



Picosun AGILE ALD[®]

for companies driven by innovation

Sustainable Manufacturing
Business Finland 14.4.2020 Webinar

Jani Kivioja, CTO
Picosun Group

picosun
AGILE ALD



PICOSUN TODAY

- **ALD production started in 2004**
- **120+ employees**
- **HQ and factory in Finland**
- **30 M\$ in sales**
- **Subsidiaries/local offices in USA, Germany, France, Japan, China, Taiwan, Singapore, Korea, and India**
- **30+ sales partners on 6 continents**
- **30 – 40% annual growth sustained for several years**
- **Sophisticated 15th generation tool design**

Importance and role of TEKES / BF & EU funded projects

- External funding is in many cases crucial for **long-term relationships and collaborative R&D projects**.
- **With the support from TEKES / BF** and EU we have been able to join many national and international projects during the last 10+ years.
- TEKES / BF has also **shared their ideas** in the proposal stage, reviewed the proposals, visited us to discuss about our wishes and the projects before acceptance, and helped us to get EU funding.

Nationally & EU funded projects 2015 - 2020

- HeLiS
- Lorix
- Roll-out
- ALD-LiB
- AIEEE
- InForMed
- Way2goFast
- R2POWER300
- R3-PowerUP
- Flingo
- Saladin
- ULIMPIA
- Position II
- Moore4Medical

Launch submission

Action points in short:

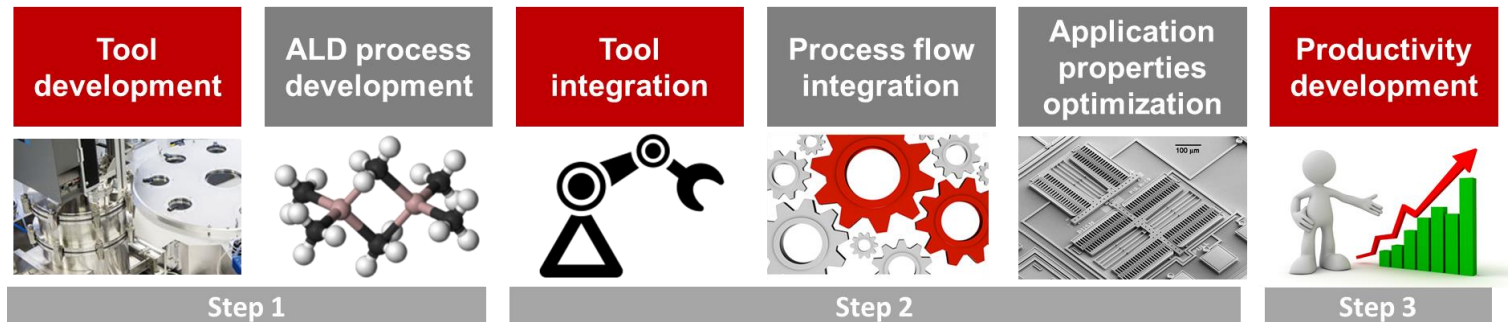
1. **Find the right call** that is in line with your needs (H2020, ECSEL, PENTA, BF, etc).
2. **Look for the right partners** to work with and establish consortium.
3. **Select coordinator** for the project, list participants and contact persons.
4. **Agree the work shares** in proposal preparation and project contributions.
5. **Write the proposal together** with the partners (coordinator in lead): Define project excellence (objectives, relation to the call / program, concept, ambition), impact or expected impact and business benefits, implementation (work plan, work packages, work shares, deliverables), and goals and milestones. (templates available for proposals)
6. Review the proposal **and ask for external advices** if possible.
7. **Submit the proposal** and hope for the best.
8. If accepted, make the proper agreements (**consortium and grant agreement**).

CASE EXAMPLE: Project “SALADIN”

- **Call:** H2020-ICT-2016-2017 - Information and Communication Technologies. Topic: micro- and nanoelectronics technologies.
- **Goal:** Design an ALD tool that will be validated in fab process flow.
- **Consortium:** tool design and manufacturing (**Picosun**), chemicals supply (**Pegasus**, UK), integration of the ALD step into the fab process flow (**Silex**, Sweden).
- Picosun as coordinator and in lead in proposal writing (template from H2020 portal).
- **TEKES** reviewed the proposal and gave extremely valuable improvement ideas.
- **Submission** in ECAS (EU funding and tender portal).
- The project proposal was accepted, agreements made, and project launched.



SALADIN covers all aspects of ALD step integration into production



SALADIN goals and benefits to Picosun

Execution and goal:

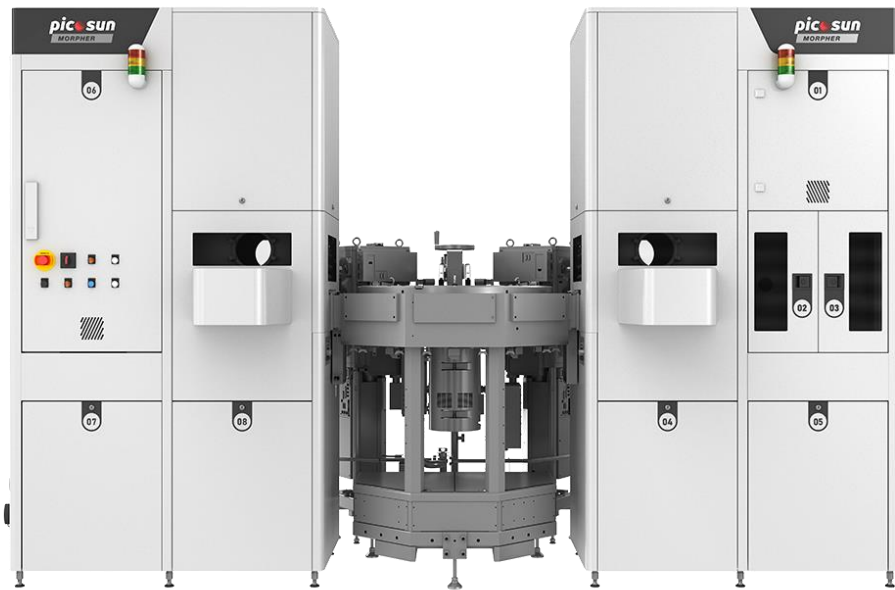
- Picosun designs and delivers a P-300F Picoflip™ tool to be installed at Silex pilot line for validation. Pegasus provides chemicals that will be tested for process integration.
- We get tool reliability, availability and maintainability baseline according to SEMI E10-0814E standard which is a prerequisite for production market. We get our tool tested and validated in fab process line.

Benefits:

- Opportunity to **evaluate the new tool design** and address improvement needs.
- **Public reference** for an automated Picosun tool in a **MEMS fab** gives credibility.
- **New improved solutions** that can facilitate our sales and increase our profit.
- **Good collaboration** between the partners, new contacts and ideas.

SALADIN outcome

New PICOSUN[®] ALD tool for 200 mm wafer industries in Beyond and More than Moore technologies e.g. MEMS, sensors, LEDs, lasers, power electronics, optics, 5G components.



Conclusions

- National and EU funding makes it possible to create long-term relationships and network with the partners.
- We need partners that trust us and our solutions and want to develop something new together with us.
- Our company invests in devoted and inventive people and continuous learning. Projects are a good way to find new possibilities and learn more.
- With a strong collaboration amongst European and national partners, universities, researchers, SMEs and industry we have good changes to develop and introduce new innovative ALD solutions for the current needs and the future.

For more information please visit

www.picosun.com

Thank you!

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AGILE ALD



Main HQ

Picosun Oy

Masalantie 365

FI-02430 Masala, Finland

Tel. +358 50 321 1955

Fax +358 9 297 6116

info@picosun.com

Picosun Oy

Tietotie 3

FI-02150 Espoo, Finland

Tel. +358 50 321 1955

info@picosun.com

North American HQ

Picosun USA, LLC

Tel. +1 214 790 0844

Mobile +1 214 490 3951

sales@picosun.com

European HQ

Picosun Europe GmbH

Tel. +49 1522 449 49 11

sales@picosun.com

Asia HQ

Picosun Asia Pte. Ltd., Singapore

Tel. +65 9756 3265

sales@picosun.com

Picosun Taiwan Co. Ltd.

Tel. +886 90 515 2985

sales@picosun.com

Picosun China Co. Ltd.

Tel. +358 40 480 3449

sales@picosun.com

Picosun Japan Co. Ltd.

Tel. +81 3 6431 9500

Mobile +81 90 5198 8131

sales@picosun.com