



***SMART SOLUTIONS TO DRIVE THE FUTURE***

**Optical Disc and Solar**

**SINGULUS TECHNOLOGIES AG**



# Financial Overview

in million €	2009	2010
<b>Revenues</b>	116.6	120.1
<b>Order Intake</b>	81.1	128.2
<b>Order Backlog (31.12.)</b>	34.7	35.5
<b>EBIT</b>	-73.3	-80.2
<b>Adjusted EBIT</b>	-40.4	-27.2
<b>EBITDA</b>	-42.7	-16.6
<b>Adjusted EBITDA</b>	-20.2	-11.0
<b>Profit Before Tax</b>	-79.4	-84.9
<b>Net Profit</b>	-78.9	-77.9
<b>Operating Cash Flow</b>	0.2	-6.9
<b>Total Assets</b>	263.6	181.9

# Extraordinary Expenses 2010

in million €	Total
<b>Write Down Inventories and Receivables Optical Disc</b>	17.0
<b>Restructuring</b>	2.9
<b>Write Down Investment Property</b>	0.6
<b>Write-Offs Capitalized Development Costs Optical Disc</b>	4.6
<b>Write-Offs Mastering Goodwill and Capitalized Development Costs</b>	23.7
<b>Write Down Intangible Assets</b>	19.0
<b>Total</b>	67.8

# Profit & Loss Statement

in million €	2009	2010
<b>Gross Revenue</b>	116.6	120.1
<b>Net Revenue</b>	114.9	118.2
<b>Gross Profit</b> (in % of Net Revenues)	33.1 (28.8%)	30.5 (25.8%)
<b>-R+D</b>	-18.6	-16.3
<b>-Sales &amp; Customer Service</b>	-20.6	-19.2
<b>-GM &amp; A</b>	-17.6	-15.0
<b>-Other Income/Expenses</b>	-16.7	-7.2
<b>-Restructuring and Impairment</b>	-32.9	-53.0
<b>OPEX (Total)</b>	-106.4	-110.7
<b>EBIT</b> (in % of Net Revenue)	-73.3 (-63.8%)	-80.2 (-67.9%)
<b>Net Income</b>	-78.9	-77.9
<b>EPS (basic)</b>	-2.11	-1.92

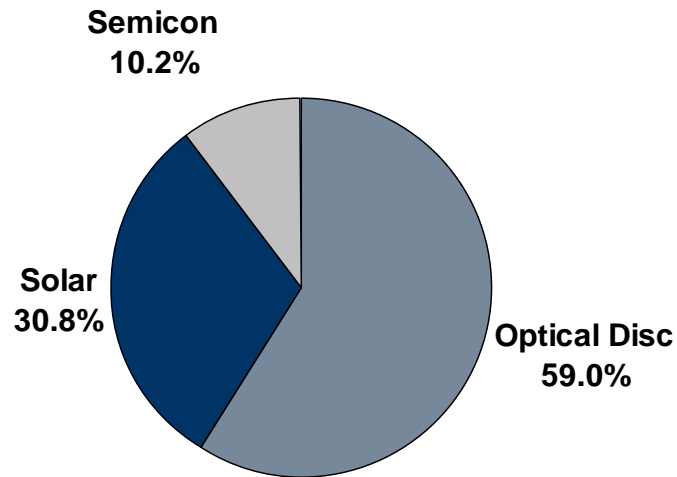
# Cashflow Development

in million €	2009	2010
<b>Cashflow from Operating Activities</b>	0.2	-6.9
<b>Cashflow from Investing Activities</b>	-14.7	-2.4
<b>Cashflow from Financing Activities</b>	-10.5	6.3
<b>Total Cashflow</b>	-25.0	-3.0
<b>Cash and Cash Equivalents at the Beginning of the Fiscal Year</b>	40.1	15.2
<b>Effect of Exchange Rate Changes</b>	0.1	0.1
<b>Cash and Cash Equivalents at the End of the Fiscal Year</b>	15.2	12.3

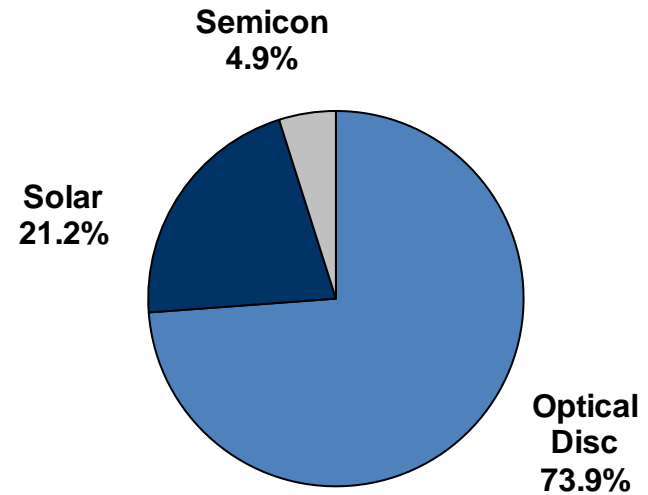
# Balance Sheet

in million €	2009	2010
<b>Cash and Cash Equivalents</b>	15.2	12.3
<b>Total Receivables</b>	41.4	47.3
<b>Total Inventories</b>	57.7	47.7
<b>Non Current Assets</b>	139.6	74.6
<b>Others</b>	9.7	0.0
<b>Total Assets</b>	263.6	181.9
<b>Total Current Liabilities</b>	72.4	54.6
<b>Total Non-Current Liabilities</b>	23.0	21.1
<b>Total Equity</b>	165.8	106.2
<b>Others</b>	2.4	0.0
<b>Equity and Liabilities</b>	263.6	181.9

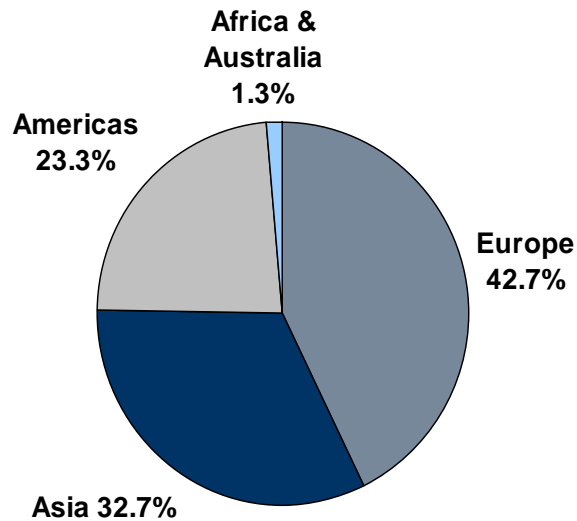
## Sales Split by Products 2009



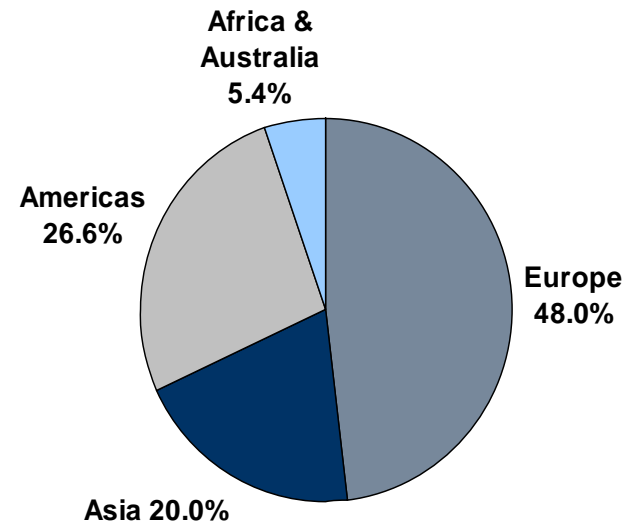
## Sales Split by Products 2010



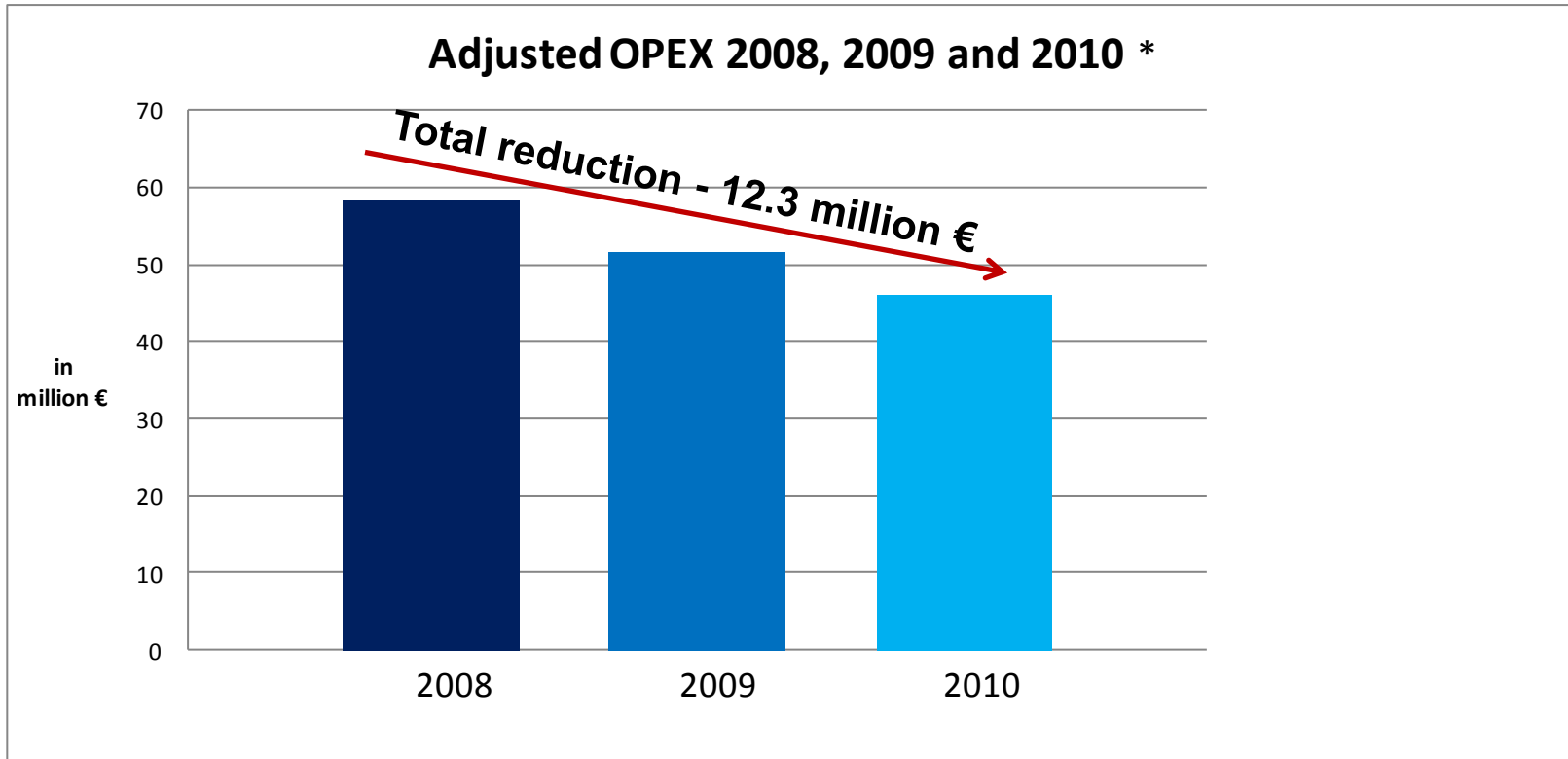
## Sales Split by Region 2009



## Sales Split by Region 2010



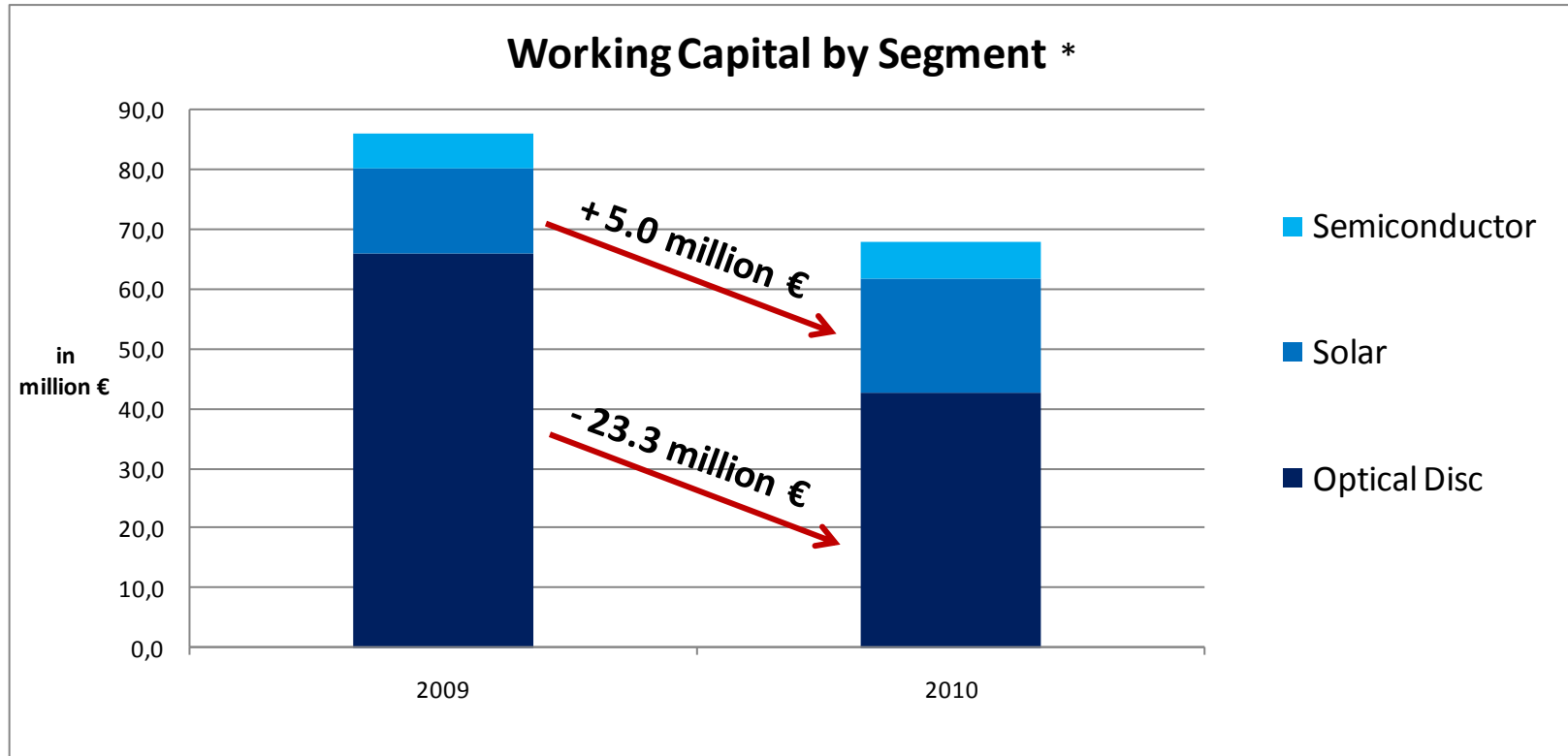
	Dec 31, 2009	Dec 31, 2010	Δ
<b>STANGL</b>	148	133	-15
<b>SINGULUS</b>	339	326	-13
<b>HamaTech APE</b>	85	-	-85 <i>Activities sold</i>
<b>SINGULUS Group</b>	572	459	-113
<b>Domestic</b>	418	337	-81
<b>Abroad</b>	154	122	-32



- **Reduction 2008 to 2009 6.8 million €**
- **Reduction 2009 to 2010 5.5 million €**

\* *OPEX includes research and development, sales and customer service and general administration costs adjusted for restructuring costs and other one time effects*

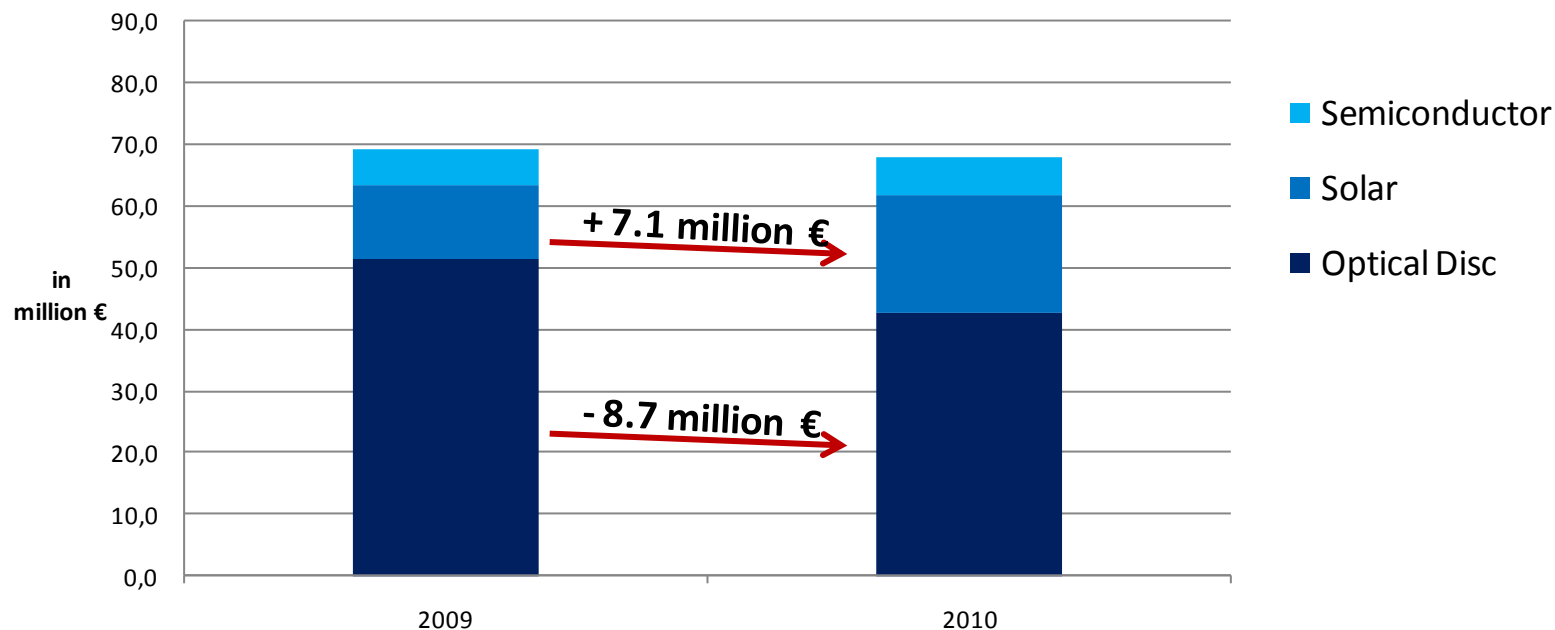
# Operational Achievement Working Capital



- **Reduction of working capital optical disc of 23.3 million €**
- **Building up new solar business lead to an increase of working capital of 5.0 million €**

\* *The working capital changes 2010 included write offs of 17.0 million €*

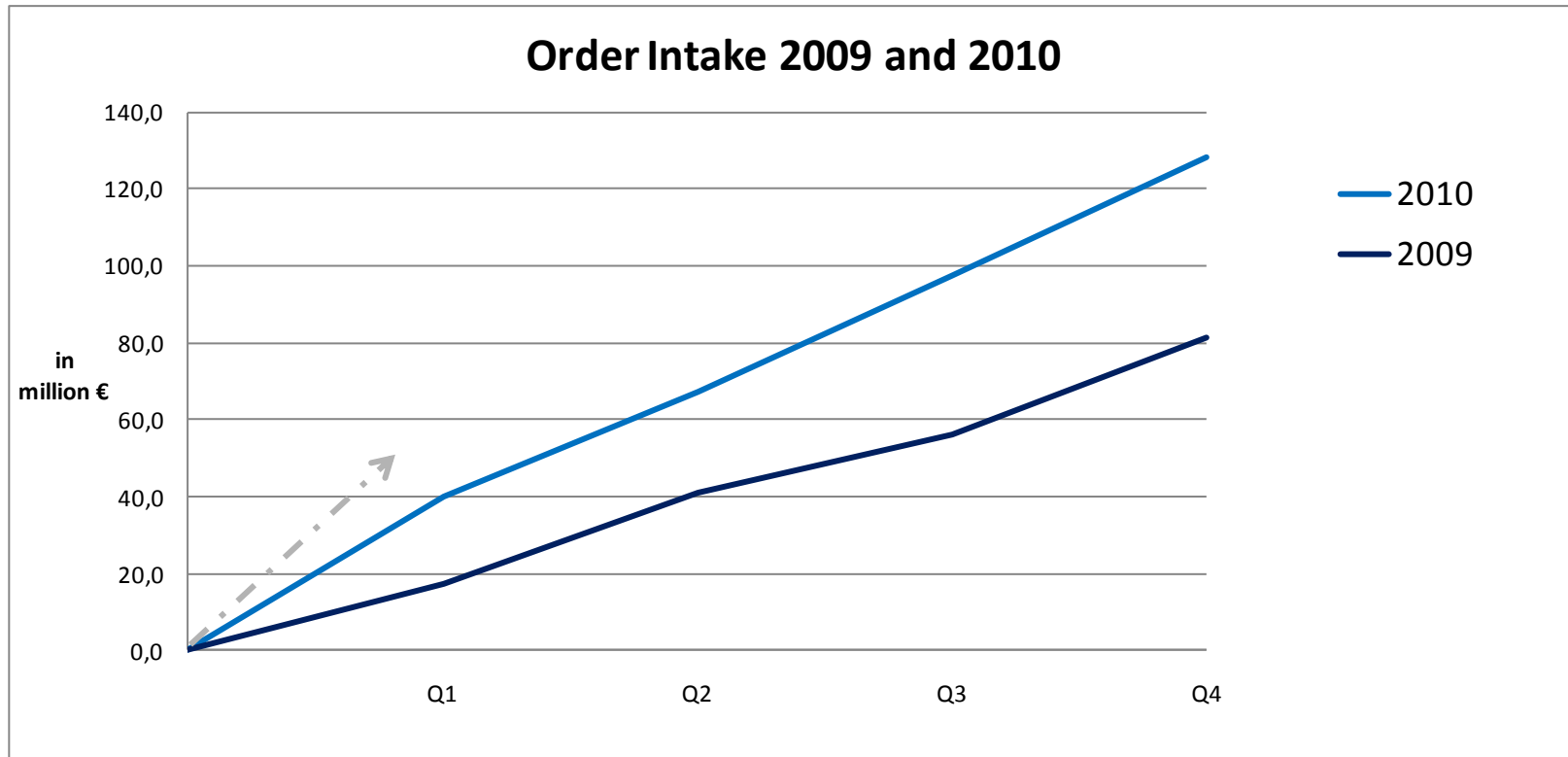
### Adjusted Working Capital by Segment \*



- | Ratio working capital / Net revenues | OD    | Solar | Total |
|--------------------------------------|-------|-------|-------|
| 2009                                 | 76.4% | 33.4% | 74.9% |
| 2010                                 | 49.0% | 76.3% | 57.4% |

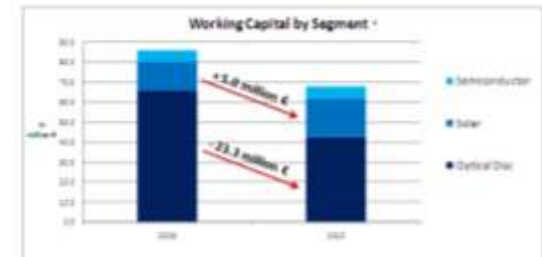
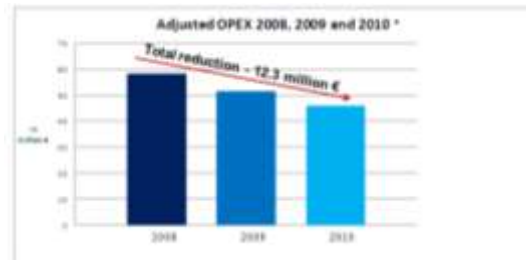
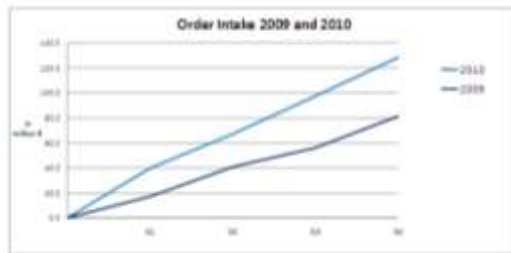
\* Working Capital 2009 was adjusted according to write downs 2010

- Increase of Order Intake 2010 + 58 %



# Achievements and Trend SINGULUS Group

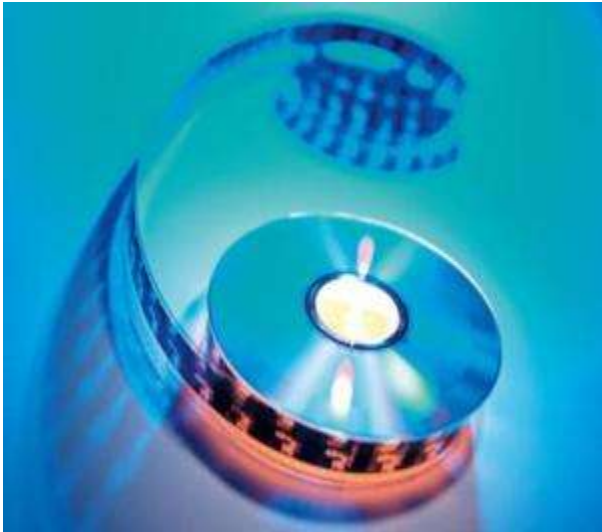
- 58 % growth in order intake
- Growth in revenues
- Successful OPEX reduction
- Reduction of working capital and improving its efficiency
- Strong balance sheet with strong equity ratio of 58.4 %



# Our two Major Segments

## Optical Disc

- Mastering
- Molding
- Replication



## Solar

- Coating
- Wet Processing
- Systems Business



# The Total Solution for Optical Disc



Mastering Systems



Molding Systems

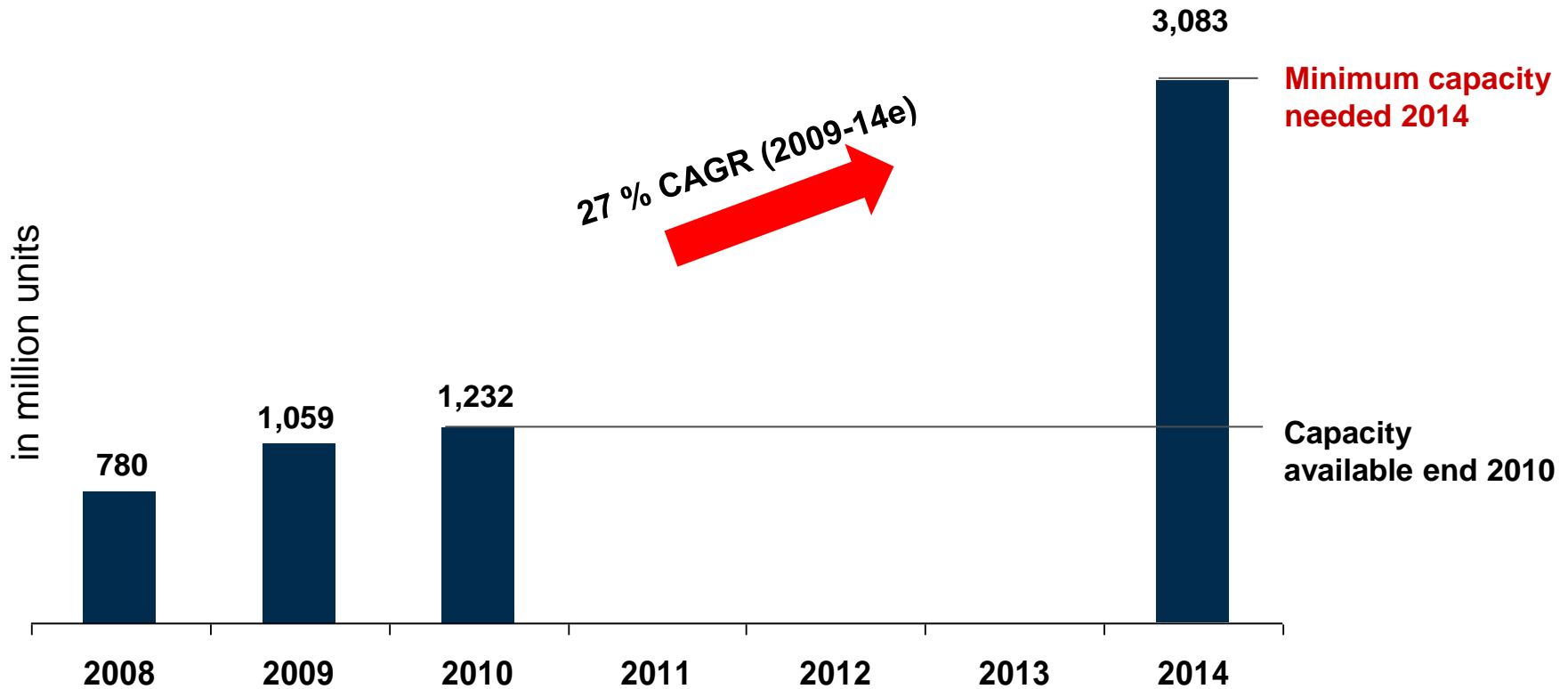


SKYLINE for CD SPACELINE for DVD

BLULINE for Blu-ray

# Minimum Future Prerecorded Blu-ray Pressing Capacity Worldwide

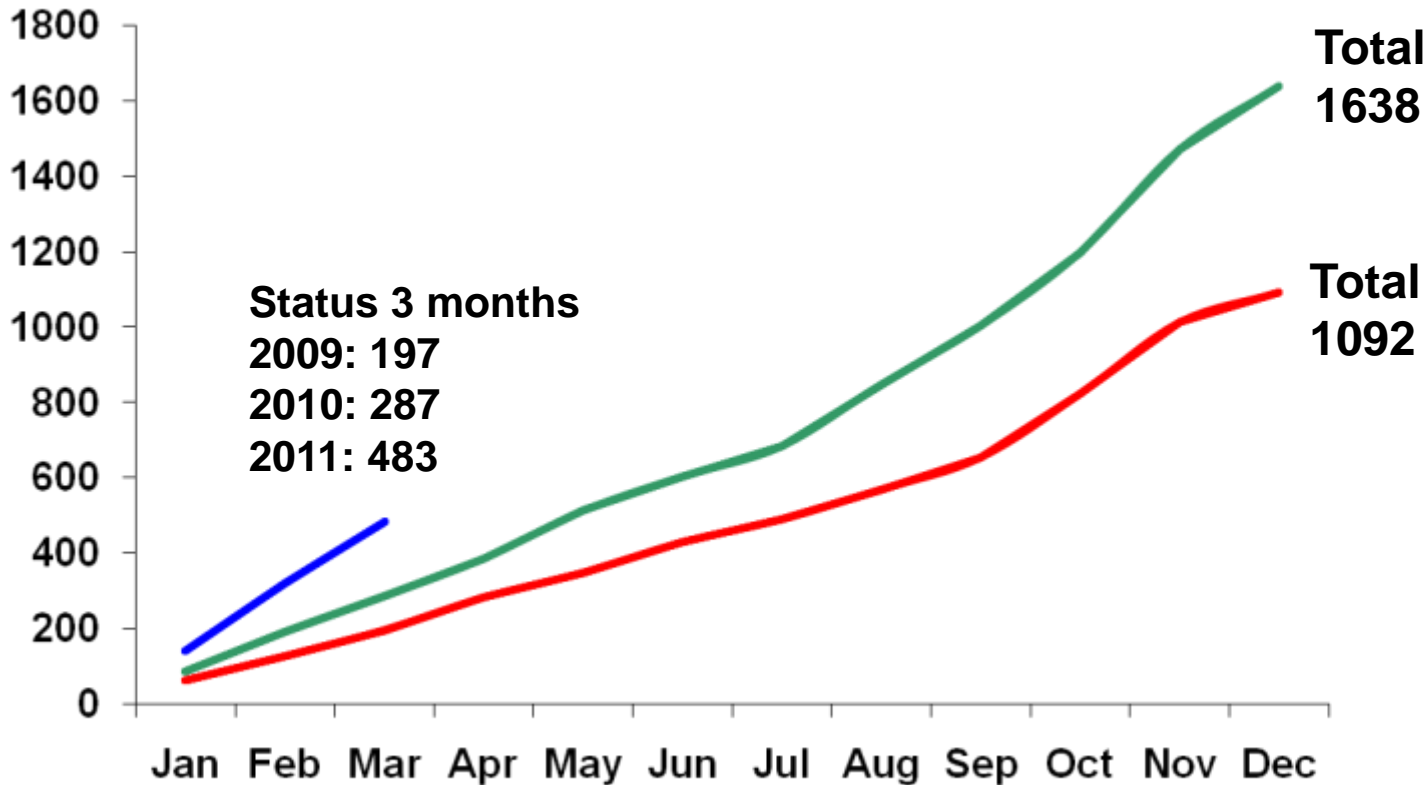
- Significant growth potential is forecasted for the foreseeable future



- Strong growth in the number of Blu-ray disc release

Number of Blu-ray discs per month

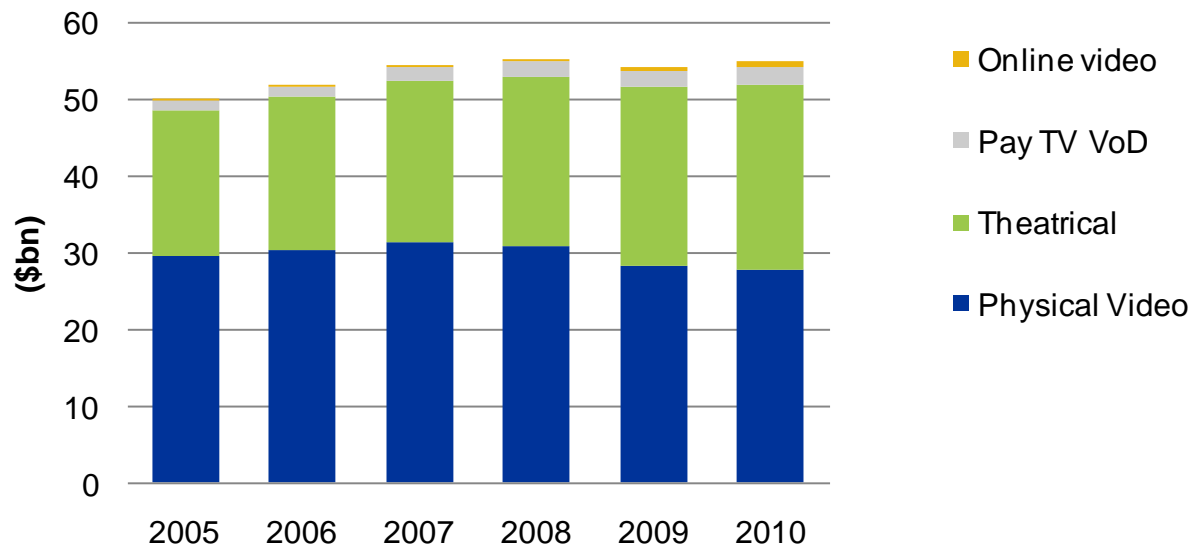
— 2009 — 2010 — 2011



# Packaged Media Generated almost Half of all Movie Spending

The prevalence of the retail business model means packaged media's share of volume is even greater up to 60 %

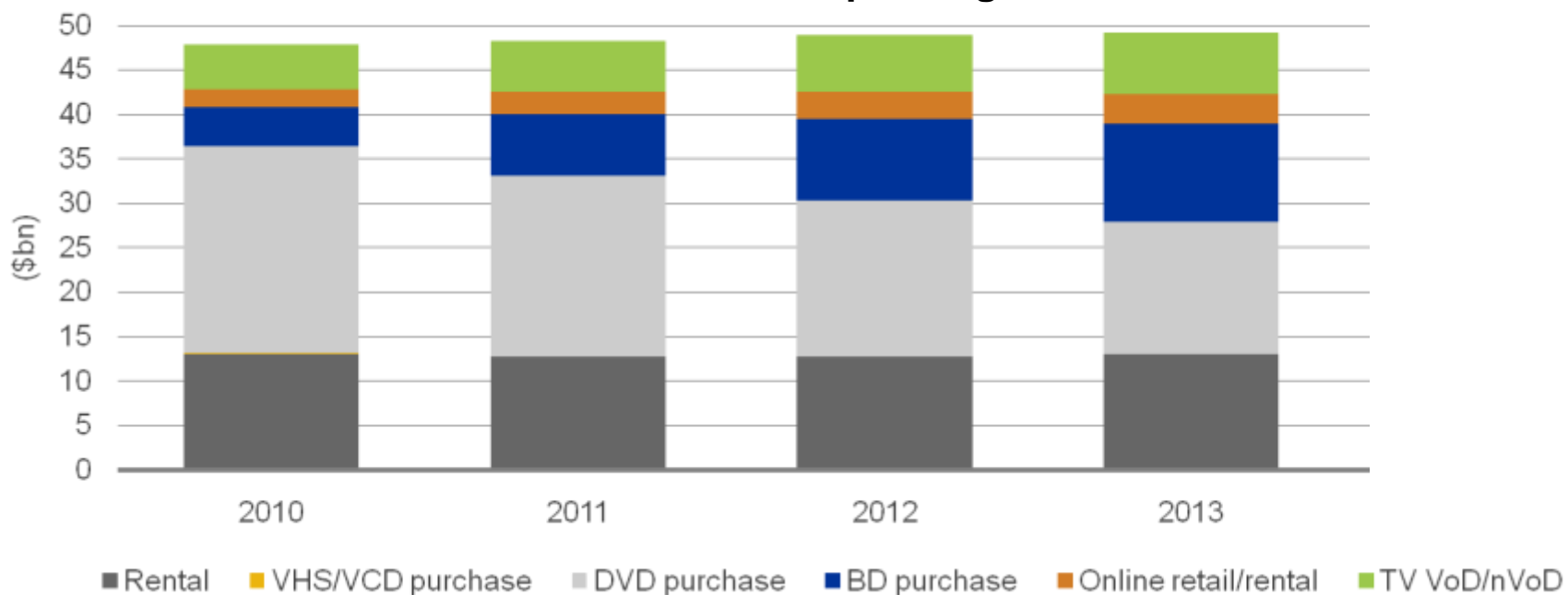
### Global movie spending by platform 2005 - 2010



# Packaged Media will still Generate 77 % of Total Spending

- By 2014 online will account for 8 % of global home entertainment spending
- TV Video on Demand for a further 15 %

### Global home entertainment spending until 2013



#### Notes:

Local currencies converted at fixed 2010 exchange rates

Physical data covers all mainstream genres; Digital includes content delivered over the open internet: retail (movies, TV & sport), rental (movies & TV) and subscription (movies & TV); TV VoD/nVoD covers TV content and movies delivered through walled garden systems



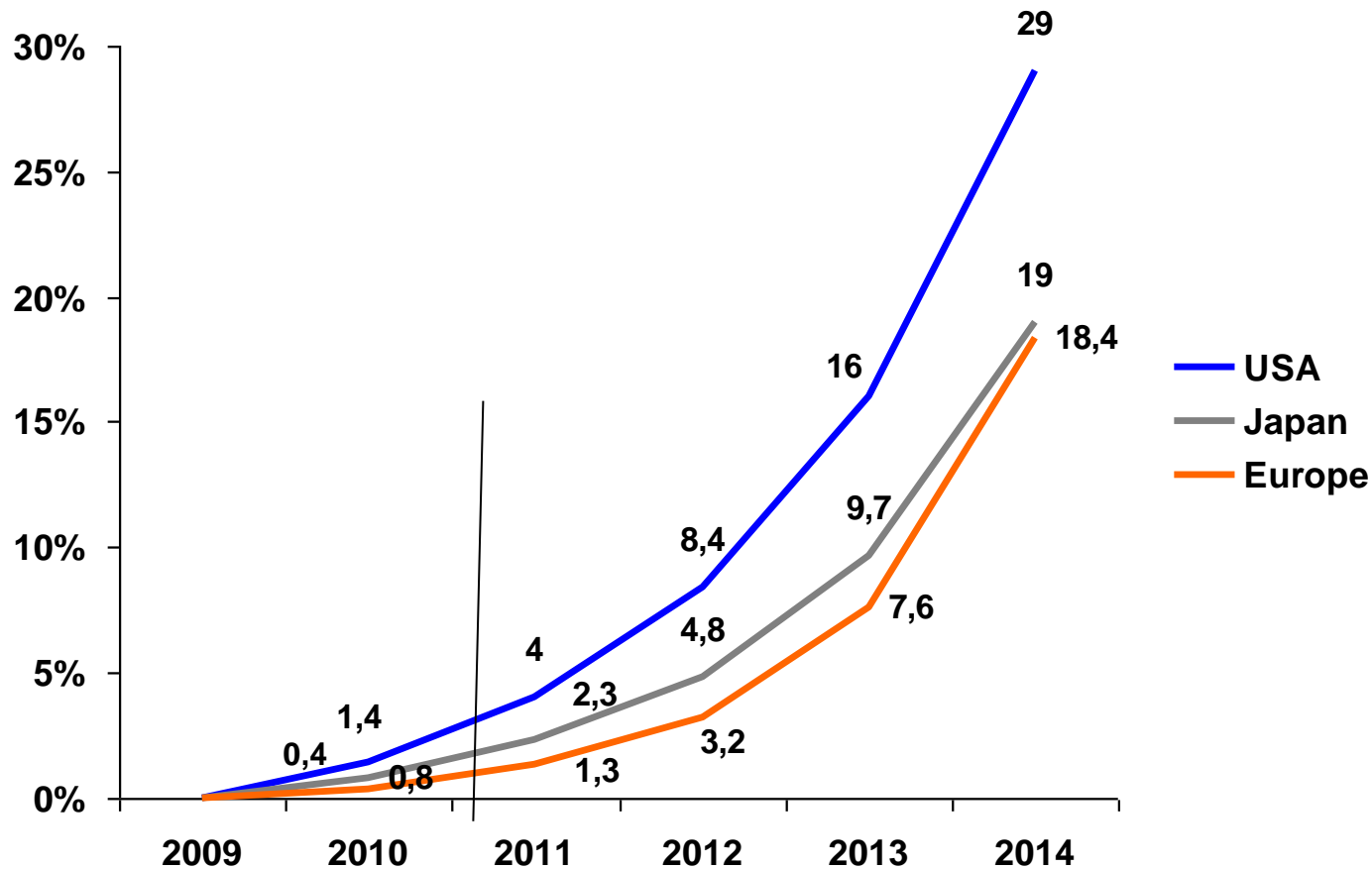
# 3D - The Third Dimension

- SINGULUS Blu-ray technology is 3D ready



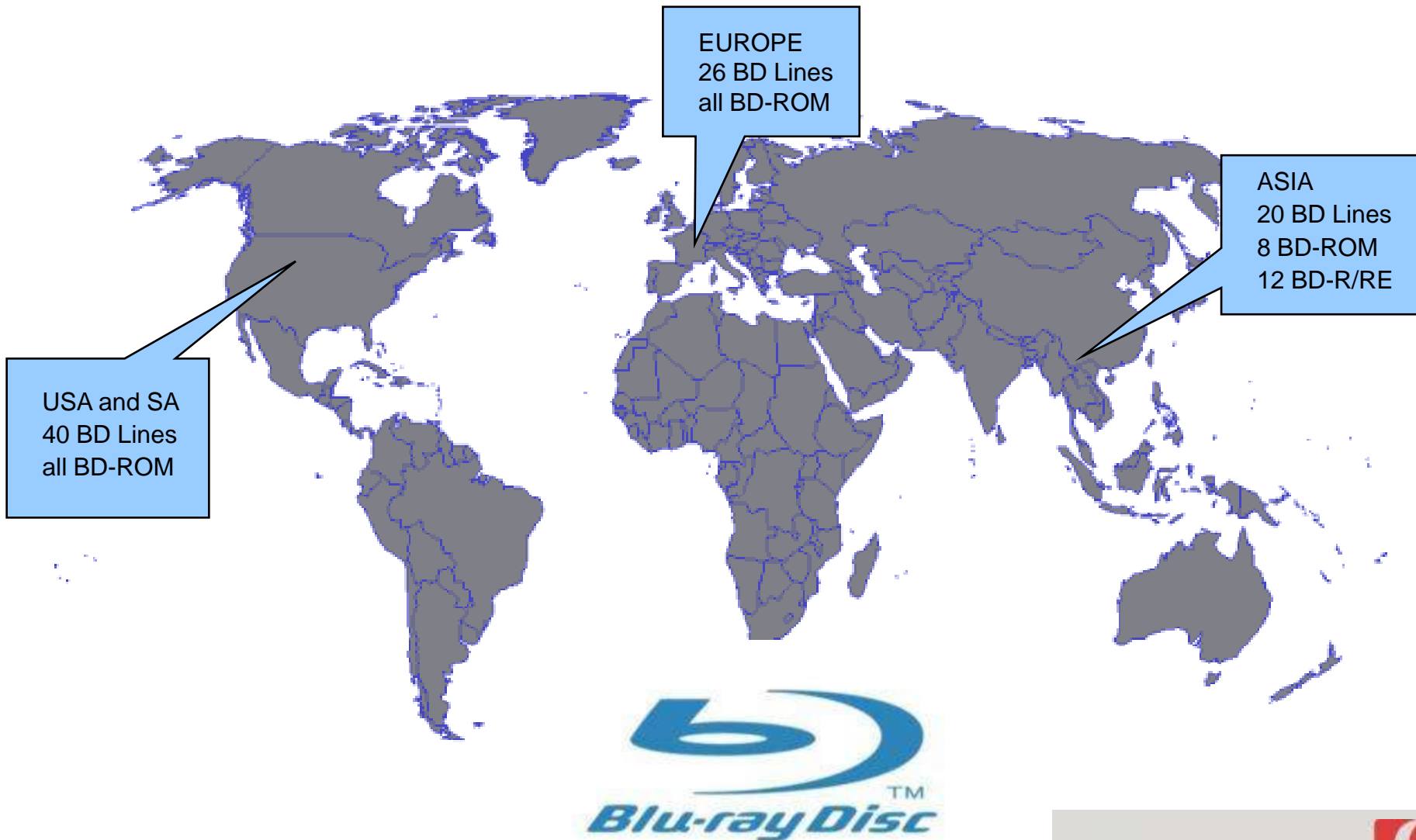
# 3D TV Screen Penetration Forecasts

- In a few years, 3D will be a standard feature on most mid-high end HDTVs
- By 2014, 29 % of the households in the US will have a 3D capable TV



# Blu-ray Disc Lines Installed Base World Wide

- Total over 85 Blu-ray disc lines installed at more than 30 customers



## High Margin Product BLULINE II

- Best of class
- Market share 90 % (excl. Sony)
- Excellent equipment performance
- > 85 Blu-ray systems installed base
- Platform for BD 75 & BD 100



## CRYSTALLINE

- Ready for Dual Layer Blu-ray
- Well-established in the market

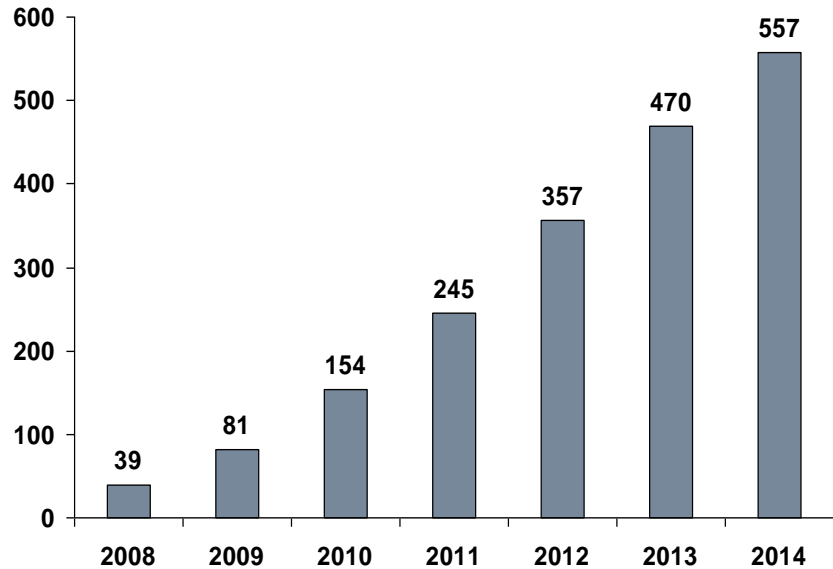




# A New Market: BD-R/BD-RE



## Projected Global BD-R/RE Disc Production million discs



## BLULINE BD-R/RE

- Inline production system
- Based on BLULINE II
- Will open potential for new revenues



## BLULINE CLM

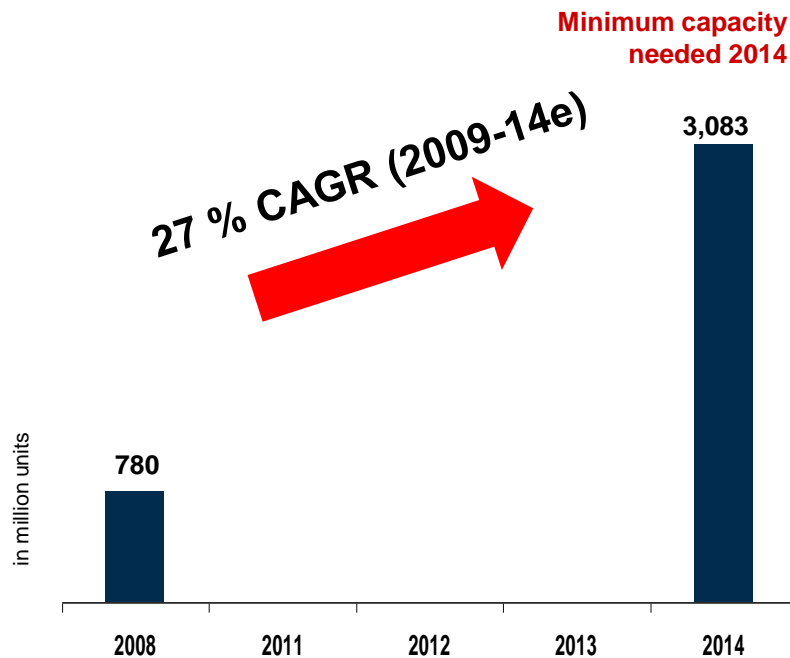
- New module for BD-R cover layer
- Already 8 systems in order backlog



# Packaged Media Remains Major Revenue Stream

- Production capacity will be build up over the coming years

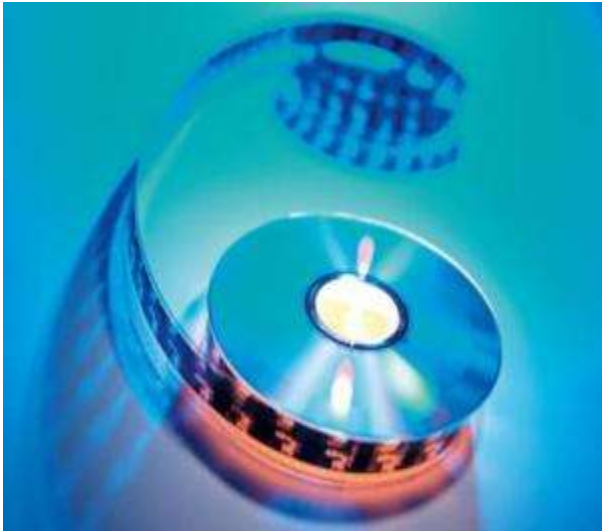
- \_ Rapid growth of Blu-ray disc sales worldwide
- \_ Packaged media remain the major revenue generator for studios
- \_ 3D will boost the Blu-ray market
- \_ High Blu-ray player penetration



# Our Major Segments

## Optical Disc

- Mastering
- Molding
- Replication

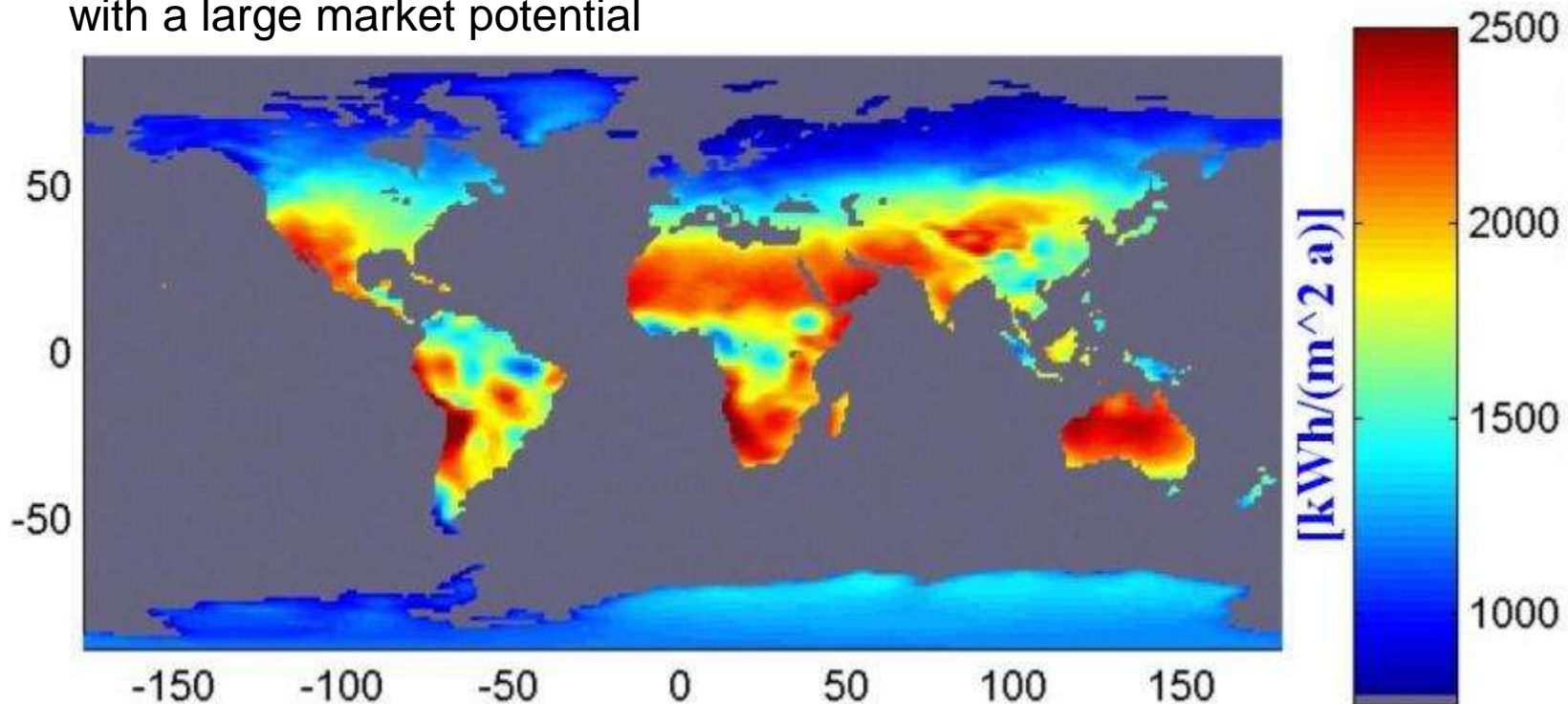


## Solar

- Coating
- Wet Processing
- Systems Business

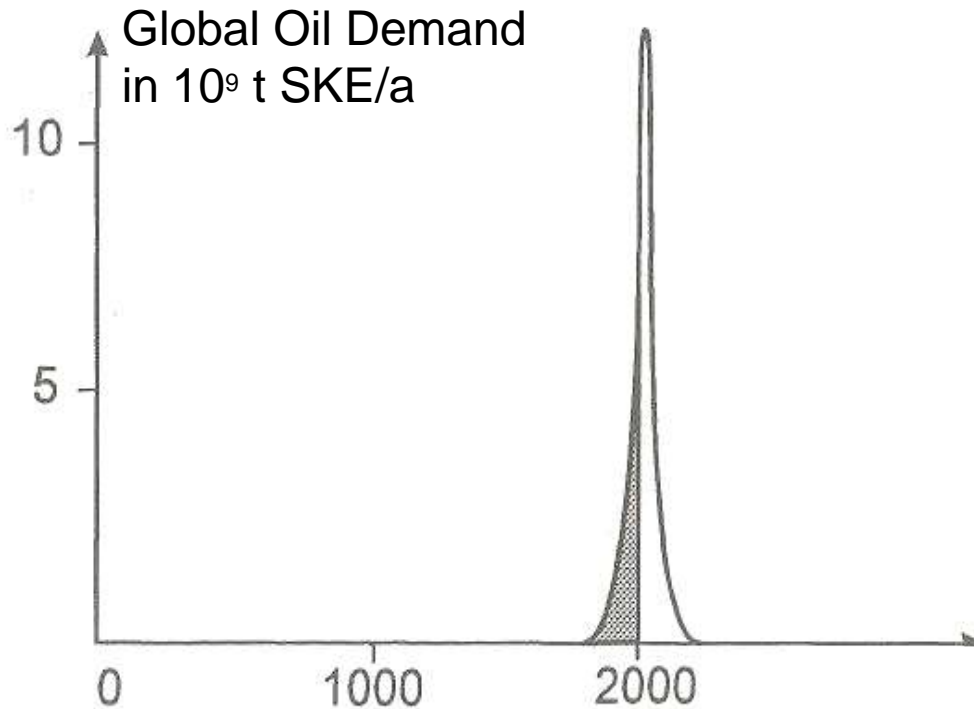


- Today, solar energy is less than 0.1 % of global energy
- The “sunny” parts of the world are ready for photovoltaic
- Cost reduction of cells and modules will drive photovoltaic
- Photovoltaic will be one of the most economic energy sources with a large market potential



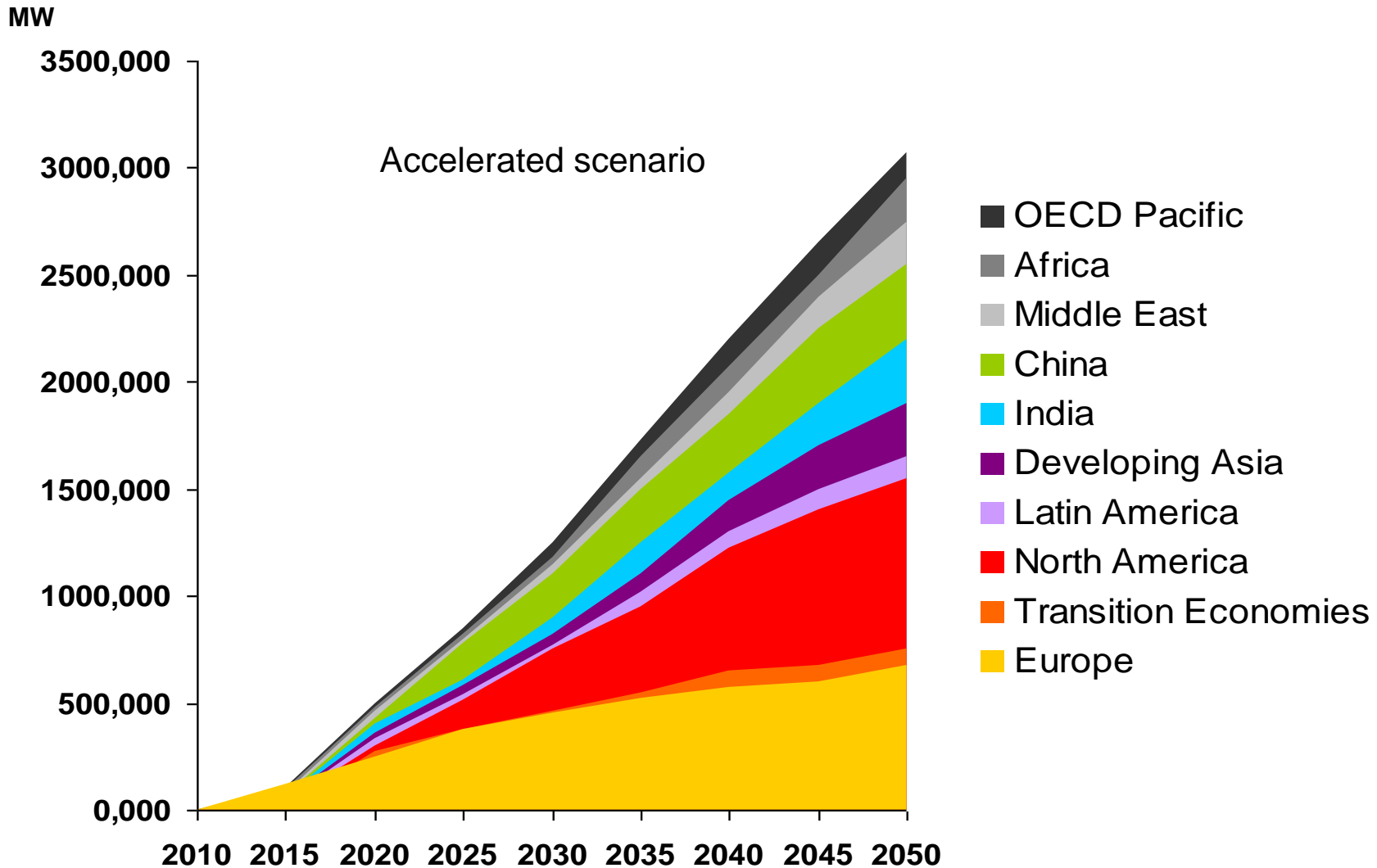
# Peak Oil vs. Increasing Global Energy Demand

- Significant oil consumption started only approx. 100 years ago
- „Peak Oil“ ist expected in 10 to 20 years from now

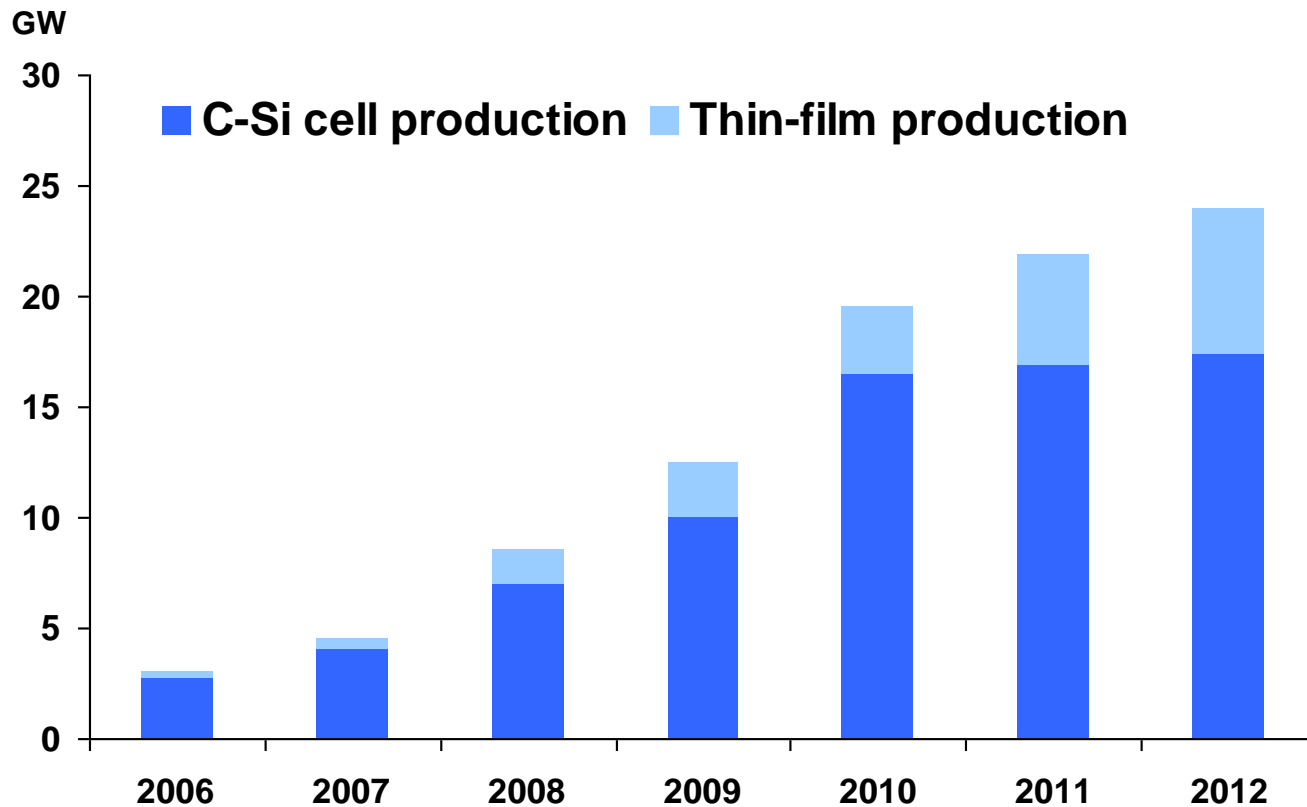


Sources: P. Würfel, "Physik der Solarzellen", 2000; Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen 2004

# Evolution of Cumulative Installed Capacity



# Comparison between Annual Cell Production and PV-Installation





## Today

- Machine in production & standard processes developed
- High-efficiency processes in development
- Co-operations for new cell concepts in progress
- New orders acquired and further expected
- Sales activities in Asia enhanced

- Systems in production in front-end line integrated

- Integrated c-Si production systems and corresponding standard processes defined
- Marketing of systems has started

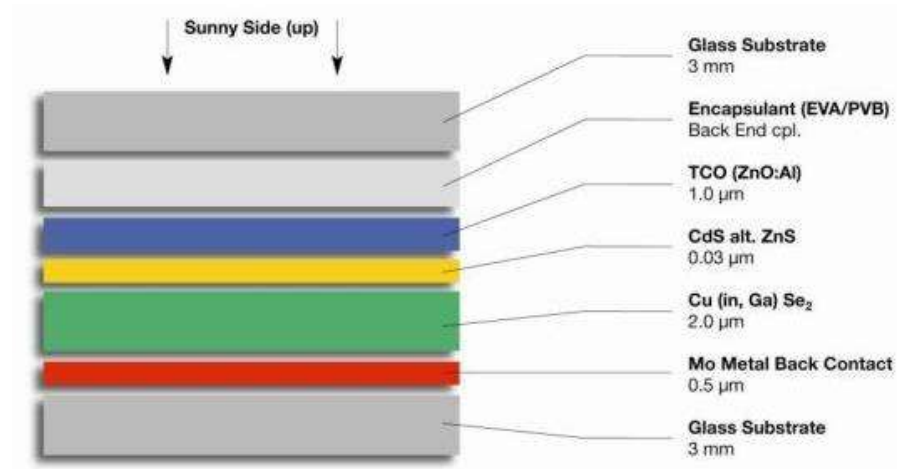
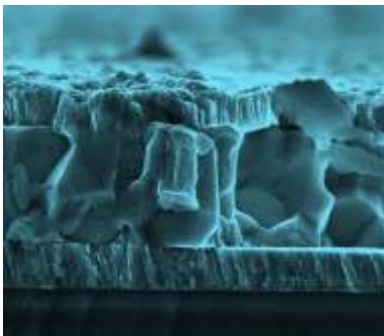
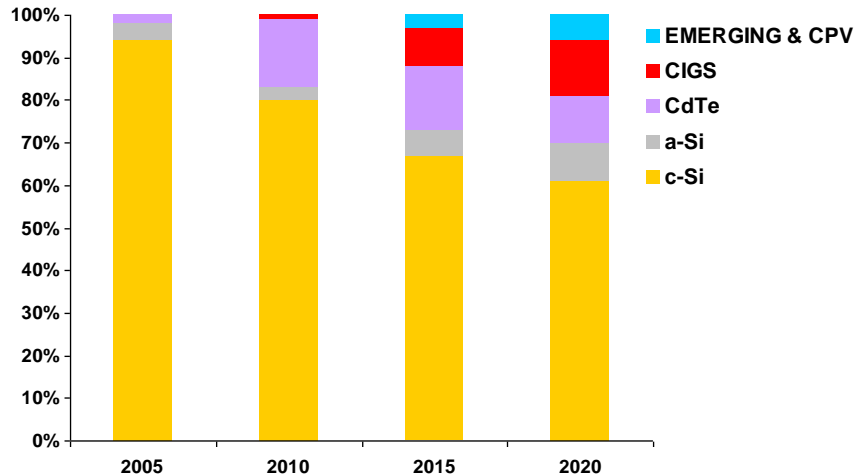
## Tomorrow

- Application of high efficiency cell processes on existing equipment
- Introduction of new equipment for advanced cell concepts
- Integration of high efficiency processes into system business

- SOLARE System for Inline Production of Silicon Solar Cells with LINEA and two SINGULAR & a back-end with double capacity offering approx. 60 MW



# CIGS with Growing Market Share



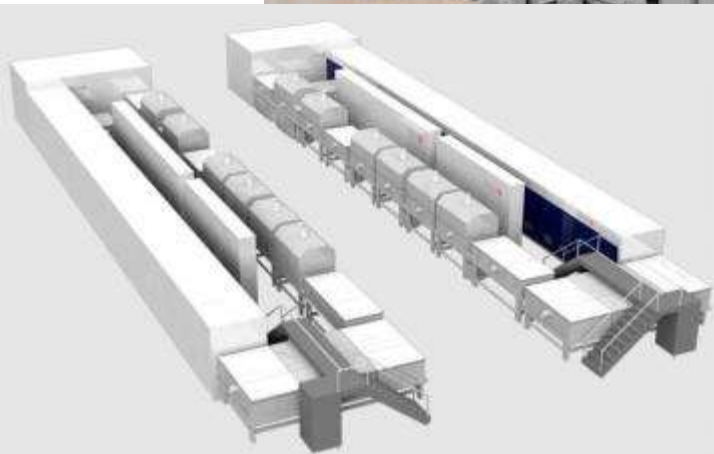
# CISARIS Inline Diffusion Furnace for CIS/CIGS Solar Cells

SINGULUS TECHNOLOGIES

31.03.2011

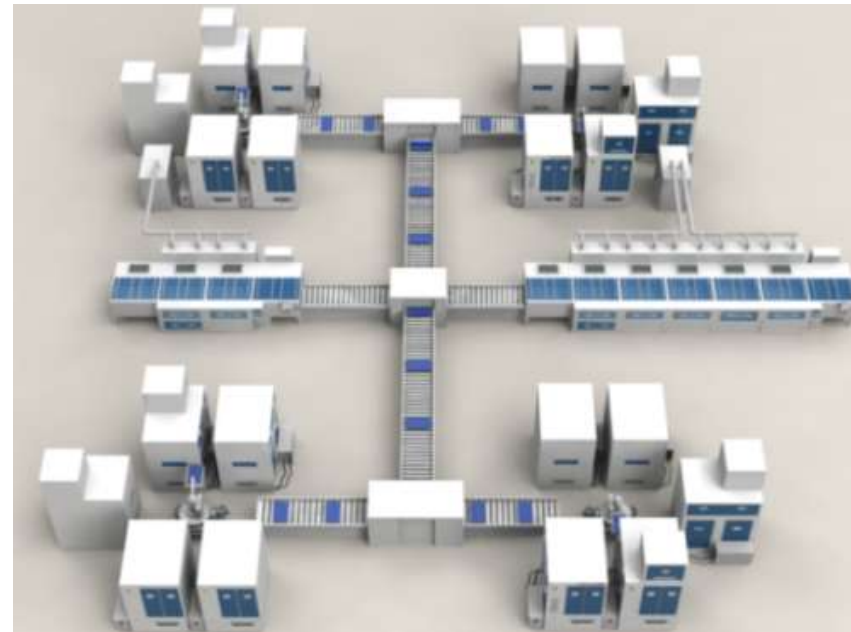
- 36 -

- Product introduced 2010
- 8 Machines already sold with an order intake of about € 50 million
- 2<sup>nd</sup> Generation for inline diffusion furnace with optimized cycle time



# TENUIS for Deposition of Buffer Layer

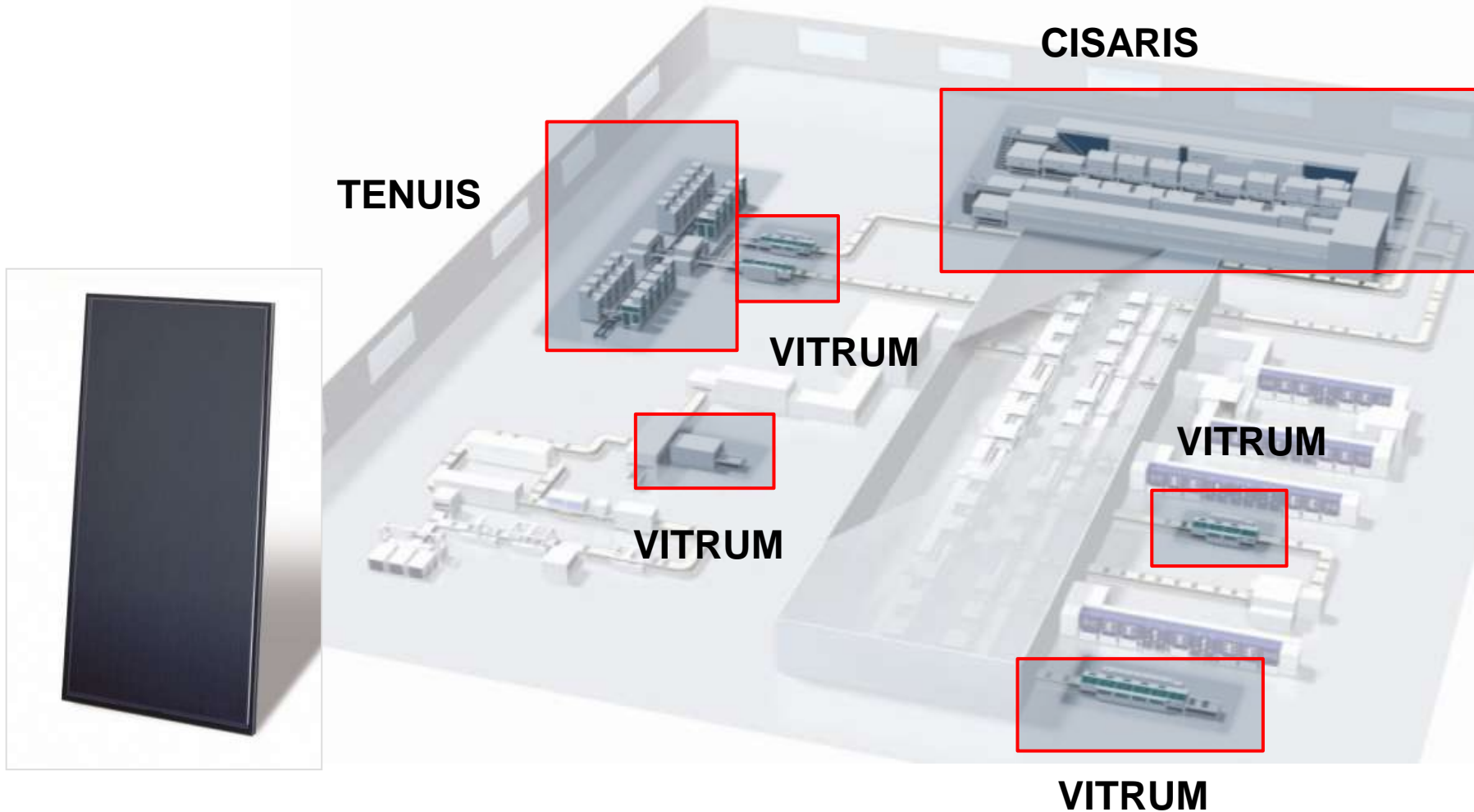
- Market leader with installed system (market share 70-80 %)
- Patented process know how for deposition
- Production capacity up to 60 MW, with modular concept to increase throughput up to 120 MW
- Low chemical consumption on the market (2.5 million EUR per year economics by chemical reduction)



- Lowest cost of ownership on the market
- High availability (uptime > 98%)
- Newest technology for best process results on the market
- High market demand



- SINGULUS covers the main process steps of CIS/CIGS manufacturing



# Well positioned for the future

## Optical Disc

- Excellent products with outstanding technology
- Only one-stop supplier and No. 1 for Blu-ray equipment globally
- Increasing sales of Blu-ray machines expected for 2011
- Strong growth for Blu-ray in the next years
- Production know-how for the coming market of rewritable/recordable Blu-ray (BD-RE/BD-R)
- Set for growth and good profitability

## Solar

- Well positioned in the growing solar market
- Optical Disc know-how transferred
- SINGULUS AR coating technology gaining market share
- Successful market introduction of selenization furnace
- Selling complete systems
- Growing market share in thin-film solar
- Solar segment expected to break-even in 2011

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## Forward-Looking Statements

This presentation contains forward-looking statements based on current expectations, assumptions and forecasts of the executive board and on currently available information. Various known and unknown risks, unpredictable developments, changes in the economic and political environment and other presently not yet identifiable effects could result in the fact that the actual future results, financial situation or the outlook for the company differ from the estimates given here. We are not obligated to update the forward-looking statements made in this presentation unless there is a legal obligation.