

Observations for a Better World

Vaisala's Capital Markets Day, May 11, 2016

VAISALA

Agenda

- 12:15 Vaisala in Brief
- 12:45 Weather Business Area
- 13:45 Break
- 14:00 Controlled Environment Business Area
- 14:45 Vaisala Production System
- 15:15 Vaisala Strategy
- 15:45 Introduction to Vaisala's products

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- Vaisala in Brief**
- Weather Business Area
- Break
- Controlled Environment Business Area
- Vaisala Production System
- Vaisala Strategy

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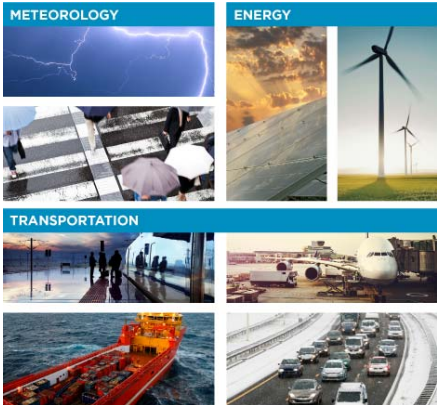
Vaisala is a Global Leader in Environmental and Industrial Measurement

VAISALA

Best-in-class Weather Observation Measurement

Serves weather impacted customers' with comprehensive offering

- Soundings
- Weather instruments
- Weather systems
- Weather radar
- Lightning
- Information services



Leading Industrial Measurement Solutions

Helps customers to improve operational quality and productivity, and to gain energy savings

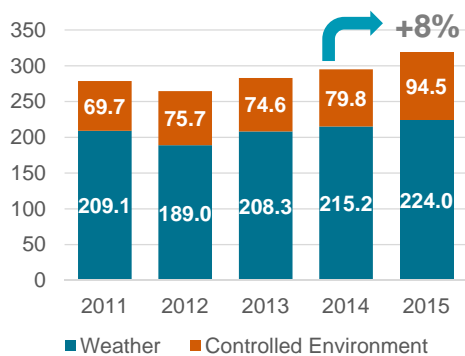
- Industrial instruments: humidity and temperature, dew point, moisture in oil, pressure, carbon dioxide
- Continuous monitoring systems
- Power transmission



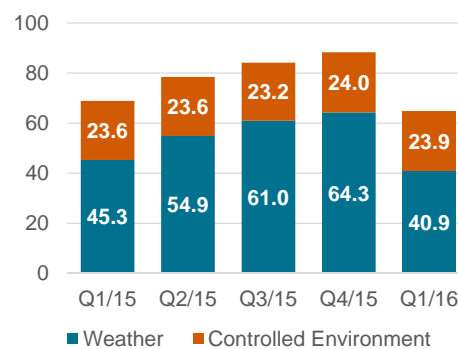
Vaisala Performed Well in 2015 Despite Challenging Market Conditions

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Strong Order Intake in 2015



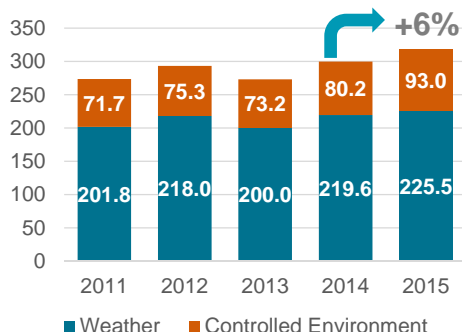
- Orders received in 2015 were 318.5 MEUR, +8%
- Growth strongest in Americas



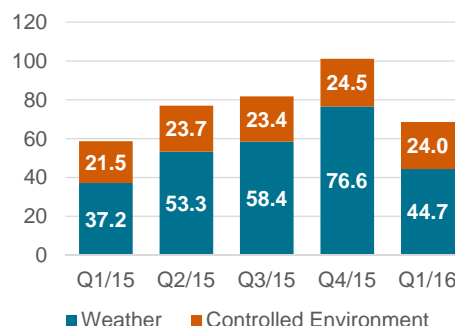
- Orders received had a slow start in Q1/2016, -6%, totaling 64.8 MEUR
- Decline was due to Weather's order intake -10%

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Net Sales Records Were Set in 2015 and Q1/16

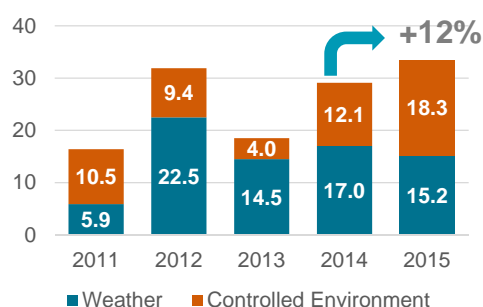


- Net sales growth was strong, +6%, totaling 318.5 MEUR
- Controlled Environment performing especially well, +16%, reaching 93.0 MEUR
- Weather Business Area +3%, reaching 225.5 MEUR

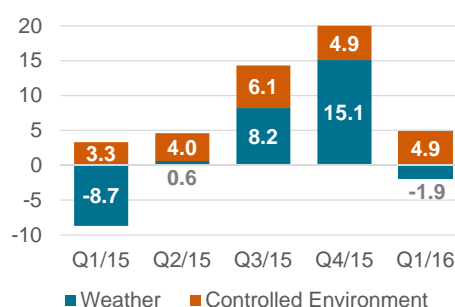


- Net sales +17%, totaling 68.7 MEUR, growth strongest in Americas
- Weather spectacular +20%, reaching 44.7 MEUR following high product deliveries
- Controlled Environment +12%, reaching 24.0 MEUR. Growth in all regions, strongest in APAC.

EBIT Margin Improved to 9.3% in 2015

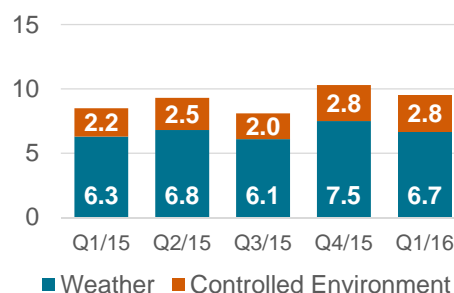
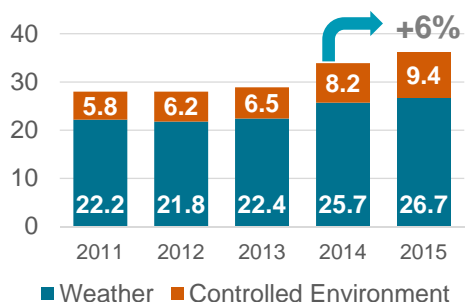


- EBIT 29.6 MEUR, +12% following net sales increase
- Includes 1.8 MEUR expenses related to the restructuring
- Weather EBIT 15.2 MEUR, -11% mainly due to lower sales volumes especially during the first half of the year
- Controlled Environment EBIT 18.3 MEUR, +51% mainly due to positive impact of USD/EUR exchange rate as well as higher sales volumes



- EBIT -1.0 MEUR, improved by 6.6 MEUR
- Includes 3.1 MEUR expenses related to the restructuring of Transportation business unit
- Weather EBIT -1.9 MEUR, improved by 6.8 MEUR mainly due to higher net sales and product profitability
- Controlled Environment EBIT 4.9 MEUR, improved by 1.6 MEUR due to higher net sales and gross margin

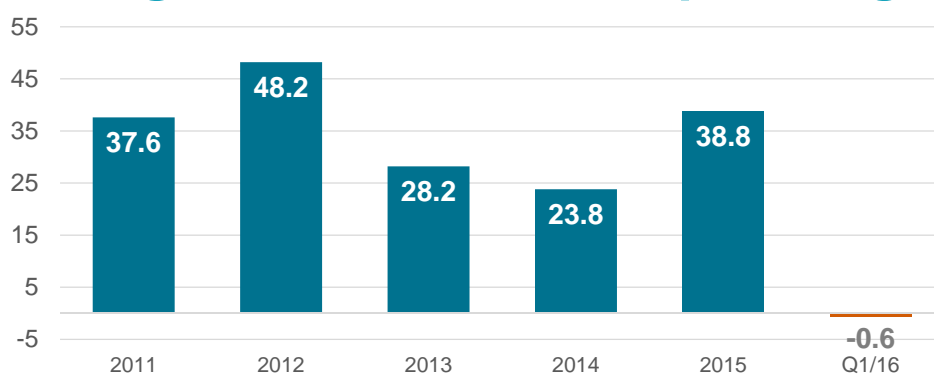
Consistent Investment in R&D Enable World Class Products



- Vaisala R&D investment 36.1 MEUR
- R&D share of net sales
 - Vaisala 11.3%
 - Weather 11.8%
 - Controlled Environment 10.1%

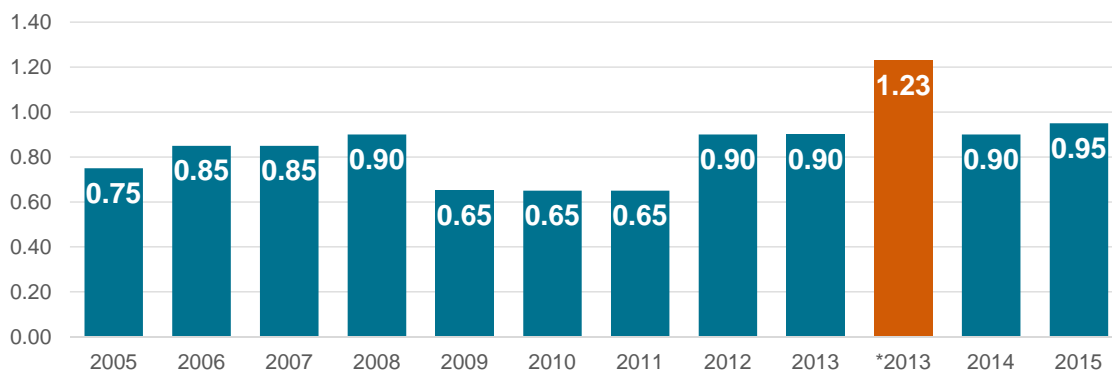
- Vaisala R&D expenses 9.5 MEUR
- Controlled Environment R&D expenses increased 0.6 MEUR

Strong Cash Flow from Operating Activities



- Cash flow improvement of 15 MEUR during 2015 as a result of profitability and working capital improvement
- Q1/16 cash flow -0.6 MEUR million despite considerable profitability improvement year-on-year, weakening mainly due to increase of trade receivables

Stable Dividend Through Out Years



* Return of capital to shareholders in 2013

Observations for a Better World

Observations for a Better World

Weather

Growth through industry leading offering and information services expansion

METEOROLOGY



ENERGY



TRANSPORTATION








Reliable environmental observations for better decision making, safety and efficiency



Controlled Environment

Growth through product leadership



Leadership Built on

Reliability

Expertise in applications, science and technologies

Excellence in high mix – low volume businesses

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Observations for a Better World. Weather Business Area

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Goals and Scope

Strategy

Conclusions

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Weather Business

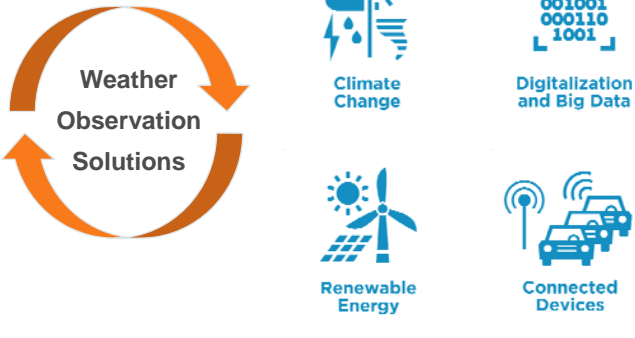
Our Markets



Weather

- METEOROLOGY
- ENERGY
- TRANSPORTATION

Mega Trends Impacting the Markets



- Climate Change
- Digitalization and Big Data
- Renewable Energy
- Connected Devices

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Weather Business Strategic Goals

- **Growth** through industry leading offering and information services expansion
- We have **strong expertise in applications, science and technologies**
- Customers view us as **the leader in reliability**



Weather Business Scope

WEATHER BUSINESS

Serving national MET agencies and weather impacted customers with comprehensive offering
 Rich set of business and delivery models to match each customer's need

CUSTOMERS

Meteorology, Aviation, Road & Rail, Maritime, Renewable Energy

GEOGRAPHY

Global delivery together with local partners






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Reliable Weather Technology



- BUSINESS PARTNER PROVIDING OPERATIONAL VALUE**
Information Services
- ONE STOP SHOP PROJECT HOUSE**
Installation and integration
- RELIABLE WEATHER TECHNOLOGY PROVIDER**
Hardware, Software & Basic Services

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Global Leader Across the Offering



Truly Global Business and Presence

Countries where sold 2015

156 countries out of 196 in the World



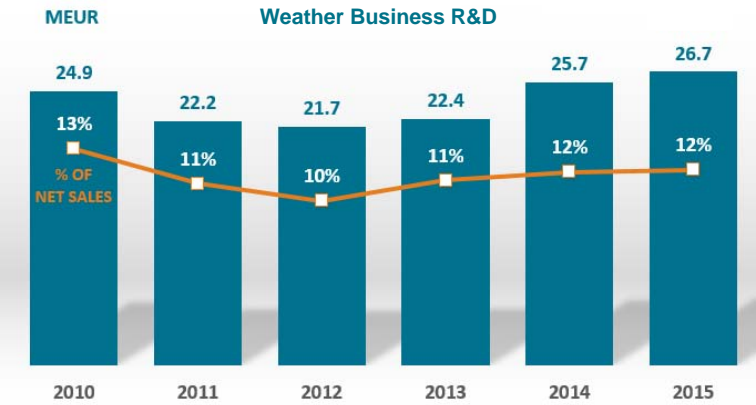
Countries with own office or representation

117 countries out of 196 in the World

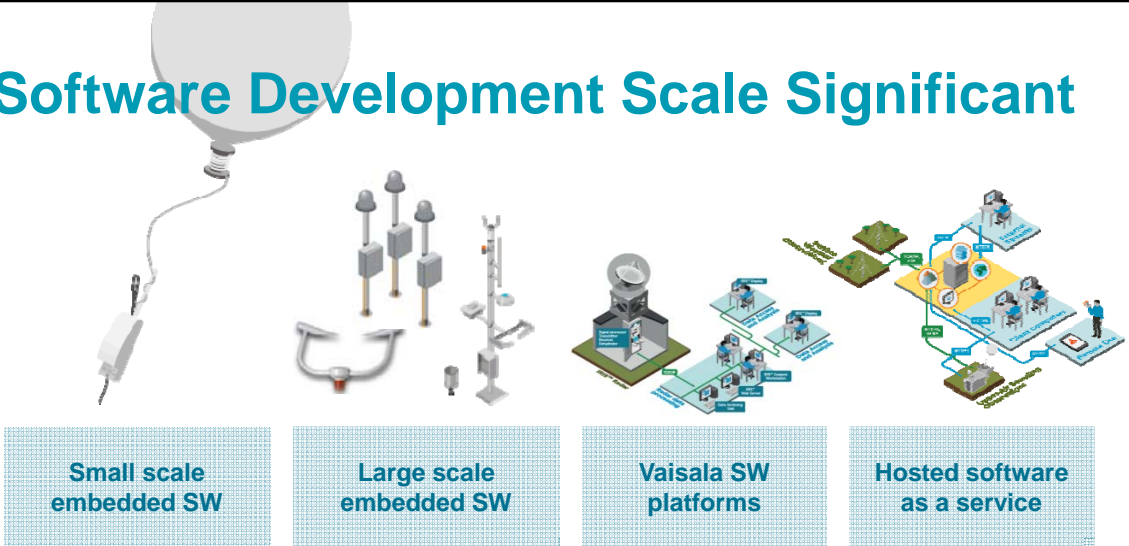


Continuous Innovation to Sustain Leadership Position

- 300** Personnel in Research and Development
- 2 / 3** of Vaisala personnel with University or Doctoral degree
- 30** Research and Technology Team involved in applied science



Software Development Scale Significant



Mobile devices supported with the same software utilizing standard browsers or device specific apps utilizing partner network

Software Product Examples



IRIS Weather Radar Software

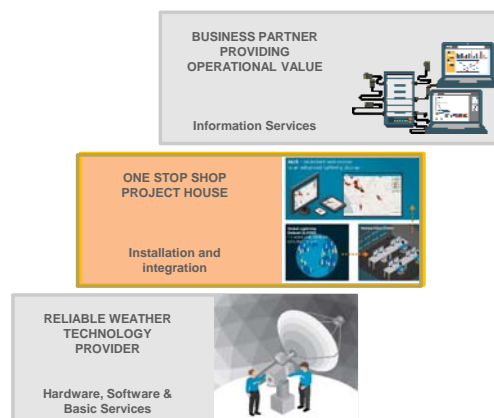
- Updates through releases
- Simple and easy-to-understand interface
- Accurate precipitation estimation and classification
- Earlier weather watches and warnings
- Track Storm Movement and Vertical Structure of Storms
- Access and share data from anywhere



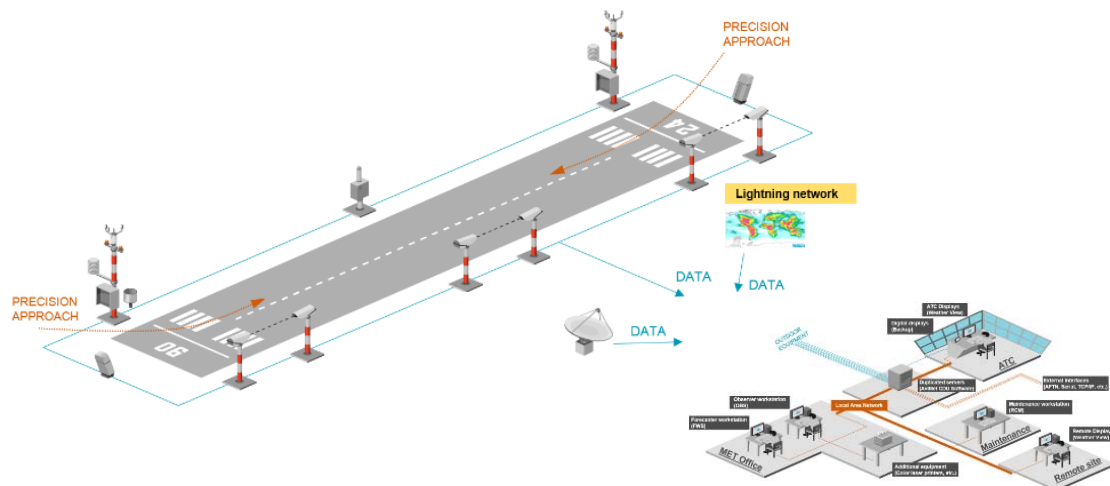
Network Manager

- One secure platform to manage small and large observation networks with high-quality data 24/7
- Affordable and easy to buy and maintain over the product life cycle
- Efficiency through optimized central operations combining remote monitoring, control and diagnostics
- Possible to integrate also non-Vaisala instruments

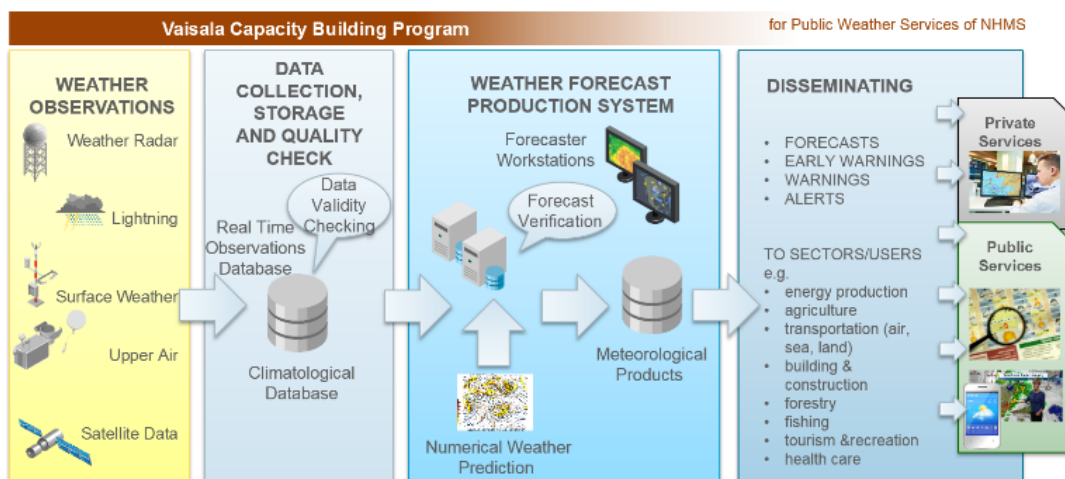
Dependable Project Delivery



Aviation Total Weather Solution



Complete Meteorological Infrastructure



Cutting-edge Information Services



Weather Impacts Society, Business and People

Climate change implies

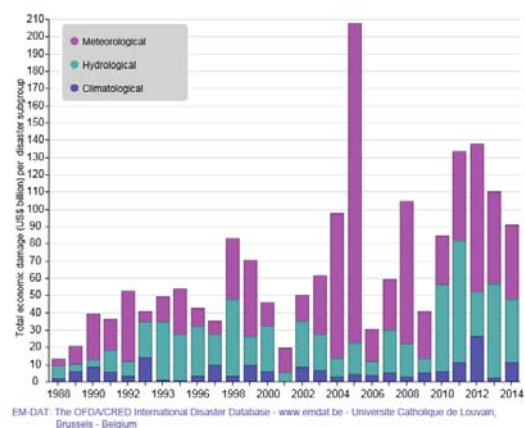
- More frequent and severe extreme weather
- Increased volatility in weather

Weather impacts business and behavior

- "70% of global activities are weather dependent"
- "50% of global businesses are weather sensitive"
- "30% of global GDP is weather impacted"
- "2nd biggest influence on consumer behavior after the state of economy"

Need for accurate weather data is increasing

- More innovative services will emerge



Note: Statements have not verified for accuracy – used as indicative only

Dynamic Traffic Signal in Colorado

Issue

- Accumulation of snow in a blind curve
- Snow would melt during the day and refreeze later in the day
- Customer noticed crashes were occurring at this curve during otherwise good driving conditions



Solution

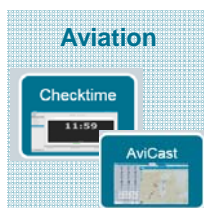
- Use a non-intrusive fixed weather station to monitor grip.
- When refreeze occurred, weather station would activate warning sign located prior to the curve



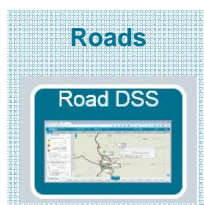
Result

- 80% reduction in crashes at the site

Observation Enhanced Decision Support

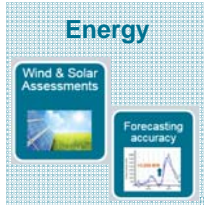


- CheckTime for airlines to calculate aircraft anti-icing fluid failure
- AviCast run as software as a service for airport operations and maintenance
 - Real-time thunderstorm and lightning combined with weather radar image
 - Integrated for a convenient use at airport control towers with AviMet



- Road DSS product family for winter road maintenance decision makers
 - De-icing [reactive] and anti-icing [proactive] treatments
 - Improve operational efficiency and reduce environmental impact
 - Audit trail for treatment and performance reporting

Observation Enhanced Decision Support

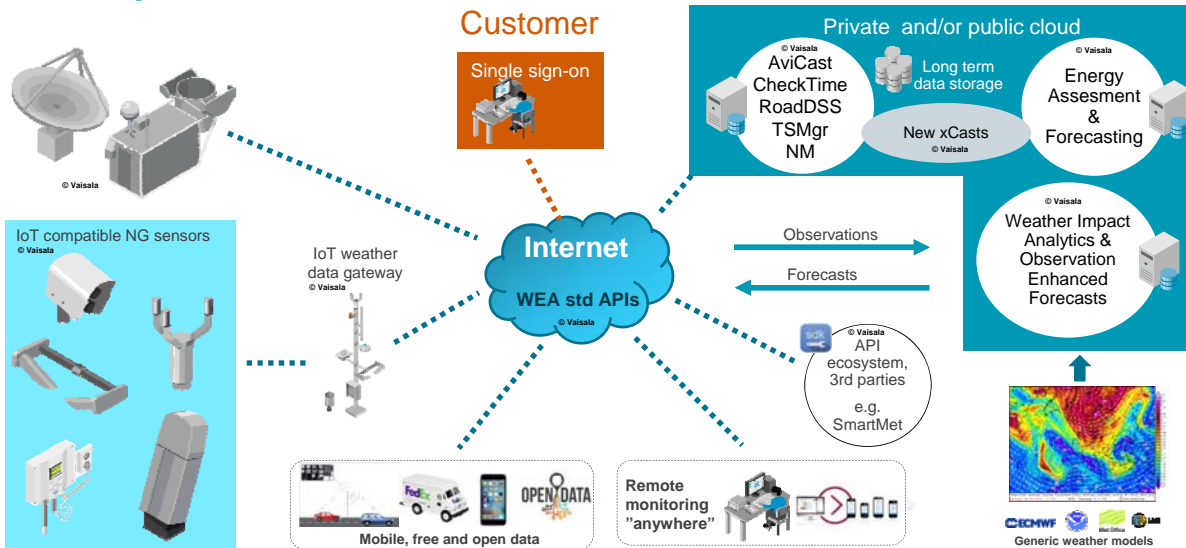


- Pre-assessments supported by decade long global wind data and solar maps
- Investment due diligence services including measurement campaigns
- Short-term forecasts based on numerical weather models and learning systems



- Over 90% of the world's national weather services with lightning detection networks use Vaisala technology, to support protecting life and property
- 8 of the world's top 10 electric utility companies rely on lightning data from Vaisala manufactured lightning detection networks

Our System Vision





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Global Market Sizes and Growth 2016

in MEUR	Meteorology Infrastructure	Transportation	Energy
Market size*	450-500	300	300-350
Market growth p.a.	0%	0-5%	>10%
Vaisala market share 2016*	High	High	Low
Market size total	1,000 – 1,200 MEUR, ~20% market share		

Market share indication:

- Low <10%
- Mid 10–25%
- High >25%

- No major changes to market overviews or growth rates
- Market sizes updated based on the growth rates

* Vaisala estimate of the size of market that is addressable currently or with organic development in the roadmaps

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Weather Business Area

- **Growth** through industry leading offering and information services expansion
- We have **strong expertise in applications, science and technologies**
- Customers view us as **the leader in reliability**



Questions Welcome!



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Observations for a Better World Controlled Environment

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Controlled Environment

Our Markets



Industrial Measurement Solutions



Mega Trends



We Help Our Customers to Improve

- Product quality
- Productivity
- Energy efficiency
- Maintenance activities
- Regulatory compliance



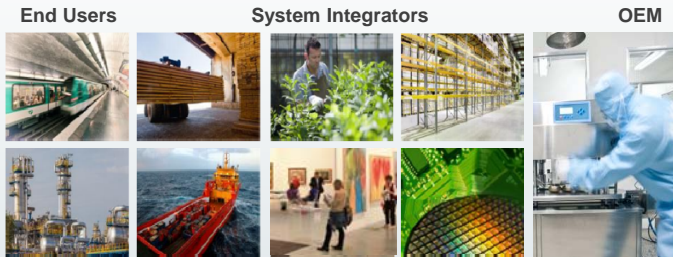
Global Market Sizes and Growth 2016

in MEUR	Instruments	Power Transmission	Life Science
Market size*	400-450	150-200	250-300
Market growth p.a.	5%	15%	10%
Vaisala market share 2016*	Mid	Low	Low
Market size total	800-950 MEUR		

Market share indication:
 Low <10%
 Mid 10-25%
 High >25%

- No major changes to market overviews or growth rates
- Market sizes updated based on the growth rates

* Vaisala estimate of the size of market that is addressable currently or with organic development in the roadmaps



Industry Cases

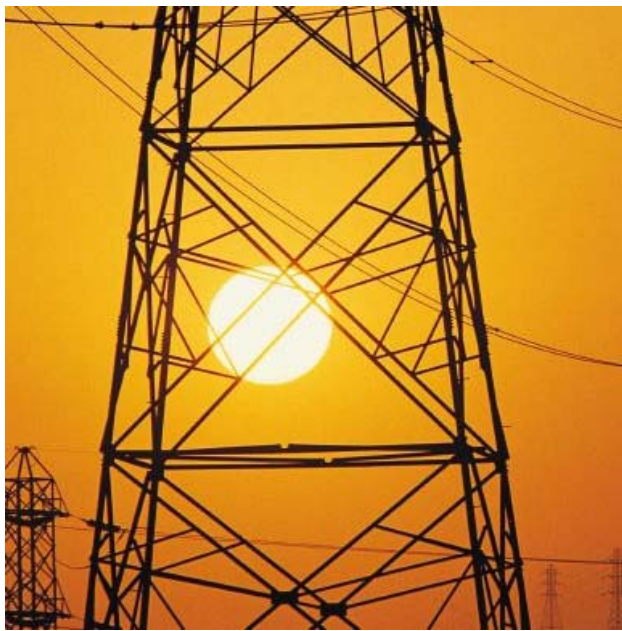
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Examples of Industries We Serve

- Power Transmission
- Life Sciences
- Industrial Drying (e.g. paper)
- Electronics
- Building Automation, e.g demand controlled ventilation
- Automotive Industry
- Agriculture and Food Industry



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Power Transmission

We measure multiple gases in transformer oil.

Early indication about the possible faults in high voltage transformers.

Improves the efficiency of customers' operations, generates cost savings.

Life Sciences

Control of environmental conditions

- improved quality and efficiency
- reduced risk of damage

Continuous monitoring system

New carbon dioxide meter
GMP251 for applications with
higher CO₂ concentrations



Building Automation

Our products are used to optimize ventilation e.g. in office buildings, hospitals, data centers or factories.

Considerable cost savings through improved efficiency of heating, ventilation and air conditioning.



Johnson Controls Leadership Innovation Award

Johnson Controls a long-time customer of Vaisala for building automation projects and data centers

Using world-renown CARBOCAP® Carbon Dioxide Transmitters

Vaisala awarded for being one of their best suppliers





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Growth through Product Leadership

- Understanding our customers' needs
- Achieving #1 position in selected markets
- Continuously creating winning products

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Understanding Our Customers' Needs

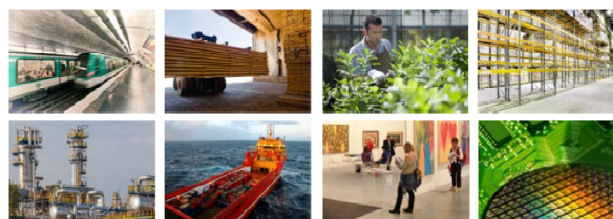
Growth Markets

- Strong growth potential in Life Science and Power Transmission markets
- Investments in new offering addressing the specific market needs
- Identification of new attractive growth markets



Flagship Markets

- Strong position with our high-end humidity and carbon dioxide offering
- Continuous investments in offering development



Achieving # 1 Position in Selected Markets

Sales Channel

- Channel with best fit to the market
- Partner management

Application Expertise

- Strong in-house expertise in industry demands, such as Life Science specific regulations

Geographical Reach

- Regional go-to-market strategies
- Expansion to new regions



Focus on Channel Partner Management

Partner selection
Non-exclusive contracts
Training
Active sales management

Partner Management Model

- Annual global distributor meeting in Vaisala head office
- Local distributor meetings in regions
- First-class support organization
- Regular performance follow-up

Continuously Creating Winning Products

Superior Products and Technologies

- Solutions that outperform competition
- Clean room sensor manufacturing and calibration
- New parameter development

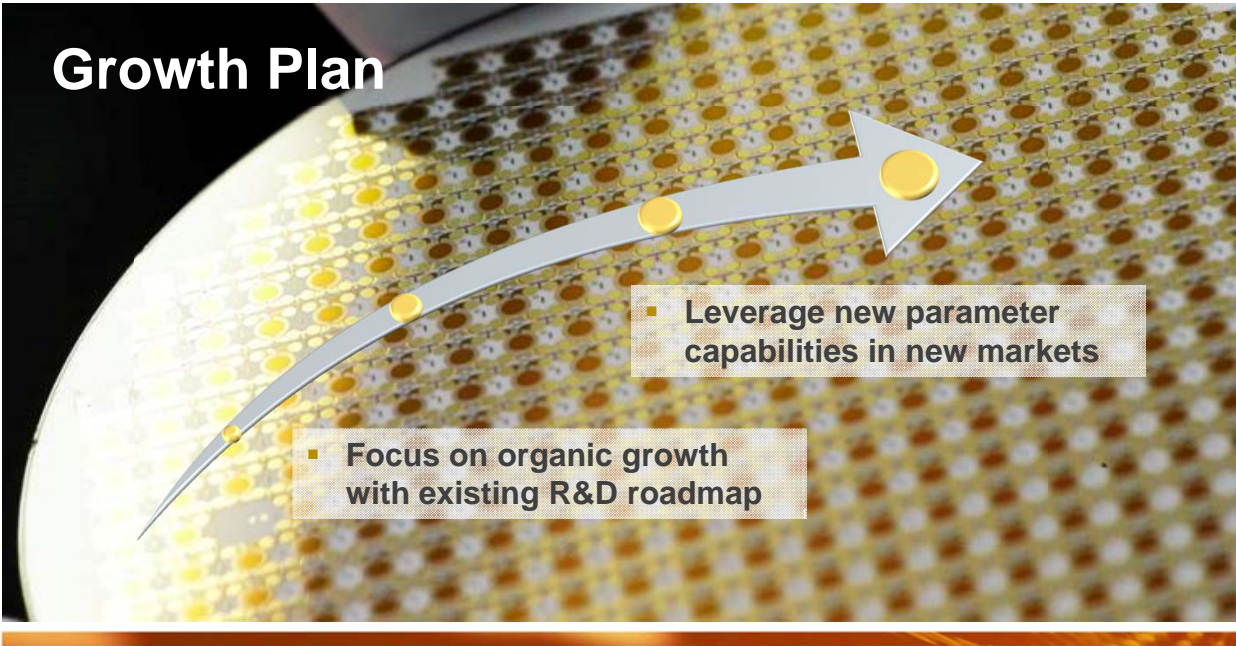
Software Development

- System software and IoT connectivity layer

Scalability of Our Products

- Using new technologies in all suitable applications and industries to accelerate growth

Growth Plan



- Focus on organic growth with existing R&D roadmap
- Leverage new parameter capabilities in new markets

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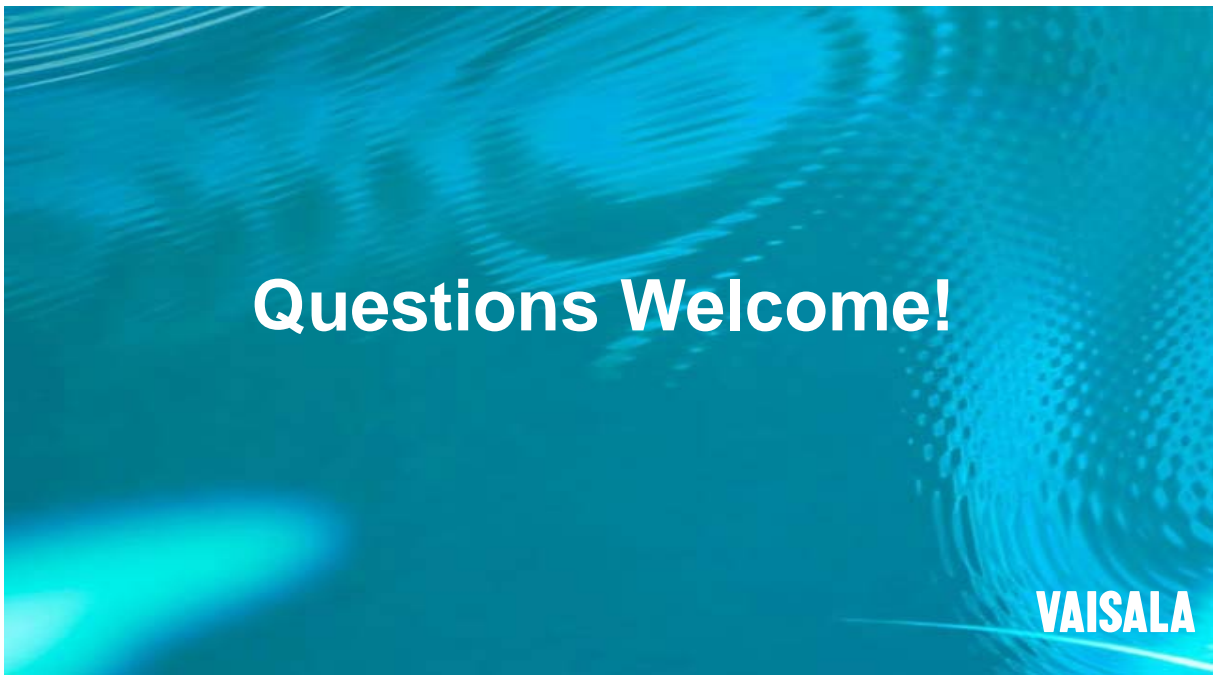
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Growth through Product Leadership

- Understanding our customers' needs
- Achieving #1 position in selected markets
- Continuously creating winning products

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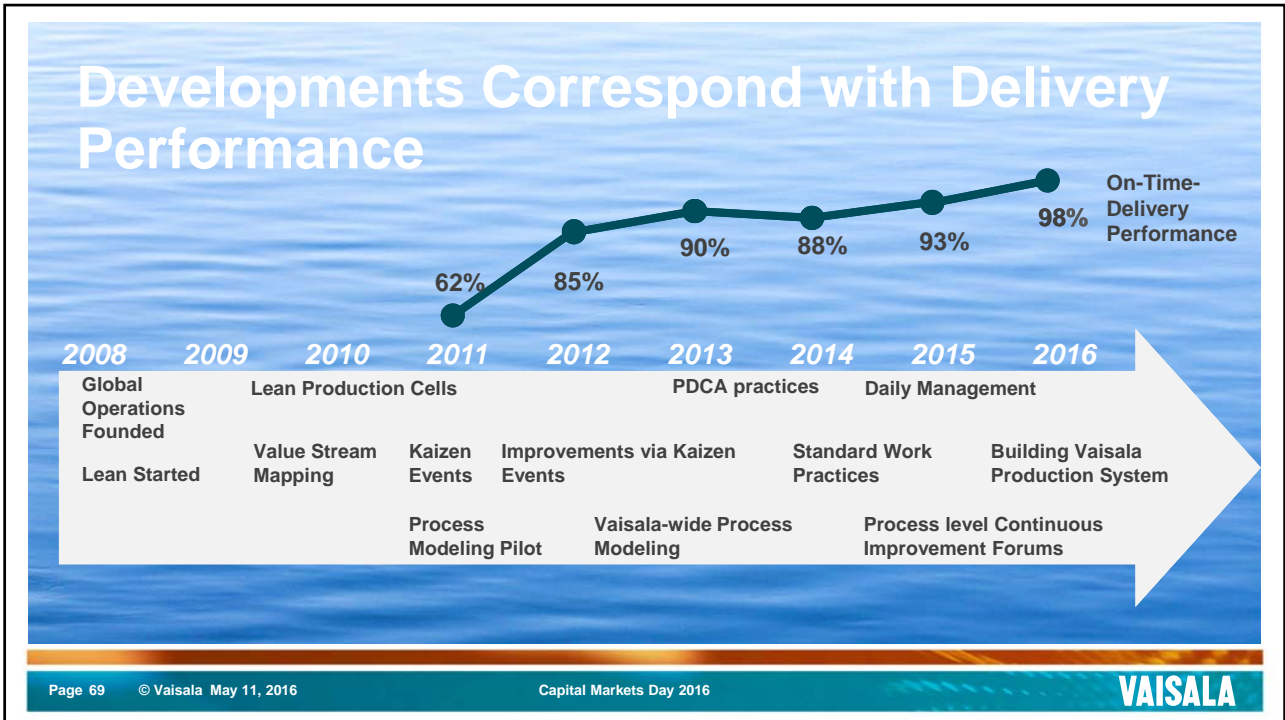
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Vaisala Production System

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Operations

Vision
Winning high mix – low volume supply chain and awesome place to work

Mission
We create value for our customers with reliable and flexible supply chain network

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Vaisala Production System – Way to Drive Operational Excellence



Operations Strategy

Conscious choices between several alternatives with long-term commitment

Strategic Development Initiatives

- Sourcing Development
- Core Technologies
- High Performing Teams
- Life Cycle Management Processes
- Systematic Operational Excellence Improvement



Systematic Improvement

Entire organization engaged in improving our ways of working

Improvement Phases

- Harvest ideas
- Prioritize
- Execute



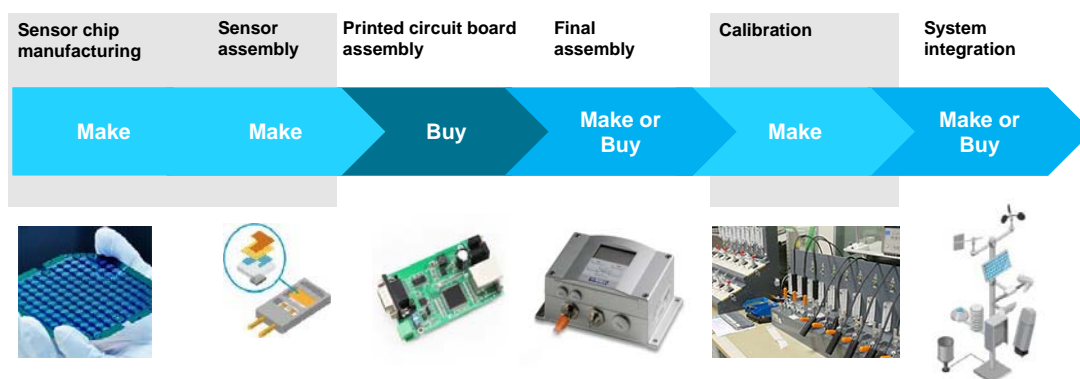
Standard Way of Working

Agreed, standard ways of working lay foundation for efficient operations

Our Standards Cover

- Processes
- Standardized Work
- Working environment

Make or Buy?



High IP-value High intellectual property value = Make

Factory Footprint

2 Own Factories + 6 Partners



Boulder	USA, CO
Processes	Assembly & test Integration
Products	Lightning detection Wind energy systems US specific aviation US specific road
Employees	25

Helsinki	Finland
Processes	Sensor chip manuf. Sensor assembly Final assembly Calibration Integration
Products	Full range
Employees	350

+500 Suppliers' Network

Sourcing strategy aims for:

- Supplier base consolidation
- Long-term partnerships with main suppliers
- One-stop-shop suppliers
- Early supplier involvement to new product design

Vaisala Operations We Deliver.





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Vaisala Strategy

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Growth through industry leading offering and information services expansion

METEOROLOGY



ENERGY



TRANSPORTATION





Reliable environmental observations for better decision making, safety and efficiency



Controlled Environment

Growth through product leadership



Leadership Built on

Reliability

Expertise in applications, science and technologies

Excellence in high mix – low volume businesses

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Weather Business Area

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Controlled Environment Business Area

Growth through Product Leadership

- Understanding our customers' needs
- Achieving #1 position in selected markets
- Continuously creating winning products

Sustainability

	<p>Committed to use 100% renewable energy by 2020</p>	 <p>87% Complete</p>	<p>Emission reductions from electricity consumption were -33% compared to 2014</p> 
<p>Waste recovery rate of the manufacturing sites was 98%</p> 	<p>3 Vaisala sites send no waste to landfills at all recycling 100%</p>	<p>Water consumption from manufacturing sites decreased 9% from 2014</p>	







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Outlook and Targets

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Vaisala markets

Global market sizes and growth in 2016

	Meteorology Infrastructure	Transportation	Energy	Instruments	Power Transmission	Life Science
In MEUR						
Market size*	450–500	300	300–350	400–450	150–200	250–300
Market growth p.a.	0%	0–5%	>10%	5%	15%	10%
Vaisala market share 2016*	High	High	Low	Mid	Low	Low
Vaisala addressable market size total	~1,800–2,150 MEUR					
	Market share indication: Low <10% Mid 10-25% High >25%		* Vaisala's estimate of the size of market that is addressable currently or with organic development in the roadmaps, no external market information available			

Market outlook 2016

- Market outlook for Vaisala is generally stable.
- However, in many emerging countries situation remains uncertain and this is expected to impact adversely on governmental finances and delay public customers' decision making.
- Business opportunities in oil and gas related businesses are expected to remain weak throughout the year due to low crude oil prices.
- In renewable energy market outlook is positive.
- Also market outlook for industrial measurement solutions is solid.

Business outlook 2016

Vaisala updated its business outlook for 2016 to include restructuring expenses in the operating result estimate.

- Vaisala continues to estimate its full year 2016 net sales to be in the range of EUR 305–335 million.
- Vaisala estimates its operating result (EBIT) to be in the range of EUR 25–35 million.

- Previous business outlook from February 10, 2016: Vaisala estimates its full year 2016 net sales to be in the range of EUR 305-335 million and the operating result (EBIT) excluding non-recurring items in the range of EUR 28-38 million.

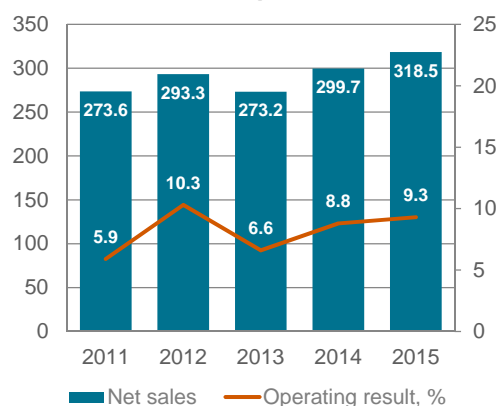
Vaisala's long-term targets

Our objective is profitable growth with an average annual growth of 5%

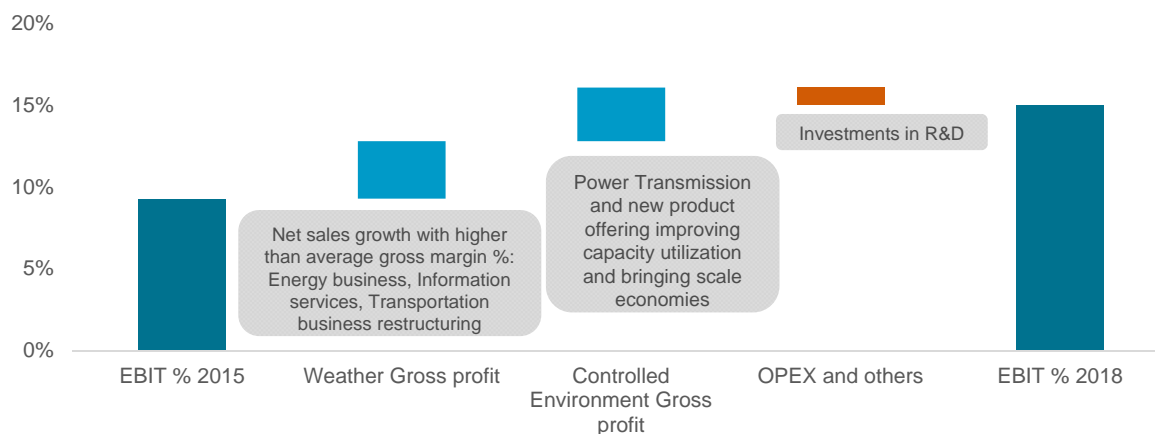
In selected growth businesses such as renewable energy, life science and power transmission the target is to exceed 10% annual growth

and to achieve 15% operating profit margin (EBIT) by 2018.

Net sales and operating result development



Long-Term Financial Targets: EBIT %



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