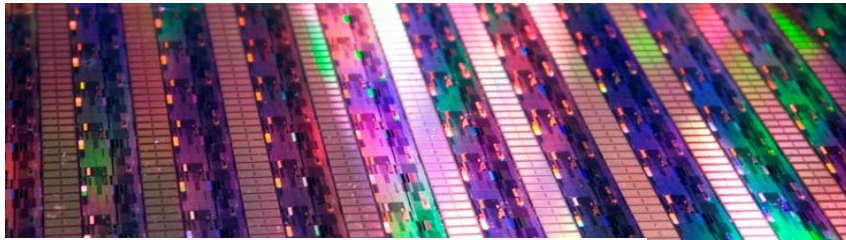


Plasma Control Technologies

## Commercializing the RF power supply unit through expanded market access



Michael Kammerer, President of Plasma Control Technologies

**COMETGROUP**  
Technology with Passion

## Agenda

- 1 PCT business environment
- 2 What makes COMET PCT successful?
- 3 Strategic objectives: *what do we want to achieve?*
- 4 Core initiatives at a glance: *building blocks*

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## Chances in a cyclic business environment

Trends

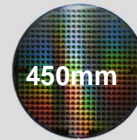
**Smart Mobility  
Connectivity  
Efficiency**



More efficient smartphones and tablets ...  
(Flash, NAND memories)



... require higher performing chips and ...transition to a new wafer technology



## Challenges in a cyclic business environment

Trends

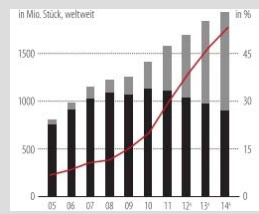
**Shorter cycles of product life time  
Shorter innovation cycles**

**Higher productivity to reduce costs**

flash memory is one of the highest cost elements in producing a smart phone (22% - 25% of total costs)

Phone sales

Standard mobile phones  
Smart phones  
Share smart phones



## PCT in the right markets where RF power is needed

### Communication

Mobile Phones, mobile computing



### Solar

Thin-film doubles in market shares by 2030. Crystalline will also use RF processes in the future.



Thin Film

### Flatpanels / Displays

LCD, AMOLED



### LED

Future Technology for industrial and house lightening

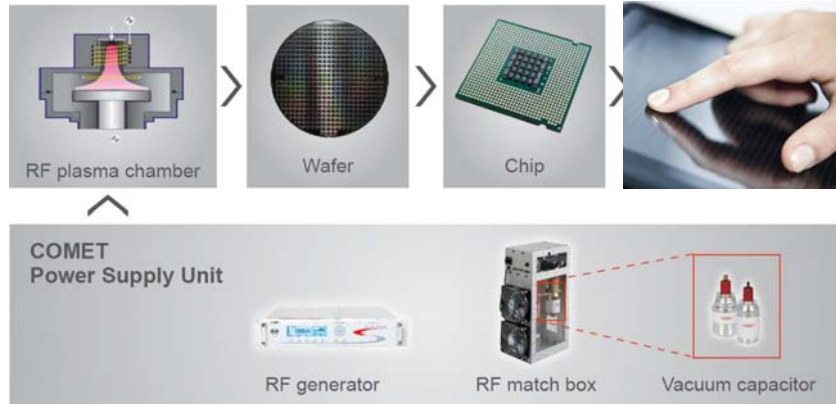


## Agenda

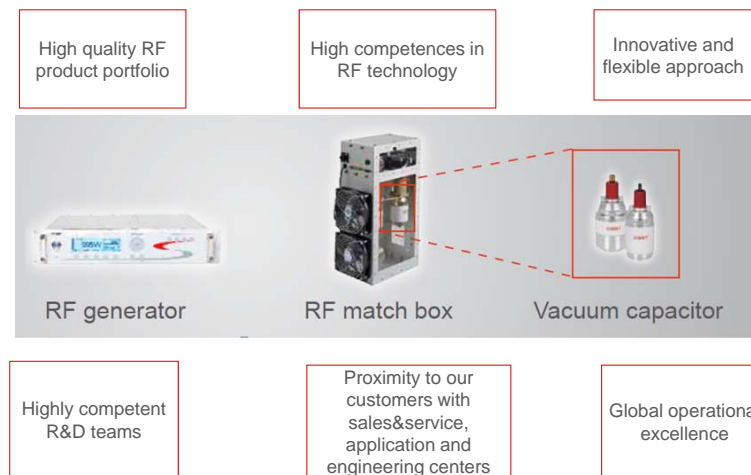
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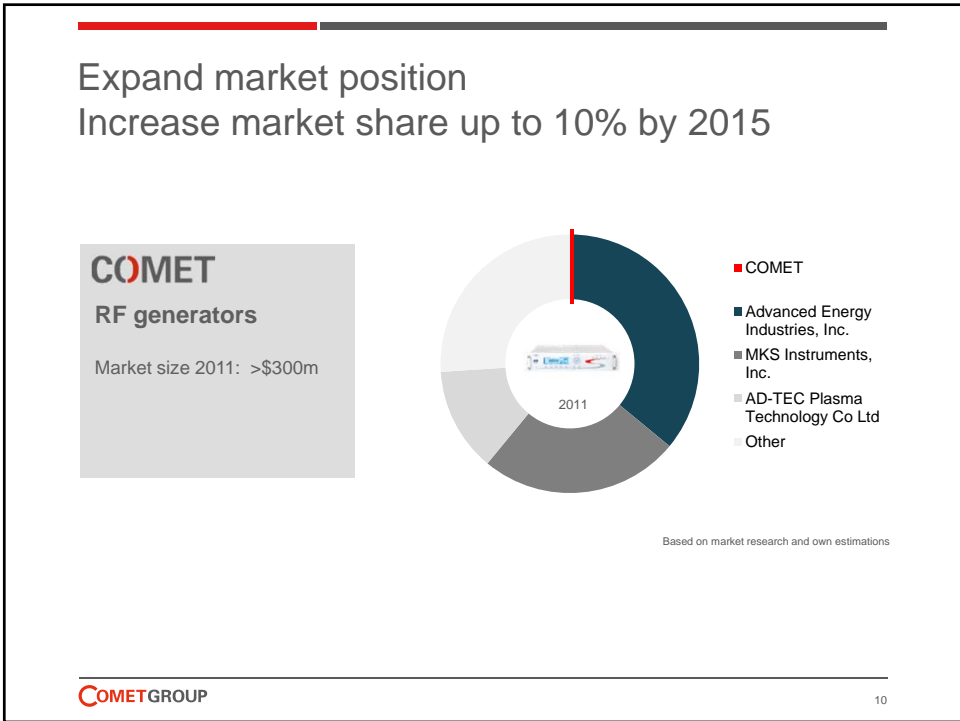
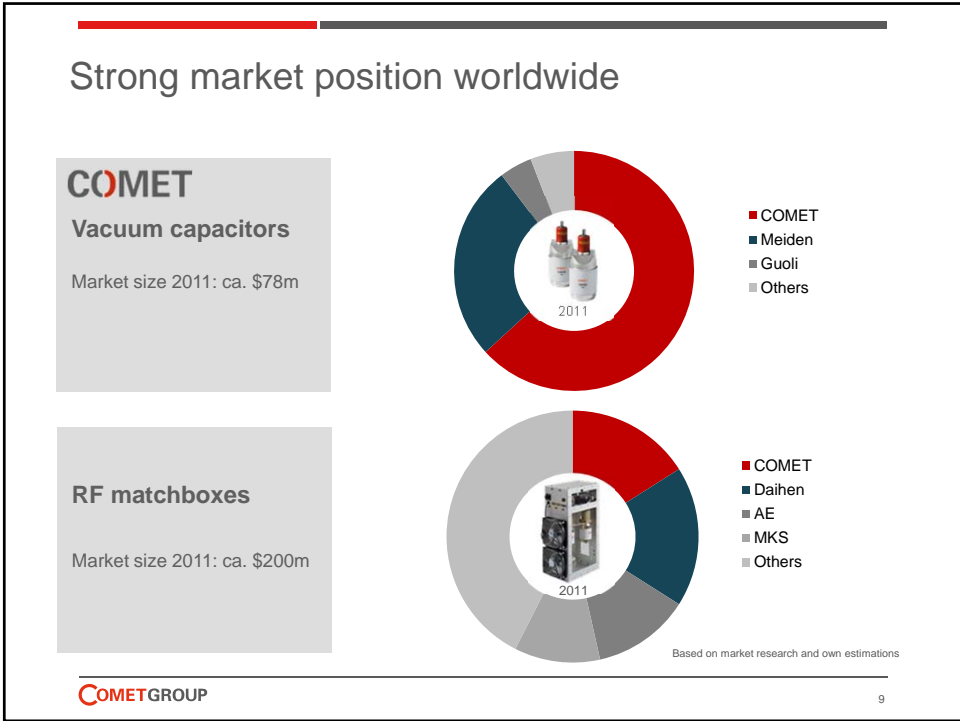
## PCT business model

### Example memory chip for smart phone



## Why do our customer choose us?





## Agenda

- 1 PCT business environment
- 2 What makes COMET PCT successful?
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## Strategic Goals: Push innovative technologies

1



- Targeted Investment in further development of RF & vacuum technology (450mm)
- Launch of new technologies (IP's) and product features to secure competitive advantages
- Set up training and education R&D programs
- Strong relationship with relevant R&D institutes & universities

## Strategic Goals: Expand market reach








- Focus on top customers (Penetration LAM, AMAT)
- Business development ASIA (China, Korea Taiwan)
- Strengthen sales / key account organization
- Push emerging RF generator business
- Accelerate sales for standard products
- Diversify businesses outside semi / solar


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## Strategic Goals 2015: Expand market reach

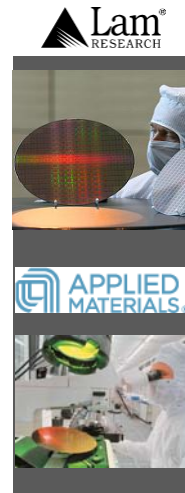
Strong Key Account Management	Set-up a sales channel for standard products	Investment in business development ASIA
		
<p>Further penetration of Top Customers with customized RF Matchboxes</p> <p><b>LAM/NVLS</b></p> <p><b>Applied Materials</b></p> <p>Focus on new high potential keys accounts</p>	<p><b>Aggressive push of sales with standard RF generators</b></p> <p>Expand customer base</p> <p>Launch of new generation of vacuum capacitors</p> <ul style="list-style-type: none"> <li>- Higher performance</li> <li>- Low cost version</li> </ul>	<p><b>CHINA</b></p> <ul style="list-style-type: none"> <li>- Push sales of standard products</li> <li>- Further penetration of potential customers</li> </ul> <p><b>KOREA</b></p> <ul style="list-style-type: none"> <li>- Expand local sales and service organization</li> <li>- Penetrate equipment OEM's with build-to-spec matchboxes and standard generators</li> </ul> <p><b>TAIWAN / JAPAN</b></p> <ul style="list-style-type: none"> <li>- Push further business opportunities</li> </ul>


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## Semiconductor – remains PCT core market

### COMET with R&D projects in leading position

- All big OEMs in Silicon Valley have been penetrated with COMET matchboxes on most systems for the advanced 300mm technology. New projects regarding 300mm are still ongoing.
- Further aggressive penetration of the OEMs with RF matchboxes and RF generators



## Strategic Goals



- Push aggressively RF standard generators
- Establish RF generators in solar
- Develop further business potentials: Medical and industrial laser applications
- Entry with RF generators in Semi



**Business development outside SEMI with RF Technology**

- VHF Amplifiers for medical applications
  - COMET => exclusive 1st source for VHF Amplifier
  - Customized products with extreme wide frequency (350 – 600MHz)
  - Strong customer partnership since 1985
  
- Establish RF generators for laser applications
  
- Further investigation of additional opportunities

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**Investment in business development ASIA**

Solar / LED Market	COMET
2 major thin film producers announce big plans for the next 5 years	PCT involved with 13MGz and emerging 40MHZ Technology
Government investment programs for solar plants postponed but not cancelled	PCT ready for ramp up
LED market still emerging	PCT involved with potential equipment manufacturers

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## PCT Strategic building blocks 2015



### Key Technologies

- Vacuum and RF technology



### Strong Growth

- Focus on top customers (Penetration LAM, AMAT)
- Business development Asia
- Strengthen sales / KAM organization
- Diversify businesses outside semi / solar



### Emerging Business

- Push RF generator business



### Operational Excellence

- Continuously improvement of LEAN production
- Set up of LEAN administration