Finetech's flexible equipment solutions

for leading-edge applications

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AGENDA

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- European vs Worldwide Semiconductor Market
- Situation in Russia – our perspective (back-end)
- Requirements for equipment
- Finetech's Solutions
- Prototype 2 Production

European vs Worldwide Semiconductor Market

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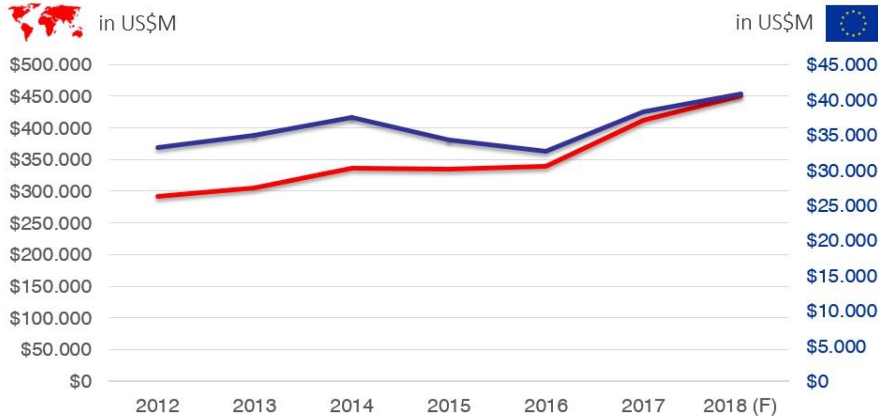

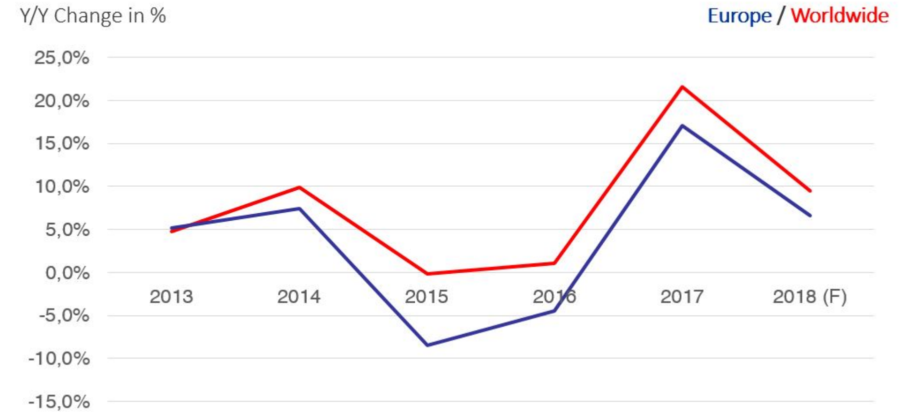

- Europe accounts for only 9% of the global semiconductor revenue
- Euro appears to be more vulnerable

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Situation in Europe vs. the Rest of World

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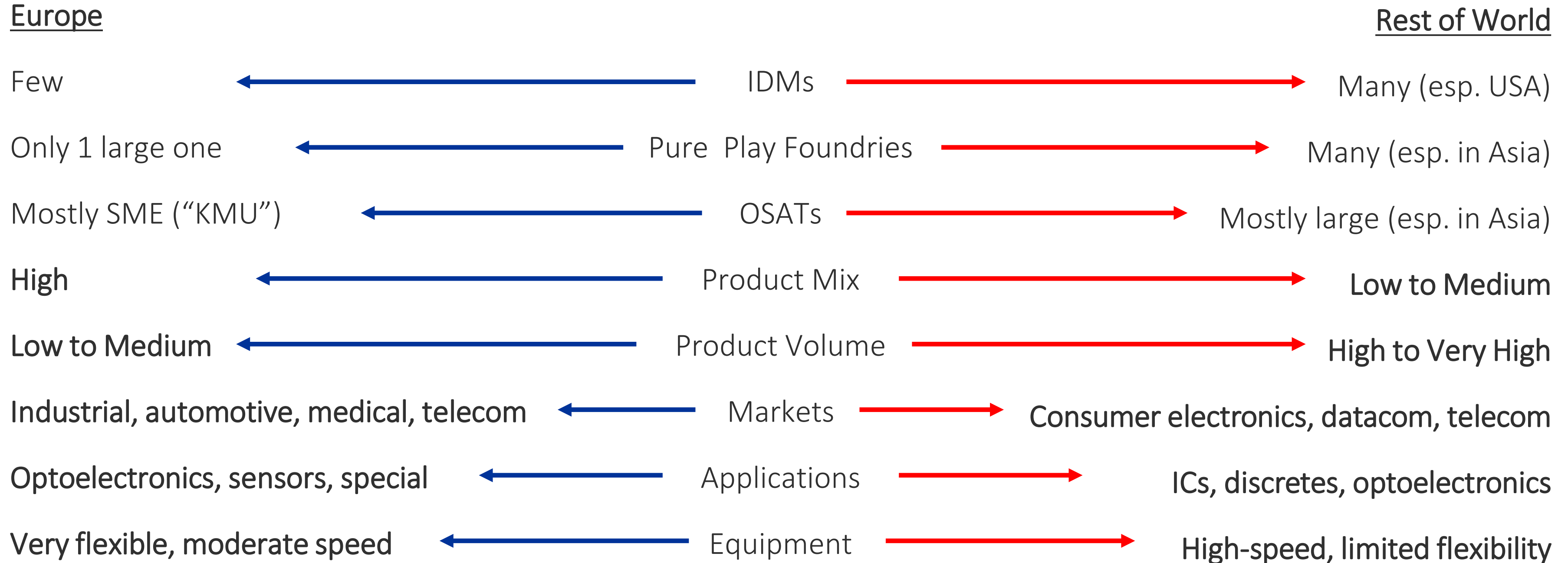

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Situation in Russia

Our perspective

Large R&D institutes with production

- Public Funding (projects and infrastructure) → long time to decision / PO
- Vertical integrated organization structure
- R&D to high mix / low volume production

Private owned companies

- Production for local market (defence, security, space, avionic, datacom)
- Niche products for export
- Almost low to mid volume

Educational sector (university, scientific research)

- Leading edge projects
- Highest demands on equipment capabilities

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Situation in Russia

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Our idea of customer needs

Equipment requirements :

- High quality
- Capable for future project requirement
- Very flexible
- Robust / long life time
- Easy to use / low maintenance

Demands for supplier:

- Local technical after sales & service capabilities
- Fast reaction
- Factory support

Our solutions for R&D and production

More then 25 Year’s experience

Nearly 100 installations in Russia

Product range M/A

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FINEPLACER®
lambda

FINEPLACER®
sigma

FINEPLACER®
femto 2

Manual

Semi Automatic

Automatic

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Product range M/A

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- Highest placement accuracy (5 to 0.5 micron) → future proofed
- Outstanding flexibility → platform based machine concept
- Robust and low maintenance → 24/7
- User friendly → ergonomic design
- Easy to use → software concept and GUI
- Easy to retrofit / convert for various applications
- Machine to machine capability → easy process transfer

- More then 10 years cooperation with local partners → proven service concept
- Application support → application lab & experienced engineers
- Understanding of local market

Finetech's road from Lab to Fab

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5 Reasons Why

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1. Offering customers of Finetech's manual and semi-automatic equipment for R&D also production solutions that allow to transfer process recipes developed on FINEPLACER® table top bonders to production systems

2. Recently more medium-sized enterprises (SME/KMU) develop their products and processes on production equipment in order to avoid early teething problems when moving from lab to fab

3. Eliminating the influence of the operator when it comes to high end quality products (i.e. higher yield), considering that many semiconductor devices have become much more complex compared to before

4. Cost reduction, as labor in Europe has become too expensive to run even a smaller scale production on manual equipment

5. Shorter production times even for smaller lot sizes mean lower costs per device and better profit margins

The perfect production bonder for European customers

- Full process flexibility
- High accuracy and precision – selectable on a per chip basis
- Fully automatic material management systems
- Fully automatic tool management system
- Lens and/or SMD processing
- Large work/bond area

Process Flexibility

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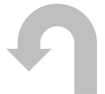
- Conductive, non-conductive and UV epoxy, flux – all in one process program
- Dispensing (pressure/time, jet or screw fed, multi) and dipping
- Soldering / eutectic processes
- Heated work stage and heated bond tools
- Thermocompression
- Laser Assisted Bonding
- Ultrasonic bonding
- Face up and face down
- Low force and high force



Finetech‘s Solutions

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FINEPLACER® femto 2 – for Highest Precision & Accuracy

- Fully-automated and manual operation
- 0.5µm @ 3 Sigma placement accuracy and precision
- For all kind of chip bonding technologies
- Full process traceability
- Large work area
- Very low to high bond force
- Multi-chip capability
- Die presentation from waffle/gel-packs and wafer
- For low-volume, medium to high-mix production

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Finetech's Solutions

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FineXT 5205 – for Flexibility in Medium Volume Production

- Fully automatic operation
- For all kind of chip bonding technologies
- Die presentation from waffle/gel-packs and up to 8” wafers
- SMD feeder option
- JEDEC tray feeder option
- Tool-tip changer for multi-chip capability
- Manual work holder or automatic conveyer system (indexer)
- 3D substrate support
- Large work area
- **For medium-mix production**

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Finetech's Solutions

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FineXT 6003 – for Flexibility in Higher Volume Production

- Fully automatic operation
- Modes for high accuracy and high speed on per chip base
- Accepts wafers up to 12" in frames and rings
- Can process dice and devices from waffle packs and gel-pak®
- Fully automatic tool management system for multi-chip capability
- Epoxy and eutectic in one process program
- Extremely large bond area for high efficiency
- Low to medium bond force
- Inline and stand-alone configuration possible
- Manual work holder or automatic conveyer system (indexer)
- Wafer Mapping
- **For medium to high-mix production**

More then 25 Year’s experience

More then 2500 installations world-wide

Nearly 100 installations in Russia

100% made in Germany

Thank you for your attention!

Thomas Müller, Head of Sales

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