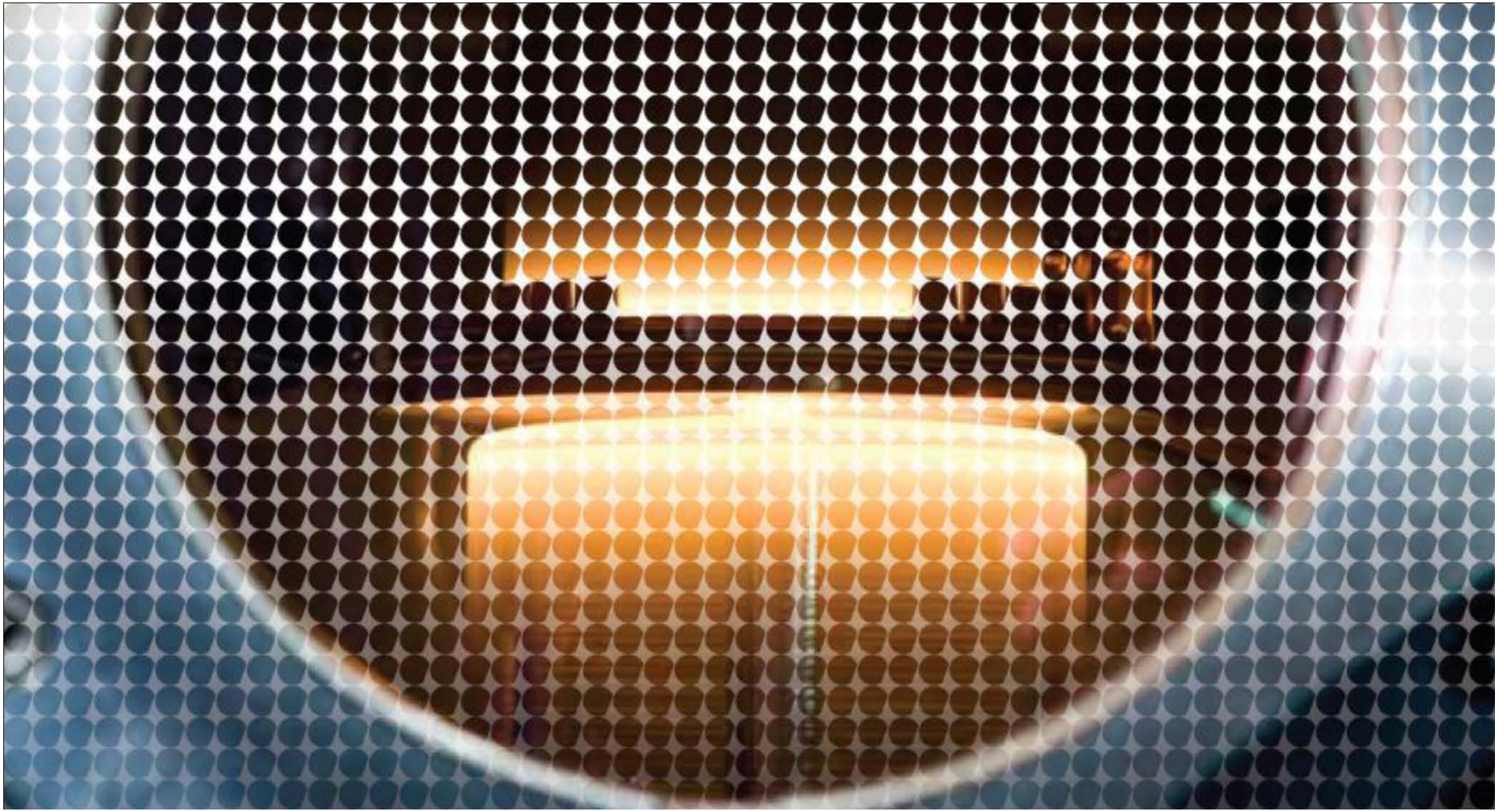

COMPANY PRESENTATION

Linderupvej, September 28th 2011

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AGENDA

1. Poly market, Long Term Agreements (LTAs)
2. Poly quality issue
3. Customer Long Term Agreements (LTAs)
4. NTD, transport sector
5. R&D, Qualifications
6. Warsaw plant
7. Market outlook
8. Management focus

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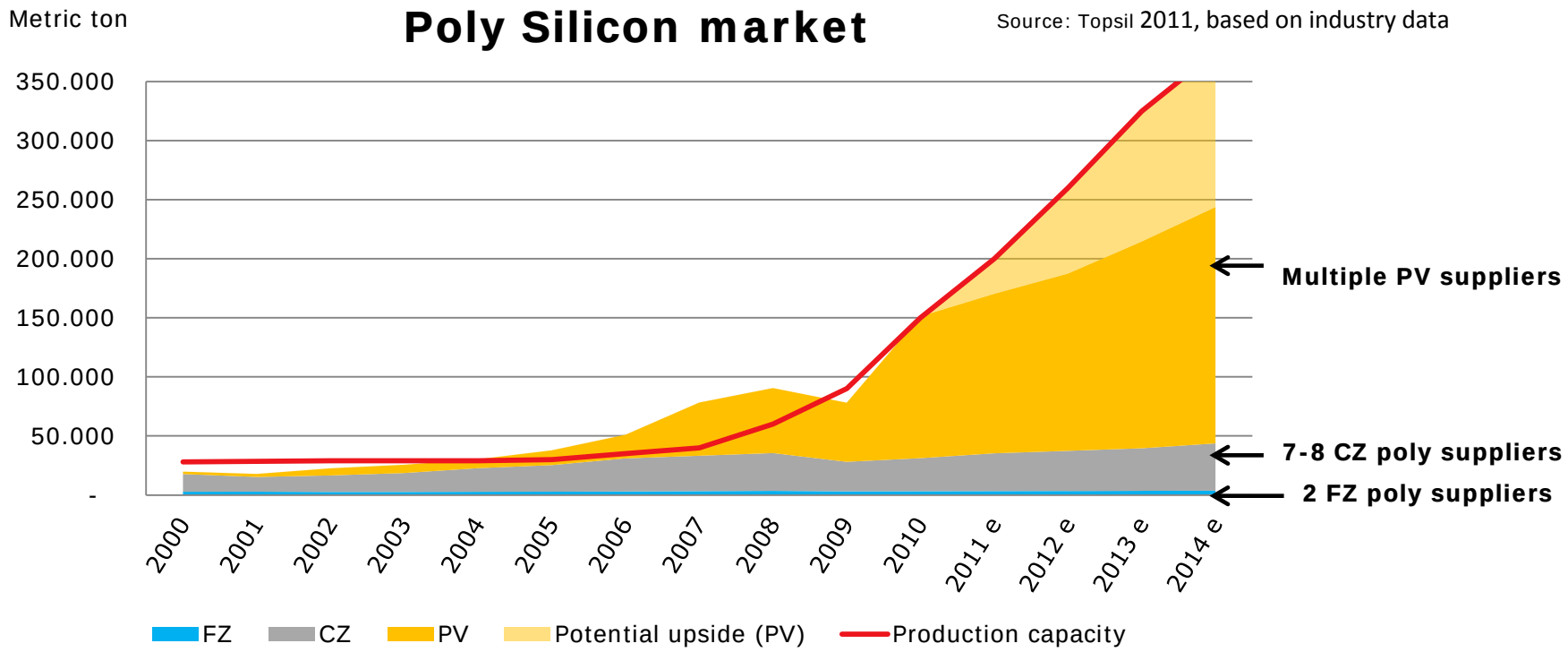
POLY MARKET, LONG TERM AGREEMENTS (LTAS)

POLY SILICON MARKET

CONSIDERABLE GROWTH DRIVEN BY PV



- Poly silicon for PV market cannot be used in CZ or FZ markets due to differences in technical specifications.

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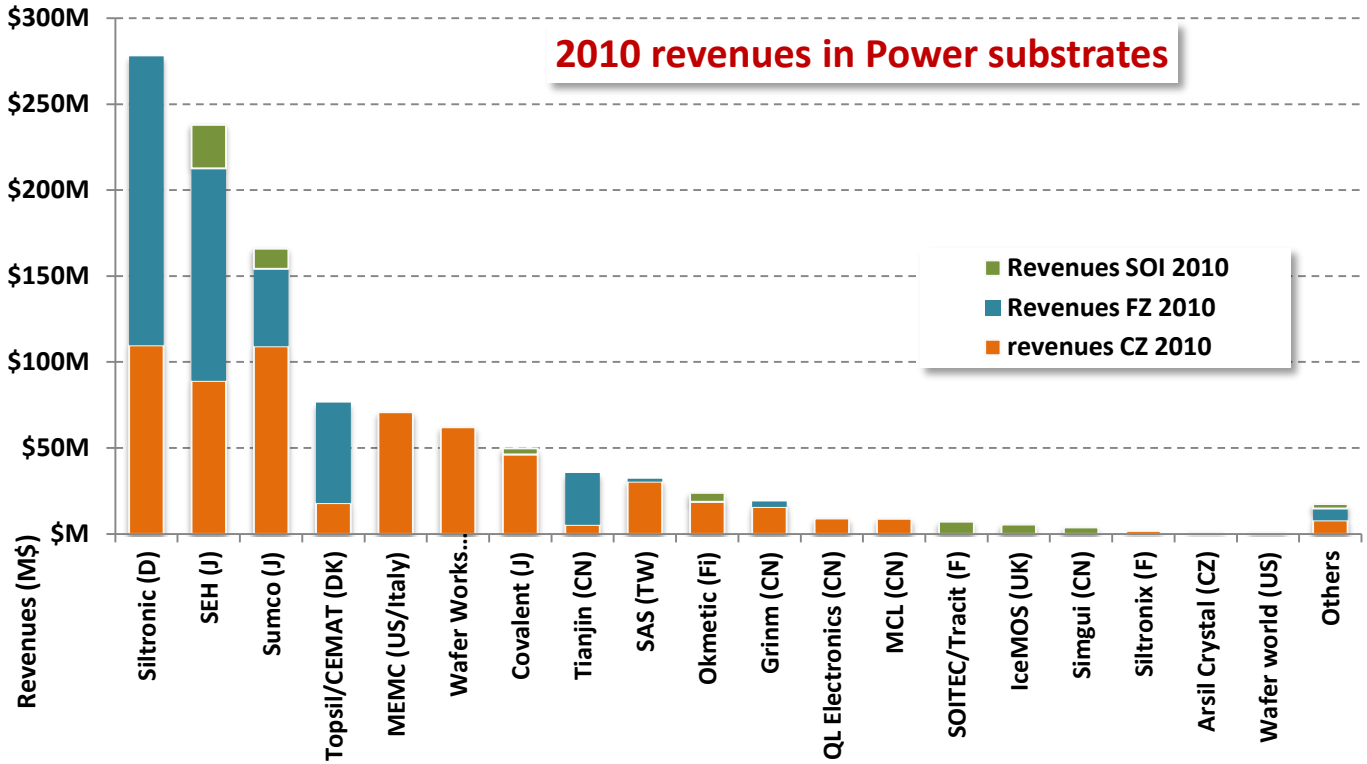
POLY SILICON FOR FLOAT ZONE
A FRACTION OF OVERALL POLY MARKET

- Poly for FZ manufacturing constitutes diminutive percentage of aggregated poly market.
- Poly for Float Zone is attractive business for existing FZ manufacturers:
  - Very few players in the market place
  - Supply/demand characterised by 2 suppliers and 5 customers; bargaining power at supplier
  - Alternative source (CZ/FZ) established in 2007 by one of the major FZ manufacturers.
- Entry of new FZ poly suppliers unlikely, due to relatively small market and high entry barriers (Poly silicon technology and production difficult and costly to develop).

FLOAT ZONE MANUFACTURERS
FEW IN THE MARKET



Source: Yole Developpement, 2011

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LONG TERM AGREEMENTS - POLY
AN INDUSTRY STANDARD

Technology 1: Silane	Technology 2: Trichlorsilane	Technology 3: CZ double pass
RANGE Useable for all PFZ and NTD specs.	**RANGE** Useable for all PFZ and some NTD specs.	**RANGE** Not suitable for NTD, cost competitiveness
One global supplier	One global supplier	One known FZ-manufacturer

- All three poly-technologies are available to Topsil, Long Term Agreements (LTAs) applicable for 1+2.
- Topsil has entered into LTAs to safeguard access to poly used for NTD.
- LTA is industry standard for poly silicon supply.
- >90% of poly for FZ manufacturing is supplied in LTAs.
- Purchase outside the LTAs is depending on accessible capacity, relations, etc. Prices will be equal to or higher than LTA prices.
- No correlation between CZ-poly and FZ-poly pricing.

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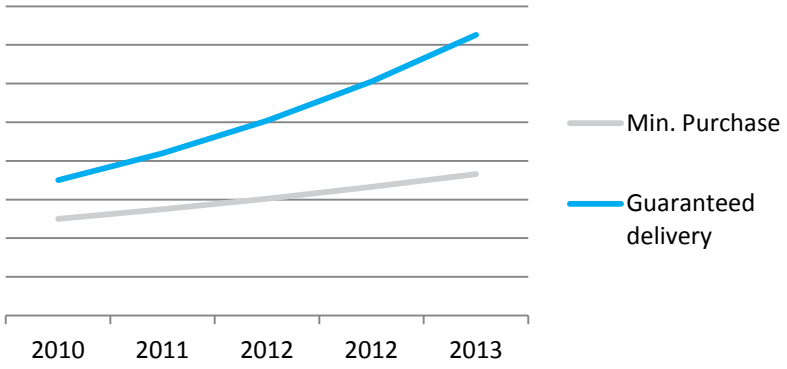
LONG TERM AGREEMENTS - POLY
CENTRAL TO MANAGE AND REDUCE RISK

- LTAs are strategically important to Topsil.
- Contracts stipulate agreed volume + price within a certain period.
- In support of Topsils growth plans, the LTAs safeguard increasing poly levels year on year.
- Topsil to purchase agreed volumes in 2011.
- Example:



POLY QUALITY ISSUE

POLY QUALITY ISSUE
AGREEMENT TO BE REACHED

Quality issue:
”Challenge in reaching uniform quality, compared to historic levels”

- Quality issue with one supplier in first half of 2011 is currently under investigation.
- Long history of being able to reach mutually beneficially solutions on technical as well as business issues.
- Both parties have keen interest in solving the matter and expanding business.
- Topsil is confident to reach agreement.
- In addition to pending issue, technology improvements to optimise yield and support of future 8’’ FZ is being discussed.

CUSTOMER LONG TERM AGREEMENTS (LTAS)

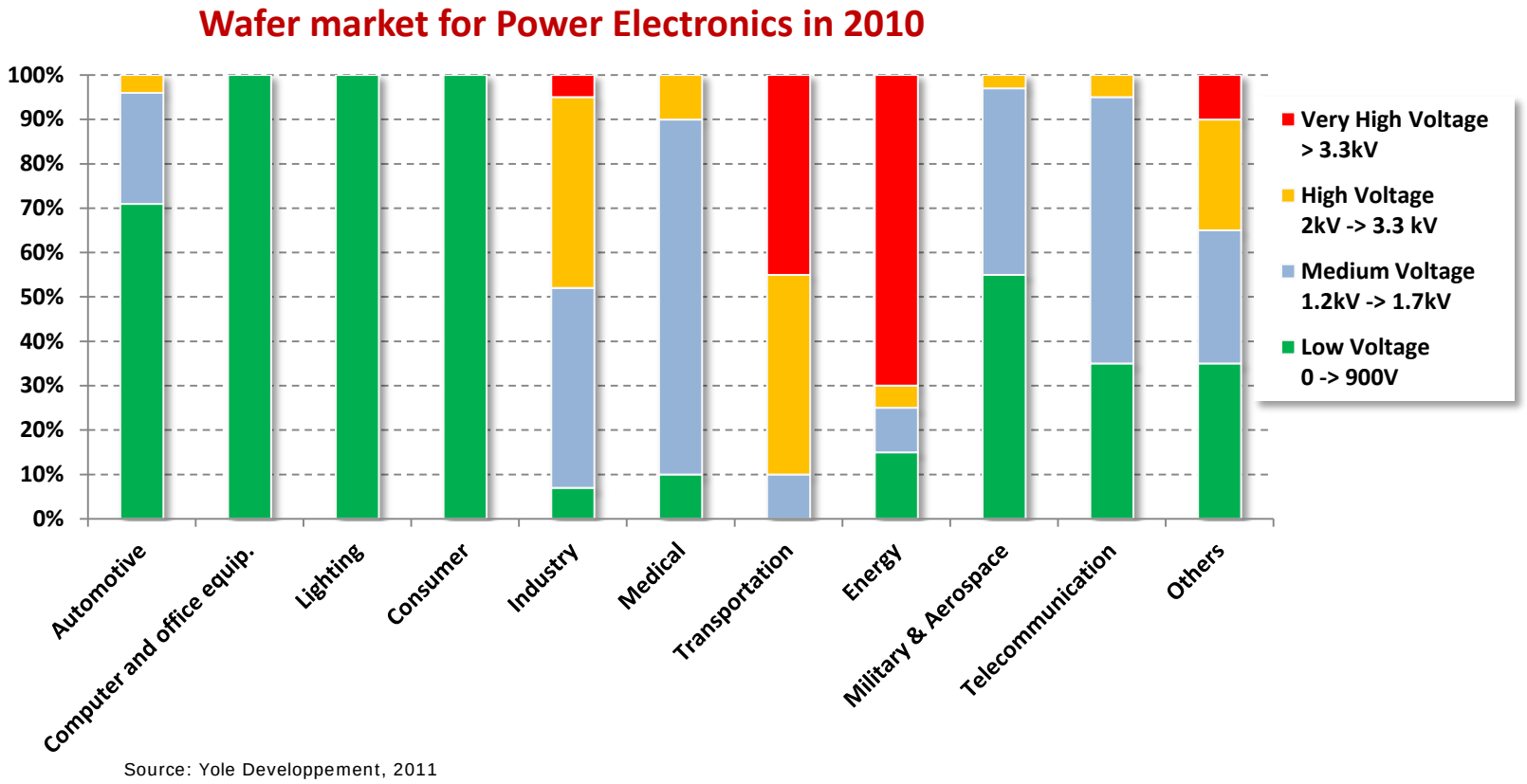
LONG TERM AGREEMENTS - CUSTOMERS

SIX CUSTOMERS SIGNED UP

- Long Term Agreements (LTAs) with six main customers from 1-1-2010 which gave customers favourable terms in exchange for committed purchase
  - Three contracts renewed – three new contracts.
- Contents of LTAs according to customer preferences: Some customers prefer to include main part of orders in LTA (contracted prices, yet more volume fixed), whereas others prefer less volume fixed, yet market prices outside of LTA coverage.
- In total, contracts secure volumes corresponding to 40% of 2010 – revenues.
- LTAs introduced by Topsil to link and balance poly contracts with sales (reduce risk) and build customer relations (not industry standard).
- No changes to contractual framework or agreed terms since launch.

NTD, TRANSPORT SECTOR

TRANSPORT AND ENERGY MARKETS
REQUIRE HIGHEST VOLTAGE LEVELS

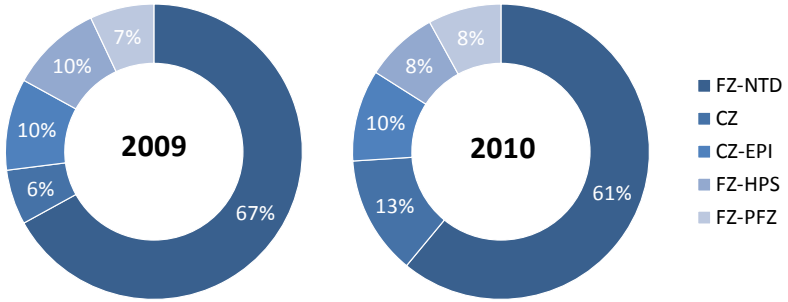


Source: Yole Developpement, 2011

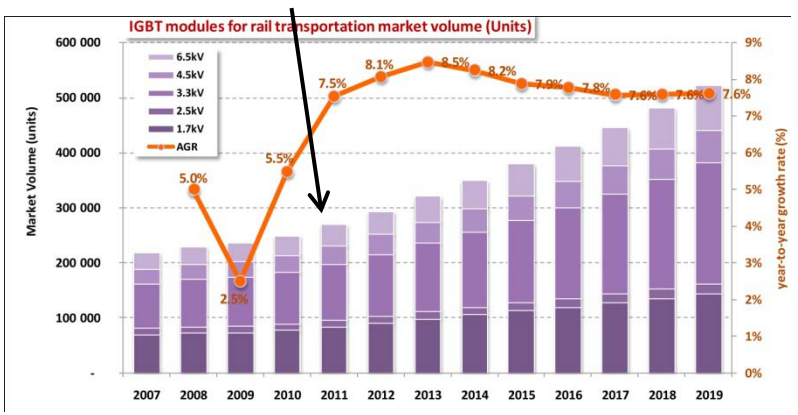
MARKET LEADER
HIGH-VOLTAGE NTD

- Market position on NTD unchanged, total market share of around 7% on power market, 2010 and 2011 to date*.
- App. 50% market share of NTD in main segments.
- NTD accounted for 61% of total sales in 2010.
- Current estimate that app. 1/3 of Topsils NTD sale in 2010/11 to be used in the transport sector, mainly traction.

Topsil revenue split, 2009 & 2010



Actual development - not as expected!



Source: Yole Developpement, 2009

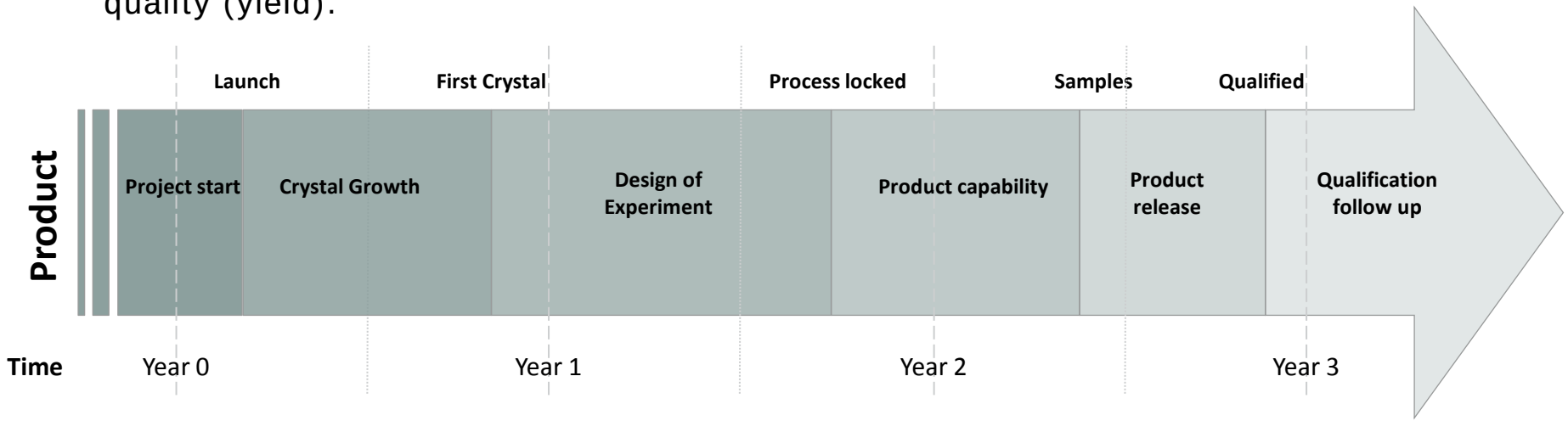
* Source: Topsil and Yole Developpement, 2011

R&D, QUALIFI-CATIONS

R&D A KEY DRIVER
- IN SILICON WAFER MARKET

Development in wafer sizes driven by production line requirements (i.e 6” line, 8” line)

- CZ (start 1960s): 3” -> 4” -> 5” -> 6” -> 8” -> 12” -> 16” (400mm) -> 18” (450mm)
- FZ (start 70s): 3 ” -> 4” -> 5” -> 6” -> 8”
- 12” FZ theoretically possible.
- Lifecycle of given diameter typically 15-20 years (FZ) and 10 years (CZ).
- Marked development drivers: Technical performance, equipment availability, cost and quality (yield).



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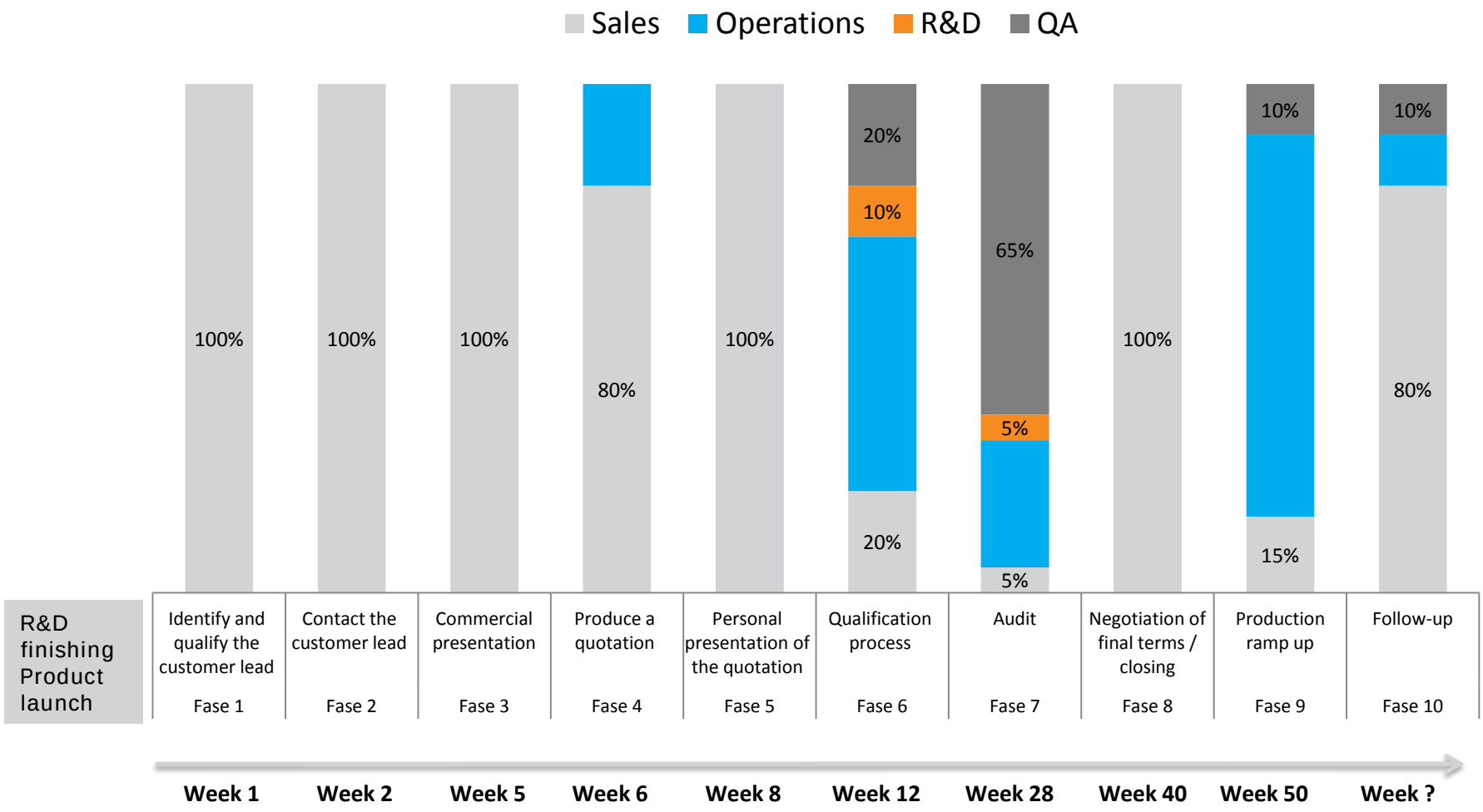
QUALIFICATION PROCESS
(APP. 3 ITERATIONS OF PHASE 6)



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NEW PRODUCT, 6” PFZ

WAFER FOR 600V AND 1200V DEVICES

In December 2010 a new product for IGBT´s was released - 6” PFZ - with optimised resistivity control based on a new **patented** 6” and 8” technology platform.

- PFZ represents more than 60% of the total FZ market. Topsil has less than 1% market share in the PFZ market.
- Optimised electrical parameters for medium power devises for industrial, and automotive applications.
- Product parameters have been benchmarked against “best in class” competitor and found “comparable if not better”.
- Production experience of 6” PFZ will be used in the 8” development and production ramp.
- PFZ qualifications are running according to plan in terms of expected volume and number of customers – **but** 1-1½ year delay.

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NEW PRODUCT, 6” PFZ - STATUS
WAFER FOR 600V AND 1200V DEVICES

Status:

Product development, launch of product and qualification has been more time-consuming than originally anticipated:

- Prioritisation of daily business to PFZ development (machine allocation).
- Decision to extend final R&D work by six months in order to achieve premium electrical product properties.
- Customer motivation (qualification is time consuming and costly).

Lessons learned:

- Prioritise R&D equally to daily production (machine allocation).
- New products should be introduced wihtin the customer qualification window.
- Product development, launch and qualification need to run in parallel.

NEW PRODUCT, 6” EPI
WAFER FOR 600V AND 1200V DEVICES

Topsil released a new 6” thick EPI product for medium power devises, Q2 2010.

- CZ-EPI is the most commonly used substrate for low and medium power devises.
- CZ-EPI wafers serve as a common device platform and are used by most power devise manufacturers either in-house or at semiconductor foundries.
- Optimised electrical parameters for medium power devises for consumer, industrial, and automotive applications.
- FZ customers are typically also using CZ-EPI, depending of application.

NEW PRODUCT, 6” EPI - STATUS
WAFER FOR 600V AND 1200V DEVICES

Status

Development of new, EPI-product has been more time consuming than originally anticipated:

- Process knowledge from existing products not fully transferable to new product – R&D was required.
- Specific, technical challenges and issues needed to be resolved.
- Qualification successfully achieved, but variances in production have delayed production ramp.

CZ-business in general

- CZ substrate sales disappeared unexpected within a very short time frame, customers left 4+5’’ in favour of 6’’. Warsaw operation has limited 6’’ capacity.
- Less bulk CZ, according to plan, however this happened far faster than we have been able to introduce new, thick CZ-EPI.
- New special CZ product getting ready for volume production, following customer demand.

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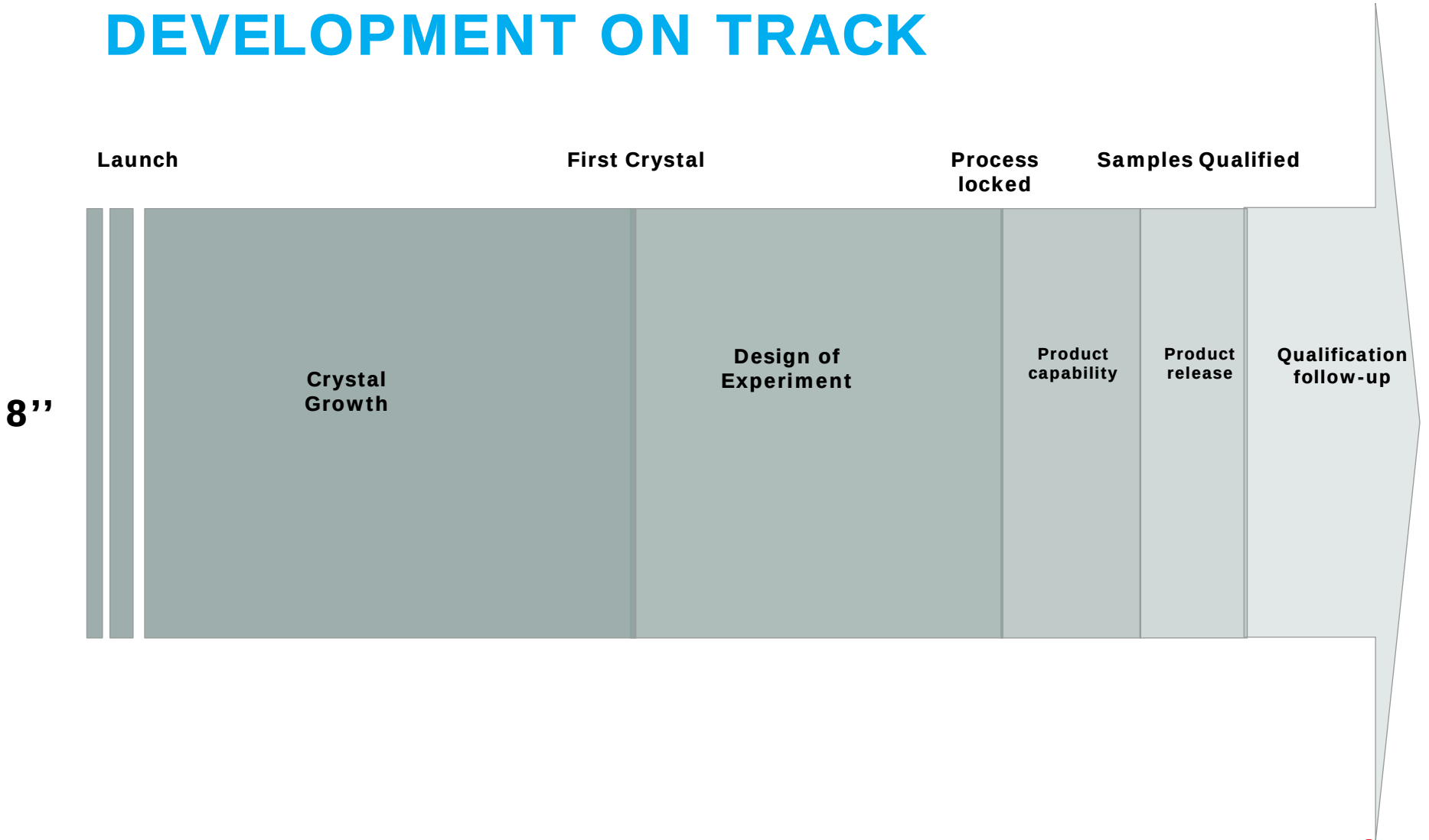
NEW PRODUCTS, 8” NTD AND PFZ
DEVELOPMENT ON TRACK



CAPACITY EXPANSION
NEW FZ-PLANT

September 2011

- Construction following plan, walls up starting week 38.
- Construction to be completed 2012, followed by step-by-step transfer of technology and people.

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CAPACITY EXPANSION
PLANNING OF SMOOTH TRANSFER

- Internal planning procedure in progress.
- Topsil team appointed to handle qualification in close cooperation with each customer.
- Qualification of new plant not to interfere with ongoing manufacture, i.e. old site not to be closed down until qualification completed at new plant.
- Transfer planning addressed with customers (initial phase).

WARSAW PLANT

WARSAW PLANT RESTRUCTURING PLAN
TO BE IMPLEMENTED

Situation

- Revenue down, fixed cost high.

Response - Execution

- Solve thick CZ-EPI technicalities, finalise qualification
- Capacity utilisation, sourcing
- Service provision under close examination, with a view to renegotiating service packages
- Trim of organisation.

Time frame

- Plan to reach break-even shortly to be presented to BOD in very near future.

WARSAW PLANT
– ACHIEVEMENTS AND SUCCESSES

- Positive response from Topsil's existing customers – who deem Topsil's market position to be strengthened in terms of better control of production and supply chain.
- Developed capability for new feedstock – using CZ as feedstock for FZ processes.
- Improved quality of NTD wafers:
  - Developed quality assurance processes to test and support special requirements of high voltage devices
  - In-source wafering of special NTD wafers
  - Established 8" wafering capability to support R&D program
- Strengthened supply chain:
  - Centralised efficient warehouse for Topsil group
  - Established sourcing organisation for ingots and wafers
- Developed waste handling – recycling of FZ remelt used for CZ ingots.

MARKET OUTLOOK

LONG TERM MARKET OUTLOOK
REMAIN ATTRACTIVE

2010

- Strong underlying market, market growth on high and very high voltage levels, long visibility, 20% increase in wafer volume, analyses pointed towards continuous, very favorable growth rates.

2011

- Shorter visibility – late impact of financial crisis, apparent short term market fluctuations.
- Traction – Slow-down of projects and project execution due to safety and economics discussion.
- Slow down in the introduction of renewables (e.i. infrastructure and transformers).

2012

- To be communicated March 2012 (Annual report).

Long term

- Overall market expectations remain intact acc. to analysts and main customers.

MANAGE-MENT FOCUS

STRATEGIC CHALLENGES - MANAGEMENT FOCUS

Challenge	Response
New Plant Operation	
• Time to operation /qualification	• Primary focus on growth in volume; less on closing date for old plant
New Product Introductions	
• Delays in PFZ and EPI qualification and sales (R&D etc.)	• Projects Groups around PFZ and EPI • Solve technical CZ-EPI issues, qualify, ramp
Core business - NTD	
• Market fluctuations	• Regain momentum for NTD
Cost focus	
• Cost improvements reached through yield improvements for Topsil and Cemat	• Cost improvement programme scaling to reach target • Cemat to be run as a production site
Research & Development	
• Time to market 8” NTD and PFZ + cost	• 8” Integrated Product Development is scaled to reach target (ingot, wafering etc.)

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BACK UP SLIDES

VALUE CHAIN

THE FLOAT ZONE PROCESS – FROM POLYSILICON TO WAFER

STEP 1


QUARTZ SAND


REDUCTION


DISTILLATION


SIEMENS PROCESS


POLYSILICON

FZ

THE FLOAT ZONE PROCESS – FROM POLYSILICON TO WAFER

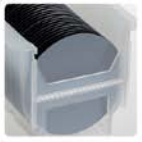
STEP 2


POLYSILICON


FZ PROCESS


IRRADIATION (NTD)


WAFERING


FINISHED WAFER

or

CZ

CZHOCHRALSKI PROCESS – FROM CRUSHED POLYSILICON TO WAFER

STEP 2


POLYSILICON


CZ PROCESS


WAFERING


EPITAXY PROCESS


FINISHED WAFER

FROM TOPSIL TO CUSTOMER

STEP 3 AND 4


FINISHED WAFER


DIFFUSION


COMPONENT


ELECTRONIC CONTROL


END-USE

TOPSIL

TOPSIL IS DEDICATED TO HIGH PERFORMANCE DEVICES

- High and very high power with high resistivity

NTD

CZ

- Low to medium power
- High volumes and strong price competition

PFZ

CZ EPI

- High Power
- Increasing proliferation of medium power products

- Low and medium power
- High volumes and price competition

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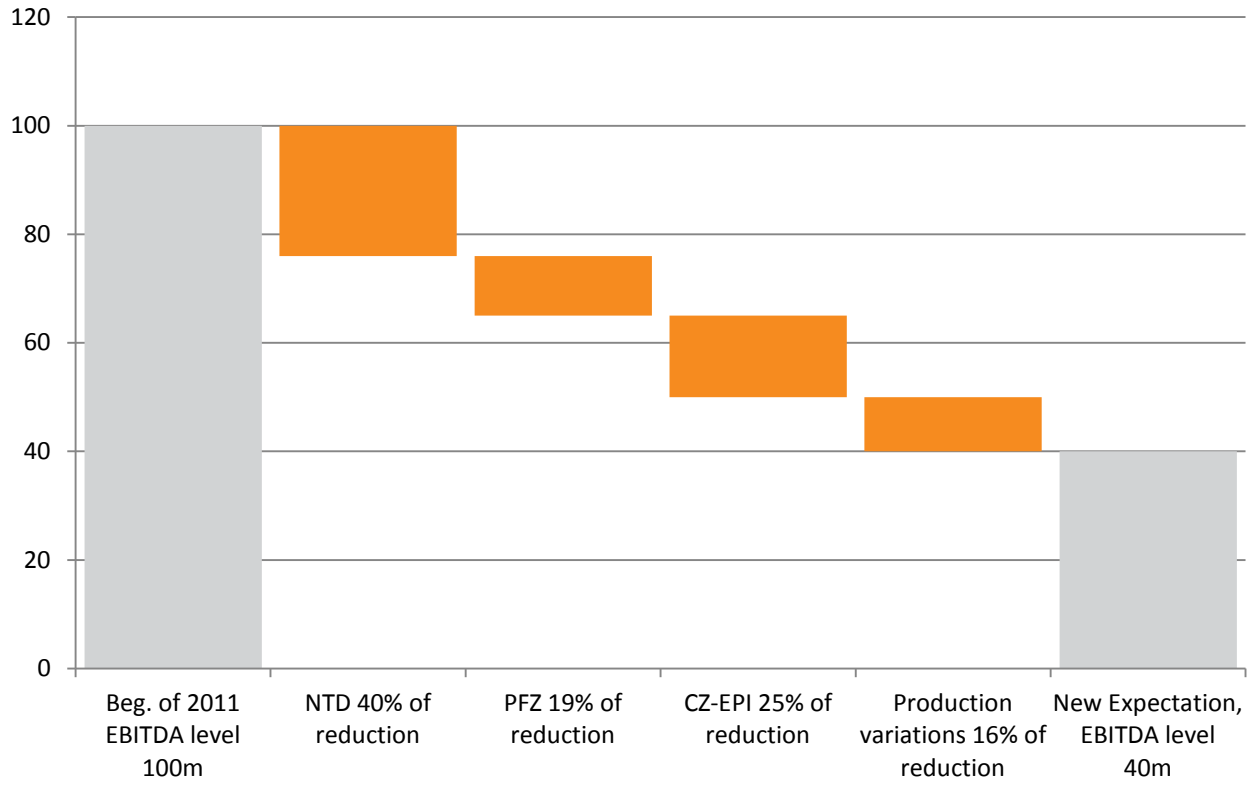
ADJUSTED EBITDA 2011



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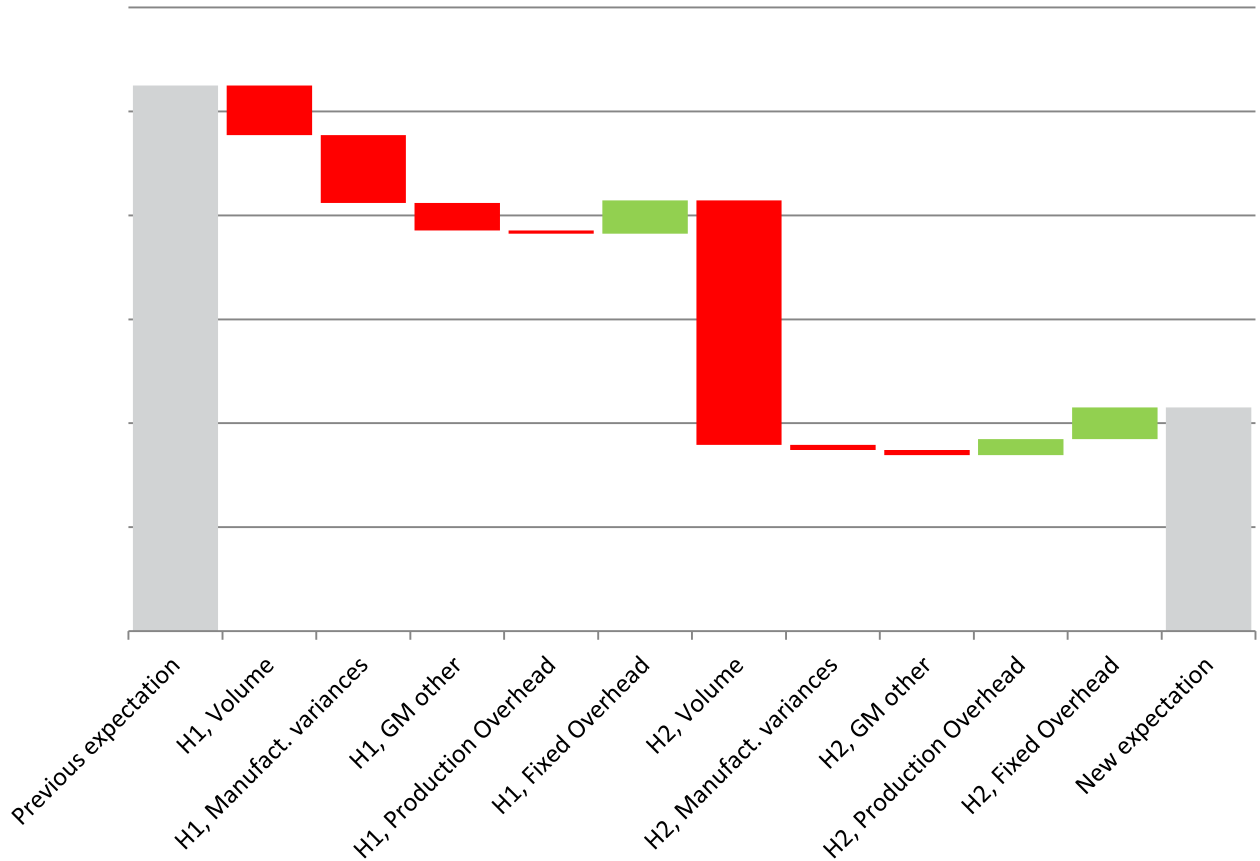
EBITDA EXPLANATIONS



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STATUS, NTD

	NTD
Q2 2011	▪ NTD sales down late Q2/early Q3. Contract customers adjust present orders and downgrade number of orders for the year
Status 2011	▪ Market down on the short term. Late impact of financial crises ▪ Infrastructure and transport sectors hit ▪ Chinese decision on lowering maximum speed of high speed trains to direct affect Topsil sales ▪ Market share maintained
Future	▪ Growth is expected from 2H, 2012 and forward (based on customer expectations)

	NTD 2011	NTD Future
Market outlook		

Revised compared to Q1

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STATUS, CZ-EPI AND NEW PFZ PRODUCT

	EPI and PFZ
Q2 2011	▪ Qualification delay compared to original planning ▪ CZ-EPI technical qualification issues ▪ PFZ qualification running well, although delayed
Status 2011	▪ Delay to have negative impact on sales
Future	▪ CZ volume growth from 2013 and forward ▪ PFZ volume growth from 2012 and forward

	2011	Future
Market outlook		

THANK YOU FOR YOUR ATTENTION

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