OLIVER WYMAN

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Solar power: Investing opportunities in the coming growth phase

Roland O. Rechtsteiner

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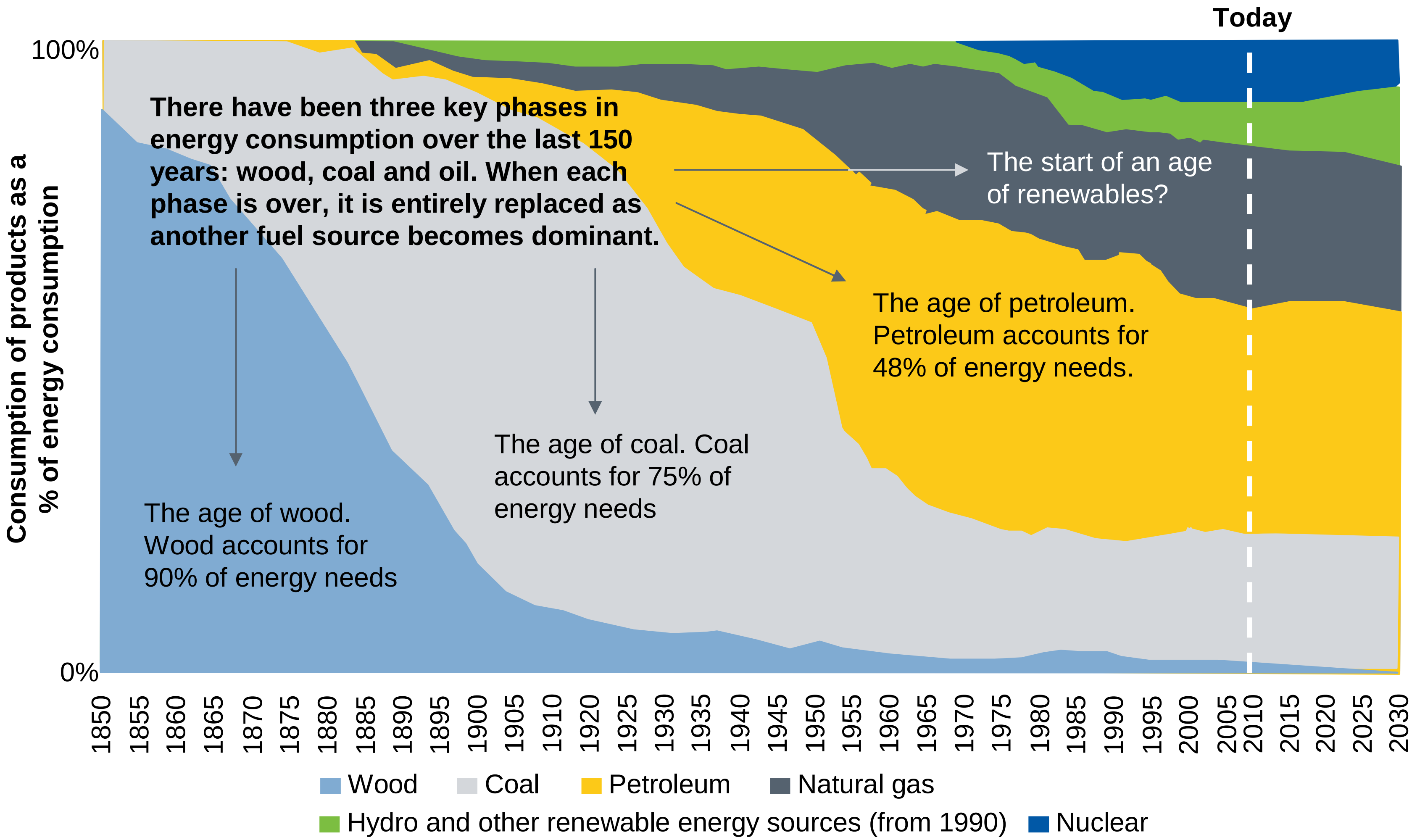
Confidentiality

Contents

Energy's new natural order

Renewables are a growing share of energy consumption and we may be at the start of a new age of renewables



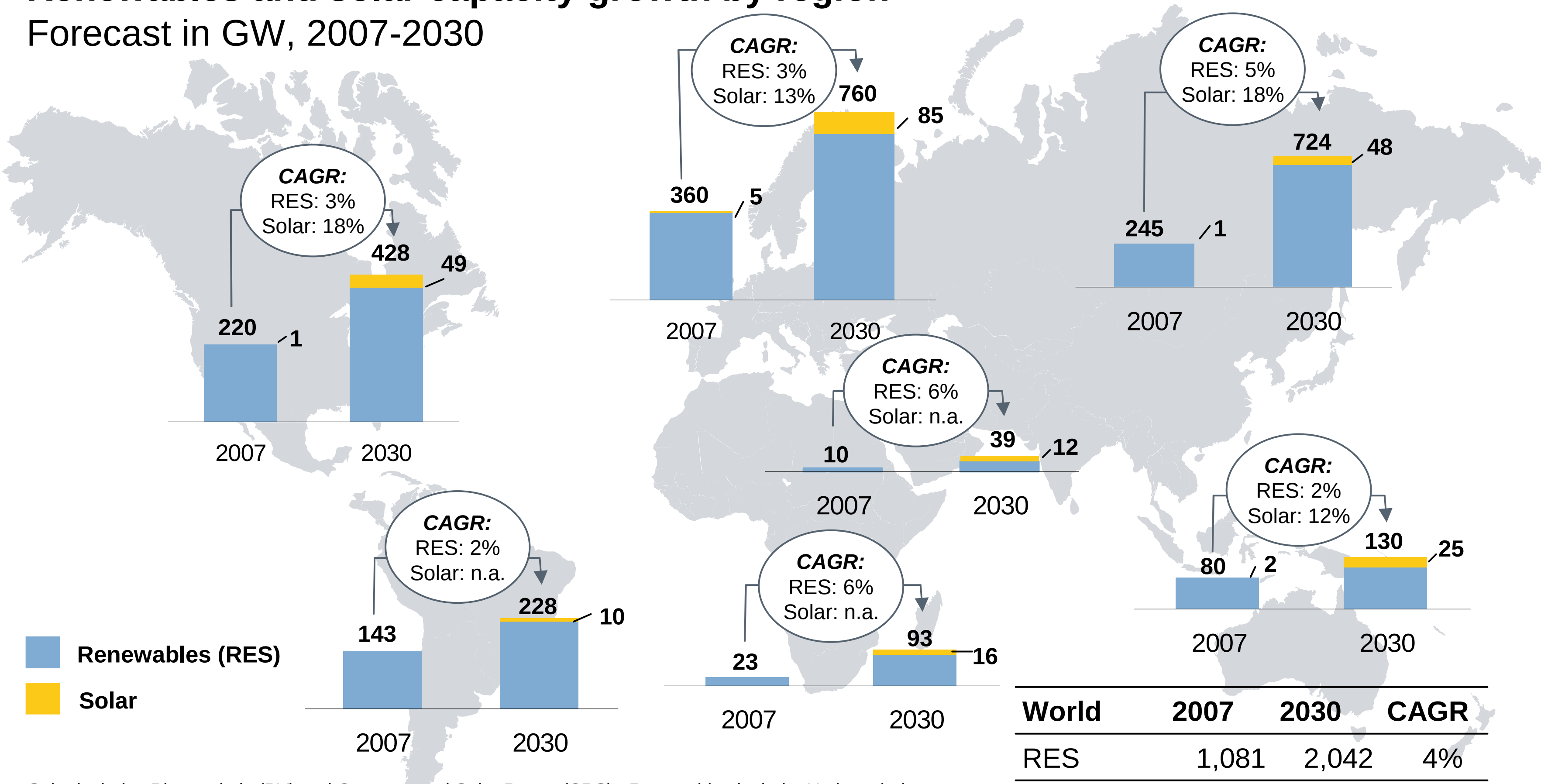
Source: Goldman Sachs, EIA, IEA, Oliver Wyman

Growing global solar generation capacity

Over the next two decades, solar capacity is expected to grow faster than the overall renewable energy sector

Renewables and solar capacity growth by region

Forecast in GW, 2007-2030



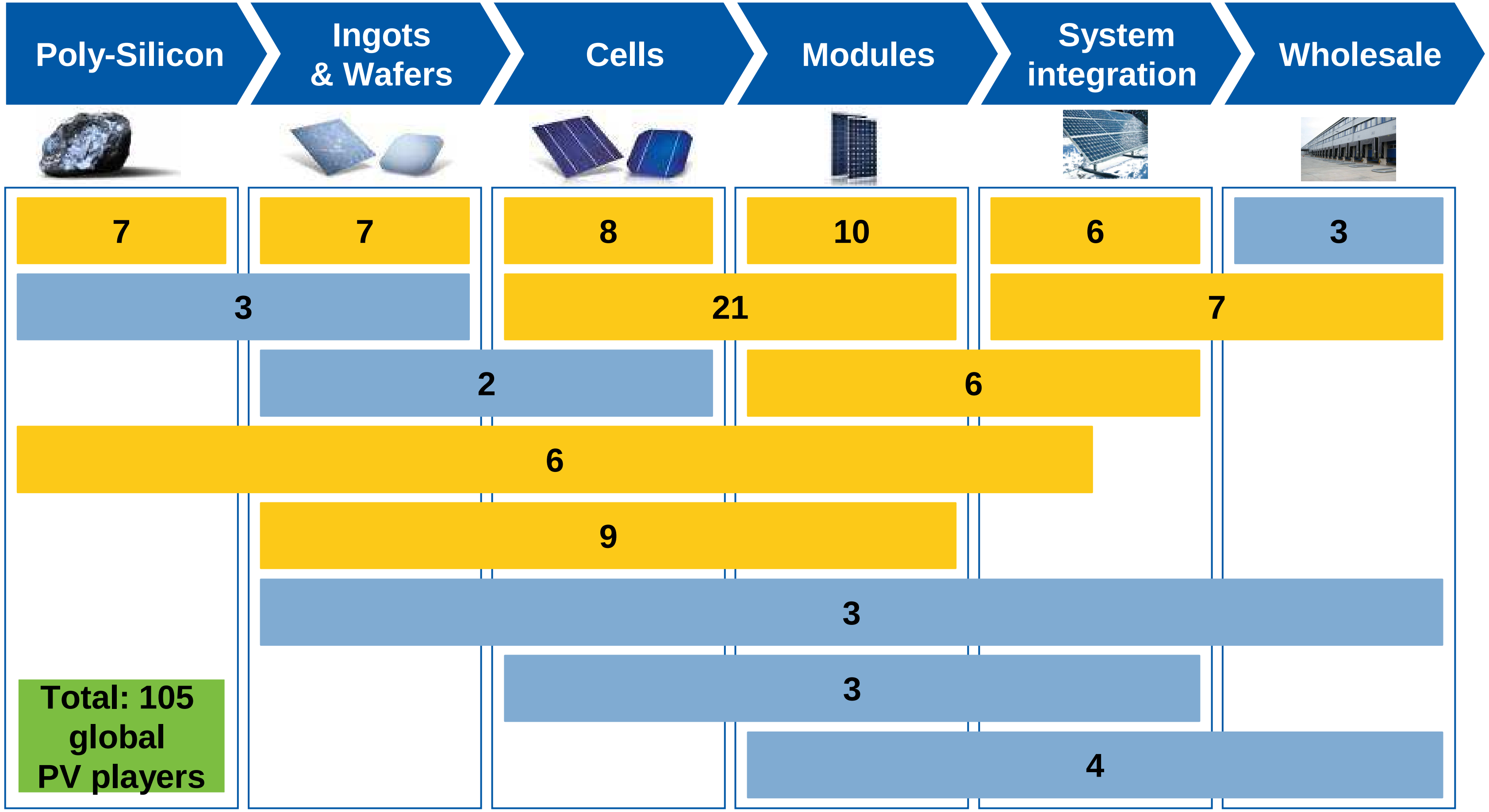
World	2007	2030	CAGR
RES	1,081	2,042	4%
Solar	9	245	15%

Solar includes Photovoltaic (PV) and Concentrated Solar Power (CPS). Renewables include: Hydro, wind, solar, biomass/ waste, geothermal, and wave/tidal energy.
North America includes USA, Canada and Mexico; Japan and Korea are included in Asia-Pacific.
Source: IEA, Oliver Wyman analysis

PV business models: Current positioning of major players

Multiple different business models currently exist and no clear leaders have emerged

Current positioning 2009 (number of major PV players)

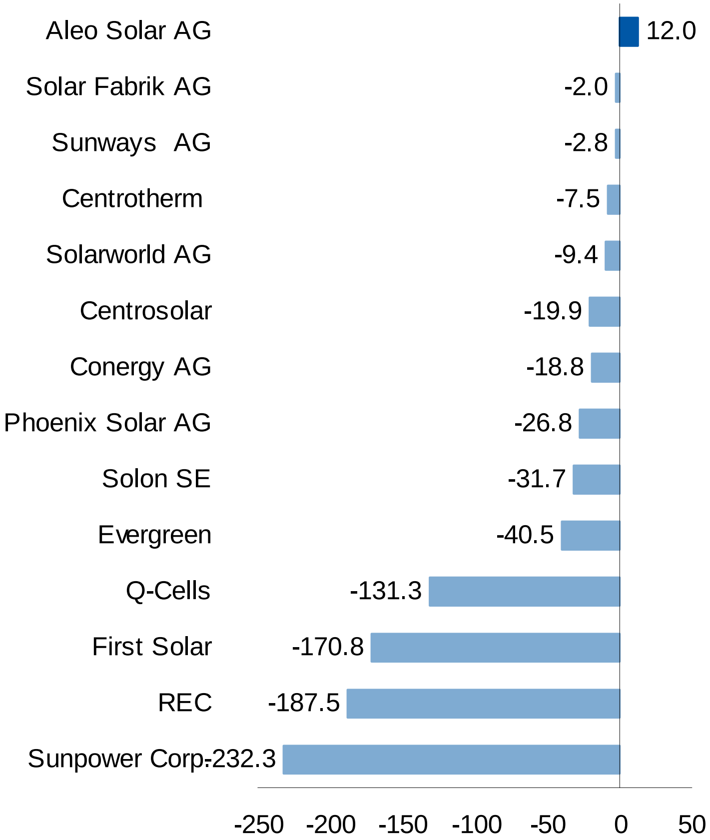


Source: Oliver Wyman

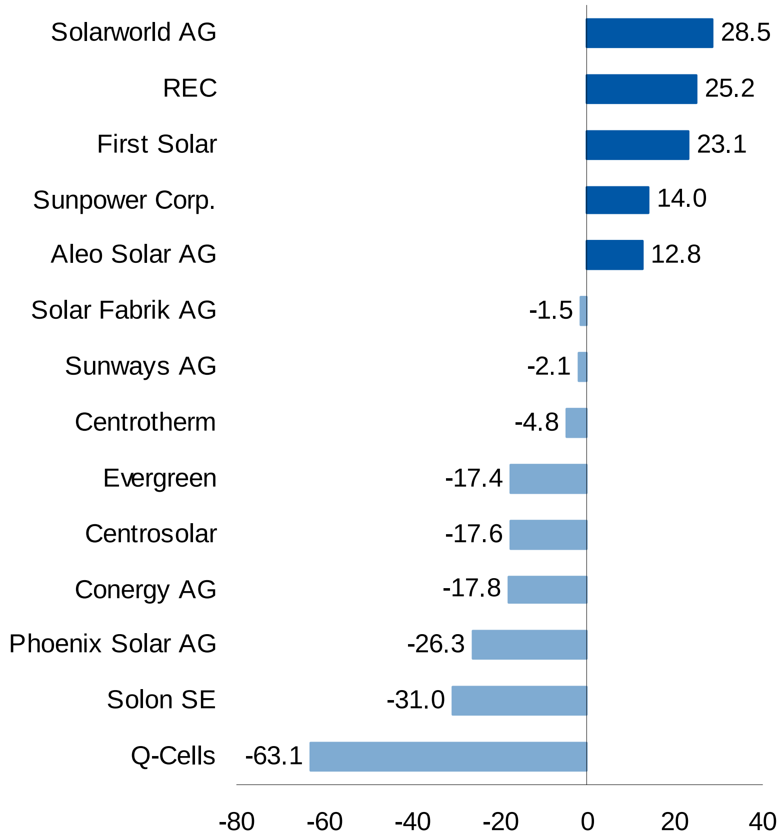
Growing pressure

Strong growth of the solar sector puts pressure on cash-flows and hence access to large financing

Free Cash Flow
Mio. € (Q1 2010)



Cash Flow from Operations
Mio. € (Q1 2010)



Source: Quartalsberichte, Thomson Financials

The future PV industry

The PV industry is a pure play "commodity business" with fragmented structures – substantial and structural changes expected

Current market and future scenarios

PV market 2009

- Subsidy driven growth in selected regions
- Very fragmented market (value chain, regions)
- Low degree of professionalism ("start-up" atmosphere)
- Heterogeneous business models
- Globalization of the businesses and players
  - Chinese players entering EU
  - US players entering China
- Immature technologies

Oliver Wyman study

"Quo vadis photovoltaic industry?"

Scenarios 2012+

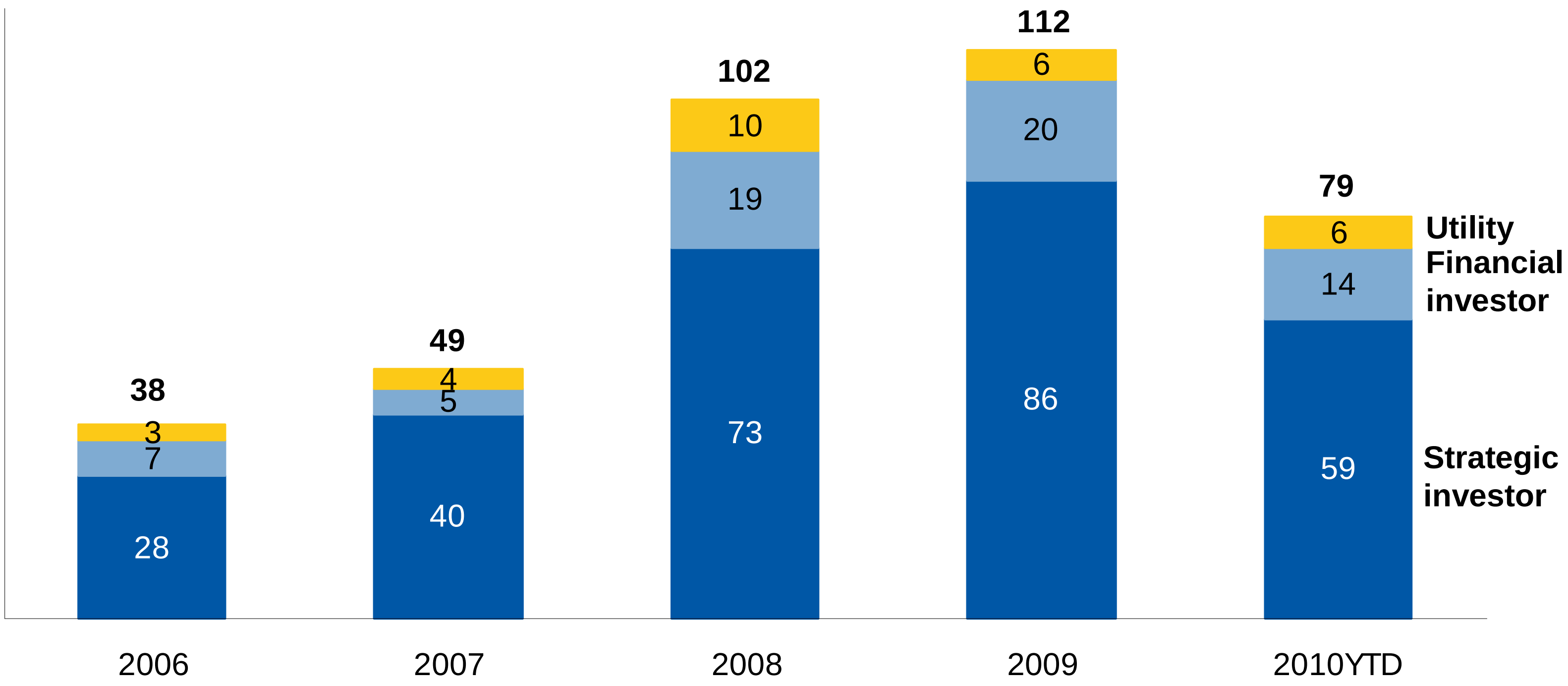
- Global competition
- Large dominating players
- Focused, differentiated business models
- Tough competition in each level of the value chain
  - Manufacturing (cell, module, silicon)
  - Distribution
  - „Old economy" players entering the market (e.g. Bosch, Siemens)
- Mature technologies
- Sustainable price decreases

Commodity Business

The solar M&A wave

Mergers and acquisitions are continuing in spite of recession

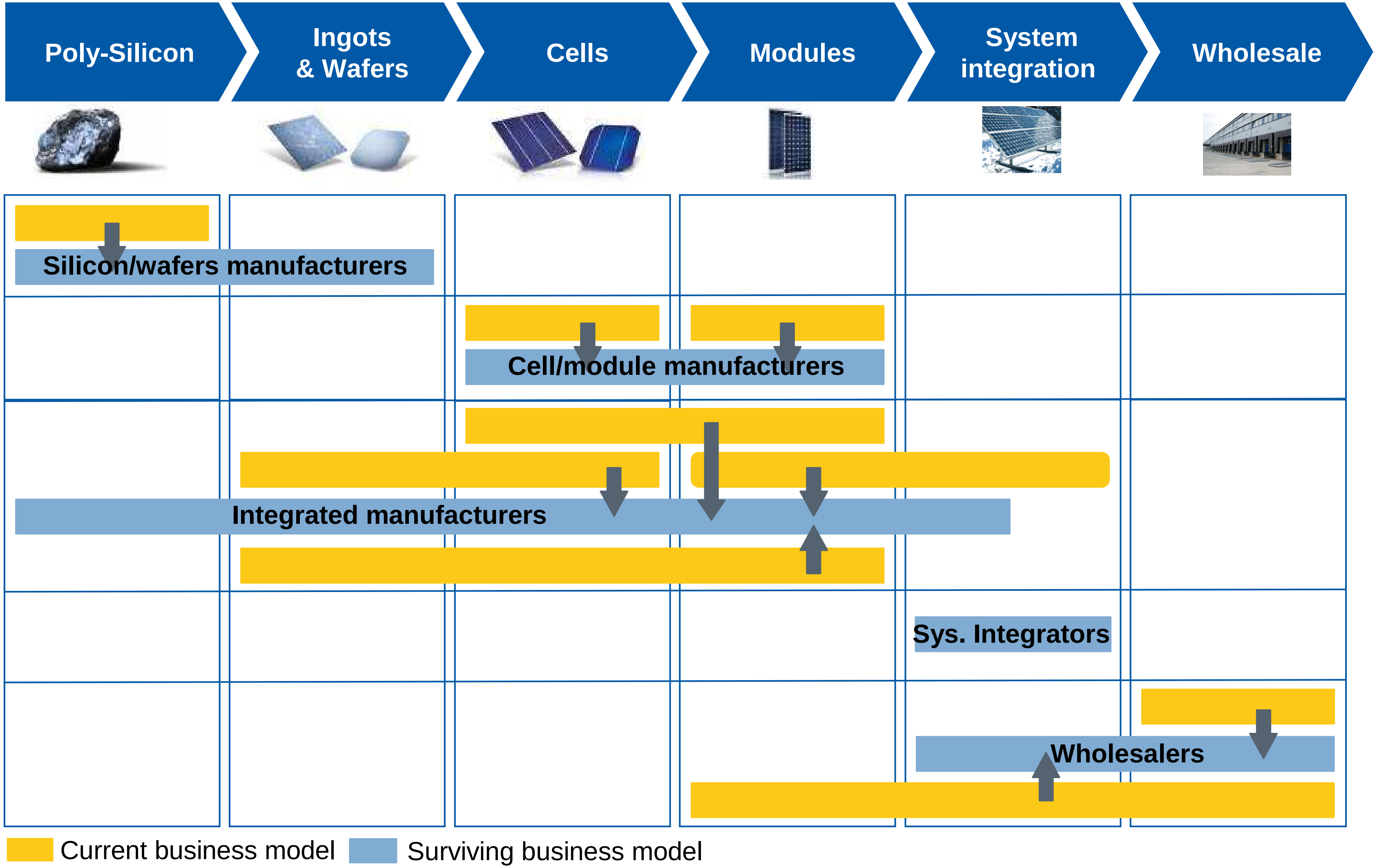
M&A Photovoltaic Industry – Number of deals by investor type
(2006-2010)



1 Average deal value for deals with disclosed deal value
Source: Dealogic

The Survivors: Winning PV business models by 2012

Business model trends of integrated module manufacturers



Source: Oliver Wyman

Summary

Outlook

- Significant growth expected around the globe
- Business models with attractive margins are developing
- Consolidation expected on the supplier side

Before investing…

- Examine the solar industry's widening gap in profitability and consider each company's broader value chain and cash-flow
- Closely scrutinize future business models
- Approach market with portfolio perspective rather than single stock cherry-picking

OLIVER WYMAN

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MARSH MERCER KROLL
GUY CARPENTER OLIVER WYMAN