



Science For A Better Life

MaterialScience

Bayer R&D Investor Day 2005

December 8, 2005 | London



Bayer MaterialScience



Bayer R&D Investor Day 2005

Innovation at Bayer MaterialScience – Overview

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Board Member Innovation and Marketing
Bayer MaterialScience

Forward Looking Statements



This presentation contains forward-looking statements based on current assumptions and forecasts made by Bayer Group management.

Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. These factors include those discussed in our public reports filed with the Frankfurt Stock Exchange and with the U.S. Securities and Exchange Commission (including our Form 20-F). The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.

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Key Messages



- Innovation is an integral part of the business strategy
- Managing innovation is different at MaterialScience
- Our investment in R&D is paying off

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Focus on Polycarbonate and Polyurethanes



Polyurethanes



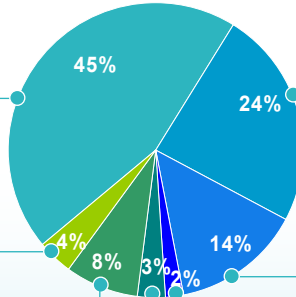
Wolff Walsrode



H.C. Starck



Total sales €8.597m



Polycarbonates



Coatings, Adhesives, Sealants



Thermoplastic Polyurethanes



Inorganic Basic Chemicals



Serving Key Industry Sectors



Chemicals
9%

Others
(sports, leisure, medical, footwear etc.)
23%

Furniture / Wood
16%

Automotive
16%

Electro/ Electronics
16%

Construction
20%



Innovation is Key for our Roadmap to Profitable Growth



Growth

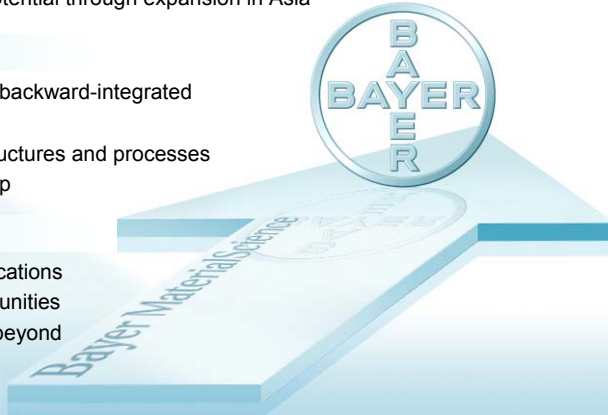
- Building on leadership positions in the majority of our businesses
- Tapping significant growth potential through expansion in Asia

Efficiency

- Concentrating on sufficiently backward-integrated world-scale plants
- Benefiting from optimized structures and processes through technology leadership

Innovation

- Developing tailor-made applications
- Exploiting new growth opportunities throughout the portfolio and beyond



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Broad Diversity of Innovations



Waterborne 2K-PUR coatings
Meeting ecological requirements



Aspartates for innovative corrosion protection



New Makroblend product lines for use in automotive exterior parts – high toughness even at low temperatures



Flame resistant **Bayblend** grades with Eco-label compliance



New scratch-resistant **Makrolon** grades for automotive glazing



Printable aliphatic **Desmopan** films for improved mechanical properties and light stability



Multitec
Short Fiber Spraying – fast and efficient process



ETICS
External thermal insulation composite system



Bayflex Lightweight
Density reduction, excellent dynamic compression set performance

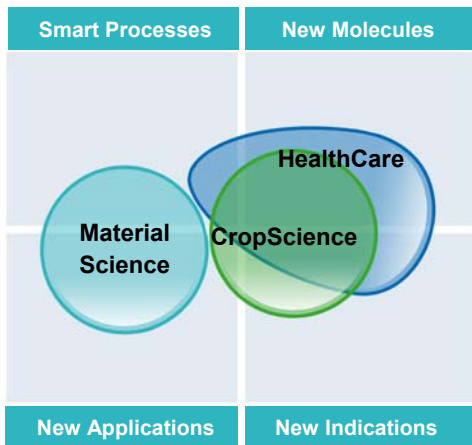


Baytron – conductive polymer for capacitors, electrodes and antistatics



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Research at MaterialScience is Different



- New applications for existing polymers and smart processes are key research areas
- Invention of new polymeric material not on the horizon
- Proximity to customers
- Tailor-made solutions meeting specific customer needs
- Driving innovation in multiple industry areas with highly versatile materials
- Blockbusters not immanent

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Expanding The Scope – Environment to promote incubation of new business



- 'New Business' and 'Greenhouse' are parts of our R&D organization, providing a platform for projects outside the primary scope of current business units
- New Business organization identifies attractive projects
- Greenhouse is the project development phase with milestone-controlled funding for a predefined period
- After Greenhouse phase, business is integrated into BMS business or follows exit models



A Greenhouse project – Carbon Nanotubes (Baytubes)



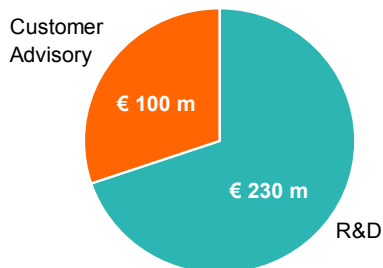
- Cost-efficient manufacturing of ultrapure carbon nanotubes
- Product development using carbon nanotubes: hybrids with outstanding mechanical, electrical and physico-chemical properties at significantly lower loadings than conventional fillers

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R&D Resources Efficiently Deployed



R&D Budget 2005



- Competitive R&D funding, approximately 3% of sales
- NPV-based project evaluation
- R&D expenses differentiated to specific business unit needs
- R&D expenses split equally between 'process innovation' and 'growth opportunities in new applications'
- 'Customer advisory' involves customers at early stage of R&D to adapt projects to specific customer needs
- 10% of R&D invested in New Business

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Investment in R&D is Paying Off – Patent Protection and Share of New Products



Solid intellectual property position

- Approx. 3,000 active patent families consisting of approx. 29,000 single patents and patent applications
- 200 - 250 new patent applications per annum
- More than 40% of 2004 sales were generated by patented products

More than 20% of sales from new products

- New products are defined as either completely new or as products with new functionalities launched since 2000
- 2,500 new products in a portfolio of about 8,000 products (2004)
- High share of sales from new products in
 - Polycarbonates
 - HC Starck
 - Coating, Adhesives and Sealants

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Process Innovation

- Capability to drive the world-scale definition
- Mastering process efficiency

Hartmut Löwer

Innovation in Electro/Electronics

- Driving the future of optical data storage
- New functionalities for high performance polymers

Ian Paterson

Innovation in Automotive

- Modularization and functionalities obtained by polymer applications
- Technology breakthrough in automotive glazing

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