

Core expertise in
technology

MERSEN INVESTOR DAY

DECEMBER 4TH, 2014

merseN

PROGRAM

9:00 – 9:20

Strategic Vision

Luc Themelin

9:20 – 9:40

Financial Business Model

Thomas Baumgartner

Break

10:00 – 10:40

The Electrical Segment

Laurent Marcenac

Break

11:15 – 12:30

3 Case Studies

Surge
Protection

Windpower
solutions

Power
converters

*Gabriel Ledru
Marc Charlebois
Emmanuel Carmier*



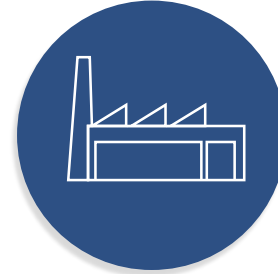
● STRATEGIC VISION

LUC THEMELIN
CHAIRMAN OF THE MANAGEMENT BOARD

MERSEN'S MEDIUM-TERM STRATEGIC VISION



**Maximize growth
potential in our markets**



**Optimize
our manufacturing facilities**



Customers



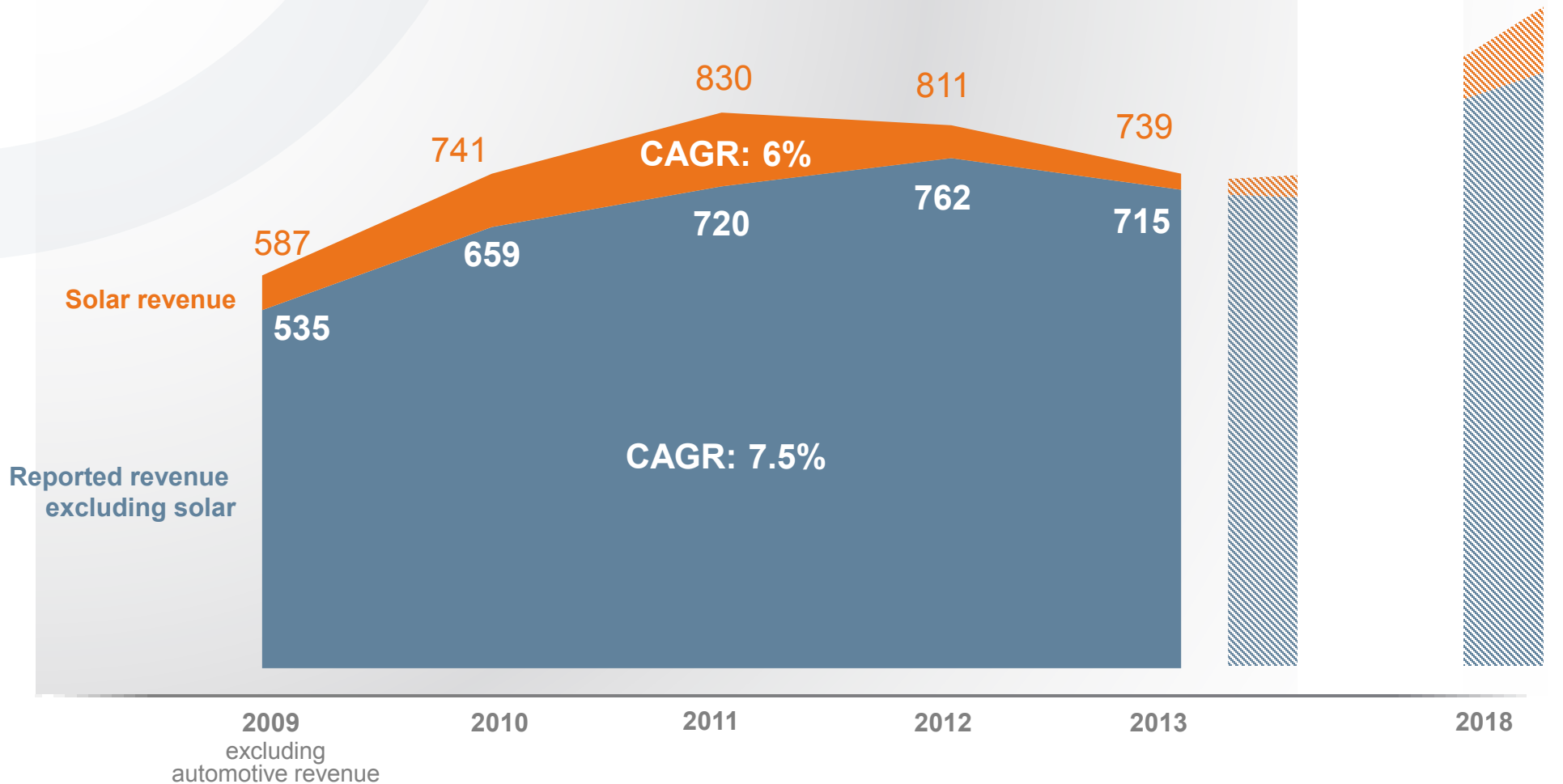
Shareholders



Employees

SECURELY ANCHORED GROWTH POTENTIAL

Reported figures in €m



* In a favorable economic environment



COMPETITIVE STRENGTHS TO DRIVE GROWTH



1

Strong market positions



- 20-25% market share
- Segments with high barriers to entry

2

A presence in high-potential markets

➤ Solar



➤ Electronics



3

Expertise in key applications



- Application expertise in materials and components
- Proficiency in power conversion components
- Surge protection expertise to maintain power quality

THREE DYNAMICS TO SUSTAIN GROWTH



1

A more powerful innovation drive



- A major contribution coming from the new product pipeline

~€100 million in 2018

2

A deeper local presence



- To capture growth, especially in Asia

~30% of 2018 revenue from Asia

3

A sustained, targeted acquisitions drive



- Acquired revenue stream

€50-100 million by 2018

In a favorable economic environment

OPTIMIZING MANUFACTURING FACILITIES



The Transform plan

- Comprehensive, worldwide plan
- To streamline the manufacturing base, mainly in Europe
- To optimize facilities dedicated to the chemicals market

Objectives

- Make our centers of excellence more efficient
- Streamline operations and enhance flexibility
- Reduce dependence on cyclical chemicals markets
- Improve competitiveness while maintaining local sales teams close to customers
- Improve the supply chain

RESULTS

- Full-year benefits expected in 2016: an additional 150 bps of recurring operating margin compared with 2013
- Provisions for restructuring costs and impairment recognized in 2014: €30 million

THE TRANSFORM PLAN

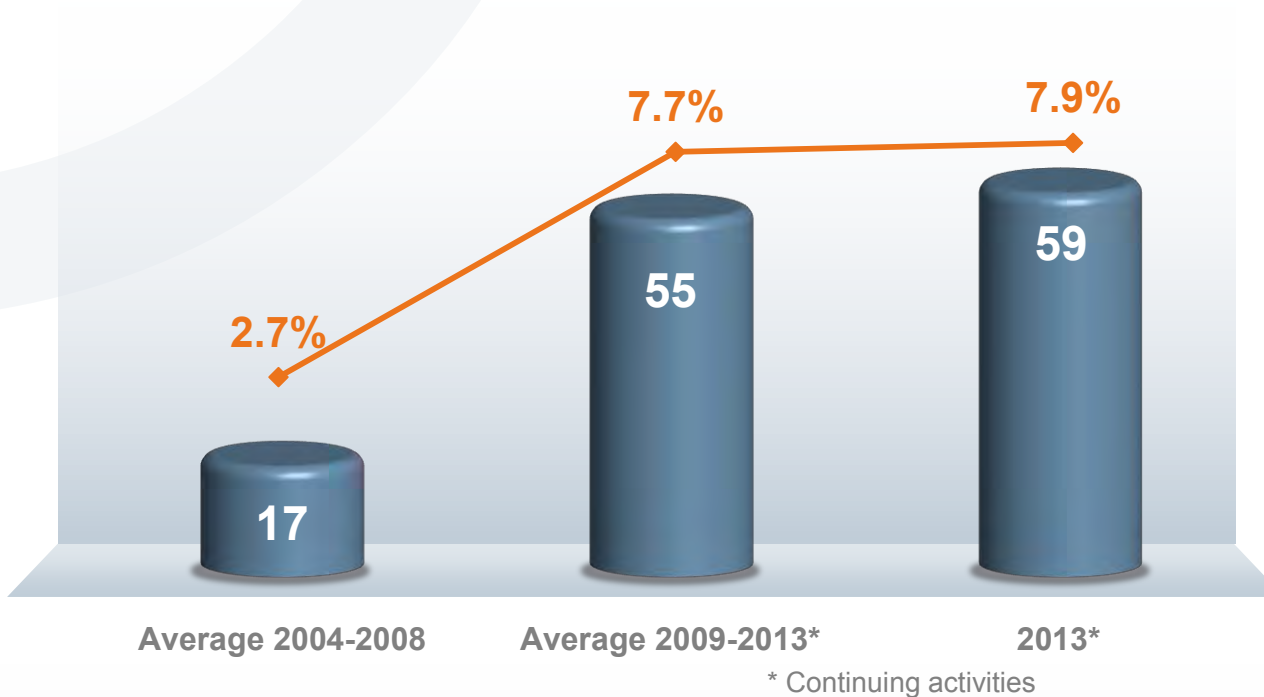


DETAILS

- Closure of Chemical plant
- ★ Resizing of Chemical plant
- Closure of other plant
- ★ Resizing of other plant

- **Closure** of 6 plants in Europe and the United States and **resizing** of 1 plant in Europe
- **Discontinuation** of the carbon steel equipment business in China
- **Operational deployment** in H2 2014 and in 2015

AN IMPROVING CASH FLOW PROFILE



FCF yield:
Free cash flow/revenue

Free cash flow:
Operating cash flow - capex (€m)

ACTION PLANS

- 2009-2013: cash initiative plan (centralize inventory, reduce number of SKUs, S&OP methods, incentives, capabilities)
- Beginning in 2014: continuous improvement, lean manufacturing processes in each plant, limited capex

USES OF CASH FLOW



Sustained, targeted acquisitions, mainly in the Electrical Segment

Average valuation: 7 to 9 times EBITDA

Dividend payments

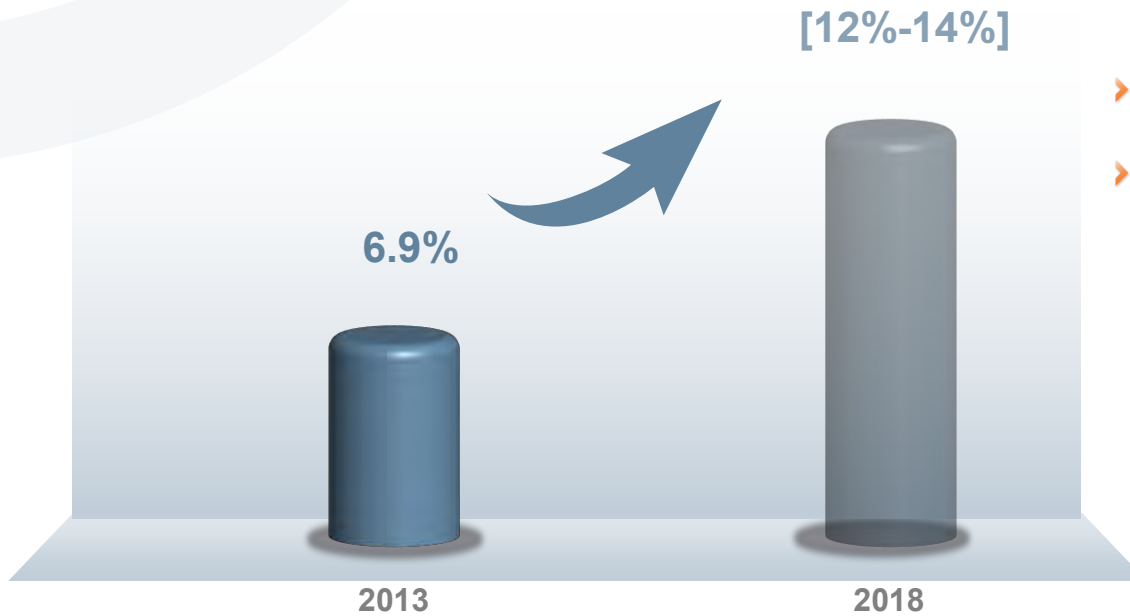
[30%-40%] payout before non-recurring items

While maintaining debt at an average of [1.5-2.5] times EBITDA

CREATING SHAREHOLDER VALUE OVER THE MEDIUM TERM



ROCE before tax*



- Assuming a favorable economic environment
- Revenue of around €1 billion in 2018
- Recurring operating margin of >12%, i.e. recurring operating profit of around €120m (vs. €60m in 2013)

* Before non-recurring items

CONCLUSION

Powerful market drivers

Solid industrial fundamentals

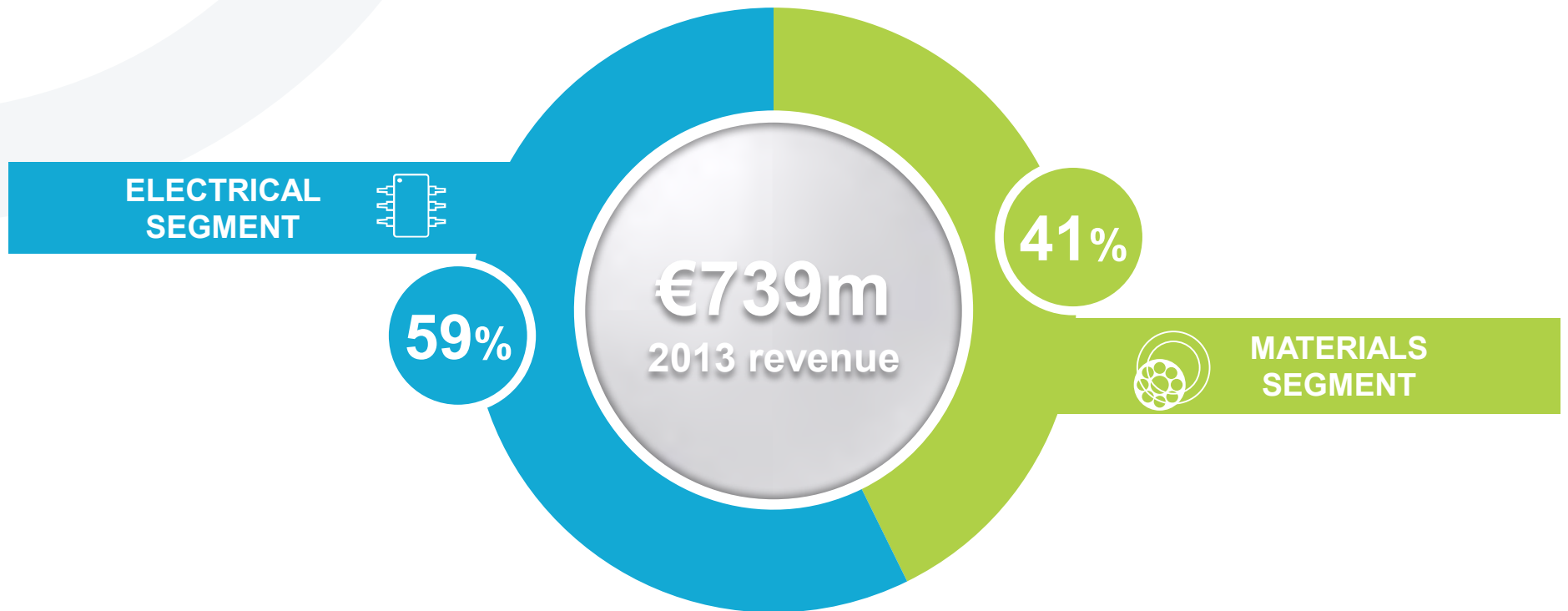
Robust finances



● FINANCIAL BUSINESS MODEL

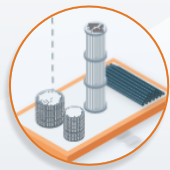
THOMAS BAUMGARTNER
CHIEF FINANCIAL OFFICER

2 STRATEGICALLY RELATED SEGMENTS

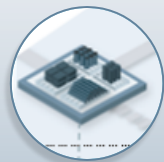


MATERIALS SEGMENT: RAISING BARRIERS TO ENTRY AND INCREASING VALUE-ADDED

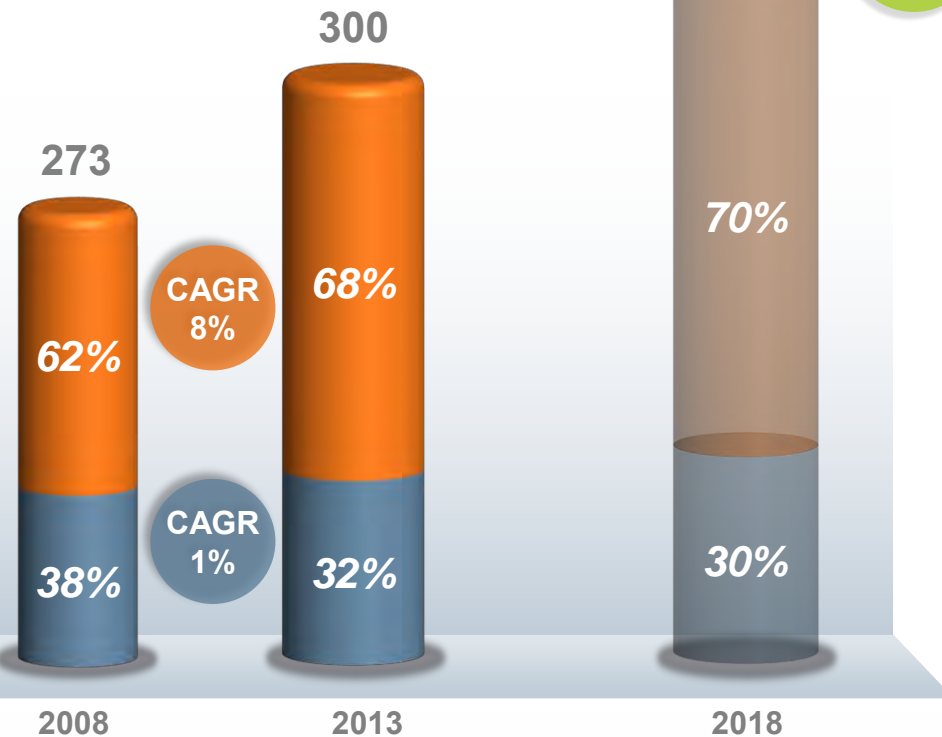
Materials Segment revenue, €m
% volume of graphite sold



High value-added finished products
Up to €3,000/kg



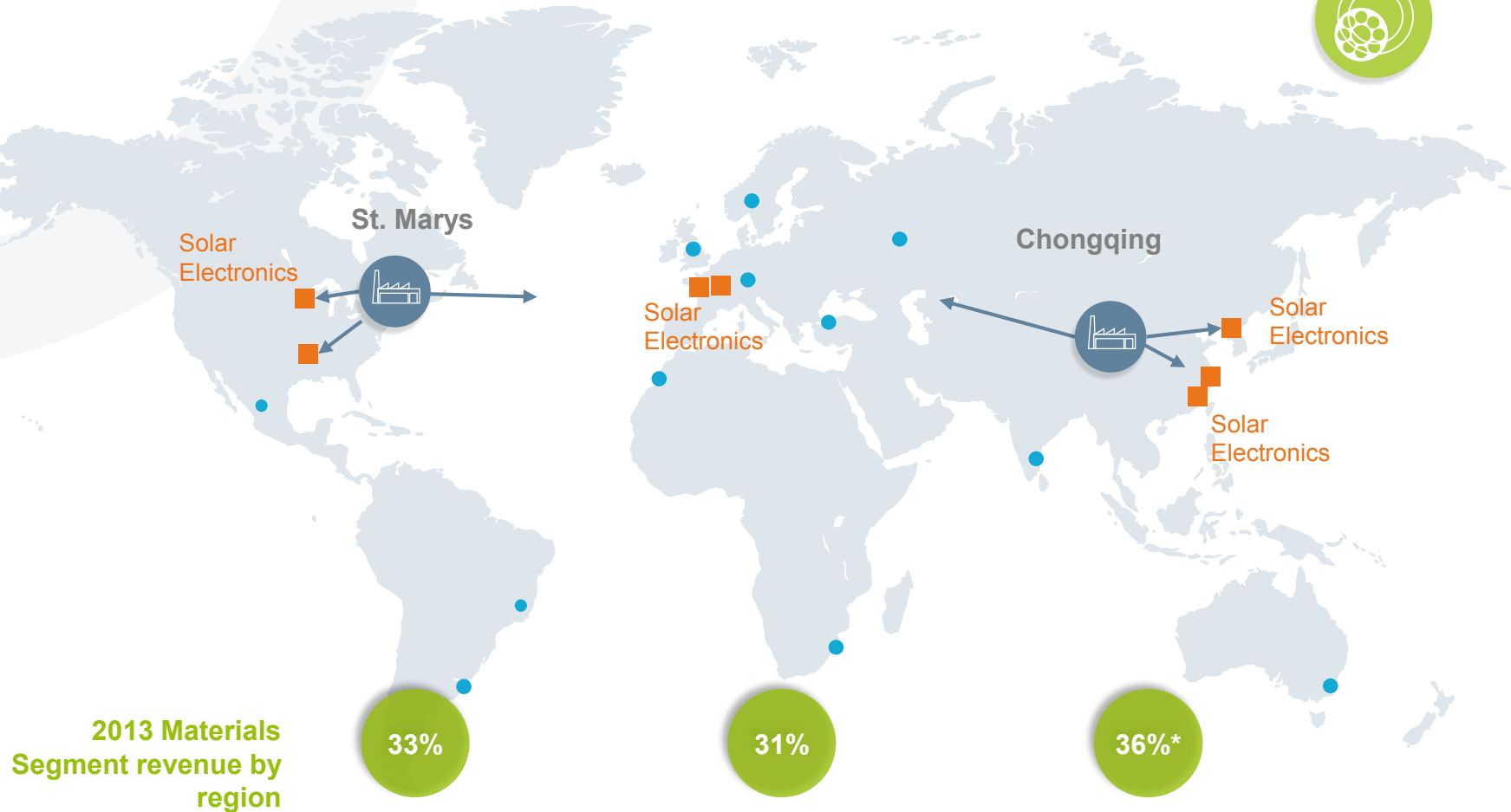
Semi-finished products
From €6/kg



BARRIERS TO ENTRY

- **Upstream:** Full control over the material (integrated model)
- **Downstream:** In-depth application capabilities (model similar to the Electrical Segment's)

GLOBAL MARKET COVERAGE TO ENSURE A COMPETITIVE LOCAL PRESENCE



2 highly competitive graphite semi-finished product fabrication plants (upstream)

* Including Sabic

High-tech finished product plants (downstream) providing access to every major market

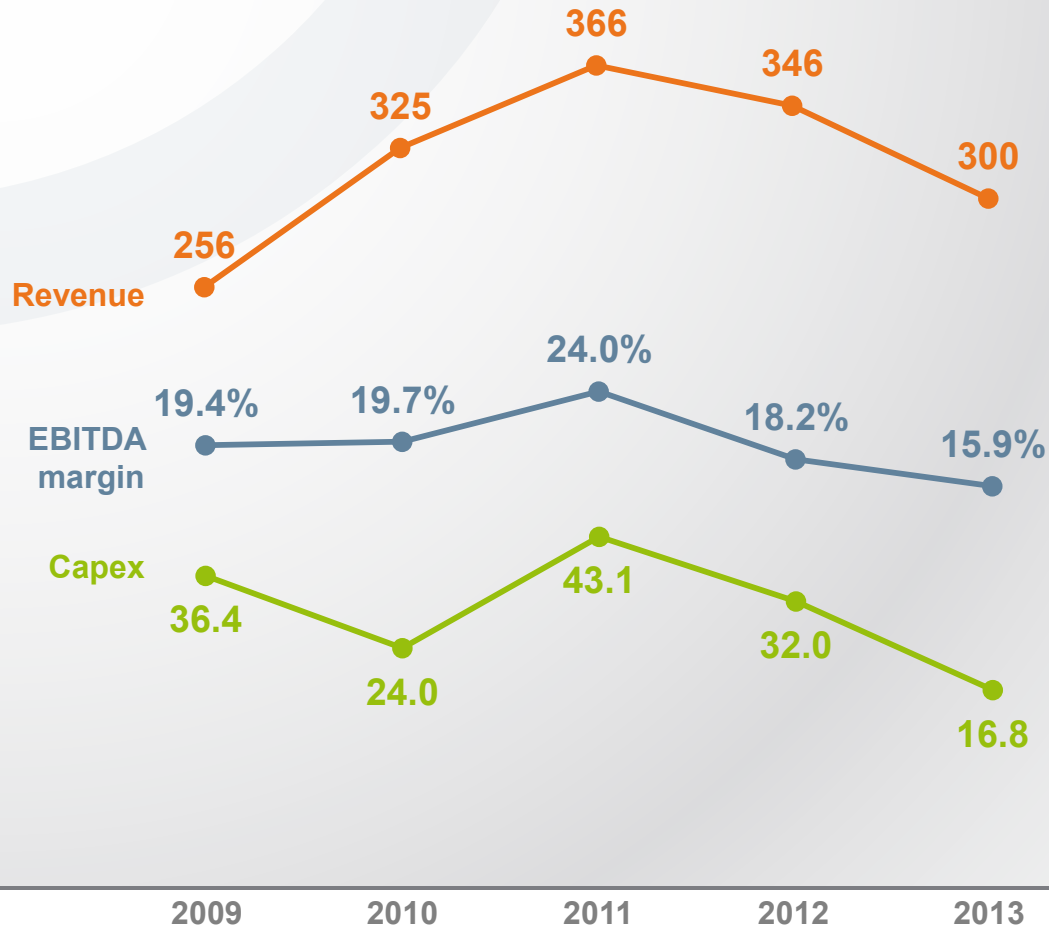
Manufacturing or sales facilities covering every geography



MATERIALS SEGMENT: LEVERAGE IN PLACE



Materials Segment, in €m

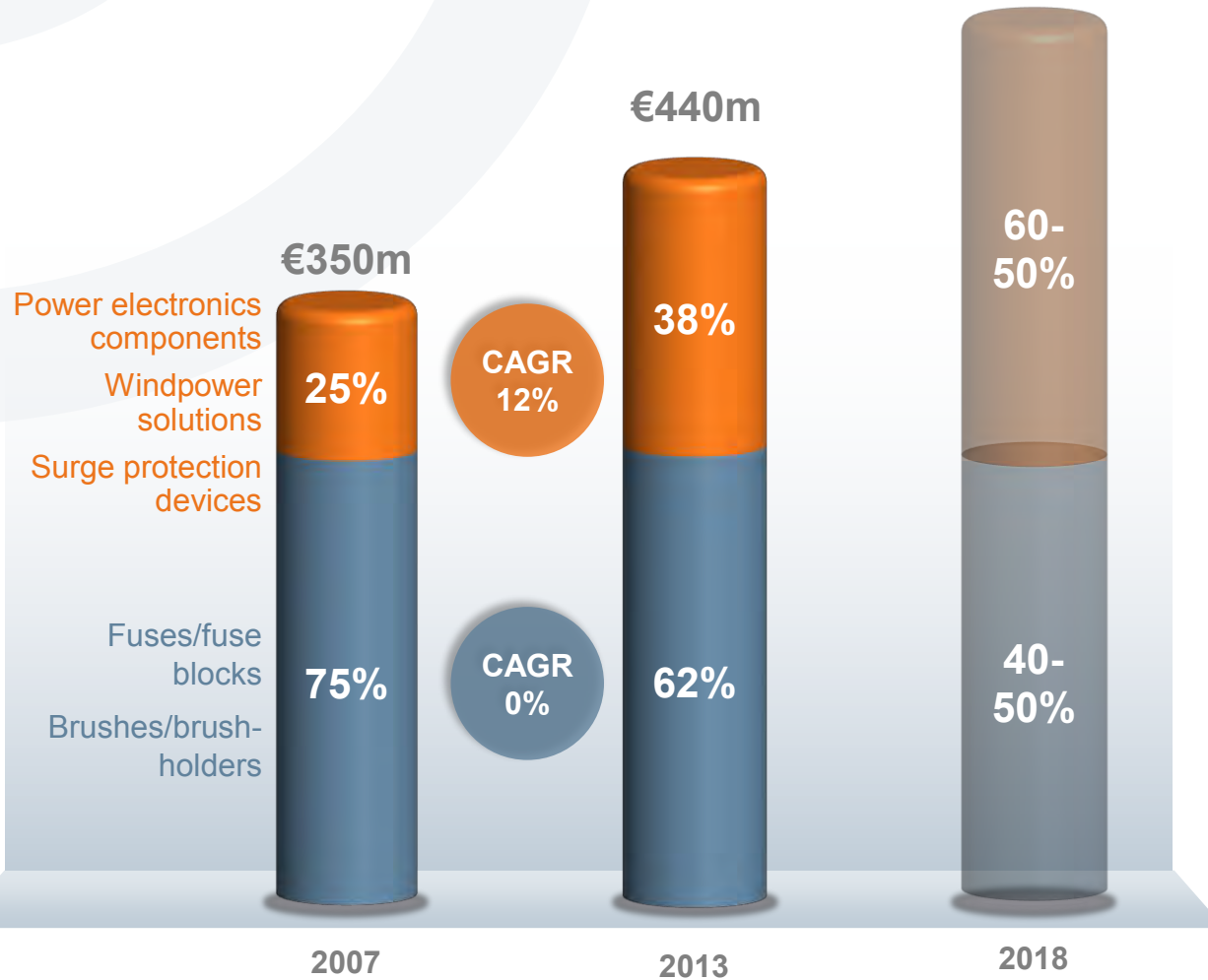
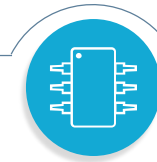


Growth potential
Electronics, solar

High EBITDA margin
Major leverage

Period of heavy capex
completed

ELECTRICAL SEGMENT: SHIFTING THE PORTFOLIO TO FASTER GROWING PRODUCTS



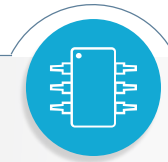
➤ Expand GROWTH PRODUCTS

- Renewable energies
- Energy efficiency
- Power quality
- Services and maintenance

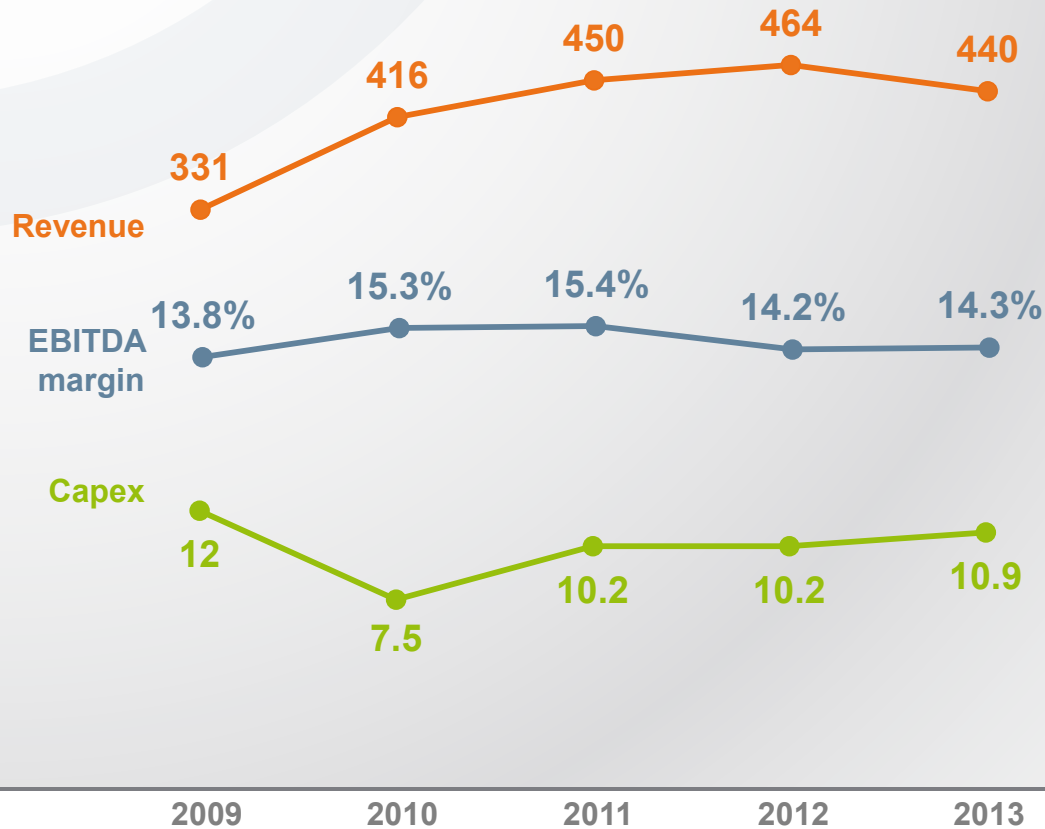
➤ Maximize MATURE PRODUCTS

- Historic Western leaders who are maintaining their market share → replacement business
- High standards barrier limits the number of new entrants
- Little need for new capex
- Optimized manufacturing model

ELECTRICAL SEGMENT: HIGH CASH FLOW AND EBITDA



Electrical Segment, in €m



Growth potential

- Renewable energies
- Energy efficiency
- Power quality
- Services and maintenance



Resiliently high margin



Low capital intensity

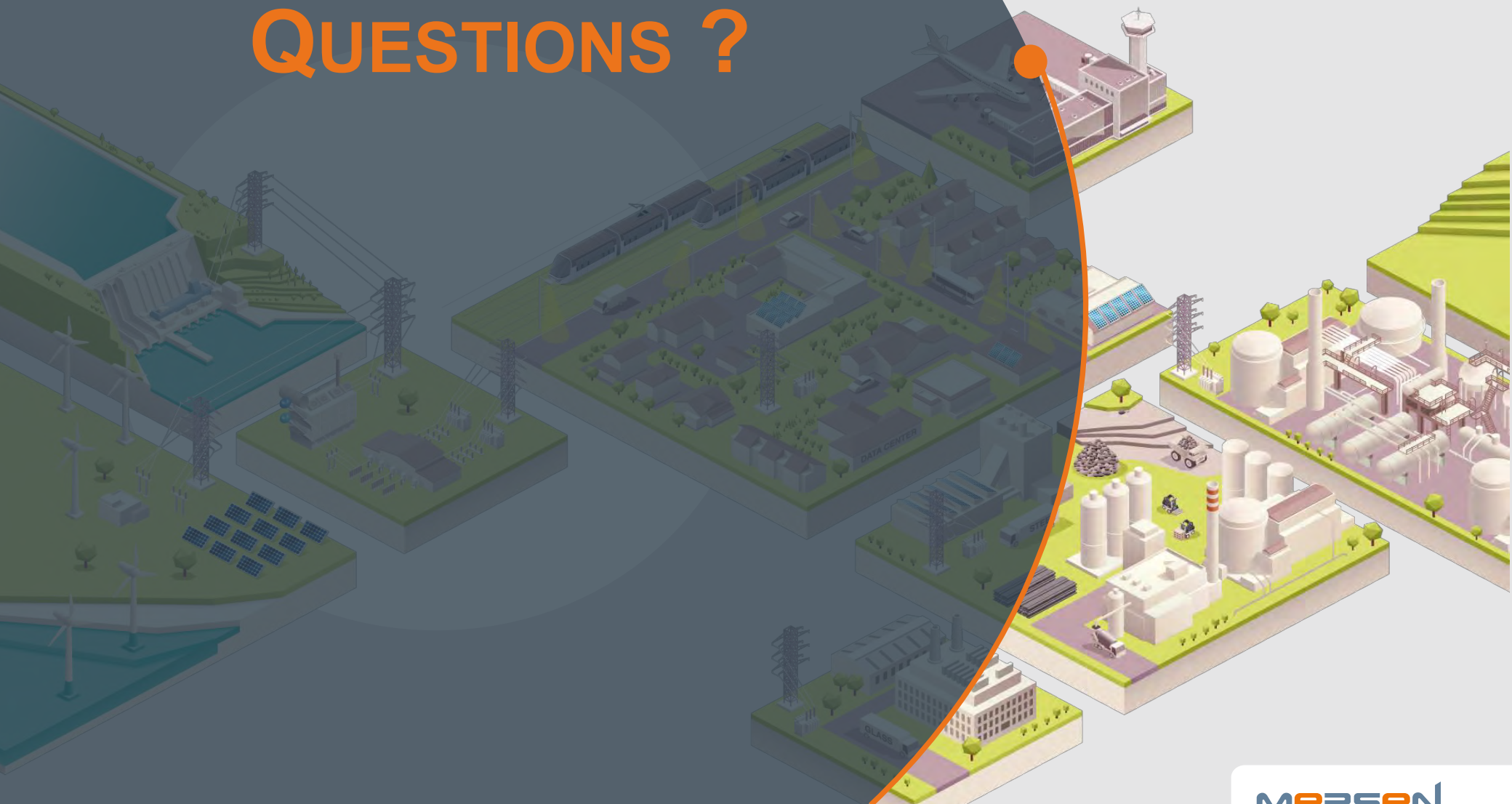
AN OPTIMIZED PROFILE FOR THE GROUP



FOR THE GROUP

- High EBITDA and cash flow

QUESTIONS ?





● ELECTRICAL SEGMENT

LAURENT MARCENAC
VICE PRESIDENT, GLOBAL SALES FOR THE
ELECTRICAL SEGMENT

MERSEN: EXPERTISE IN THREE KEY FUNCTIONS

Power supply



Carbon brushes



Power slip rings



Brush-holders



Current collection

Electrical protection



Surge protection devices



Fuse holders



Fuses

Power conversion



Coolers







Busbars



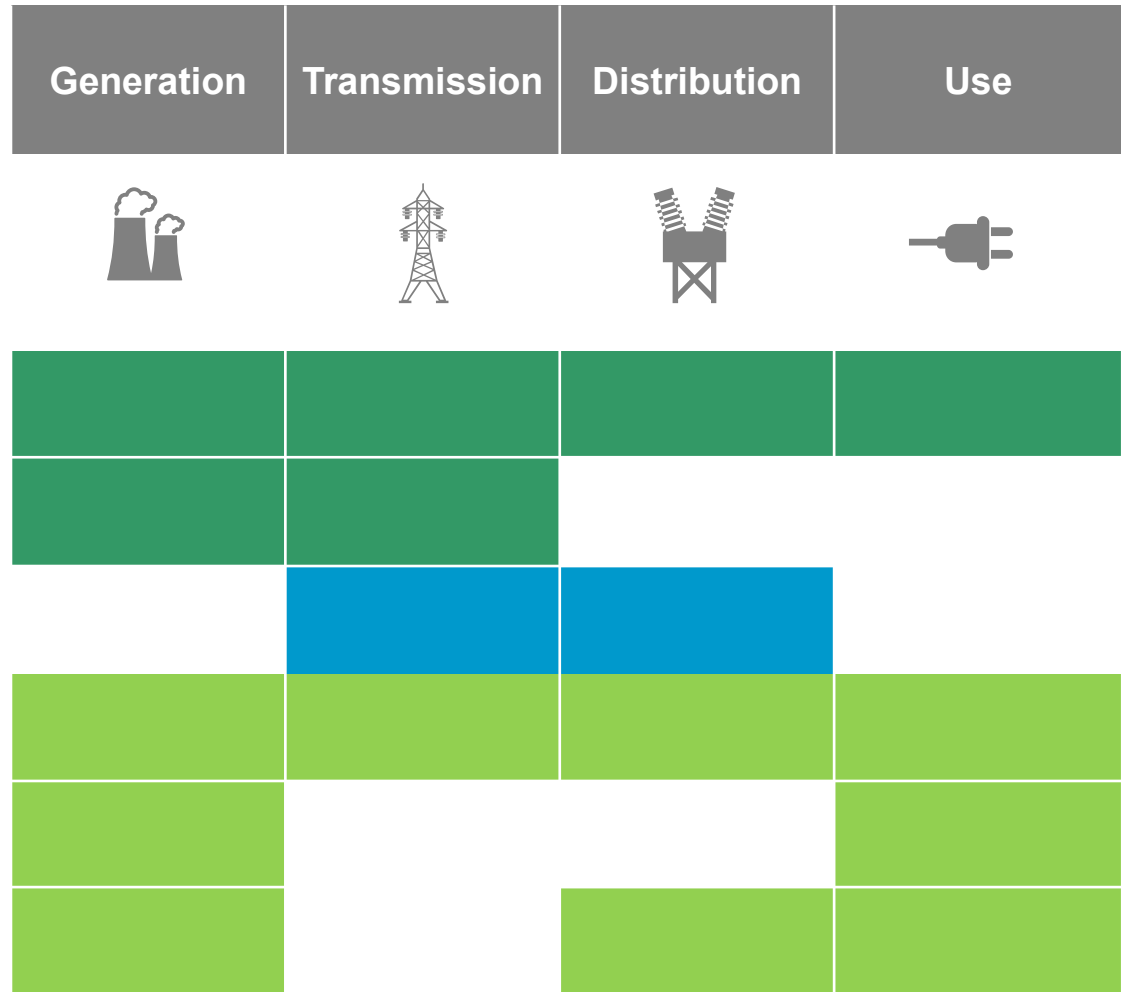
Fuses

A PRESENCE ACROSS THE ELECTRICITY VALUE CHAIN

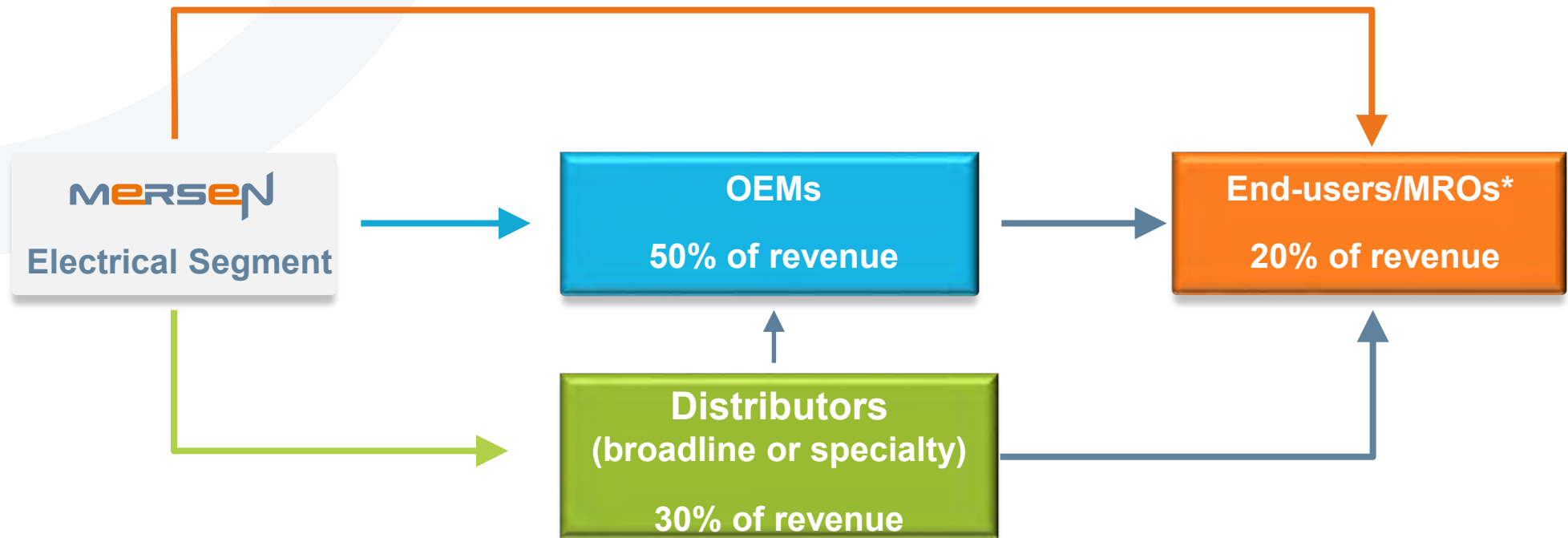
	Generation	Transmission	Distribution	Use	Mersen revenue*
					
Power supply					€140m
Electrical protection					€170m
Power conversion		<i>HVDC</i>			€130m
					€440m

* Based on 2013 revenue

A MARKET WITH MANY DRIVERS







PROFICIENCY IN EVERY SALES CHANNEL, OFFERING THE RIGHT SOLUTION FOR EACH TYPE OF CUSTOMER



A strong key relationship with OEMs, specifiers and partners

* MRO : Maintenance, Repair, Operations

COMPETITIVE STRENGTHS TO MEET THE NEEDS OF THE MOST DEMANDING OEMs

Generation	Transmission	Distribution	Use
 <p>Vestas</p> <p>ALSTOM</p> <p>SMA</p> <p>ABB</p> <p>GE</p> <p>SIEMENS</p> <p>HITACHI Inspire the Next</p> <p>Gamesa</p> <p>SENVION wind energy solutions</p> <p>EDF</p> <p>VOITH</p> <p>UNITEPOWER</p> <p>KACO new energy.</p>	 <p>ABB</p> <p>SIEMENS</p> <p>RXPE RONGXIN POWER ELECTRONIC RONGXIN POWER ENGINEERING</p> <p>ALSTOM</p> <p>XPT</p>	 <p>Fuji Electric</p> <p>Rockwell Automation</p> <p>EATON</p> <p>SIEMENS</p> <p>Schneider Electric</p> <p>ABB</p> <p>GE</p> <p>TMEIC We drive industry</p> <p>EMERSON</p>	 <p>ALSTOM</p> <p>BOMBARDIER</p> <p>MITSUBISHI ELECTRIC Changes for the Better</p> <p>THALES</p> <p>SIEMENS</p> <p>Continental</p> <p>GE</p> <p>SAFRAN AEROSPACE DEFENCE SECURITY</p> <p>TESLA</p> <p>WEG Motors and Drives</p> <p>SBPT</p> <p>CNR 永济新时速电机电器有限公司 中国北车 YONGJI XINSHI SU ELECTRIC EQUIPMENT CO., LTD.</p>
<h2>MERSEN'S ADVANTAGES</h2>			

➤ Global network

➤ Technical expertise, specifier capabilities

➤ Product portfolio

WORLDWIDE MARKET COVERAGE, TO SUPPORT OEMs AS THEY EXPAND IN THE GLOBAL MARKETPLACE

- Mersen's Design, Manufacturing and Commercial Capabilities
Examples of OEM Centers of Expertise Worldwide




LEVERAGING DISTRIBUTORS TO CAPTURE THE VALUE OF OUR BROAD PRODUCT PORTFOLIO




MERSEN'S ADVANTAGES

- Catalogue covering every application
- Global logistics (Distribution hub on each continent, fulfillment rate)
- Brand recognition


ACCESS TO A STABLE, PROFITABLE REPLACEMENT MARKET AT END-USERS




Process industries




ArcelorMittal




bhpbilliton




LAFARGE




ALCAN




Transportation




UNDERGROUND



TRANSNET



INDIAN RAILWAYS



SNCF



Energy



NEXTera ENERGY RESOURCES



edf



edp renewables powered by nature



IBERDROLA

MERSEN'S ADVANTAGES

- Global network
- Application expertise
- Locally based capabilities
- Services portfolio

A THREE-PRIORITY STRATEGY

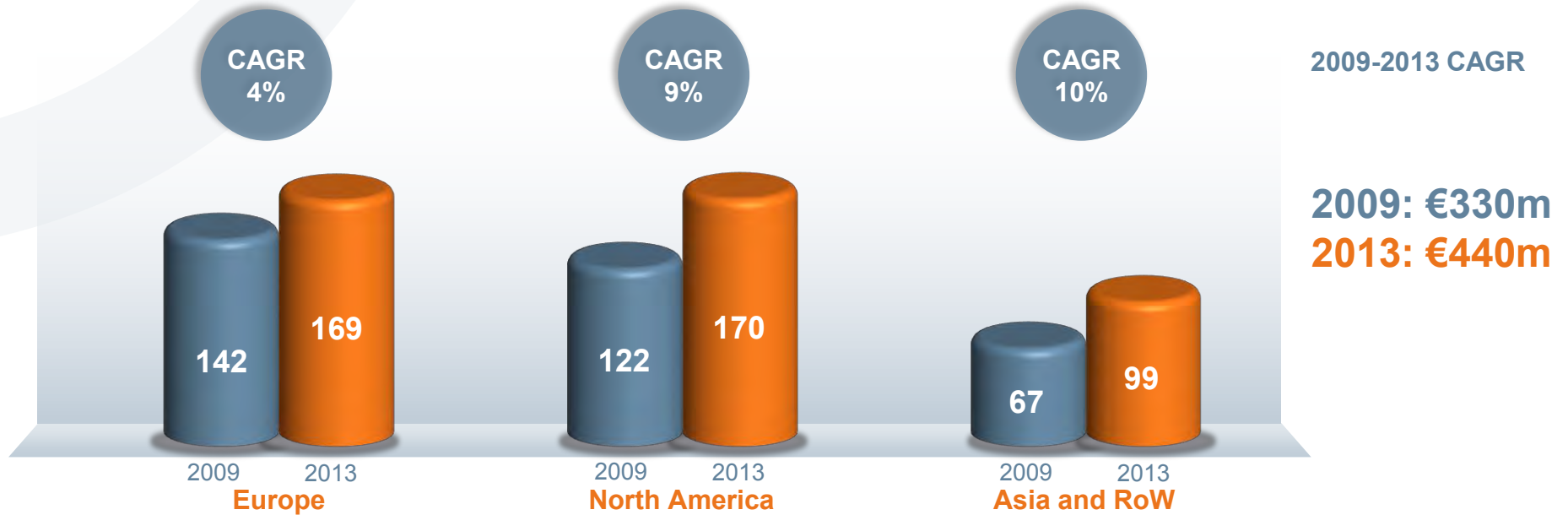
Sustain the growth dynamic
in all regions

Maintain our strong, profitable position
in mature products

Drive faster expansion
in growth products

SUSTAIN THE GROWTH DYNAMIC IN ALL REGIONS

Electrical Segment revenue, in €m

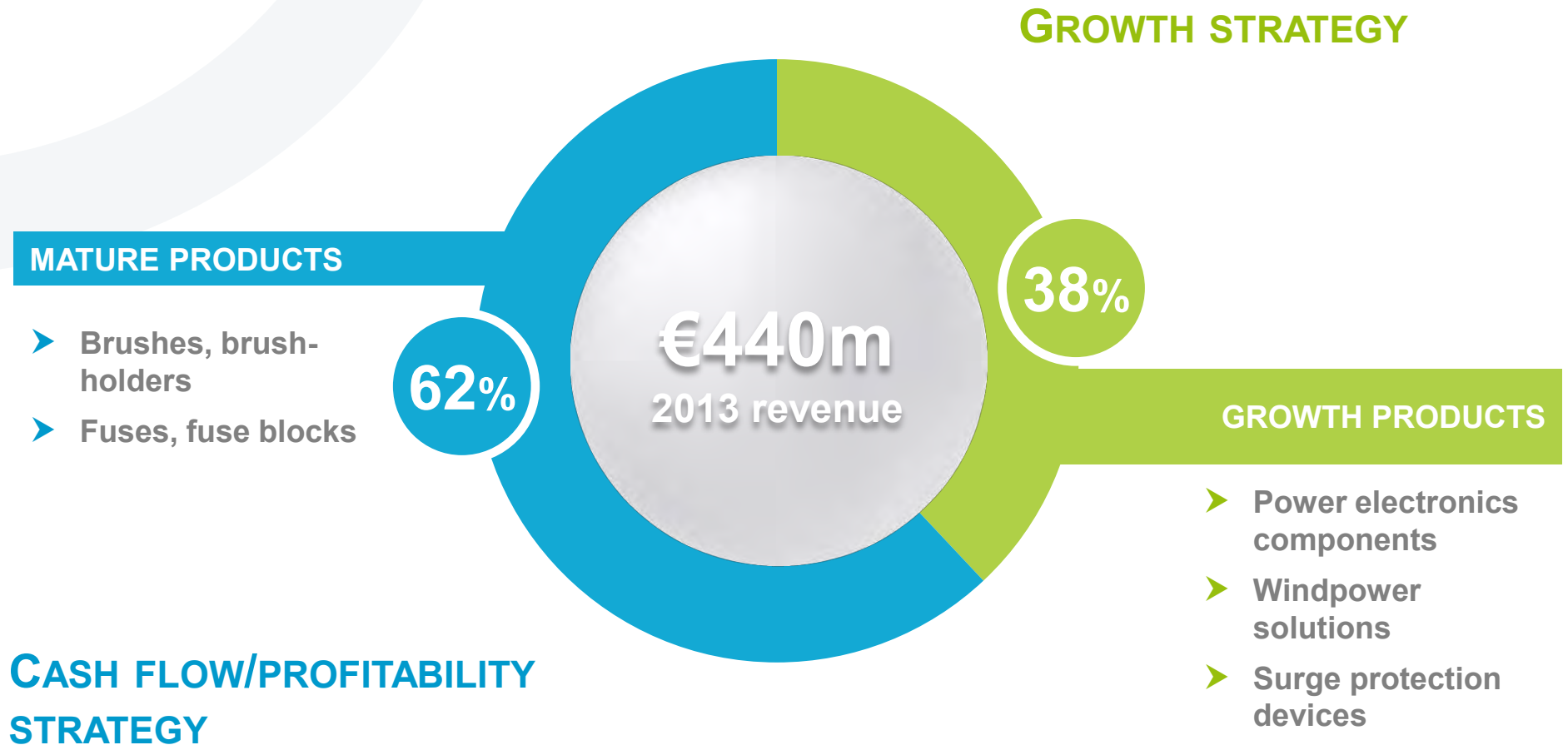


- Growth in Germany (exporter OEMs)
- Acquisition of M-Schneider (2010) and Eldre (2012)





- Growth in the region
- Acquisition of Eldre (2012)

- Strong growth in the region
- Start-up of local cooler and busbar production lines

A DIFFERENTIATED STRATEGY ACCORDING TO THE PRODUCTS POSITION ON THE LIFE CYCLE



MAINTAINING OUR STRONG COMPETITIVE POSITION IN MATURE PRODUCTS

		 <i>Powering Business Worldwide</i>			
Graphite brushes	[20-25%]		[20-25%]	[10-15%]	
Industrial fuses	[15-18%]	[22-25%]			[5-6%]

BARRIERS TO ENTRY:

- Power supply: formulation, specifiers, regulatory approval
- Electrical protection: ability to interact with distributors, importance of standards

OPTIMIZING THE PRODUCTION BASE TO MAINTAIN A PROFITABLE POSITION IN MATURE PRODUCTS



RESULT

● Automated plants

● Low-cost plants

- Nearly 40% of revenue derived from products made in low-cost countries
- Automated plants: centers of excellence and R&D

OPPORTUNISTIC ACQUISITIONS TO CONSOLIDATE OUR POSITIONS IN MATURE PRODUCTS



MV fuses
2007

- Strengthening positions in the MV market
- Cost synergies



AREVA
MV fuses
2008



Fuses
2010

- Positioning in the DIN market
- Cost synergies



Fuses
2008

- Positioning in the fast growing Chinese market
- Cost competitiveness

2013 ROCE* on acquisitions: 15%

* Excluding exceptional items

DRIVING EXPANSION IN GROWTH PRODUCTS

1

Positioned in high value-added products

- BTO, short run products
- Key capabilities
- High market share
- Innovation capacity

2

Effective market drivers

- Energy efficiency, Power quality, Energy storage, Alternative energies
- Asia deployment

3

Pursue accretive acquisitions

- Technological input in unique capabilities
- Synergies with the Mersen network

2018 revenue: €250-290m
2013-2018 CAGR: 8-11%
(excluding acquisitions)

2013 revenue: €170m



3 EXAMPLES OF GROWTH PRODUCTS

SURGE
protection
components

Power quality

2013 revenue:
€10m

WINDPOWER
SOLUTIONS

Alternative energies

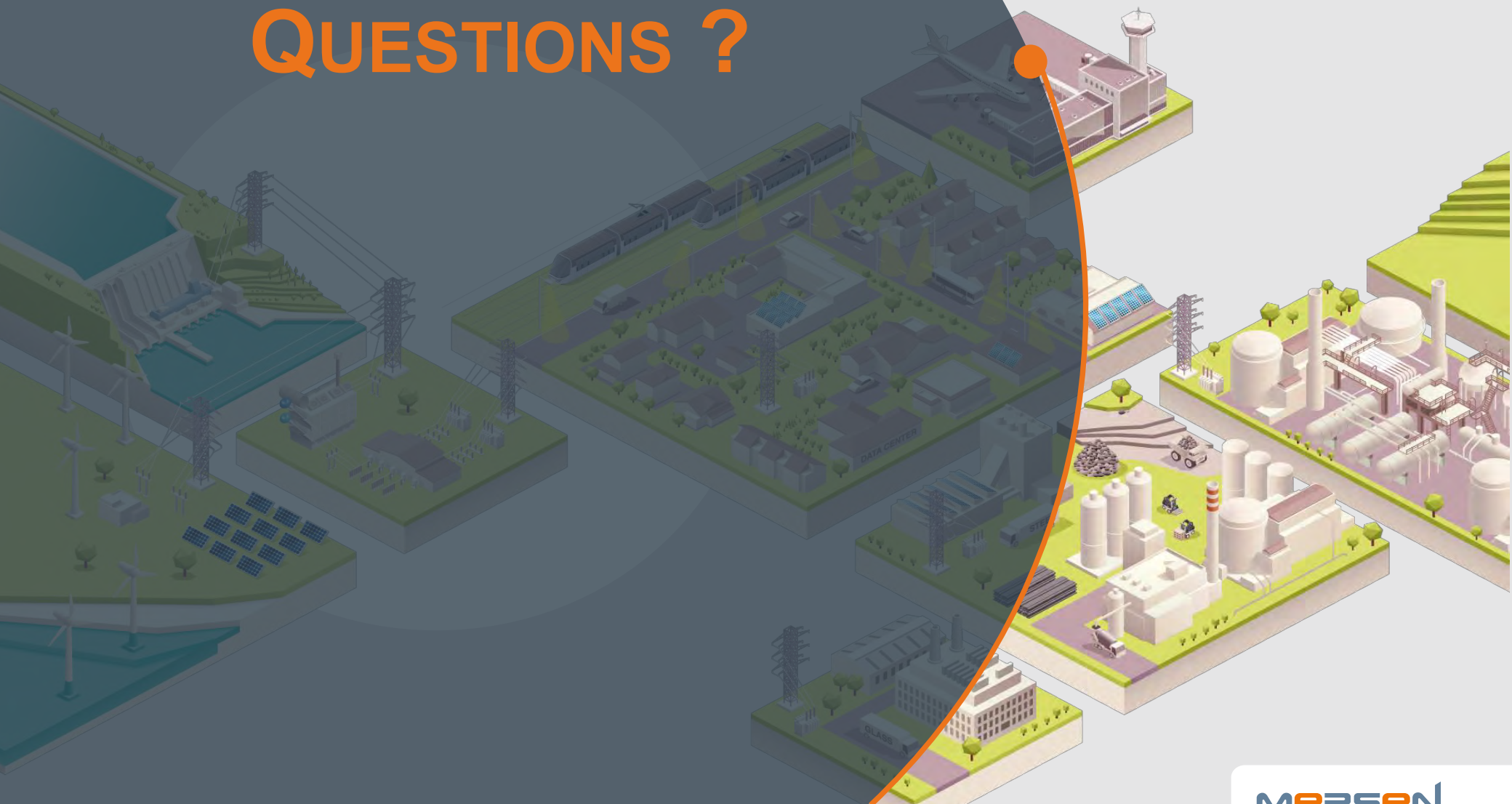
2013 revenue:
€30m

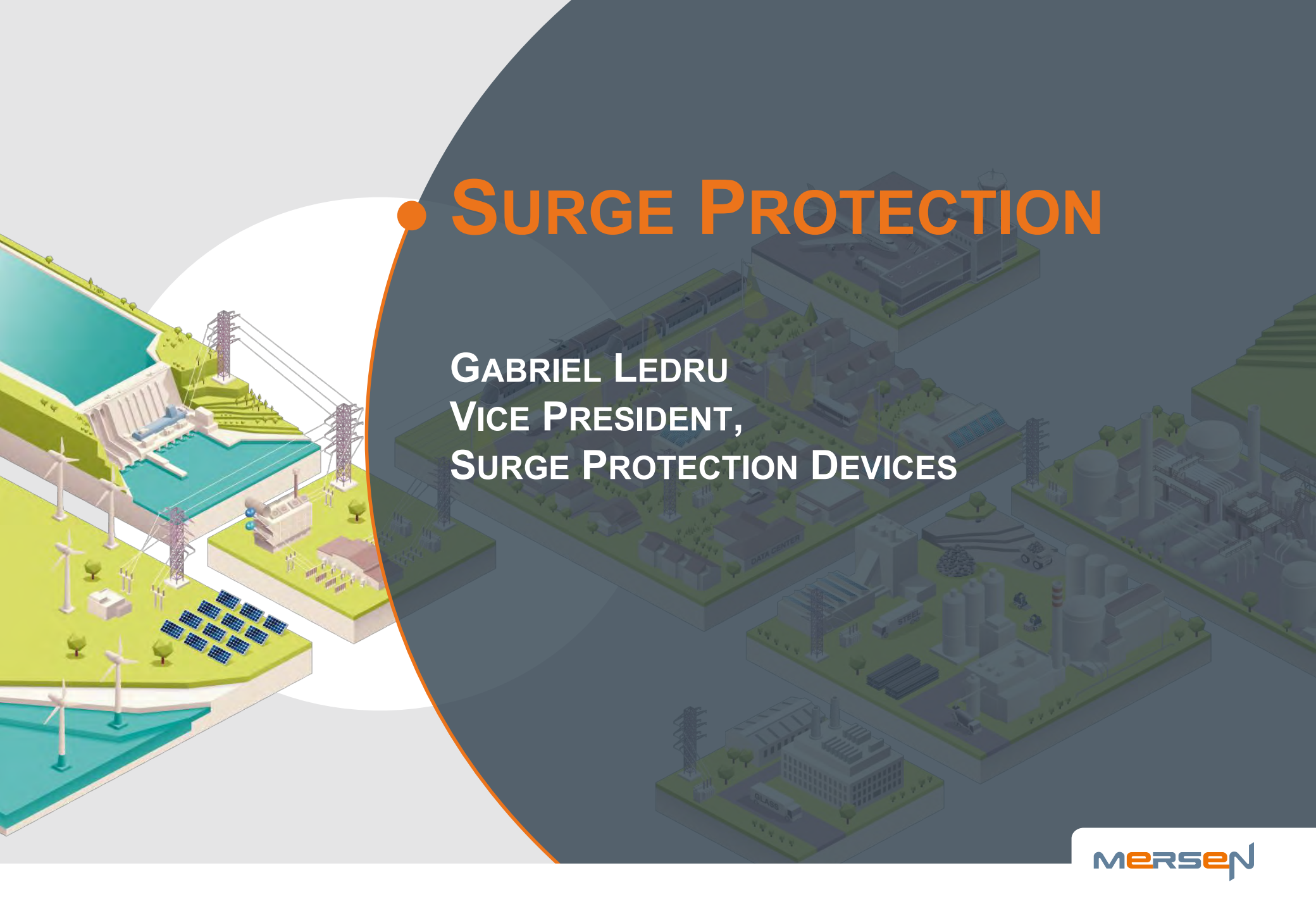
POWER
ELECTRONICS
components

Energy efficiency
Energy storage

2013 revenue:
€130m

QUESTIONS ?





● SURGE PROTECTION

GABRIEL LEDRU
VICE PRESIDENT,
SURGE PROTECTION DEVICES



5,000,000
lightning strikes a year

30 kA
average current density of a
lightning strike

61%
of electrical damage is due to
voltage spikes

VOLTAGE SPIKES

Causes

- Lightning
- Switching between transformer stations
- Disconnecting electric motors

Impact

(e.g.: Spain 2012*)

- **12 million tonnes** of electronic waste
- **€60m** in electrical damage repairs

* Source: Cirprotec

THE BENEFITS OF SURGE PROTECTION

The solution: SPDs*

- A device that shorts to ground any unwanted voltage



➤ Can extend equipment service life by more than 20%



Service continuity



Cost savings



Safety



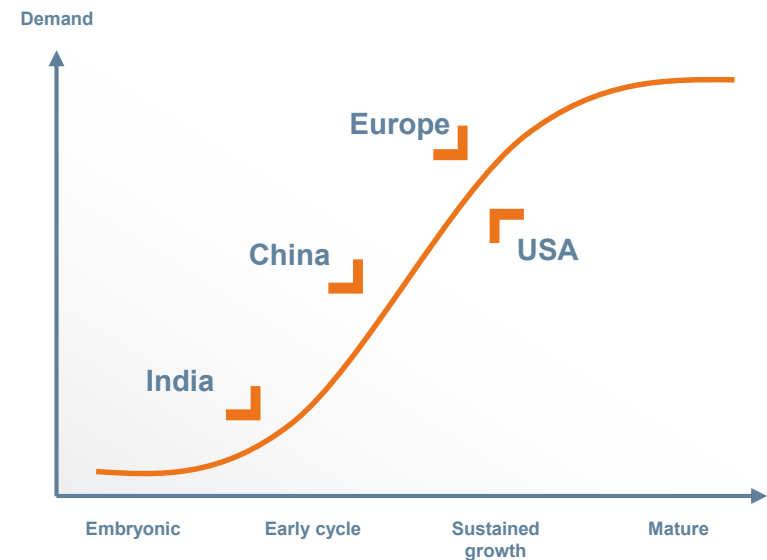
Less electronic waste

*Surge Protection Devices

A FAST GROWING MARKET

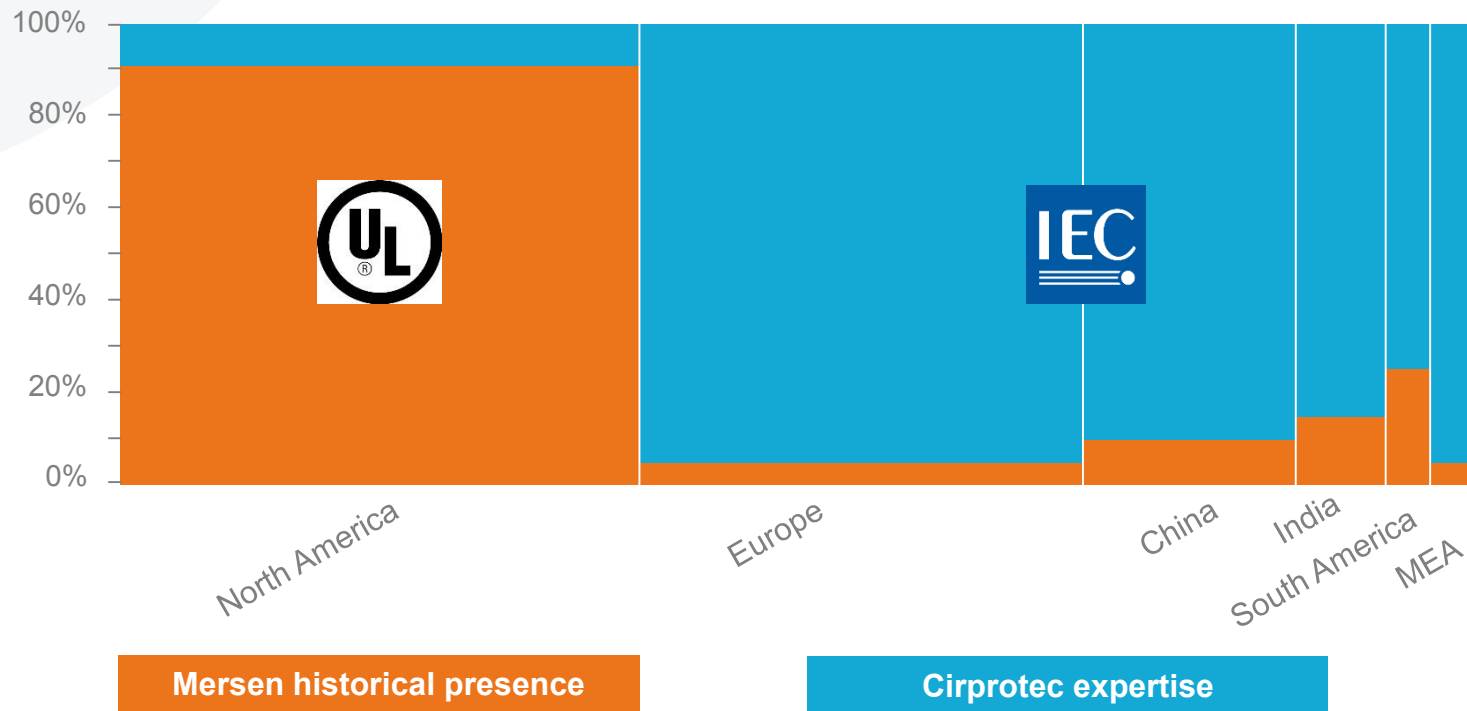
- **Expanding by around 8% a year**
 - Growing amount of electronic equipment to protect (data centers, solar, windpower, etc.)
 - Faster standardization (process industries, etc.)

Stage of SPD Market Development By Region



➤ Current market growth is being led by Europe and the United States
➤ China and India will be future drivers

A MARKET STRUCTURED BY STANDARDS



Market approx. €500m*

* Source: Mersen

STILL A HIGHLY FRAGMENTED MARKET: OPPORTUNITIES FOR CONSOLIDATION

The two market leaders (Dehn, Phoenix Contact)

Cumulated market share:
20-25%

Primarily present in the IEC
segment

Mersen in the top 10

Market share: <5%

Many local players

Mainly in the IEC segment

Market share: 1-3%

Consolidation is coming, especially in the IEC segment

THE ALLIANCE WITH CIRPROTEC

➤ Cirprotec

- World's leading independent manufacturer of IEC SPDs
- Mainly in the Spanish market (50% of revenue)

➤ Acquisition rationale

- Strengthen the Electrical Segment's presence in an expanding market segment
 - Access the IEC market (Europe and Asia)
 - Access testing and innovation capabilities
- Generate synergies by using our network in Asia and Europe

➤ Majority stake acquired in early 2014

- Valued at 7 times EBITDA



TESTING AND INNOVATION CAPABILITIES

Test center



- Competitive advantage to capture market growth

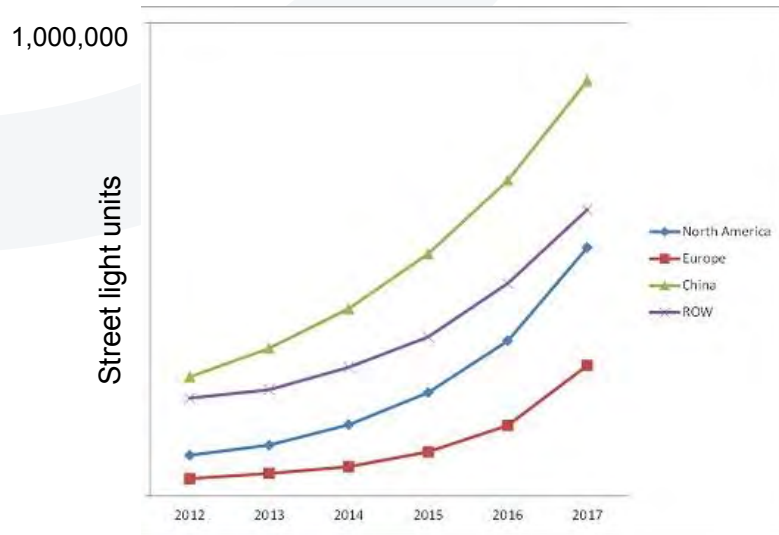
Innovation capabilities



- Technological platform to drive faster growth in every geography

INNOVATION CAPABILITIES WILL ENABLE US TO CAPTURE NEW MARKETS

LED public lighting market*



*Source: Strategies Unlimited

- **31% forecast CAGR through 2017**
(in volume)
 - More energy efficient, for the same performance
 - Smaller carbon footprint
 - Less light pollution

➤ Sensitive components like LEDs need extensive protection against voltage spikes

MERSEN POSITIONED IN HIGH VALUE-ADDED SEGMENTS

Development of a new generation of LED lighting



- › Instant on
- › Luminous efficacy
- › Improved dimming
- › Easy luminous flux adjustment
- › Intelligent management

Critical components for special environments



- › Uninterrupted service is mission-critical
- › Safety
- › Requirements of TV broadcasting
- › Surge protection is essential

STRATEGY

Position ourselves as the **global specialist**

by continuing to expand in both standards

Forge alliances

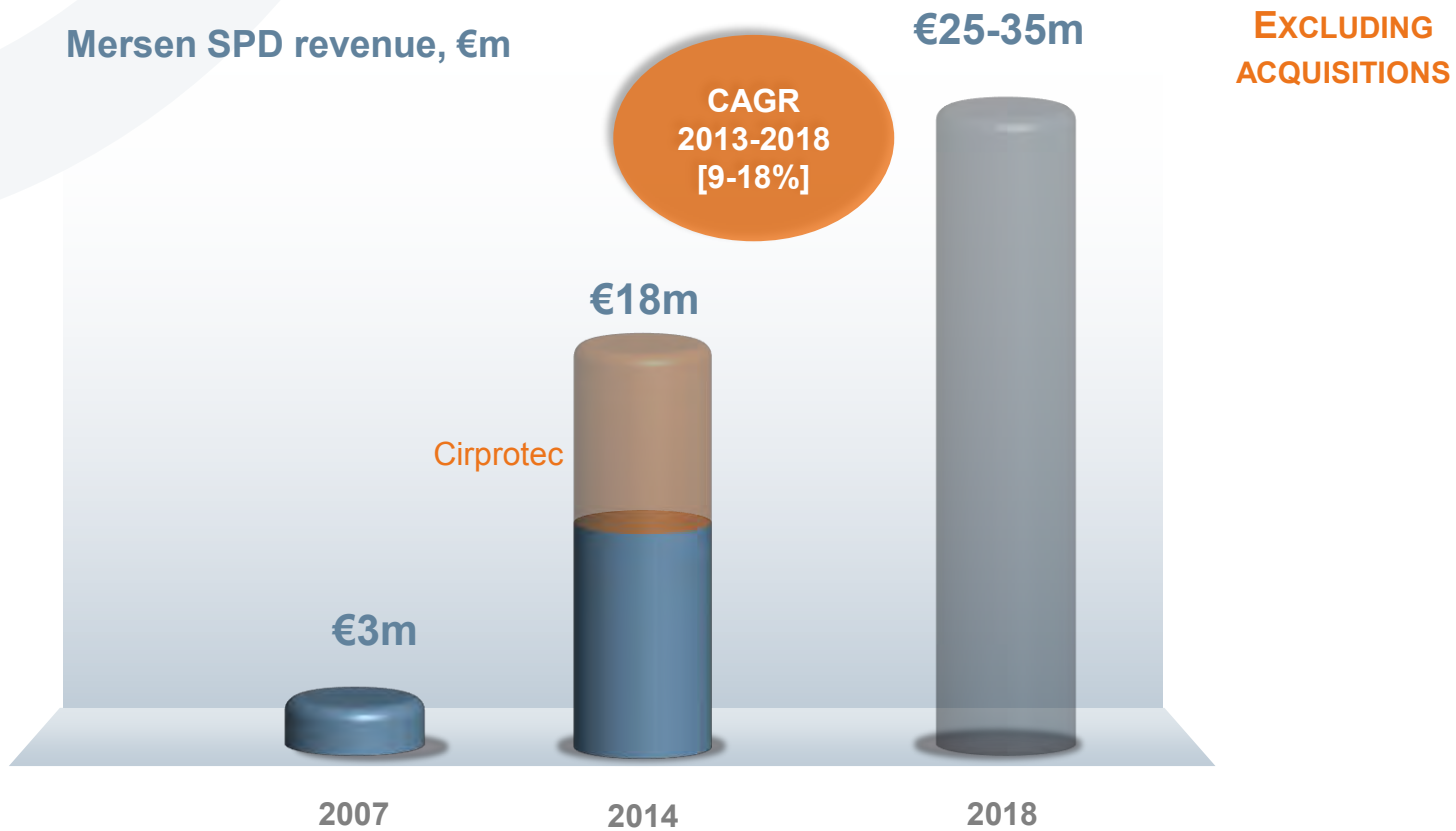
in Asia

Step up innovation

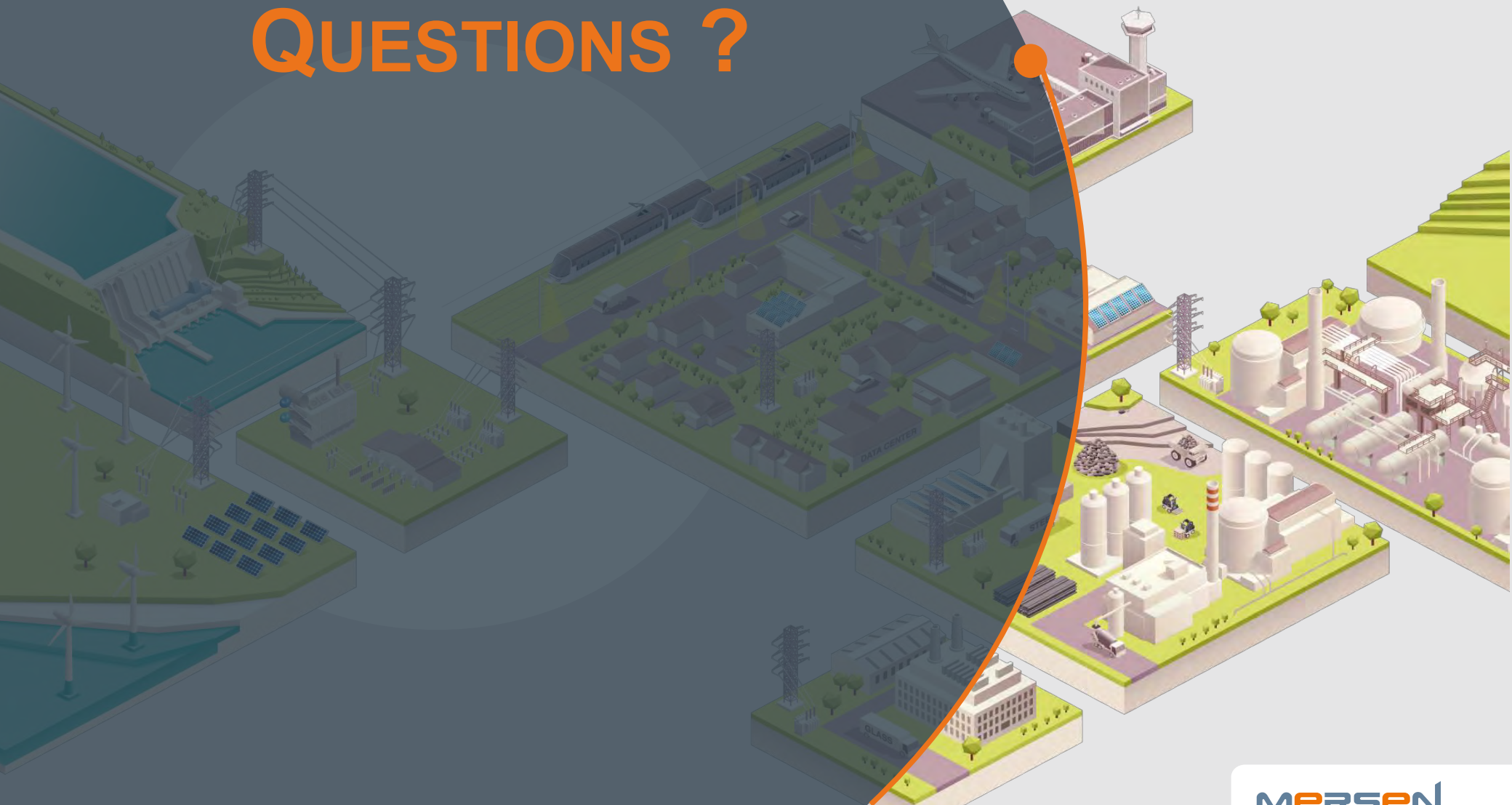
around competency centers

Develop a global manufacturing base

OBJECTIVE: OUTPERFORM THE MARKET



QUESTIONS ?





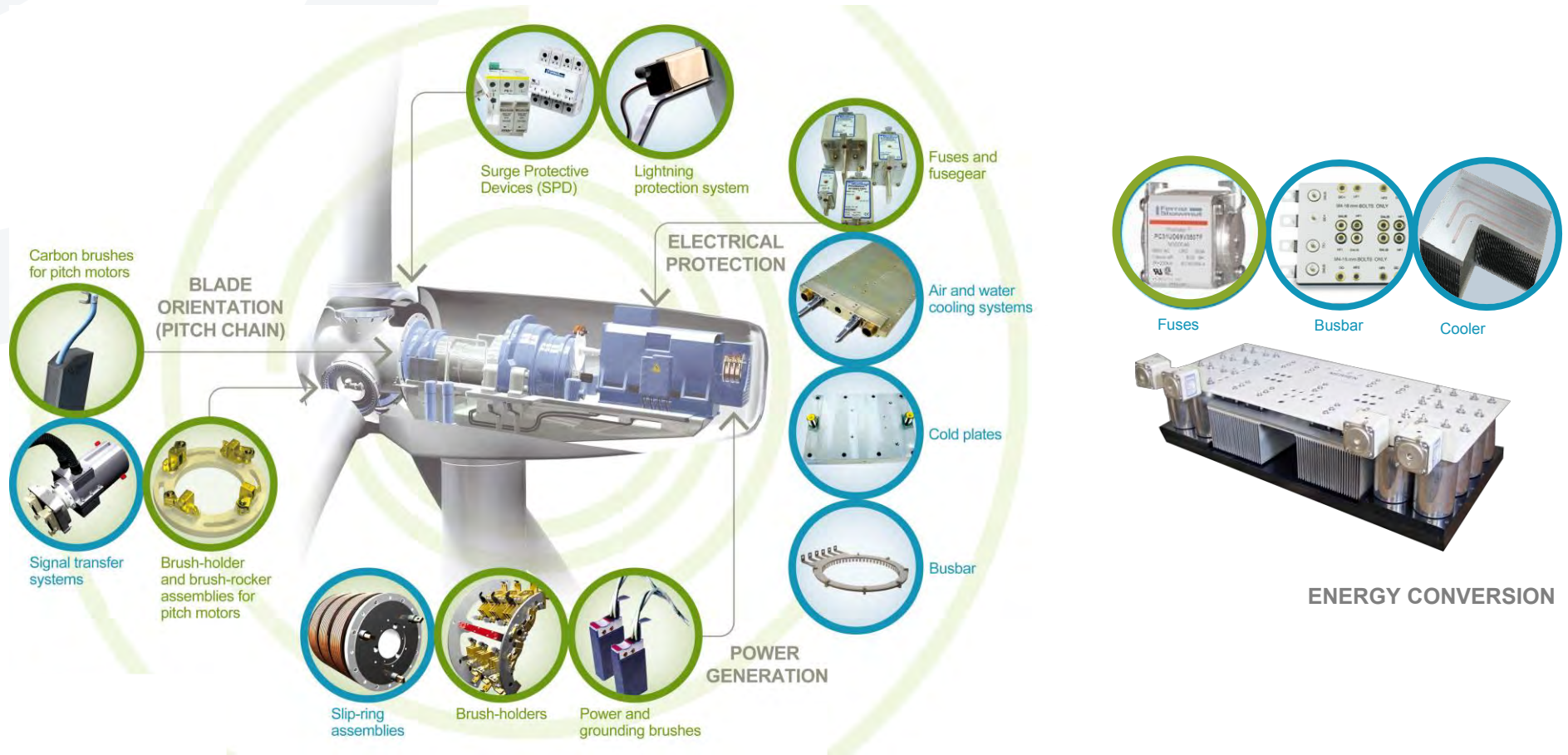
● MERSEN'S WINDPOWER SOLUTIONS

MARC CHARLEBOIS
GENERAL MANAGER, NORTH AMERICA,
ELECTRICAL SEGMENT

MERSEN IN THE WINDPOWER MARKET



MERSEN'S WINDPOWER OFFERING: AN END-TO-END SOLUTION AROUND THE WORLD



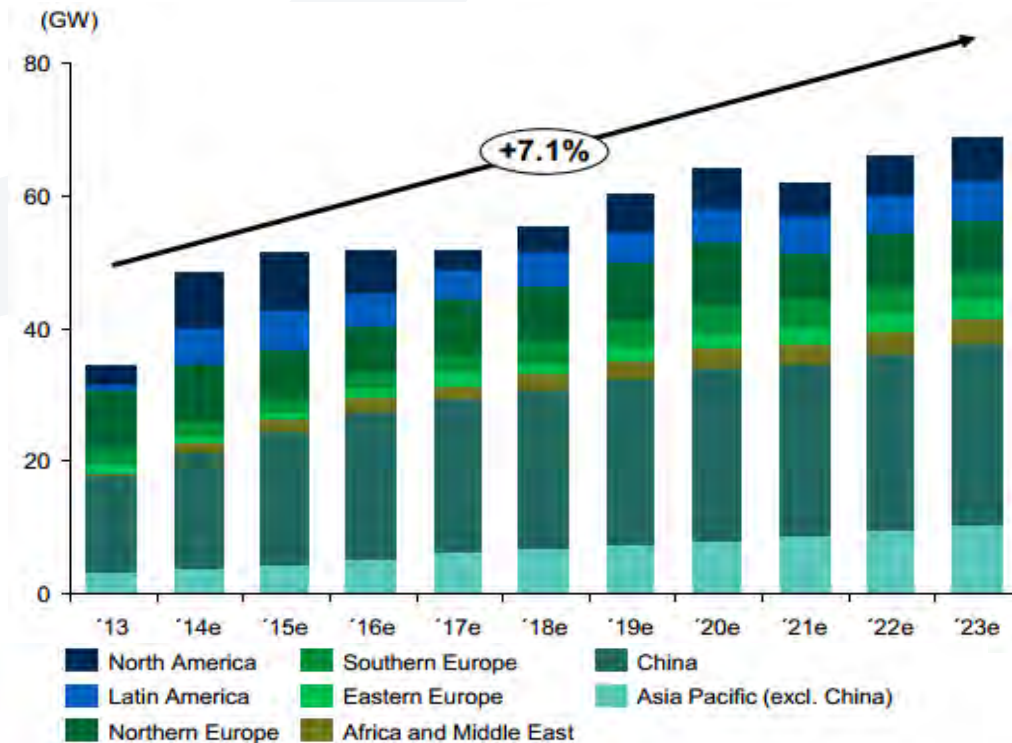
OEM



OEM +
replacement

OEM MARKET: ON-GRID WINDPOWER GROWING BY MORE THAN 7% A YEAR LONG-TERM

Worldwide forecast of on-grid windpower, 2013-2023e



Mersen's accessible market

Number of wind turbines growing by 5% a year

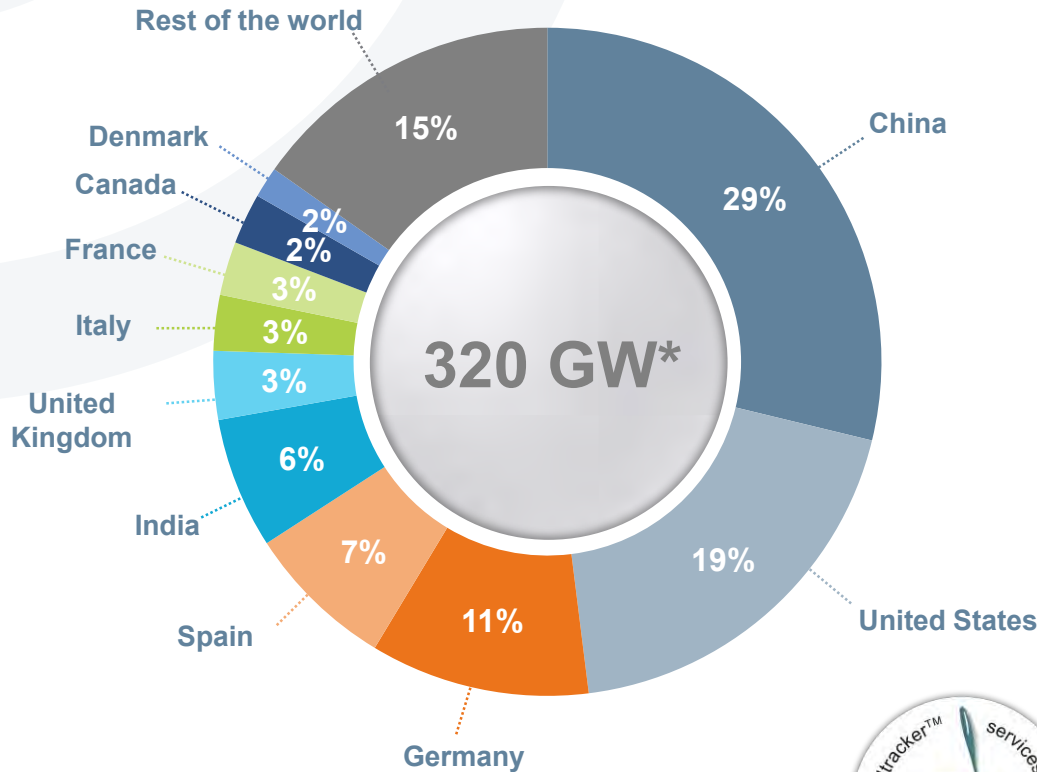
China: more limited access (national sourcing of certain components)

MERSEN'S ADVANTAGES

- A worldwide network of experts
- Comprehensive solutions and specification capabilities

Source: MAKE

THE REPLACEMENT MARKET: AN INSTALLED BASE OF 250,000 WIND TURBINES IN 2013



Mersen's accessible market

➤ **550,000 wind turbines installed worldwide by 2023**

➤ **Brushes have to be replaced every 12-18 months**

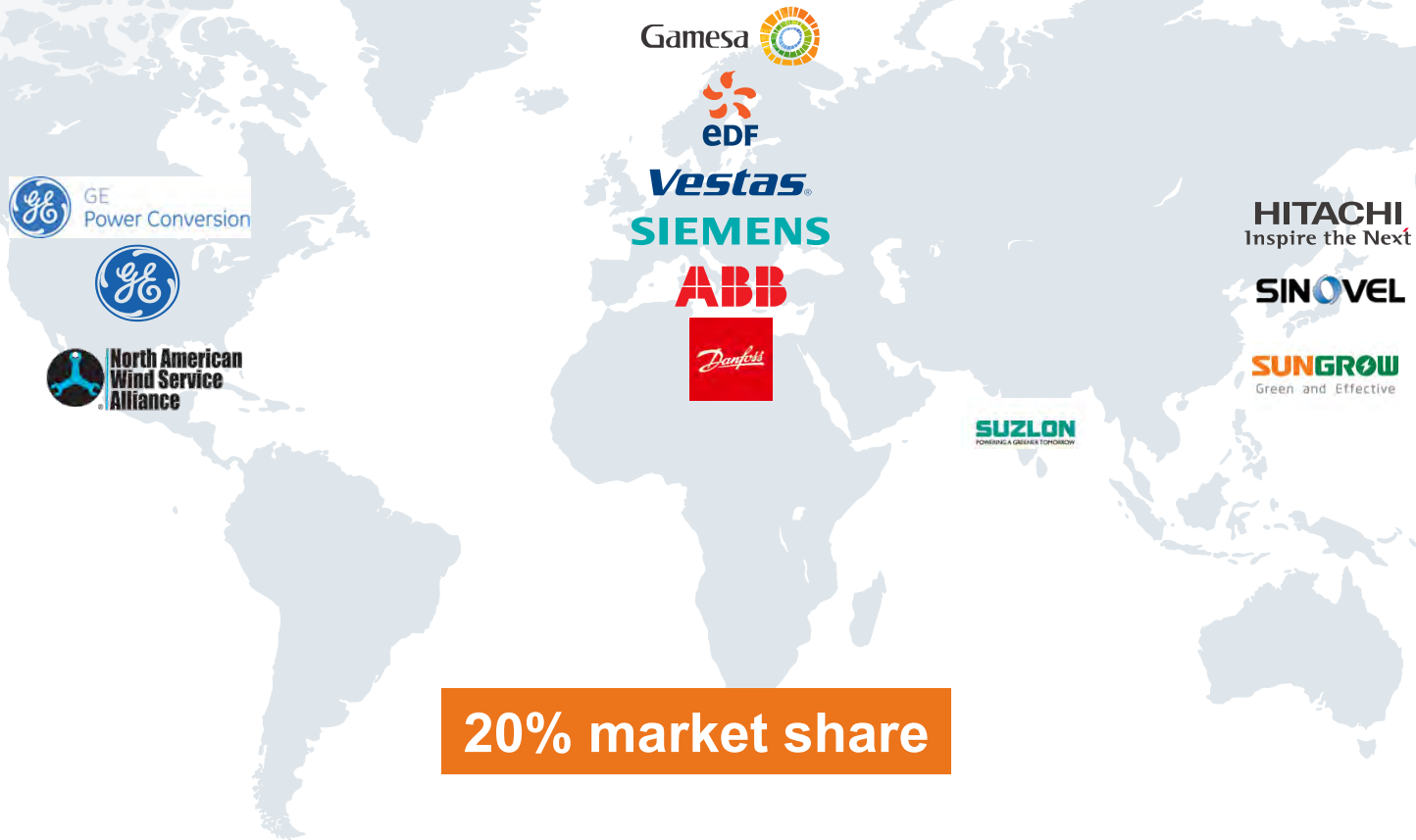
MERSEN'S ADVANTAGES

➤ **Unrivalled field experience** ➤ **Dedicated team**

➤ **Comprehensive solutions (including services and maintenance)**

*Source: GWEC, installed base at end-2013, in GW

SIGNIFICANT MARKET SHARE FOR MERSEN, THANKS TO A POWERFUL MANUFACTURING BASE



20% market share

THE PARTNERSHIP WITH ABB: AN EXAMPLE OF MERSEN EXPERTISE



ABB

- Development of a generator to equip the vast majority of wind turbine models in the world (1.5 to 3.2 MW unit capacity)



merseN

- Experts in slip-ring design (sizes, materials, etc.)
- Experts in brush-holder design (configuration optimization, pressure, etc.)

THE PARTNERSHIP WITH ABB: AN EXAMPLE OF MERSEN EXPERTISE

➤ **Collaboration**
with ABB engineers
for five years

➤ Development of a
custom solution

➤ **A complete solution** combining
the power slip-ring,
brush-holder and
graphite brush

➤ **Reduces the need**
for maintenance

➤ **Global production:**
Germany,
China, India

➤ Three-year
framework
agreement makes
Mersen an **ABB**
preferred supplier

STRATEGY

Strengthen our position

in the growing OEM market

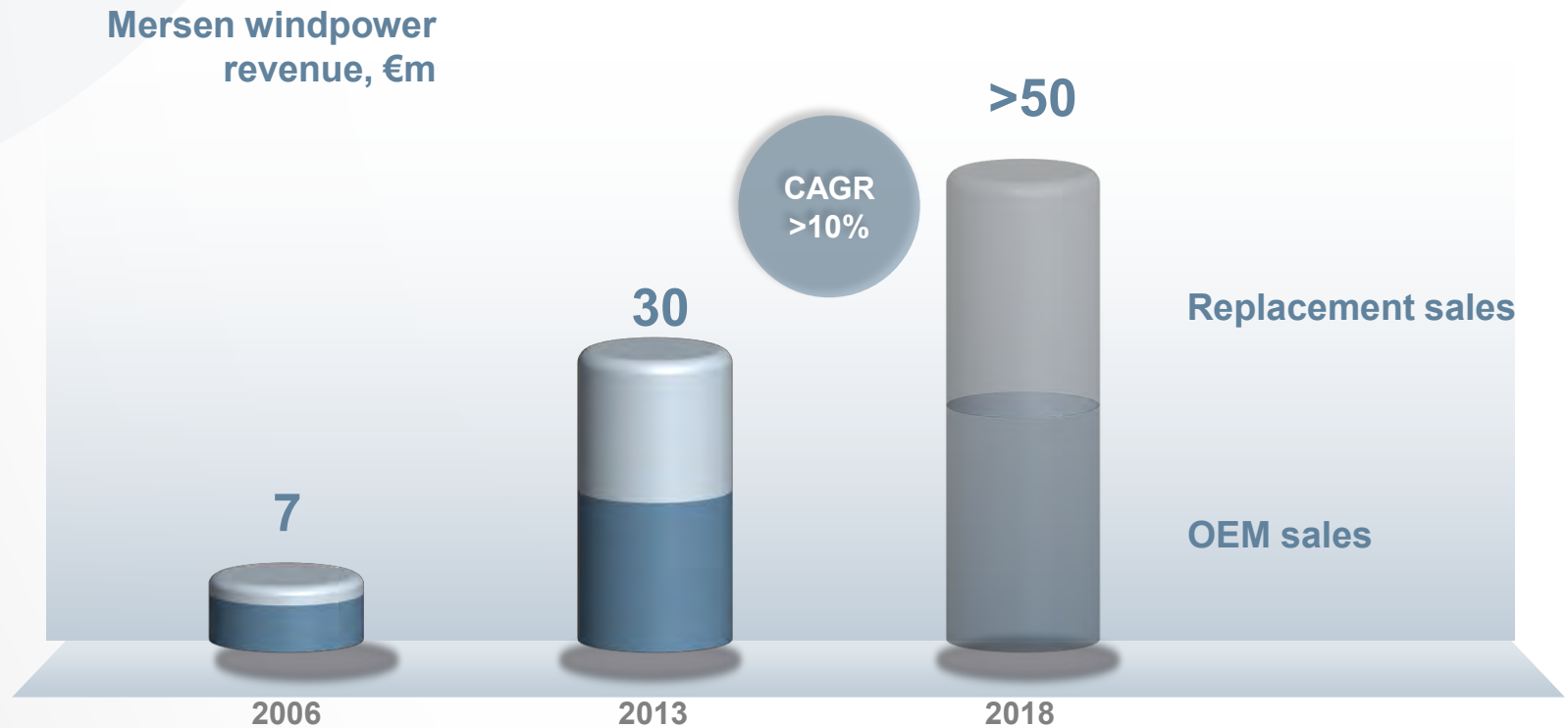
Consolidate the replacement market
through grid managers

Develop our redesign solutions

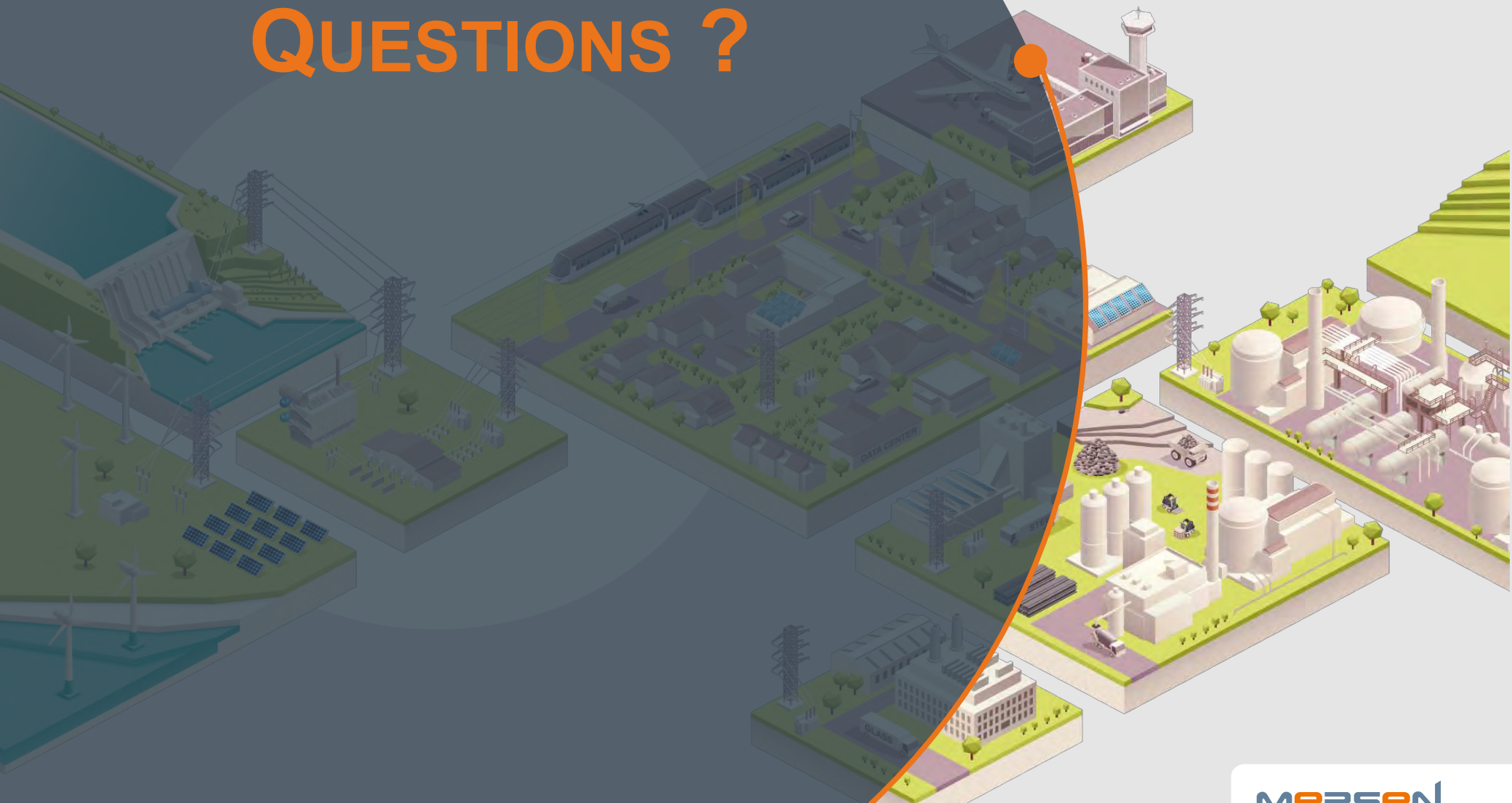
to offer operators compelling alternatives

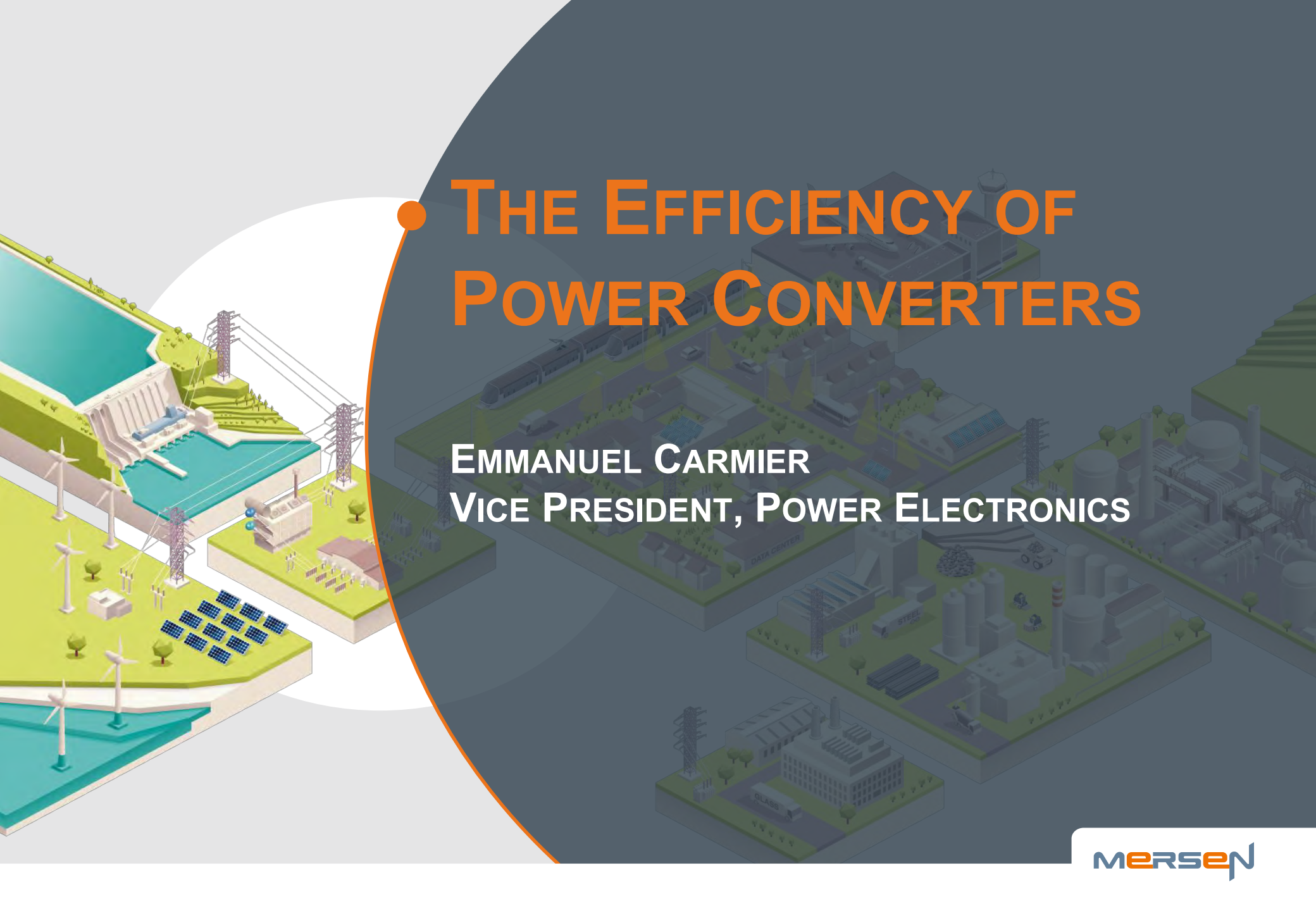
Capture growth in the energy conversion market,
thanks to our range of key components available in the three major regions

OBJECTIVE: OUTPERFORM THE MARKET



QUESTIONS ?

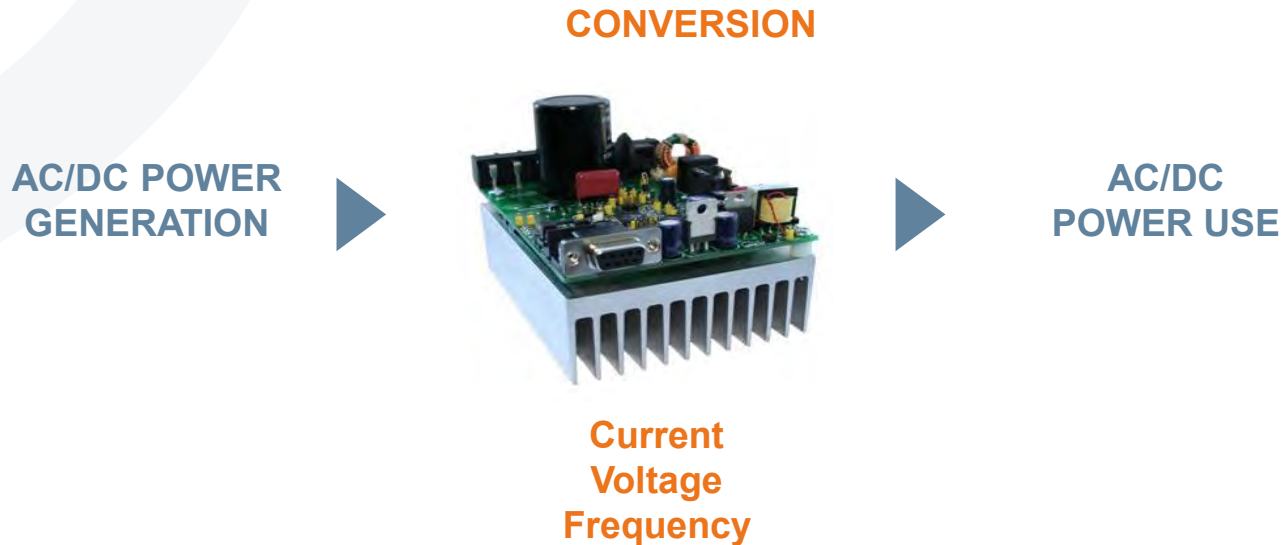




• THE EFFICIENCY OF POWER CONVERTERS

EMMANUEL CARMIER
VICE PRESIDENT, POWER ELECTRONICS

POWER ELECTRONICS: CONVERTING ELECTRICAL POWER

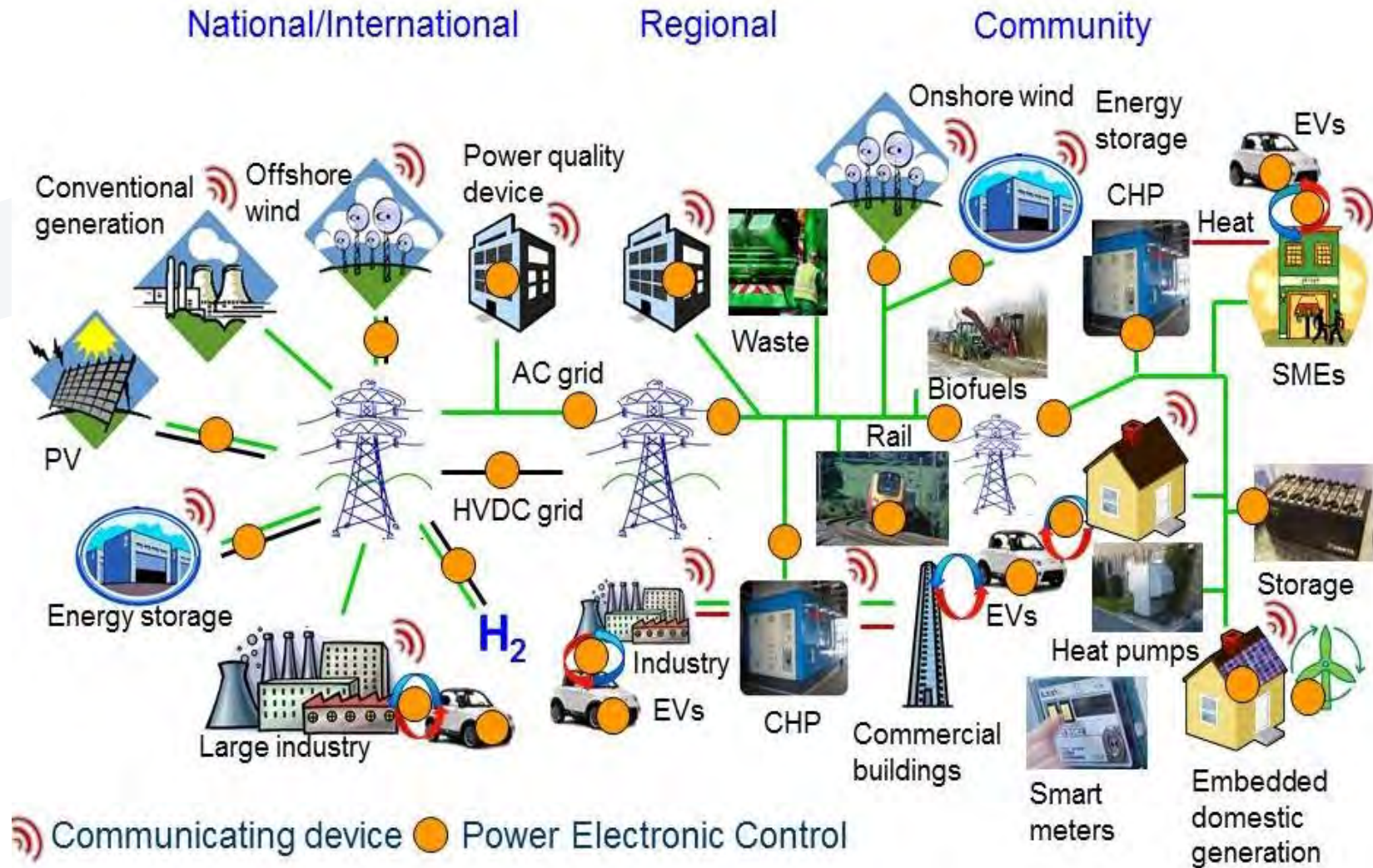


Basic function: to convert electrical power **as efficiently as possible** into a form suitable for a very wide variety of **applications and users**

MERSEN'S FOCUS

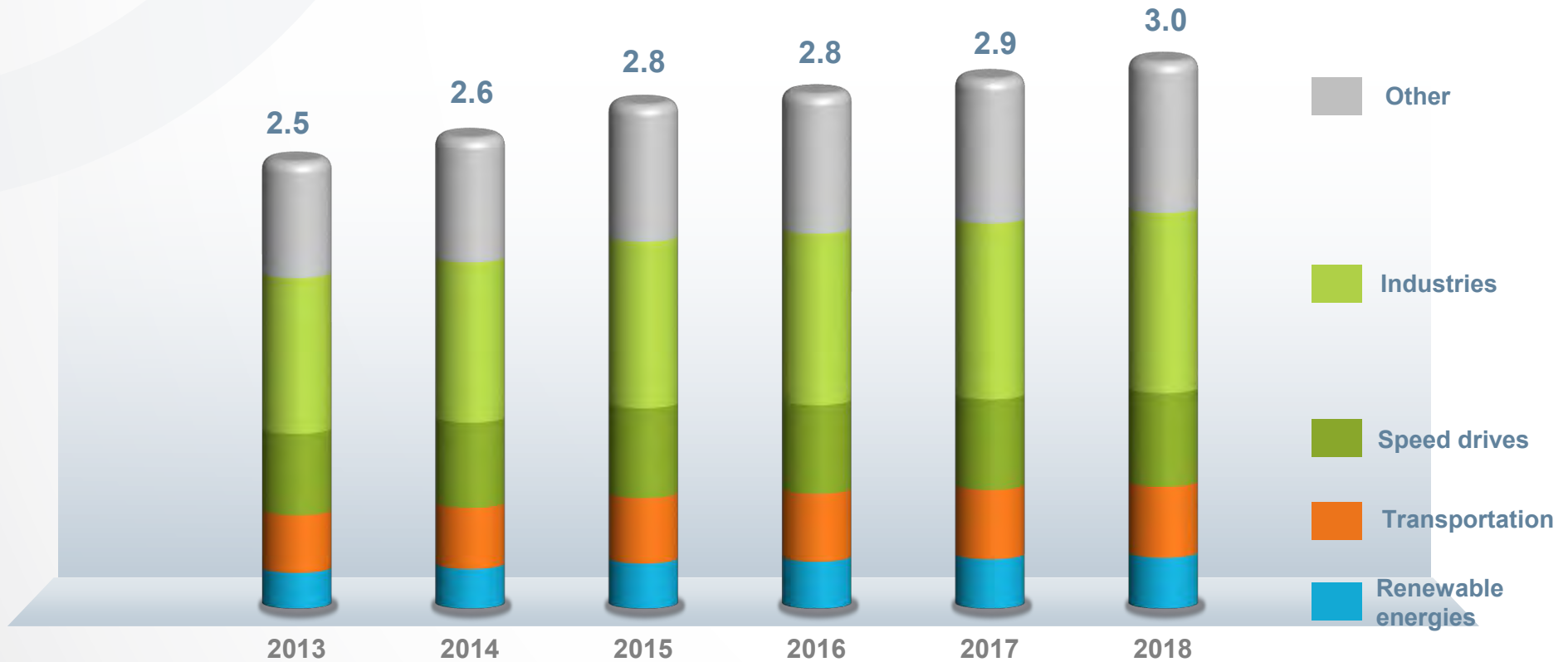
- **High-power applications** (excluding the consumer electronics and low power supply market)

A NEED ACROSS THE ENTIRE ELECTRIC POWER VALUE CHAIN



A MARKET GROWING BY MORE THAN 6% A YEAR...

The power semiconductor market (in \$bn)*
Segments accessible to Mersen



* Source: Yole 2013

... LED BY RENEWABLE ENERGIES, TRANSPORTATION AND THE NEED FOR ENERGY EFFICIENCY...

Renewable energies



➤ Growing demand for energy



➤ Carbon emissions reduction



Mobility needs



➤ Urbanization



➤ Traffic congestion



➤ Carbon emissions reduction

Energy efficiency

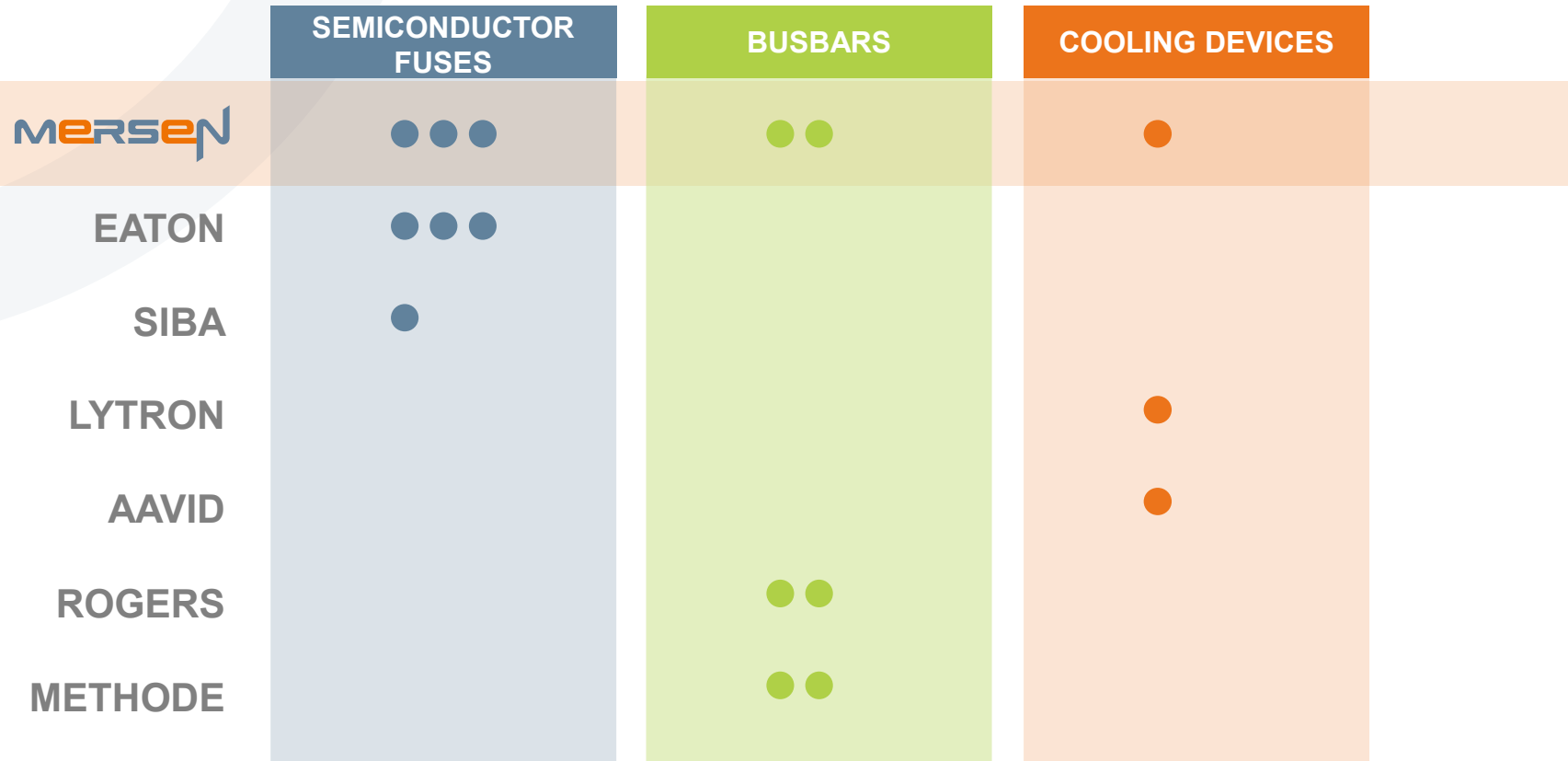


➤ Carbon emissions reduction



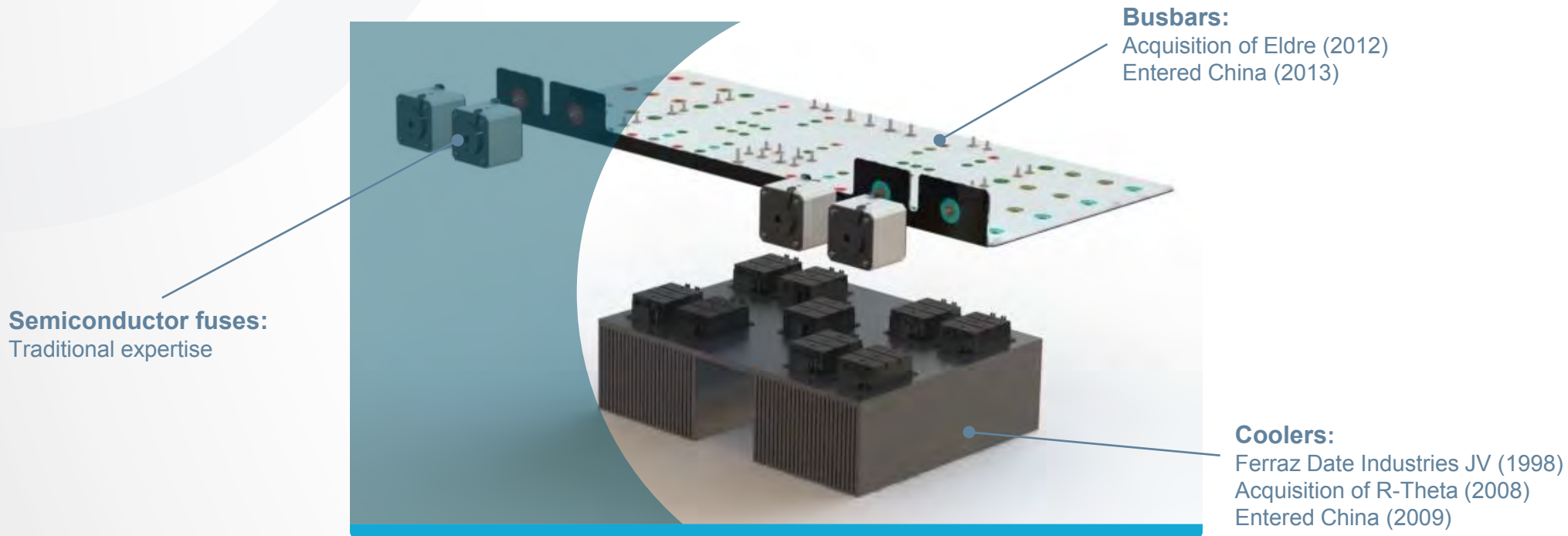
➤ Energy use reduction

... IN WHICH MERSEN STANDS APART FOR ITS COMPREHENSIVE OFFERING



- Market share [30% - 40%]
- [10% - 30%]
- <10%

MERSEN'S POWER ELECTRONICS PORTFOLIO: BUILDING AN UNIQUE SOLUTION



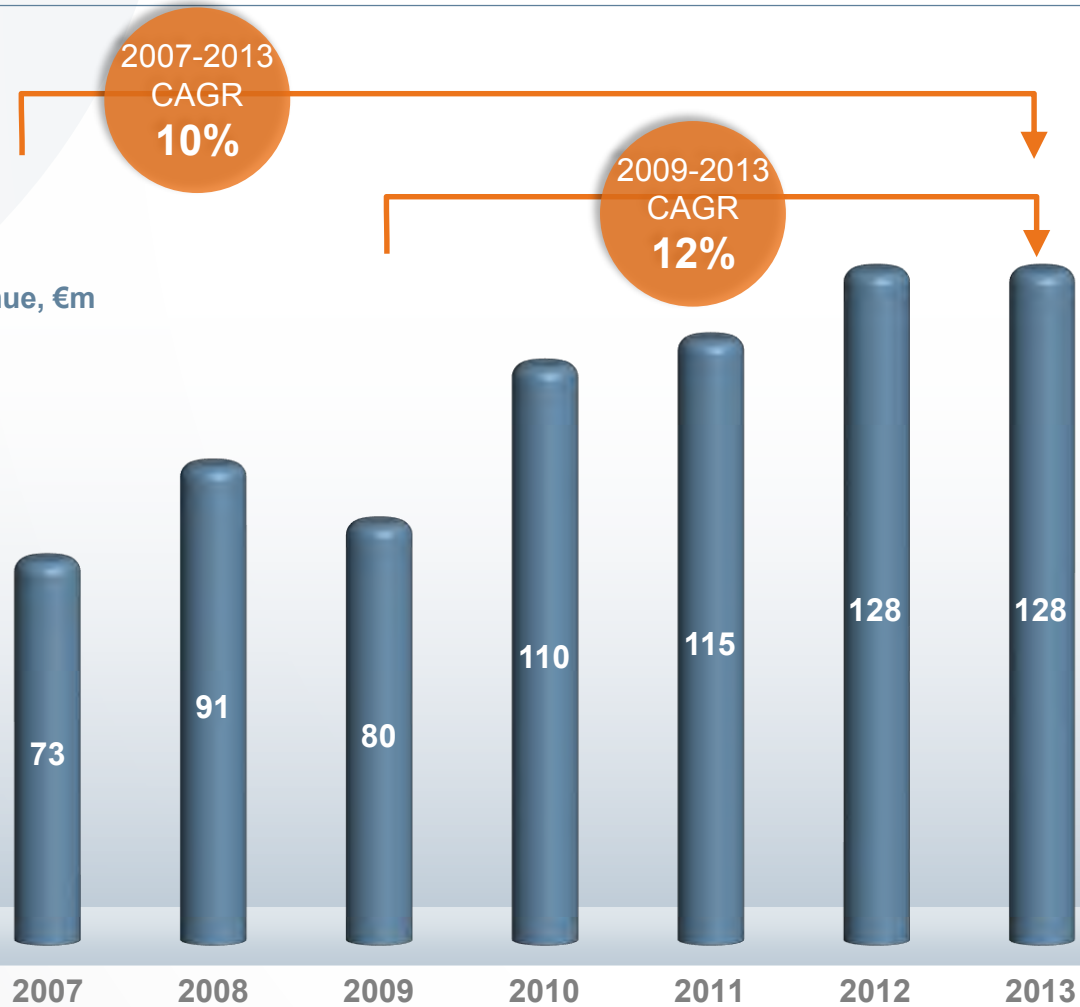
Strong interaction among these components

AN EFFICIENT MANUFACTURING AND SALES ORGANIZATION, LOCATED CLOSE TO OEM DESIGN CENTERS



GROWTH IN REVENUE DESPITE THE UNFAVORABLE ECONOMIC ENVIRONMENT

Mersen power electronics revenue, €m



THE ELDRE ACQUISITION

➤ Eldre in 2011

- Global leader in busbars
- Production facilities in Europe and the United States
- Mainly serving the process industry market in the United States and the transportation and windpower markets in Europe

➤ Acquisition rationale

- Extend the product portfolio in a growth segment (power electronics)
- Access key expertise upstream from the design of power converters
- Develop the business in Asia

➤ Acquisition completed in late 2011

- Valued at 7.4 times EBITDA



ELDRE TWO YEARS LATER: GROWING THE BUSINESS

➤ In Asia: busbar production facility near Shanghai (2013)

- Gain market share in Asia: Rotem, Advanced Energy, Fuji Kobe
- Seize opportunities with new entrants: Destin Power, RXPE, Tianxin



➤ New customer entry points

- A wider array of addressed markets (power conversion systems for solar, data centers, defense)
- Customer synergies: Bombardier, Siemens Wind Power, Power One/ABB

2014 RESULTS

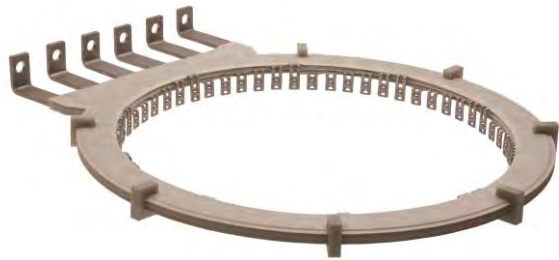
➤ Revenue in Asia: €2m

➤ Revenue from customer synergies: ~€4m
(including all power electronics components)

ELDRE TWO YEARS LATER: NEW TECHNOLOGICAL DEVELOPMENTS

Circular busbars

- Replace motor windings with a busbar
- Efficient, reliable, quicker to assemble
- Applications: windpower, traction, industrial motors



Smart busbars

- Flexible design suited to battery specifications, with an additional monitoring capability (voltage and temperature control)
- Efficient, compact
- Applications: Li-ion batteries (energy storage)



2018 OBJECTIVES

- Potential revenue generated from these two examples: €5-10m

STRATEGY

Continue to expand the product portfolio
> Be the **PREFERRED RESOURCE** for designers

Develop partnerships

with OEM customers and semiconductor manufacturers

> Be the **SPECIALIST** in optimizing components to improve converter efficiency

Innovate in products and services

> Be the **EXPERT** source of new ideas and solutions thanks to our simulation software

OBJECTIVE: OUTPERFORM THE MARKET

Mersen power
electronics revenue, €m

2013-2018
CAGR
7-10%

EXCLUDING
ACQUISITIONS



QUESTIONS ?

