



**SMA SOLAR TECHNOLOGY AG**  
**Metzler Small Cap Days**  
**Frankfurt**

Presented by Kaveh Rouhi, CFO  
April 14th, 2026

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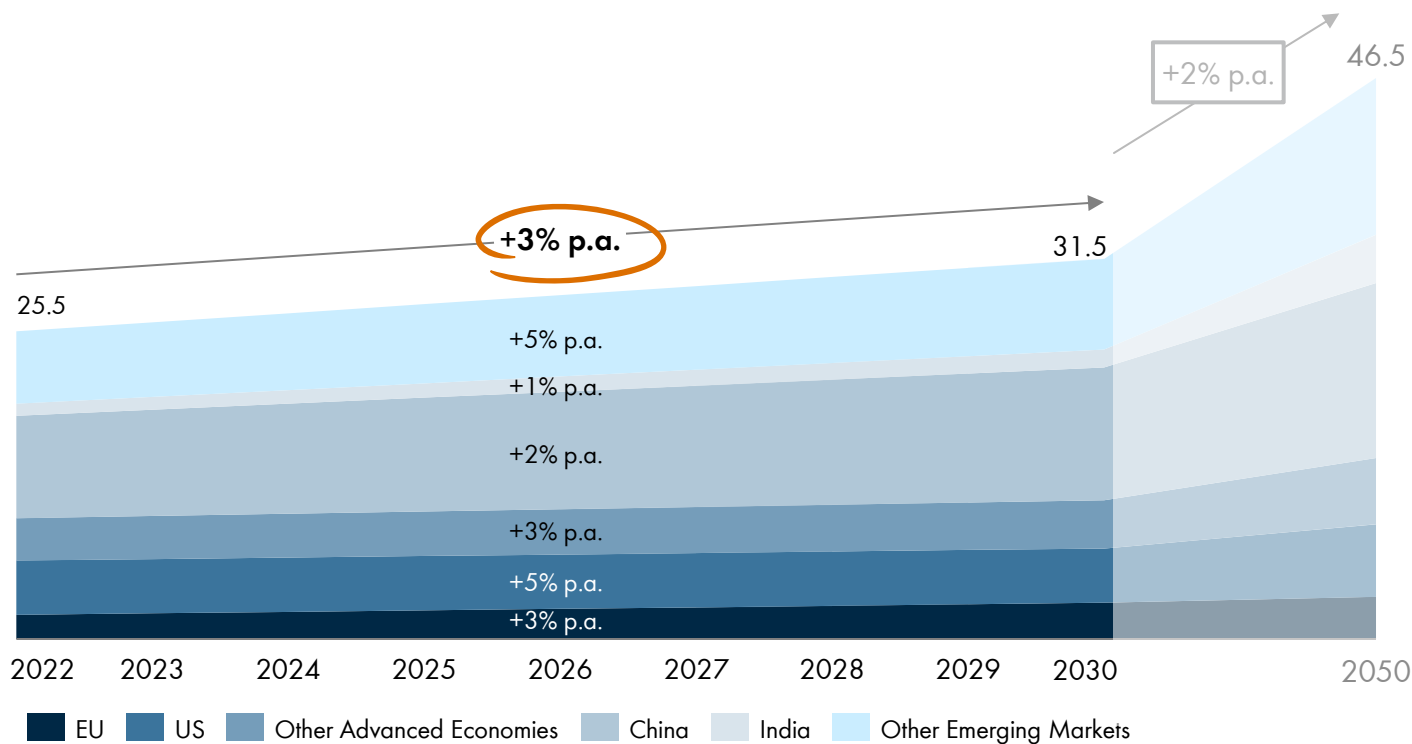
# The Solar Market

# Electricity demand rising 3% p.a., driven by industry electrification and data boom



## Global electrical power demand forecast

In Thousand TWh



## Key insights

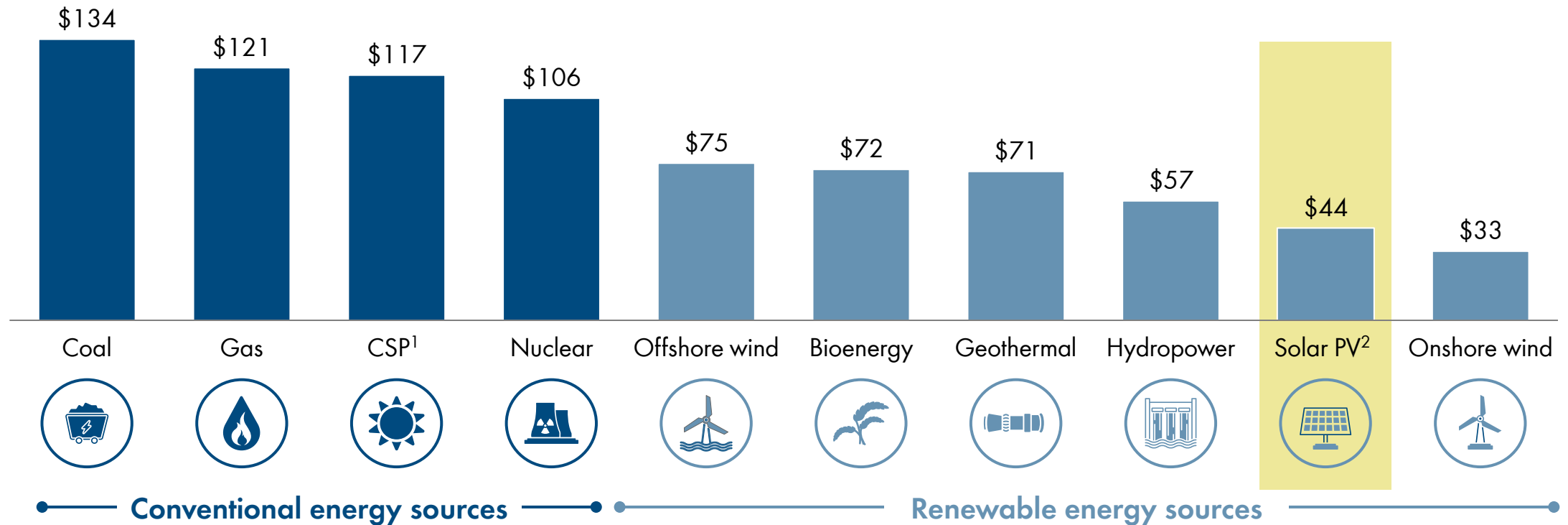
- Electrification of **heating**, electrification of **mobility** and **smart appliances significantly increasing private consumption**
- **AI, cloud computing, & digitalization** are accelerating the expansion of data centers, whose **electricity use may triple by 2030**
- **Decarbonization of industries** such as steel and chemicals to electrical heating due to sustainability targets (e.g., electrical furnaces)
- **Efficiency improvements** expected in the future, but **not enough to offset demand growth as outlined above**



# To address demand, Solar PV second cheapest form of electricity source

## Global average Levelized Cost of Electricity (LCOE) by energy source

In \$/MWh, 2024 real



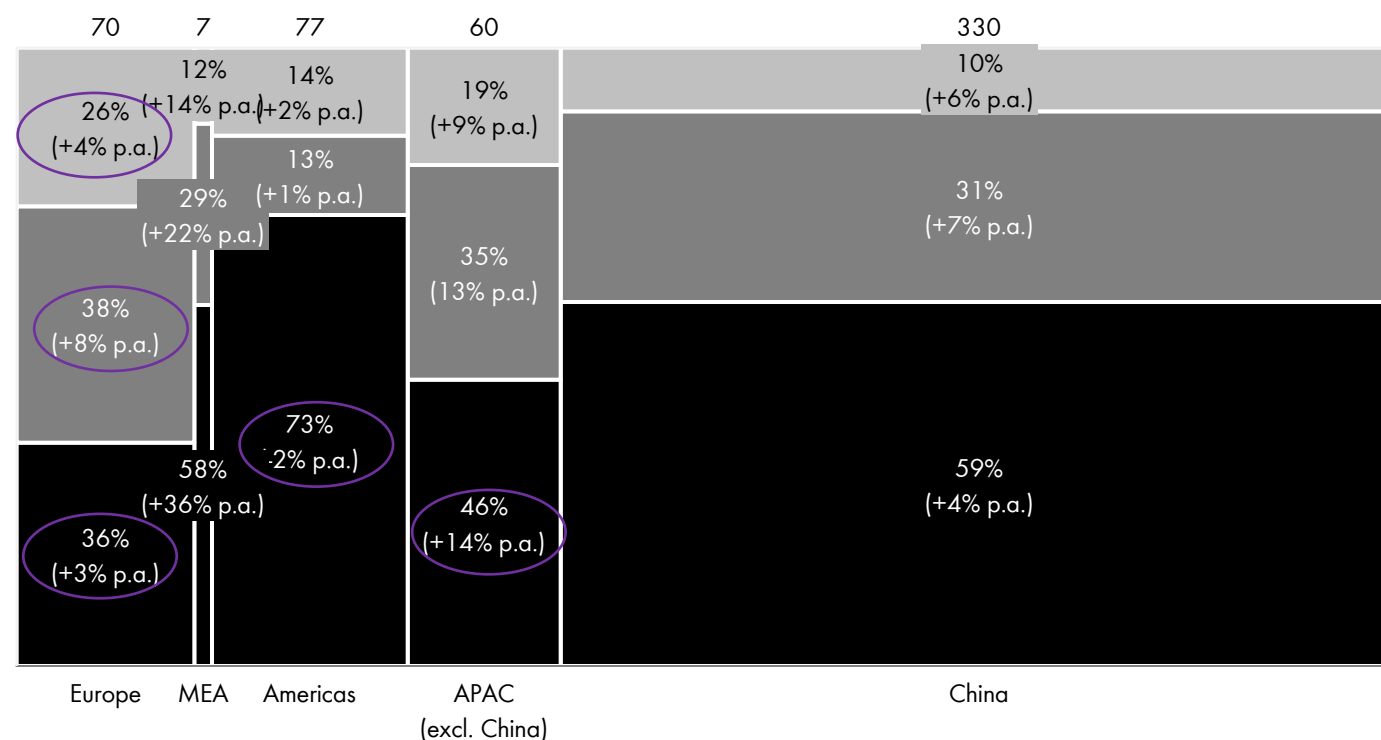
1. Concentrated Solar Power; 2. Average across segments  
 Source: Lazard; IEA; IRENA (International Renewable Energy Agency); BCG analysis



# China covers half of total PV installation and has strongest growth in C&I – SMA main market show good growth potential

## Global annual solar PV installation FC 2024 by region/segment

Total in GW, Regional-split in % of total region, CAGR in % p.a. 2024 to 2030



## Key insights

- **Chinese market accounting for 61% global PV installations in 2024** driven by domestic manufacturing scale and strong grid integration
- **Chinese market with steady growth of 4-7% p.a.** across all segments between 2024 to 2030
- **Utility with highest regional share (>70%) in Americas** fueled by tax incentives/ credits and accelerated permit processes
- **Residential and C&I with significant share in Europe and APAC (excl. China)** due to high electricity prices (grid-parity) and subsidies

Source: Wood Mackenzie; IEA; SolarPowerEurope; GlobalData; BCG analysis

■ Utility ■ Commercial & industrial ■ Residential

○ Most relevant markets for SMA

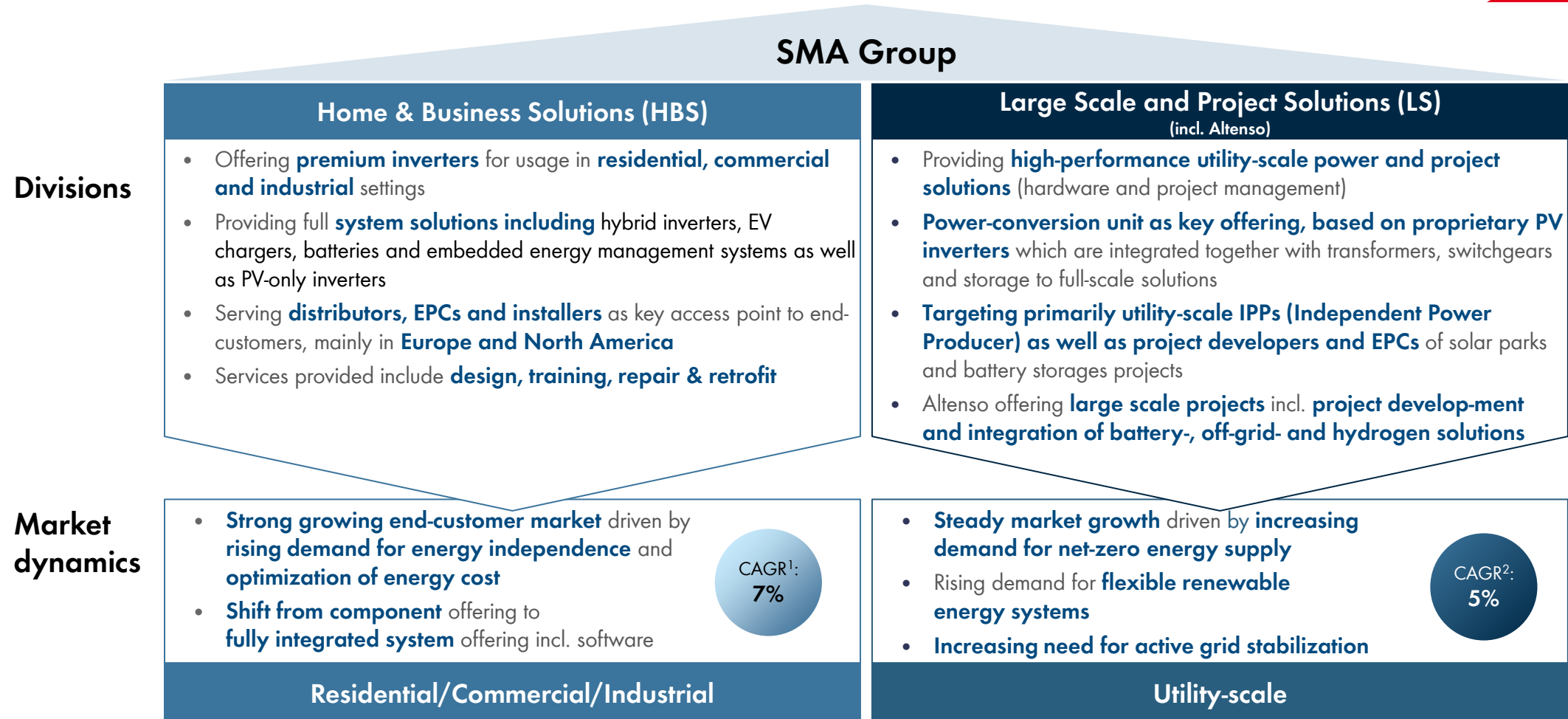
xx% - % of regional share 2024

(xx%) - CAGR 2024-2030



# SMA's Business Model & Market Positioning

# Two core divisions under SMA Group with distinct market dynamics



1. CAGR for global HBS PV-market, 2024–2030; 2. CAGR for global LS PV-market, 2024–2030  
 Note: IPPs = Independent power producers; EPC = Engineering, procurement and construction  
 Source: Company information; BCG analysis



# LS | In-house OEM of high-performance utility-scale Power Conversion Systems

## Current business model

- Focus on **in-house design and manufacturing of high-performance Power Conversion System and grid-critical technologies**, including embedded software
- Portfolio includes **grid-compliant system technology, monitoring solutions, and services** such as (after sales) field services and trainings
- Serves the **global PV and Storage utility-scale solar market**, addressing primarily **utility-scale IPPs as well as EPCs and project developers of solar plant projects**

### LS value chain Excl. Altense



## Target differentiation



### Brand trust

Longstanding track record recognized globally for resilience and sustainability, actively supporting (new) client-connections



### System quality and flexibility

High-end quality portfolio with plug & play design and global standards compliance which can be tailored project-specific



### Vertical integration:

Expansion capabilities towards and better monetization in "plan" and "operate" as addition to "build" large scale products

### Current differentiation

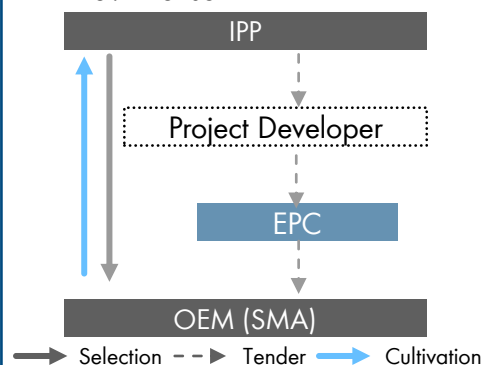


System offering



## Go-to-market approach

Excl. Altense



- Direct **B2B sales model** with key account management **targeting IPPs**
- System specified by developers or asset owners, with **EPCs as main contractual buyers of SMA systems**
- **Project acquisition primarily through tenders**, requiring technical prequalification and bankability

## Challenges



### Scaling

Limited scale in service, customer projects, and engineering constrains performance also linked to automation gaps



### Product delays

Delayed launch of new generation PEARL due to testing capacity constraints for complex use cases



### Lack of investment

Insufficient investment relative to rising complexity in use cases and the need to strengthen differentiation

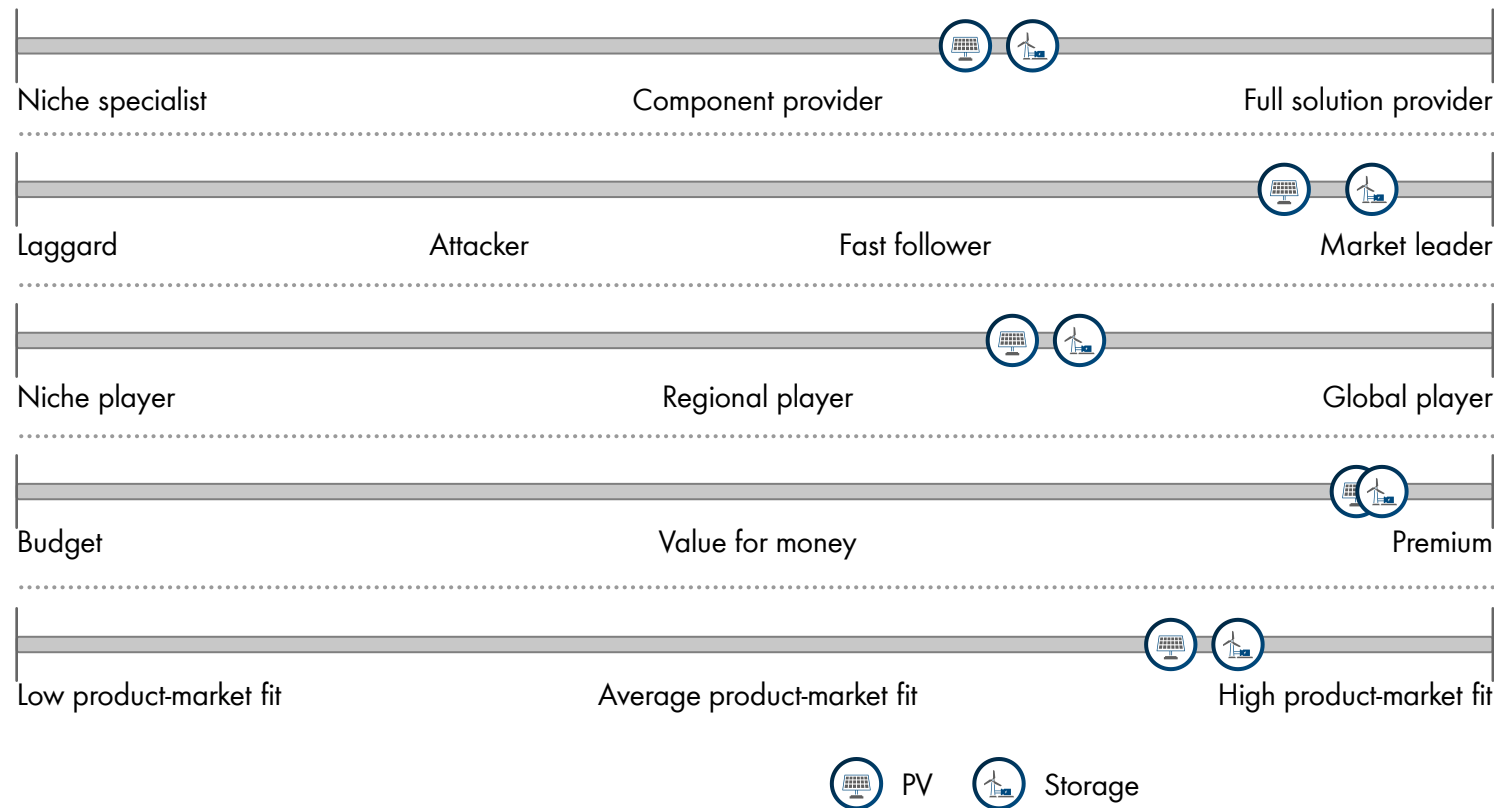
● Low differentiation / mature business

● High differentiation / growth business

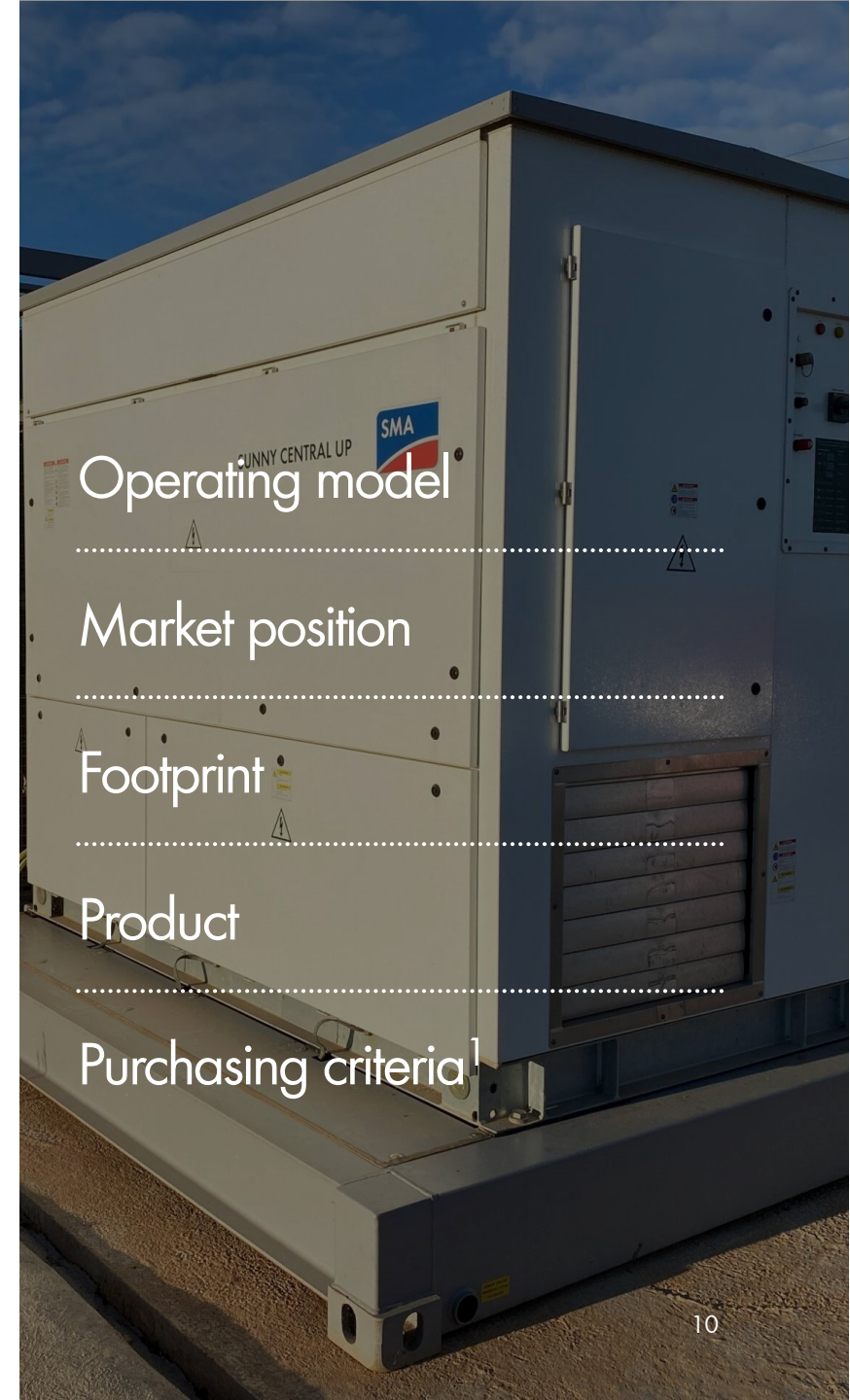
PCS= Power Conversion Unit  
Source: BCG analysis

# LS | Overall, LS positioned as a leading global high-end OEM

## Large scale positioning



1. Battery product-market fit varies in different applications  
Source: BCG analysis





# LS-Altenseo | Innovative project developer of complex, tailored utility-scale solutions

## Current business model

- Focus on the **design, engineering, and delivery of customized energy systems** for innovative off-grid, hybrid, storage, and hydrogen applications
- **Solution provider** integrating SMA core technologies with third-party components for **niche and emerging segments** such as critical infrastructure or hydrogen P2G projects
- Operates **globally with a project-based model**, working closely with technology partners, public institutions, and industrial clients

### Altenseo value chain



## Target differentiation



### Technology leadership

Specialized in **storage, off-grid, and P2G solutions**, applicable in **global markets** with local requirements



### Portfolio agility

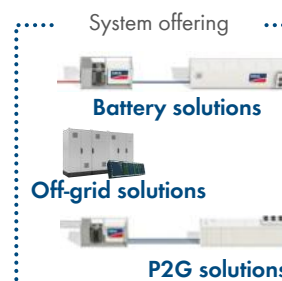
Expertise in **broad range of solution capabilities** can be **tailored to niche use cases**, adapting quickly to emerging market trends



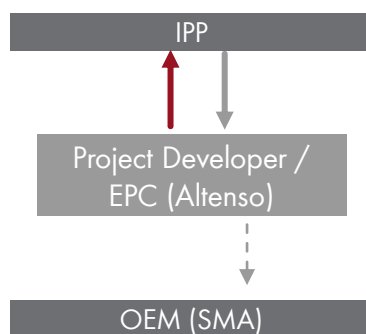
### Internal component sourcing

**Direct access to SMA's utility-scale product portfolio and engineering expertise** enables advanced solution delivery

### Current differentiation



## Go-to-market approach



- Direct **B2B sales model targeting** industrial, public-sector, & infrastructure **IPPs** with complex energy system needs
- Acts as **project developer or technical lead**, delivering customized full turnkey solutions
- **Acquires projects via public tenders**, pilot programs, or strategic partnerships, requiring technical prequalification and bankability
- **Hydrogen exception: selling power-conversion units** via electrolyzer OEMs, but preparing to shift towards direct developer/EPC

→ Selection    - - → Tender    → Cultivation

Source: BCG analysis

## Challenges



### Working capital

Large, milestone-based projects **require cash over long cycles** while **concentrated investor exposure** increases dependency risk



### Project risks

**Cluster risks** through small number of **high value projects**, also impacted by **trade uncertainty** (e.g., US tariffs)



### Growth investment

**Lack of internal capacity** (such as investment capital or staffing) **to fully support ambitious growth targets**

● Low differentiation / mature business

● High differentiation / growth business

# HBS | In-house OEM of solar energy systems and smart solutions



## Current business model

- Focus on **in-house design and manufacturing of core PV system components**, including hardware and embedded software
- Product **portfolio includes inverters, EV chargers, storages and energy management systems** as well as product support, digital tools, and after-sales services
- Serves the **residential and commercial market globally**, with a strong presence in Europe, by primarily **targeting installers and distributors**

### HBS value chain



## Target differentiation



### Path towards system offering

**Complementary single provider product portfolio**, enabling centrally managed E2E solutions incl. **cybersecurity capabilities**



### Smart solutions

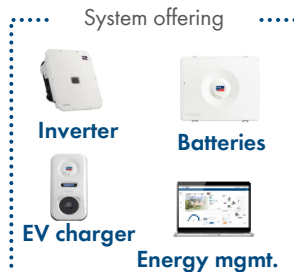
**Advanced energy management platforms** (e.g., Sunny Portal) enables real-time optimization solutions



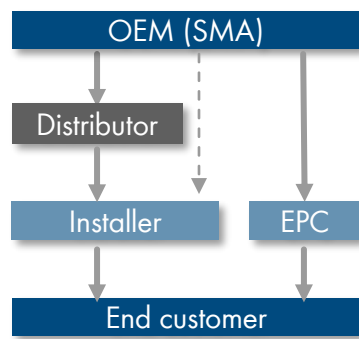
### Brand

Strong European brand with **long-standing presence** perceived as a **secure and local partner**

**Current differentiation**



## Go-to-market approach



- **Three-tier model:** sales via distributors and installers to end customers
- **Distributors hold key market influence** with direct access to local installer networks
- **Installers act as gatekeepers to end customers and influence** product selection
- **Direct two-tier access to EPC networks** in C&I segments
- **Strong Pull-Strategy** to broader installer EPCs/End-customers **to enhance brand and differentiated offering**

→ Channel pull    - - -> Channel push

Source: BCG analysis

## Challenges



### Competition

Intense **pressure from large Asian players** with superior scale, and pricing power (e.g., Sungrow with -8x revenue)



### Service

**Inconsistent quality of services** not meeting rising customer expectations on premium products



### Regulatory

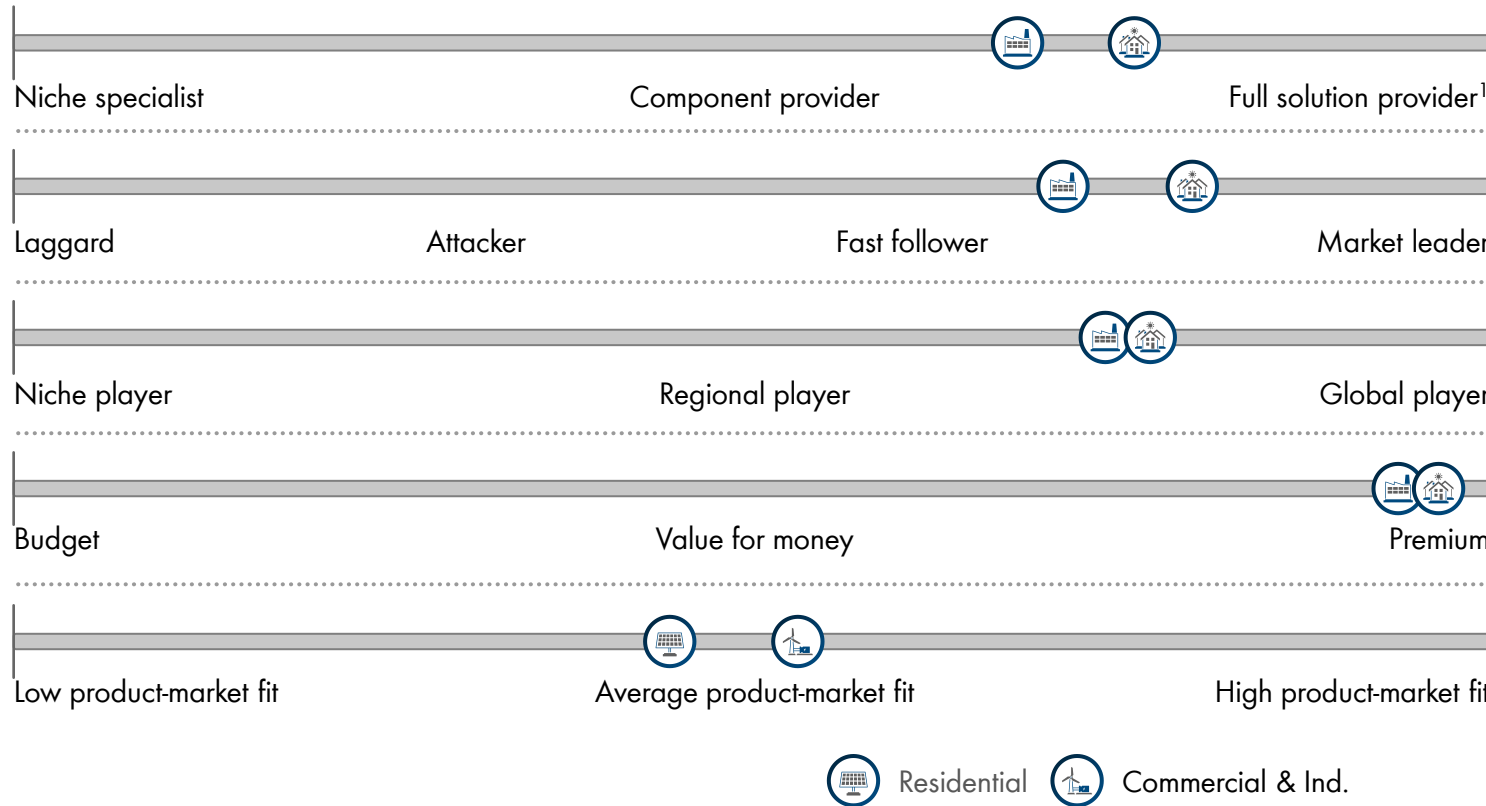
Increasingly **uncertain policy landscape**, with growing influence from **international protectionism**

● Low differentiation / mature business

● High differentiation / growth business

# HBS | HBS positioned as global premium full solution player

## HBS positioning



1. Full solution provider: Offers system solution incl. inverter, batteries, EMS features, etc.  
 Source: BCG analysis



Operating model

Market position

Footprint

Product

Purchasing criteria



# Review FY 2025



Sales

**€1,516m**

FY 2024:  
€1,530m

Free-Cash-Flow

**€+110m**

FY 2024:  
€-184m

EBITDA<sup>1</sup>

**€-65m**

FY 2024:  
€-16m

Order backlog

**€1,352m**

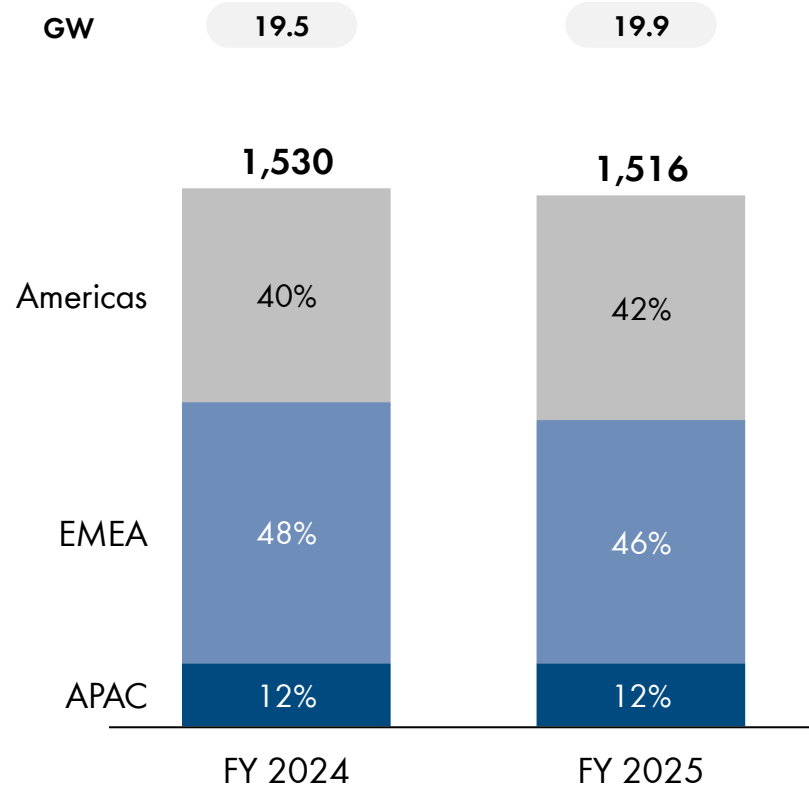
FY 2024:  
€1,356m

1. For the one-off effects accounted for in EBITDA, please refer to the Annual Report 2025 on page 33.

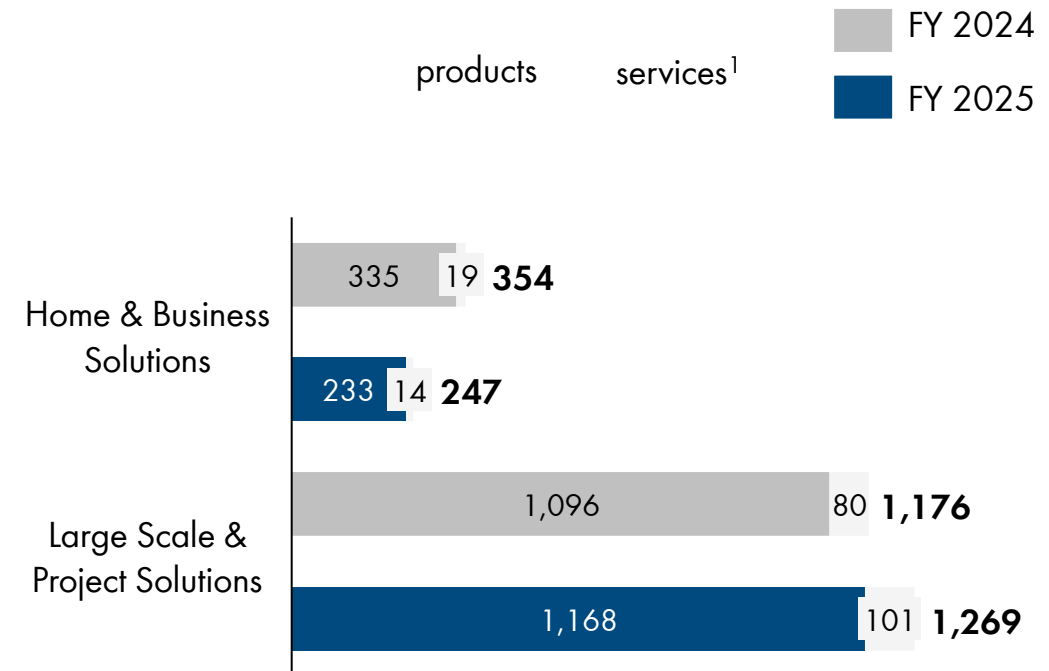
# Sales slightly below prior year with revenue growth in Large Scale & Project Solutions and weak sales in HBS as expected



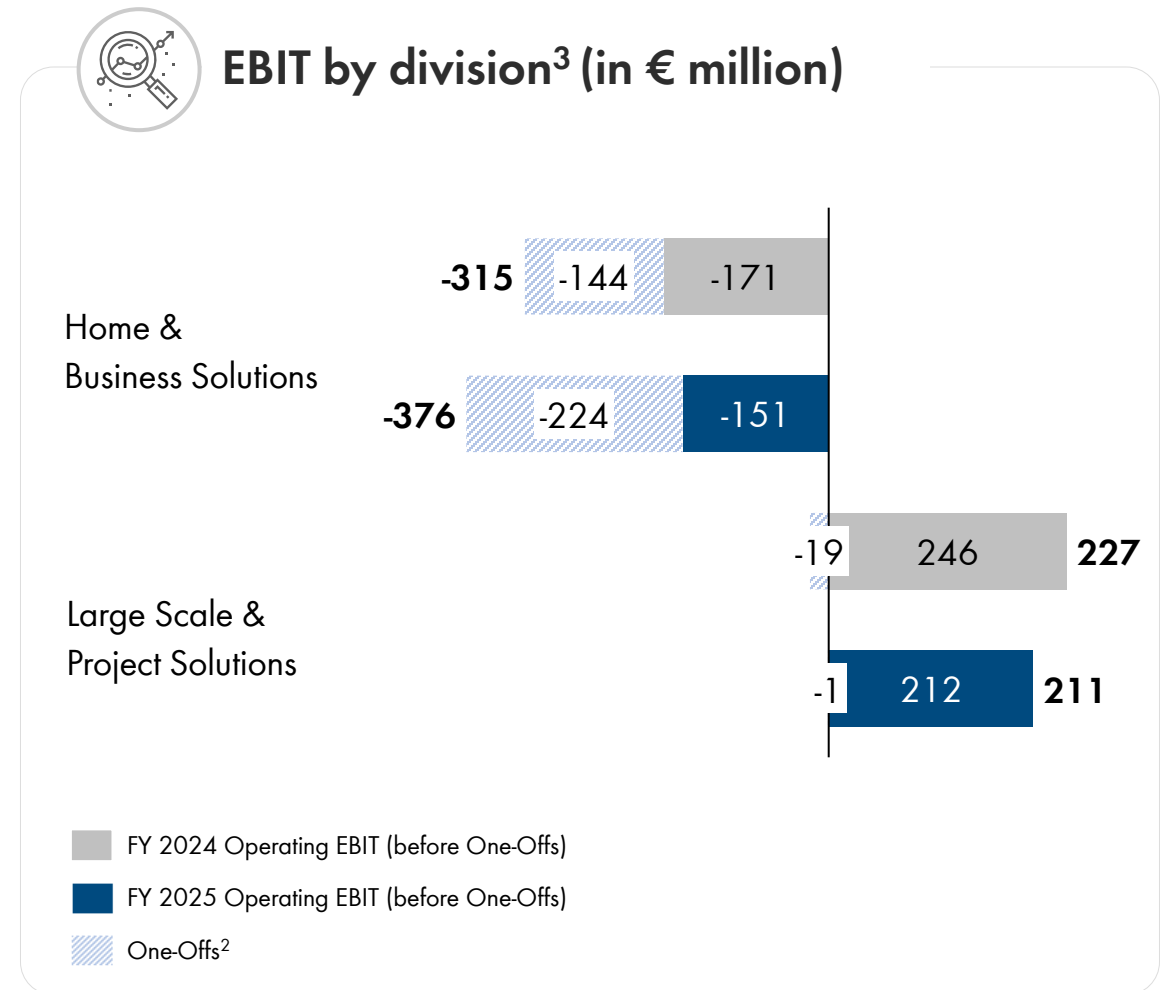
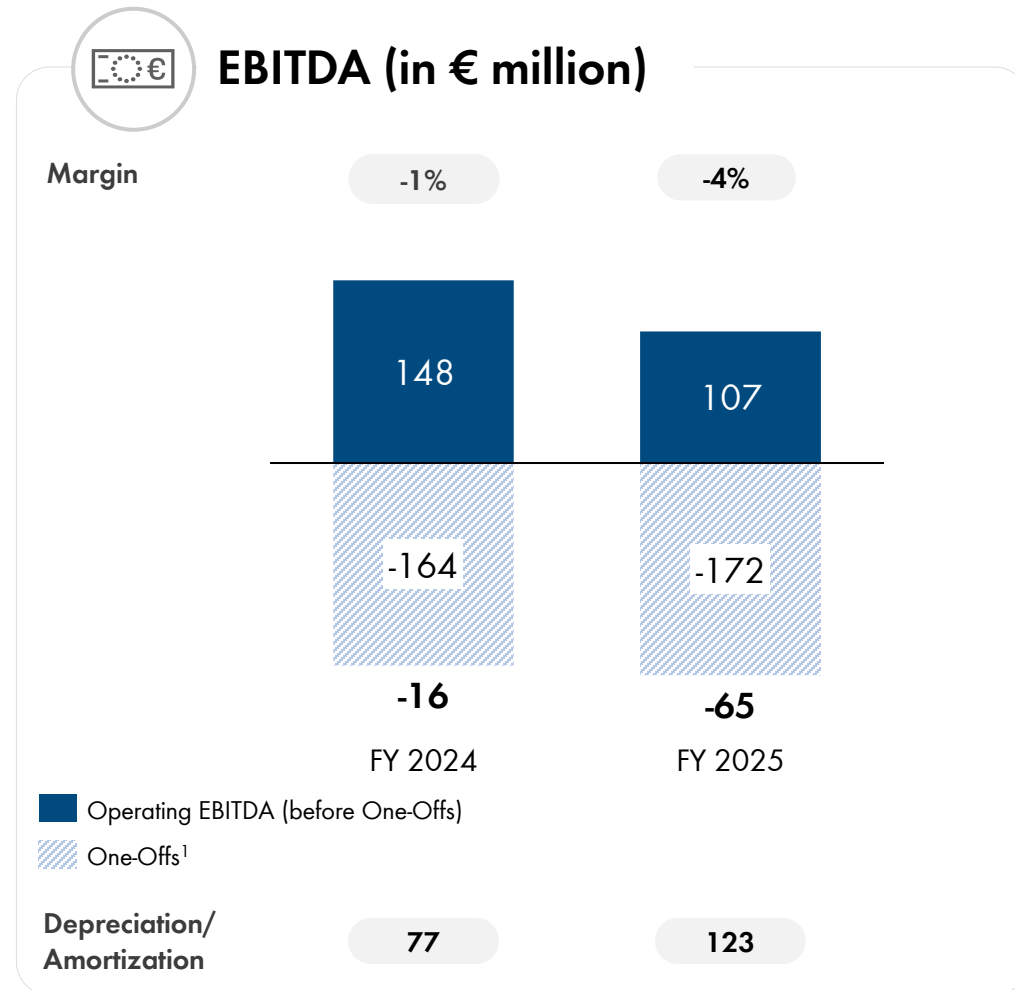
## Sales per region (in € million)



## Sales by division (in € million)



Profitability driven by Large Scale division while HBS significantly negative due to lower sales volume and resulting lower fixed cost depression as well as significant one-offs

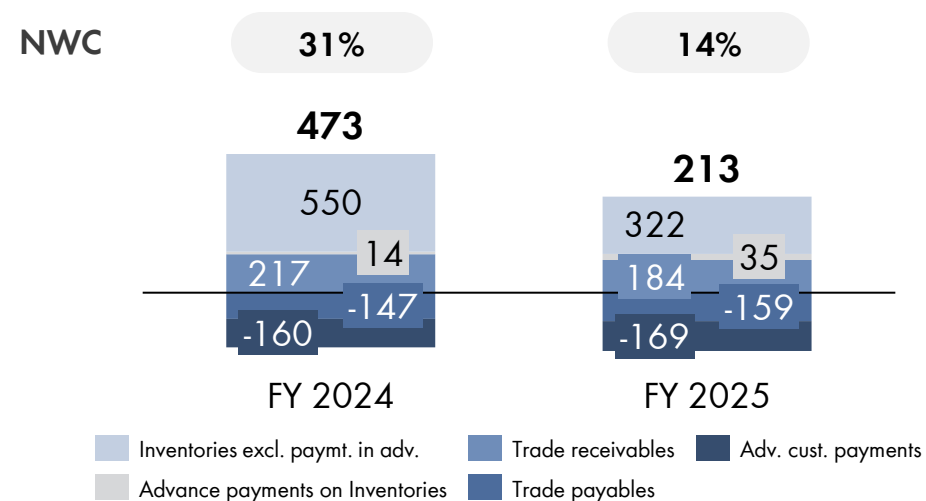


1. For the one-off effects accounted for in EBITDA, please refer to the Annual Report 2025 on pages 33.  
 2. For the one-off effects accounted for in EBIT, please refer to the Annual Report 2025 on page 34 for HBS and page 35 for LSPS.  
 3. Due to one-off effects in the Corporate division, the sum of the divisions does not equal the total for the Group.

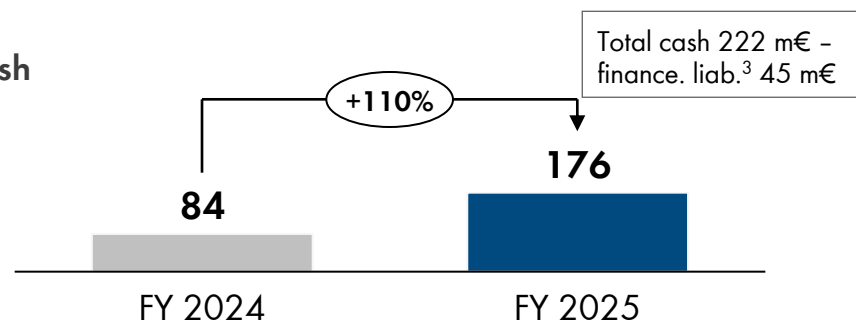
NWC reduction measures taking effect driving recovery of cash which supported the reduction of financial liabilities to credit institutions by €100m



### NWC | Net Cash (in € million)



### Net Cash



### Group Balance Sheet (in € million)

	Year-end 2024	Year-end 2025	Change
<b>Non-current assets</b>	479	492	3%
<b>Working capital</b>	780	541	-31%
<b>Other assets<sup>1</sup></b>	53	52	-2%
<b>Total cash</b>	229	222	-3%
<b>Shareholder's equity</b>	553	366	-34%
<b>Provisions<sup>2</sup></b>	231	237	2%
<b>Trade payables</b>	147	159	8%
<b>Financial liabilities<sup>3</sup></b>	145	45	-69%
<b>Other liabilities<sup>2,4</sup></b>	464	499	8%
<b>TOTAL</b>	<b>1,541</b>	<b>1,306</b>	<b>-15%</b>

1. Other assets include financial receivables, income tax assets, value added tax receivables, other financial assets and assets held for sale.

2. Not interest-bearing

3. w/o not interest-bearing derivatives: 0.1m€ (2024: 0.0m€) and IFRS 16 Leases of 87.8m€ (2024: 44.3m€).

4. Other liabilities include advanced customer payments, deferred income from extended guarantees and service & maintenance contracts, personnel-related liabilities and customer bonuses.

Free cash flow well above prior year, mainly driven by positive cash gains from operating profits as well as effective net working capital reduction measures



## Cash Flow (in € million)

	FY 2024	FY 2025
<b>Net Income</b>	<b>-118</b>	<b>-181</b>
Depreciation and Amortization <sup>1</sup> (incl. one-off effects)	77	123
Non-cash P&L effects & changes in provisions <sup>2</sup> (incl. one-off effects)	162	166
Non-P&L cash effects <sup>3</sup> (incl. one-off effects)	-47	-80
Cash Flow from changes in NWC	-199	115
<b>Cash Flow from Operating Activities</b>	<b>-125</b>	<b>143</b>
Net Capex <sup>4</sup>	-90	-49
Cash inflow from divestments	31 <sup>5</sup>	16 <sup>6</sup>
<b>Free Cash Flow<sup>7</sup></b>	<b>-184</b>	<b>110</b>

1. Incl. impairments for R&D and fixed assets (71m€ in 2025; 27 m€ in 2024)

2. Incl. non-cash tax and interest expenses (16m€ in 2025; 11m€ in 2024), provisions on inventories (133m€ in 2025; 115m€ in 2024), provisions for doubtful receivables (12m€ in 2025; 4m€ in 2024), Change in provisions due to warranty related movements (long/short) and the increase/decrease in provisions for future restructuring payments (5m€ in 2025; 30m€ in 2024)

3. Incl. non-cash income from deferred tax assets (-35m€ in 2025), interest paid, interest received and taxes paid (-28m€ in 2025; -12m€ in 2024) and cash inflow from the sale of project companies reassigned to cash inflow from divestments (-16m€ in 2025; -31m€ in 2024)

4. Incl. capitalized R&D project costs

5. Incl. Cash inflow of 18m€ from the sale of the shares in elaxon and an amount in the low-double-digit million range from the sale of a Battery Storage Project Company of Altenseo; 2024 reorganized for the purposes of a uniform, comparable presentation

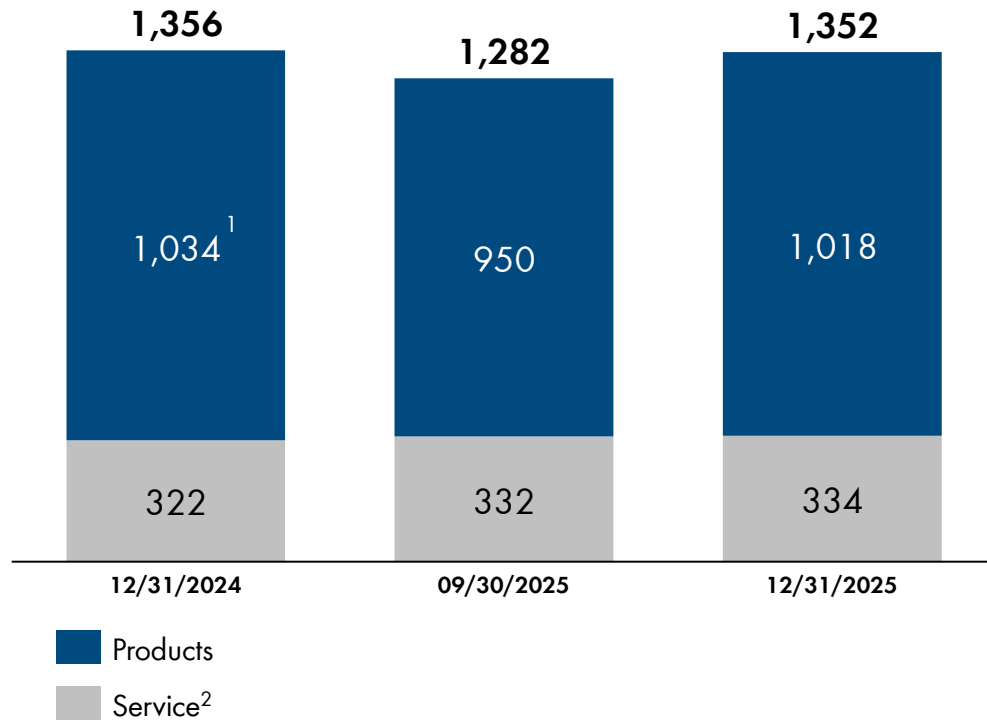
6. Incl. Cash inflows of a low-single-digit million euro amount from the sale of conevea, as well as a low-double-digit million euro amount from the sale of two Battery Storage Project Companies of Altenseo

7. W/o Net Investments from Securities and Other Financial Assets

# Order Backlog on previous year's level with product order backlog of €1 bn



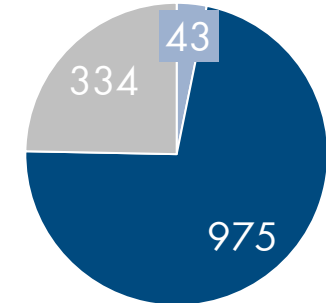
## Order backlog development (in €m)



## Order backlog by segment (in €m) and region (in %)

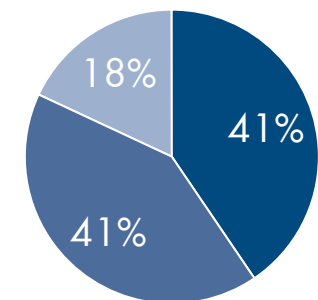
Total order backlog: €1,352m (December 31, 2025)

- Home & Business Solutions<sup>3</sup>
- Large Scale & Project Solutions<sup>3</sup>
- Service



## Product order backlog by regions (in%)

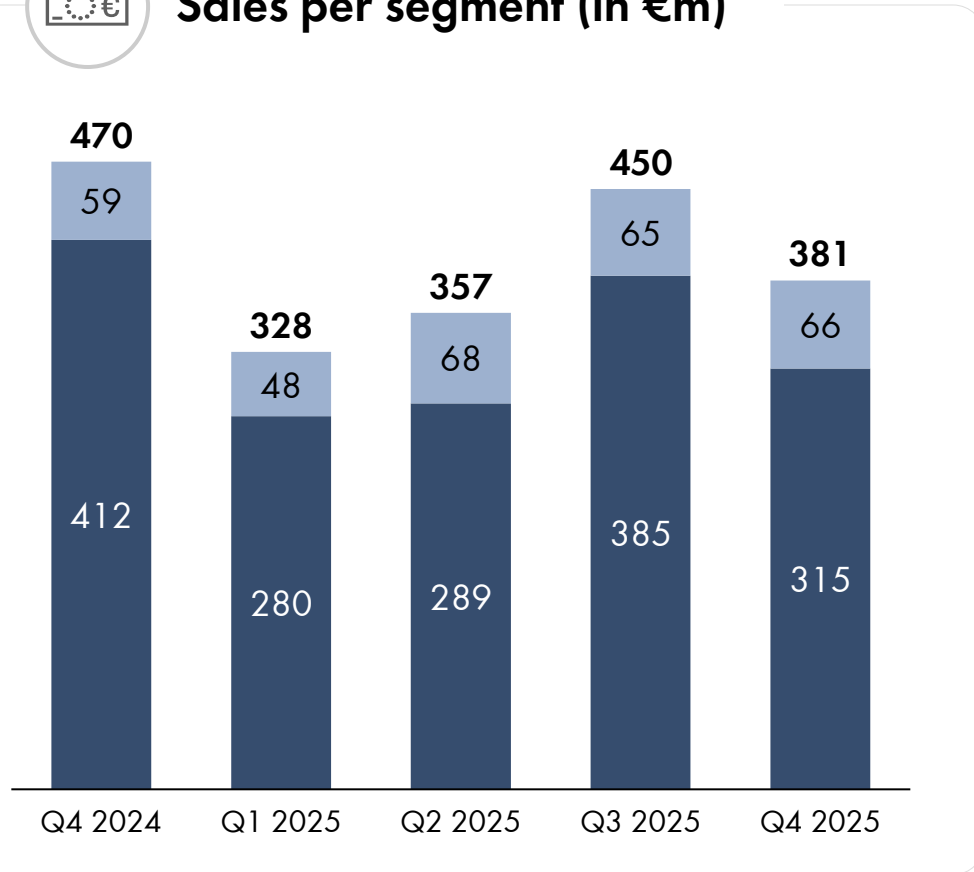
- EMEA
- Americas
- APAC



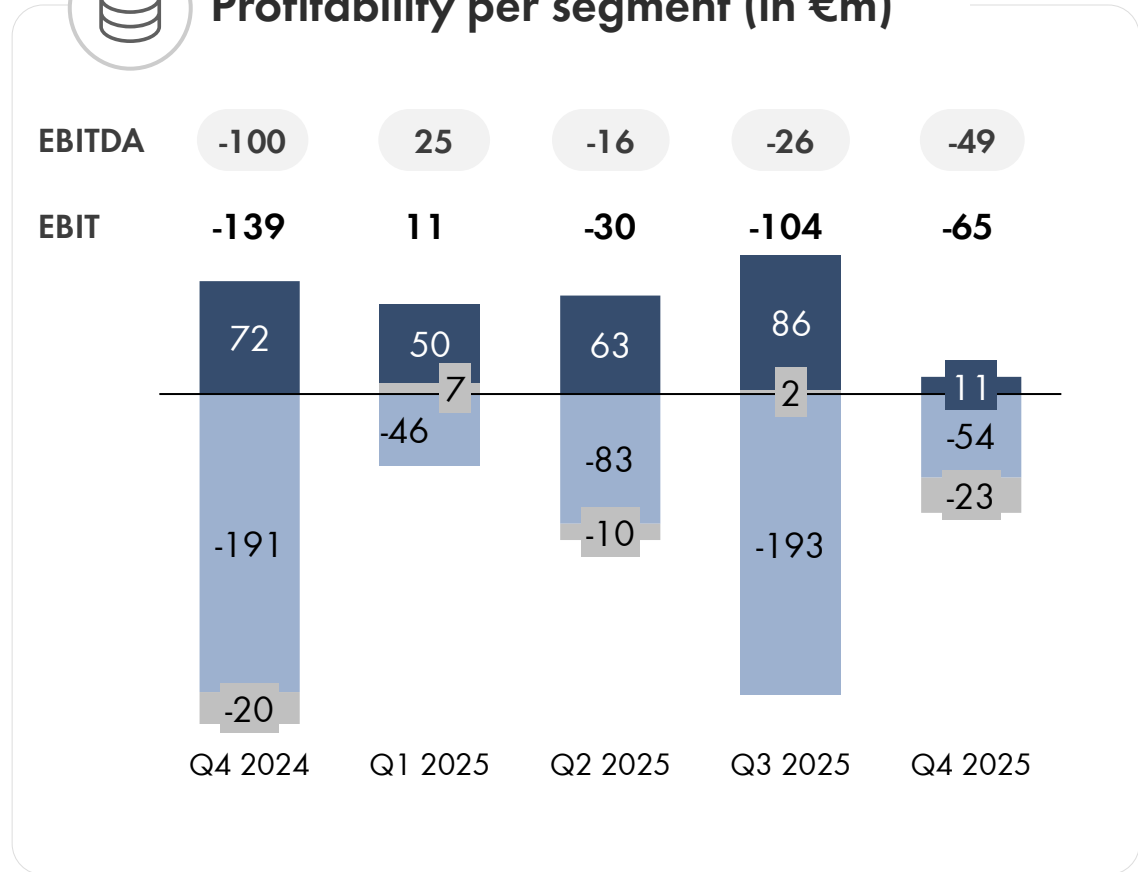
Q4 2025 sales below prior year. Profitability affected by lower sales volume and resulting lower fixed cost depression in HBS as well as one-time effects



Sales per segment (in €m)



Profitability per segment (in €m)



■ Home & Business Solutions 
 ■ Large Scale & Project Solutions 
 ■ Reconciliation & Corporate



# Business Update





Portfolio

Development

Supply Chain Management

Production

Sales & Service

## HBS POST TRANSFORMATION



Market-ready solutions with focus on interoperability, usability, and smart energy management for recurring revenues.



- ✓ Sunny Tripower X 60 launched in **Jan 26**
- 3ph Hybrid launch planned for summer
- Battery solution for **USA** via partnership model



Hardware developed with partners according to SMA specifications, secure software built in-house, and strategic use of GCC India for talent and cost efficiency.



- Build-up of GCC India:**
- ✓ Target of 30 FTEs in 2025 achieved,
  - additional 20 FTE planned for 2026
  - **R&D transformation** for more flexibility and efficiency



Lean and efficient SCM operations with full transparency and fast response times for effective stock management.



- ✓ Established new **AIS-focused procurement** setup structure
- **Optimization of warehouse** capacity in progress, **warehouse BRA** closed



Partner-led hardware production and final assembly in Krakow enable competitive pricing while preserving SMA's premium market positioning.



- ✓ **SOP for HBS** products achieved in **February 2026**

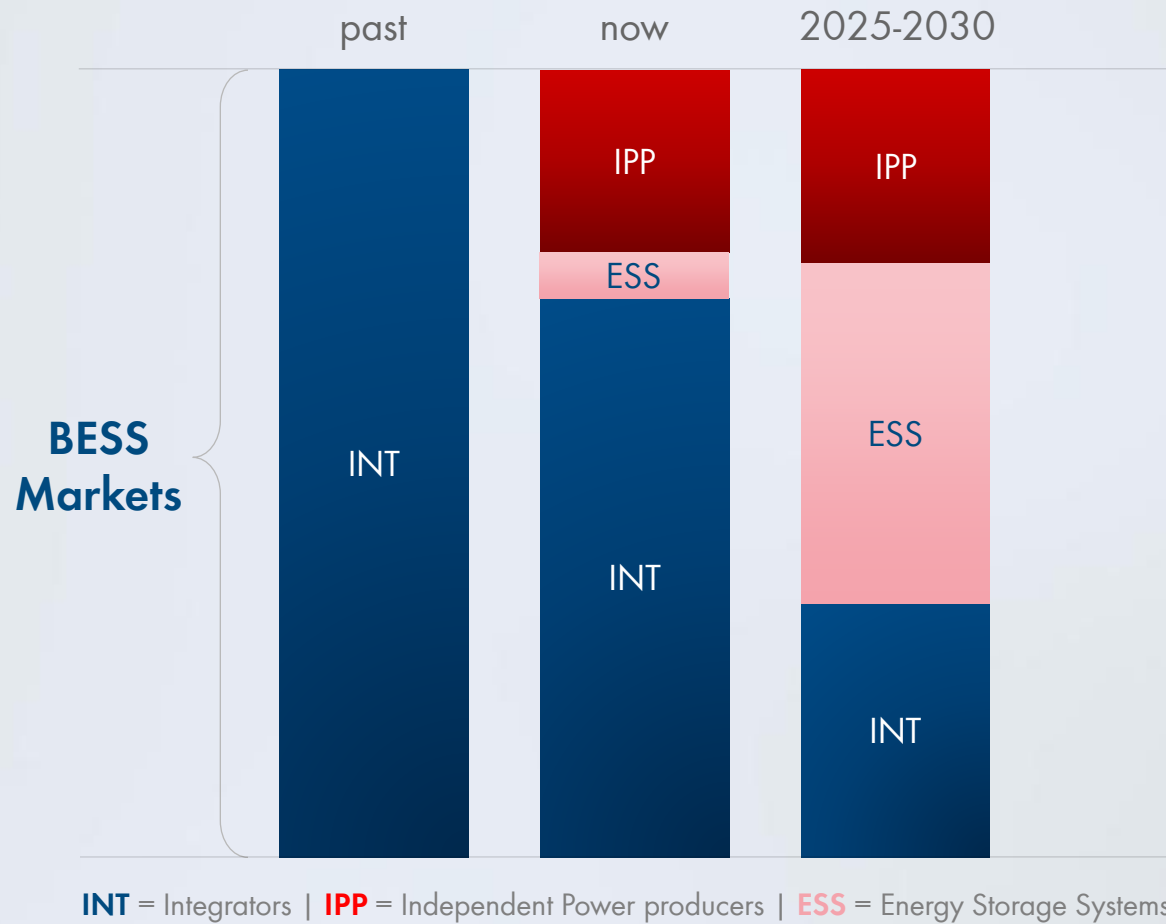


Strategic focus on Europe, service excellence USP, cost-efficient operations.



- ✓ **Country Exit Sales LATAM & APAC** implemented in 2025
- ✓ **Sales Exit AUS** decided & implemented in Q1 2026
- **Reduction of service partner costs**

# Large Scale & Project Solutions | Shift in BESS customer base



SMA's large-scale business is transitioning from a transaction-driven integrator model toward a more asset-owner-driven model with IPPs and storage players, which should fundamentally change both margin structure and competitive positioning.

The effect will be longer sales cycles, higher technical requirements, but also potentially more recurring service and software revenue.



## AI Data Centers



### AI Data Centers:

High power density combined with very demanding load profiles, future generations powered directly by DC voltages

## DC Coupling



### Next generation of DC coupling:

Value creation through lower cost, higher reliability & uptime and greater system flexibility



# Outlook 2026

# Changes in the global political landscape will play a significant role



## United States

- The **Supreme Court ruling** restricts executive tariff authority significantly; the White House now needs the support of the Congress for any new tariffs
- A **temporary 10% global** tariff for 150 days applied immediately, but under no legal structure
- EU announced **acceptance** of maximum **15% tariffs** laid out in existing trade deal
- Existing tariffs on aluminum, steel, copper and special Chinese goods remain enforced
- **FEOC** reinforces the importance of **trusted system technologies**
- Currency exposure from high revenue share in USD can lead to negative or positive FX-effects



## Europe

- The Industry Accelerator Act intensifies **“Made in Europe” Industrial policy**; inverters and batteries are among the benefiting technology’s



## Germany

- The **“Netzpaket”** creates uncertainty on the expansion of battery storage in Germany
- The **first leak of the “EEG” revision** shows some HBS barriers but also accelerates the market integration in favor of HBS
- **Additional demand for Large Scale & Project Solutions** capacity until 2035



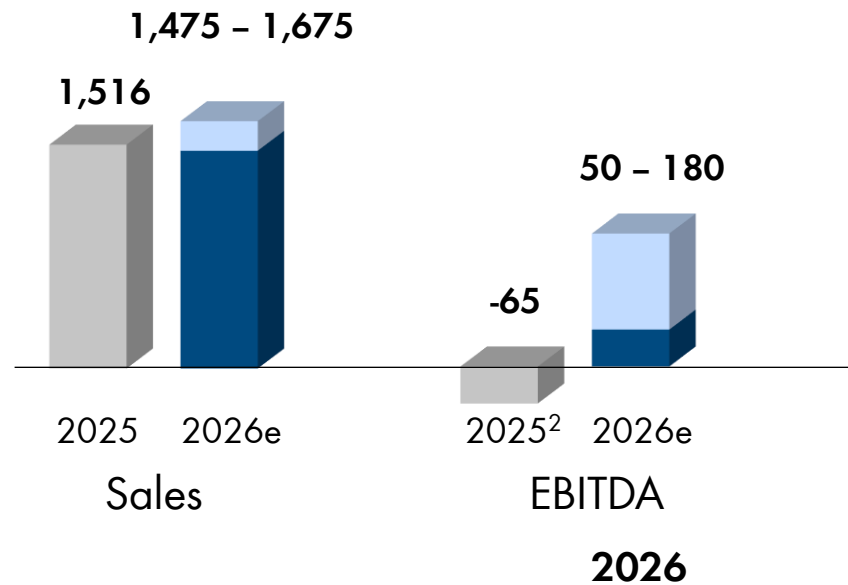
## Australia

- **Regulatory and permitting delays** remain a major bottleneck
- Grid connection **delays** and infrastructure **constraints** remain
- Government decided to expand the **Capacity Investment Scheme (CIS)**, which contains a strong policy push for **storage and system integration**
- Government decided on a national coordination of **priority projects** (incl. transmission and storage)

Sales and EBITDA guidance range reflects persistent uncertainty due to trade barriers, geopolitical conflicts and potential impacts from the new EEG legislation



### Guidance 2026 (in €m)



<b>CapEx (incl. R&amp;D &amp; leasing)<sup>1</sup></b>	<b>approx. €50m</b>
<b>Depreciation / amortization</b>	<b>approx. €50m</b>



### Management comments

- Expected Large Scale sales slightly above the high level of previous year. EBIT below last year due to higher costs for service expansion to cover growing installed base, currency effects and less capitalized R&D projects.
- Expected HBS sales above previous year with EBIT also above last year due to restructuring and transformation program, but still not back in black.
- Additional headwinds may result from changes in legislation, uncertainties about potential refunds of tariffs in the US and FX development

Thank you.



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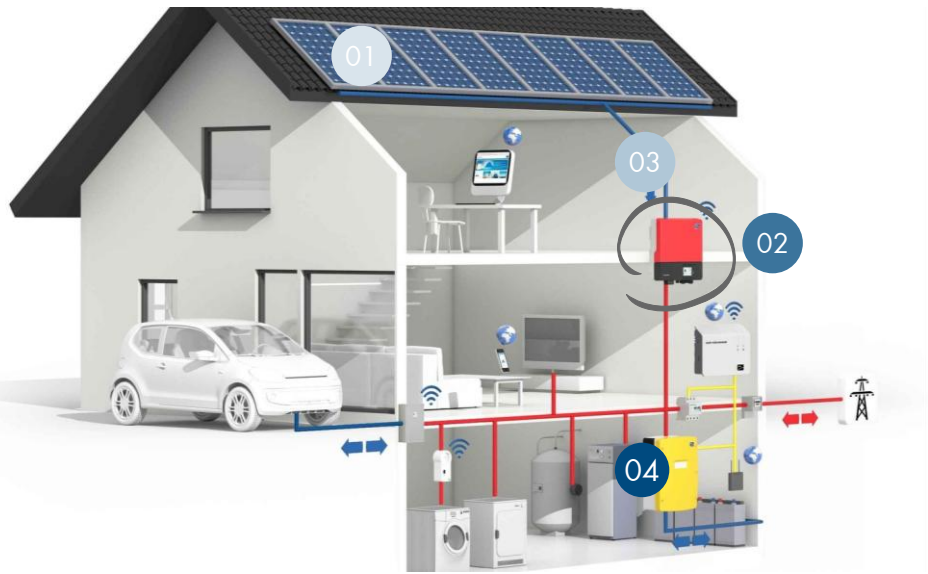


# Appendix

# High inverter share of ~19% cost triggers efficiency race in residential PV

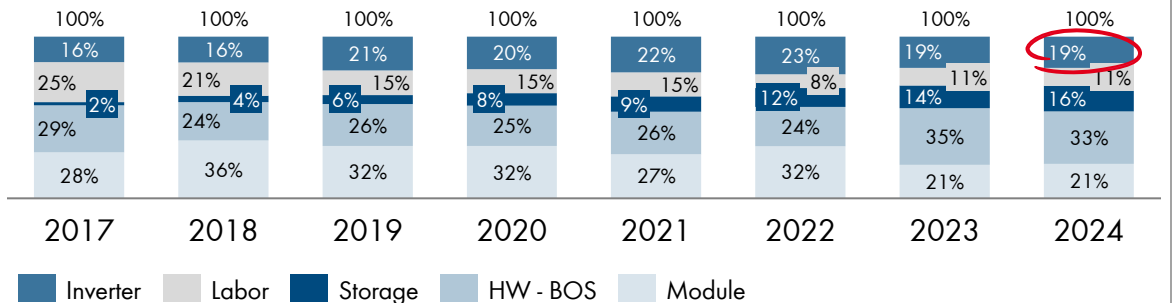


System schematic: residential PV



- 01 Module
- 03 Hardware (BOS)<sup>2</sup>
- 02 Inverter
- 04 Storage

Residential PV system cost split by component (2017 - 2024)<sup>1</sup>



## Key learnings

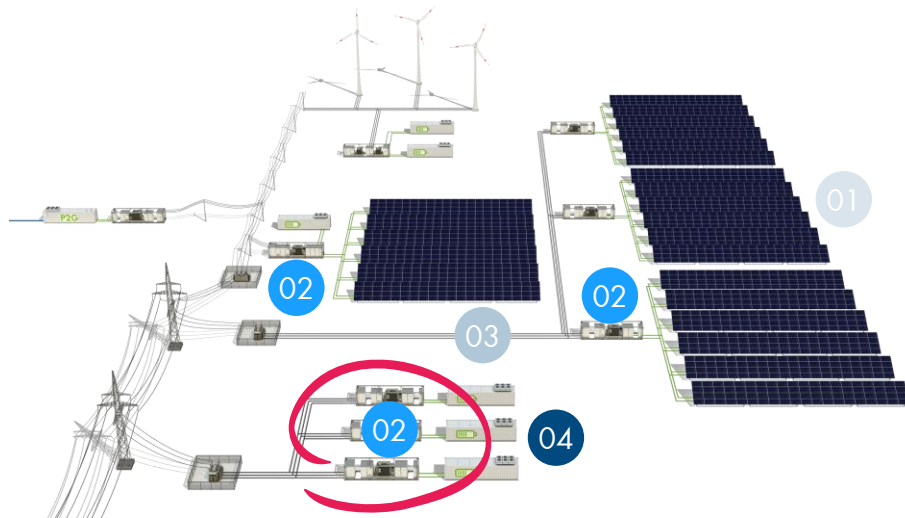
- Higher inverter cost share due to other components' cost decline and shift towards more complex hybrid inverters
- Inverter now a substantial cost piece, attracting innovation and triggering efficiency pressure
- Price-leading market participants taking substantial market share, attracting cost-sensitive customers

1. Excluding other costs such as permits, marketing 2. Hardware - Balance Of System (including cabling, metering, control units, safety devices) 3. Including installation  
Source: BCG analysis; Energy.gov

# Zooming out, power-conversion unit only ~ 4% of PV system cost

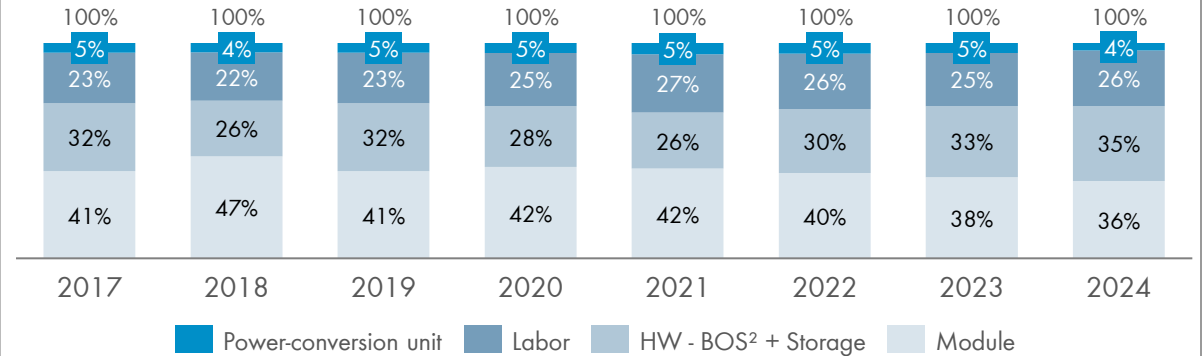


## System schematic: Utility-scale PV plant



- 01 Module
- 02 Power-conversion unit (incl. Inverter)
- 03 Hardware (BOS)<sup>2</sup>
- 04 Storage

## Utility-scale PV system cost split by component (2017 - 2024)<sup>1</sup>



## Key insights

- Power-conversion unit accounts for relatively stable ~ 4% of total system cost
- Customers value proven reliability and uptime over minor price deltas, providing opportunity for higher price realization
- SMA's track record and reliability sustain competitiveness despite premium prices

1. Excluding other soft costs such as fees, permits, marketing 2. Hardware - Balance Of System (including cabling) and storage 3. Including installation and project management  
Source: BCG analysis

# Inverter accounts for ~50% of power-conversion unit's cost



System schematic: Power-conversion unit<sup>2</sup>



- Transformer
- Inverter
- Hardware (Packaging)
- Switchgear

Cost split of containerized power-conversion unit (2024)<sup>1</sup>



## Key Learnings

- Utility power-conversion unit with several components, SMA manufactures inverter with ~50% cost share

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- Pre-built integration in one unit speeds up installation and saves on-site labor and cabling

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- Non-inverter parts for SMA markets mostly from Western vendors, limiting Asian competitors' cost advantage potential

1. Excluding other soft costs such as fees, permits, marketing; 2. Full SMA value creation of inverter, partial value creation in transformer, switchgear and HW - Packaging (sourced externally but integrated to PCU)  
Source: BCG analysis