OUR EXECUTIVE BOARD
Dr. Rothweiler and Dr. Gollwitzer are experienced industry managers.

Dr. Dirk Rothweiler
CEO
since Jan. 1, 2017

Dr. Mathias Gollwitzer
CFO
since Aug. 10, 2015

2017  CEO, First Sensor AG
2008  Executive Vice President Optical Systems, Jenoptik AG
2005  Vice President Sales and Service, TCZ
2000  Managing Director Asia-Pacific, Süss Microtec Co. Ltd.
1999  Director Sales & Marketing, Süss Microtec AG
1995  Project Manager for the Semiconductor Technology Division, Carl Zeiss
1995  Doctorate from the Department of Engineering, RWTH Aachen

2015  CFO, First Sensor AG
2012  Vice President Group Controlling, EnBW Energie Baden-Württemberg AG
2008  CFO, Mercedes-Benz France SAS
2006  Director Corporate Controlling, DaimlerChrysler AG
2005  CFO, DaimlerChrysler Belgium/Luxembourg NV/SA
2002  Director Research and Technology, Daimler AG
1999  CEO, Temic Sprachverarbeitung GmbH
1995  Director Division Controlling, Telefunken Systemtechnik Gmb
1992  Expert Adviser Finance/Controlling, Deutsche Aerospace AG
FIRST SENSOR
AT A GLANCE
OUR COMPETENCE

We are an expert for semiconductor production.
OUR COMPETENCE
And possess extensive experience in micro systems technology.
OUR COMPETENCE

We combine these competences with profound system expertise.

<table>
<thead>
<tr>
<th>Energy Storage Module</th>
<th>Communication Module</th>
<th>Power Management Module</th>
<th>Sensing Module/Sensorfusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery</td>
<td>Radio Transceiver Module</td>
<td>Power Management Circuit</td>
<td>Accelero</td>
</tr>
<tr>
<td>Energy Harvester</td>
<td>Signal Processing ULP</td>
<td>Power Circuit Management</td>
<td>Gyro</td>
</tr>
<tr>
<td></td>
<td>Wi-Fi Module</td>
<td></td>
<td>Light Sensor</td>
</tr>
<tr>
<td></td>
<td>Bluetooth</td>
<td></td>
<td>Temp. Sensor</td>
</tr>
<tr>
<td></td>
<td>ZigBee</td>
<td></td>
<td>Pressure Sensor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Magnet o.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Image Sensor</td>
</tr>
</tbody>
</table>

Form factor

First Sensor

www.first-sensor.com
OUR COMPETENCE
Thereby, we cover the entire value chain of sensor technology.

Sensor chip
- Silicium based
- Converts physical parameters into electrical signals

Packaging
- Connecting microelectronic and non-electronic micro components to a housing

Sensor
- Consists of a sensor chip, a housing and electronics
- The measurement signal can be calibrated

Sensor system
- Measures and preprocesses data
- Communicates with other systems

Detect
Detect & Understand
OUR RANGE OF SERVICES

We develop and produce standard products and sensor solutions.

Radiation
Flow
Acceleration
Light
Level
Pressure
OUR MARKETS

We focus on the growth markets Industrial, Medical and Mobility.

First Sensor Industrial

Innovative solutions for the automation of industry

- Industrial Process Control
- Radiation and Security
- Smart Buildings
- Length Measurement
- Aerospace

Sales share 50%

First Sensor Medical

Reliable technology whenever it is needed

- Diagnostics
- Medical Respiration and Pneumology
- Dialysis and Infusion

Sales share 20%

First Sensor Mobility

New ideas for intelligent mobility

- Cameras and camera systems
- Pressure Sensors
- Optical Sensors
- Flow Sensors

Sales share 30%
Our Markets
The industrial market is marked by smart processes.

Intelligent sensor systems control applications such as condition monitoring, predictive maintenance or human-machine collaboration.
OUR MARKETS

The medical market is characterized by miniaturization & digital health.

Devices in the nanometer range for new applications, e.g. ventilators for home use, are no longer merely visions of the future.
The mobility market is driven by a new idea of transportation.

The trend towards partially and fully autonomous vehicles is possible only thanks to sensor-based driver assistance systems.
OUR PRESENCE

We grow in our core market as well as in high potential sales regions.

*Q3 2017
OUR STRATEGY FOR PROFITABLE GROWTH
We generate and utilize economies of scale in 4 dimensions.

1. Target Markets
   - Industrial
   - Medical
   - Mobility

2. Key Products & Customers
   - Key Products
     - > 1 M€ p.a.
   - Key Customers
     - > 1 M€ p.a.

3. Forward Integration
   - Sensor System
   - Sensor
   - Component
   - Chip

4. Internationalization
   - Germany
   - Europe
   - North America
   - Asia

Operative Excellence
OUR STRATEGY FOR PROFITABLE GROWTH
We generate and utilize economies of scale in 4 dimensions.

<table>
<thead>
<tr>
<th>Target Markets</th>
<th>Key Products &amp; Customers</th>
<th>Forward Integration</th>
<th>Internationalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>Key Products &gt; 1 M€ p.a.</td>
<td>Sensor System</td>
<td>Germany</td>
</tr>
<tr>
<td>Medical</td>
<td>Key Customers &gt; 1 M€ p.a.</td>
<td>Sensor</td>
<td>Europe</td>
</tr>
<tr>
<td>Mobility</td>
<td></td>
<td>Component</td>
<td>North America</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chip</td>
<td>Asia</td>
</tr>
</tbody>
</table>

Operative Excellence
DIMENSION 1: CLEAR FOCUS ON OUR TARGET MARKETS

We participate in above average growth markets.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>+ 6.0%</td>
<td>+ 10.8%</td>
<td>+ 11.0%</td>
<td>+ 10.8%</td>
</tr>
<tr>
<td>Medical</td>
<td>+ 11.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>+ 13.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

+ 9.0% up to 2020

+ 5.0% in 2017
OUR STRATEGY FOR PROFITABLE GROWTH
We generate and utilize economies of scale in 4 dimensions.

<table>
<thead>
<tr>
<th>① Target Markets</th>
<th>② Key Products &amp; Customers</th>
<th>③ Forward Integration</th>
<th>④ Internationalization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Key Products</td>
<td>Sensor System</td>
<td>Germany</td>
</tr>
<tr>
<td>Industrial</td>
<td>&gt; 1 M€ p.a.</td>
<td>Sensor</td>
<td>Europe</td>
</tr>
<tr>
<td>Medical</td>
<td>Key Customers</td>
<td>Component</td>
<td>North America</td>
</tr>
<tr>
<td>Mobility</td>
<td>&gt; 1 M € p.a.</td>
<td>Chip</td>
<td>Asia</td>
</tr>
</tbody>
</table>

Operative Excellence
DIMENSION 2: CLEAR FOCUS ON KEY PRODUCTS

In the next years, we will grow with existing and new key products.
DIMENSION 2: CLEAR FOCUS ON KEY CUSTOMERS

In the next years, we will grow with existing and new key customers.
**DIMENSION 2: CLEAR FOCUS ON KEY PRODUCTS & CUSTOMERS**

Why is this efficient?

<table>
<thead>
<tr>
<th>Key Products</th>
<th>Key Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Single respective product developments result in relatively large quantities and therefore sales volumes.</td>
<td></td>
</tr>
<tr>
<td>- Sales per head in both sales and engineering increases – our existing team will be able to handle larger revenue streams.</td>
<td></td>
</tr>
<tr>
<td>- „Mix &amp; Noise“ in operations are decreased due to reduced parts variety and transactions per revenue.</td>
<td></td>
</tr>
<tr>
<td>- Our supply chain and own production will gain in productivity and can be managed with fewer resources per revenue.</td>
<td></td>
</tr>
<tr>
<td>- With higher quantities per part our purchasing power will increase.</td>
<td></td>
</tr>
<tr>
<td>- With more varietal purity we increase the stability of our value creation process.</td>
<td></td>
</tr>
<tr>
<td>- Lead time, on time delivery and quality will improve as a result.</td>
<td></td>
</tr>
</tbody>
</table>

Our growth becomes more scalable and our profitability increases.
OUR STRATEGY FOR PROFITABLE GROWTH
We generate and utilize economies of scale in 4 dimensions.

<table>
<thead>
<tr>
<th></th>
<th>Target Markets</th>
<th>Key Products &amp; Customers</th>
<th>Forward Integration</th>
<th>Internationalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Industrial</td>
<td>Key Products</td>
<td>Sensor System</td>
<td>Germany</td>
</tr>
<tr>
<td></td>
<td>Medical</td>
<td>Key Products</td>
<td>Sensor</td>
<td>Europe</td>
</tr>
<tr>
<td></td>
<td>Mobility</td>
<td>Key Customers</td>
<td>Component</td>
<td>North America</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Chip</td>
<td>Asia</td>
</tr>
</tbody>
</table>

Operative Excellence

Operative Excellence

Operative Excellence

Operative Excellence

Operative Excellence
DIMENSION 3: CLEAR FOCUS ON FORWARD INTEGRATION

We base our forward integration initiatives on clear product roadmaps.

Radiation

Flow

Acceleration

Light

Level

Pressure

Integrated Manufacturing Services

Multi Sensor Systems
OUR STRATEGY FOR PROFITABLE GROWTH
We generate and utilize economies of scale in 4 dimensions.

**Target Markets**
- Industrial
- Medical
- Mobility

**Key Products & Customers**
- Key Products: > 1 M€ p.a.
- Key Customers: > 1 M€ p.a.

**Forward Integration**
- Sensor System
- Sensor
- Component
- Chip

**Internationalization**
- Germany
- Europe
- North Amerika
- Asia

Operative Excellence
DIMENSION 4: CLEAR FOCUS ON INTERNATIONALIZATION

We will participate in the solid growth* of our targeted sales regions.

* Source: IWF
**OUR STRATEGY FOR PROFITABLE GROWTH**

We generate and utilize economies of scale in 4 dimensions.

<table>
<thead>
<tr>
<th>① Target Markets</th>
<th>② Key Products &amp; Customers</th>
<th>③ Forward Integration</th>
<th>④ Internationalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>Sensor System</td>
<td>Germany</td>
<td></td>
</tr>
<tr>
<td>Medical</td>
<td>Sensor</td>
<td>Europe</td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>Component</td>
<td>North Amerika</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chip</td>
<td>Asia</td>
<td></td>
</tr>
</tbody>
</table>

**Operative Excellence**

1. Key Products & Customers
   - Key Products: > 1 M€ p.a.
   - Key Customers: > 1 M€ p.a.
THE FUNDAMENT: FOCUS ON OPERATIVE EXCELLENCE

We concentrate on five core initiatives.

<table>
<thead>
<tr>
<th>Top Initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ Lead Time, On-Time Delivery, Quality</td>
</tr>
<tr>
<td>➤ Core Processes</td>
</tr>
<tr>
<td>➤ OneERP</td>
</tr>
<tr>
<td>➤ T’s &amp; C’s Harmonization</td>
</tr>
<tr>
<td>➤ Portfolio Optimization</td>
</tr>
</tbody>
</table>
WITH THIS APPROACH TOWARDS PROFITABLE GROWTH WE ALREADY EXCEEDED OUR TARGETS FOR 2017.

<table>
<thead>
<tr>
<th>Guidance 2017</th>
<th>Result 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales: 140 - 145 M €</td>
<td>Sales: 147.5 M €</td>
</tr>
<tr>
<td>EBIT-Margin: 5 - 6 %</td>
<td>EBIT-Margin: 7.1 %</td>
</tr>
</tbody>
</table>
GROWTH DRIVER LIDAR
LiDAR is a relevant factor within our strategy for profitable growth.

1. Target Markets
   - Industrial
   - Medical
   - Mobility

2. Key Products & Customers
   - Key Products: > 1 M€ p.a.
   - Key Customers: > 1 M€ p.a.

3. Forward Integration
   - Sensor System
   - Sensor
   - Component
   - Chip

4. Internationalization
   - Germany
   - Europe
   - North America
   - Asia

Operative Excellence
GROWTH DRIVER LIDAR

Main reason for accidents are preventable human mistakes.

<table>
<thead>
<tr>
<th></th>
<th>Mistakes of car drivers</th>
<th>63.9 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Mistakes of bicyclists</td>
<td>13.5 %</td>
</tr>
<tr>
<td>3</td>
<td>Bad road conditions</td>
<td>7.7 %</td>
</tr>
<tr>
<td>4</td>
<td>Mistakes of motorbike riders</td>
<td>7.2 %</td>
</tr>
<tr>
<td>5</td>
<td>Mistakes of truck drivers</td>
<td>5.7 %</td>
</tr>
<tr>
<td>6</td>
<td>Mistakes of pedestrians</td>
<td>3.5 %</td>
</tr>
<tr>
<td>7</td>
<td>Technical issues</td>
<td>0.9 %</td>
</tr>
</tbody>
</table>

Source: German Federal Statistical Office 2016
GROWTH DRIVER LIDAR

Sensors in vehicles assist the drivers and provide more road safety.
GROWTH DRIVER LiDAR

LiDAR is an important technology for many of these safety applications.

- Long-Range Radar
- Short-/Medium-Range Radar
- LiDAR
- Camera
- Ultrasound

Surround View

Blind Spot Detection

Rear Collision Warning

Parking Assist

Collision Avoidance

Emergency Braking

Pedestrian Detection

Traffic Sign Recognition

Cross Traffic Alert

Lane Departure Warning

Adaptive Cruise Control
GROWTH DRIVER LIDAR
Reason: LiDAR provides the highest resolution even for large distances.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>LIDAR (pulsed ToF)</th>
<th>Radar</th>
<th>Ultra-sonic</th>
<th>Cameras</th>
<th>PMD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Short distance</td>
<td>Long distance</td>
<td></td>
<td>Mono</td>
<td>Stereo</td>
</tr>
<tr>
<td>Max range (m)</td>
<td>150 - 250</td>
<td>55 - 100</td>
<td>150 - 200</td>
<td>2 - 4</td>
<td>40 - 60 (120 coarse)</td>
</tr>
<tr>
<td>Min range (m)</td>
<td>1</td>
<td>0.25 - 1</td>
<td>1</td>
<td>0.25</td>
<td>0.3</td>
</tr>
<tr>
<td>Precision (m)</td>
<td>0.1 (newer: 0.04)</td>
<td>0.25 – 0.75</td>
<td>0.3 – 3.75</td>
<td>Very good</td>
<td>3</td>
</tr>
<tr>
<td>Velocity measurement</td>
<td>Indirectly via distance t1-t0</td>
<td>directly via Doppler effect</td>
<td>hardly</td>
<td>hardly</td>
<td>Indirect via dist.</td>
</tr>
<tr>
<td>Horizontal field of view</td>
<td>30° - 180°</td>
<td>55° Scan: 120°</td>
<td>16°, Scan: 60°</td>
<td>60°</td>
<td>45° - 190°</td>
</tr>
<tr>
<td>Horizontal resolution</td>
<td>0.01° - 1°</td>
<td>10.5°</td>
<td>3.5°</td>
<td>bad</td>
<td>&lt; 0.1° - 0.3°</td>
</tr>
<tr>
<td>Vertical field of view</td>
<td>3° - 16°</td>
<td>3° - 13°</td>
<td>3° - 13°</td>
<td>30°</td>
<td>45°</td>
</tr>
<tr>
<td>Vertical resolution</td>
<td>0.8° - 1°</td>
<td>4.5°</td>
<td>4.5°</td>
<td>bad</td>
<td>&lt; 0.1°</td>
</tr>
</tbody>
</table>
### GROWTH DRIVER LIDAR

Besides LiDAR, cameras are irreplaceable for a safe surround view.

<table>
<thead>
<tr>
<th>On Board Sensor Capability</th>
<th>LIDAR (Detection &amp; ranging)</th>
<th>Camera (Monitoring &amp; classification)</th>
<th>RADAR (Detection &amp; ranging)</th>
<th>V2X &amp; Cellular* (Information)</th>
<th>Map &amp; Location (Information)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Detection Performance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic objects</td>
<td>Car/Trucks</td>
<td>★★</td>
<td>★</td>
<td>★★ ★</td>
<td>★</td>
</tr>
<tr>
<td></td>
<td>Motorcycle</td>
<td>★★</td>
<td>★</td>
<td>★★</td>
<td>★</td>
</tr>
<tr>
<td></td>
<td>Bicycle</td>
<td>★★</td>
<td>★</td>
<td>★★</td>
<td>★</td>
</tr>
<tr>
<td></td>
<td>Pedestrian</td>
<td>★★</td>
<td>★</td>
<td>★★</td>
<td>★</td>
</tr>
<tr>
<td></td>
<td>Animal</td>
<td>★★</td>
<td>★</td>
<td>★★</td>
<td>★</td>
</tr>
<tr>
<td></td>
<td>Debris</td>
<td>★★</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Road marking</td>
<td>★★</td>
<td>★</td>
<td>★★ ★</td>
<td>★★ ★</td>
</tr>
<tr>
<td>traffic constraints</td>
<td>Traffic signs</td>
<td>★★</td>
<td>★</td>
<td>★★ ★</td>
<td>★★ ★</td>
</tr>
<tr>
<td></td>
<td>Traffic lights</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Path/Road structure</td>
<td>Curve</td>
<td>★</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Guard rails</td>
<td>★★</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wall/Obstacle</td>
<td>★★</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>360° View</td>
<td></td>
<td>★★ ★</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Robustness**

|                  |                                 |                                      |                            |                               |                             |
|------------------|---------------------------------|--------------------------------------|                            |                               |                             |
| Rain/Snow        | ★★                              |                                     | ★★ ★★                      | ★★ ★★                        | ★★ ★★                        |
| Fog              |                                 |                                     | ★★ ★★                      | ★★ ★★                        | ★★ ★★                        |
| Night            | ★★                              |                                     | ★★ ★★                      | ★★ ★★                        | ★★ ★★                        |

* Depends on coverage
GROWTH DRIVER LIDAR

In LiDAR systems different components work hand in hand.

Source: Velodyne
GROWTH DRIVER LIDAR
First Sensor is an important supplier for the detectors in LiDAR systems.

Source: IHS Markit
GROWTH DRIVER LIDAR

With our APD we have captured a leading share for more than 10 years.

- Single APD with amplifier
- DARPA Urban Challenge; First Sensor APDs in all winning teams
- Industrial hybrids (APD+TIA in one package)
- Few Pixel APD-Array in SMD package for ACC / AEC-Q 101 qualified by FIS

- 12 Pixel APD-Array in ceramic package for ACC
- Gesture recognition with 64 pixel APD-Array
- Receiver module with APD-Array, HV, TIA, MUX, Timing discriminator
- Receiver module with APD and electronics integrated in one package
GROWTH DRIVER LIDAR
Therefore we will participate in the growth of the driver assist market.

- 2017: 94 m vehicles produced (2.2% CAGR 17-22, 2017 IHS Markit)
- Automotive semiconductor revenue for ADAS grows with 20.9% (CAGR 17-22, 2017 IHS Markit)
- Estimates as high as 10% of new cars with self-driving features in 2020

Source: Lux Research 2017
In this growing mobility market LiDAR will play the most important role.

Source: Goldman Sachs Global Investment Research
GROWTH DRIVER LiDAR

But LiDAR also has applications in the industrial market, e.g. logistics...
GROWTH DRIVER LIDAR

...mapping and construction...
GROWTH DRIVER LIDAR

...and traffic control & security.
THE SHARE
Currently, our free float amounts to nearly 59 percent.

Key facts*

- Market Cap: € 214.54 m
- Traded stocks/day: 28,754
- 30 Day High: 25,5
- 30 Day Low: 20,5
- Index Ranking Free Float: 53
- Market Capitalization: 53
- Index Ranking Turnover: 53

Shareholder structure according to the existing voting rights announcements as at January 31, 2018

- FS Technology Holding S.à.r.l.: 58.95%
- Midlin NV: 36.02%
- Other shareholders: 5.03%

* January 31, 2018
FIRST SENSOR SHARE

Increase of 50% while the DAX increased by 13% over the year 2017.
**FINANCIAL CALENDAR**


<table>
<thead>
<tr>
<th>When?</th>
<th>What?</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 22, 2018 8.00 a.m.</td>
<td>Annual Report 2017</td>
</tr>
<tr>
<td>March 22, 2018 10.00 a.m.</td>
<td>Financial Statement Press Conference &amp; Capital Market Day</td>
</tr>
<tr>
<td>May 14, 2018</td>
<td>Interim Report Q1 2018</td>
</tr>
<tr>
<td>May 23, 2018</td>
<td>Annual General Meeting 2018, Penta Hotel, Grünauer Str. 1, 12557 Berlin</td>
</tr>
<tr>
<td>August 13, 2018</td>
<td>6-Month Financial Report 2018</td>
</tr>
<tr>
<td>November 12, 2018</td>
<td>Interim Report Q3 2018</td>
</tr>
<tr>
<td>November 26-28, 2018</td>
<td>German Equity Forum 2018</td>
</tr>
</tbody>
</table>
Contact
Corinna Krause, Director Corporate Communications & Investor Relations
Phone: + 49 30 639923 571
Mail to: corinna.krause@first-sensor.com