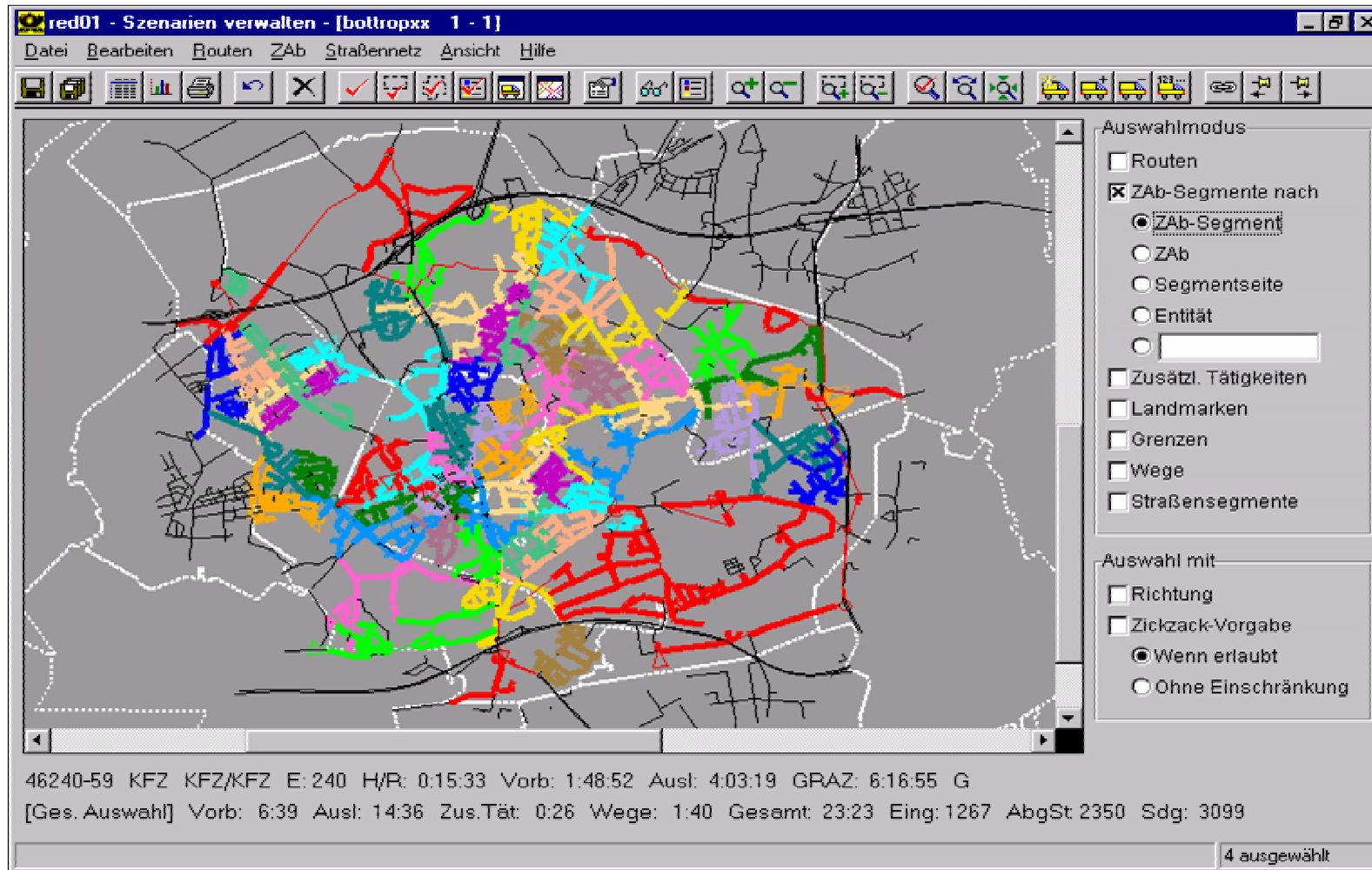
Optimization of delivery routes requires:

- 1. A method to determine the carrier workload **by street segment** given the structural data and letter mail volume of that street segment.
- 2. Sufficiently detailed digital street maps.
- 3. An optimization tool, which combines street segments to cost-optimal routes given some restrictions concerning service time, total volume/weight, carrier work hours, etc.

Delivery route optimization is most important for cost efficiency and for fast cost adaptations to changing mail volume.

1. Turnaround 1991-2001 (10)

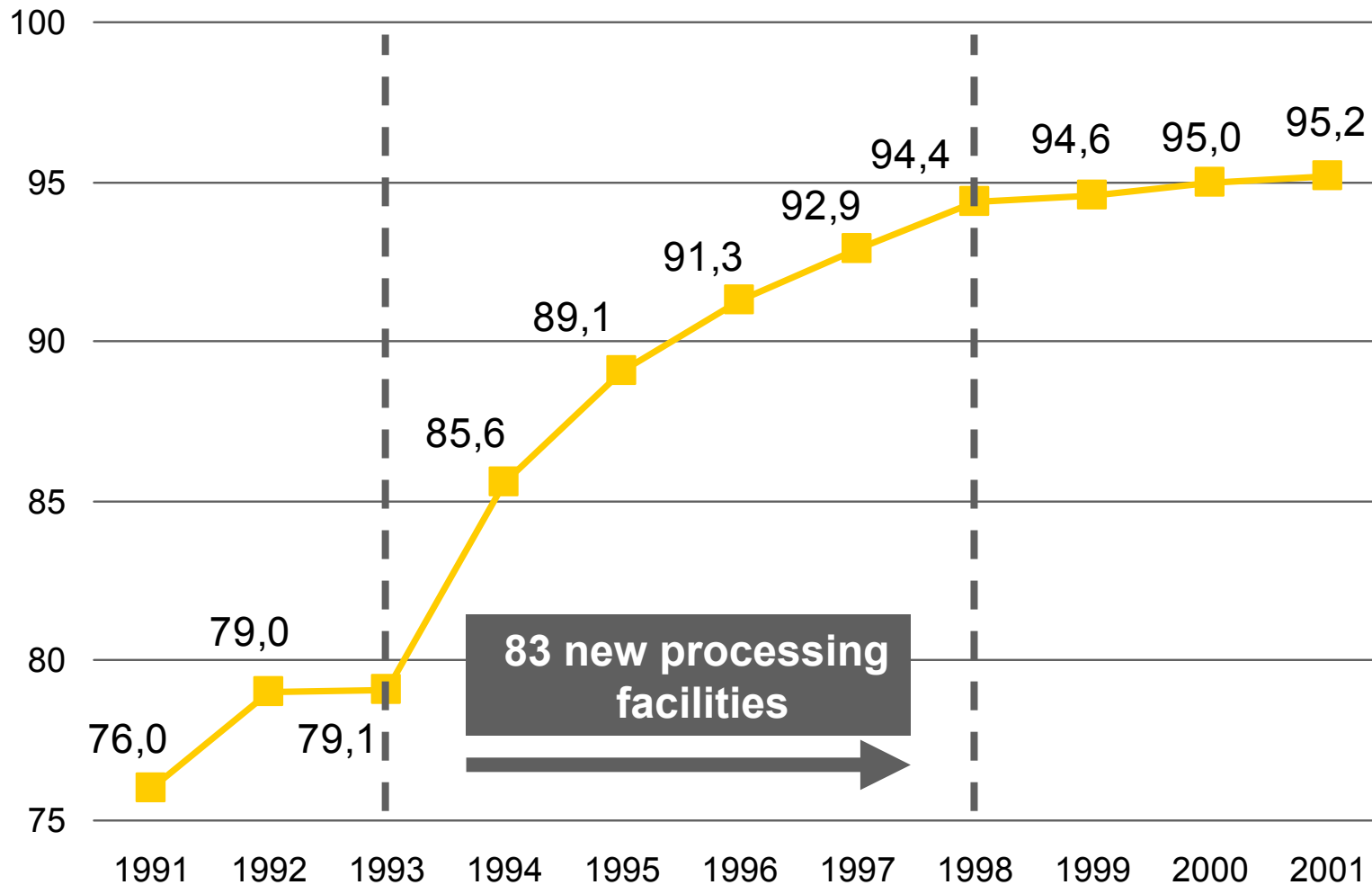
We implemented an operations research based delivery route optimization tool, which now covers the entire country:



1. Turnaround 1991-2001 (11)

Success in service quality:

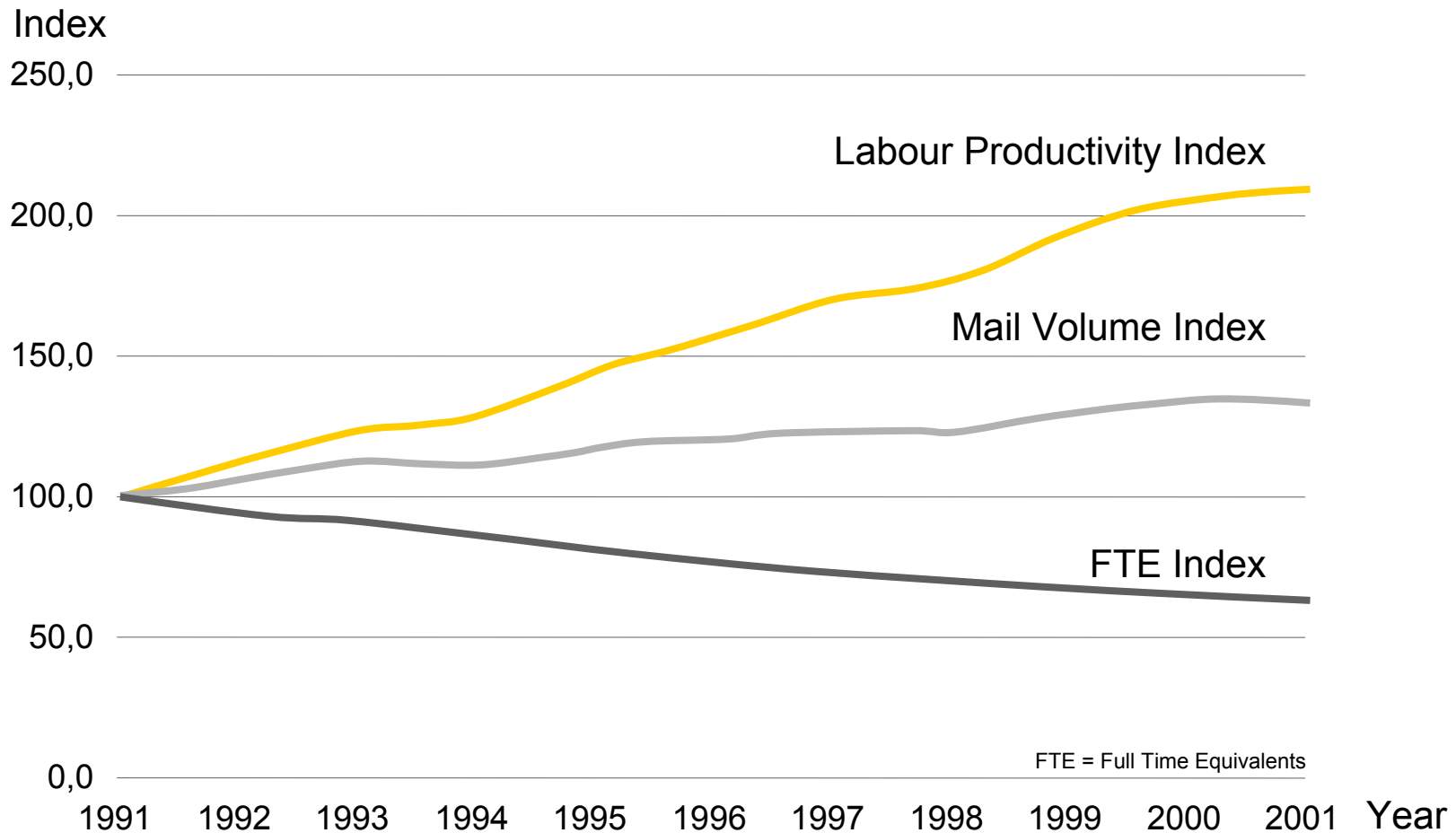
Percentage of Letter Mail delivered the Day after Posting (J+1)



1. Turnaround 1991-2001 (12)

Success in labour productivity:

■ Labour Productivity MAIL Division



1. Turnaround 1991-2001

2. Customer and Employee Satisfaction

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2. Customer and Employee Satisfaction (1)

- We believe that in the service industry customer satisfaction is rooted in employee satisfaction, because no amount of marketing money can wash away the effect of poor frontline service.
- Satisfied employees create satisfied customers. Satisfied customers are loyal customers.
- We regularly monitor customer and employee satisfaction. Examples:

Customer Survey Criteria

Customer ...	Mark	Classification by Deutsche Post
completely satisfied (vollkommen zufrieden)	1	Convinced Customer (überzeugter Kunde)
very satisfied (sehr zufrieden)	2	
satisfied (zufrieden)	3	Satisfied Customer (zufriedengestellter Kunde)
less satisfied (weniger zufrieden)	4	Disappointed Customer (enttäuschter Kunde)
dissatisfied (unzufrieden)	5	

Survey Results 2002 (Example)

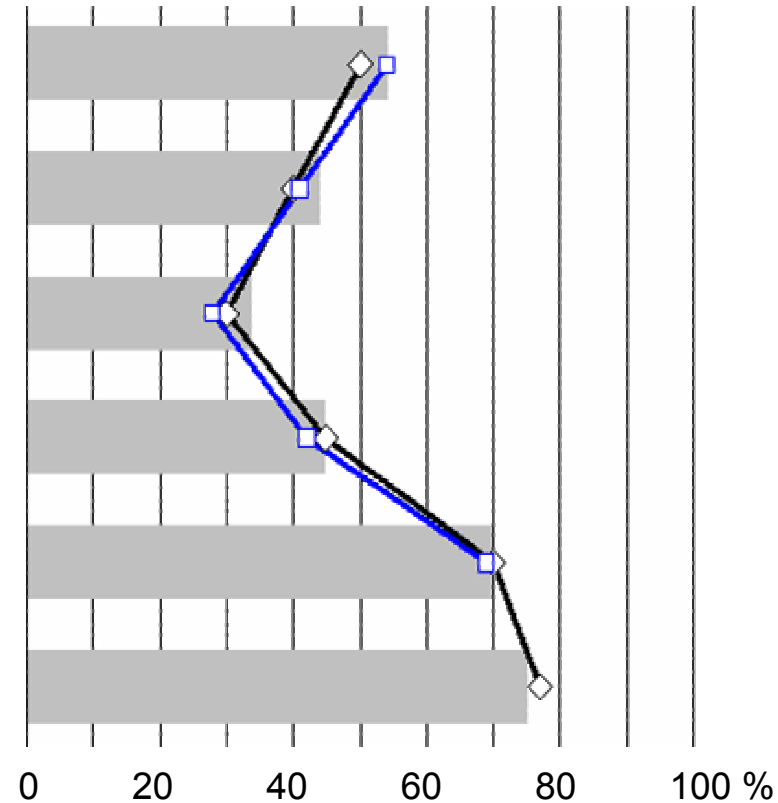
Customer Response Concerning	Mark
Friendlyness of Letter Carrier (Freundlichkeit)	2,02
Appearance of Letter Carrier (Erscheinungsbild)	2,19
Condition of Delivered Mail Pieces (Zustand der zugestellten Briefe und Pakete)	2,32
Delivery Time of Day (Zeitpunkt der Zustellung)	2,65
Letter Carrier Service (Total)	~2,00
Frontline clerk TUI travel agency	1,80
ADAC motorway patrolmen	1,87

2. Customer and Employee Satisfaction (2)

Employee Satisfaction (Example: Letter Carrier)

Survey Results 2001

- Satisfied with work shift/work hours
- Enough time to perform the job
- Prefer working in a group
- Can work much more
- Proud to work for Deutsche Post
- Enjoy wearing letter carrier uniform



2. Customer and Employee Satisfaction (3)

Our objective is to improve customer and employee satisfaction. Means:

- Total Quality Management
- Empower employees/pay them for performance
- Get rid of manuals, empower employees to use common sense in customer relations
- Training Programs/discussions/good communication
- Company sponsored social events for employees (soccer games, biker meetings, art exhibitions, etc.)

1. Turnaround 1991-2001

2. Customer and Employee Satisfaction













3. Automation and Optimization

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3. Automation and Optimization (1)

Automation of letter mail operations is the more difficult the bigger the mail formats and the closer the process is to the “last mile”. Status at Deutsche Post:

Letter Mail Format	% of Mail Volume	not machine-able	2003 degree of automated sortation to			
			Inward Mail Processing Facility	Delivery Depot	Delivery Route	Walk Sequence
S/C	77%	9%				
L	21%	15%				
M	2%	2%				

3. Automation and Optimization (2)

- Since 2000 we put 517 carrier sequence barcode sorter (CSBCS) into operation.
- Machine features:
 - Sortation to sequence in 3 runs
 - 17 or 21 bins
 - Throughput: 9.300 pcs/hr
 - Footprint: 20 m²
- A contract for additional 202 CSBCS was signed on 17 July 2003. These machines will be ready for operation in 2004. With a total 719 CSBCS we will be able to automatically sequence roughly 70% of all standard and compact letters.



3. Automation and Optimization (3)

- Actual projects to enhance automation:
 - Implementation of 202 additional carrier sequence barcode sorters (see previous page)
 - Improving OCR read rates by employing specialised secondary readers
 - Replacing the equipment in our 4 redirection centers by machines with higher throughput rates and better IT features.
 - Contract preparation for the next generation computerized forwarding system, which will enable us to redirect mail at the first OCR.
- Our long-term objective is to automatically sequence all letter mail per route
- We are determined to be a world leader in postal automation and network optimization.

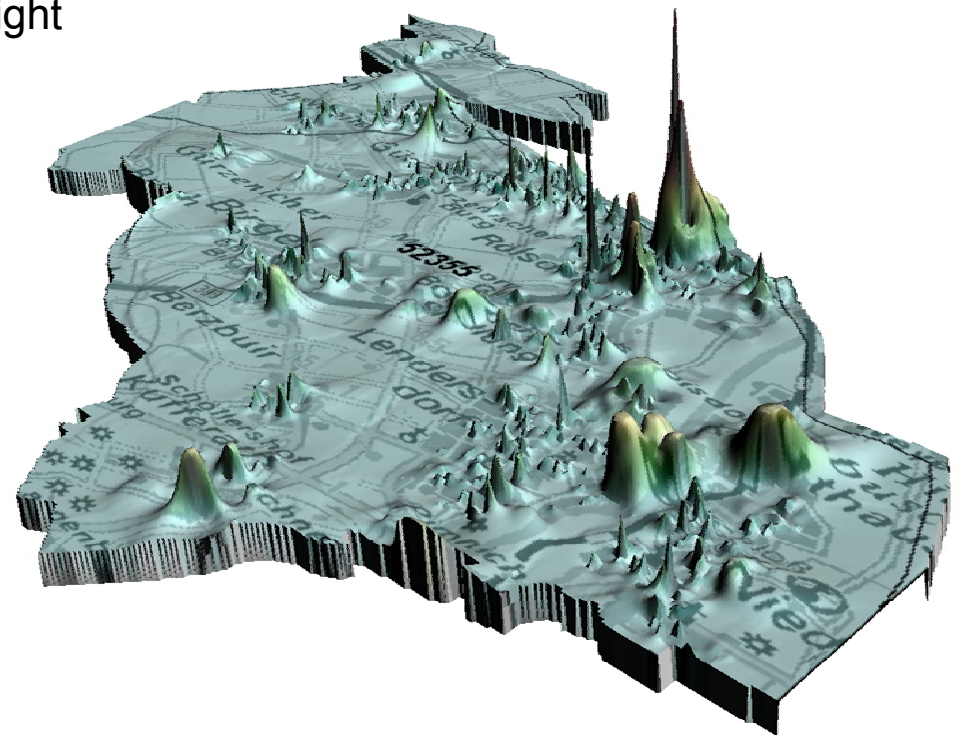
3. Automation and Optimization (4)

- Our Cologne based Geographical Data Center, which cooperates with Teleatlas, Gent, provides sufficiently detailed digital maps for the optimization of
 - locations (facilities, depots, outlets, letter mail boxes, etc.),
 - routes (transport, collection, delivery, etc). and
 - address services.
- In addition, our mail delivery data base contains 2.4 million street segment data sets with geographical coordinates, length, number of houses, number of households, mail volume, carrier workload (hrs), etc. for each segment.
- Given the geographical database and our operations research based tools we recently were able to optimize with substantial savings
 - the letter mail box system,
 - the joint delivery of letter mail and parcels in rural areas.

3. Automation and Optimization (5)

- Example: The question of separate or joint delivery of letter mail and parcels in rural areas can be answered with our data systems and optimization tools
- High parcel volume in spots of a rural area (shown on a digital map in 3rd dimension):

If peaks are high and close enough to each other, a separate parcel delivery route might be more cost efficient than joint delivery of letter mail and parcels



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- Coming from an administrative background, Deutsche Bundespost's wages for the majority of its workforce (sorter, carrier, etc.) were above market level.
- In the year 2000 we were able to sign a collective bargaining agreement, which lowered the wages for new hirees to the competitive market level:
- In addition, workers can receive an additional performance based pay which amounts to ~1.500 €/year or ~2.250 €/year in case of good or excellent performance (category 3 employee). The performance pay contributes substantially to the motivation of our workforce.
- Roughly 20% of our total workforce under collective bargaining agreement is actually paid according to the new wage scheme.

Wage Category	Example	Hourly Wage Rate 2003 (€)
1	Cleaner/Sweeper	7,94
2	Sorter, Driver	8,90
3	Letter Carrier, Parcel Carrier	9,37
4	Clerk with certified professional training	11,28

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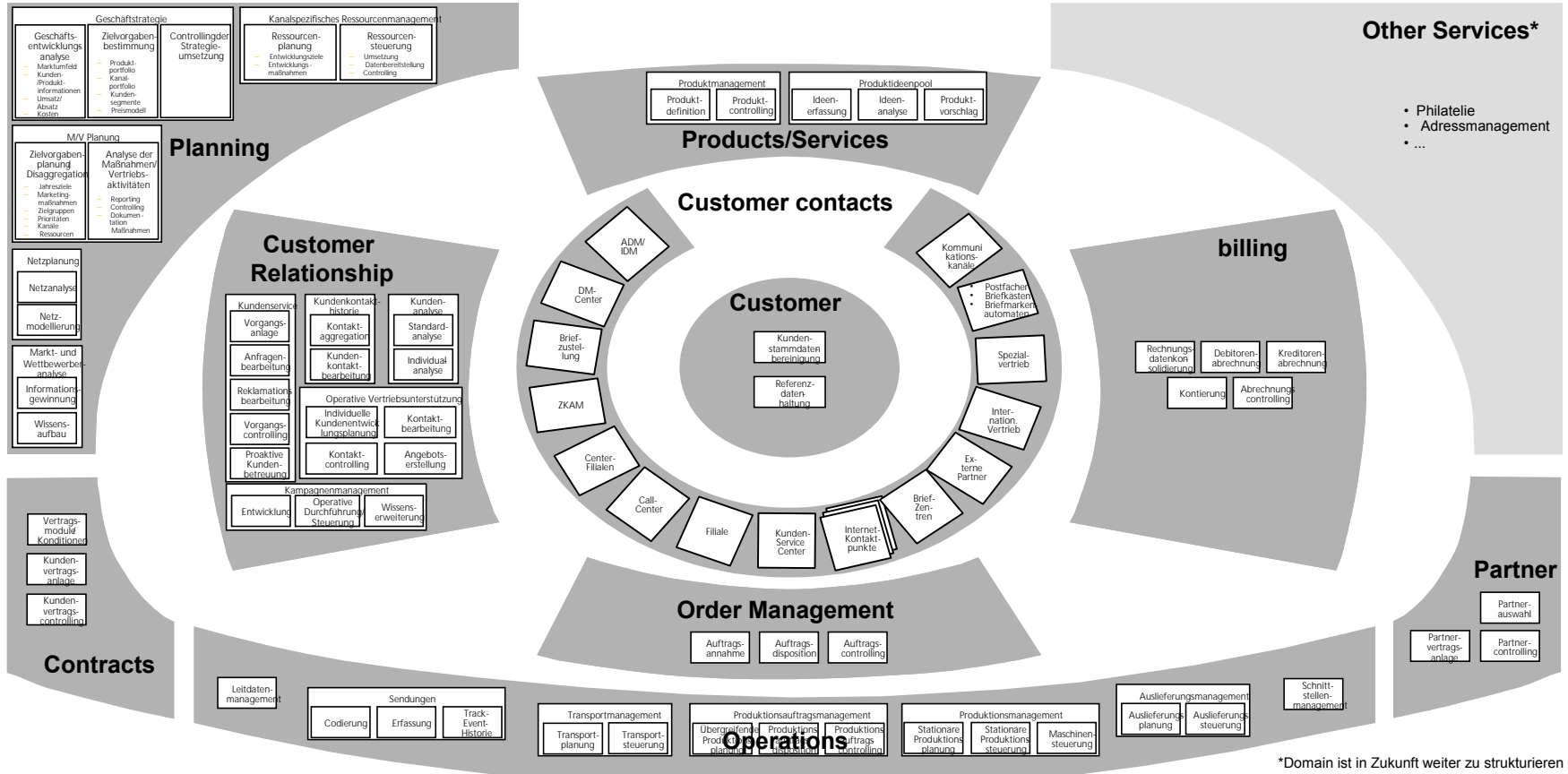
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5. IT and Management Control Systems

5. IT and Management Control Systems (1)

- During turnaround 1991-2001 focus was on improving quality, cutting costs, and speed. Many new stand-alone IT systems had to be introduced.
- Actual objective is to harmonize and improve IT systems according to our specified IT application architecture:
 - Global and redundancy free availability of functionalities and data
 - Lower complexity of the IT network
 - Robustness in case of modifications and extensions
 - Clear responsibilities for functionalities and data quality

5. IT and Management Control Systems (2)



*Domain ist in Zukunft weiter zu strukturieren

5. IT and Management Control Systems (3)

- We monitor key performance indicators of our operation offices on a monthly basis, especially service quality, meeting budget goals, and improving productivity.
- Within our corporation managements' salaries are partly performance based:

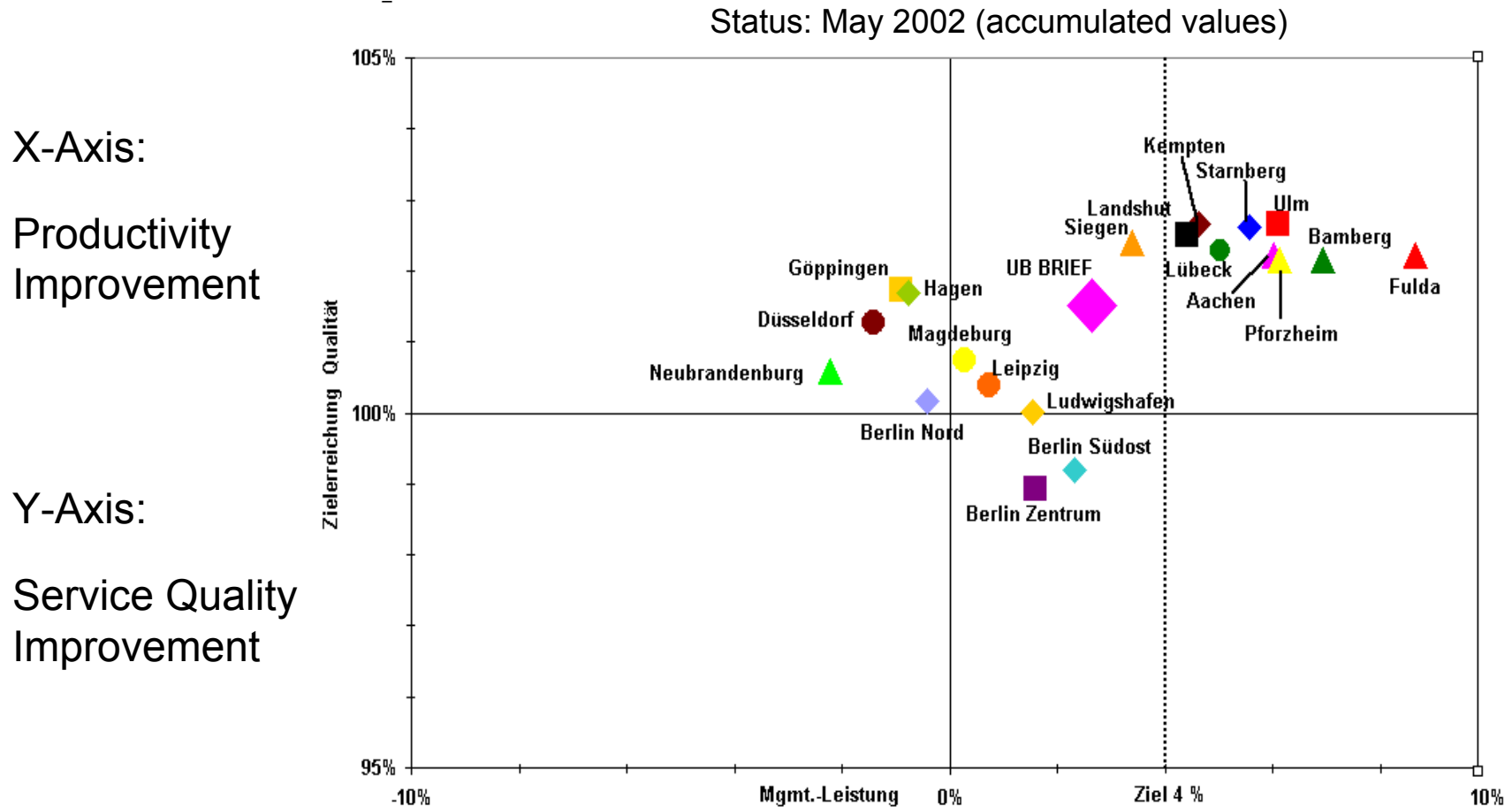
Mgmt. Level	Example	% Performance Pay
2	Head of Mail Ops	50%
3	Regional Head of Mail Ops	40%
4	Regional Head of Delivery	30%

In addition managers level 2-4 have a car fully paid for by the company.

- Performance measurements and performance pay have largely contributed to our business success.

5. IT and Management Control Systems (4)

Example: Performance of Letter Mail Operations Offices (Niederlassungen)



If you don't do it excellently, don't do it at all. Because if it's not excellent, it won't be profitable or fun, and if you're not in business for fun or profit, what the hell are you doing there?

Robert Townsend