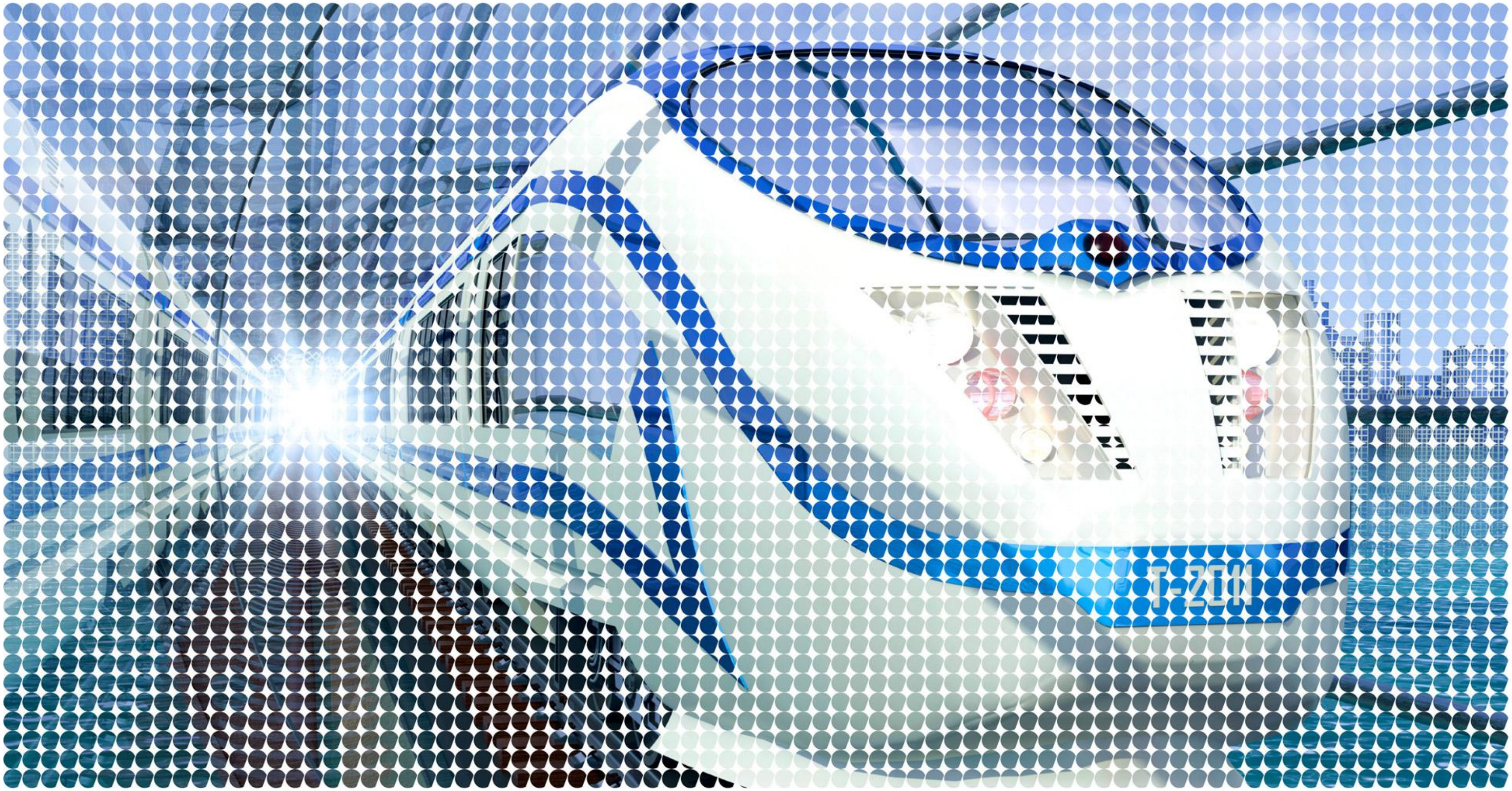


# TOPSIL

**Danske Markets, 29 November 2012**

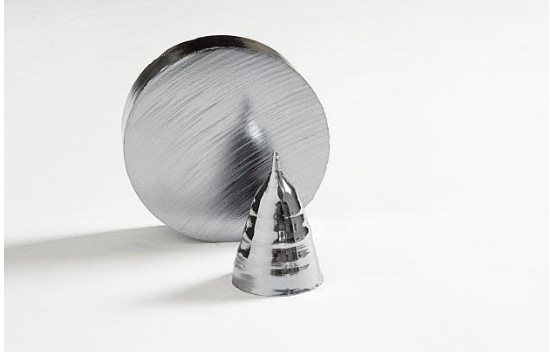
# AGENDA

1. Topsil in brief
2. Strategy ”Executing on Opportunities”
3. Questions

# TOPSIL HAS BEEN IN BUSINESS FOR MORE THAN HALF A CENTURY

- Ultrapure silicon for semiconductor industry, founded 1958
- Listed on NASDAQ OMX Nordic stock exchange since 1986
- Revenue 2011 DKK 367m/369 employees end year
- Focus on Power Market, estimated worth DKK 5.8 billion, corresponding to about 1/10 of aggregated semiconductor market 2011*

* Sources Yole Developpement and Semiconductor Equipment and Materials International (SEMI)



# CORPORATE LOCATIONS

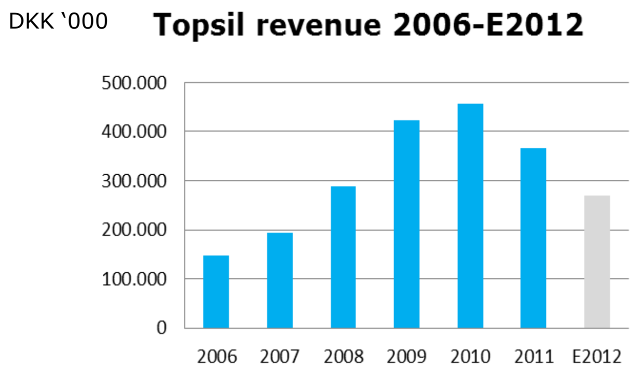

- Sales and production
- Sales representation
- Contract manufacturing
- Contract Irradiation

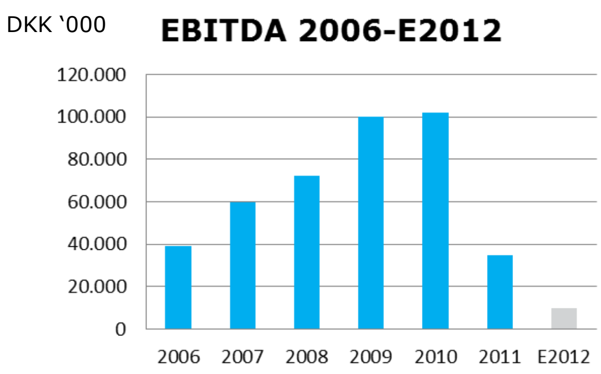


TOPSIL

# MACRO ECONOMIC DRIVERS

- **Industry:** Continued focus on energy-efficient solutions in industry, e.g. industrial motors (”Smart power”)
- **Transportation:** Continued movement towards more efficient and more climate-friendly transport of people and goods
- **Automotive:** Number of hybrid and electrical vehicles on the increase
- **Renewable energy sources:** PV and wind on the increase
- **Infrastructure:** Investments in integration of new energy sources in existing grids (Smart Grids etc.)
- **Main risks:** Financing, manufacturing and supply chain bottle necks, availability of raw materials, change of political focus (debt crisis, green power)




# TOPSIL FORMS PART OF A WIDER VALUE CHAIN

- Supply of advanced niche products
- Few but large players throughout value chain
- Long production cycles, high entrance barriers to industry
- Inter-dependency - long term relations in industry
- Topsil: Long term agreements with raw material suppliers and six main customers
- Customer requirements: Uniform, high quality products, on time delivery and price

**Polysilicon** **Power component** **Final application**

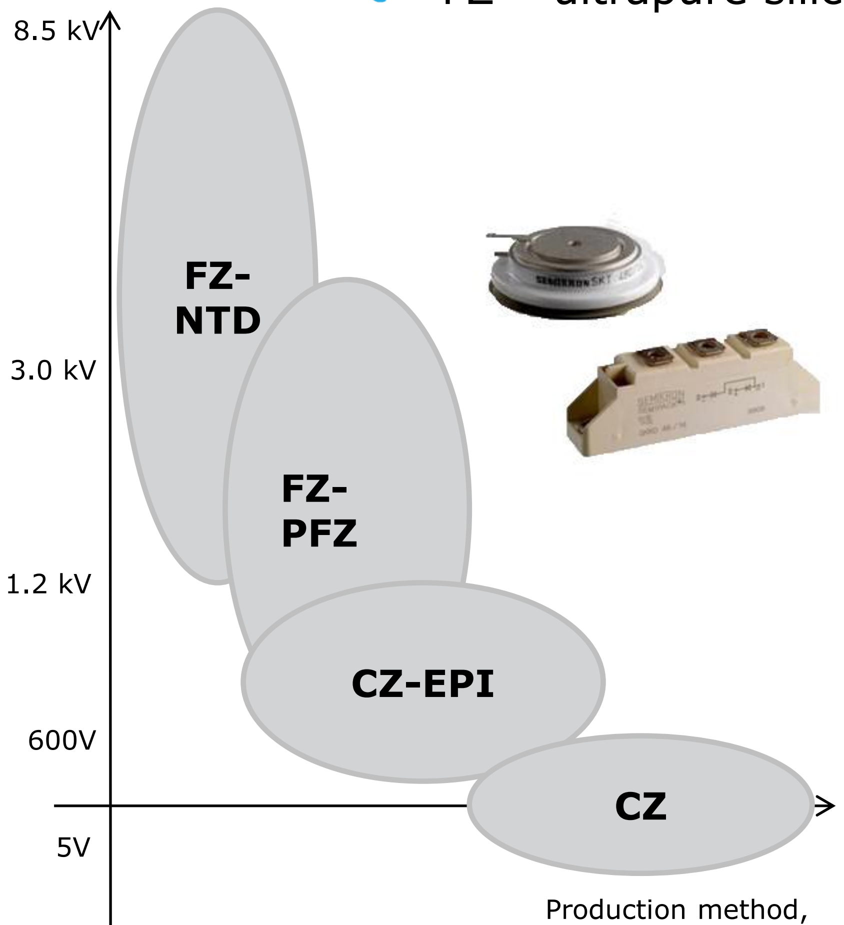

**Finished wafers** **Power module**



TOPSIL

# PRODUCTION METHODS, APPLICATIONS

- FZ – ultrapure silicon accounted for 82% of revenue 2011




Production method, voltage overlap

# STRATEGY

# NEW STRATEGY - BACKGROUND

The last two strategies have focused on investments while cash flow has been negative.

**Market**

- Highly specialised supply chain and long qualification cycles
- Long term growth perspective intact
- During 2007-2010: very favourable market conditions, under capacity in the FZ market
- Change of market in 2011, over capacity due to severe demand reduction (end user demand and reductions of inventories in supply chain)
- High interest in 200 mm FZ-PFZ silicon



TOPSIL

# NEW STRATEGY - BACKGROUND

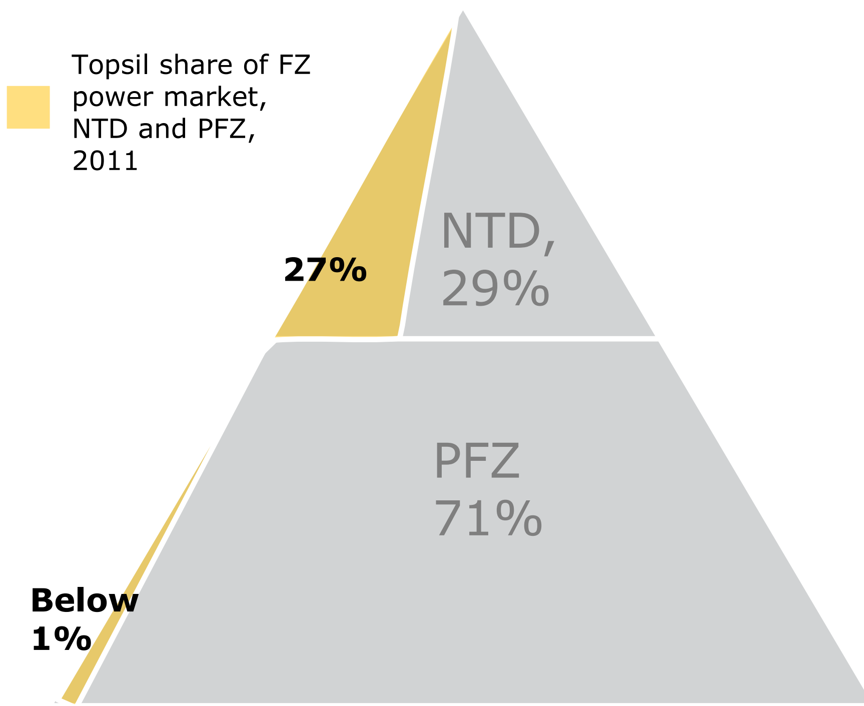
- **Topsil**
  - Production yield and efficiency below market standard
  - Lack of execution: Historically too many significant delays in key projects
  - Topsil acquired subsidiary in 2008 – slow pace of integration
  - European based
  - State-of-art float zone plant close to completion, now officially opened
  - New equipment, DK and PL
  - World class in-house power silicon and FZ competences
  - New products with improved capabilities
  - New 200 mm ultrapure silicon
  - New quality standards, TS16949 certification

# EXECUTING ON OPPORTUNITIES
## MAIN POINTS

- **Focus on value/improving liquidity, utilising investments already made:**
  - Strengthen market position in **PFZ**
  - Expand position in **Japan and China**
  - Improve **cash flow**
  - Enhance wafer production **efficiency**

200 mm

# EXECUTING ON OPPORTUNITIES
# STRENGTHEN PFZ MARKET POSITION




**NTD relative to PFZ on power market**
Source: Yole Developpement, 2012

- In 2010 new 150 mm PFZ silicon was introduced, based on patented manufacturing process
- Strong market acceptance of product performance
- Reduced market opportunities due to:
  - Slow down in demand
  - Established supplier relationships already exist
- Product launch of new 200 mm PFZ silicon while qualification window is still open

# EXECUTING ON OPPORTUNITIES
# EXPAND POSITION JP/CN

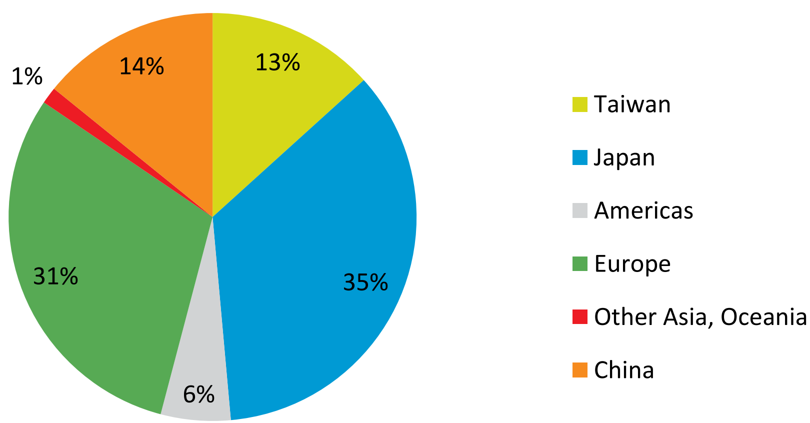
## Japan: Increase market share

- 2008: 5000Yen = 227 DKK
- 2009: 5000Yen = 278 DKK
- 2011: 5000Yen = 333 DKK
- 2012: 5000Yen = 382 DKK (August)

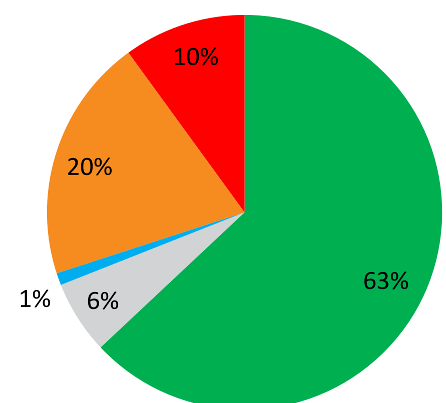
## China: Build strategic position

- We have been brought in by our European customers in the past
- Strengthen position by providing support locally

**FZ market distribution, Topsil estimate 2011**




**Topsil, FZ revenue, geographical split 2011**



# EXECUTING ON OPPORTUNITIES
# IMPROVE CASH FLOW

- Significant investments have been made in recent years – now is the time to make a return on these investments
  - Acquisition of subsidiary, Topsil S.A.
  - New plant for the manufacture of ultrapure silicon
  - State-of-art equipment for the manufacture of ultrapure silicon
  - Upgrade of equipment in Topsil S.A. in support of further processing (wafering)
- Limited new investments, full utilisation of potential following from investments already made
- Focus on reduction of working capital and increasing cash flows from operations



TOPSIL

# EXECUTING ON OPPORTUNITIES
# ENHANCE PRODUCTION EFFICIENCY

- We have constructed the most modern ultrapure silicon factory of the world and have world class expertise – but our manufacturing performance is lacking
- Improve manufacturing performance
  - Improve yield in our manufacturing
    - Manufacture of ultrapure silicon
    - Further processing (wafering)
  - Labour efficiency
- Increased capacity utilisation

# MANAGEMENT FOCUS

**FROM**

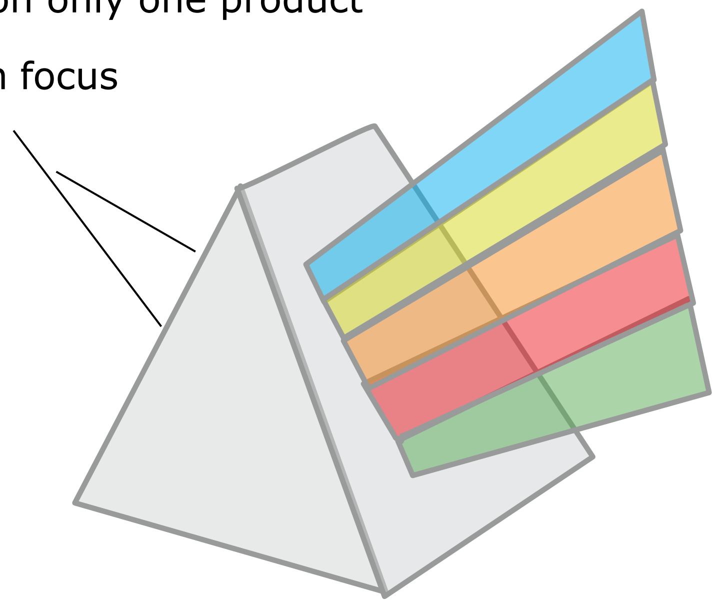
Two companies (Topsil, DK & Topsil, PL)

European focussed business

High dependency on only one product

Unclear application focus

Cash consumption



**TO**

One integrated global business

Focus on wafers for power

Two legs – NTD and PFZ

World class FZ manufacturing

Cash generation

# THANKS

**CEO Kalle Hvidt Nielsen, khn@topsil.com**