

SMA SOLAR TECHNOLOGY AG

Analyst / Investor Presentation

Half-Yearly Financial Results: January to June 2018



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Volume and Sales Growth in H1/2018



Financial Highlights H1/2018

Top Line

- SMA increased volume to >4 GW (+12% y/y) and sales to €395m (+ 4% y/y)
- Sales growth mainly driven by positive development in EMEA and APAC - SMA America increased sales in Residential only

Profitability, Bankability

- EBITDA increased by 40% to €41m in H1/18 compared to H1/17; both reporting periods were impacted by positive net effects¹
- H1/18 gross margin of 25%, new products only partly reflected
- Rock solid balance sheet structure with >50% equity ratio, c. €400m net cash and €100m long-term credit facility

Outlook 2018

- Market outlook adjusted mainly due to China's feed-in tariff suspensions: In 2018, we expect global new PV installations of 83 GW, thereof 25 GW in China (previously: 109 GW / 50 GW) and global addressable market of €6.1bn, thereof €0.8bn in China (previously: €7.0bn / €1.4bn)
- Management confirms guidance with sales of €900m to €1,000m and EBITDA of €90m to €110m

Strategic Highlights

New subsidiary



New products



Awards



Sunny Central Storage
Intersolar 2018



ennexOS
Intersolar 2018

> The Managing Board confirms 2018 guidance.

1. H1/18 net EBITDA effect of €8m: release of general warranty provision + €33m, devaluation of inventories - €14m and - €11m for single warranty provisions; H1/17 included the book gain from the sale of the Railway division (high single-digit €m-amount)

H1/2018 EBITDA is Affected by Adjustments of Warranty Provisions and Devaluation of Inventories with a Net Impact of +€8 Million¹



Key Financials (in € million)

	H1/17	H1/18	Change
MW sold	3,830	4,305	12%
Sales	381	395	4%
Residential	106	83	-22%
Commercial	125	132	6%
Utility	122	151	23%
Storage	28	29	4%
Digital Energy	0	0	
Gross Margin (in %)	19%	25%	
EBITDA ¹	29	41	40%
Depreciation	27	26	-1%
EBIT	3	15	n.m.
Net income	9	11	27%
Free Cash Flow (adj.)	26	-44	n.m.
Net CapEx (incl. R&D)	13	17	27%

	2017/12/31	2018/06/30	Change
Net cash	450	393	-13%
Total assets	1,216	1,159	-5%
NWC ratio (in %) ²	19%	21%	

	2017/2018			
	Q3	Q4	Q1	Q2
Sales	211	299	183	212
Residential	64	63	39	44
Commercial	63	84	57	75
Utility	67	100	67	84
Storage	17	52	20	9
Digital Energy	./.	./.	0	0
Gross margin	25%	25%	21%	27%
EBITDA	26	42	18	23

1. H1/18 net EBITDA effect of €8m: release of general warranty provision + €33m, devaluation of inventories - €14m and - €11m for single warranty provisions; H1/17 included the book gain from the sale of the Railway division (high single-digit €m-amount)

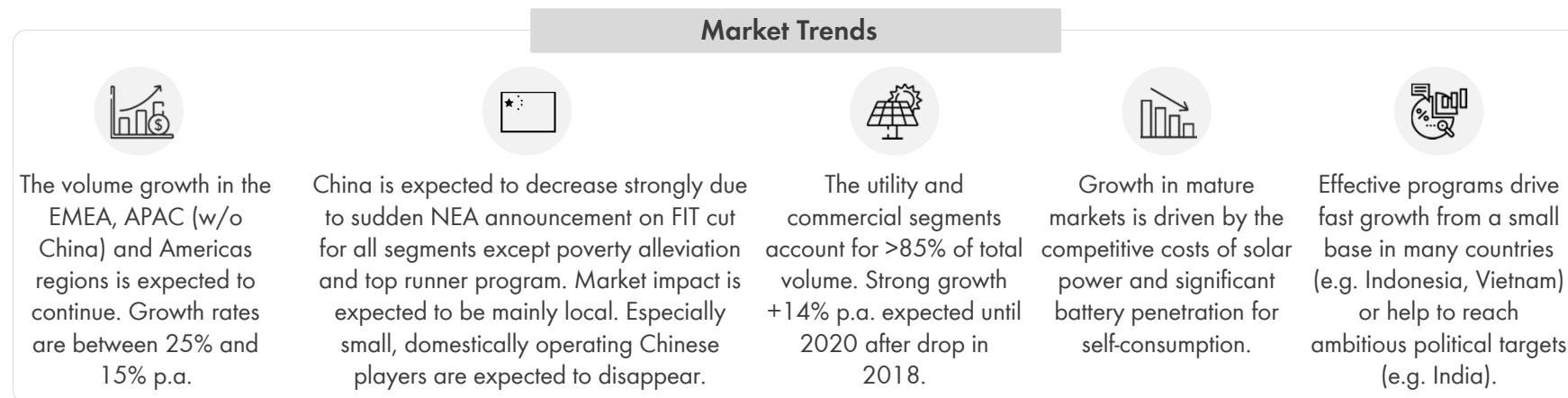
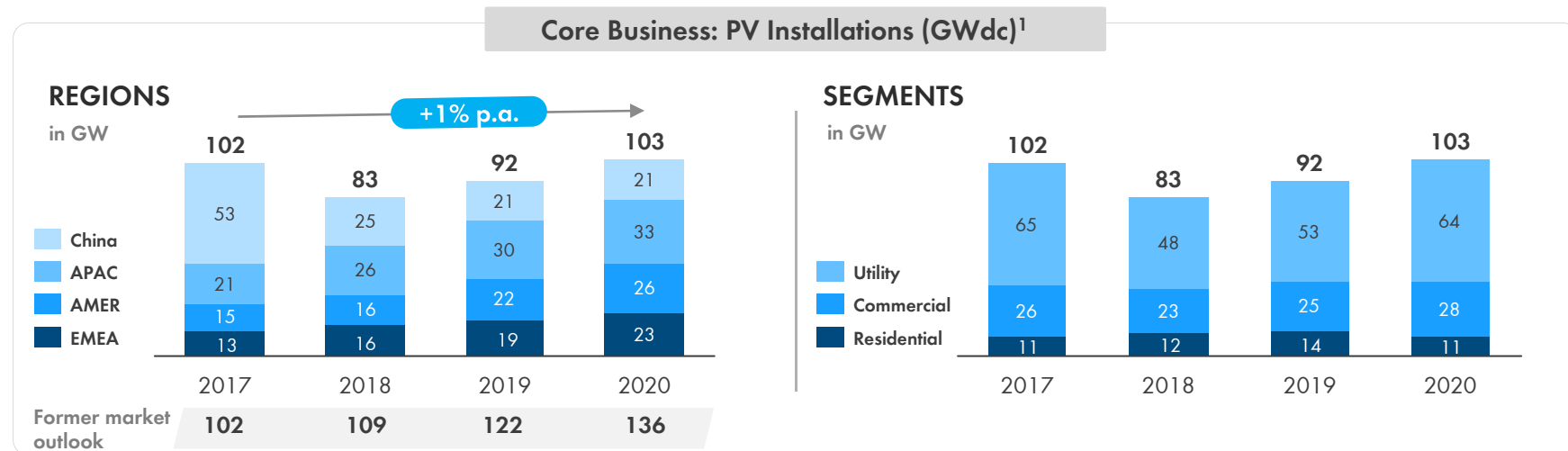
2. NWC ratio as of 2018 reporting includes advanced payments; the year end figure 2017 has been adjusted accordingly (see back up slide for more details); Net Working Capital ratio: inventory + trade receivables - trade payables (advanced payments included); as of last twelve months sales

GLOBAL MARKET OUTLOOK REDUCED MAINLY DUE
TO SUDDEN REGULATORY CHANGES IN CHINA

SMA EXPECTS MARKET CONSOLIDATION OF
INVERTER MANUFACTURERS TO ACCELERATE

O&M AND ENERGY MANAGEMENT BECOMES
MORE IMPORTANT IN LIGHT OF DECLINING
EQUIPMENT PRICES

Global Outlook Reduced by Cumulated 89 GW Until 2020, Mainly in China due to FIT Cut Announcement of Government

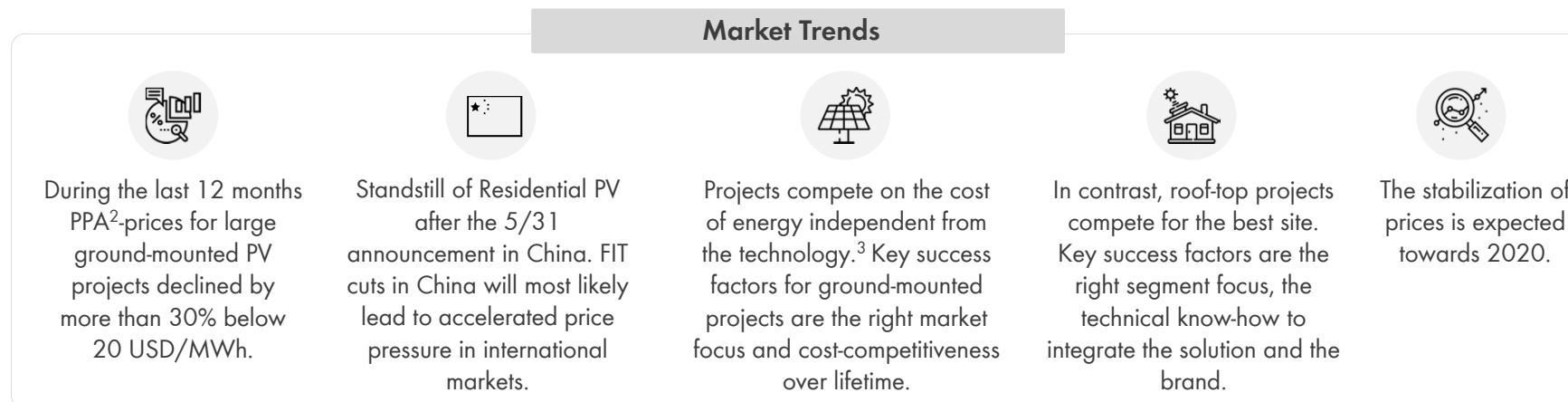
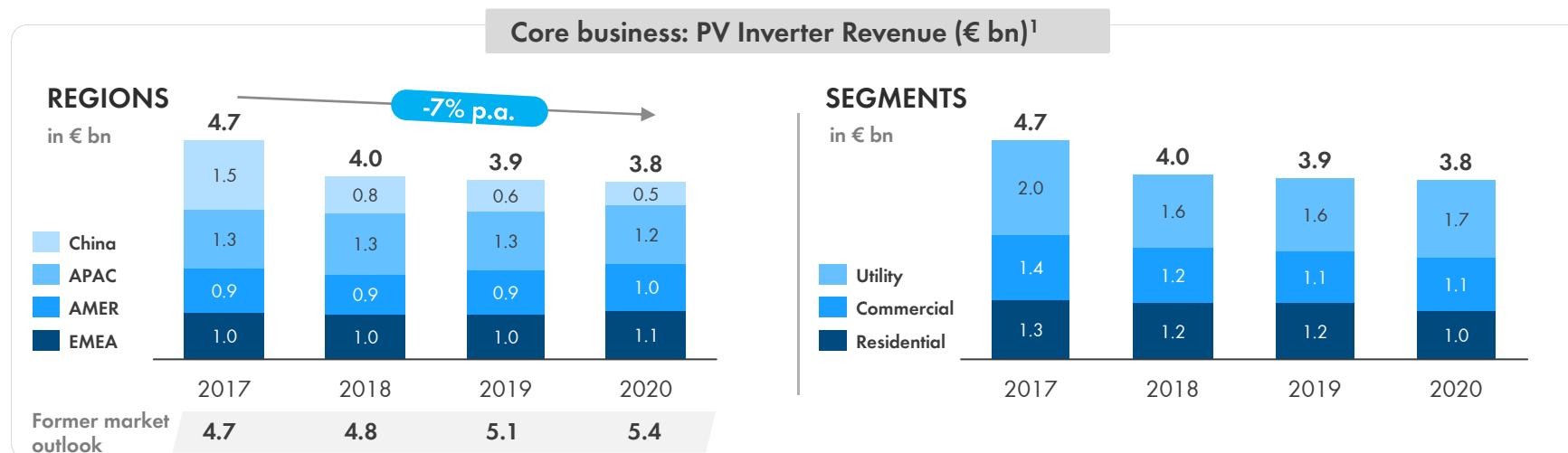


> New growth regions² become relevant in the near future.

1. SMA Market Model Q3 2018; New PV installations, Res ≤10kW plants, Com >10kW to 1MW plants, Uti >1MW plants

2. E.g. Middle East, South America, South East Asia

China Volume Correction and Strong Price Decline Leads to a Value Decline of -7% p.a. Until 2020



1. SMA Market Model Q3 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

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

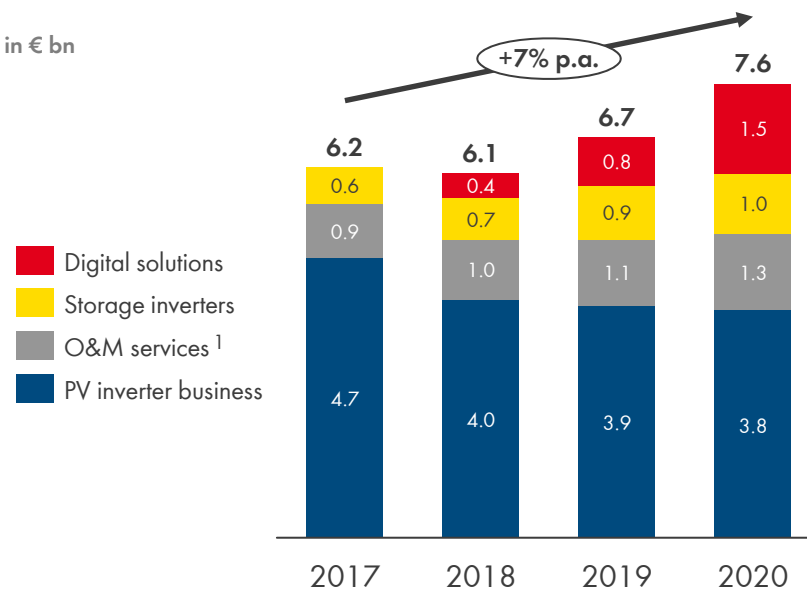


Core and New Business: Global Market Outlook by Sector (in € bn)

New PV Installs²
in GWdc

102 83 92 103

in € bn



Former market
outlook in € bn

6.2 7.0 8.0 9.2



Market Comments

- 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 outside China in volume until 2020. The stabilization of price pressure is expected towards 2020.
- O&M services gain importance with continuously declining equipment prices and are key for sustainable PV investments.

> The China announcement changed the PV market landscape. Going forward, SMA expects market consolidation of inverter manufacturers to accelerate.

1. Full O&M

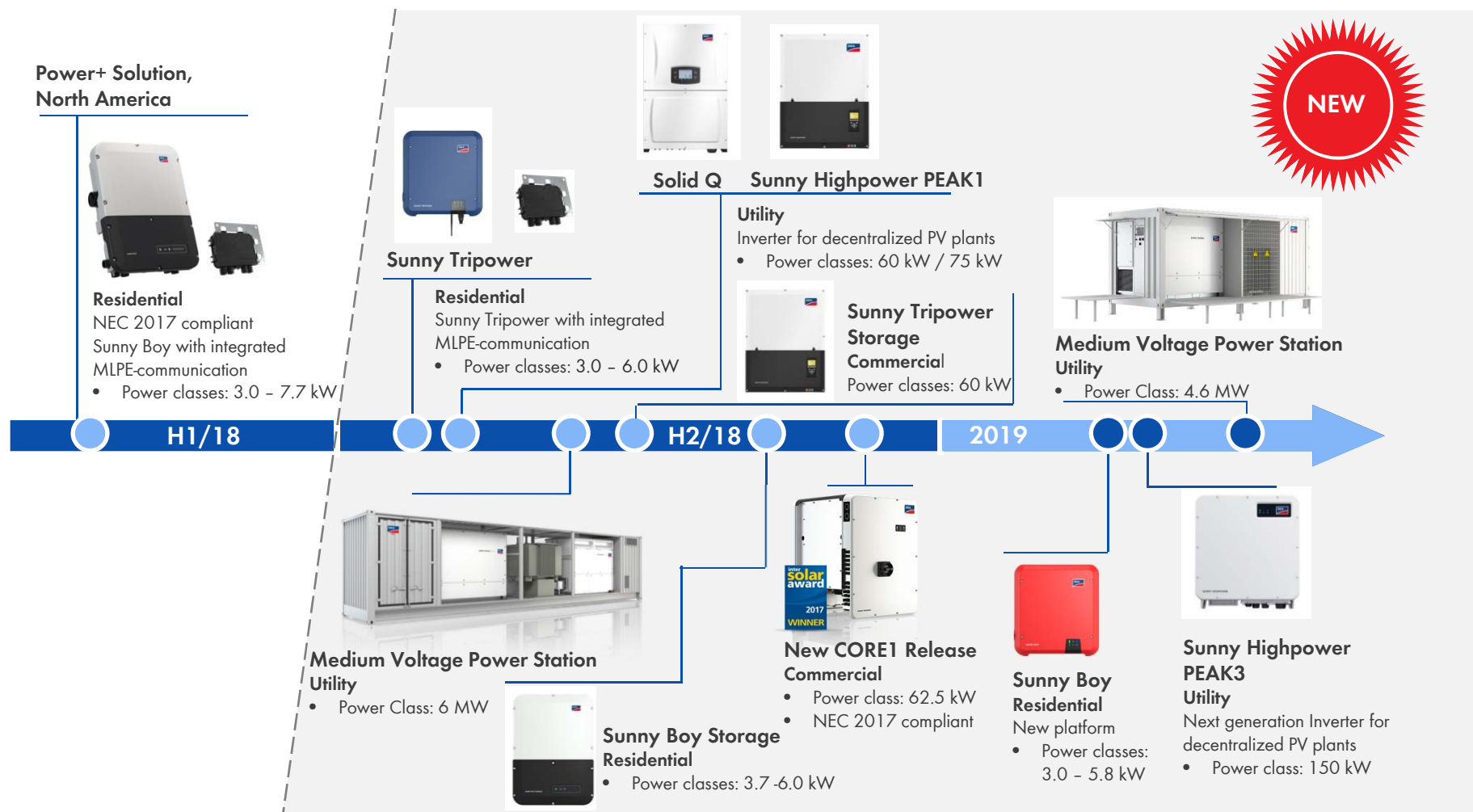
2. SMA Market Model Q3 2018

SMA WILL LAUNCH COST IMPROVED PRODUCTS
IN ALL SEGMENTS IN THE NEXT 6 TO 12 MONTHS

WITH THE NEW PRODUCT PORTFOLIO, SMA
REMAINS COMPETITIVE IN A DYNAMIC MARKET
ENVIRONMENT

SMA'S PATENTS AND TRADEMARKS PROTECT OUR
BROAD INNOVATIONS UNMATCHED IN THE PV
INDUSTRY

SMA Will Launch Cost Improved Products in All Segments in the Next 6 to 12 Months



> With the new product portfolio, SMA remains competitive in a dynamic market environment.

SMA Residential Improves Cost Competitiveness with a new 3- Phase Inverter in H2/2018



New Sunny Tripower decentral Power Plant design

- Start of delivery: H2/2018
- Power classes: 3.0 – 6.0 kW
- Cost reduction: > - 25%

Easier- Higher Yields– More Convenient

- Increased functionality reduces BOS1- cost up to 15%
- 30% faster installation
- >60% lower service costs through smart connected

Old Product



Sunny Tripower

H2/18 Residential Product Launch

50% lighter,
50% less volume

Integrated TS4-
communication



Sunny Tripower



Increasing Customer Value



Smart Connected

- Automatic replacement service for more convenience



Sunny Portal

- Comfortable PV system monitoring



Sunny Design

- Plant design, simulation and analysis



SMA Repowering

- New products and tools for growing repowering market



Sunny Boy Storage

- H2/2018
- 3.7-6.0 kW

> In medium-sized PV plants, battery size doesn't equal PV output. Therefore, SMA's solution offers customers more flexibility.

1. BoS: Balance of System
2. CCA: Cloud Connect Advanced

SMA's Awarded Inverter CORE1 for Commercial PV Plants will be Fully Ramped Up in H2/2018



H2/18 Commercial Product Release



Sunny Tripower Core 1

- Start of delivery: Q3/2017
- Fully ramped up in Q3/2018
- New product release: Q4/2018
- Power class: 62.5 kW
- Cost reduction: - 20%

Stands on its Own

- 6 MPP trackers make MPLE technology redundant
- Ease of installation: 60% faster
- NEC 2017 compliant



Increasing Customer Value and create new business models



ennexOS

- Energy Next Operating System – SMA's new cross sector IoT platform for energy management



Sunny Tripower Storage

- H2/2018
- 60 kW



New subsidiary

- Providing energy-related services for private and commercial customers



Direct Selling

- All necessary interfaces for direct marketing

> SMA does not only provide hardware. With SMA ennexOS and SMA Spot we enter into higher margin segments.

New Products for Decentralized and Centralized Power Plant Design in H2/2018



Sunny Highpower PEAK1

- Start of delivery: H2/2018
- Power class: 75 kW
- Cost reduction: > - 25%

SMA Medium Voltage Turnkey Station, 6MW

- Start of delivery: H2/2018
- Power class: 6 MW
- LTM¹ Power Up of +20%

Decentralized Power Plant Design

75 kW, 1,000 V

150 kW, 1,500 V



SUNNY HIGHPOWER PEAK1 (H2/2018) SUNNY HIGHPOWER PEAK3 (2019)

Centralized Power Plant Design

6 MW, 1,500 V (H2/2018)



Medium Voltage Power Solution (H2/2018)



Increasing Customer Value



Sunny Central Storage

- Grid-Forming Capabilities



SMA Repowering

- Repowering Market Potential until 2020: >+40%



Availability guarantees

- SMA Utility provides 99.9+% uptime



Response time guarantees

- SMA uses the most up-to-date technology for 24/7 real time monitoring



O&M services

- #5 O&M provider
- >3GW O&M under contract

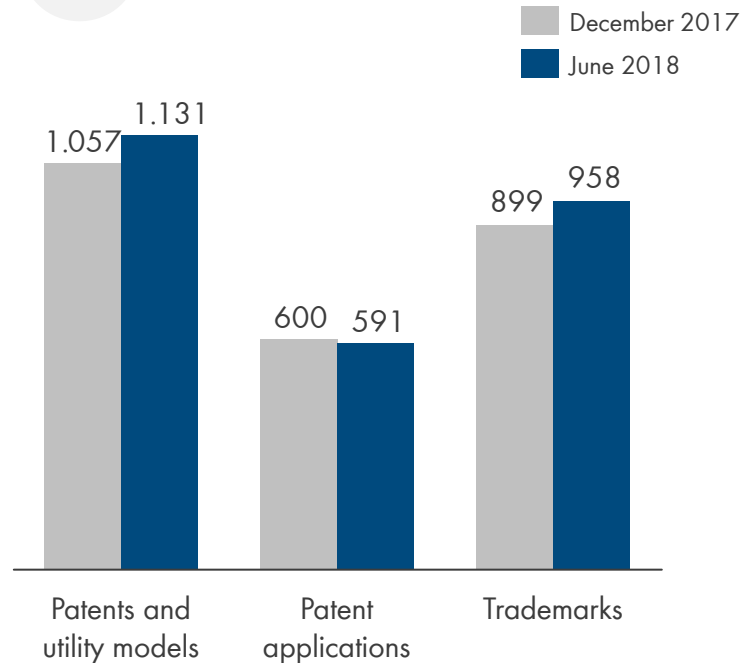
> **SMA has the competency and tools to conduct grid studies in order to speed up the commissioning process.**

1. LTM= Last Twelve Months

SMA's Patents and Trademarks Protect our Broad Innovations Unmatched in the PV Industry



Patents, Utility Models and Trademarks



License income 2018:
€0.5 million



Smart Module Technology

- SMA has the Exclusive Rights to Market and Sell Tigo's Retrofit Products¹ to participate in the expanding Module Level Electronics Market²
- Only SMA can retrofit any standard PV Module with smart electronics
- In combination with our advanced inverters, our Power+ offering complies with the new US National Electrical Code (NEC 2014 & 2017) rapid shutdown requirements, which will become mandatory for PV plants in the US in January 2019.
- SMA owns the right to acquire Tigo's remaining shares in preference to any other interested party as it holds a right of first refusal.

> SMA has global exclusivity for Tigo products¹ and has a first right of refusal in case a strategic/financial investor intends to buy Tigo Energy.

1. TS-4-R until Q1/2019

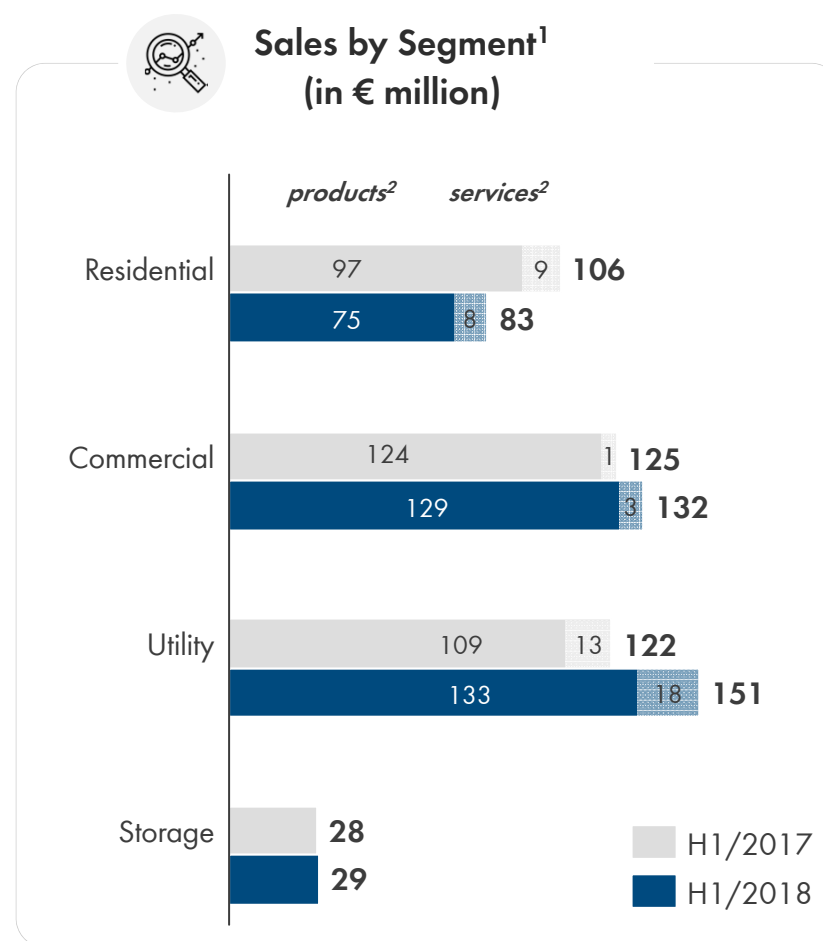
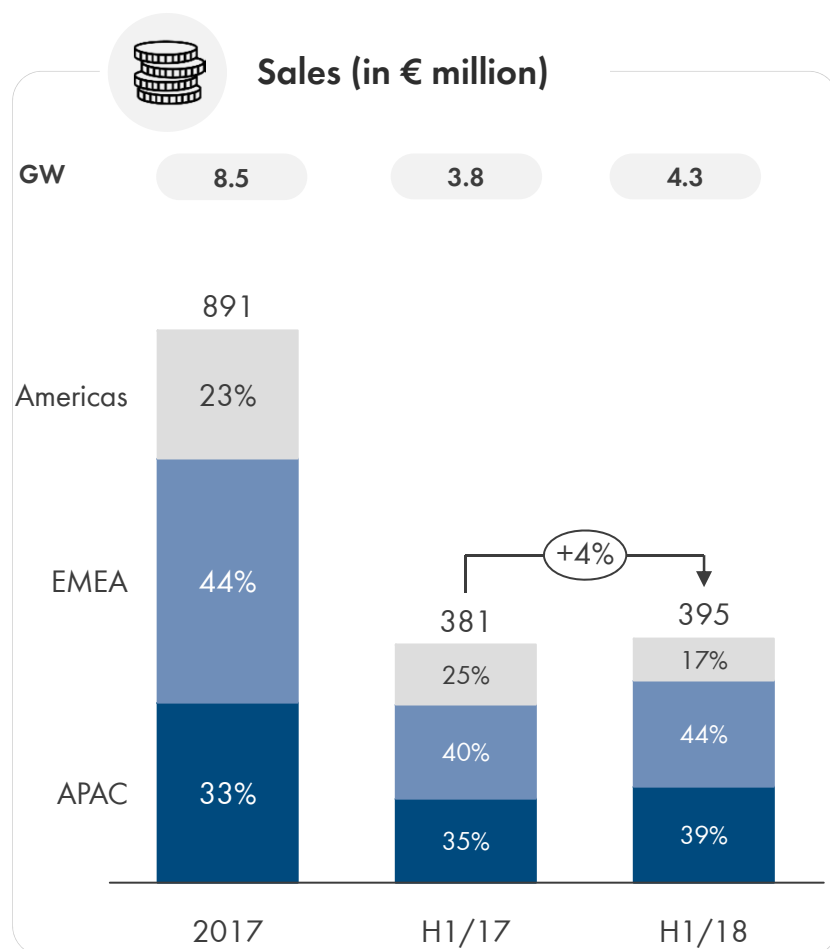
2. In 2016 SMA acquired a 28% stake in Tigo Energy

SMA GENERATED SALES OF €395M AND AN
EBITDA OF > €40M

EBITDA IS AFFECTED BY ADJUSTMENTS OF
WARRANTY PROVISIONS AND DEVALUATION OF
INVENTORIES (NET EFFECT + €8M)

GUIDANCE 2018 CONFIRMED

Sales Growth in H1/2018 Mainly Driven by Positive Development in EMEA and APAC

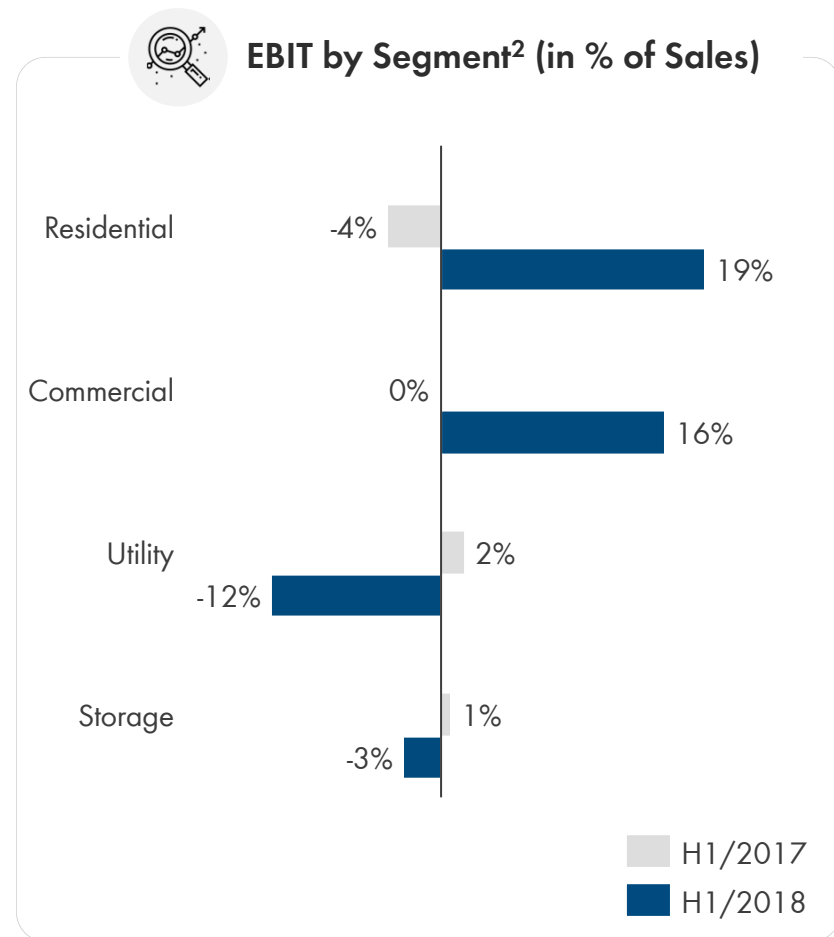
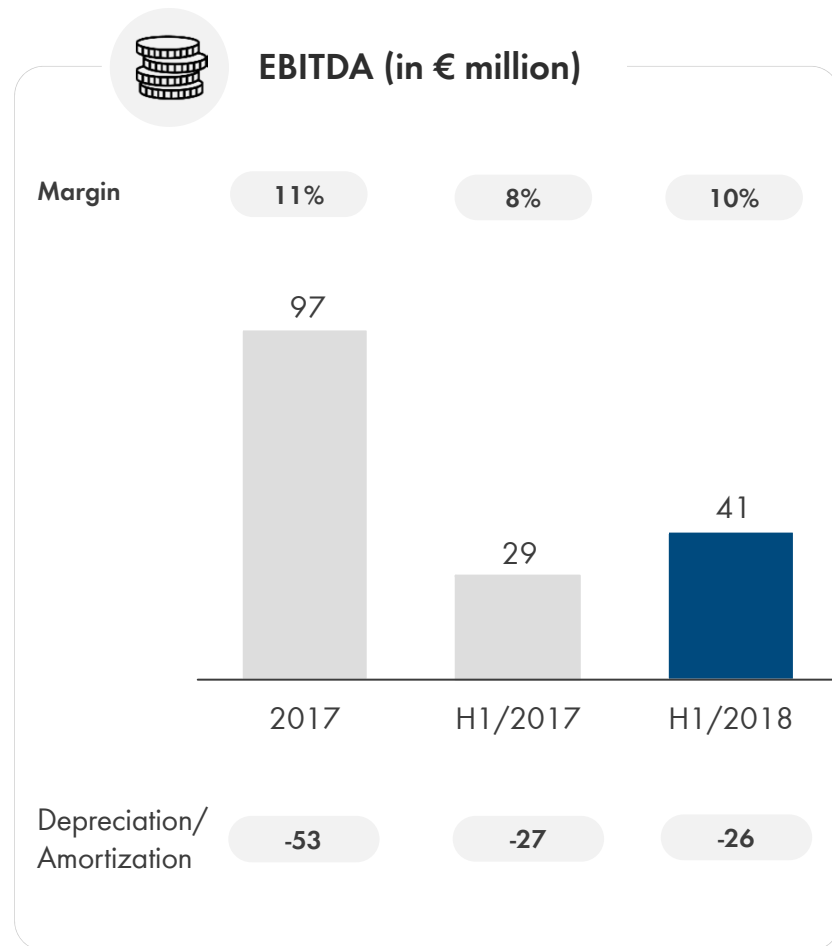


> **U.S. market remains below expectations in the commercial and utility segments.**

1. w/o Digital Energy

2. New Segment information according to IFRS 15 shows sales with external services per segment. Thereby, External Services are unlike the former Service segment and include commissioning, extended warranties, service and maintenance contracts, operational management, remote system monitoring and digital energy services. External Product Sales include inverters, storage systems, communication products, spare parts and accessories. See back up for further information.

EBITDA is Affected by Adjustments of Warranty Provisions and Devaluation of Inventories with a net Impact of +€8 m¹



> **EBITDA of H1/17 included the book gain from the sale of the Railway division (high single-digit €m-amount)**

1. H1/18 net EBITDA effect of €8m: release of general warranty provision + €33m, devaluation of inventories - €14m and - €11m for single warranty provisions

2. w/o Digital Energy

Strong Balance Sheet with equity ratio of > 50 % - Provisions Declined Significantly due to Adjustment of Warranty Provisions

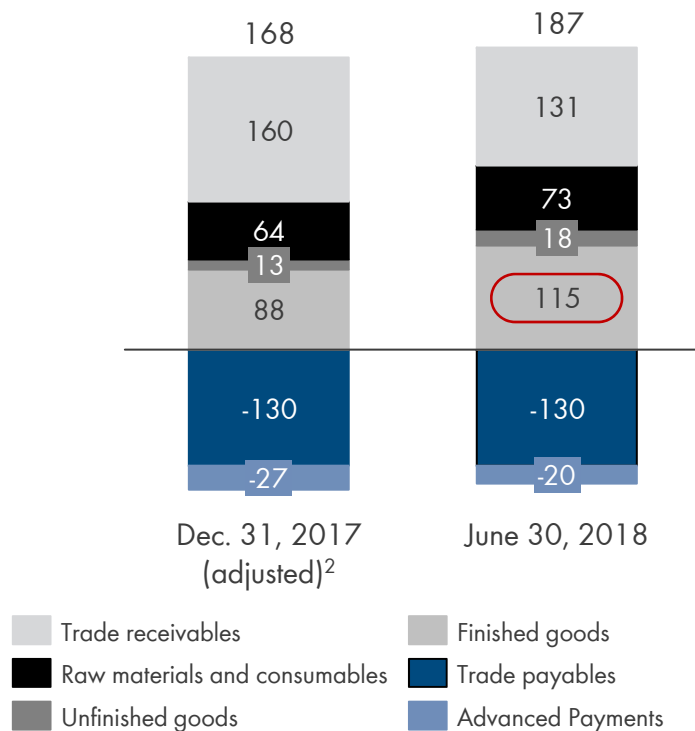


Net Working Capital (in € million)

NWC ratio¹

19%

21%



Group Balance Sheet, reclassified (in € million)

	2017/12/31	2018/06/30	Change
Non-current assets	358	347	-3%
Working capital	325	336	4%
Other assets	63	63	0%
Total cash	470	413	-12%
Shareholder's equity	612	611	0%
Provisions ³	156	124	-20%
Trade payables	130	130	0%
Financial liabilities ⁴	20	19	-6%
Other liabilities ³	298	275	-8%
Total	1,216	1,159	-5%

> **Net Working capital increased due to a build-up in inventories to ensure the ability to deliver in the Residential and Commercial segments.**

1. Net Working Capital ratio: inventory + trade receivables - trade payables (advanced payments included); as of last twelve months sales
2. NWC ratio as of 2018 reporting includes advanced payments; the year end figure 2017 has been adjusted accordingly (see back up for further information)

3. Not interest-bearing

4. w/o not interest bearing derivatives: € 2.5m (2017: € 0.4m)

Cash Flow from Operating Activities Lower than Previous Year Mainly due to Tax Payments and Higher Inventories²



Cash Flow (in € million)

	H1/2017	H1/2018	Change
Net Income	9	11	24%
Gross Cash Flow	22	3	- 87%
Cash Flow from Operating Activities	39	-27	n.m.
Net Capex ¹	-13	-17	27%
Free Cash Flow (Adj.)	26	-44	n.m.
Net Investments from Securities and Other Financial Assets	-50	-6	- 87%
Acquisitions/ Divestitures	17	0	
Free Cash Flow (IFRS)	-7	-51	n.m.

> **SMA's business is not capital intense. SMA will generate a positive Free Cash Flow in 2018 due to a stronger second half of 2018.**

1. Thereof R&D capitalization: H1/2018: €10m (H1/2017: €8m)

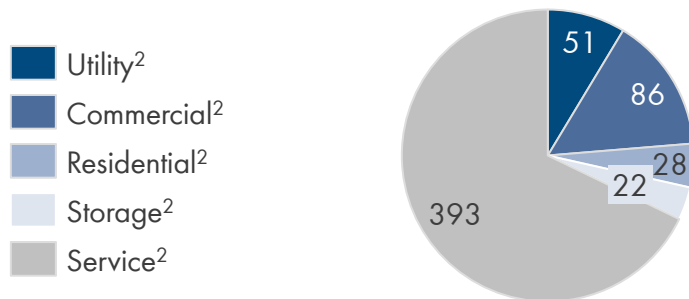
2. Income tax paid: H1/2018: - €20m; H1/2017: + €4m; change in inventories H1/2018:- €55m, H1/2017 - €16m

Order Backlog Decreased due to Higher Ability to Deliver, Market Uncertainties and Imminent Product Changes

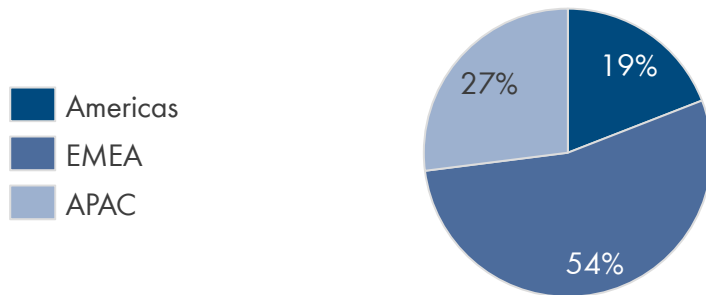


Order Backlog by Segment (in €m) and Region (in %)

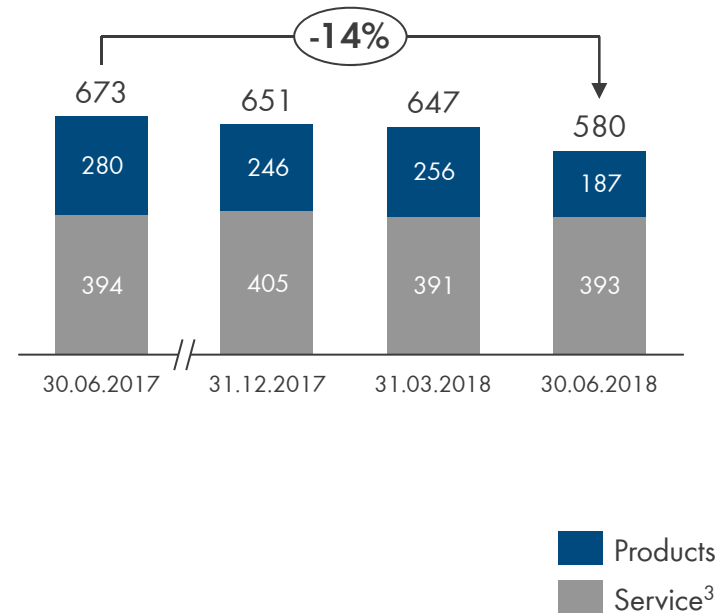
Total order backlog: €580m (June 30, 2018)¹



Product order backlog by regions (in%)



Order Backlog Development (in € million)



> The order backlog is expected to remain on the same level or increase slightly in the months to come.

1. Thereof €187m for products

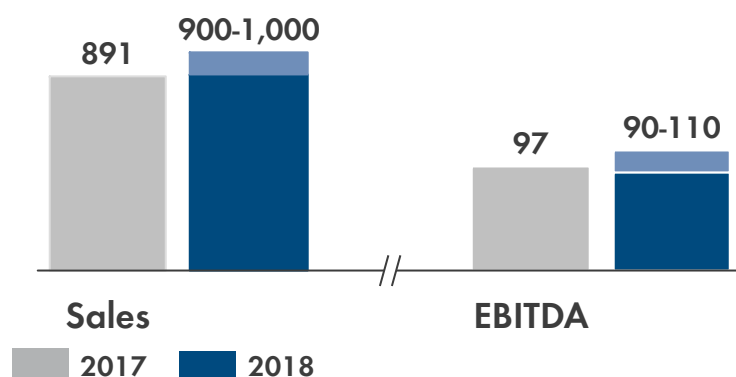
2. w/o „Service“

3. Order backlog attributable to the former segment „Service“, which will be recognized over a period of 5 to 10 years

Guidance 2018 confirmed - Management Estimates Moderate Sales and Earnings Increase despite Headwinds



Guidance 2018 (in € million)



	2018
Expenses for Digital Solutions	>€10m
NWC-Ratio ¹	19-23%
Tax Ratio	c. 25-30%
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 sales growth in Commercial due to new products and less supply constraints
- Supply constraints impacted SMA's business in H1/2018, but will have only a small impact in H2/2018.
- Energy Management and digital solution business will only have limited sales contribution.
- Price pressure in Utility remains high. Higher price reductions than initially expected in Residential and Commercial.
- Acquisitions in the fields of energy management technology and O&M (total volume €50-100 m) possible.

> **New products and improved capability to deliver will result in a stronger second half of 2018.**

1. As of 2018, the net working capital ratio includes advanced payments: inventory + trade receivables-trade payables (incl. advanced payments); as of LTM
 2. Incl. c. €20m for R&D

SMA is a Leading player for PV Inverters, Storage and O&M



Investment Highlights

Uniquely positioned in the solar market / best brand

- A leading global specialist for photovoltaics system technology 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 ennexOS¹, 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.**

ENERGY
THAT
CHANGES



SOCIAL MEDIA
www.SMA.de/Newsroom



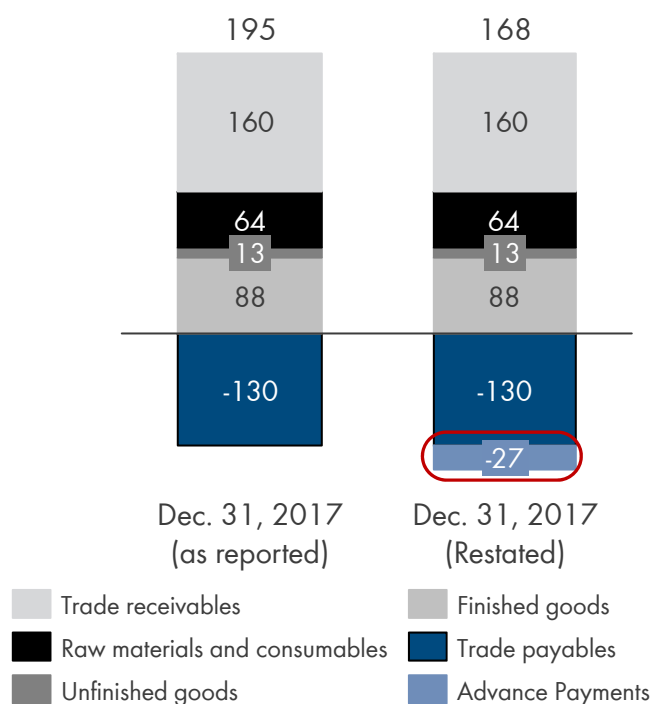
For 2018, SMA has Changed its Calculation Method for Net Working Capital

Net Working Capital Calculation Changes¹

NWC ratio¹

22%

19%



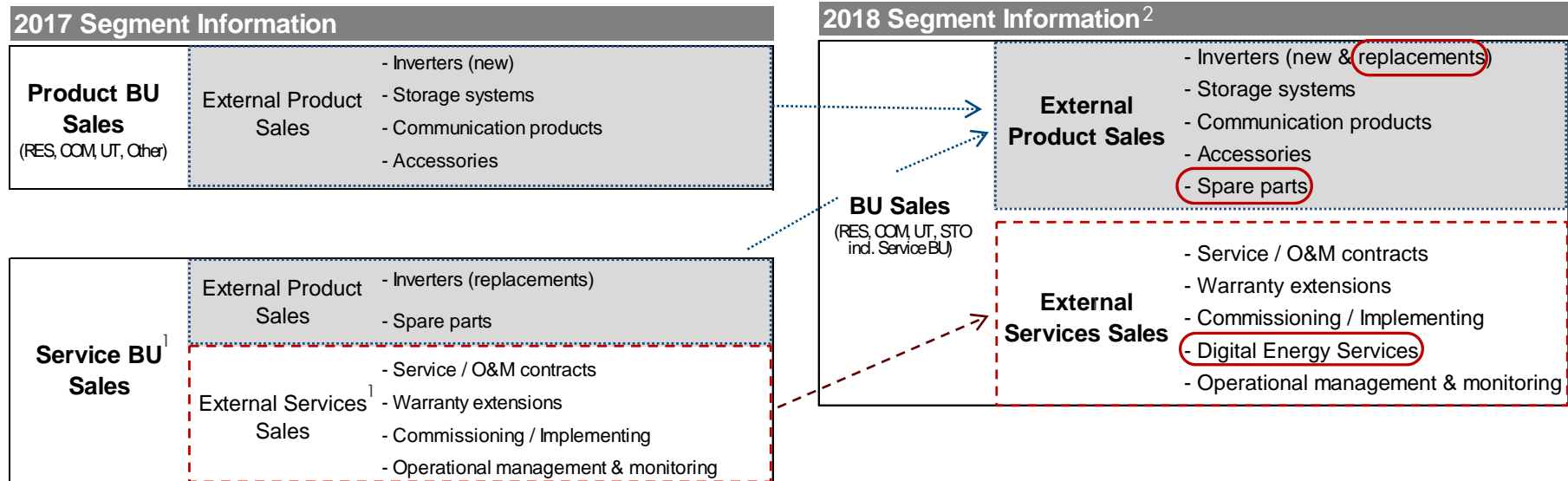
Net Working Capital Restatement

- As of 2018, the net working capital ratio includes advanced payments from customers
- $NWC = \text{trade receivables} + \text{inventories} - \text{trade payables} - \text{liabilities from advanced payments from customers}$

1. Net Working Capital ratio as of 2018: inventory + trade receivables - trade payables (advanced payments included); as of last twelve months sale

For 2018, SMA has Changed its Segment Information - it now Includes Details on External Product and Services Sales (IFRS 15)

Changes in Segment Information



1. Please note: Service BU is not the same as external Services sales (per IFRS)

2. See Quarterly Financial Statement January to March 2018, page 20, Segment Information