

PHILIPS

Manufacturing and Operational Excellence

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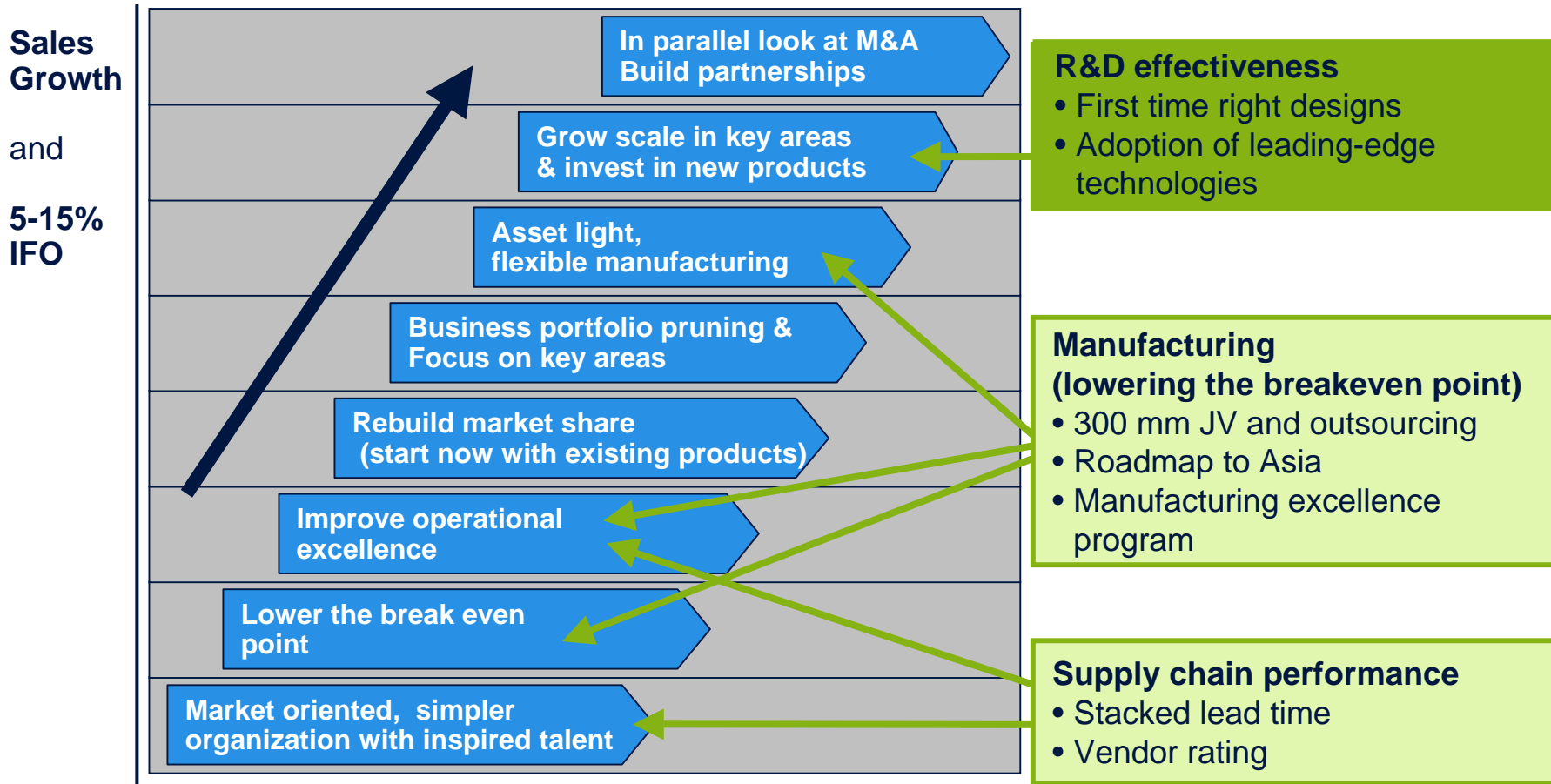
Outline

Operational excellence to improve competitiveness

- R&D Effectiveness
 - Adoption of leading edge technologies
 - First-time-right in design
- Manufacturing Strategy & Cost Down Roadmap
 - Lowering the Breakeven Point
 - Roadmap to Sourcing from Asia
 - Cost of Non-quality and Zero Defect Plan
- Supply Chain Performance Initiatives

Our focus today

Improving our competitiveness

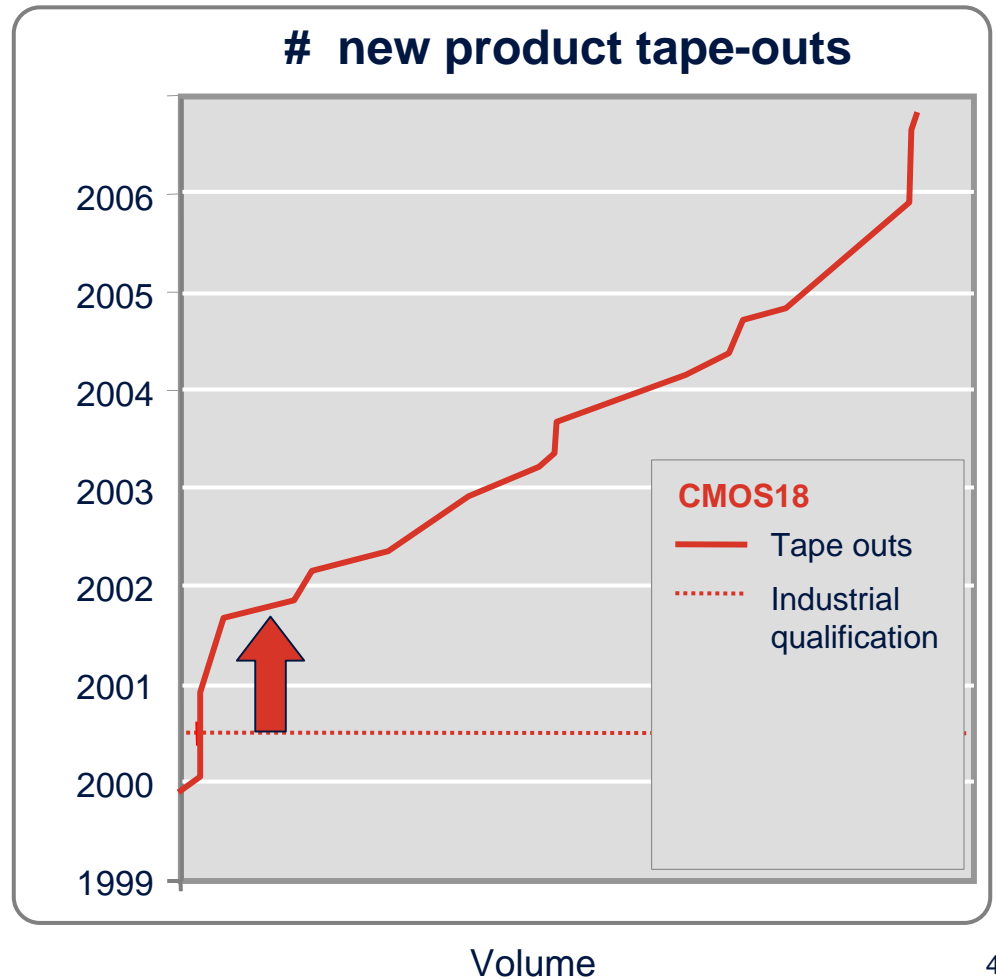


Agenda

R&D effectiveness

Focus on early adoption of leading-edge technologies

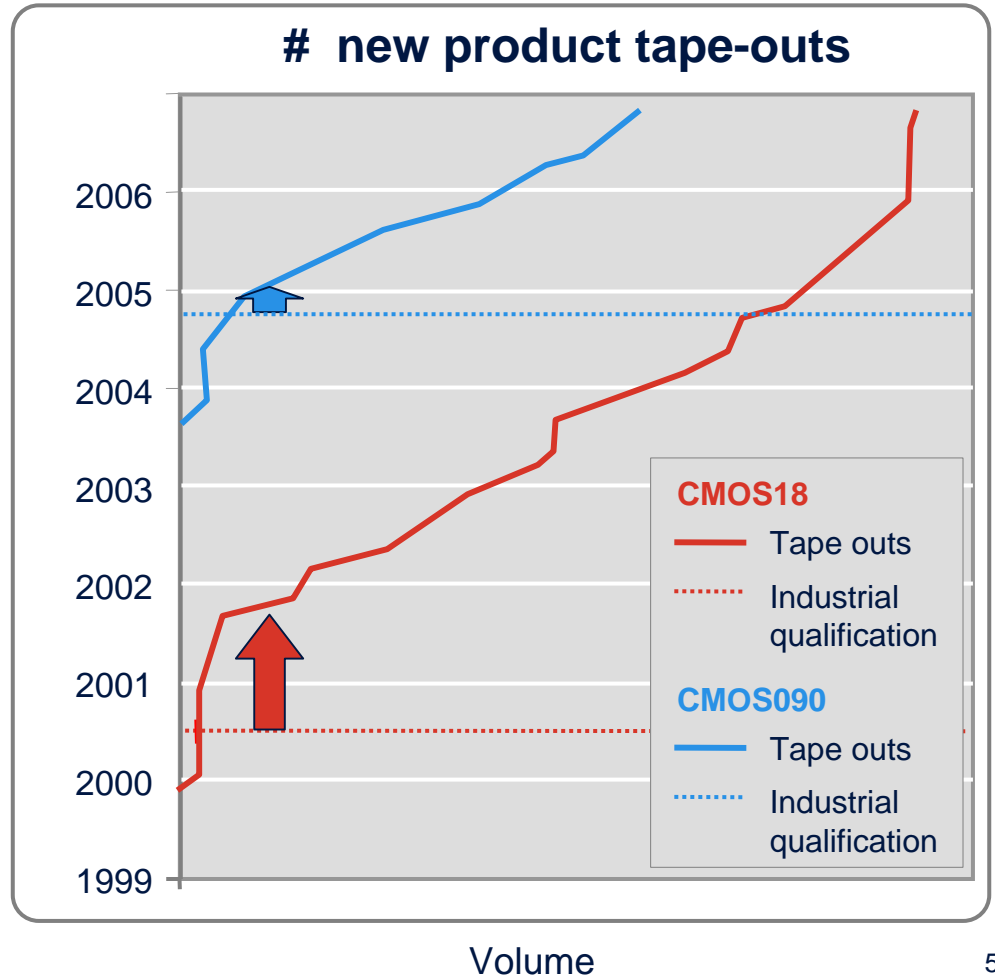
- For the 0.18 μm node it took 3 quarters after industrial qualification before the new products started growing



R&D effectiveness

Focus on early adoption of leading-edge technologies

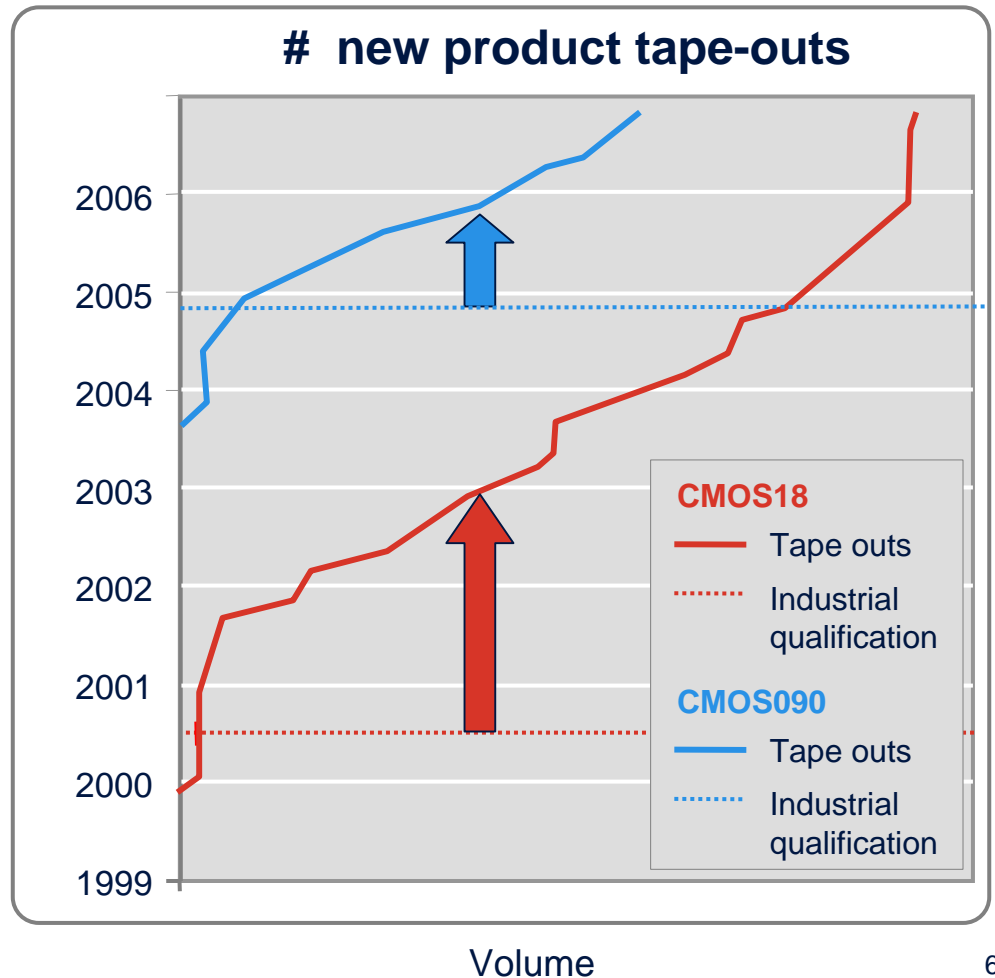
- For the 0.18 μm node it took 3 quarters after industrial qualification before the new products started growing
- For 90nm the increase in new product tape-outs occurs virtually instantaneously after process qualification



R&D effectiveness

Focus on early adoption of leading-edge technologies

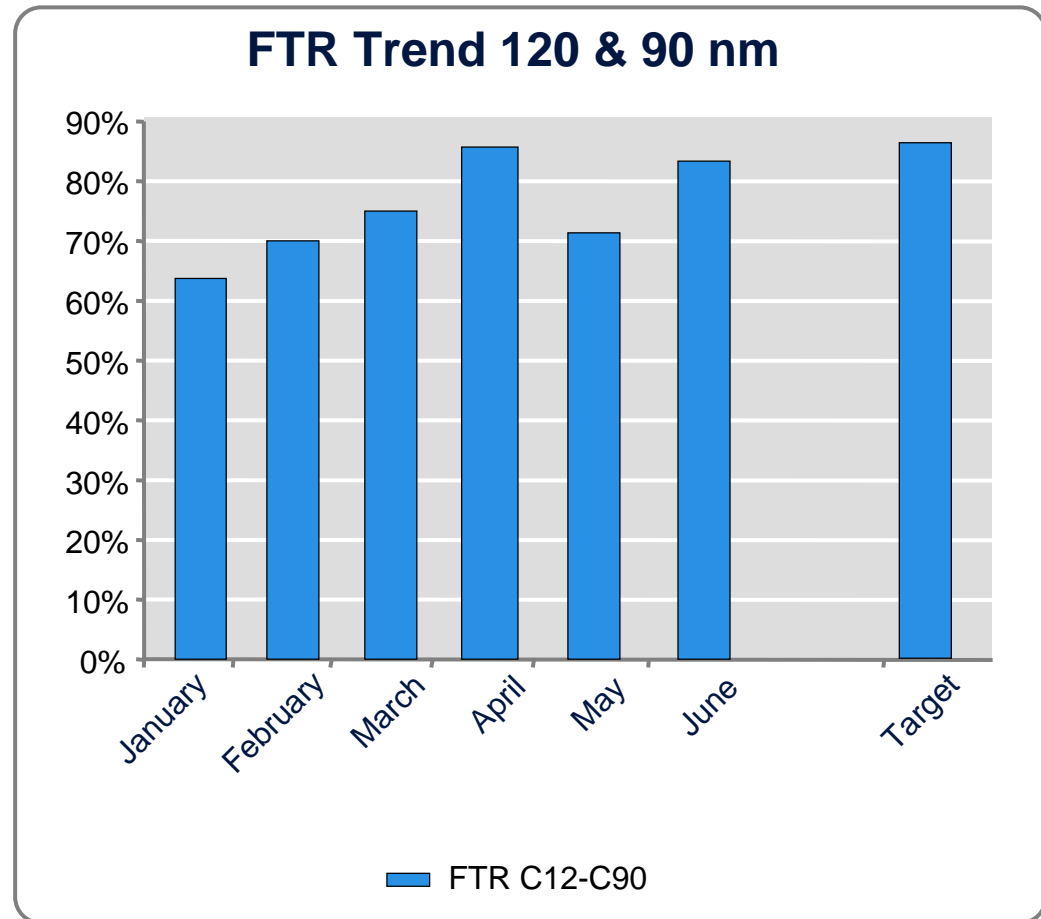
- For the 0.18 μm node it took 3 quarters after industrial qualification before the new products started growing
- For 90nm the increase in new product tape-outs occurs virtually instantaneously after process qualification
- Meanwhile, time to initial volume has come down from approx. 3 years to 3 quarters
- The principles of concurrent engineering and early validation of IP are being actively applied in the launch of 65 nm and beyond



R&D effectiveness

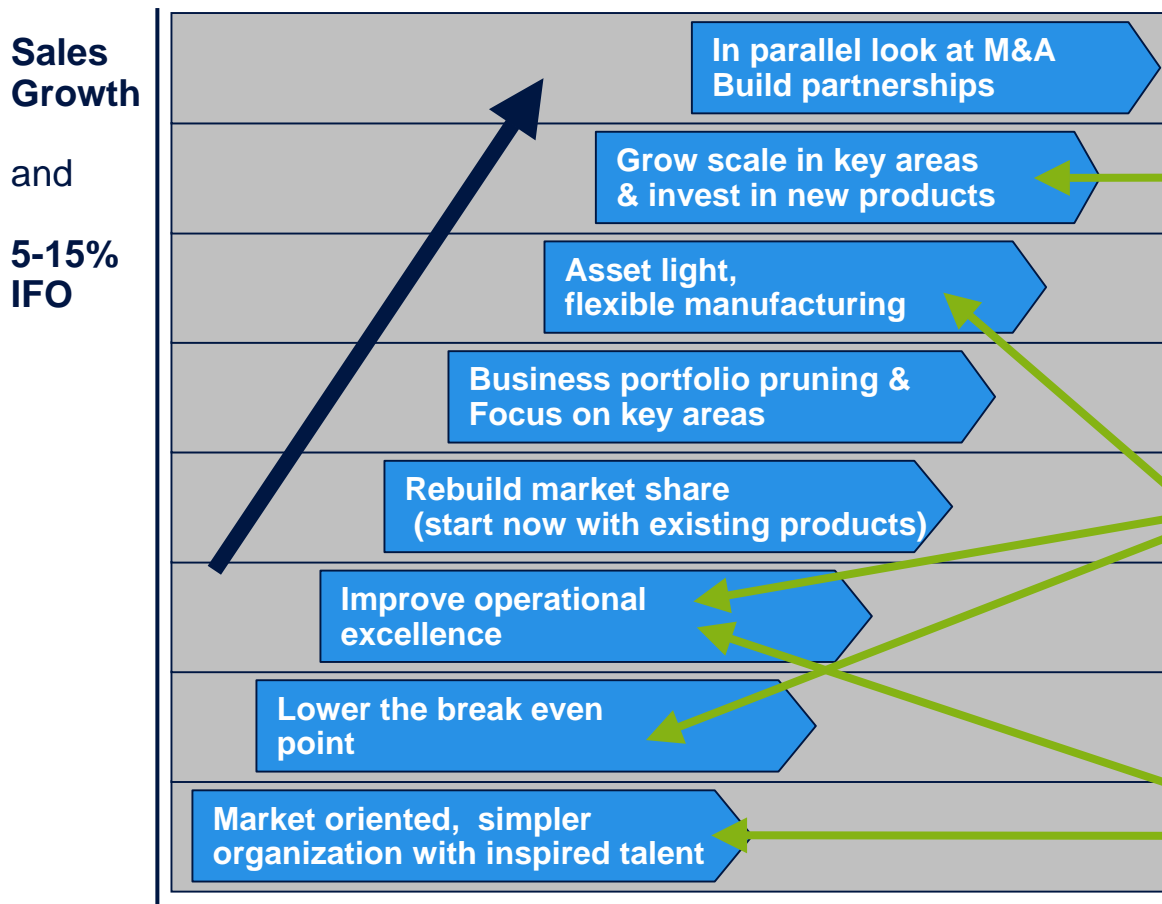
FTR (First Time Right) for 120 and 90 nm

- Improved design methodologies and focus on design for manufacturability to maintain high first time right ratios despite increasing product complexity
- To further strengthen our product creation potential, the Crolles2 alliance cooperation has been extended to include creation of advanced IP as well as assembly technology



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Improving our competitiveness



Agenda

R&D effectiveness

- First time right designs
- Adoption of leading-edge technologies

Manufacturing (lowering the breakeven point)

- 300 mm JV and outsourcing
- Roadmap to Asia
- Manufacturing excellence program

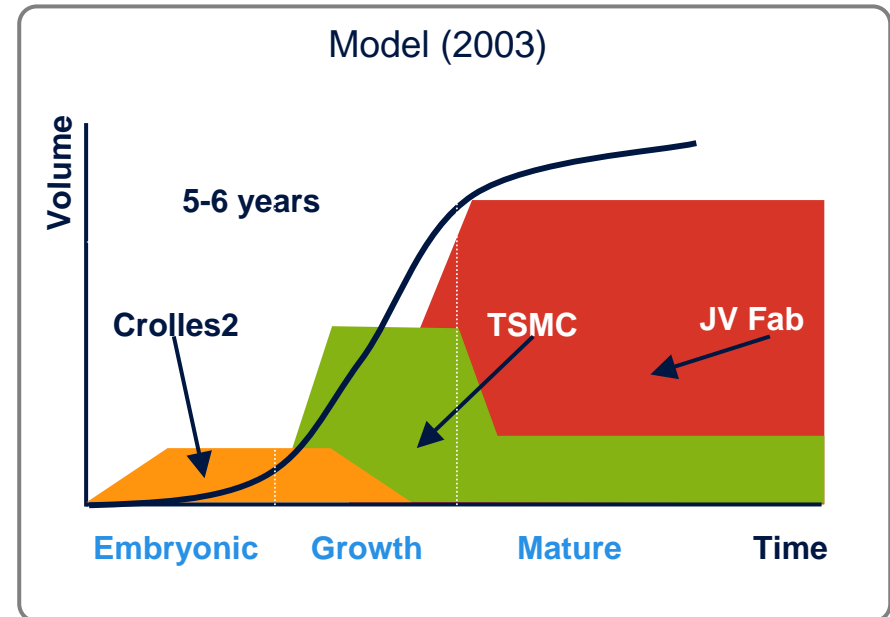
Supply chain performance

- Stacked lead time
- Vendor rating

Asset light strategy

Turning theory into practice

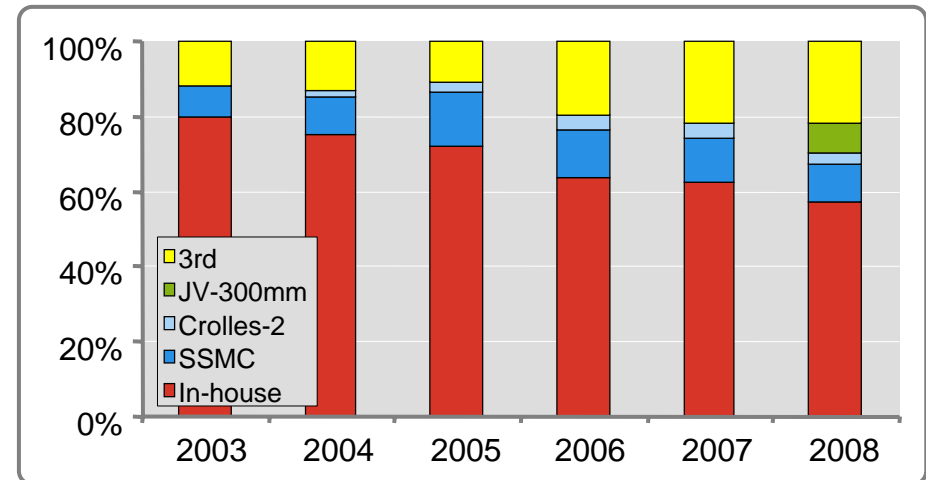
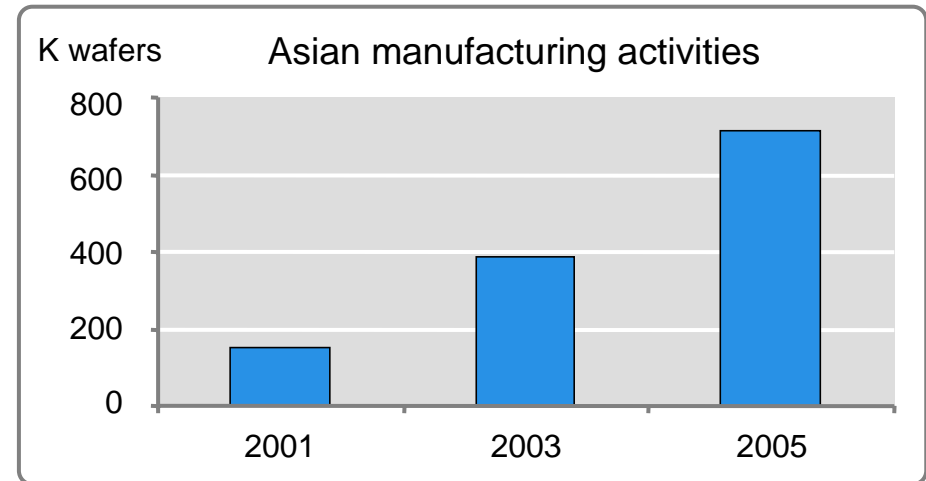
- R&D and pilot fab in Crolles-2 Alliance
- Typical time to start of own (J.V.) is 4-5 years until enough wafer load
- New J.V. for 300 mm will be needed by 2008 (market conditions will dictate exact timing)
- TSMC 2nd sourcing available



Sourcing roadmap 2005-2008

Lowering our breakeven point

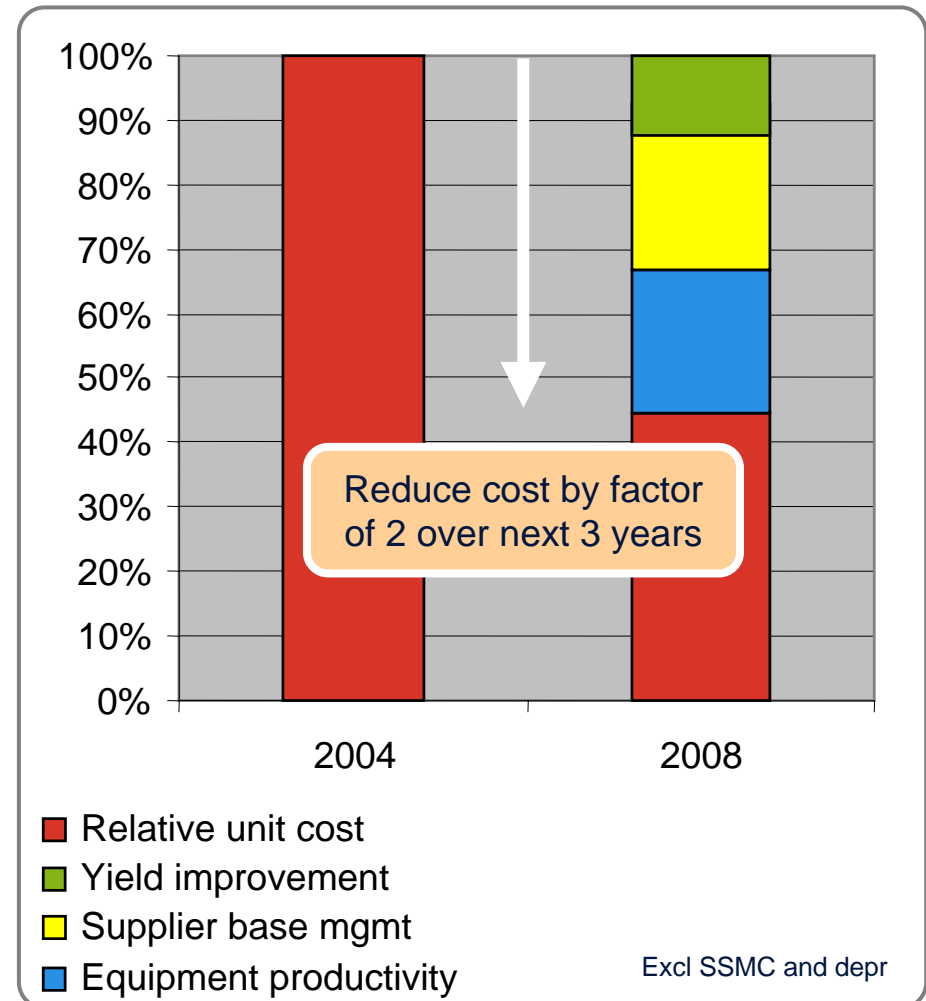
- Manufacturing activities will continue to shift to Asia
 - Advanced processes
 - High volume non-specialty processes for dual sourcing
- Outsourcing will increase to well over 30%
 - In-house production is decreasing continuously
 - Production in Europe/US will be limited to part of proprietary and specialty technologies in the existing manufacturing base



Manufacturing excellence related cost reduction

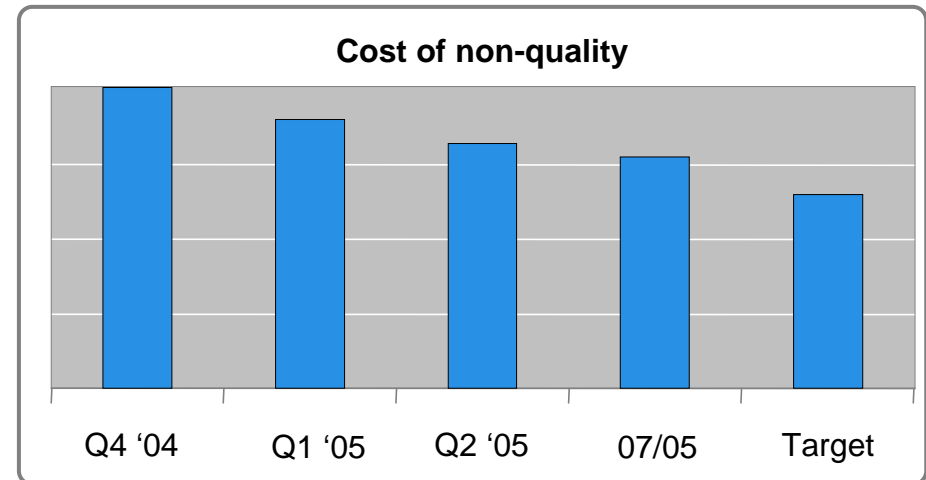
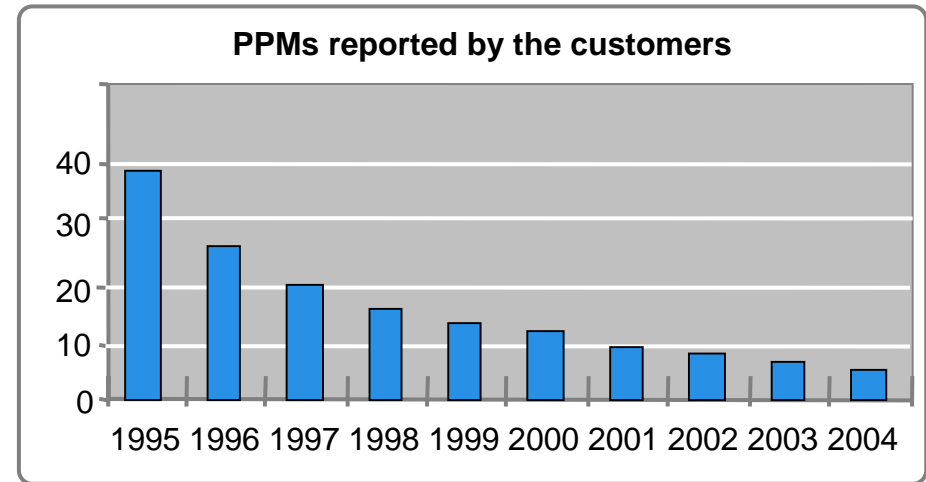
Lowering our breakeven point

- Yield improvement is approaching best in class limits
 - Traditional improvement program was not delivering fast enough
 - Installed focused manuf. excellence program, resourced with high-level industrial engineers, already paying off
- Equipment productivity improvement by retrofitting best practices from advanced and high-performing units into rest of mature base
- Supplier base: decreasing cost of direct and indirect materials
- These actions will lead to cost reduction of 325M Euros including depreciation by end 2007



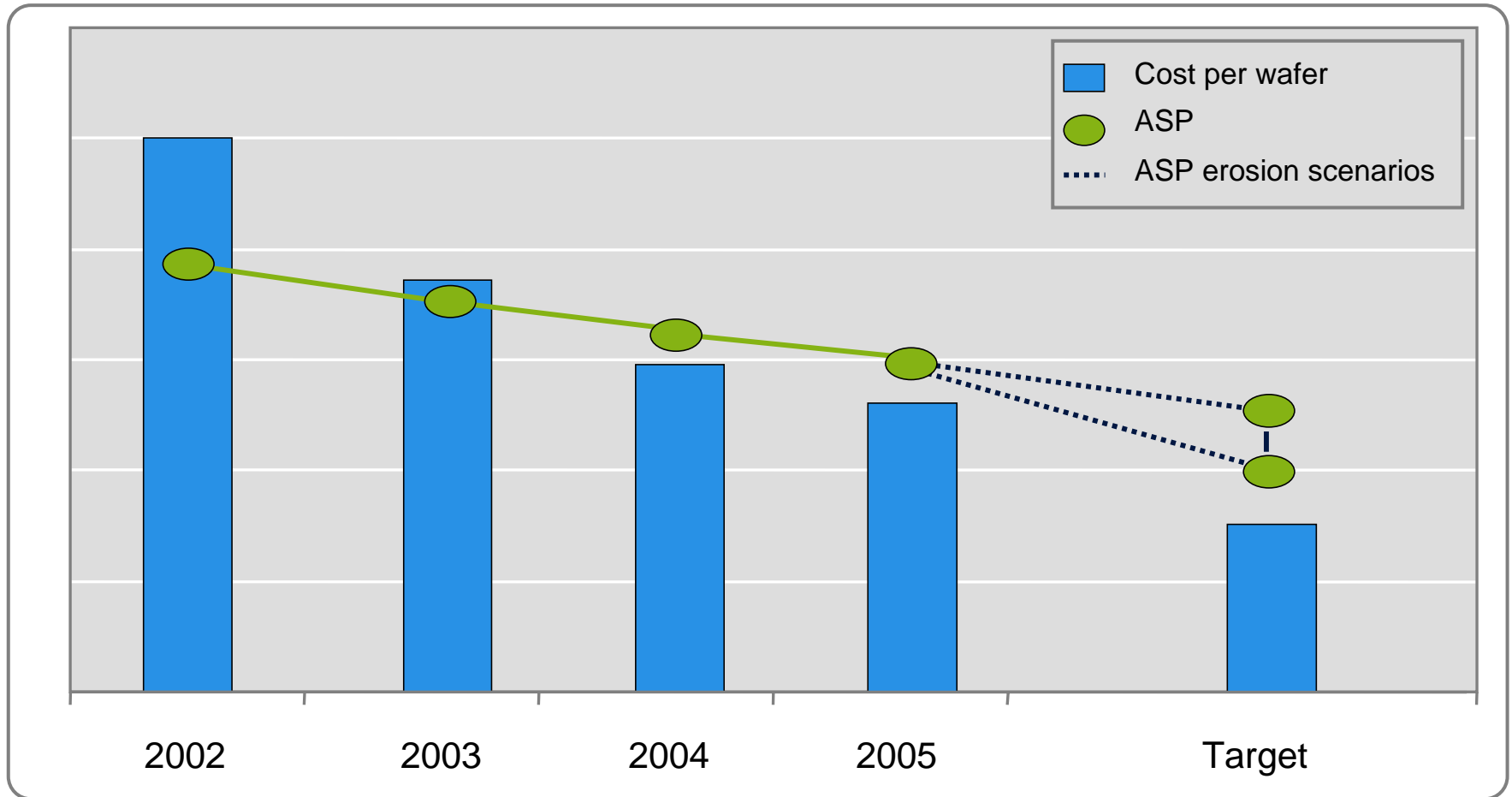
Zero defects program Meeting automotive industry requirements

- Improving technical quality control to reduce customer complaints from the PPM to the PPB level
 - Current complaint level is about 2 per billion pins (assembly)
 - Increased focus on design-for-manufacturing, as complexity of new products increases
 - Applying “firewalls” (refined measurement and test approaches) to screen latent defects
- Embedding the zero defect culture in all our operations to reduce the cost of non-quality



What does it mean?

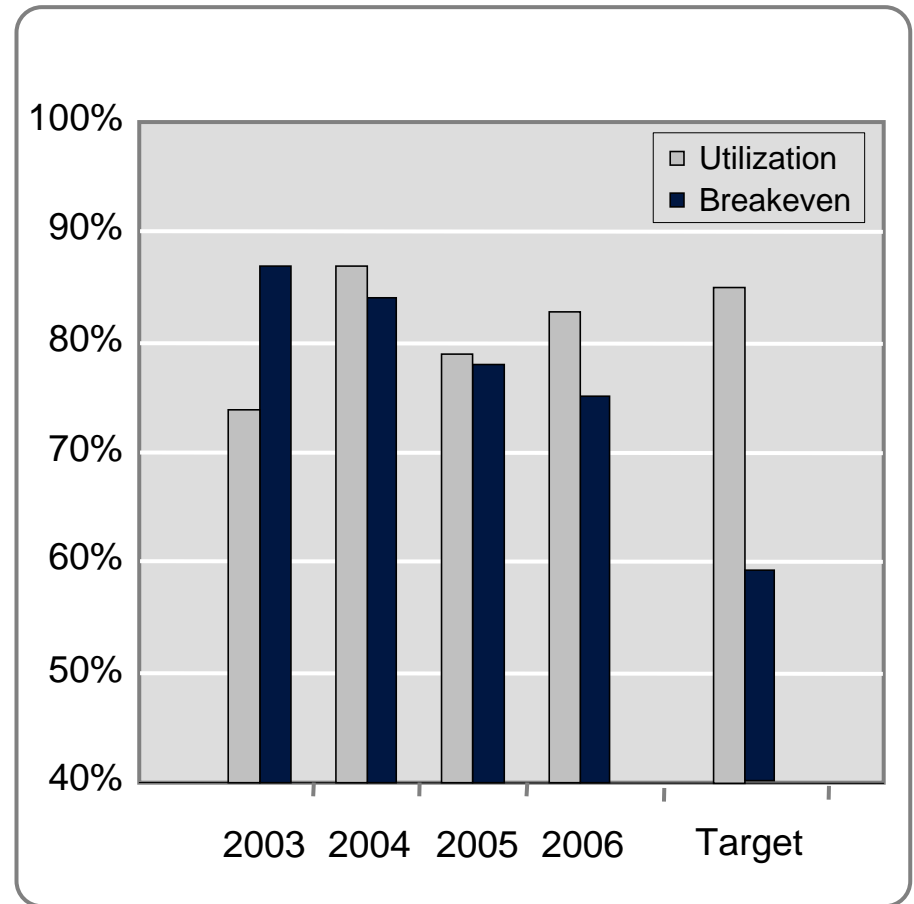
1) Wafer cost per unit reduction faster than ASP erosion



What does it mean?

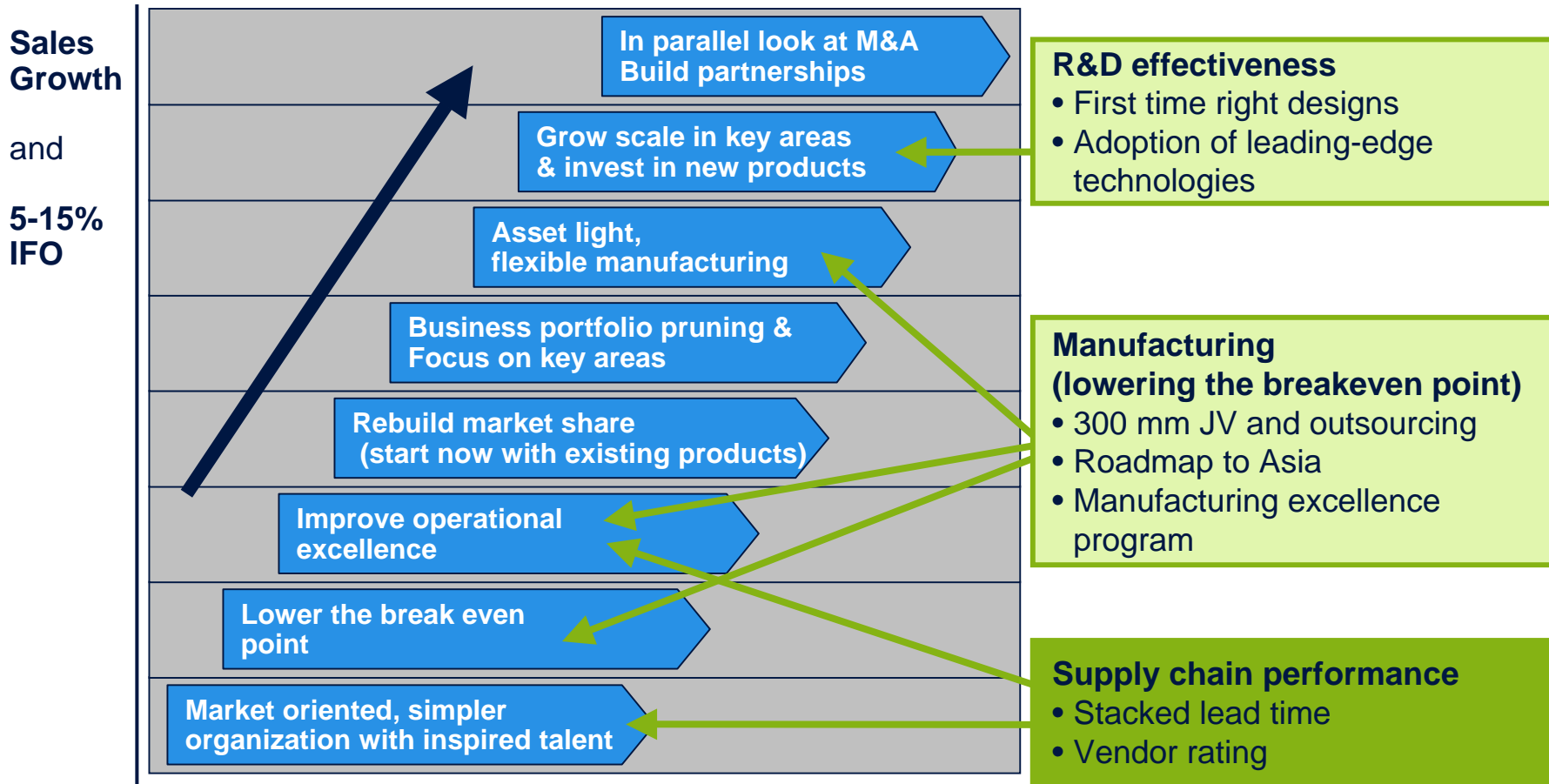
2) Continuous reduction of breakeven point

- Restructuring and regrouping of production activities (e.g. Nijmegen) in 2004 has made substantial reduction of breakeven point
- Going forward, we will continue to regroup and maintain utilizations above the breakeven point



Our focus today

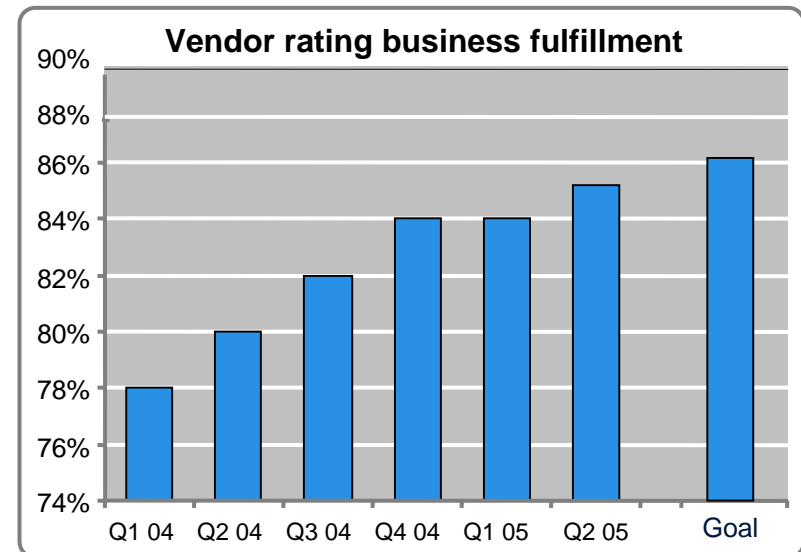
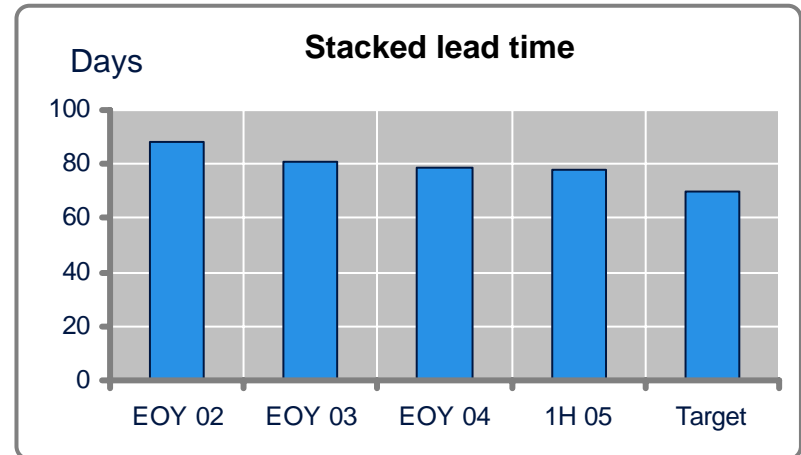
Improving our competitiveness



Optimizing supply chain management

Supporting the highway to the customer

- Despite increased complexity of flows, which adds roughly 3 days, ongoing progress in stacked lead time improvements
- Positive trend in vendor rating for business fulfillment: from 78% to 85% in 6 quarters
 - SCM organization being optimized in line with the highway to the customer
 - Breakthrough actions to improve requested line item performance (RLIP) from 75 to 90%
 - Reduce customer order confirmation from 2 days to 24 hours



In Summary:

We have made significant progress over the past year

- Increased focus on R&D effectiveness, building on the first time right experiences in 90 nm as we tackle 65 nm challenges
- Asset light strategy, ongoing cost reductions and manufacturing excellence provide a significant contribution to economic viability
- Bringing company-wide quality to automotive requirements
- Focus on supply chain management leading towards improved stacked lead time and delivery performance to become recognized for customer-service

Our journey is underway, we are on the right track, and we are committed to achieving our objectives!

