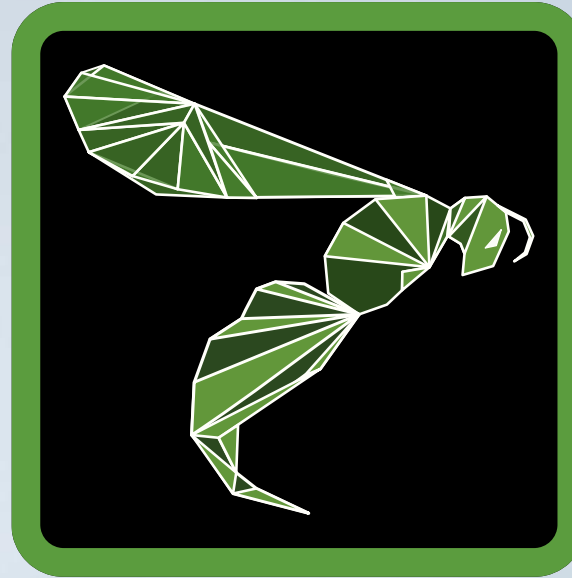# semidynamicS

**Roger Espasa, Ph.D.,
Founder & CEO**

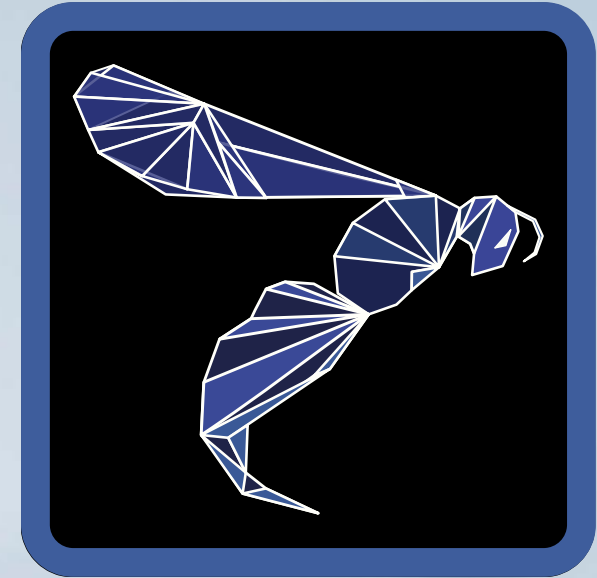# Semidynamics RISC-V IP Portfolio

## Avispado 222

2-wide **in-order** RISCV64GCV

AXI and CHI

## Atrevido 222

2-wide out-of-order RISCV64GCV

AXI and CHI

## VPU 822

8-lane RVV1.0

- Founded July 2016, Located in Barcelona
- We offer extensive customization of our IP
- Now moving into FABLESS

# Questions & Answers (1)

| | |
|---|---|
| How does your company use existing competence centers? | ❌ |
| Could you imagine your company using the services of a competence center outside your country? | ✅ |
| What are the obstacles that currently prevent you from growing or innovating? | € |
| How could the competence centers help your company in terms of providing training on semiconductors skills? | Seminars on tools, IP, protocols,… |
| What are the most pressing needs from your company and its partners? | |
| How would you imagine the interaction between your company and your 'local' competence center to look like? | Next Slides |
| What is your view on getting access to pilot lines and the design platform through the European network of competence centers? | |

# Fabless' Design Flow: Collaborations…
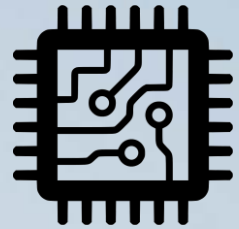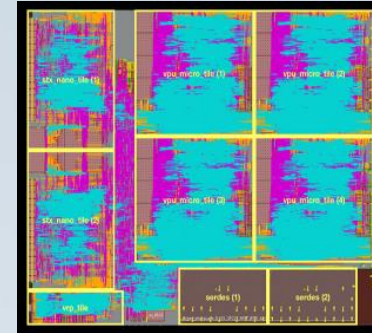
| Idea | Exploration | R&D(Frontend) | R&D(Backend) | Foundry | Chip |
|------|-------------|---------------|--------------|---------|------|
| Fabless | Fabless | Fabless | Fabless | Foundry | Fabless |
| | **+** | | **+** | Pilot Lines | |
| | Competence Center | IP    IP    IP | Competence Center | | |
| | | | Design House | | |
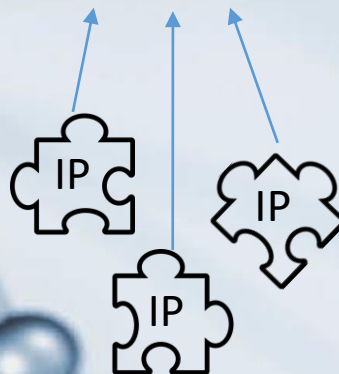
# Concrete Needs Examples

- Exploration NEEDS
  - What is the best node to be used ? Prices? (across TSMC, GF, Samsung, …)
  - What Packaging  Options are available?

- R&D Front End Needs
  - Sourcing IP : cost, origin, VIP

- R&D Back End Needs
  - Can Competence centers deliver TTM like Design Houses? At better cost?

# A comment on Open-Source IP…

| | | Differentiation | |
|---|---|---|---|
| | | Low | High |
| **Value** | Low | | |
| | High | | |

# A comment on Open-Source IP…

| Value | | Differentiation | |
|---|---|---|---|
| | | Low | High |
| | Low | AXI, AMBA, I2C, I3C, SPI, JTAG, | x |
| | High | CXL, PCIe, USB, DDRx, LPDDRx Secure Boot | Core, AI unit, Custom units \<your tech here\> |

These mostly provided commercially by non-EU companies
Ok for EU to fund Academia and Competence Centers to develop Open-Source version of these
Will help lower "barrier-of-entry" to EU Fabless

Fabless "Secret Sauce"
EU Asking to open-source this is a BIG MISTAKE
  (geo & business)
EU should fund this (Chips Act, etc…) without OSS

# Questions & Answers (2)

| | |
|---|---|
| What are the most pressing needs from your company? | • Low-cost IP for IOs<br>• Partner for Advanced Packaging<br>• Partner for Selecting optimal foundry |
| How would you imagine the interaction between your company and your 'local' competence center to look like? | • At Exploration stage<br>• At Backend Design stage |
| What is your view on getting access to pilot lines through the European network of competence centers? | • Very positive, but need path to high volume |
| What is your view on getting access to the design platform through the European network of competence centers? | • Very positive<br>• Concern on TTM and professional quality versus Design Houses |

THANK YOU!