

8<sup>th</sup> CAPITAL MARKETS DAY  
January 29, 2016, Pierre-Pascal Urbon, CEO



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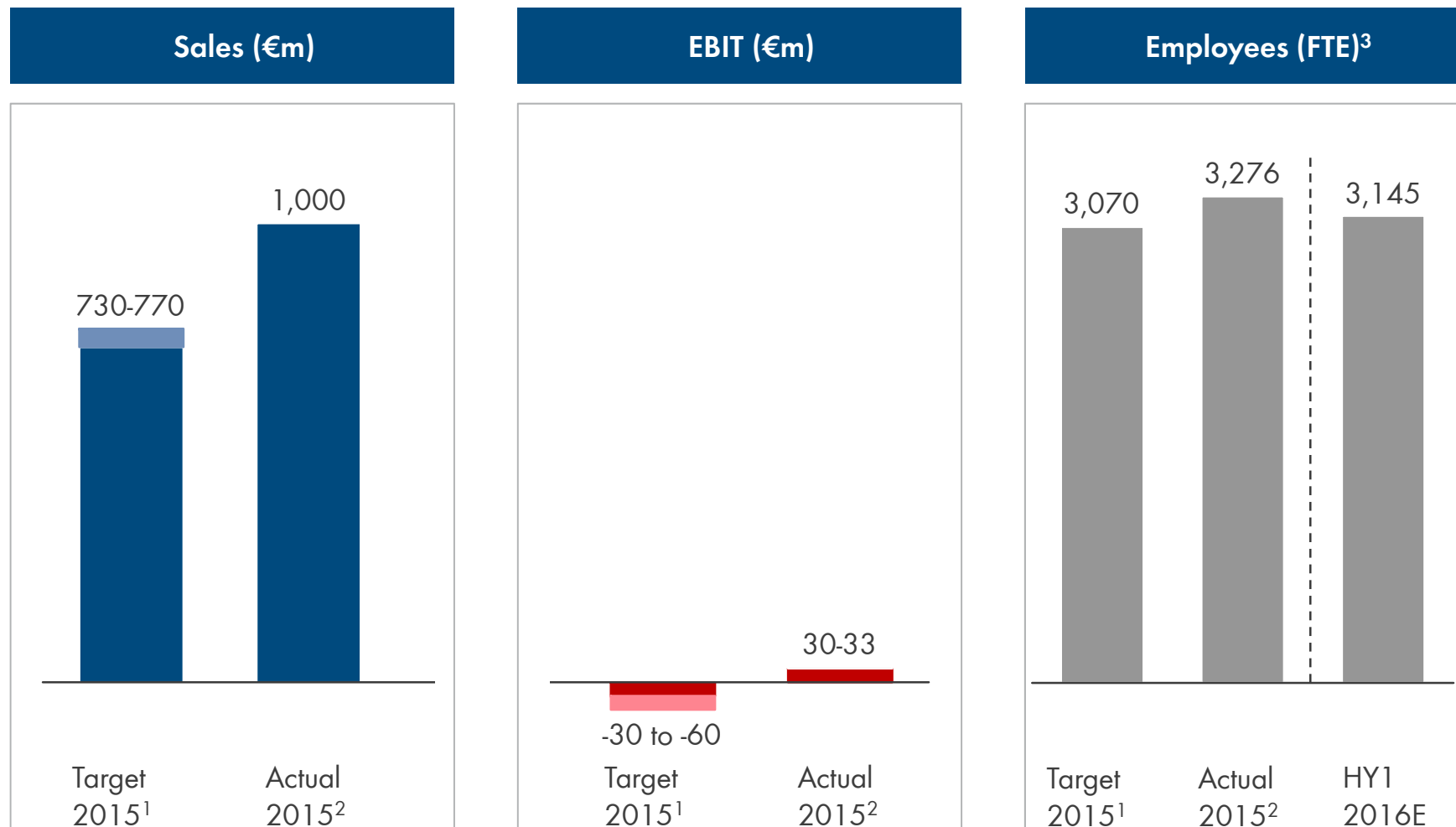
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# 1. Review 2015: When the Going Gets Tough



# Review 2015: We Delivered Much More Than Promised



> **SMA emerged stronger from the crisis of the solar industry and is the only remaining solar company in the TecDax**

1. Capital Markets Day, January 30, 2015  
2. Preliminary figures

3. Full time employees w/o temporary employees, trainees, interns as of December 31, 2015

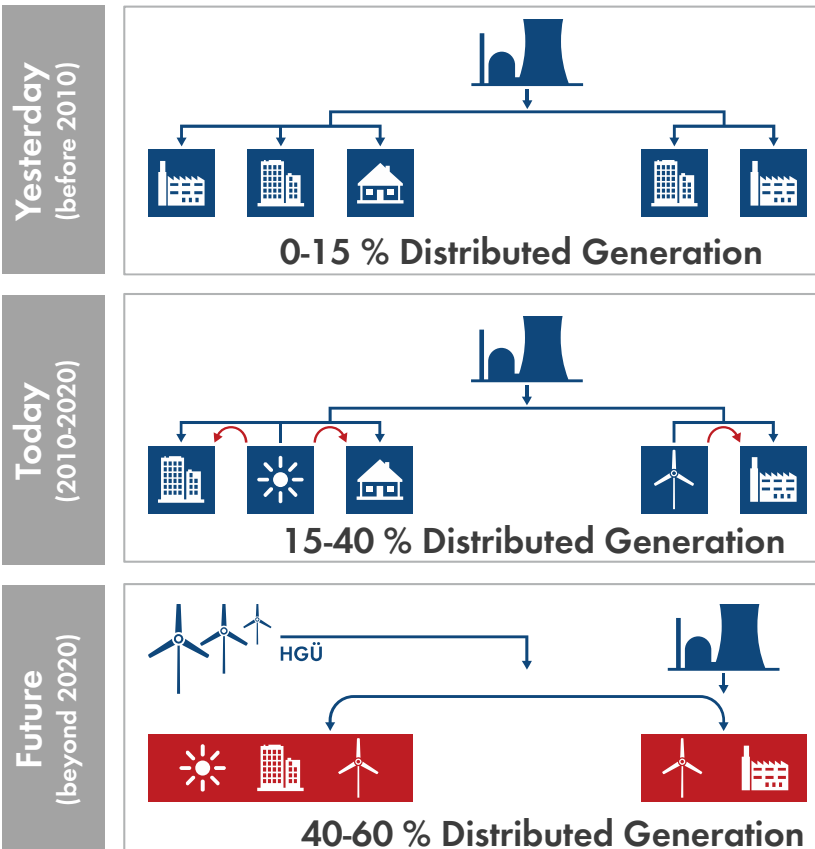
## 2. Market & Competition: Keep Calm, It's Competition Time



# Fundamental Transition Towards a Decentralized World Shakes Up the Market Environment



## Development of Power Generation



## Impact of Photovoltaics

- > Electricity produced increasingly decentral, close to the customer
- > Peak loads and seasonal peaks have been reduced
- > With many „energy producers“ the energy market is far more fragmented than before
- > Utilities lost market share and were forced to implement a strategic reorientation



- > Largely autonomous cells produce their electricity demand by themselves and balance over- and undersupply
- > Techn. developments will lead to convergence between power generation/thermal energy, generation/demand and generation/storage

> The inverter is the core of integrated, sophisticated systems

# Energy Transition Has Largely Been Politically Driven



## PV DRIVERS TO DATE

Tax Credit  
(e.g. USA)

Net-Metering  
(e.g. CA, US, IN, IT)

FIT  
(e.g. DE, FR, NL, UK, JP)

Ren. Portfolio Standard  
(e.g. AU, CN, JP, KR, US)

Tax Depreciation  
(e.g. IT)

Direct Financial Support  
(e.g. HR)

## FUTURE SITUATION

**Self-consumption;  
Excess Energy is  
Traded**

**Direct sale of PV  
Energy/ Virtual  
Power Plants**

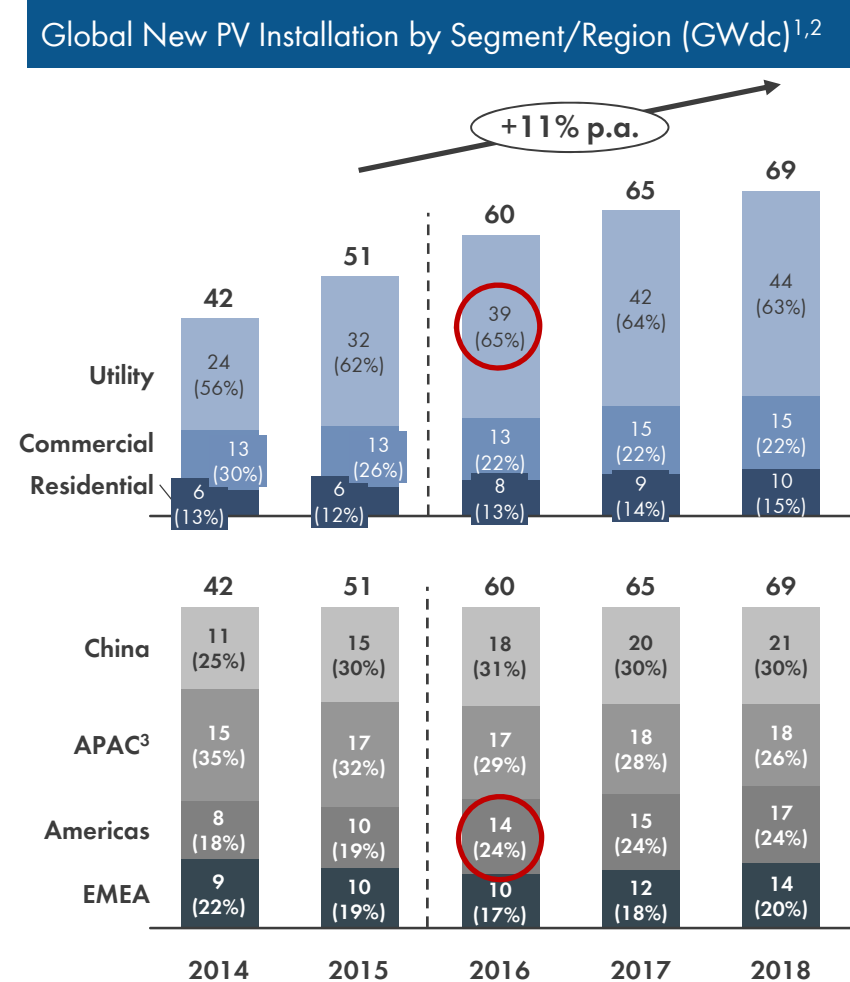
**Cooperation with  
Utilities for Balance  
Energy**

> In many countries solar power is already more cost-efficient than power from conventional plants – This will change the support mechanisms

# SMA Expects New PV Installations to Reach 60 GW in 2016, Thereof 60% in China, the USA and Japan



- > SMA expects a continuous market growth of c. 11% p.a. in global new installations until 2018. The underlying assumptions are among others long-term incentive programs (e.g. ITC in the USA) and CO<sub>2</sub> emission targets.
- > Since 2013, China has become the driving force of new installations. The relevance and share of the Chinese market will remain stable in future years. EMEA, Americas and Asia/Pacific<sup>3</sup> will each account for approximately 20-30% of global demand.
- > There will be no significant change in breakdown of the segments Residential, Commercial and Utility in the next years. The Utility segment will play the major role covering almost two thirds of the market and will be dominated by China, India and the USA until 2018.
- > The emerging markets of South East Asia, Latin America and Middle East show a promising potential and account for more than 10% of global demand.



> The utility segment in Americas will grow much faster than the other regions/segments

1. SMA MI Market Model Q1 2016

2. Incl. 1 GW Off-Grid installations: Residential, Remote and Micro-Grid applications

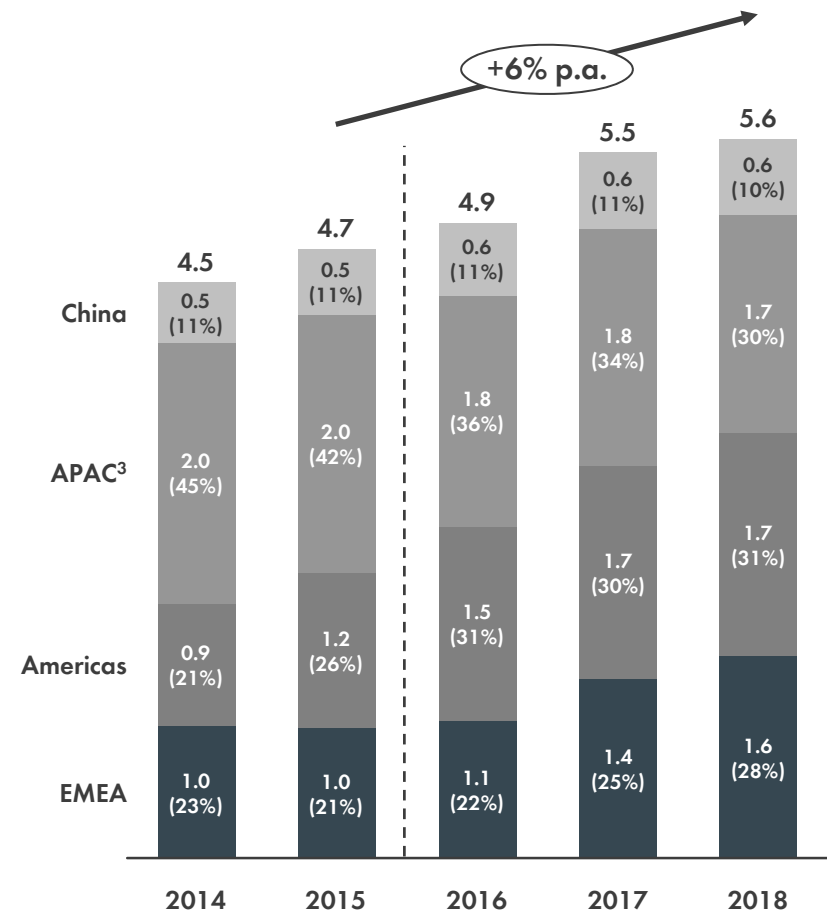
3. w/o China

# Since the Volume Growth is Driven by Price Sensitive Countries, Revenues Will Grow Only Moderately



- > Global inverter revenues are expected to grow by 6% p.a. to 5.6 bn Euro until 2018. Price pressure in all regions and segments remains high.
- > Due to high price pressure the Chinese market remains rather flatish in Euro-terms, despite strong growth in GW.
- > Sales in Japan benefit from strong pipeline of already accepted PV projects. However, already implemented FIT-cuts will almost half revenues until 2018. Other markets in APAC (e.g. India) are expected to develop nicely.
- > The most recent extension of the ITC will support attractive growth rates in the US. Other markets in the Americas region (e.g. Brazil, Chile, Mexico) will experience sales growth.
- > The European markets are expected to decline, mainly due to unfavorable FIT in UK, Germany, Italy and France. However, Africa and Middle East have a chance to overcompensate the sales decline in Europe.

Global Inverter Revenues by Region (bn EUR)<sup>1,2</sup>



## > Americas will be the strongest region in revenue terms, followed by Japan

1. Prices for revenue calculation according to IHS (EUR/Wac); SMA MI Market Model Q1 2016

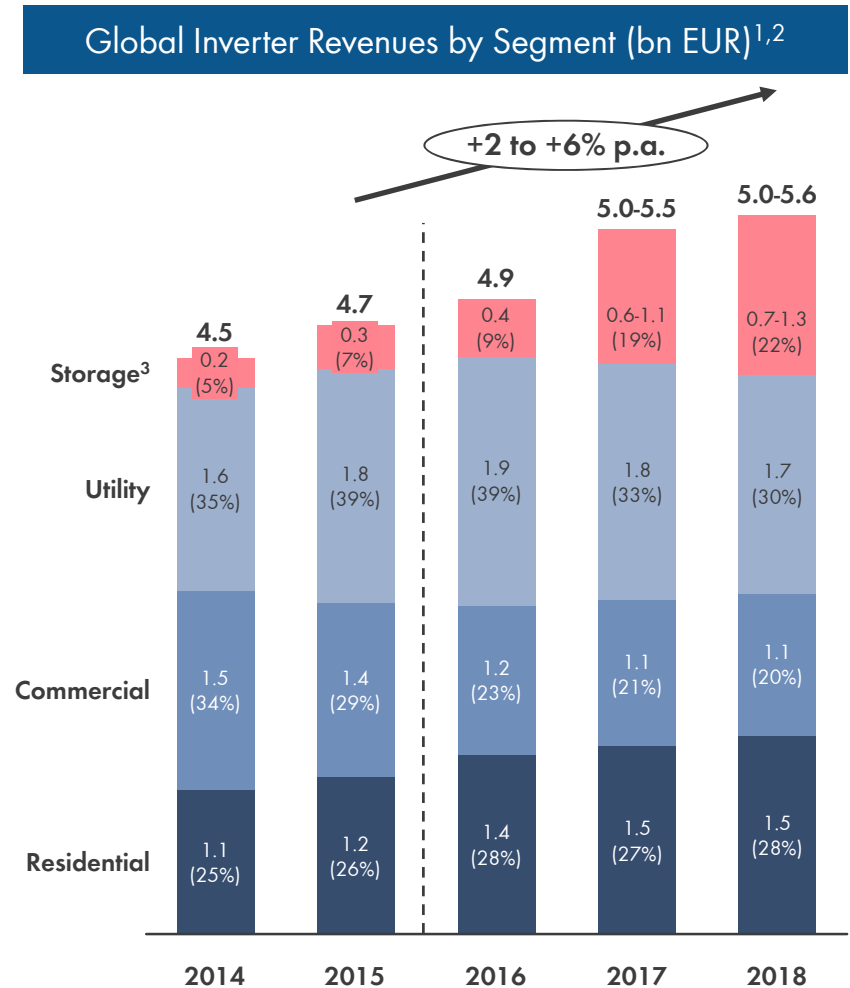
2. Incl. system technology for storage applications (best case scenario)

3. w/o China

# System Technology for Storage Applications Will Drive Global Inverter Revenues



- > The storage market is in a very early development stage. Therefore, revenues from system technology for storage applications are very difficult to estimate. In the best case this segment accounts for up to 22% of global sales in 2018.
- > Revenues for the utility and commercial segments are impacted by the regional shift to markets with low Average Selling Prices (e.g. India, China).
- > Growth in global residential sales is very much driven by strong US demand.
- > Only inverter manufacturers with a complete product portfolio for all solar applications and a truly global presence have a chance to benefit from the market development.



## > Residential and Utility will be the strongest segments in revenue terms

1. Prices for revenue calculation according to IHS (EUR/Wac); SMA MI Market Model Q1 2016

2. Incl. demand for replacement inverters

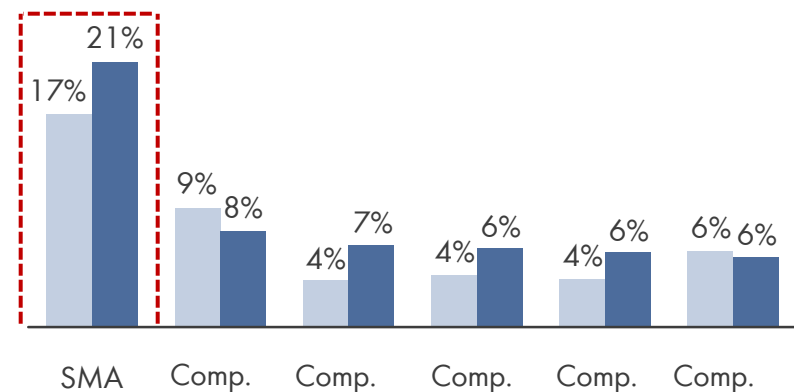
3. Incl. all applications (e.g. hybrid, behind the meter, in the grid, co-located, etc.)

# Only a few Players Serve all PV Applications and all Solar Markets

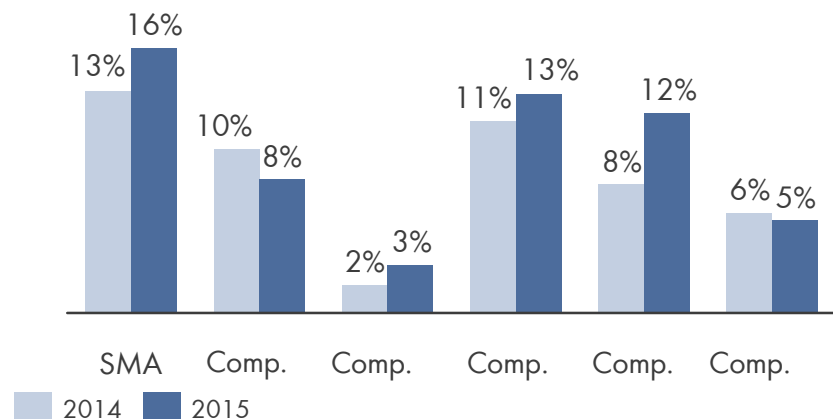


- > The solar inverter market is highly concentrated. The top 5 players account for 48% of global sales in 2015 (2014: 38%).
- > SMA is the **only** specialized PV system technology provider with a comprehensive product and service portfolio for all PV applications, global reach and a high innovation rate.
- > Many competitors with a regional focus and limited product offering already exited the market (e.g. Advanced Energy, Sunways, Siemens, Satcon)<sup>2</sup> or are loss making (e.g. Enphase)<sup>3</sup>.
- > Rise of Japanese and Chinese competitors is mainly due to local market developments.
- > SMA increased its revenue based market share by 4 percentage-points to 21% in 2015. The next biggest competitor has only 8% market share. The largest Chinese competitor is approximately more than three times smaller than SMA.

Revenue based Market Share<sup>1</sup>



GW based Market Share<sup>1</sup>



> **SMA has been the global #1 inverter player for two decades, despite the regional shift in demand in recent years**

1. SMA+Zever: Inverter Revenues; Competitors: SMA analysis based on Financial Reports of companies and IHS Market Tracker Q4 2015 for Q1-Q3 data and SMA estimates for Q4 data; Calculation based on PV

inverter market w/o storage applications

2. Public sources

3. Enphase reported net loss of USD6.3 m. for the first nine months 2015 (USD 8.0 m. FY2014)

# The Solar Inverter Market Has High Market Entry Barriers



Competitor Environment						
	SMA	Comp.	Comp.	Comp.	Comp.	Comp.
Product spectrum <sup>1</sup>						
MLPE <sup>2</sup>	✓	✓	✓	✗	✗	✗
1-ph. String Inverter	✓	✓	✗ <sup>4</sup>	✓	✓	✗
3-ph. String Inverter	✓	✓	✗ <sup>4</sup>	✓	✓	✗
Central/1500V	✓/✓	✓/✗	✗/✗	✓/✗	✗/✗	✓/✗
Turnkey/1500V	✓/✓	✓/✗	✗/✗	✓/✗	✗/✗	✓/✗
Energy Mgmt.	✓	✓	✗	✗	(✓)	✓
O&M	✓	✓	✗	✗	✗	✗
Regions						
Europe	✓	✓	✓	✓	✓	(✓)
Americas	✓	✓	✓	(✓)	(✓)	✓
APAC <sup>3</sup>	✓	✓	✓	✓	✓	✓
Japan	✓	(✓)	(✓)	(✓)	(✓)	✓
China	✓	(✓)	(✓)	✓	✓	(✓)

✓ Strong Presence   (✓) Limited Presence   ✗ No Presence

> **The product portfolio and the global presence of SMA are unmatched in the entire solar industry**

## Barriers to Market Entry

### Barriers due to economy of scale (\$\$\$)

- > International Sales Network
- > Professional Service Offerings
- > Wide Product Portfolio
- > Quality
- > Excellent Brand Reputation
- > Total Cost of Ownership
- > Bankability

### Time-related Barriers (Know-how)

- > Innovative Technologies (Costs)
- > Know-how in System and Storage Technologies
- > Grid Connection Know-how
- > Early Entry in new Markets
- > Future Proof (e.g. Data Management)

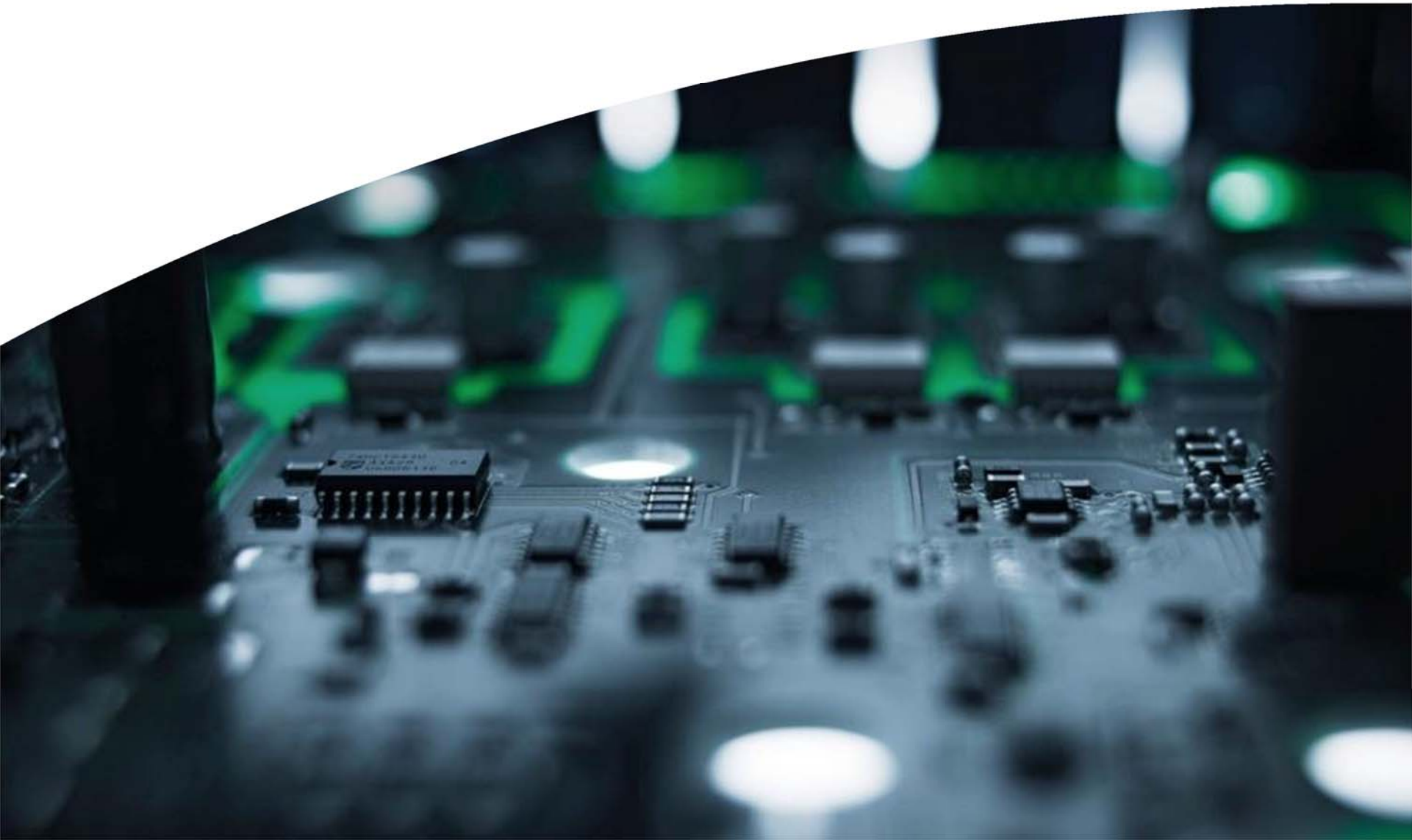
1. Source: Company websites; SMA estimates

2. Module-level power electronics

3. w/o Japan and China

4. In combination with additional equipment

### 3. Technology & Portfolio: Welcome to the Future



# We Increase Our Claim to the Growing Market of Energy Management and Services



## DATA-BASED BUSINESS MODELS

### SOLUTIONS

- SERVICE
- O+M
- ENERGY MANAGEMENT

### SYSTEMS

- MEDIUM VOLTAGE TECHNOLOGY
- SYSTEM TECHNOLOGY FOR STORAGE AND HYBRID
- COMMUNICATION PRODUCTS
- SUNNY PORTAL

### PRODUCTS

- BATTERY INVERTER
- SOLAR INVERTER

- > SMA offers full scale energy solutions and services as well as high-end PV inverter and components.
- > Main goal is to easily integrate PV in existing and new energy infrastructure and optimize the use as cheapest energy cost
- > SMA will establish alliances with strategic partners to create best in class solution
- > SMA's new products are modular designed with improved connectivity<sup>1</sup>

> In future, SMA will open up data based business models

# SMA's Complete Product Portfolio Offers Solutions for all Requirements Worldwide



## SUNNY CENTRAL



**24 GW** cumulative installed inverter capacity

Utility

## SUNNY TRIPOWER



**13 GW** cumulative installed inverter capacity

Commercial

## SUNNY BOY



**13 GW** cumulative installed inverter capacity

Residential

## SUNNY BOY STORAGE SUNNY CENTRAL STORAGE SUNNY ISLAND



Storage

## O&M / WARRANTY EXTENSION



Service

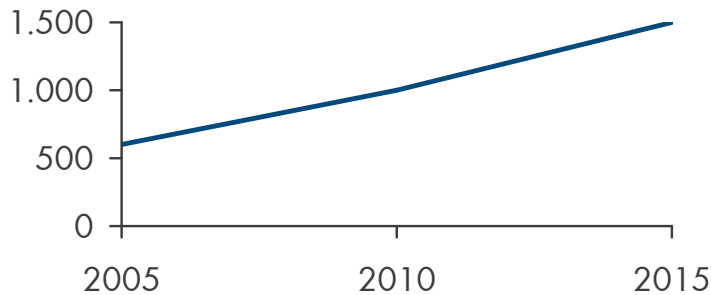
> SMA's cumulative installed power of nearly 50 GW is the basis for a successful service and storage business

# Utility: The New Sunny Central Generation Is a Game Changer – 2.5 GW Already Sold



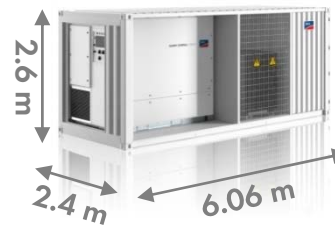
## New Technology

Max. Input Voltage (UPV max)



- > Regulations and new PV-module technologies supported the increase of input voltages from 600 V to 1,500 V over time
- > 1,500 Volt technology is a game changer particularly in the utility segment
- > Higher voltages will reduce the electrical BoS<sup>1</sup> cost by up to 10% and increase the power output by 14%
- > Only few inverter manufacturers have the competency for the 1,500 V technology

## New System & Collaborations



Sunny Central 2,200/2,500  
Power: 2.2 -2.5 MW  
Input V: 570-1,500  
Region: world-wide (new)

- > New Sunny Central generation with up to 2.5 MW power (1,000 V/1,500 V)
- > Complete 20'' Container solution<sup>2</sup> secures higher energy yield, plant availability and reduces the installation time/costs

**SIEMENS**



- > Aligned technical solution from DC to high voltage grid reduces the complexity for customers
- > Share of global network and abilities
- > Joint product development (20'' container)
- > Reliable and strong partner

1. BoS: Balance of System

2. MV-transformer, switchgear, Low Voltage distribution

# Commercial: Revolution in Solution Portfolio Will Drive Future Growth



## New Sunny Tripower Products

### Complex Installations



Power: 15-25kW

Input V: 150 -1.000

Region: MoW<sup>2</sup> (new)

- > Up to 50% power increase compared to forerunner through technological innovation



Power: 12-30kW

Input V: 150 - 1.000

Region: USA (new)

- > Highly flexible due to multistring concept and wide input voltage range

- > Includes reactive power control at grid connection point and thus reduces overall system costs

### Homogenous Installations



Power: 60kW

Input V: 565-1.000

Region: Global<sup>3</sup>; USA (new)

- > Extremely compact and light inverter (75kg)
- > Cost reduction through bundling of common central functions in the inverter management

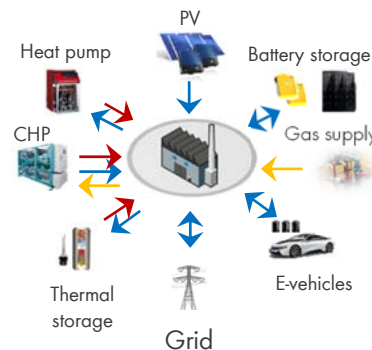
## New System & New Solution



Medium Voltage Station for Sunny Tripower  
January 2016

Fast and easy medium voltage connection

First supplier with fully integrated solution for commercial application<sup>1</sup> in a 10'' container



- > Full scale Energy Management Solution (EMS) to reduce Consumer Cost of Electricity of c. 45%

- > The new EMS will allow businesses to merge and optimize their energy production and consumption

- > Establish alliances with partners to create best in class solution

1. MV Transformer (Siemens), Switch gear (Siemens) and distribution box

2. MoW = Most of World = certified for all countries except China and USA

3. Global = certified for all countries except JP

# Residential: All Set for the Changing Market Environment



## New Sunny Boy Products



Power: 2,500 W  
Input V: 600 V  
Module Cov.: >80%  
Region: Most of World (new)

- > New product platform to reduce development time and increase number of same parts
- > Integrated web- and wireless-interface for rapid configuration and improved connectivity



Power: 6,000 W  
Input V: 600 V  
Module Cov.: >80%  
Region: North America (new)

- > New features<sup>1</sup> like string monitoring to ensure highest investment security for customers
- > Developed to best suit the needs of the North American residential PV market
- > Integrated web- and wireless-interface for rapid configuration and improved connectivity

## New Solutions / New Business Model



- > Automatic control of electrical consumers based on weather forecast and storage availability
- > Integration of home appliances<sup>2</sup>, electric vehicles and heat pumps<sup>3</sup> to increase self consumption



- > Supply of raw data to Transmission System Operator (TSO) for e.g. reduction of balancing energy needs, improvement of emergency congestion management as well as for marketing of EEG electricity

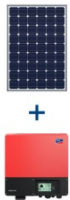
1. Only Sunny Boy 5-6 kW  
2. Miele, Bosch Siemens Hausgeräte  
3. Stiebel Eltron, Vaillant

# Storage: The Sun Always Shines With the Right Battery Solution



## Battery Inverter for Tesla Powerwall

### PV SYSTEM



### STORAGE SOLUTION



7 kWh capacity  
Storage costs:  
<0.28 €/kWh<sup>1</sup>

- > The Sunny Boy Storage is especially designed for high voltage batteries, e.g. the Tesla Powerwall (7kWh)
- > The new high voltage technology (450V) allowed SMA to reduce the specific inverter costs
- > SMA's solution opens up a wide range of applications: New installation, retrofit, storage without PV plant
- > The product is easy to connect in the SMA Energy Management system
- > Customers have free choice of battery brand , battery size and battery technology

## Battery Inverter for Mercedes-Benz Battery

### PV SYSTEM



### STORAGE SOLUTION



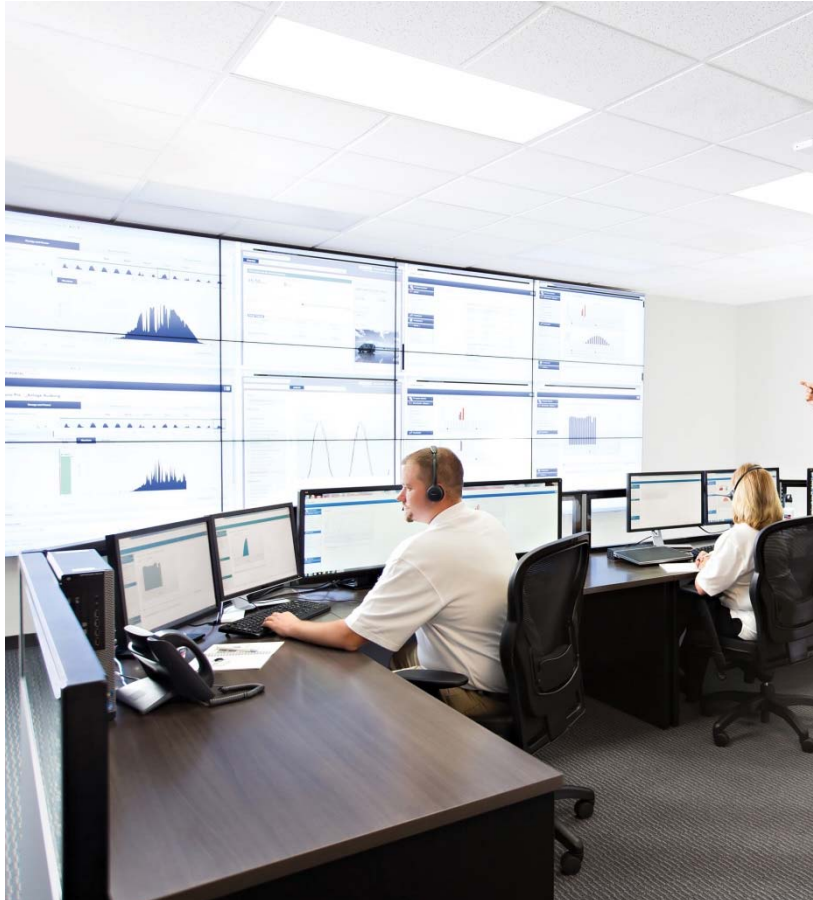
5 kWh capacity  
Storage costs:  
<0.30€/kWh<sup>1</sup>

- > The SMA Flexible Storage system is designed to equip new and existing PV-plants (1ph/3ph) with a storage system. It is easy to connect with the SMA Energy Management system
- > SMA signed a cooperation agreement with Deutsche ACCUotive<sup>3</sup> to increase the penetration of the stationary storage market (2016)
- > Deutsche ACCUotive uses the standard voltage of 48 V. The battery size (5 kWh) fits perfectly to the needs of private households.
- > For commercial applications the battery size can be stacked up to 20kWh or even higher

1. Price for stores solar electricity (today's household tariff, approx. 0.30 €/kWh)

2. The company affiliated to the Daimler AG is pursuing the goal of vehicle electrification.

# Service: Peace of Mind if SMA Is on Your Side



## Operations & Maintenance (O+M)

- > As the largest servicer of solar inverters, SMA is uniquely positioned to offer expert plant-wide O+M
- > Preventive maintenance include visual inspection and thermal scans. Expert advice is provided through remote system monitoring 24/7
- > Proactive maintenance adds 24 hrs emergency response time, spare parts inventory management and warranty management. System performance is improved by testing, real-time monitoring and thermography services
- > Total of 415 service professionals world-wide

**> SMA is already the global #4 of O+M Maintenance Providers for the PV industry and has 1.4 GW under management<sup>1</sup>**

## 4. Global Presence: At Home in 20 Countries



# Local Presence Translates Into High Market Share – SMA Combines c. 25% of Global Cumulated Installed Inverter Power<sup>1</sup>



## MARKET FUNDAMENTALS (2015)

AMERICAS		EMEA		APAC	
Cum. Installations:	26 GWac	Cum. Installations:	88 GWac	Cum. Installations:	93 GWac
SMA Cum. Market Share	38 %	SMA Cum. Market Share	38 %	SMA Cum. Market Share	6 %



## SMA FUNDAMENTALS (2015)

AMERICAS		EMEA		APAC	
Sales + Service Prof.:	150 FTE <sup>2</sup>	Sales + Service Prof.: <sup>3</sup>	440 FTE	Sales + Service Prof.:	150 FTE
O+M under contract:	986 MW	O+M under contract:	451 MW	O+M under contract:	0 MW

1. Source: SMA

2. Full time employees w/o temporary employees, trainees, interns as of December 31, 2015

3. Incl. Global Functions

# Americas Accounted for c. 43% of Total Sales in 2015 – SMA Is Prepared to Grow in Latin and South America



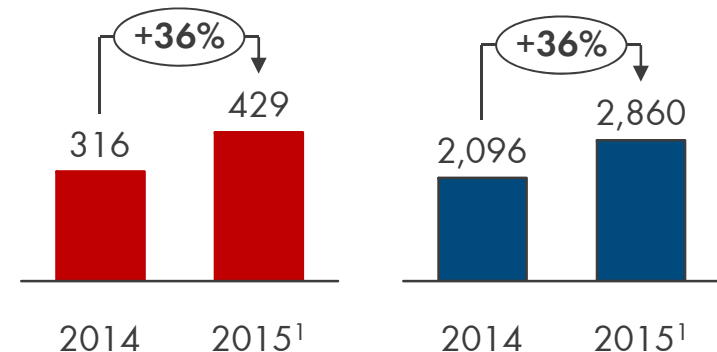
## Product Portfolio

	North America	Latin America
Micro	✓	✓
1 phase	✓	✓
3 phase	✓	✓
Central/Turnkey	✓	✓
Off-Grid	✓	✓
O&M	✓	—

## Sales & Inverter Shipment

Sales (in €m)

Inverter Shipment (MW)



## Success Stories

- > SMA won approx. 70 % of Advanced Energy Business (eg. 120 MW Swinerton)
- > SMA won Extended Warranty & Demand Based overhaul contract from a global customer (USD46m)
- > SMA won 210 MW tender in Brazil

## Sales & Service Infrastructure

North America: USA (Rocklin CA, Denver CO), Canada

Latin/South America: Chile, Brazil (new 2016)

> The ITC extension ensures stable growth of the PV Market in the US

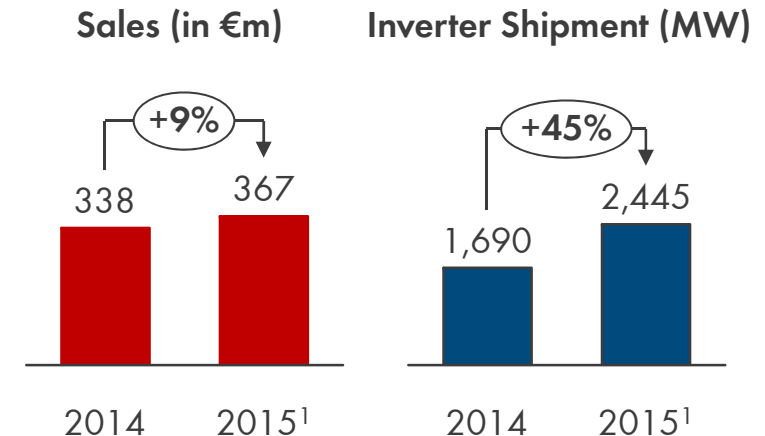
# EMEA Accounted for c. 37% of total Sales in 2015 – SMA Is Well Positioned for Growth in Middle East and Africa



## Product Portfolio

	EU	ME	Africa
Micro	✓	✓	✓
1 phase	✓	✓	✓
3 phase	✓	✓	✓
Central/Turnkey	✓	✓	✓
Off-Grid	✓	✓	✓
O&M	✓	–	–

## Sales & Inverter Shipment



## Success Stories

- > 500MW successfully commissioned in Q1 2015 in UK
- > SMA fulfills the strict local content requirements in South Africa
- > Approx. 35% of storage systems in Germany are equipped with SMA technology

## Sales & Service Infrastructure

Europe: Germany, Italy, France, Benelux, UK, Spain, Turkey (new 2016/2017)

Middle East: Jordan (new 2016), United Arab Emirates

Africa: South Africa

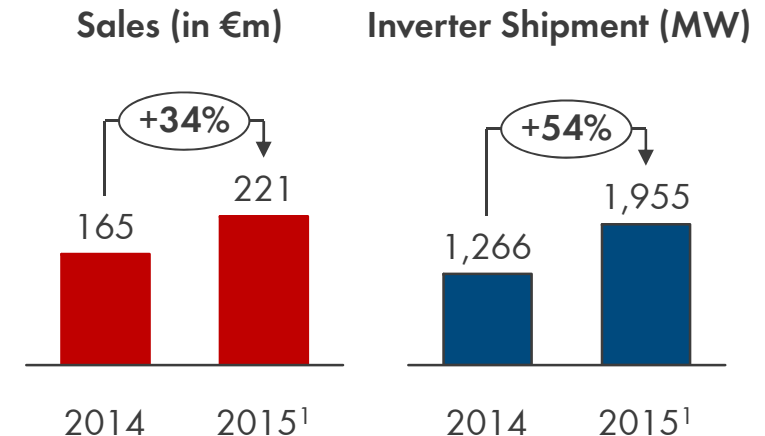
# APAC Accounted for c. 22% of Total Sales in 2015 – SMA Increased the Customer Base and Is Poised for Further Growth



## Product Portfolio

	Japan	Australia	India
Micro	–	✓	✓
1 phase	✓	✓	✓
3 phase	✓	✓	✓
Central/Turnkey	✓	✓	✓
Off-Grid	–	✓	✓
O&M	–	–	–

## Sales & Inverter Shipment



## Success Stories

- > SMA won additional key customers in Japan to grow Sunny Boy and Sunny Tripower business
- > First utility scale storage project realized in South Korea (24 MW)
- > Largest solar roof top installation in India (8MW)

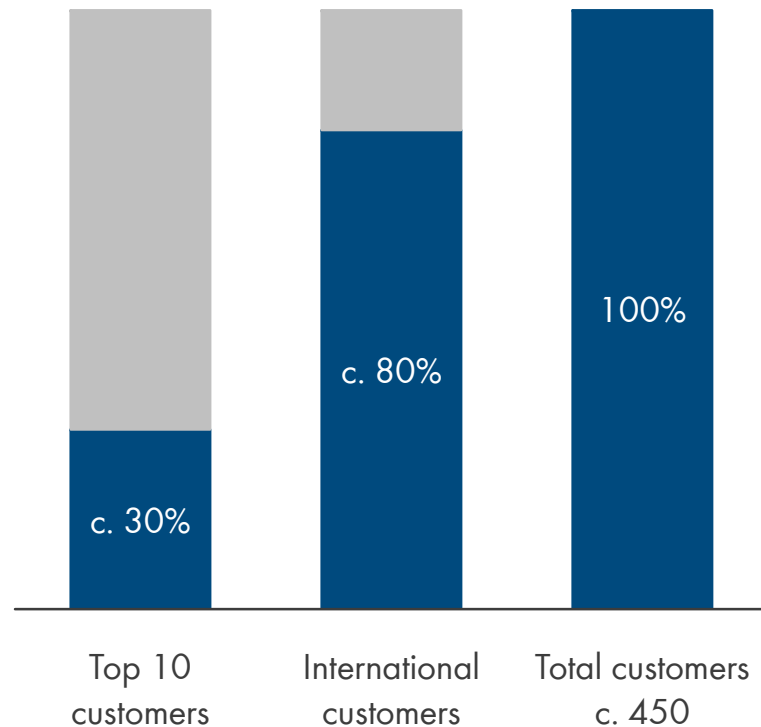
## Sales & Service Infrastructure

Australia, South Korea, Thailand, Japan, India, China

# SMA Has Been Recognized as the Most Successful Inverter Brand for the Fourth Time in a Row



## Overview Customer Base 2014



## Comments

- > High class customer base (Distributors, EPC's, Module Manufacturers)
- > Excellent customer loyalty
  - > On average more than 10 years customer relationship with Top 10 customers
  - > High level of customer service
  - > Supporting customers to expand in upcoming markets (eg. Phillipines, Brazil, Mexico, Turkey)
- > Significant pull from installers due to product training
- > Professional project management to ensure on-time delivery
- > Best in class corporate web page to provide comprehensive information to end-customers about photovoltaic technology (Award Welt; 2016)

> **Blue chip customer base with longstanding customer relationship**

## 5. Flexibility: If the Only Reliable Constant Is Change, We Better Be Flexible

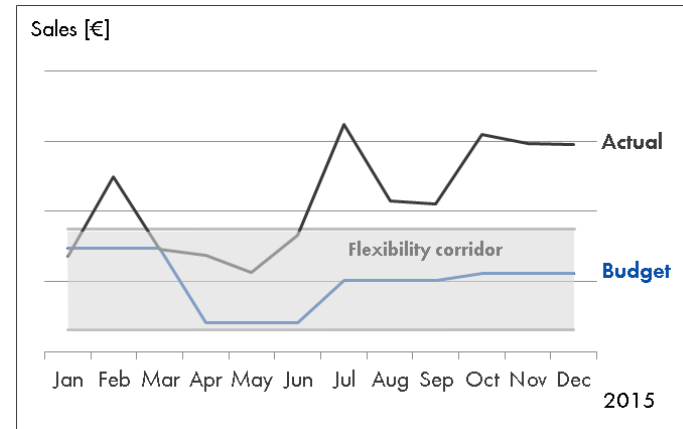


# SMA Can Quickly Adjust the Production Output Even Beyond the Standard Flexible Corridor

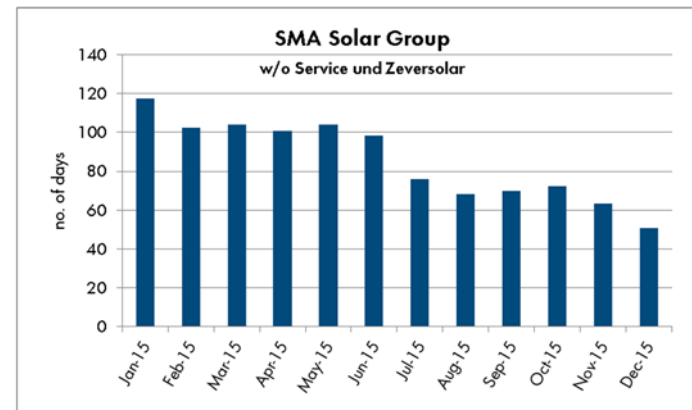


- > **Increase of production flexibility, e.g.**
  - ✓ New and more shift models
  - ✓ New temporary workers agreements
  - ✓ X-divisional exchange of resources
- > **Implementation of order-oriented and modular production systems.**
- > **Global Operations Footprint, e.g.**
  - ✓ Same production set up and processes
  - ✓ Strategic alignment of all functions
  - ✓ Global supply chain and hub structure
- > **Flexibility agreements with suppliers**
- > **Change from push to pull principle with short replenishment cycles in material supply**

## Flexibility Model Global Operations



## Inventory Reduction [DOH] in Parallel to Sales Increase



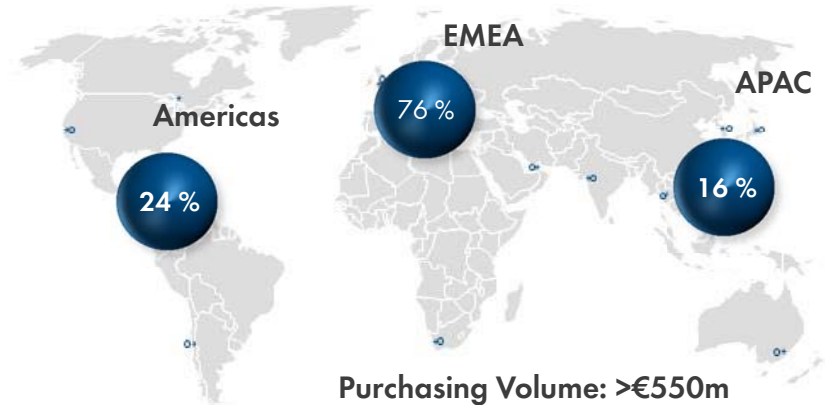
> The annual production capacity increased to 20 GW

# Our Global Footprint Enables us to Increase our Competitiveness and Flexibility

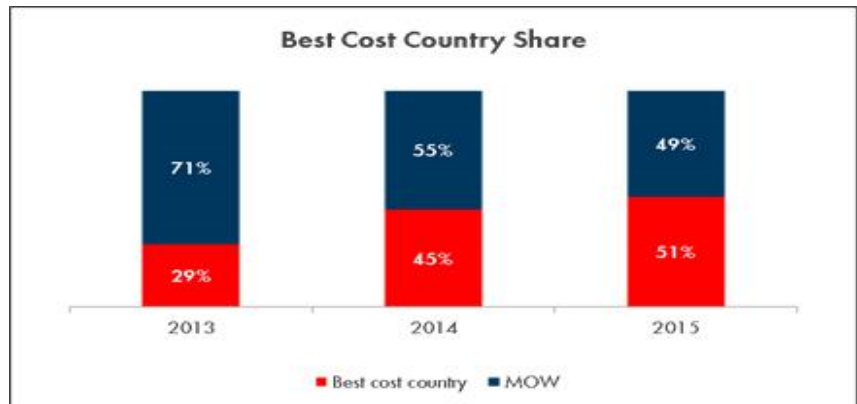


- > **Global Procurement Structure** with Sourcing Offices in Shanghai, Krakow and Americas to leverage spend globally
- > **Commodity strategies define** optimum sourcing by increasing Best Cost Country Share in alignment with proximity to our factories
- > **Hedging Strategies** to form instrumental part of tactical sourcing mitigating risk and opening opportunities
- > **Sourcing Scouts in new emerging markets** to manage potential entry barriers securing optimum manufacture and supply
- > **Early involvement in product innovation** to foster Technology Leadership driving standardization to increase our competitiveness on global markets

## Global Footprint and Spend



## Best Cost Country Share



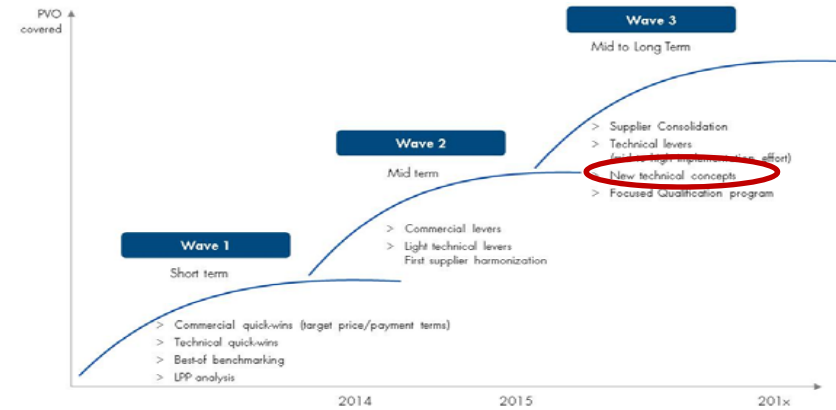
- > **With our global category management organization we identify technology and solution partners**

# The Danfoss Alliance Creates Value due to Joint Volumes but also in Terms of Changes Within Supply Base and Materials

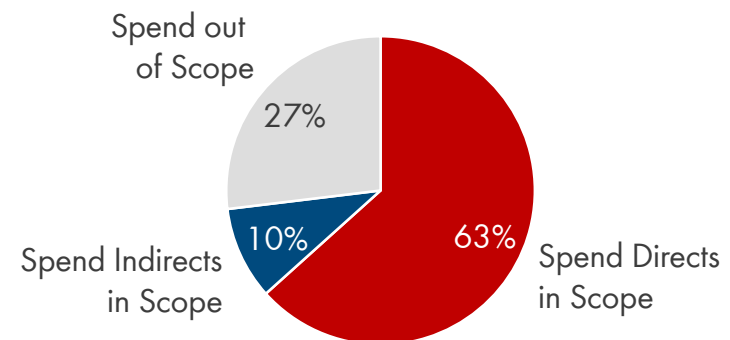


- > **Early involvement and value engineering** to create sustainable value
- > **SMA/Danfoss Alliance represents significant spend** within our industry sector providing saving potential via supplier consolidation
- > **Joint supplier portfolio** provides opportunity to reduce single sourcing hence mitigates risk whilst increasing flexibility in volatile market environments
- > **Volume concentration** will lead to accelerated standardization of materials with cross functional alignment ensuring delivery of our joint targets
- > **Supply Chain Strategies** (Super Market, VMI) and dedicated programs to optimize payment terms impact DIO and DPO

## Volume Leverage and Consolidation



## Danfoss Contribution



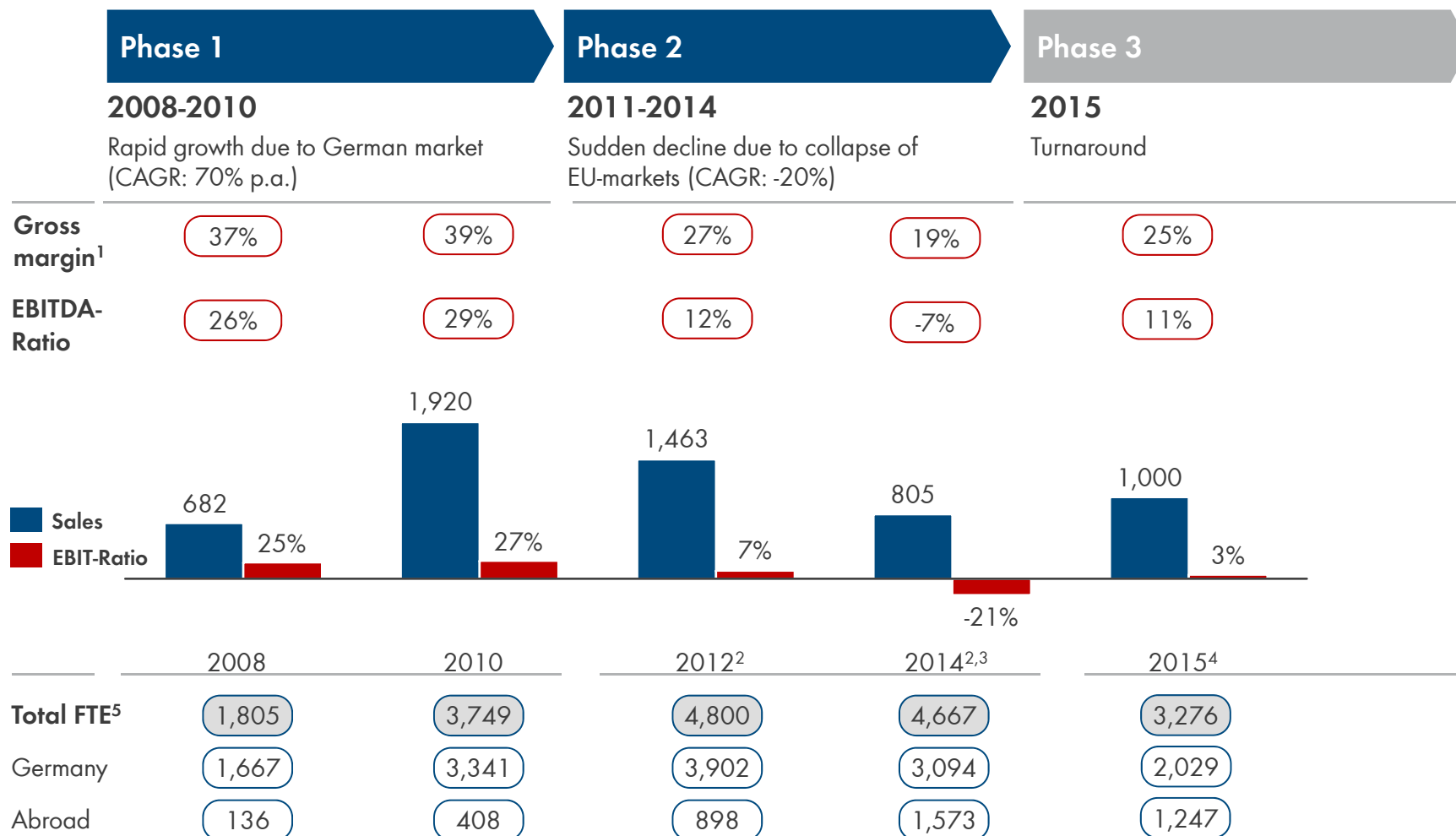
**SMA Alliance Savings €5-7m p.a.**

> **Significant material cost reductions and reduction of Net Working Capital realized**

## 6. Financials: Rock Solid & Profitable



# SMA Increased the Break-Even Point in Times of Rapid Growth; 2014 Loss due to Overcapacity, Zeyversolar and One-Offs



1. Without one-off items

2. Including dtw (299FTE as of December 31, 2014)

3. Including Zeyversolar (360 FTE as of December 31, 2014)

4. Preliminary Figures

5. As of December 31 (without temporary employees, trainees and interns)

# After Two Years in the Red We Are Back to Black



## Key Financials (€m)

	2014	2015 <sup>1</sup>	Δ
MW sold	5,051	7,260	+44%
Sales	805	1,000	+24%
Residential	249	253	+2%
Commercial	159	207	+30%
Utility	282	416	+48%
Service	41	50	+22%
Other Business	74	74	0%
Gross Margin	17%	21%	
EBITDA	-58	113	n.m.
EBIT	-165	33	n.m.
One-Offs <sup>2</sup>	-110	-25	

## Key Financials (€m)

	2014	2015 <sup>1</sup>	Δ
Free Cash Flow (Adj.)	-103	54	n.m.
Capex	76	51	-33%
Net Cash <sup>3</sup>	225	286	+27%
NWC Ratio <sup>4</sup>	31%	c. 22%	

- > Revenue growth is mainly driven by strong utility business (+€134m) which now accounts for c. 42% of total sales.
- > International share grew by 12% (87% of sales)
- > Margin improvement due to favorable product mix, material cost improvements, fixed cost reduction and x-rate effects.
- > High cash generation due to Net Working Capital deployment

1. Preliminary Figures

2. 2015: impairment on working capital (€27m); R+D impairment (€6.1m) as well as release of severance

payment provision( €-8.6m), 2014: Restructuring provision

(€50m); Impairment loss of Zevsolar , working capital and R+D projects

3. Net cash is impacted by pay-out of severance payments

NWC: Net Working Capital (Inventory+Accounts Receivable-Accounts Payable)

# SMA Implemented an Ambitious Restructuring Plan Within 12 Months



## Key Transformation Measures

<b>Technology</b> From 1,050 to 640 FTE <sup>1</sup>	<ul style="list-style-type: none"> <li>&gt; Downsizing Kassel, Denver, Suzhou</li> <li>&gt; Reduction of ext. service providers</li> <li>&gt; Focus R&amp;D projects / portfolio</li> </ul>
<b>Operations</b> From 2,090 to 1,540 FTE <sup>1</sup>	<ul style="list-style-type: none"> <li>&gt; Outsourcing of non-core activities</li> <li>&gt; Phase out interim managers</li> <li>&gt; Improvement of SCM and central inverter production</li> </ul>
<b>Administration</b> From 580 to 355 FTE <sup>1</sup>	<ul style="list-style-type: none"> <li>&gt; Restructuring CFO/CEO functions</li> <li>&gt; Centralization of administration funct.</li> <li>&gt; Reduction of non-personnel expenses</li> </ul>
<b>Sales &amp; Marketing</b> From 435 to 325 FTE <sup>1</sup>	<ul style="list-style-type: none"> <li>&gt; Reduction of back office staff</li> <li>&gt; Downsizing of communication &amp; marketing</li> <li>&gt; Closure of subsidiaries</li> </ul>
<b>Service</b> From 510 to 416 FTE <sup>1</sup>	<ul style="list-style-type: none"> <li>&gt; Rightsizing infrastructure EMEA/APAC</li> <li>&gt; Reduction of service level</li> </ul>
<b>Others</b>	<ul style="list-style-type: none"> <li>&gt; Reduction of office/production space</li> <li>&gt; Restructuring of IT services</li> </ul>

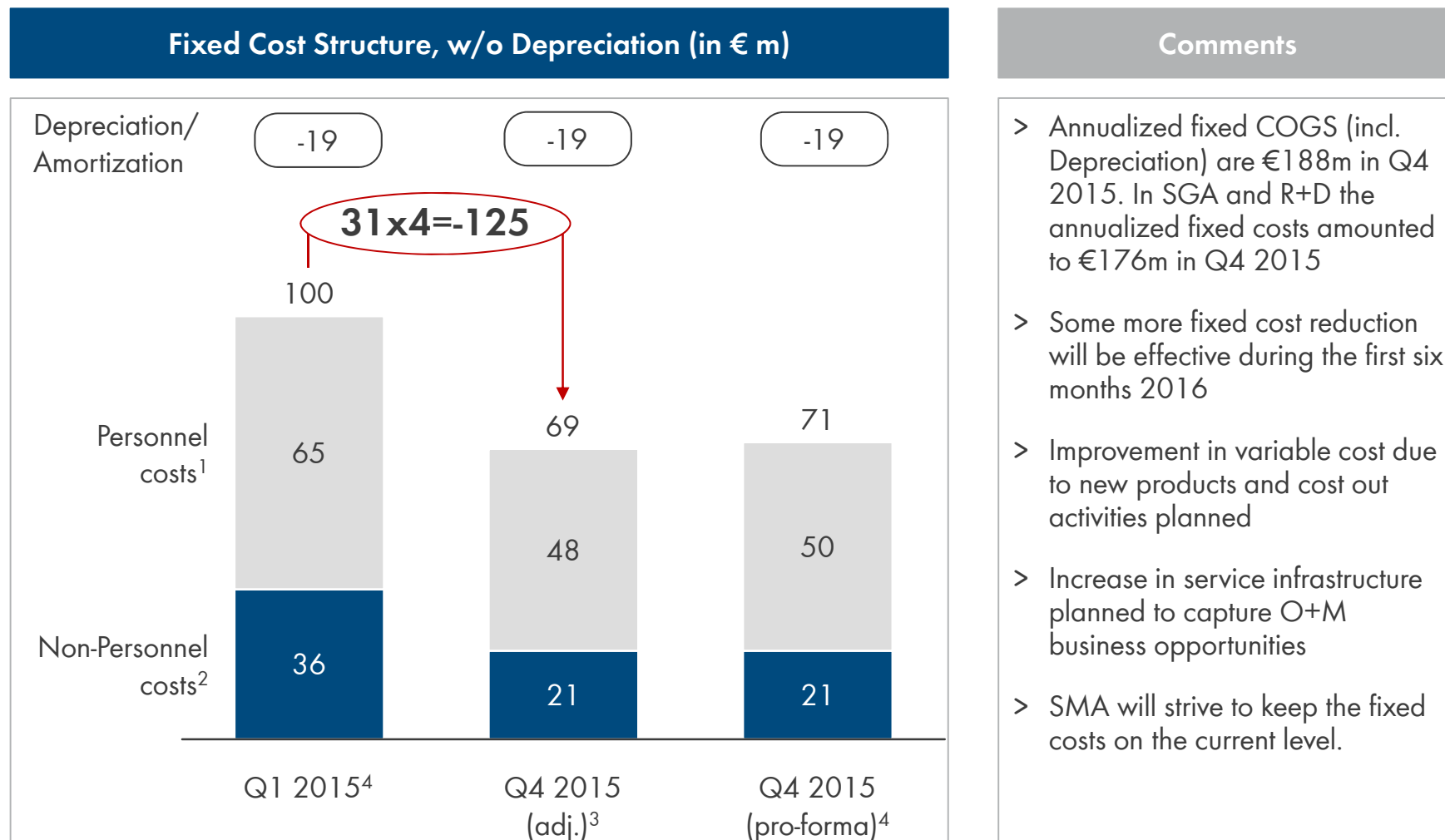
## Implementation

- > More than 80% of all measures are already implemented
  - > The measures have been transformed into the budget 2016 to avoid swing-back effect
  - > Some measures are delayed due to strong growth in recent months (e.g. outsourcing of non-core activities)
  - > The avg. salary reduction of headcount is below initial target. In addition, the full head count reduction target will not be reached fully (gap 75 FTE)
- ➔ After a very difficult and stressful time for SMA employees and SMA Management team the motivation of the entire SMA team improves every day

> Nearly 1,400 employees<sup>1</sup> left SMA as of December 31, 2015. 130 employees<sup>1</sup> are expected to leave within the first 6 months 2016

<sup>1</sup> Full time employees w/o temporary employees, trainees, interns as of December 31, 2015. Additional c. 130 employees are expected to leave SMA within the first six months 2016

# SMA's Fixed Cost Structure Has Been Reduced Significantly



> **SMA has a break-even point c. €750m at the end of 2015**

1. W/o temporary workers (Q1 2015: €2,6m, Q4 2015: €5,5m)

2. See Notes 5-8 to the Income Statement SMA Group:SGA, Gross R&D & COGS w/o Material expenses

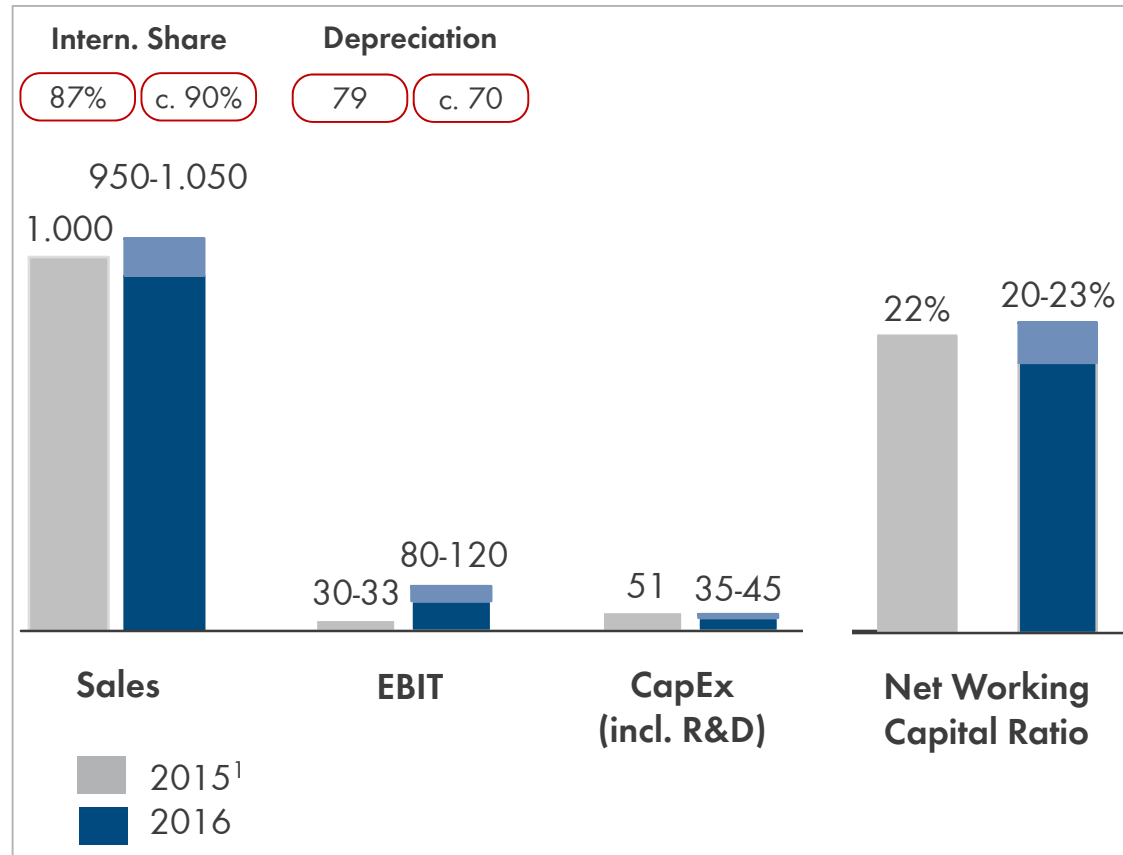
3. Preliminary; Without Performance Bonuses and Christmas allowances

4. Preliminary; Including normalized Bonuses and Christmas allowances

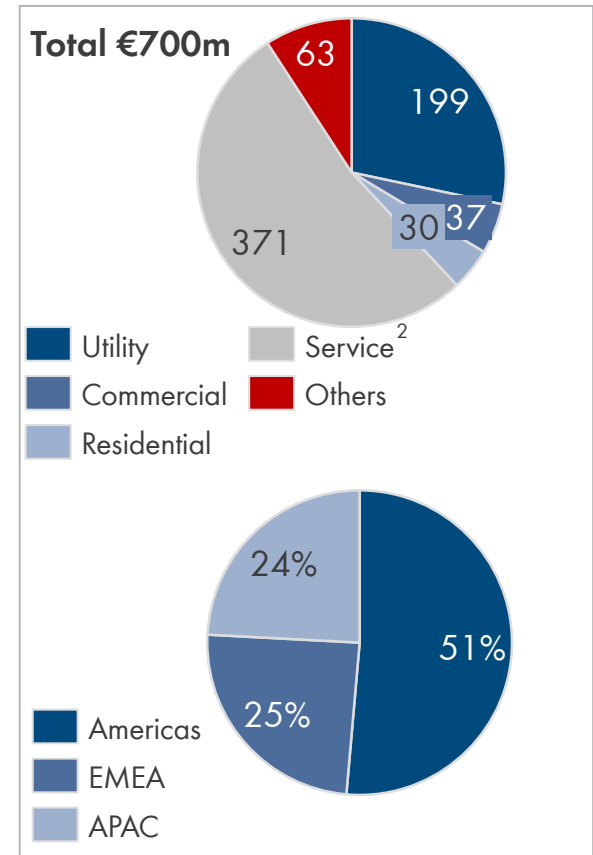
# The SMA Management Expects Flattish Revenues, but a Significant Earnings Increase due to Lower Var./Fixed Costs



## Guidance 2016



## Order Backlog (Dec 31, 2015)



> **SMA's Guidance is supported by solid order backlog. The SMA Management expects to generate a strong positive cash flow in 2016**

1. Preliminary figures

2. Order Backlog in Service will be recognized over a period of 5 to 10 years

# Executive Summary: SMA an Attractive Investment Opportunity and the #1 Industry Player



- ✓ SMA **completed the turnaround** within a very short period of time and overachieved the ambitious targets for 2015
- ✓ Energy is evolving into decentralized and diverse eco-system. Global solar market is expected to grow by **>20% to 60GW** in 2016 (4.9 bln. €)
- ✓ SMA is expanding its focus from a pure inverter manufacturer to an **solution provider for energy services**
- ✓ SMA will **reduce the consumer cost of electricity** with high-end PV-inverters and components
- ✓ SMA is able to **respond quickly to the volatile markets** due to its flexible and capital light production
- ✓ The alliance with Danfoss and the best-cost sourcing strategy will lead to an **improved cost structure**
- ✓ SMA's local presence translates into **high market shares** (21% in 2015) and high customer loyalty

# Executive Summary: SMA an Attractive Investment Opportunity and the #1 Industry Player



- ✓ Guidance indicates flattish revenues, significant earnings increase and **strong cash flow generation**
- ✓ **Rock solid company** with a high equity ratio and high net cash position
- ✓ Experienced management team with a **proven track record** and good team spirit

ENERGY  
THAT  
CHANGES





BACK UP

# Entrepreneurial Management Team Guiding SMA Profitability Into the Future

## MANAGEMENT BOARD



**Pierre-P. Urbon, 45**  
Contract 2017  
Speaker of the Board,  
Finance/Legal, Sales



**Dr. Juergen Reinert, 48**  
Contract 2019  
Business Units, Operations, R+D



**Roland Grebe, 55**  
Contract 2019  
HR, IT, SMA Railway / Sunbelt

## EXECUTIVE MANAGEMENT COMMITTEE<sup>1</sup>

**Dr. Johannes Kneip**  
(R+D)

**Ulrich Hadding**  
(Finance/Legal)

**Mike Terlinden**  
(Operations)

**Nick Morbach**  
(Distribution Business)

**Boris Wolff**  
(Project Business)

**Alexander Naujoks**  
(HR)

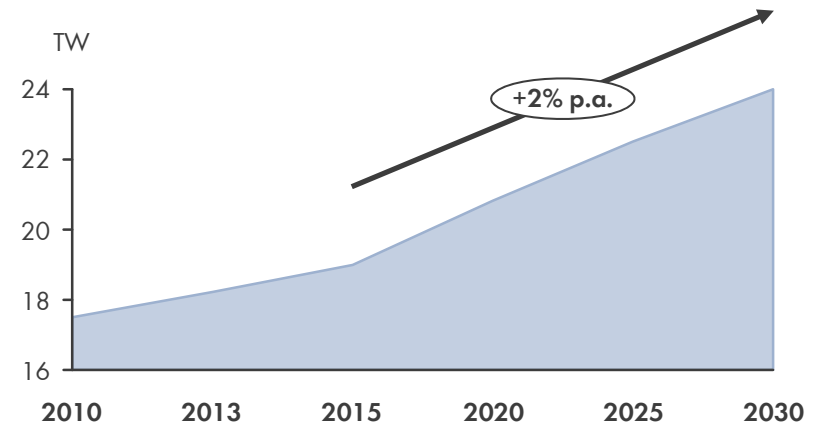
> **Highly experienced management team with strong team spirit and proven track record**

1. The Executive Management Committee will be completed with Sales and Service functions in the short term

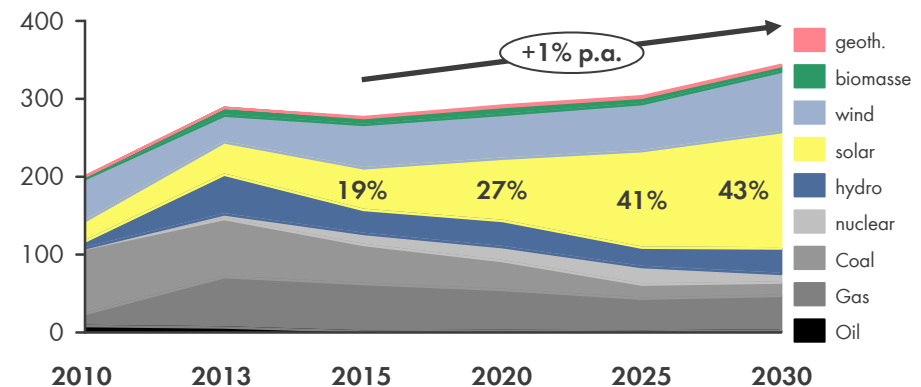
# Solar PV is Expected to Make Up the Biggest Share of Additional Power Capacity by 2020

- > Whereas the population is expected to grow by 1% p.a. the energy consumption will increase faster.
- > The necessary power generation capacity to compensate the increasing energy consumption is expected to be built according to international climate targets.
- > The goal of recent Paris Agreement as result of COP21 will force the expansion of renewable energies as climate-damaging emissions shall be reduced by 2030 to limit global warming below 2°C.
- > The transition towards renewable sources will not only be supported by industrialized countries, but also by emerging countries, which will receive substantial financial support.
- > Drivers are not only climate reasons, but also economical ones: Experts analyzed that the renewable/PV industry creates more jobs than the conventional energies.<sup>3</sup>

## Annual energy consumption<sup>1</sup>



## Annual additions to global power generation capacity<sup>2</sup>



> **Solar will become the hottest industry of the 21<sup>st</sup> century**

