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leti innovation for industry

Open 3D™ Platform

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CEA-Leti-Minatec

OPEN 3D BOOST YOUR INNOVATION

Introduction to Open 3D™ Platform

- **The concept :**
  - Open 3D™ is a 3D technology offer, targeting industrial & academic customers
  - Open 3D™ will give access to 3D innovative technologies with the following key drivers :
    - Moderate access cost to technologies :
      - Based on mature technologies
    - Customization upon request
    - Short cycle time

- **Means & Facilities :**
  - Open 3D™ will operate on CEA-LETI technological platforms : 200 & 300 mm
  - Support by LETI skills on layout, process, metrology, characterization, tests & reliability
  - Global offer from 3D design to component final packaging

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Introduction to Open 3D™ Platform

- **Customer advantages :**
  - Open 3D™ commitment : moderate cost & reduce cycle time.
  - Access to 3D innovative technologies for any wafer format (200 & soon 300 mm)
  - Boost customer innovation thanks to 3D innovative technologies
  - Possibility to make proof-of-concept , prototyping & small volume production

- **Open 3D customer's typology :**
  - Laboratories, universities and international Institutions
  - Fabless
  - "Niche" markets manufacturers & integrators
  - IDM

Projects already started with :

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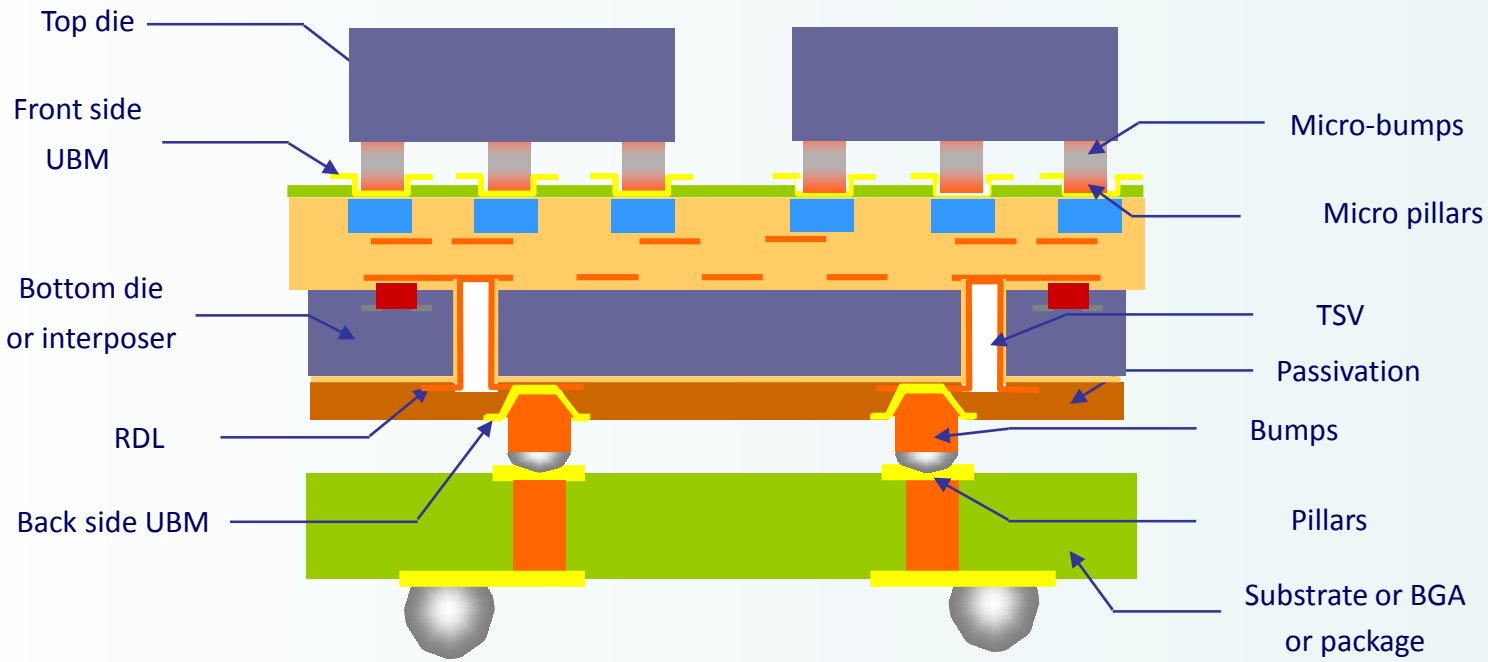
Technological offer overview

- **Technological modules definitions :**
  - Through Silicon via (TSV)
  - Redistribution layer (RDL)
  - UBM
  - Interconnections
  - Components stacking
  - Packaging with partner collaboration



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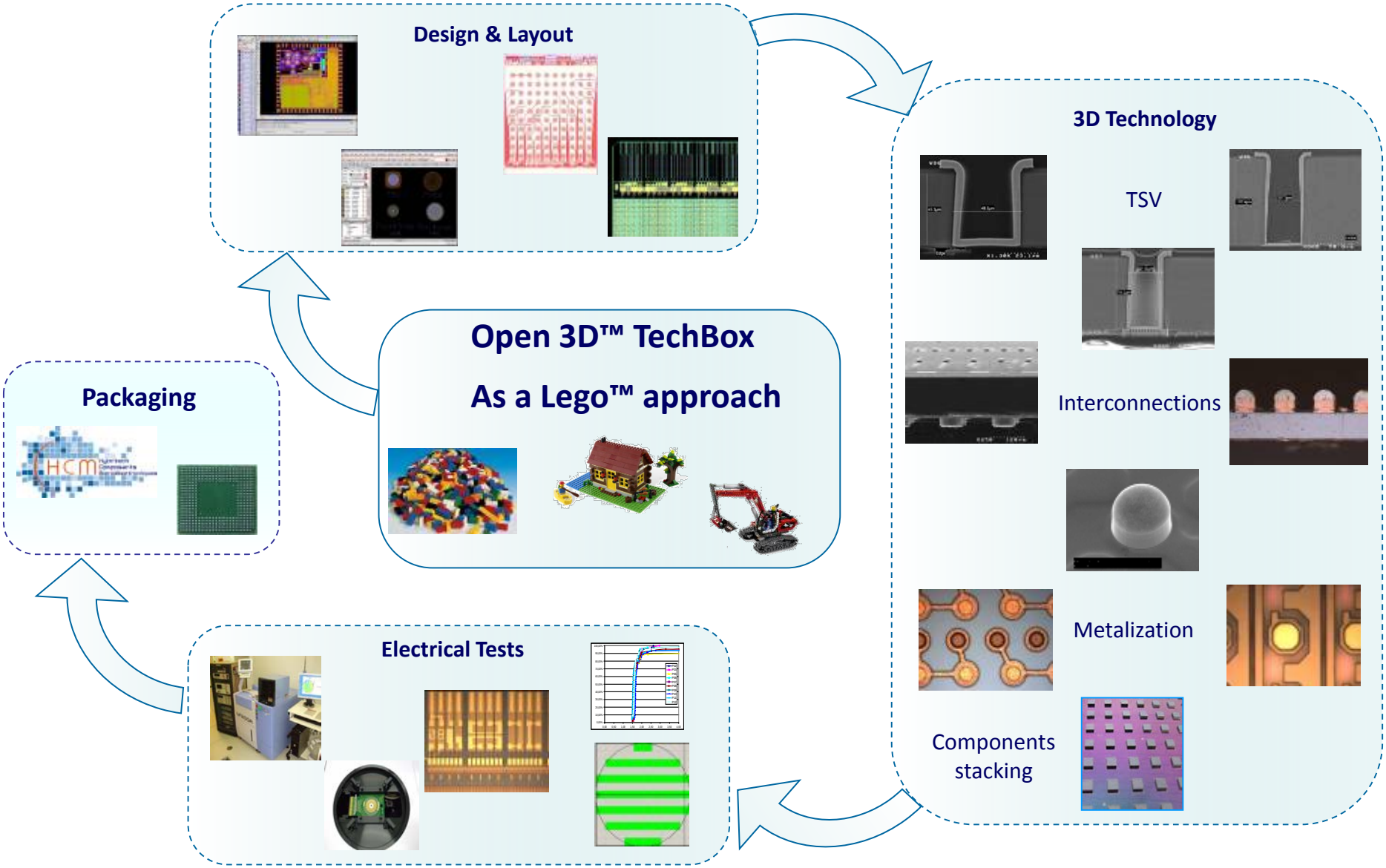
Technological offer overview



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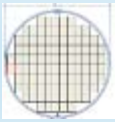
How to work with Open 3D™

- Simple process for customer

Tech. Specifications / planning

Possible access to layout & Wafers through CMP

Device layout



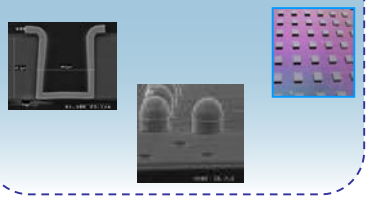
Wafers

PO

Open 3D™ TechBox

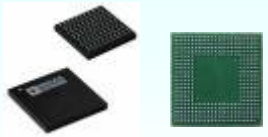
Design & Layout

3D Technology

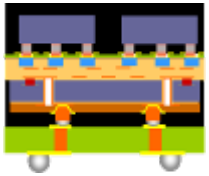


Tests

3D Packaging



Innovative product for your market



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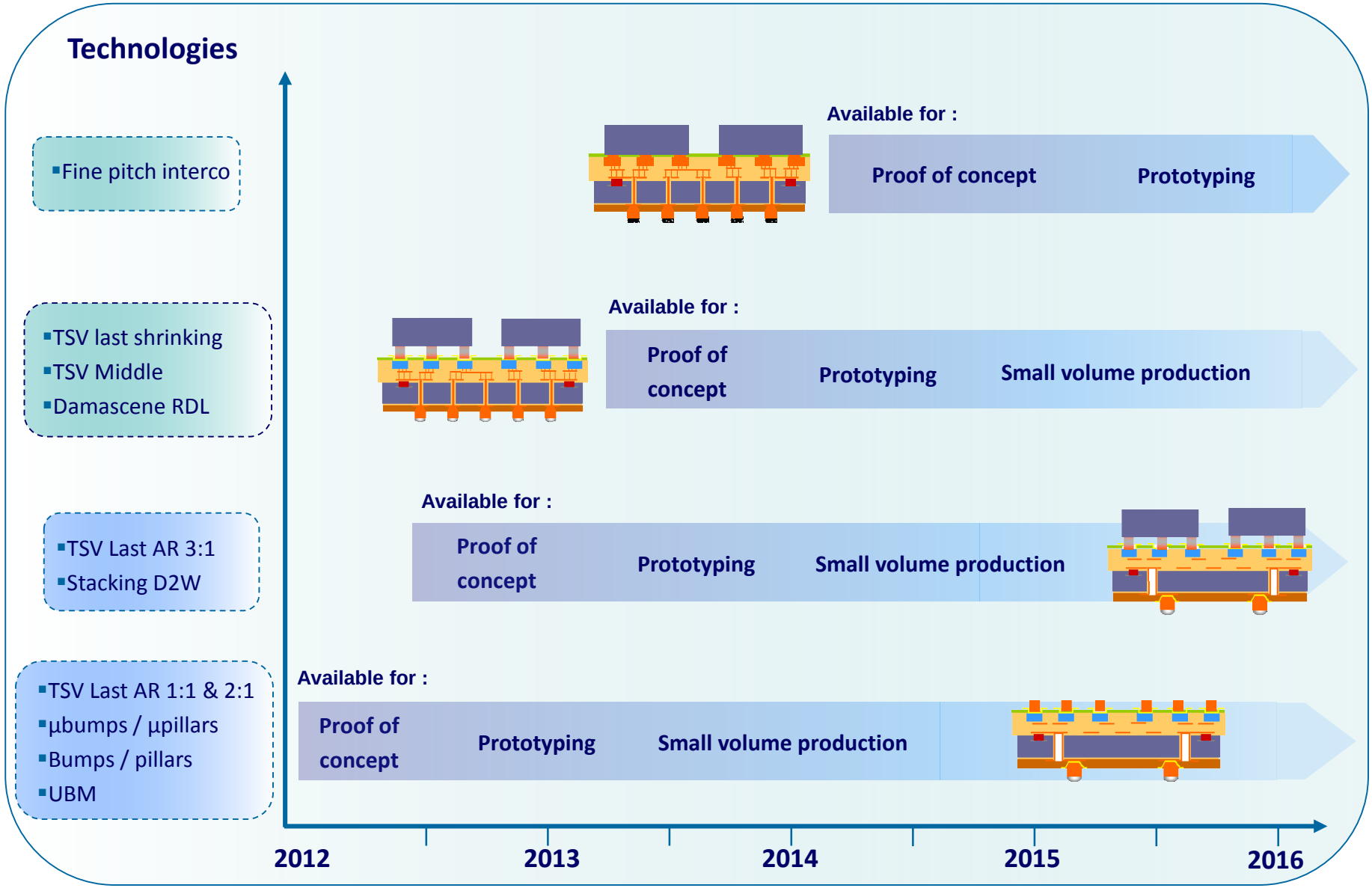
Open 3D™ : Technological roadmap



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Conclusions / Prospects

- Conclusions :
  - Open 3D™ is a LETI 3D technologies offer, targeting industrial & academics customers
  - Open 3D™ will give access to 3D mature technologies with the following key drivers :
    - Moderate cost technologies
    - Short cycle time
  - Open 3D™ will operate on LETI facilities @ Minatec campus / Grenoble – France
  - Already two projects have started on the platform

- Open 3D prospects :
  - Continue to fill the Open 3D catalog with new mature technologies in very close collaboration with LETI R&D projects

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Thank you for your attention

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