

**OKMETIC**

# **SOI wafers - success story of Okmetic and Finnish microelectronics ecosystem**

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# Okmetic in brief

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- The world's leading supplier of sensor wafers for MEMS manufacturing
- Cutting-edge solutions to customers who are world's leading manufacturers
- Focus on bonded SOI product family and specialized 150-200mm wafers



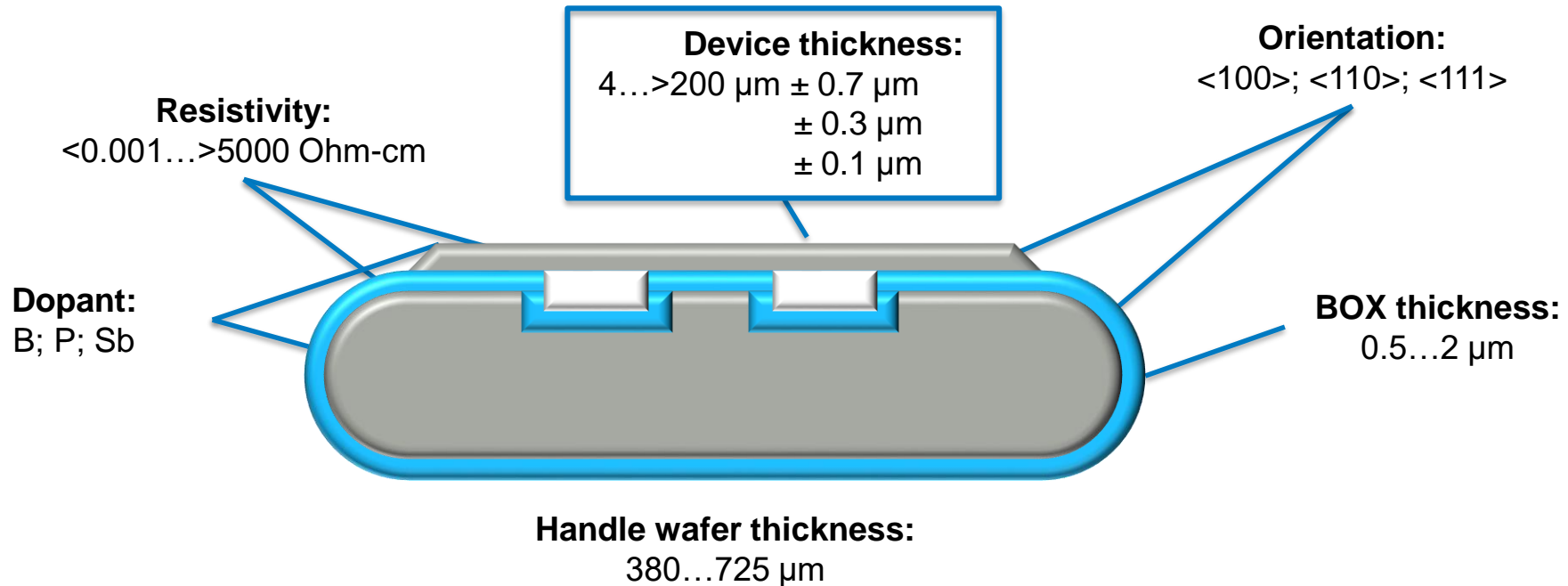
## 2017

- Net sales 85.9 MEUR
- Operating profit 13.6%  
(% of net sales)
- Employees (approx.) 400

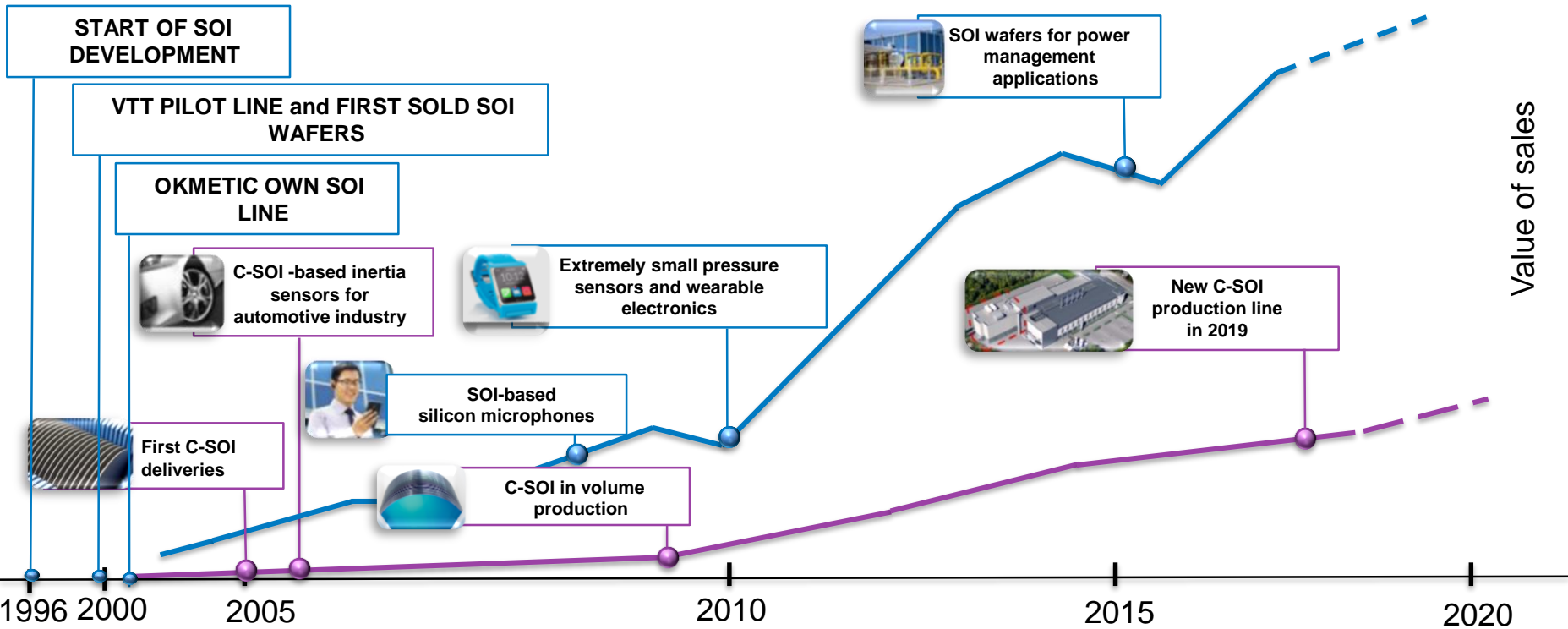
## Future

- Net sales 2018(est.) 100 MEUR
- Net sales 2019 (est.) 140 MEUR
- Employees 2019 (est.) 460
- Investments 2017-2019 100 MEUR

# Cavity-SOI wafer is a partially built sensor, not just a substrate



# MEMS sensors and devices are growth drivers for Okmetic SOI and C-SOI



# Why Okmetic was able to develop the SOI platform?

## Clear strategy: Concentrate to specialized wafers “weird wafers”

- Development started early enough and continue even after many drawbacks

## Close cooperation with other part of Finnish ecosystem

- Close development cooperation with VTT
- Companies especially VTI Technologies (current Murata) to develop Cavity SOI

## Support from the Finnish government

- Multiple Tekes projects
- Micronova cleanroom building
- Support for microelectronics education from the 70'

## Lots of patience from the owners and TEKES

- Lots of trust even when the target were not immediately met

## Close cooperation with customers and outside world

- Cooperation with world-leading companies
- EU-level research projects

## Many skillful engineers educated by Finnish Universities

- MEMS needs in-depth understanding of many different fields

**Without hard work and help from several parties the success story of SOI in Okmetic would not have been possible**

# Finnish microelectronics has growth potential

Global megatrends will boost the market growth of microelectronics

Multiple companies with different sizes, fields and growth-driven

- Almost all sales come from exports
- Many highly skilled experts are needed also in future
- Manufacturing jobs in Finland

New promising market areas as silicon photonics, MEMS mirrors for LIDAR applications etc...

Proven track record as a functional & powerful ecosystem

- Excellent cooperation with different parties
- Critical mass of experts
- All parts of Finnish ecosystem are competitive compared to abroad ecosystems

# How we can grow the Finnish microelectronic ecosystem

All:	Companies	VTT	Universities	Government
<ul style="list-style-type: none"><li>• Common vision and trust to grow the Finnish microelectronics ecosystem</li><li>• Willingness to make compromises in short term to get success in long term</li></ul>	<ul style="list-style-type: none"><li>• Medium size companies<ul style="list-style-type: none"><li>• Boldness to go to new areas</li></ul></li><li>• Start-ups<ul style="list-style-type: none"><li>• Boldness to have high goals</li><li>• Utilize experience from others' success</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Boldness to rely on own strength</li><li>• International cooperation</li><li>• Continue the close cooperation with Finnish industry</li></ul>	<ul style="list-style-type: none"><li>• Boldness to rely on own strength</li><li>• Continue to educate highly skilled students</li><li>• International collaboration</li><li>• Continue the close cooperation with Finnish industry</li></ul>	<ul style="list-style-type: none"><li>• Boldness to finance high risk research projects</li><li>• Finance the facilities and new equipment's</li><li>• Finance Universities and Academy of Finland in microelectronics field</li></ul>

**UNITED WE STAND, DIVIDED WE FALL**

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