

CATRENE: Giver and Taker for 3D Integration

Public funding & opportunities for SMEs

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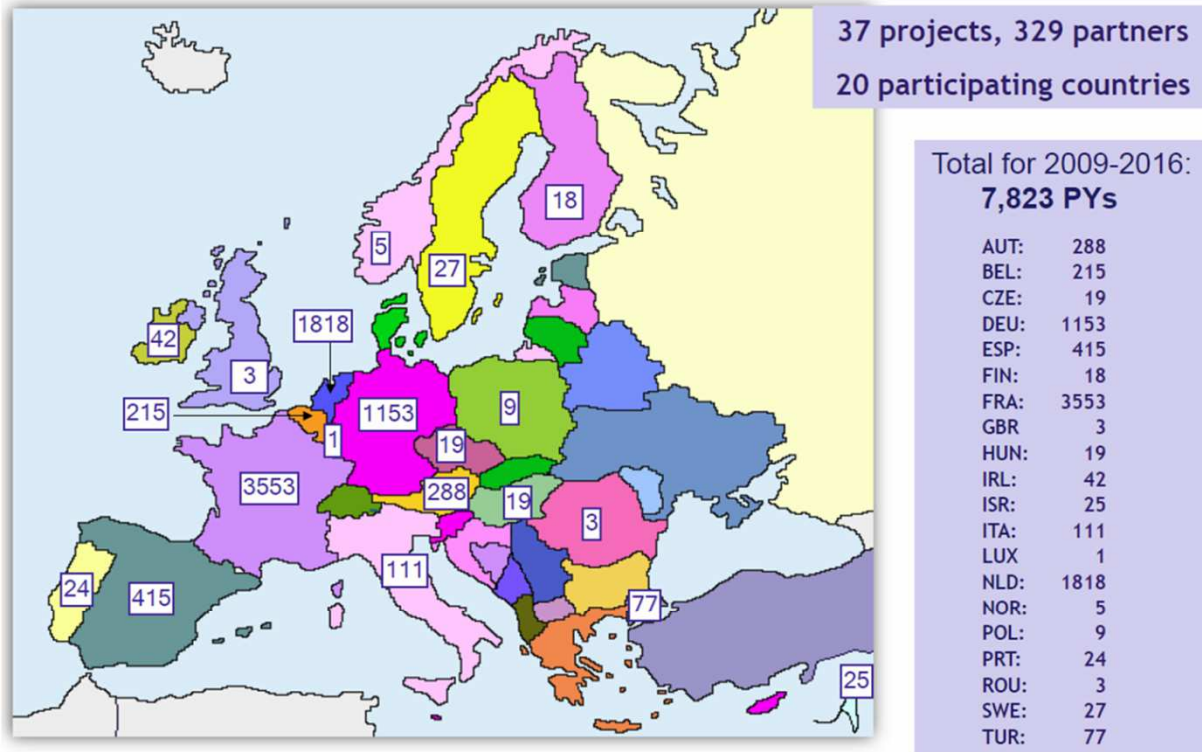
Grenoble January 22nd 2014



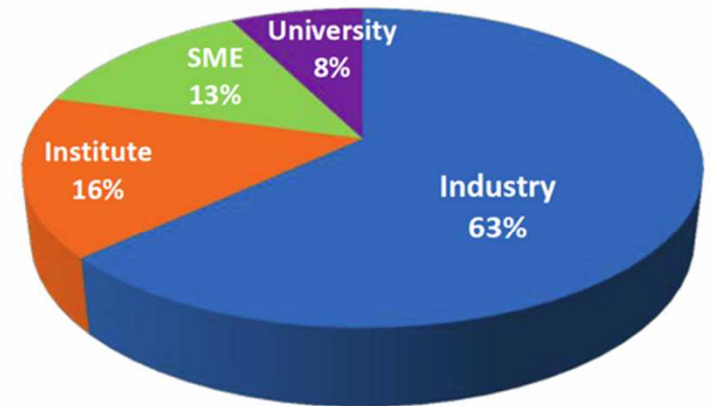
The CATRENE solution for 3D

European 3D TSV Summit
Application Ready

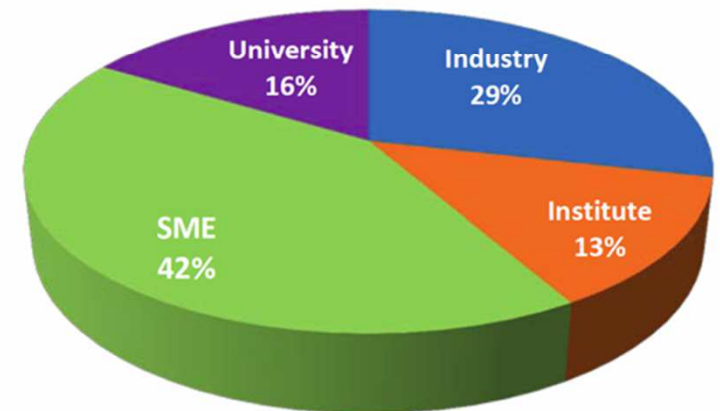
CATRENE at a glance



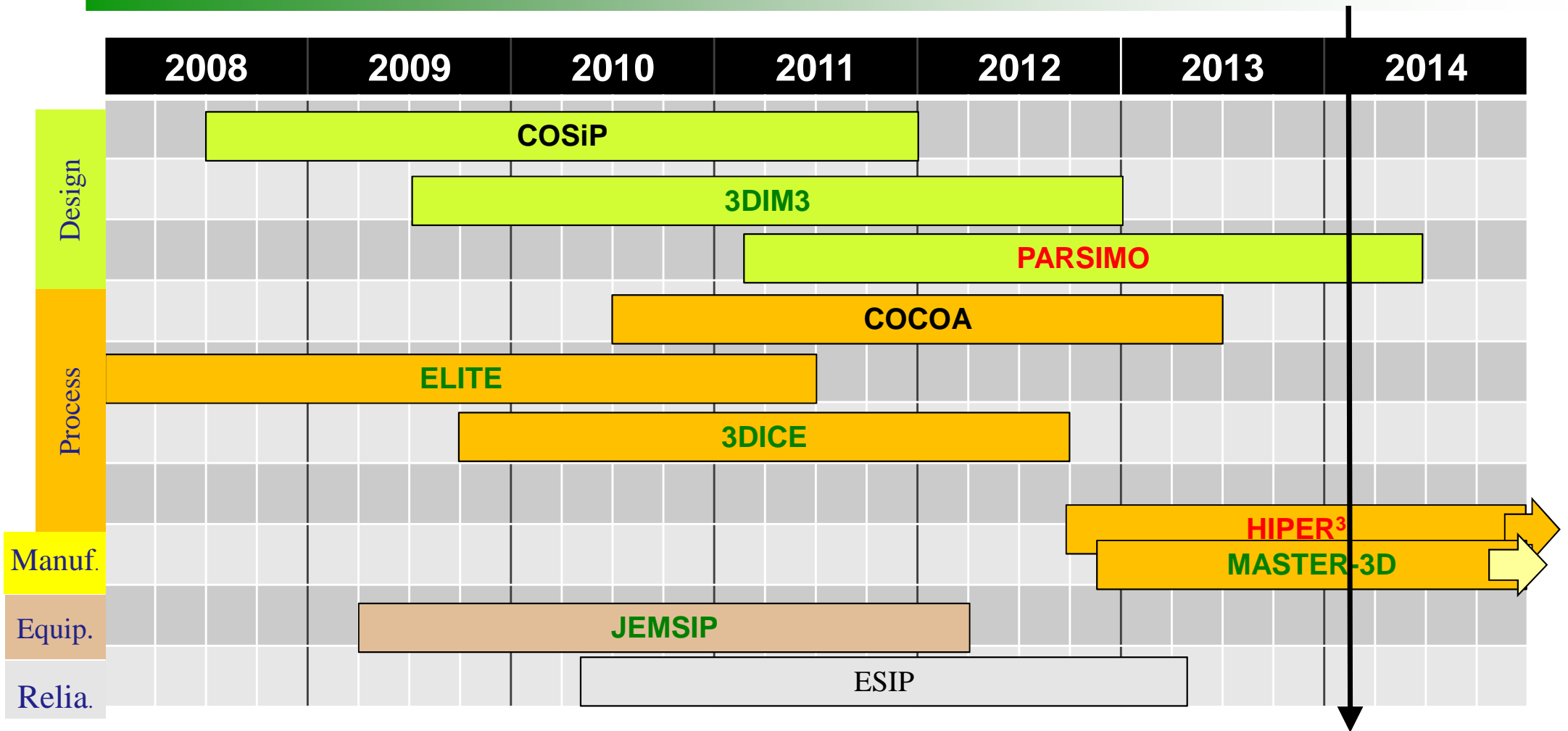
Total Resources: 7,823 PYs



329 participants from 20 countries



Cooperative 3D projects: a success over time



CAN WE PUSH INNOVATION IN 3D INTEGRATION FURTHER?

Yes, we can!



CATRENE: A strong supporter

- No one company is able to master the full integration process
- Different skills are required from the atom up to google software integration
- Concurrent engineering is possible in a collaborative environment
- Large groups, SMEs and academia have not the same timeline but can contribute together

Europe maintains leadership in More than Moore

- 3D integration is a differentiating factor
- The packaging is scaling down at chip level
 - The back-end operation is back inside wafer fab
- Many suppliers like SMEs must act locally
 - And perform innovation in Europe
- R&D centres can focus on high value steps
- Standardization is helping to protect companies with innovative know-how

The CATRENE experience (from a partner point of view)

Constructing the future of R&D on 3D together

SMEs and CATRENE projects

- Large Groups with 29% participation collect 63% of the resources
- SMEs with 42% participation collect only 13% of the resources

Why do SMEs hesitate to join CATRENE projects ?

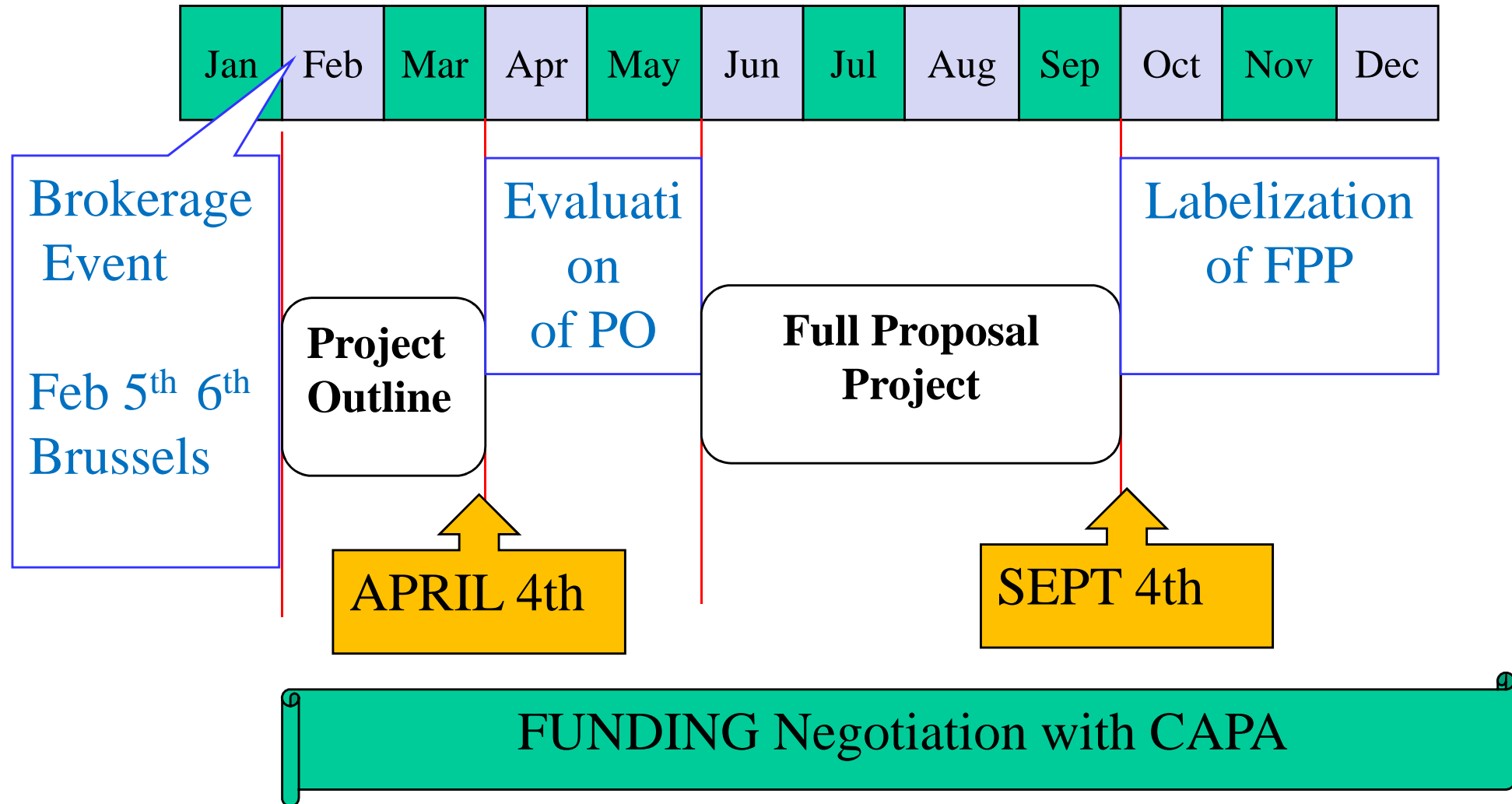
- Too time consuming?
- Too much administrative load?
- Not enough funding?
- Or simply, SMEs don't know the benefits (for them) of participating in the programme?

How to overcome these fears ?

- **DARE to participate !**
 - CATRENE office is a supportive organization
- **TALK to SMEs who have been successful**
 - RECIF has taken up the challenge to be the first SME leading a project
CT306 : NGC450
- **COME to our Brokerage Event**
 - February 5th and 6th 2014 in Brussels



CATRENE Overall Agenda and Timing 2014



Strengths of the CATRENE Cluster

- Alignment and direct interaction with Public Authorities
- Quality process
 - Expertise of the reviewers and mentors
 - Coached iteration of POs and FPs
 - Project coaching by the same reviewers throughout the project's lifespan
 - 3 levels of governance provides deep insight into industrial needs (Board, Support Group and Steering Groups)
- Flexibility
 - Adaptation of the scope according to the market needs
 - Adaptation of the consortium according to the project needs and companies priorities
 - Proposals can be presented at any time (unsolicited)

European 3D TSV Summit

Application Ready

**Thanks to SEMI to host
the CATRENE solution for 3D**

