SMA SOLAR TECHNOLOGY AG
10th Capital Markets Day

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1. Review 2017 and Outlook

SMA is the World Market Leader for PV Inverters and a Leading Player in Storage and O&M

Investment Highlights

Unique positioned in the solar market / Best brand

- World market leader with 65 GW installed base
- Complete portfolio to serve all PV segments
- 20 subsidiaries with strong service capabilities and access to all channels
- Award-winning 20 GW production to achieve scale

Leverage PV expertise to enter into high margin business

- Strong partnerships to create a new ecosystem
- Know-how & products to benefit from strong growth in the field of battery storage
- With ennexOS[1], SMA has set the basis to manage the complexity of integrated solutions
- Infrastructure to expand into data-driven business models and services

Key Financials 2017e[2]

Sales
€ 890 m

EBITDA
€ 95 m

EPS
€ 0.86

Net Cash
€ 450 m

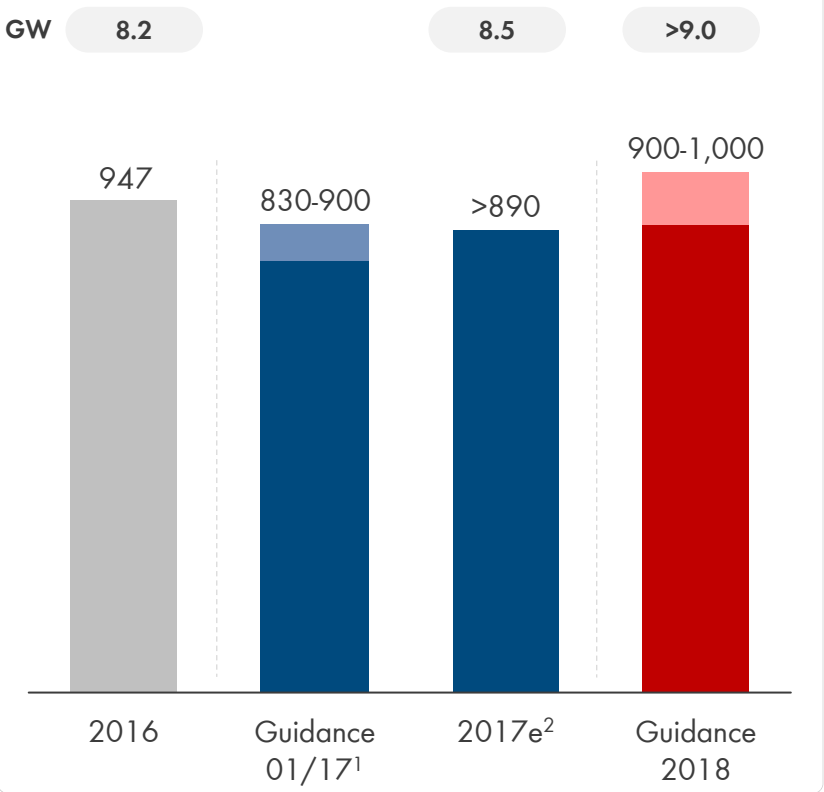
Equity Ratio
50%

Market Cap[3]
€ 1.3 bn

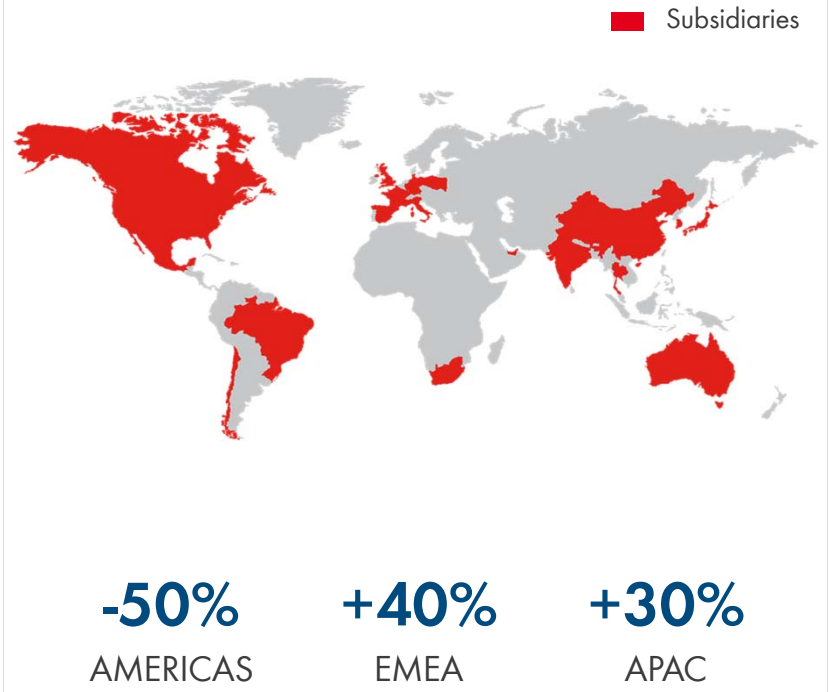
1. SMA's Energy Management Platform
2. Preliminary figures
3. Current market capitalization as of 01/25/2017

Record Shipments in 2017 with More than 8.5 GW

Sales (in € million)



Regional Sales Development (2016/2017)[3]

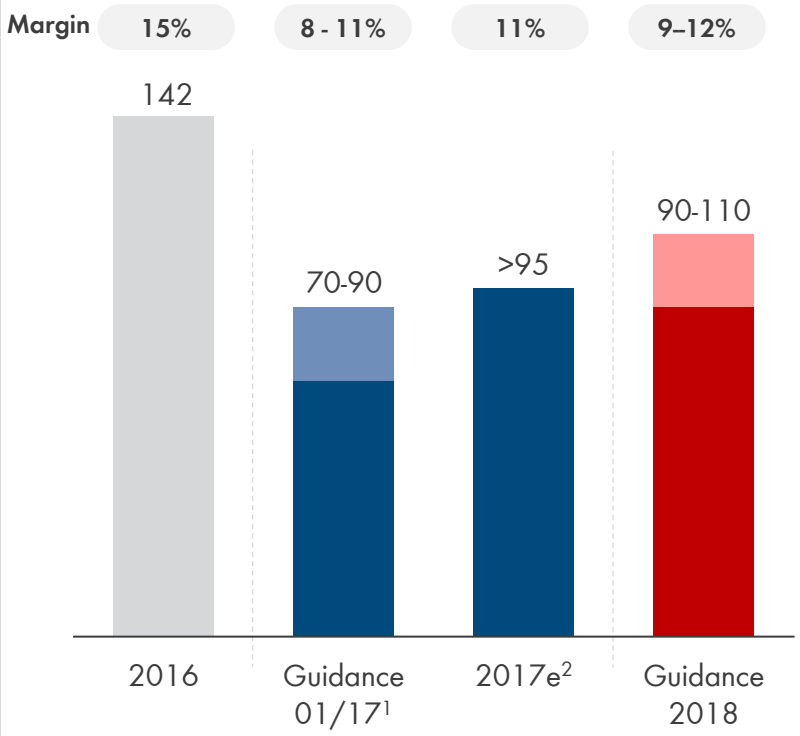


› Sales decline in 2017 was mainly due to regulatory uncertainties in the U.S.

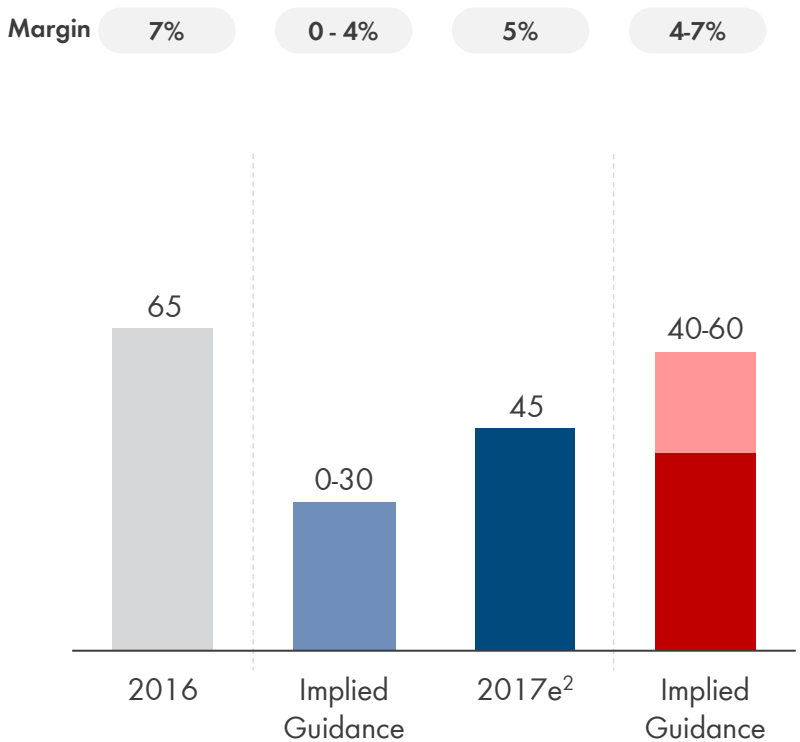
1. Guidance Adjustments: Sales €900-950m (08/01/2017); Sales €>900m (11/09/2017)
2. Preliminary figures
3. Rounded figures before sales deductions

SMA Delivered Higher Earnings than Initially Guided – All Segments are Profitable in 2017

EBITDA (in € million)



EBIT (in € million)



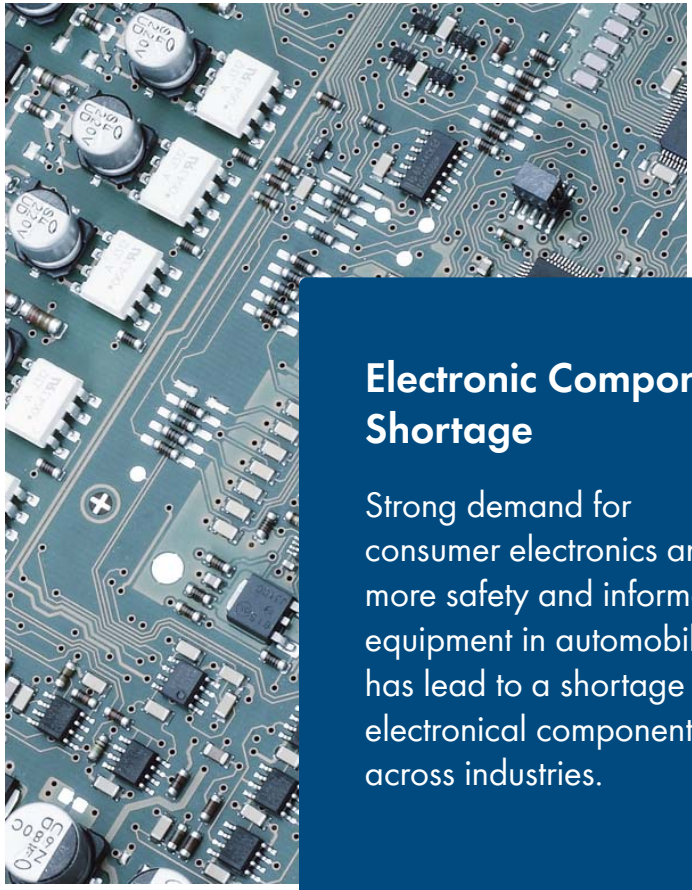
› 2018 earnings guidance includes investments in new digital solutions of > €10 million.

1. Guidance Adjustments: EBITDA €85-100m; EBIT: €15-40m (08/01/2017)
2. Preliminary figures

Political Uncertainties and Supply Shortage Impacted SMA's Business in 2017

Political Uncertainties

- U.S. President Trump has set a 4-year trade duty for imported solar cells/ modules that start at 30%. The first 2.5 GW is excluded from this tariff.[1]
- The U.S. tax reform has a negative net income effect.[2]



Electronic Component Shortage

Strong demand for consumer electronics and more safety and information equipment in automobiles has lead to a shortage of electronical components across industries.

> In 2017, the demand for SMA products was higher than shipments. The order backlog for products increased by 70% compared to end of 2016.

1. SMA's market outlook includes a slightly negative impact from the import tariff.
2. Adjustment of deferred tax assets.

SMA Implements its Strategy as Planned to Open up New Profit Pools

SHAPING THE DIGITAL ENERGY REVOLUTION

- New business units for energy services and data driven offerings
- MVV[1] is new strategic partner for direct marketing of solar power
- EnnexOS is SMA's new platform for energy management





STRENGTHENING MARKET LEADERSHIP

- New large accounts such as Sunrun
- 12% market share in captive market Japan
- 21% market share in price sensitive market India
- 2.6 GW O&M under mgmt.

LEAN OPERATIONS

- Manufacturing Excellence Award
- Re-energize SMA America
- Disposal of non-core assets (SMA Railway)



1 MVV: Leading German energy company with sales >€4bn
2 Sunrun: Largest dedicated residential solar company in the US (160.000+ customers)

2. Megatrends

Megatrends are Transforming the Electricity Ecosystem

1

Decarbonization
is leading to an expansion of PV capacity, which in turn fosters decentralization and the demand for storage systems

2

Sector convergence
is providing new means of flexibility – Managing the resulting complexity is creating demand for new energy solutions

3

The structural transformation of the energy system
will require solutions to control and manage the increasingly decentralized grid enabled by digitalization

4

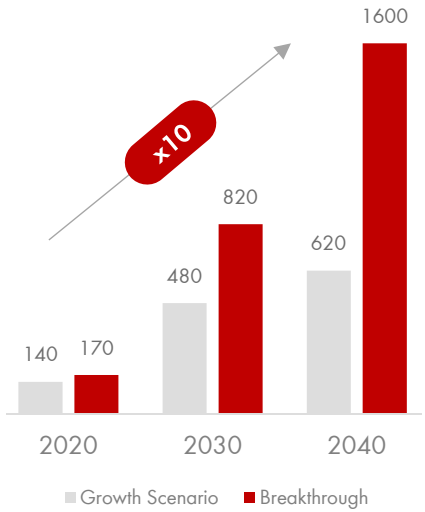
Disruption in the electricity industry
creates new roles to be played by traditional OEMs[1] along the entire value chain

> SMA will leverage its existing experience to expand into digital solutions.

1. OEM: Original Equipment Manufacturer

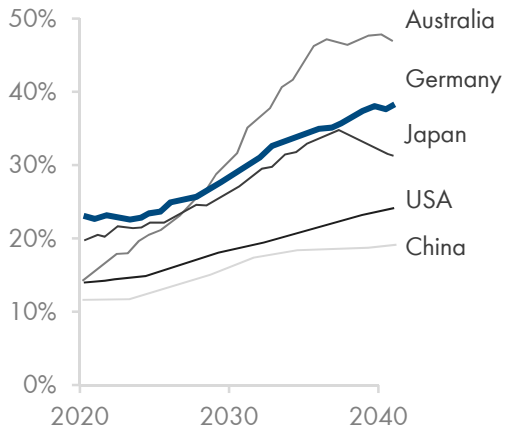
Decarbonization is Expanding PV Capacity, which in turn Fosters Decentralization and Storage Demand

Annual PV capacity additions by scenario (GW p.a.)[1]



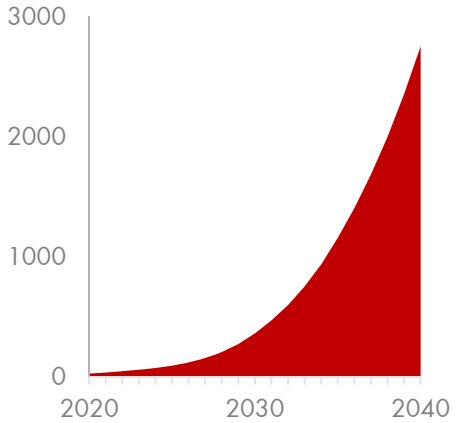
Policies, sustainability concerns and strong growth in primary energy demand drive expansion of PV capacity

Decentral vs. central generation share (% of TWh)[2]



Integrated solutions, energy management and data-based offerings lead to an increasingly decentralized energy system

Cumulative global storage capacity (GW)[3]

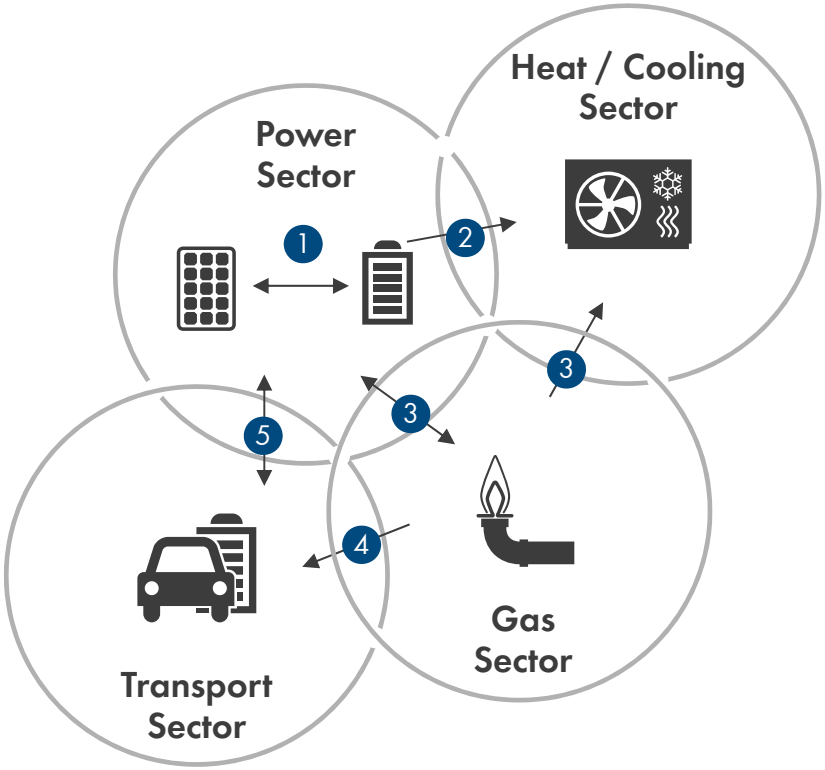


High share of renewables results in increased volatility and requires capacity balancing and optimization

› Decarbonization is driven by political targets.[4]

1 Fraunhofer-Institute for Solar Energy Systems, 2015
2 Bloomberg New Energy Outlook, 2017: Ratio of non-grid scale (PV, batteries, demand response) to total installed capacity in moderate PV growth scenario
3 Bloomberg New Energy Outlook, 2017: Capacity of small scale batteries and utility scale batteries
4 Paris agreement from 2015 within the United Nations Framework Convention on Climate Change

Sector Convergence Provides new Means of Flexibility – Managing the Resulting Complexity Requires Intelligent Control

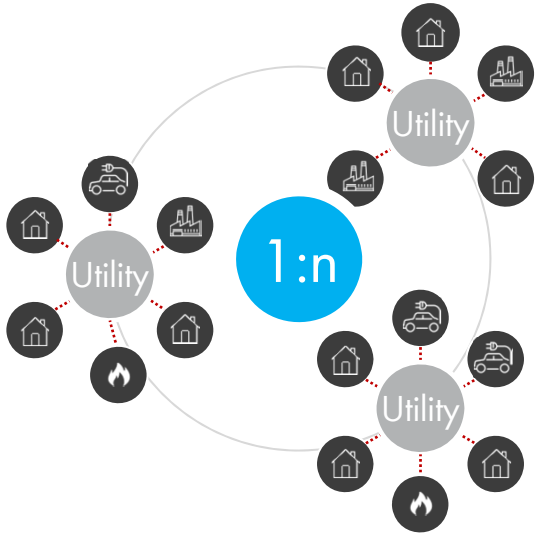


1 Power-to-Storage
2 Power-to-Heat
3 Power-to-Gas
4 Power-to-Gas Fuels
5 Power-to-Motion

› **Variable power prices and new technologies add new options for energy transfer between sectors.**

The Structural Transformation of the Energy System Requires Solutions to Control and Manage the Decentralized Grid

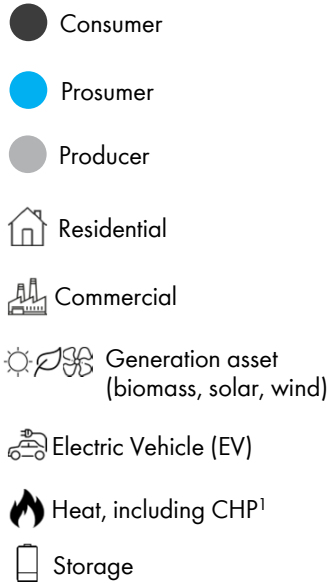
Today



- Centrally controlled grid
- Supply based on demand

Tomorrow

- Decentrally controlled grid
- Distribution determined by energy price at given time



Drivers

- Use of renewables increases volatility and requires balancing and optimization
- Technology costs decrease, which enables completely new use cases
- Digitalization is the key for decentralized applications and new business models

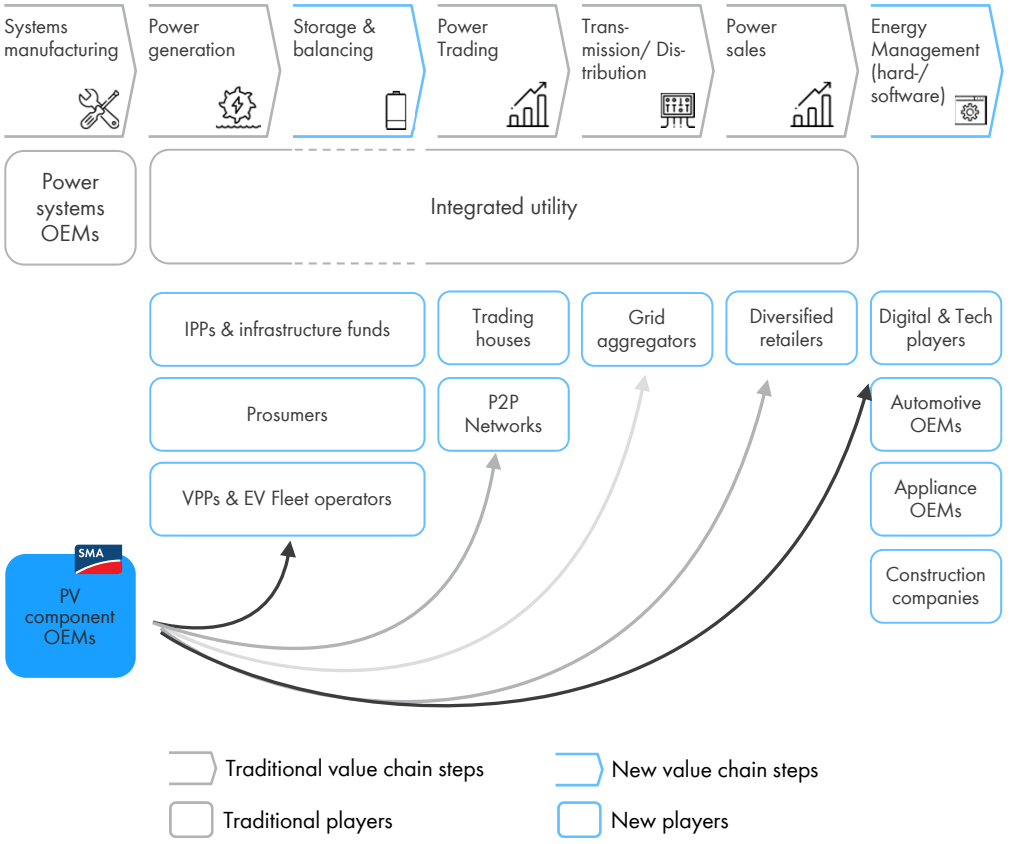
1 CHP: Combined Heat Power

Disruption in the Energy Industry Creates New Roles to be Played by Traditional OEMs Along the Value Chain

Market Trends

- Energy value chain is expanding to storage & balancing and energy management
- As technological progress accelerates and power prices continue to decline, the integrated utility model becomes less attractive
- Highly competitive and specialized players enter the market to capitalize on their capabilities and resources, leveraging economies of scale
- Additionally peer-to-peer networks emerge

Emerging Player Landscape

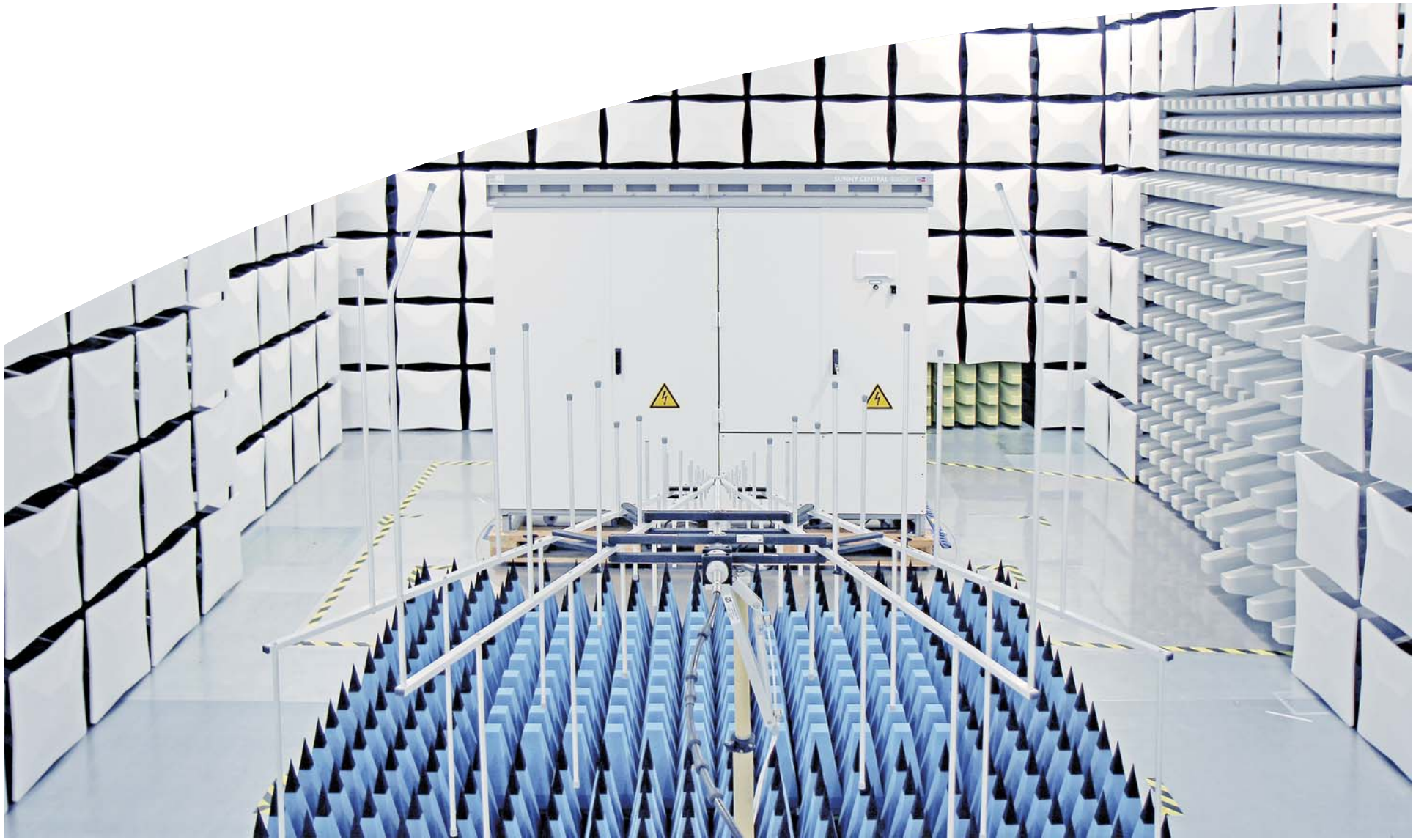


› The solar inverter is the key sensor to collect energy data. SMA has the data analytics and energy management know-how to create new services.

OEM: Original Equipment Manufacturer
IPPs: Independent Power Producer

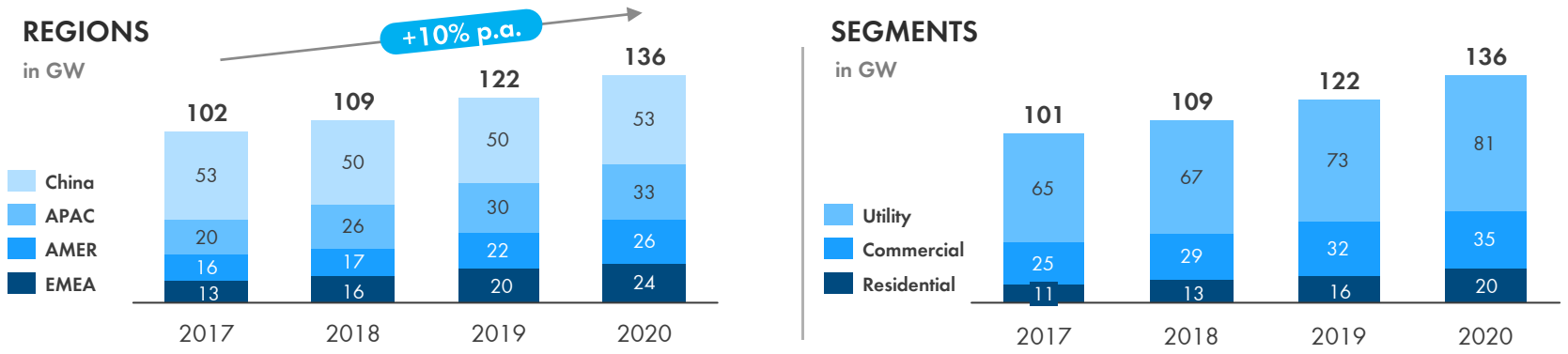
VPPs: Virtual Power Plant, EV: Electric Vehicle
P2P: Peer-to-Peer

3. Market and Competition



Positive Global Outlook of +10% Volume Growth p.a. Until 2020

Core Business: PV Installations (GWdc)[1]



Market Trends

The volume growth in the EMEA and APAC regions is expected to continue. Growth rates are between 25% and 15% p.a.

China remains the largest market but with a rather flattish development.

The utility and commercial segments account for >85% of total volume. Strong growth of 26 GW (+9% p.a.) is expected until 2020.

Growth in mature markets is driven by the competitive costs of solar power and significant battery penetration for self-consumption.

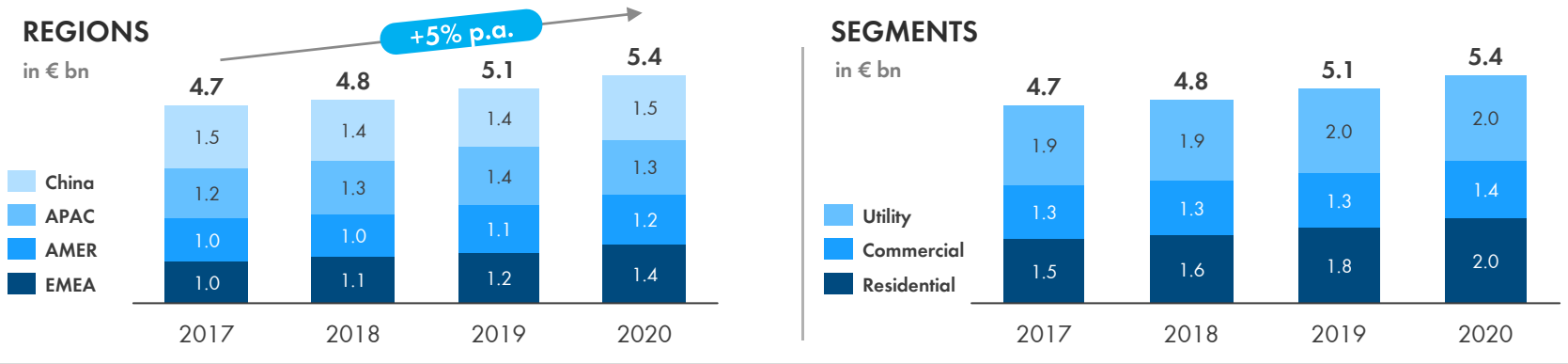
Effective programs drive fast growth from a small base in many countries (e.g. Indonesia) or help to reach ambitious political targets (e.g. India).

› New growth regions[2] become relevant in the near future.

1. SMA Market Model Q1 2018; New PV installations, Res ≤10kW plants, Com >10kW to 1MW plants, Uti >1MW plants
2. E.g. Middle East, Mexico, South East Asia

The Change in the Product and Country mix will lead to Value Growth of 5% p.a. until 2020

Core business: PV Inverter Revenue (€ bn)[1]



Market Trends

During the last 12 months PPA[2]-prices for large ground-mounted PV projects declined by more than 30% below 20 USD/MWh.

Projects compete on the cost of energy independent from the technology.[3]

Key success factors for ground-mounted projects are the right market focus and cost-competitiveness over lifetime.

In contrast, roof-top projects compete for the best site. Key success factors are the right segment focus, the technical know-how to integrate the solution and the brand.

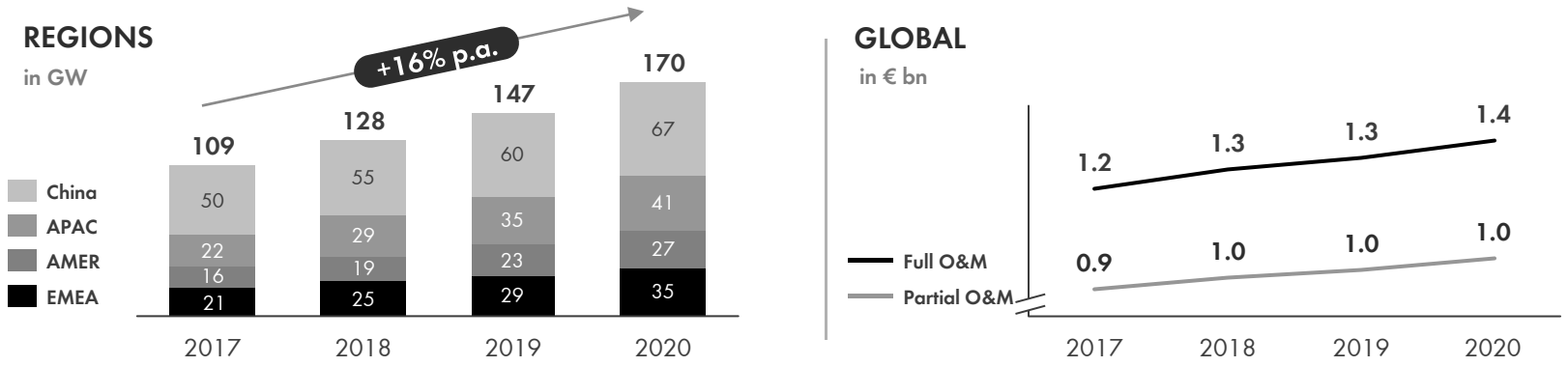
The stabilization of price pressure is expected towards 2020.

› Mature markets and roof-top applications will become the key value drivers.

1. SMA Market Model Q1 2018; PV Inverter incl. new and Repowering installations, Res ≤10kW plants, Com >10kW to 1MW plants, Uti >1MW plants
2. Power Purchase Agreement
3. Wind, PV, Gas

PV Projects >250 kW move Towards long-term Service Contracts – Battery Storage will Accelerate Growth in Service

Core Business: Annual New O&M Contracts by Region[1]



Market Trends

As Capex for equipment constantly declines, after sales and O&M service are becoming more important.

In mature markets O&M is a business on its own. Independent service providers (ISP) are selected separately from the EPC to ensure data integration, analytics and qualified PV technicians.

For large-scale PV plants investors/asset managers reject string inverters due to the potential of slower outage response time and higher O&M service costs.

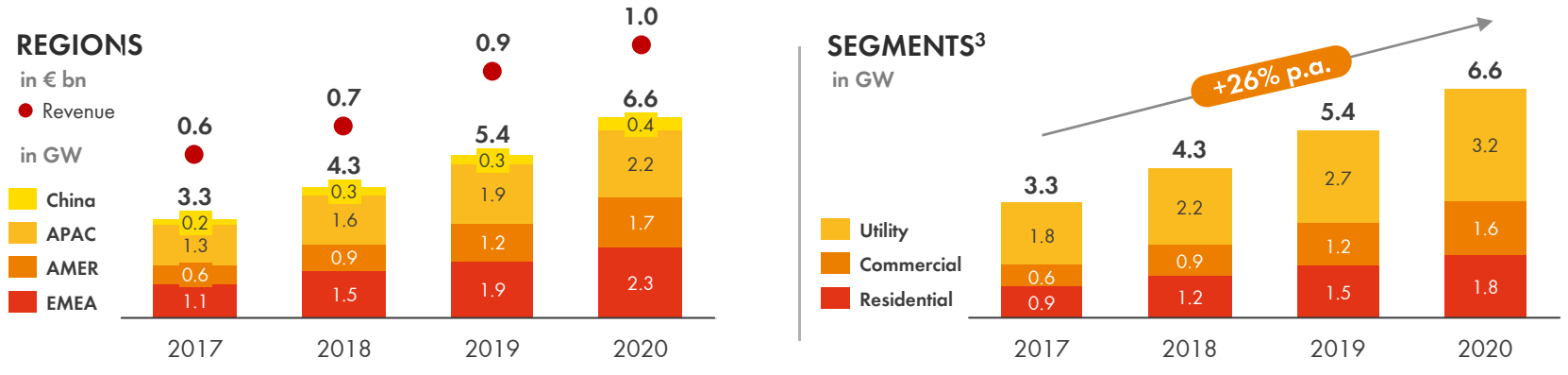
The fast growing battery storage business offers huge growth potential for ISP with technical expertise and global service infrastructure.

> Contracts shift from all-inclusive, fixed price models to service plans and customer specific scope of work

1. SMA Market Model Q1 2018; Commercial and Utility segments available for being addressed with new contracts

Battery Storage will Increasingly be Integrated in New and Existing PV Systems and thus Increase Complexity

Storage Inverter Installations and Revenues[1]



Market Trends

Battery storage price reduction is the most important growth driver for nano- and micro-grids.

Mature markets will adopt first to increase residential share (eg. US, EU, JP).

SMA expects storage prices of <750 €/kWh for residential applications and <300 €/kWh for utility applications by 2020.

Battery storage can address many use cases in parallel[2]. Therefore, competencies in grid integration and battery technologies are key to untap market potential.

The share of system technology in different battery application is significantly higher compared to the traditional PV inverter business.

Since every application is different, significant customization is needed to untap full potential.

› Greater complexity will lead to lower commodization of PV inverter equipment.

1. SMA MI Market Model Q1 2018
2. E.g. ancillary services, congestion relief, energy shifting, etc.
3. Residential and Commercial incl. behind-the-meter and off-grid remote applications; Utility incl. In-the-grid, co-located and micro-grid applications

As a Result of the Megatrends, New Energy Service and Data Solutions Represent Emerging Value Pools

Decarbonization | **Sector Convergence** | **Decentralization** | **Digitalization**

Decentralized, convergent energy networks require solutions that manage flexibility and complexity

1 New Business: Energy Services

Providing data driven energy management and efficiency improvement hardware, software and services for residential and commercial customers

Use of energy generation and consumption data to facilitate energy fingerprint based business models

2 New Business: Energy Data

Data emerges from energy networks, which can be used to tailor new solutions for energy (and beyond)

Energy efficiency improvement	Invoice validation	Regulatory consulting
Metering services	Energy procurement	Sale of excess generation
Flexibility	Local load management	Energy monitoring

Enrich DATA **Provide**

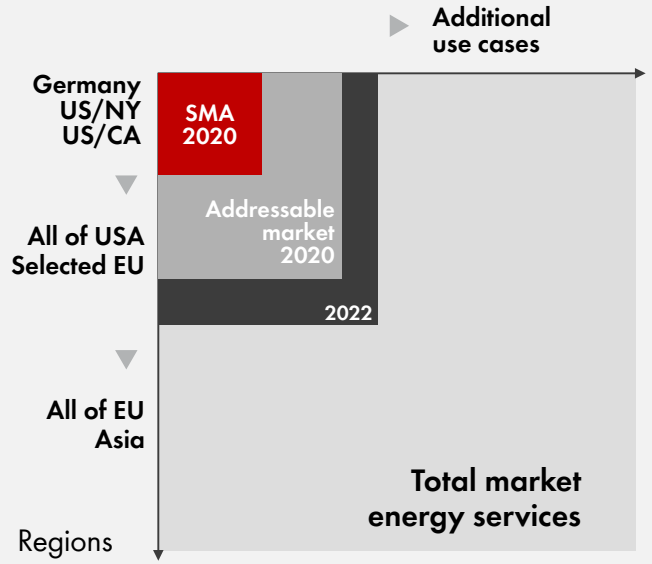
Current focus fields

Future (focus) fields

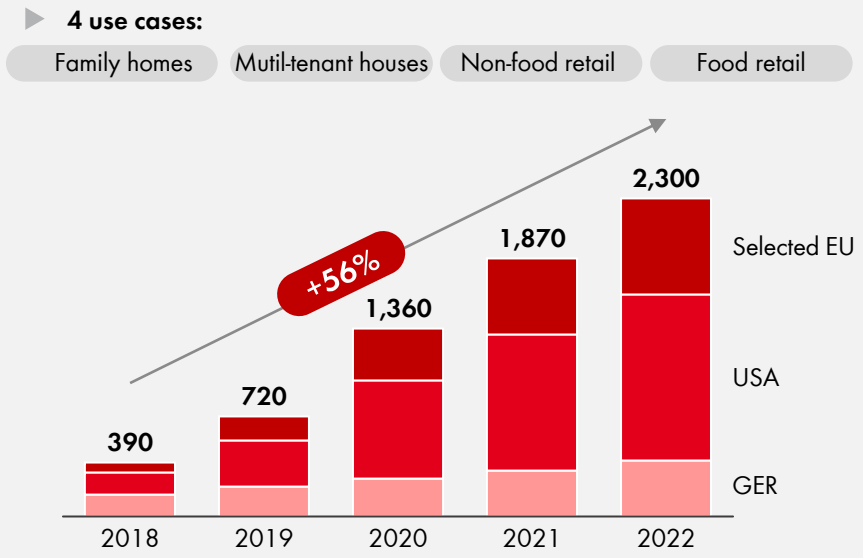
PV feed-in forecasting	Performance benchmarking	User profiling
Lead generation	Risk assessment	Lifetime forecasting
Portal infrastructure	Platform as a service	Analytics as a service

Value Pools from the Addressable Market for Selected Energy Services are Expected to be as High as €2.3 bn in 2022

Total market



Addressable market (in € m) [1]



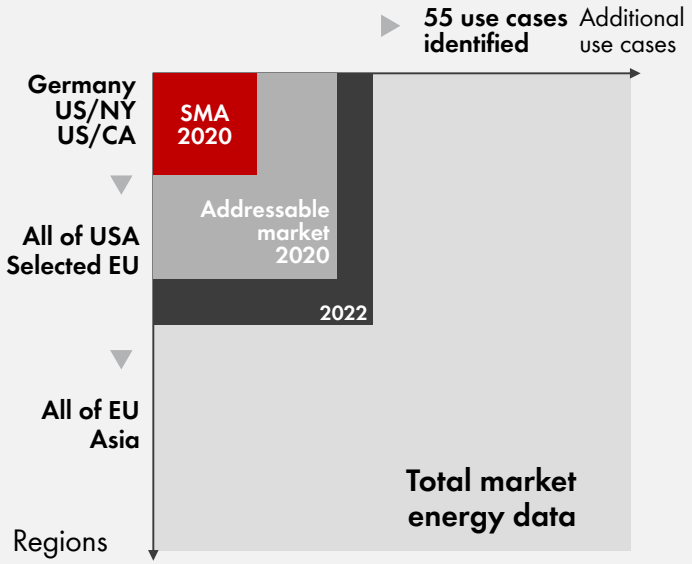
In 2022 addressable market for the four considered use cases can reach €880 m for food-retail stores, €650 m for family homes, €640 m for non-food retail chain stores and €120 m for multi-tenant housing

To capture these value pools, an automated management of relevant energy sources and demand is required

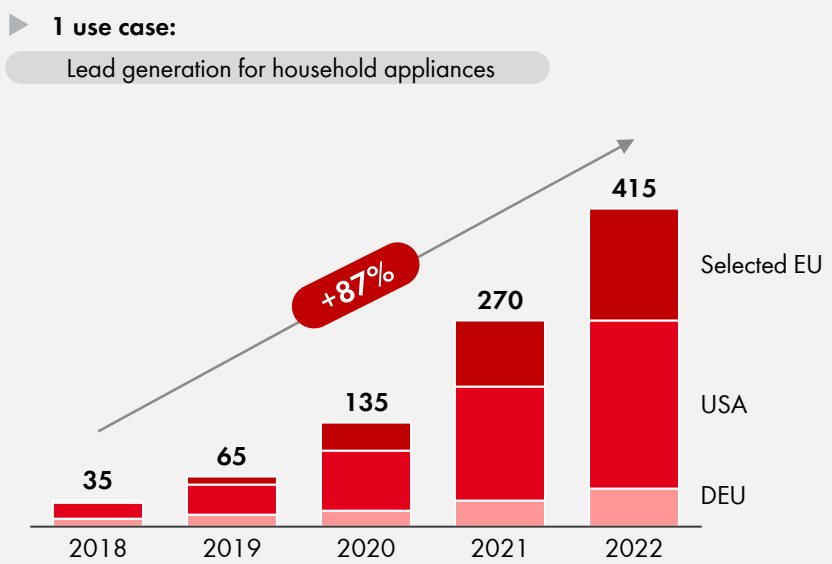
1.Roland Berger calculations: Relevant buildings are derived from the number of family homes, multi-tenant housing, non-food and food retail stores based on census data and forecasted adoption rates of energy management solutions. The market value per building is calculated based on energy savings potential and the savings share attributable to energy management solutions (8-40 % depending on the use case). A regional scaling is applied to adjust the market share addressable by an energy service provider in USA and European countries between 2017 and 2022 (from 0% to 10-40% depending on the country and use case)

Value Pools from Energy Data are Emerging – Value Pools from Lead Generation Alone Could be €415 m in 2022

Total market



Addressable market (in € m)[1]



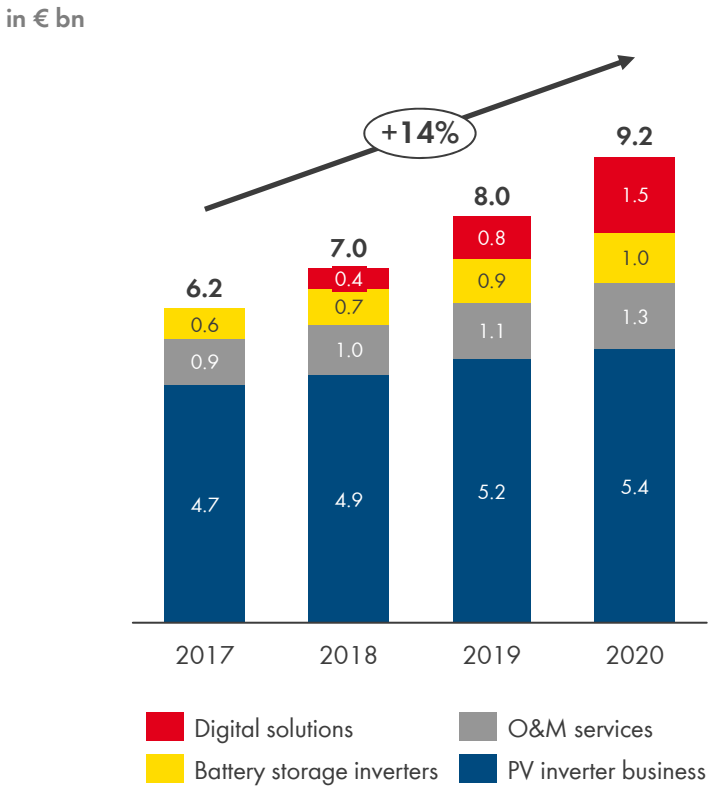
With other use cases the addressable market from energy data can be a manifold of the €415 m (2022) for lead generation

Access to data and technologies for data collection and analysis are required to capture this value pool

1. Roland Berger calculations: Number of energy-data based leads derived from marketing budget for digital market content (22% of total marketing budget) by country and type of household appliance (major, small) adjusted for an usage rate of energy data starting at 0% in 2017 and growing to 80% in 2022 (comparable to rates in early internet advertising). Number of leads valued at costs per lead for digital content marketing in manufacturing. A regional scaling is applied to adjust the addressable share over time from 0% in 2017 to 100% in 2022 in USA and European countries.

The Disruption in the Energy Sector will Open up New Value Pools for Technology Driven Companies such as SMA

Core and New Business: Global Market Outlook by Sector (in € bn)



Market Summary

- The megatrends decarbonization, technical cost decrease, sector convergence and digitalization will lead to a higher share of renewable energy and its growth.
- The need for digital solutions and battery storage will create new value pools.
- PV-inverters will serve as the backbone for smart grids solutions connecting the components and collecting data.
- The traditional PV market is expected to grow in volume and value until 2020. EMEA and APAC as well as Utility and Commercial are key growth markets.
- O&M services gain importance with continuously declining equipment prices and are key for sustainable PV investments

> SMA has a clear understanding how to approach digital solutions and battery storage and builds upon world market leader position and strong financials.

SMA is the World Market Leader for PV Inverters and the Best Known Inverter Brand[1]

The traditional PV inverter market is rather concentrated (Top 5 players c. 50 %)

Company	Market share 2017[2]	Trend 2016 -> 2017	Segment Split[3]			Main Markets[3]		
			Residential	Commercial	Utility	#1	#2	#3
SMA	14%	↘				US	IN	AU
Comp. 1	13%	↗				CN	–	–
Comp. 2	11%	↗				CN	EU	–
Comp. 3	6%	↘				IN	EU	US
Comp. 4	5%	→				US	EU	–

- **Market share gains of Chinese competitors is very much driven by strong growth in China. Top players shipped only c. $280m into international markets in 2017.[4]**
- **Large conglomerates are too inflexible to adapt to fast changing markets. Inverter specialists[5] have a much higher risk exposure and limited economies of scale.**

1. IHS PV Inverter Customer Insight Survey 2016
2. Based on Revenue, SMA estimate
3. Based on MW, IHS and SMA estimate
4. China Export Customs data Jan-Nov 2017
5. Only one / few markets and one technology (e.g. string / optimizer)

SMA is a Leading Global Player for Storage Inverters and O&M

Storage inverter market is very young and therefore fragmented

Company	Market Share 2017[1]	Trend 2016 ->2017	Outlook 2018	Segment Split[2]			Main Markets[2]		
				Res	Com	Utility	#1	#2	#3
SMA	14%	↗	↗				UK	US	DE
Comp. 1	6%	→	↗				UK	US	–
Comp. 2	5%	↘	↘				US	–	–

SMA strives to become #1 for O&M Services

Company	Assets under management[3]	Trend 2016 –>2017	Outlook 2018	Offering Full Service	Preventive Maintenance	Main Markets[3]		
						#1	#2	#3
Comp. 1	6.4 GW	↗	↗	X[4]	X[4]	US	CA	AU
Comp. 1	4.4 GW	↗	↗	X	X	US	–	–
SMA #5	2.6 GW	↗	↗	X	X	US	EU	CA

› SMA strives to gain market share in the storage inverter and O&M markets due to its unique competencies and global infrastructure.

1. Based on MW, SMA estimate
2. Based on MW, IHS and SMA estimate
3. GTM O&M Report 2017, as of Sept 2017
4. Only Utility

4. Strengthening Core Business

Smart Technologies Change the Energy Sector Quickly - Connectivity and Integrated Solutions Become the New Standard

Strengthening core business

Continuous Push in all Segments and all Regions

Cost Competitiveness with New Technologies and Higher Power Classes

Excellent O&M Services, Quality due to Best-in-class Testing and Compliance

Expand new business

New Services to Reduce the Cost of Electricity

Data Analytics to Improve Efficiency

Storage Integration to Enable many New Use Cases

SMA Offers Full Suite of Multi-Vendor Operations and Maintenance Services in Selected Markets

Use Case: Multi-Vendor O&M Services

+98%

+99%

Plant Performance Guarantees

Segment Focus:

- Full Suite & multi-vendor O&M services
- Commercial and Utility PV plants

Regional Focus:

- EMEA: GER, UK, France, Spain, Italy
- Americas: U.S., Canada, Mexico, Chile
- APAC: Australia and Japan

› In 2017, SMA increased PV plants under O&M contracts by 50% from 1.7 GW to 2.6 GW.

1. Net present value
2. Assuming €0.10/Kwh

SMA Strives To Become #1 O&M Provider in the World

Success Factors & Key Project Wins 2017 (Non-SMA PV Plants)

Quilapilun (110 MWdc), Chile

Javiera (70MWdc), Chile

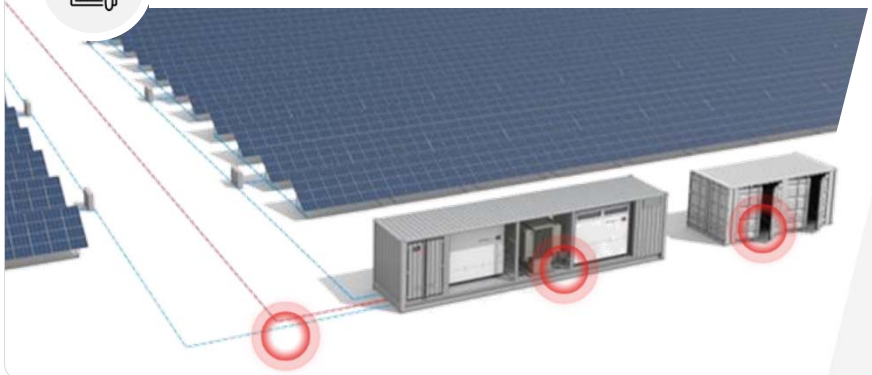
- Global service network ensures proximity and best price point
- Innovation in O&M delivery, driving continuous improvements to OPEX costs over life of PV plant
- Proven record of increasing yield up to 30%, achieving 99.9+% availability
- Influencing investors to chose SMA Inverters + SMA O&M Services to ensure sustainable investment

› A change of 1% availability results in an NPV difference of €2 million over 25 years.[1]

1. Net present value; assuming €0.10/KWh

SMA has Excellent Competencies to Handle the Complexity of Centralized Utility-Scale Power Plants

Use Case Utility: PPA[1] Driven Business Model



Segment Focus Centralized Plant Layout:

- Turnkey solution incl. PV inverter, DC-combiner, MV-system, storage plant communication and grid control
- Services (eg. Comissioning, grid studies

Regional Focus:

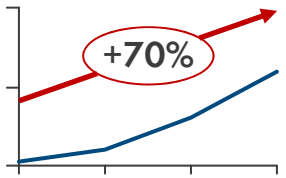
- Worldwide (w/o China), incl. UL and JET-certification

Success Factors

Medium Voltage Turnkey Solution, up to 6MW

- Increase power size to 6MW
- Allow high DC/AC-ratios (up to 200%) to reduce specific cost
- Reduce 50 % installation costs with pre-tested MV Power Station (40" container)
- Provide advanced grid stability functions (eg. active & reactive power, frequency control)

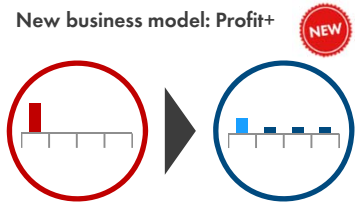
Repowering Market Potential (in GW)



2014 2016 2018 2020

- Repowering demand is increasing as the globally installed base grows older (CAGR >+40% until 2020).

New business model: Profit+



Shift 30% CAPEX to OPEX

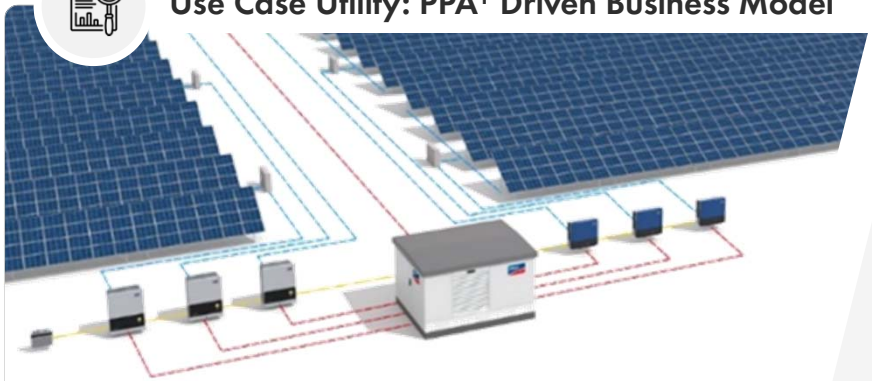
- Backing our quality promise with contractual commitment
- Introduce bundled offers (equipment and services) to reduce inverter-life-time-cost by up to 20% (Profit+)

› SMA Utility provides its customers up to 99.998% uptime.

1. PPA: Power purchase agreement

SMA Offers the Best Technical Solution for Utility-Scale Power Plants with Complex System Design

Use Case Utility: PPA[1] Driven Business Model



Segment Focus:

- 3phs inverters for power sizes of up to 150kW
- Two product lines to serve solution and value markets
- MV[2] system for multi MW PV power plants

Regional Focus:

- Worldwide, incl. UL and JET certification

Strategic Success Factors

Improve Cost Competitiveness

- Two inverter platform for all global markets
- Increase power size to 150 kW
- Higher integration to enhance power : weight-ratio, optimized installation and O&M

60 kW, 1,000 V

SMA Solid-Q (2018)

75 kW, 1,000 V

SUNNY HIGHPOWER PEAK1 (2018)

150 kW, 1,500 V

SUNNY HIGHPOWER
Next Generation (2019)

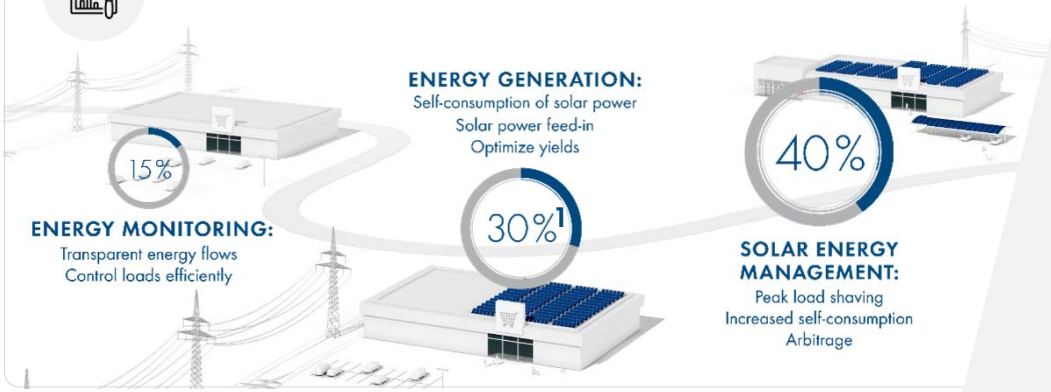
› The new products will help SMA to serve complex ground-mounted PV plants.

1 PPA:Power purchase agreement
2 MV: Medium Voltage

3 Only modules that require optimization are equipped with the SMA optimizer solution (Power+)

SMA Helps to use as Much Solar Power as Possible at the Point of Production to Reduce Electricity Costs

Use Cases: Residential & Commercial



Segment Focus:

- Dual brands (SMA/Zeversolar) to serve solution and value markets
- Residential 1phs and 3phs inverters (PV plants from 1kW to12kW)
- Commercial 3phs inverters (PV plants from 10kW-1MW)
- Optimizers for all power classes (TS4-R; selected deployment)[2]

Regional Focus:

- All markets, incl. JET and UL certification

Success Factors

Key Global Inverter Platforms

- Increase power size to 50 kW
- Reduce number of platforms

STP 6.0 with integrated MLPE-communication

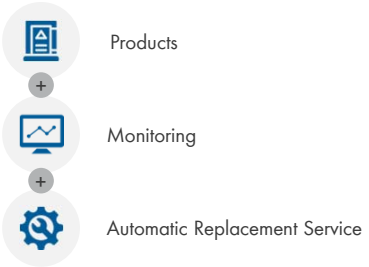
- Increase functionality to reduce BOS[3]- cost and improve yield

CORE1, 50 kW

- Component swop to reduce service costs

Improve Cost Competitiveness

- Repowering bundle to ensure a future-proof solution for existing PV-plants



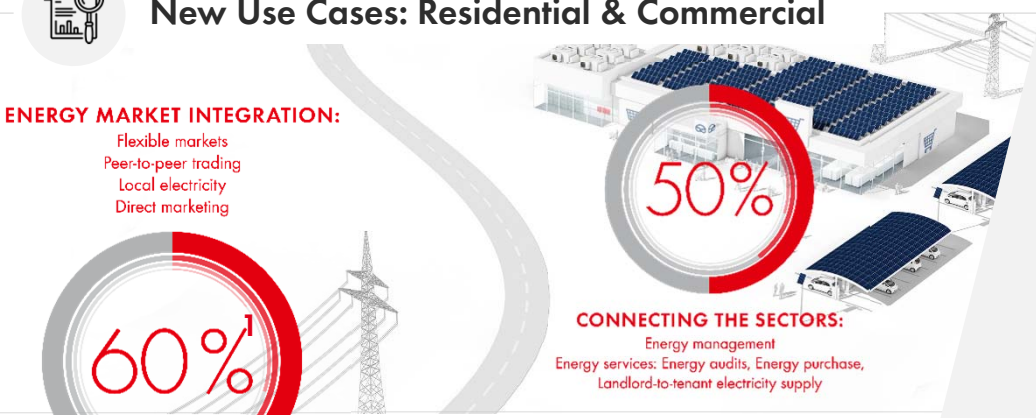
- Increase customer value by bundling products and services to solutions

Higher Margin Business with Bundles

1 Energy cost savings
2. Only modules that require optimization are equipped with the SMA optimizer solution (Power+).
3 BoS: Balance of System

SMA's Integrated Solutions will help to Optimize the Energy Costs Across Sectors

New Use Cases: Residential & Commercial



Segment Focus:

- Storage system technology for all battery types and power classes
- Energy Management Platform
- Complete offering from power generation to energy trading

Regional Focus:

- Europe, USA, Japan, Australia

Success Factors

Sunny Boy Storage 6.0

Sunny Tripower Storage 60

- Expand storage portfolio for residential & commercial applications (H1/2018)

- Global roll-out of ennexOS energy management platform and introduction of additional APPs to increase customer value (H2/2018)

Danfoss Cooling

- Form strategic alliances for integral solutions

Improve Margin With Storage – and Energy Management Solutions

› SMA has the know-how to create integrated solutions for commercial applications.

1. Energy cost savings

5. Expand into New Business

Smart Technologies Change the Energy Sector Quickly - Connectivity and Integrated Solutions Become the new Standard

Strengthening core business

Continuous Push in all Segments and all Regions

Cost Competitiveness with New Technologies and Higher Power Classes

Excellent O&M Services, Quality due to Best-in-class Testing and Compliance

Expand new business

New Services to Reduce the cost of Electricity

Data Analytics to Improve Efficiency

Storage Integration to Enable many New Use Cases

SMA is the First Mover of its kind in the Digital Energy Solutions Business

SMA approach to digital solutions

SMA Under-standing

SMA Offering

1 Energy services

Provision of energy-related services for private (white-label) and commercial customers

- Flexibility Marketing
- Energy Monitoring
- Energy Efficiency Improvement
- Cross-sectoral Energy Mgmt.
- P2P Trading and Local Load Mgmt.

Enrich DATA Provide

2 Energy data

Collection/analysis of energy related data (i.e. from PV installations) to provide data-based services

- Portal-as-a-Service
- Data analysis
- Energy analysis
- Energy trading platform

SMA USP[1]

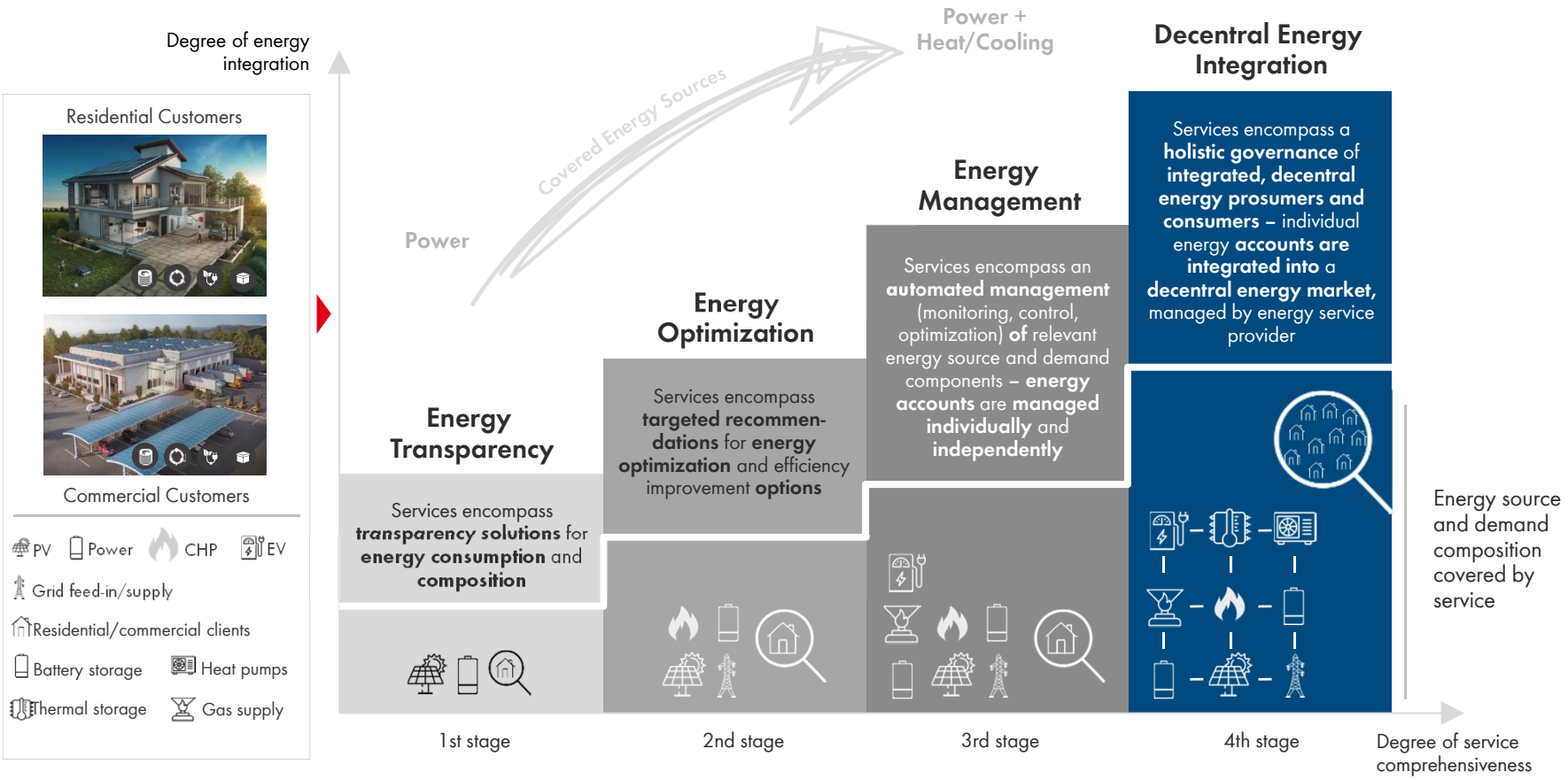
- Available technology platform across sectors
- Access to 300,000 PV systems provides data from >1.5 m devices, allowing to create a worldwide database and data services as well as for integrating energy service solutions

› SMA has in-depth energy economical know-how and unparalleled access to energy data to create new business models.

1. Unique Selling Proposition

SMA Envisions a Transformation to a Holistic Service Offering in a Decentral, Integrated Energy World

Stages of Energy Service Transformation



Energy Services are a Substantial Lever of Efficiency Gains and Service Innovation for Commercial Clients

Case Study – Supermarket

Today

- Setup of a 500kW solar carport at a supermarket branch of a leading supermarket player
- Produced solar power is used in supermarket and shopping mall, covering 15% of the overall, annual power demand

Tomorrow

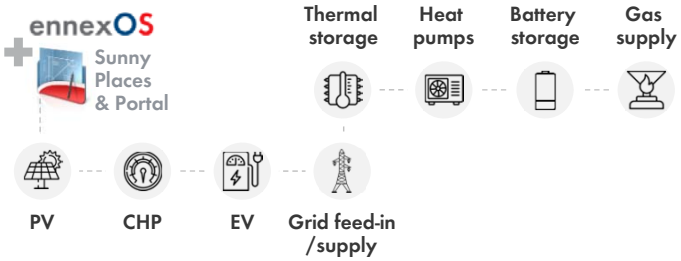
- Implementing charging stations for electric vehicles of supermarket customers
- Integrated system of modules for energy sources (e.g. PV systems, combined heat and power units, heat pumps) and energy consumption (e.g. heating, air conditioning, cooling, lighting)
- Implementation of a prosumer-based, virtual power plant with other, decentralized power generation units

Involved Parties

Future Parties[1]

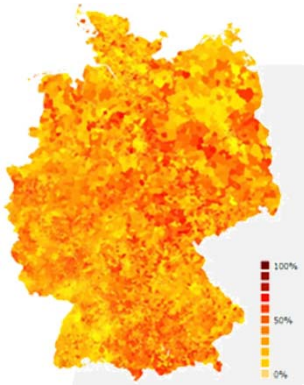
Danfoss Cooling

SMA Solutions



1.Joint Venture plannend

The Processing and Use of Energy Data is Gaining Momentum – SMA in Stellar Starting Position



PV power in Germany from June 14, 2016:

> Data from 100,000 monitored PV systems
> 5 minute averages transmitted every 5 minutes
> Aggregated to 5 digit ZIP codes

Involved Parties

SMA

TenneT

Case Study Insights – TenneT TSO

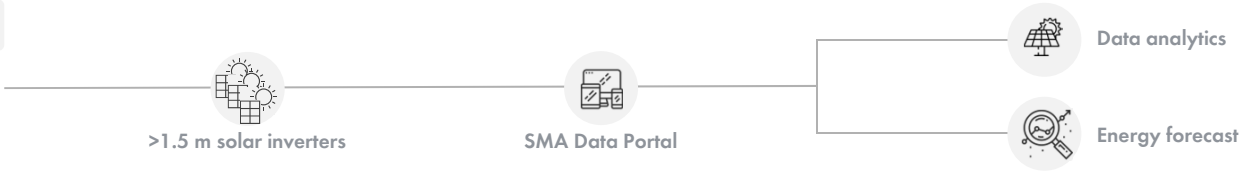
Today

> SMA provides plausibilized and aggregated near-time data from 26,000 PV systems within the TenneT control area
> TenneT uses those data points among others for precise and geographically highly resolved PV projections and forecasts, reduced need of control reserve and congestion management

Tomorrow

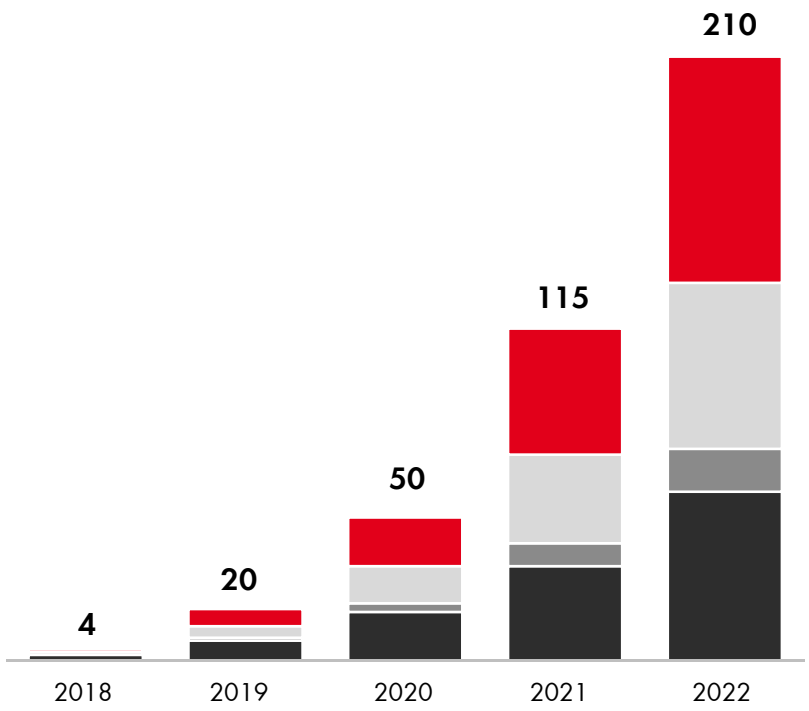
> Annually, network grows by over 60,000 additional systems globally
> International rollout to regions in Europe, North America and Australia with high PV penetration and strong SMA data coverage
> Additional data points reflecting on-site consumption and locally stored energy will further enhance quality and comprehensiveness

SMA Solutions



An Energy Service Business Could Make Potential Revenues of up to €50 m in 2020 from the Four Use Cases

SMA's addressable market (top-down calculation)
4 use cases only



Revenue potential (€ m)

- Food retail stores
- Non-food retail chain stores
- Mutil-tenant housing
- Family homes

Addressable market 2018-2022
€ 390 – 2,300 m

Market share[1] 1% – 12%

Profit Potential in 2020 (€ m)

15-25%[2] **€ 7.5-12.5 m**

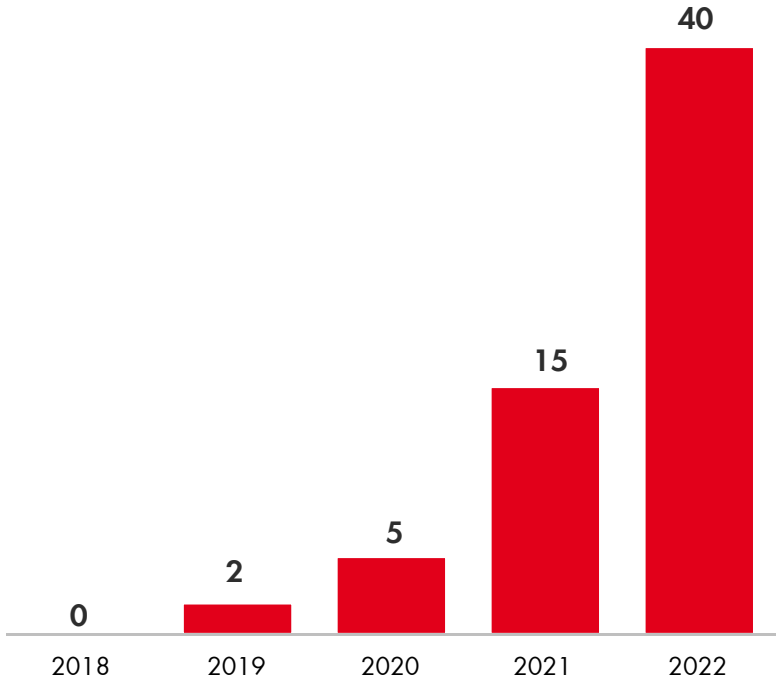
With its current focus SMA is planning with revenues of € 15 m in 2020 from energy services thus having strong upside potential.

1. Varies by use case and country and is increasing over time
2. Based on a benchmarking of EBITDA margins of digital data/platform companies

Energy Data could Bring Potential Revenues of up to €40 m in 2022 from Lead Generation

SMA's addressable market (top-down calculation)

1use cases only



Revenue potential (€ m)

- Lead generation
- Addressable market 2018-2022
- €35 – 415 m
- Market share[1] 1% – 7.5%

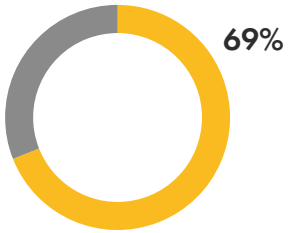
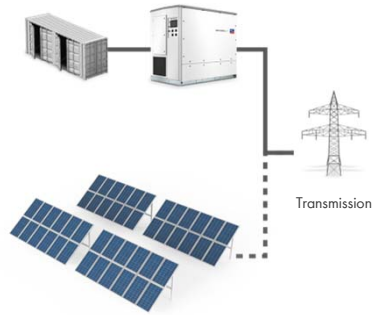
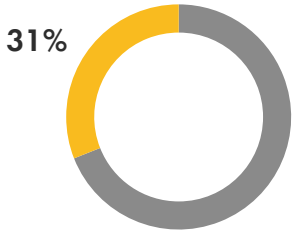
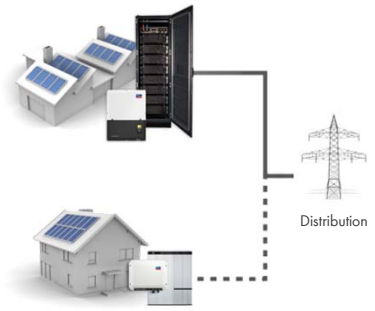
Profit Potential in 2020 (€ m)

40-50%[2] **€ 1.5-2.4 m**

With several use cases in the pipeline SMA is planning with revenues of €10 m in 2020.

1. Varies by use case and country and is increasing over time
2. Based on a benchmarking of EBITDA margins of digital data companies

SMA Provides Storage Solutions for all Battery Types and All Applications

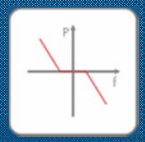
Segment	SMA Offering	Illustration	SMA Contribution
Utility Front-of-Meter  SMA's share in Utility segment 18%[1]	**Grid storage** Grid services Renewable integration Deferral Balancing		System integration Energy management System design/ Engineering Grid simulation Efficient battery inverters O&M Services
Residential,Commercial & Industrial Behind-the-Meter  SMA's share in R/C segment 7,9%[1]	**Behind-the-meter** Energy shifting Peak shaving ToU[2] Power Quality		System integration Energy management Calculation of energy savings Efficient battery inverters

› The Storage segment will grow significantly in future years.

1. Based on own estimations and IHS Markit research for an On-Grid Market of a total size of 2,426MW. The total storage market size with On-Grid and Off-Grid 3.3GW, thereof SMA's share 14%
2. Time of Use
3. Based on IHS Markit Research

Business Case Large Scale Storage: Multi-Application Sample Plant in the UK

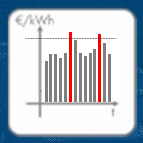
ROI < 3 years



1. Grid services - Firm Frequency Response[1] (FFR) to stabilize the grid

2. Arbitrage trading - Revenue stream depending on low electricity prices[2]

3. Deferral - Providing capacity[3] to avoid grid extension



4. Balancing - Providing capacity to shave extreme peaks ("Triads")[4]

50 MW large scale Storage Plant, UK

› **The business case large scale storage will be accelerated by the decentralization of the enrgy sector.**

1. Out of FFR, yearly revenues of 6 Mio GBP will be achieved at an availability of 92 %
2. In 2017, energy spot market price variability in the UK varied between -100 GBP/MWh and 3000 GBP/MWh
3. Capacity is generating revenues of > 1 Mio GBP, contracted for 15 years
4. Triads: Covering three days of higher mismatch of load and generation in UK in winter provide yearly revenues of > 1 Mio GBP

Business Case Commercial Storage: Much More than Self Consumption

ROI < 5 years[4]

1. Peak Shaving -
Reduce demand charge[1] by supplying peak demand from storage

2. Time of Use - Tariffs
Monetizing gap between different time-of-use electricity tariffs[2]

3. Energy shifting -
Optimizing self consumption[3]

4. Power Quality -
Avoiding additional costs for statcom, UPS

1. In 2017, Demand charge savings in range of 60 – 120 €/kW*a in Germany
2. ToU strong country/market dependent. In Germany approx. 5€cent/kWh difference between high and low tariffs
3. Revenue from energy shifting strongly dependent on customer total energy consumption and his electricity price per kWh
4. ROI based on calculation assuming savings of 100€/kW*a

6. Technology, Operations, Sales and Service

Unmatched Track Record of R&D Excellence

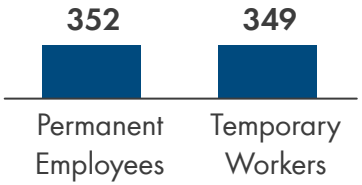
4,000 meter altitude	30 years	950 patents	500 engineers	>1.5 million inverters
ALL REGIONS	**EXPERIENCE**	**INNOVATION**	**ALL SEGMENTS**	**PORTAL DATA**
• From 4,000 meter altitude to desert conditions • Best- in-class test center • Integration into all grids worldwide	• PV plants from 1 kW to 500 MW • All battery types and sizes • PV penetration up to 80% • Reliability • More than 5 million inverters sold	• Blackstart capability • Safety Arc Fault Circuit Interrupter • Research network with > 30 institutions for future trends • Sector coupling • Research future trends • Smart grid technology	• Inverters from module level electronics to Medium Voltage Turnkey Solutions • All battery types and sizes • Energy Services	• Data analytics • Predictive maintenance • Growing share of Software engineers and IT specialists • Open Source approach

> SMA has an installed base of 65 GW.

SMA Can Scale its Operations 1:2 According to Demand within one months and 1:10 within one Year

Kassel, GERMANY

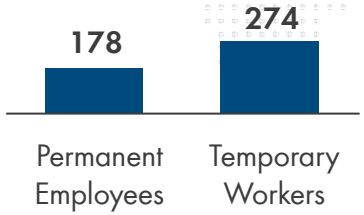
Production Site For all inverter types



Max. production capacity 14 GW

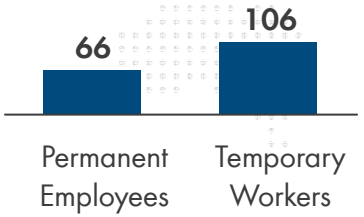
Zabierzów, POLAND

SMA Magnetics produce Chokes and transformers



Yangzhong, China

Production Site For all inverter types



Max. production capacity 6 GW

› SMA has a production capacity of max. 20 GW, which is not capital intense.

SMA's 2018 Production Volume Forecast of Critical Components is Secured with Multi-Vendor Strategy

Strategic Initiatives

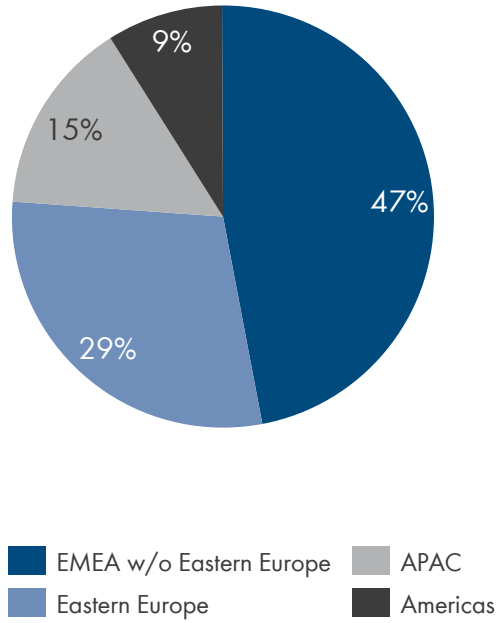
Sourcing Offices in China, Poland, Germany and USA to leverage spend globally

Combining resourcing volume with Danfoss to ensure higher volume

Early involvement in product innovation to foster Technology Leadership driving standardization to increase our competitiveness on global markets

Sourcing volume 2017

Total Sourcing Volume 2017: €450m



› The general price increase of electronic components is included in SMA's earnings guidance.

No other competitor has a similar Specialized Sales and Service Infrastructure and Access to all Channels

#380[1] 23%[2]

#8[3] 0.5 GW[4]

EMEA

- 50 MW storage project in Pelham, UK
- 500 MW O&M contracts under management
- Strategic Alliances with Audi, MVV and Danfoss Cooling

#160[1] 15%[2]

#6[3] 0.1 GW[4]

APAC

- 730 MW utility projects sold in Australia
- First manufacturer with certified MLPE[5] technology in Japan/Australia
- > 1GW shipped in India

#180[1] 9%[2]

#5[3] 1.9 GW[4]

Americas

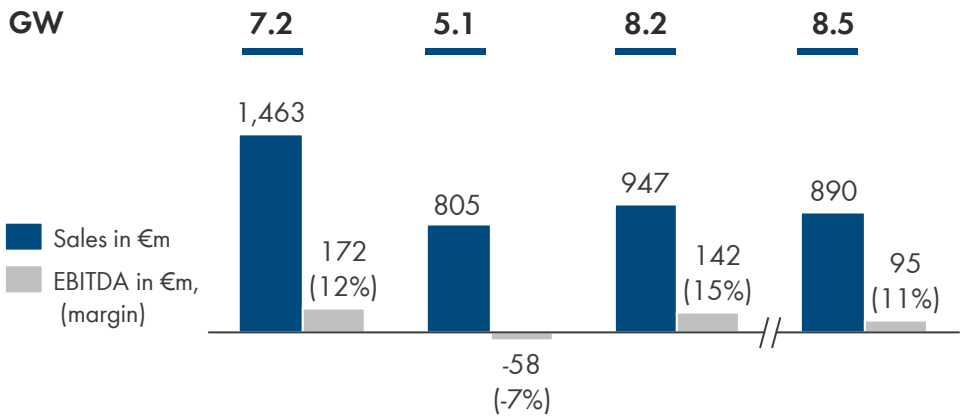
- 10 GW utility inverters installed in US
- 20 MW battery storage project in the Mojave desert
- Sunrun as new strategic account

> SMA will launch an online channel to serve markets with a weak SMA presence.

1. Sales and Service FTE
2. Market share 2017, based on revenue, incl. PV and Storage Inverters
3. Country presence with subsidiary
4. O&M under management
5. MLPE: Module Level Power Electronics

7. Financials

SMA Successfully Managed fast Changing Market Conditions and Protected its High Net Cash Position



	2012	2014	2016	2017e[1]
Gross margin	24%	17%	26%	22%
Net cash	446	225	362	450
FTE	4,800	4,665	3,118	3,006

Strategic Initiatives

- Acquisition of Zeversolar to improve sourcing and portfolio (2012)
- Strategic alliance with Danfoss to improve competitiveness and enter into new business (2014/2018)[2]
- Restructuring / Head-count reduction to improve breakeven (2014)
- Invest >€600m in R&D since 2012 to reduce specific costs and expand into storage and EMS[3]
- Invest in Tigo Energy to complete portfolio with MLPE[4] (2016)
- Closure of Denver production to reduce fixed costs (2016)
- Divestment of SMA Railway (2017)
- Set up digital solution business to increase profitability (2017)

1. Preliminary figures
2. Joint Venture with Danfoss cooling to offer energy management solution for Food/Retail
3. Energy Management System
4. MLPE: Module Level Power Electronics

2017 was a Transitional Year due to US demand. The Shortage of Electronic Components Impacted SMA as well.

Preliminary Key Financials (in € million)

	2016	2017e	Change
Sales	947	890	-6%
Residential	191	208	9%
Commercial	273	268	-2%
Utility	397	240	-40%
Service	45	77	71%
Other Business	41	97	>100%
EBITDA	142	95	-33%
EBIT	65	45	-30%
Net income	30	30	+/- 0%
Net cash	362	450	24%
NWC ratio (in %)	24%	22%	n.m.

Comments 2017

- Sales decline mainly due to weak US Utility business. Strong growth in APAC and EMEA.
- Positive development in residential, service and storage business.
- Net income impacted by adjustment of deferred tax assets (US) and reserve tax accruals for Chinese entities.
- Since many years, SMA has a policy to distribute 20%-40% of its group net income to shareholders.

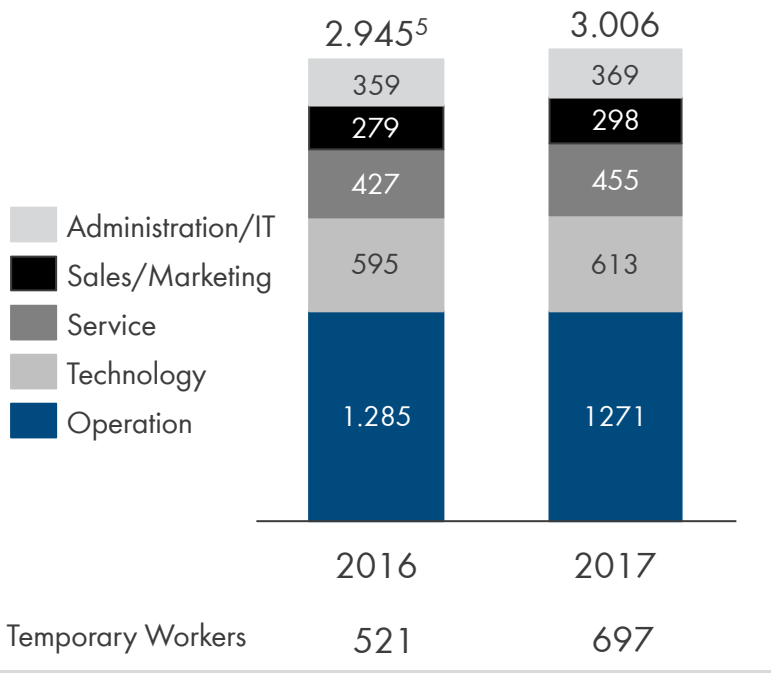
› SMA's annual report will be published on March 28, 2018.

SMA Slightly Increased the Number of Employees to Untap the Growth Potential in Future Years

Preliminary Group Balance Sheet, reclassified (in € million)

	2016/12/31	2017/12/31[1]	Change
Non-current assets	426	358	-16%
Working capital	334	325	-3%
Other assets	66	63	-4%
Total cash	385	470	22%
Shareholder's equity	585	612	5%
Provisions[2]	177	156	-12%
Trade payables	109	130	19%
Financial liabilities[3]	23	20	-13%
Other liabilities[2]	317	298	-6%
Total	1,211	1,216	

Global Full Time Employees[4]



	2016	2017
Temporary Workers	521	697

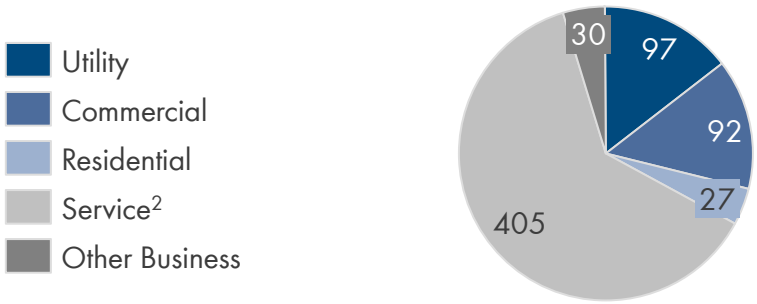
› SMA operates with a cash break-even point of c. €700m. With cost-improved products SMA strives to reduce the break-even in 2018. Covenants for our syn-loan were all observed.

1. Preliminary figures
2. Not interes-tbearing
3. w/o not interest bearing derivatives: € 0,4m (2016: € 17,6m)
4. w/o temporary workers and learners
5. w/o Denver

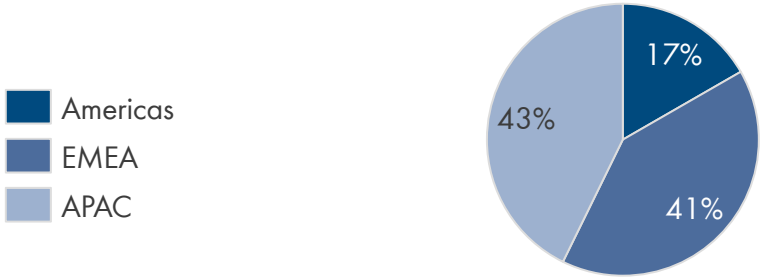
SMA Experienced a Strong Order Intake 2017

Order Backlog by Segment and Region (in € million)

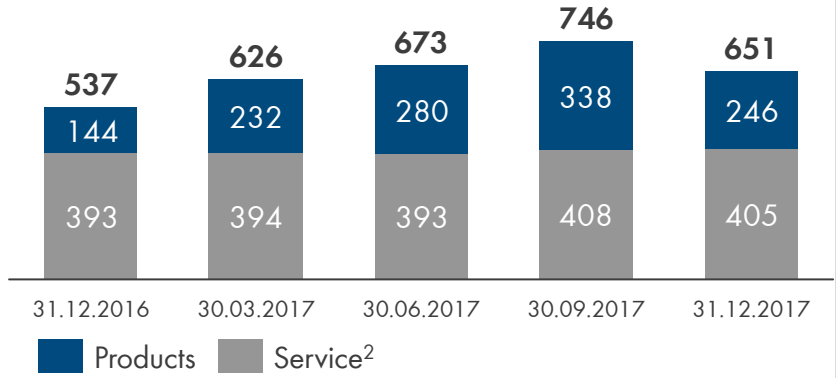
Total order backlog: €651m (Dec 31, 2017)



Product order backlog by regions (in%)



Order Backlog Development (in € million)



- Product backlog increased by more than € 100 m
- Increase in order backlog for products is mainly driven by APAC and EMEA residential and commercial markets.
- 30% of guided sales figure 2018 is covered with product backlog.

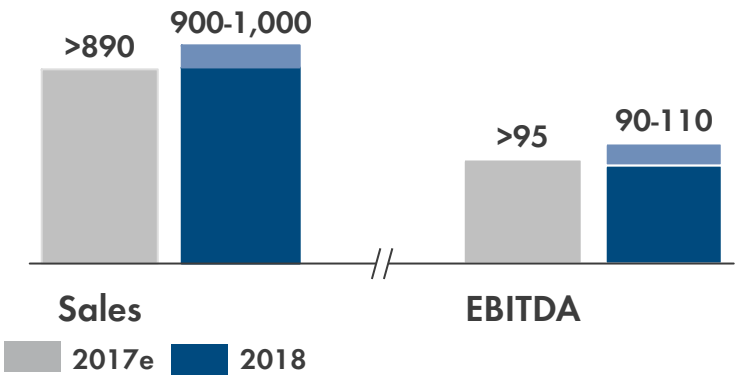
› SMA starts with a solid order backlog into 2018.

1- Total Order backlog as of December 31, 2016: €537 m.
2. Order backlog for service will be recognized as sales within next 5-10 years.

8. Guidance, Strategy and Investment Highlights

SMA's Management Estimates Sales and Earnings Growth in 2018

Guidance 2018 (in € million)



	2018
Expenses for Digital Solutions	>€10m
NWC-Ratio	19-23%
Tax Ratio	c. 30%
CapEx (incl R&D)[2]	c. €50m
Depreciation / Amortization	c. €50m

Management Comment

- SMA plans to increase market share, mainly in APAC (China, Japan, Australia).
- Strong growth in commercial and residential (incl. Optimizer) due to new products. Storage will increase significantly due to market development.
- Energy Management and digital solution business will only have limited sales contribution.
- Price pressure in utility remains high. Moderate development in all other segments.
- Supply constraints will ease starting Q2/2018.
- Acquisitions in the fields of energy management technology and O&M portfolios and additional optimizer technology are likely (total volume €50-100 m).

> Earnings Guidance 2018 is impacted by expenses for new digital business. Sufficient FX-hedging is secured.

1. Preliminary figures
2. Incl. c. €20m for R&D

SMA is the World Market Leader for PV Inverters and a Leading Player in Storage and O&M

Investment Highlights

Unique positioned in the solar market / Best brand

- World market leader with 65 GW installed base
- Complete portfolio to serve all PV segments
- 20 subsidiaries with strong service capabilities and access to all channels
- Award-winning 20 GW production to achieve scale

Leverage PV expertise to enter into high margin business

- Strong partnerships to create a new ecosystem
- Know-how & products to benefit from strong growth in the field of battery storage
- With ennexOS[1], SMA has set the basis to manage the complexity of integrated solutions
- Infrastructure to expand into data-driven business models and services

Key Financials 2018

Sales
€ 900 m - € 1,000 m

EBITDA
€ 90 m - € 110 m

Key Product Innovation 2018

› SMA has an experienced management team with a proven track record.

1. SMA's Energy Management Platform

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BACK UP

SMA Solar Technology AG

SMA has a Sound Strategy in Place to Benefit from the Disruption in the Energy Sector

01

GLOBAL MARKET LEADER in all Segments

We want to be #1in the RESIDENTIAL, COMMERCIAL, UTILITY, SERVICE and OFF-GRID & STORAGE segments.

02

SMA is a Provider of Systems and Solutions

By 2020, sales of non-PV inverters are expected to rise from around 20% of total sales to > 40%.

03

Sustainable Profitability and low Capital Intensity

SMA strives for continuous efficiency improvements. If necessary, the profitability will be ensured by means of reductions in structural costs.

04

Development of SMA by means of Disruptive Approaches

We want to achieve this by focusing on three disruptive initiatives. “Energy Services” and “Energy Portal” are technology-driven, data-based business models while “Energy Shop” is an end-to-end sales model to digitize our sales channel.

05

SMA is an ATTRACTIVE COMPANY

We live by our values and provide freedom for responsible entrepreneurial action. We stand out due to fairness, internationality and sustainability.

Experienced Management Team with Proven Track Record

Management Board

Pierre-P. Urbon
CEO/CSO
born 1970
With SMA since 2005
Contract :2022

Dr.-Ing. Juergen Reinert[1]
CTO/COO
born 1968
With SMA since 2011
Contract 2019

Ulrich Hadding
CFO
born 1968
With SMA since 2009
Contract 2019

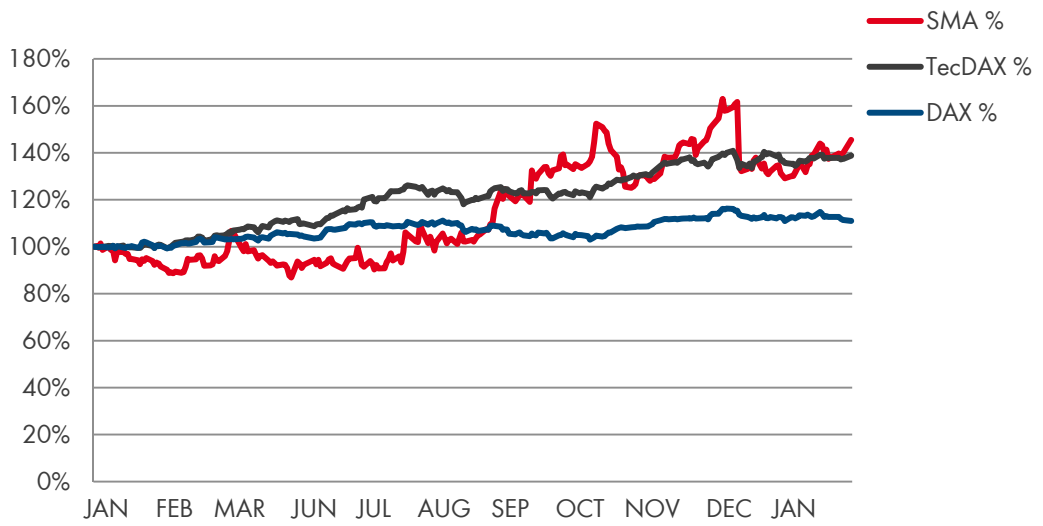
Executive Management Team[2]

- Jon I. Ekker, Service
- Dr.-Ing. Johannes Kneip, Technology[3]
- Nick Morbach, BU Residential and Commercial
- Alexander Naujoks, HR
- Thomas Pixa, Finance
- John Susa, Sales Americas/APAC
- Mike Terlinden, Operation
- Boris Wolff, BU Utility

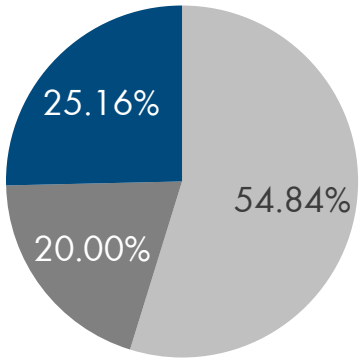
1. Deputy CEO
2. Alphabetical order
3. Speaker

SMA's Share Price Rallied in 2017

Share Price Development 01/2017 -01/2018



Shareholder Structure[1]



- SMA founders, their trusts and families
- Danfoss A/S
- Freefloat

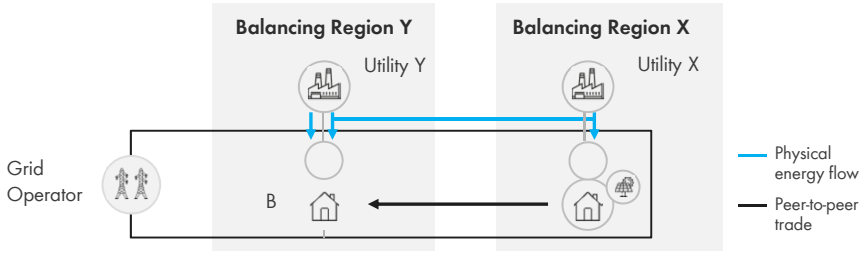
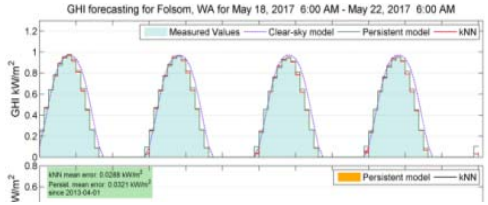
- Outstanding Shares: 34.7 m
- No pre-emption rights or other restrictions
- Market capitalization: €1.3 bn [2]

> SMA has a stable shareholder structure.

1. As of January25, 2018, Company Information
2. As of January25, 2018

Back up

Digitalization of the Energy Industry Enables Analysis and Optimization of Energy Demand and Supply

Example	Solution	Comment
AI[1]-based virtual power plants for electric vehicle fleets	**Data Input** • Mobility demands • GPS data • Power prices • Level of charge ▶ **AI algorithm** ▶ **AI algorithm** ▶ **DSO** 	• e-vehicle fleet functions as a virtual power plant to feed electricity back to the DSO or to absorb excess power depending on demand predictions from AI[1] algorithm • **SMA collaborates with VW, Audi, Daimler**
Blockchain-based peer-to-peer trading of electric power		• Blockchain technology logs peer-to-peer trades as transactions and make it available to utilities, prosumers and solution providers • **New regulatory framework required**
AI[1] to predict power output from solar	 ▶ 	• AI[1] provide solar power forecasts of high accuracy, which allow to integrate solar energy into the grid cheaply and reliably • **SMA provides data collected in PV plants to Tennet**

› The need for digital solutions is creating new, rapidly growing value pools that can build on the traditional inverter business with a key role to be played by system integrators.

1 AI: Artificial Intelligence

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