Undisputable Global Leader for Weather Observations

Capital Markets Day 2019
Jarkko Sairanen, EVP, Weather and Environment Business Area
Leadership with a Broad Product Portfolio

Soundings

Weather Radars

Wind Lidars

Surface Weather
Digital Solutions: "Vaisala Digital"

Ground Transportation

Aviation

Renewable Energy

Lightning
## Key Market Trends

<table>
<thead>
<tr>
<th>Climate Change</th>
<th>Urbanization</th>
<th>Renewable Energy</th>
<th>Protectionism</th>
<th>Public Spend Shift</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extreme weather, climate change, and resource scarcity</td>
<td>World urbanization continuing, accelerating pollution challenges</td>
<td>Clean &amp; renewable energy becoming mainstream</td>
<td>US, China, EU blocks protecting own interests (trade, data, etc.)</td>
<td>Priorities and public debt impacting funding</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sustainability</th>
<th>Future of Mobility</th>
<th>Hyperconnectivity</th>
<th>New Data Capture</th>
<th>Open Data &amp; Al</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental sustainability becoming a purchase criteria</td>
<td>Drones, autonomous cars &amp; ships becoming reality</td>
<td>Always on hyperconnectivity for everything (cars, infra, etc.)</td>
<td>Nano satellites, cars, airplanes, mobile networks acquire data</td>
<td>Environmental data becoming more open &amp; leveraged by AI</td>
</tr>
</tbody>
</table>
# Weather and Environment

## Global Market Sizes and Growth

<table>
<thead>
<tr>
<th></th>
<th>Meteorology Infrastructure</th>
<th>Transportation</th>
<th>Renewable Energy</th>
<th>Ambient Air Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MEUR</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Market Size</strong></td>
<td>450–500</td>
<td>300–500</td>
<td>330–380</td>
<td>150–200</td>
</tr>
<tr>
<td><strong>Market Growth p.a.</strong></td>
<td>0%</td>
<td>0-5%</td>
<td>&gt;10%</td>
<td>&gt;5%</td>
</tr>
<tr>
<td><strong>Vaisala Market Share 2018</strong></td>
<td>High</td>
<td>High</td>
<td>Mid</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Market Size Total</strong></td>
<td>~1,300 / ~20% Market Share</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Weather and Environment Global Market Sizes and Growth*

**Market share indication:**
- Low <10%
- Mid 10–25%
- High >25%
Weather and Environment Strategy Pillars

Industry Leading Products extending to supplementary observations

Large Projects with outstanding delivery capability

Digital Solutions for chosen weather critical operations

Environmental Measurements through selective expansion
“Fireworks” of New Products

- Forward Scatter
- Mobile Road Sensor
- Compact Weather Radar
- NG Connect Sensors
- X-Band Weather Radar
- Ceilometer Humidity Profiler
Wind Lidar Opportunity

Several customer segments
- Renewable energy
  - Turbine control
  - China play
- Aviation
- Meteorology, air quality

Leverage synergies
- Vaisala sales channel
- Core “engines”
Large Projects: Unique Capability

Bahamas Capacity Building

Argentina Automated Weather Observing System

Vietnam Capacity Building

Sweden Road Weather Information System
Digital Future in Roads

All-year value proposition
- Cracks and potholes

Intelligent fleets
- Connected infotainment
- Autonomous vehicles

System solution capabilities
- Sensors, networks
- Impact analysis, decision support
- Installation and service
Supplementary Air Quality Networks

Environmental expansion
- Smart cities
- Hotspots like harbors

Growing offering
- Sensors as core
- Visualization and modelling software
- Spearhead applications
Key Strategic Objectives

Continuously improve the core business
- Renew through instruments
- Expand to all weather radar bands
- Extend into supplementary sensors
- Simplify where possible

Drive growth opportunities at hand
- Wind lidars
- Digital solutions for chosen weather critical operations
- Ambient air quality

Capability and competence development
- Agility in product and solution creation
- “B2B-like” sales skills and culture
- Marketing competence to the next level
- Outstanding project delivery capabilities
- Embrace digital transformation
  - In offering as well as in operations
  - Best customer delight across all touch points

Undisputable Global Leader for Weather Observations
Observations for a Better World

VAISALA