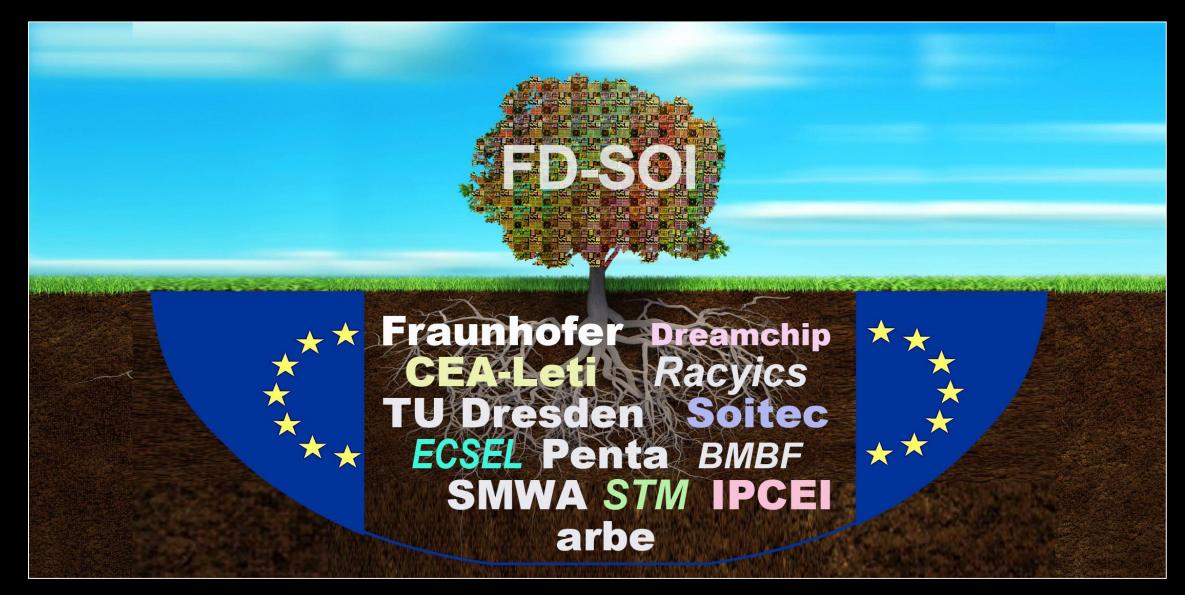
Enabling Connected Intelligence

European FD-SOI for Global Leadership

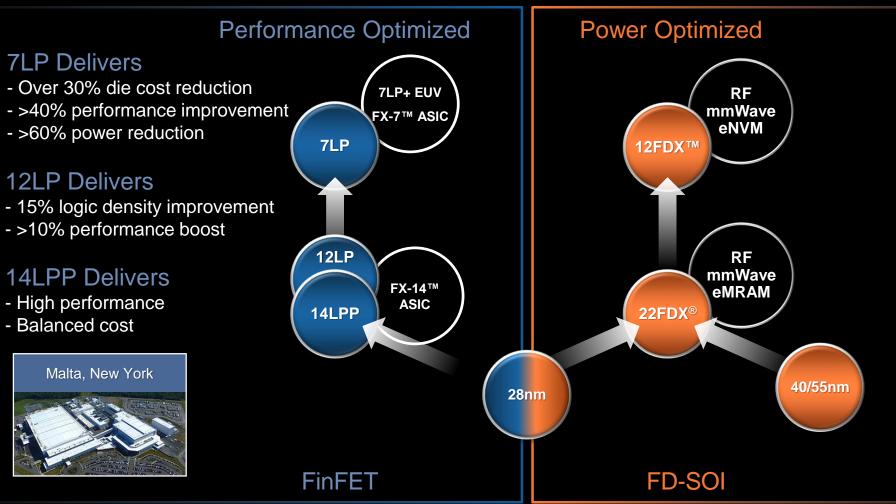
Dr. Thomas Morgenstern | SVP and General Manager, GLOBALFOUNDRIES Dresden



FD-SOI is a technology with strong European roots



Our dual-track strategy: FinFET and FD-SOI



12FDX Delivers

- Full-node scaling
- Energy efficiency
- Superior RF/Analog features
- Enhanced body-biasing

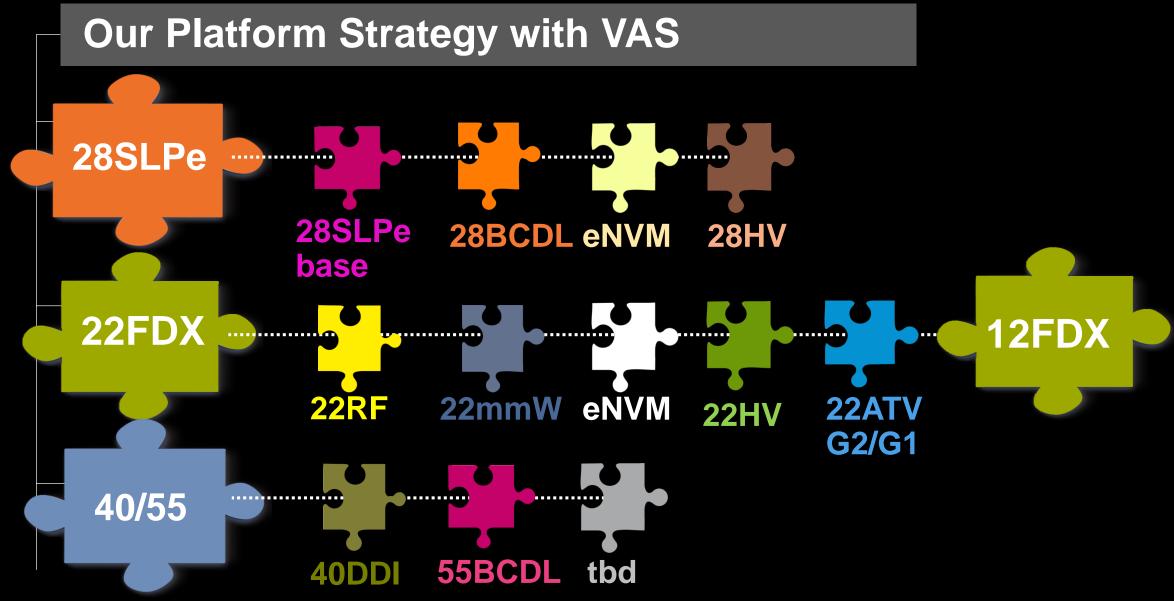
22FDX Delivers

- Superior RF/Analog features
- Lower power
- Smaller die
- Fewer masks
- Lower die cost



...with Dresden as the COE

What Dresden is offering: Value Added Solutions (VAS)





22FDX[®] for IoT, Automotive and RF

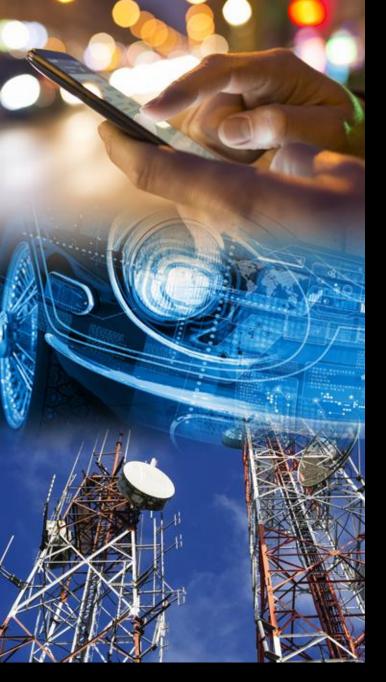
Compelling

- FinFET-like performance for customer who still want to use planar devices
- Ultra-low voltage (0.4V)
- Ultra-low leakage (1pA/µm)
- MRAM integration for IoT and Auto-MCU
- Automotive grade 2 and 1, mmWave / Radar
- Benchmark RF performance (>400GHz), and PA integration

Relevant

- IoT ARM, RISC-V processors for NB-IoT and AI ML functions
- Automotive ADAS /Vision, Infotainment, Body Electronics MCU, Radar
- RF <6GHz: Connectivity (BLE, Wi-Fi, Zigbee), Cellular (3G, 4G LTE, 5G)
- RF mmWave >26GHz, 5G infrastructure, ADC/DAC integration

5



22FDX/12FDX for IoT, Automotive and RF

STRATEGIC PARTNERSHIPS



"The cost-effective performance and best-in-class energy efficiency benefits of GF's 22FDX platform..."

Joël Hartmann, EVP, Digital Front-End Manufacturing & Technology, STMicroelectronics



"The power consumption we measured on the silicon have fully met the expectations and the result is highly competitive for the ADAS Computer Vision MPSoC market."

Dr. Jens Benndorf, Managing Director and Co-Founder of Dream Chip Technologies

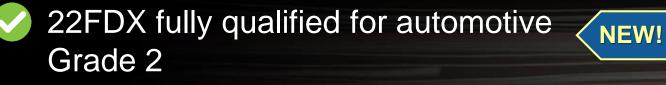


"With over a decade of automotive industry experience, GF's 22FDX delivers a performance on-demand, energyefficient solution for our current and future radar technology needs."

Kobi Marenko, CEO of Arbe Robotics

22FDX Auto Qualified, Ready for Production

Dresden, Fab 1 automotive qualified < Q1 2018



AEC Q-100; with ambient temp up to 105°C

Prototyping ongoing, automotive production < Q3 2018

Q1 2019



Features high voltage, eNVM auto grade, RF, mmWave

 \checkmark

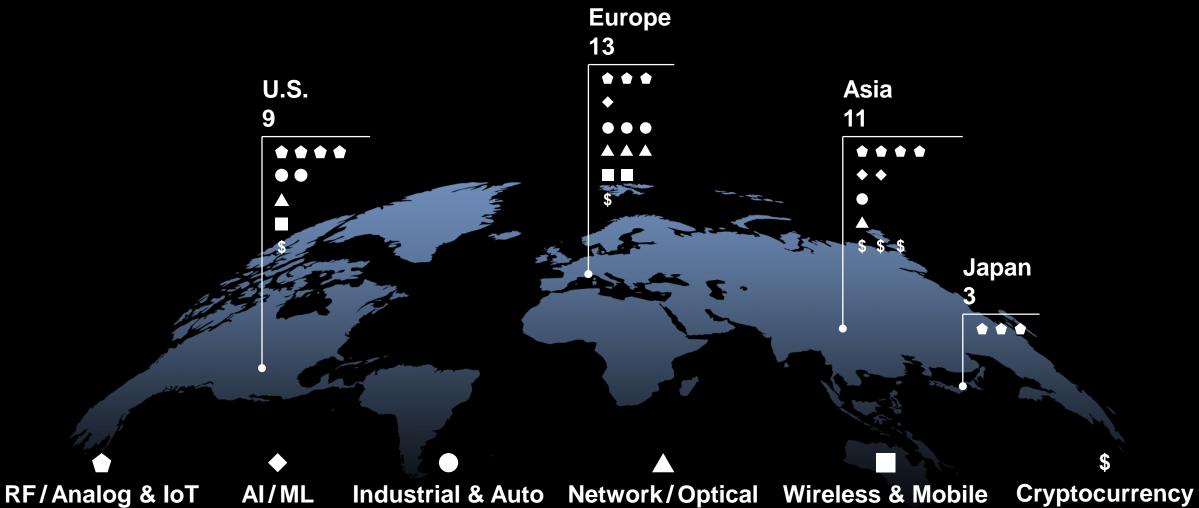
Next-gen eMRAM in development

22FDX and Arbe Robotics 77GHz high resolution radar chipset

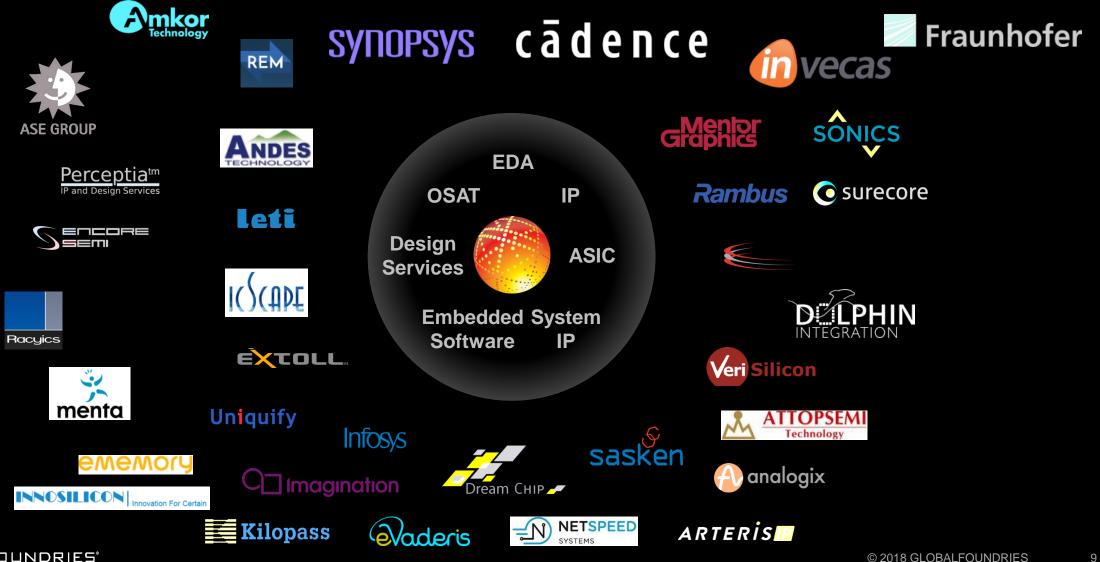
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Marketplace Validation of 22FDX – Market Applications

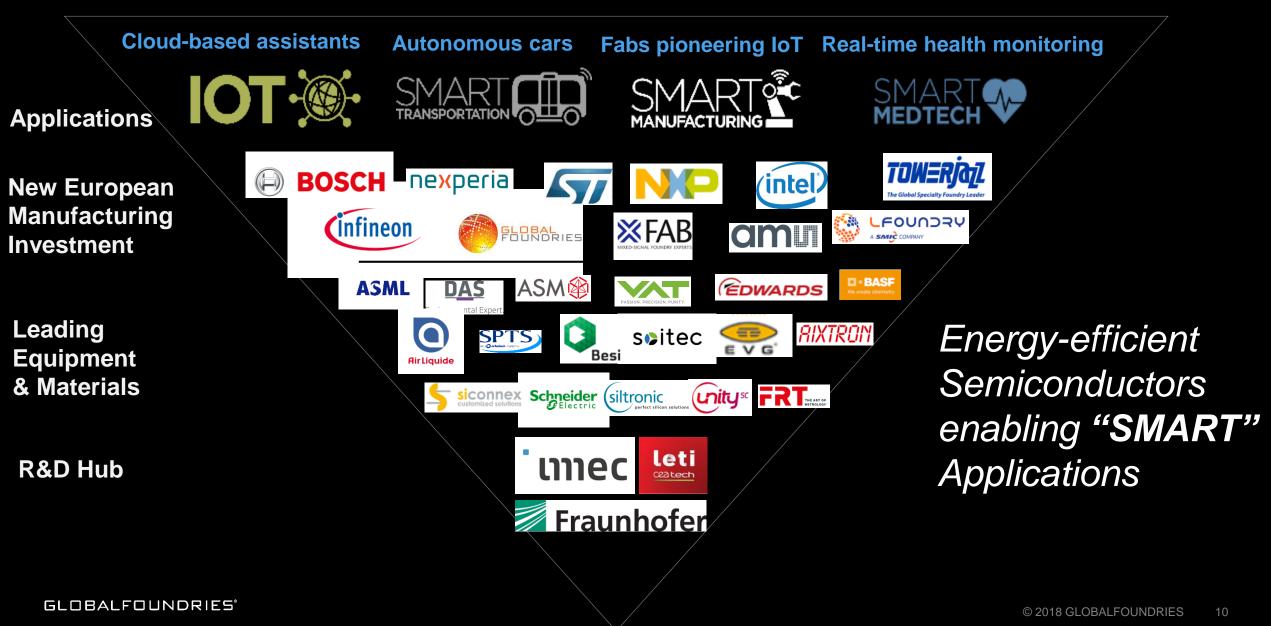
36 client DWINs across the world



Ecosystem Partnering via **FDXcelerator**[™] Comprehensive design platform including IP and design flows



Positioning Europe in the Global Manufacturing Supply Chain



Advancing European value chains with FD-SOI



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