



Science & Technology Facilities Council
Rutherford Appleton Laboratory

STFC Europractice and Arm SoC Labs

Mark Willoughby



UK Research and Innovation



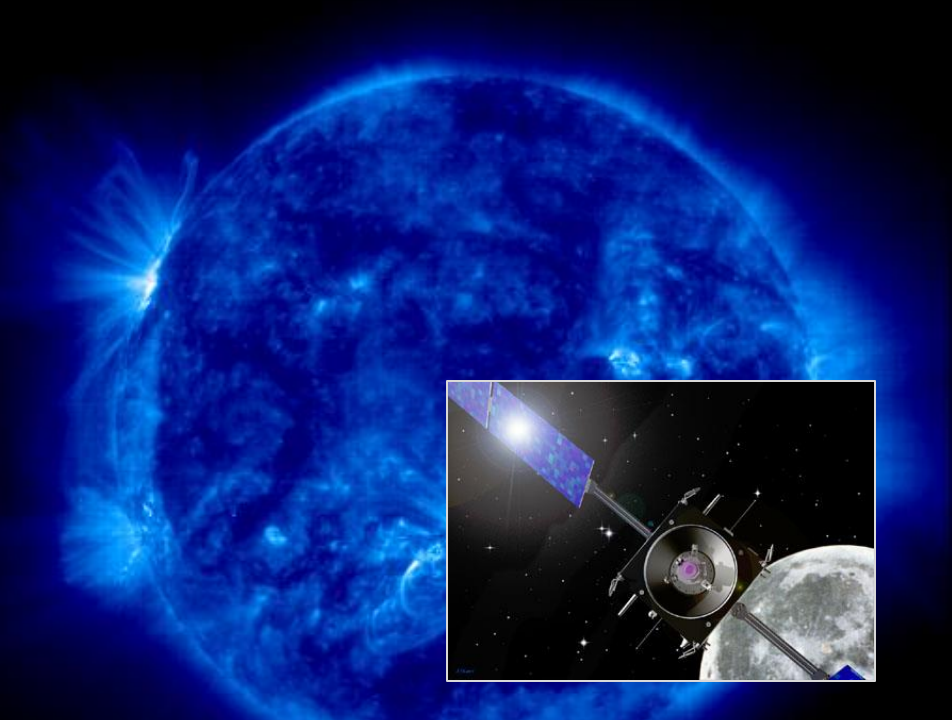
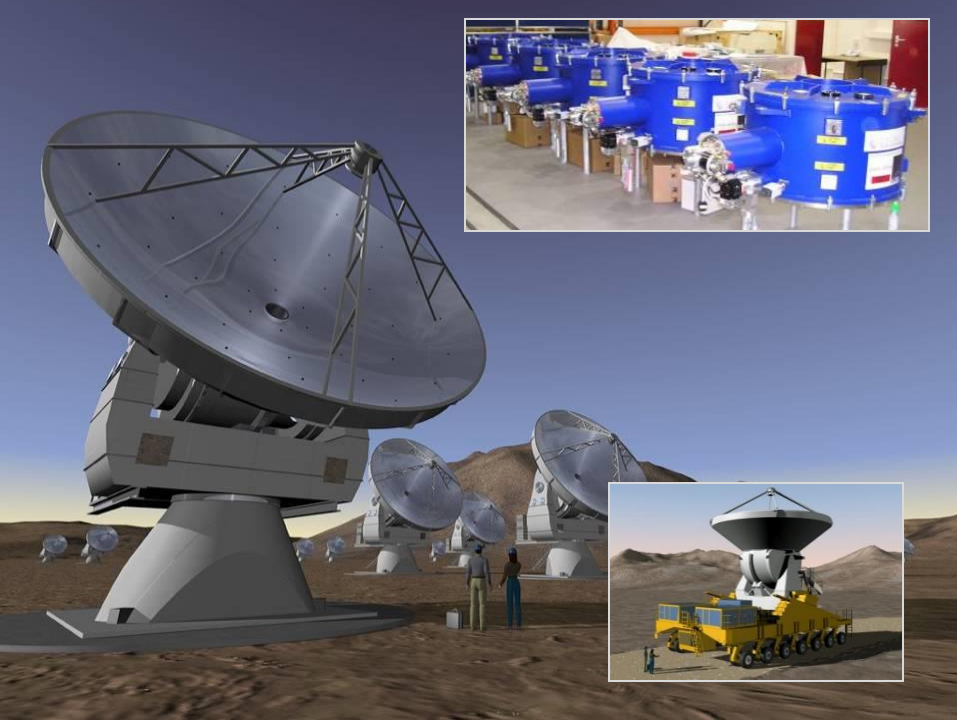
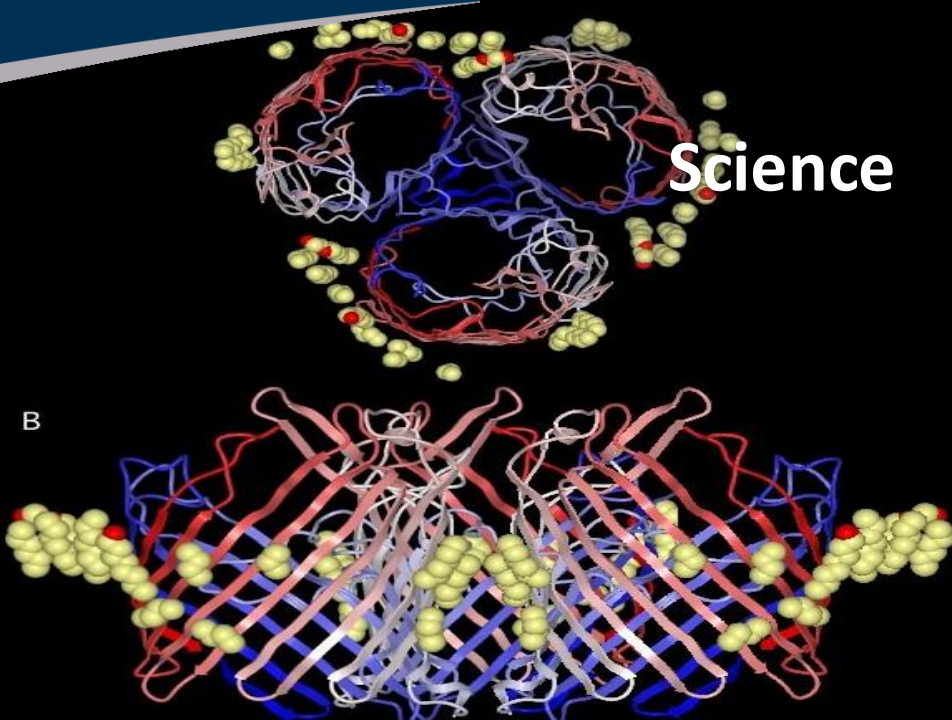
- STFC is one of seven UK Research Councils and part of UK Research and Innovation (UKRI)
 - UKRI is an independent, non-departmental public body of the Dept for Business Energy and Industrial Strategy (BEIS)
- 
Department for
Business, Energy
& Industrial Strategy
- Established as an independent legal body, outside of Government, but accountable to Parliament

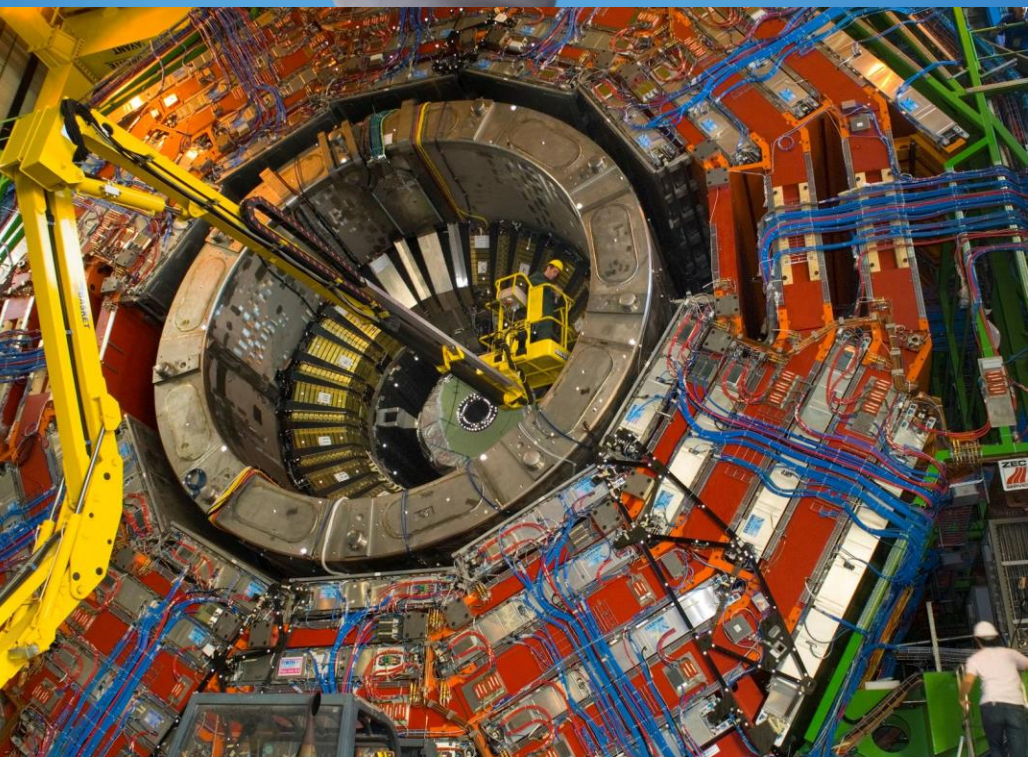
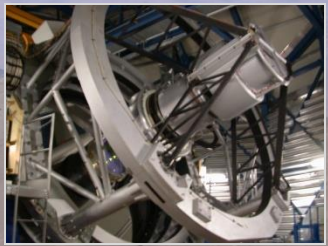
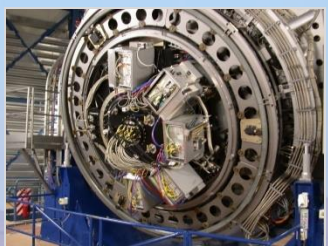
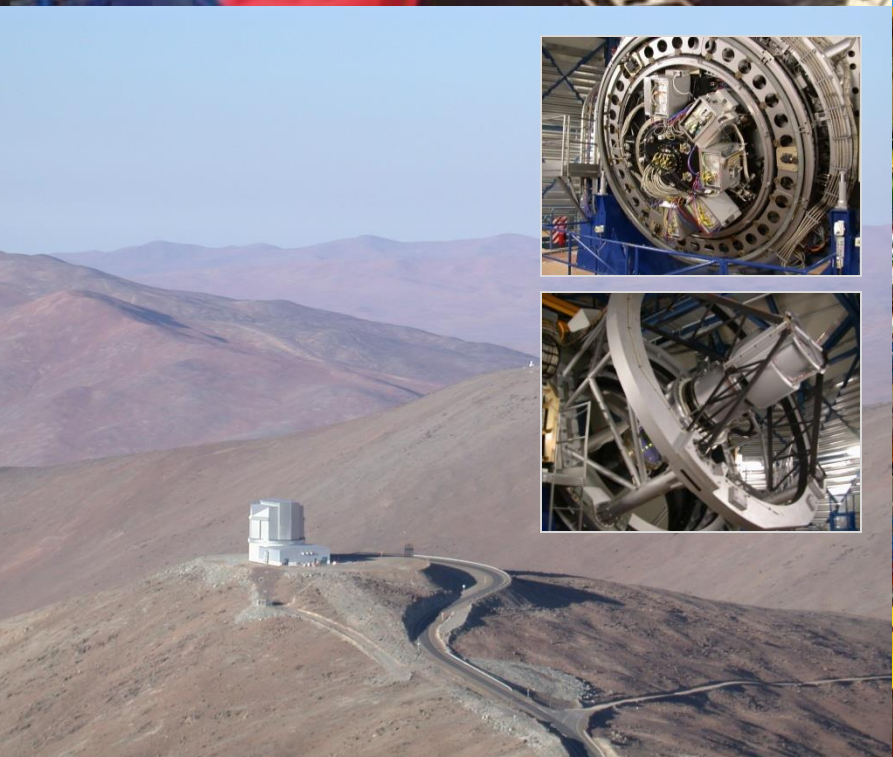
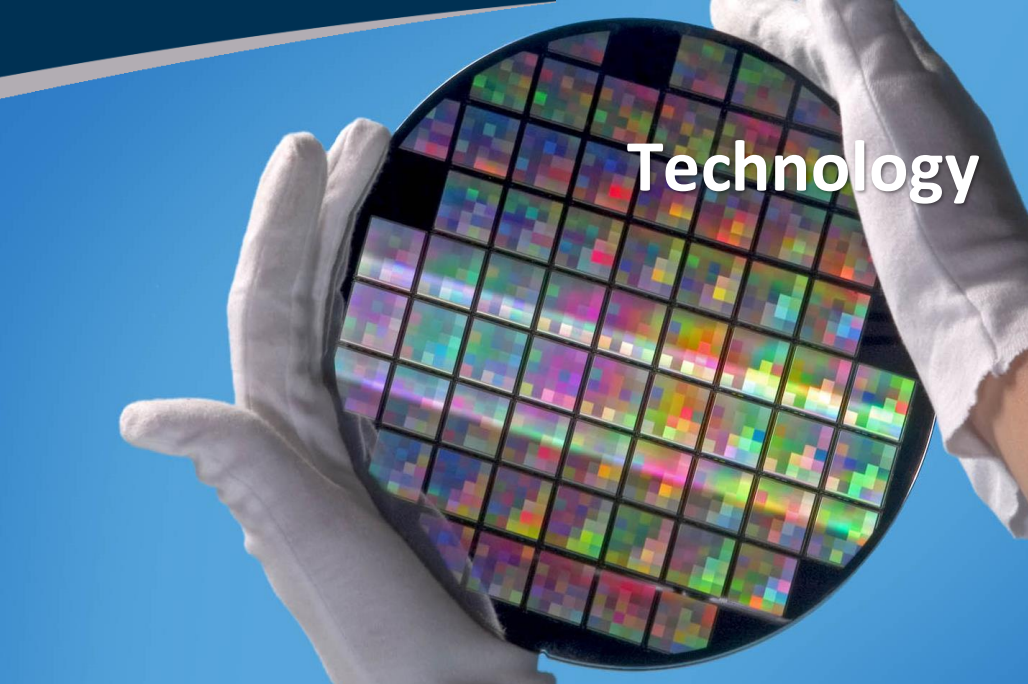
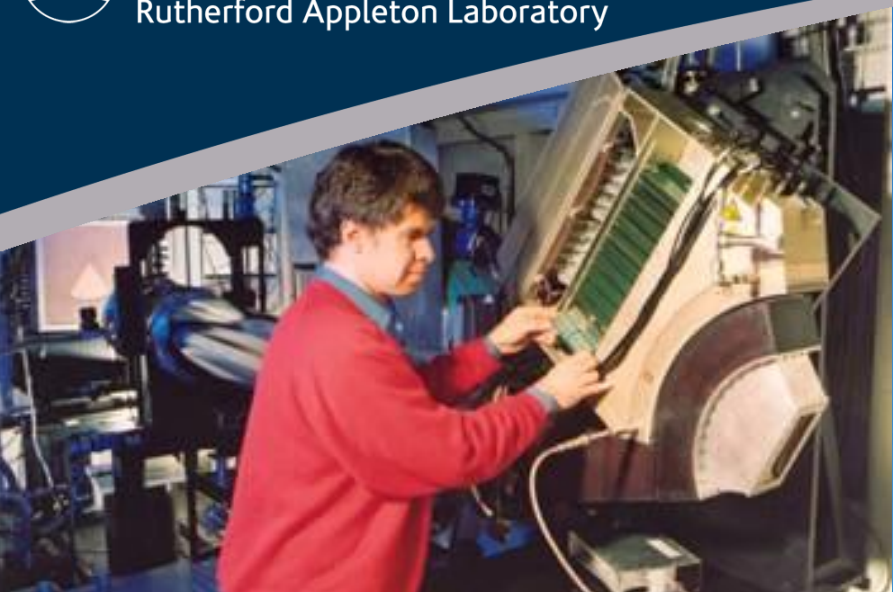


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Atlas Tracker at CERN

RAL designed silicon detectors & full custom ASICs

- 210 m² of silicon
- 10,000,000 channels
- 75,000 ASICs
- 40,000 Optical links
- Harsh operating environment



Microelectronics Support Centre @ RAL

specialising in design methodology, design tools and design flows





Microelectronics Support Centre

Supporting UK and European academic institutions in their teaching, research programmes and collaborations to help maintain a microelectronics design advantage for the UK and Europe in an increasingly competitive world market

Microelectronics Support Centre at RAL
supporting academia for more than 35 years

1980's Ecad

1989 Eurochip

1995 Europractice

2019 NEXTS

**National
schemes**



EUROPRACTICE





NEXTS: Next Europpractice eXtended Technologies and Services

- Continued the work of Europractice from 1st January 2019
- Adds new partners and new services
- Continues to be known as Europractice (NEXTS is only the internal EC project name)



Science & Technology
Facilities Council

UK Research
and Innovation

**Design tools and
Training services**

imec



Fraunhofer
IIS



**MPW & prototype
fabrications services**



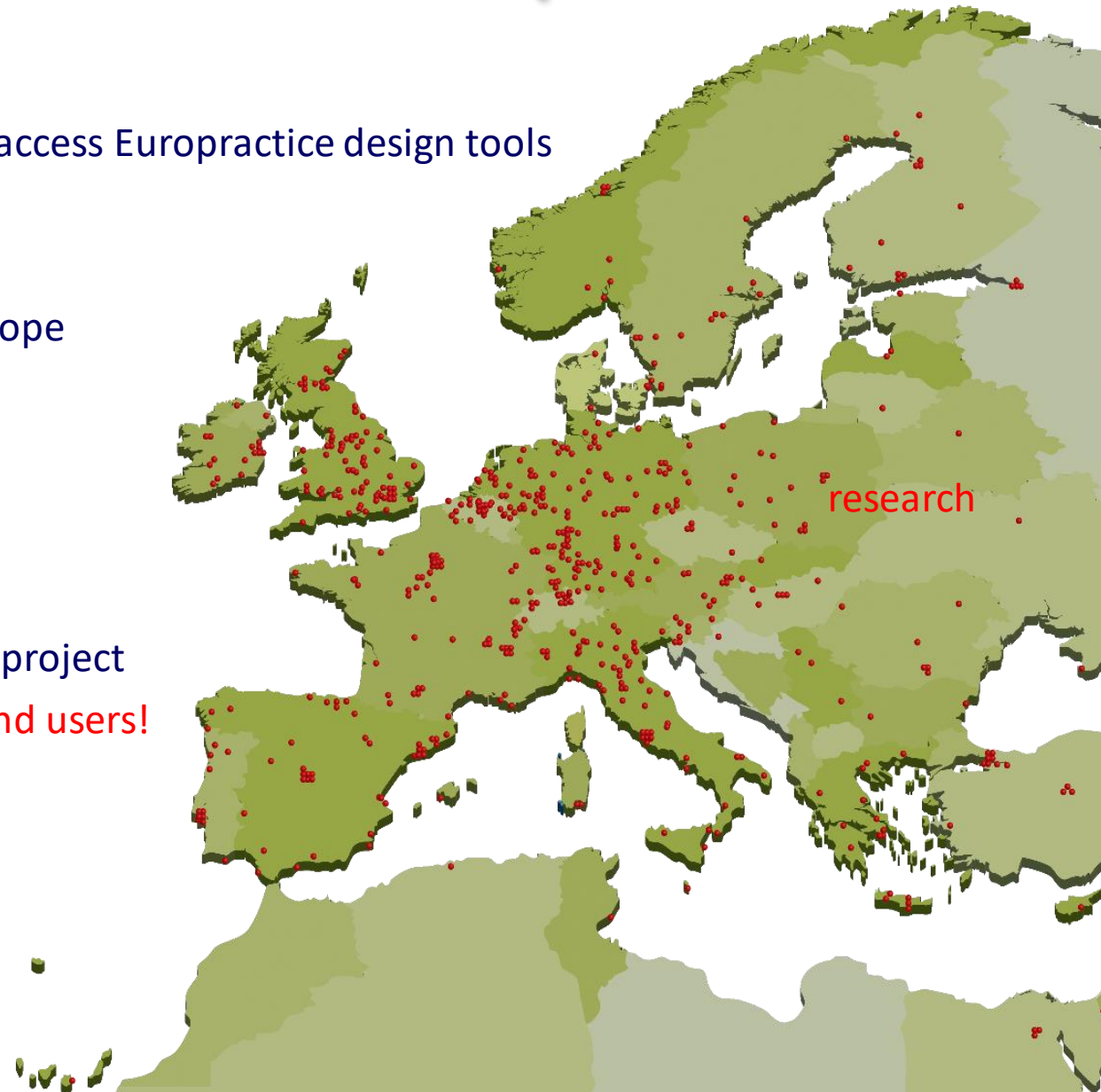
Tyndall
National Institute
Instiúid Náisiúnta

**System Integration
services**



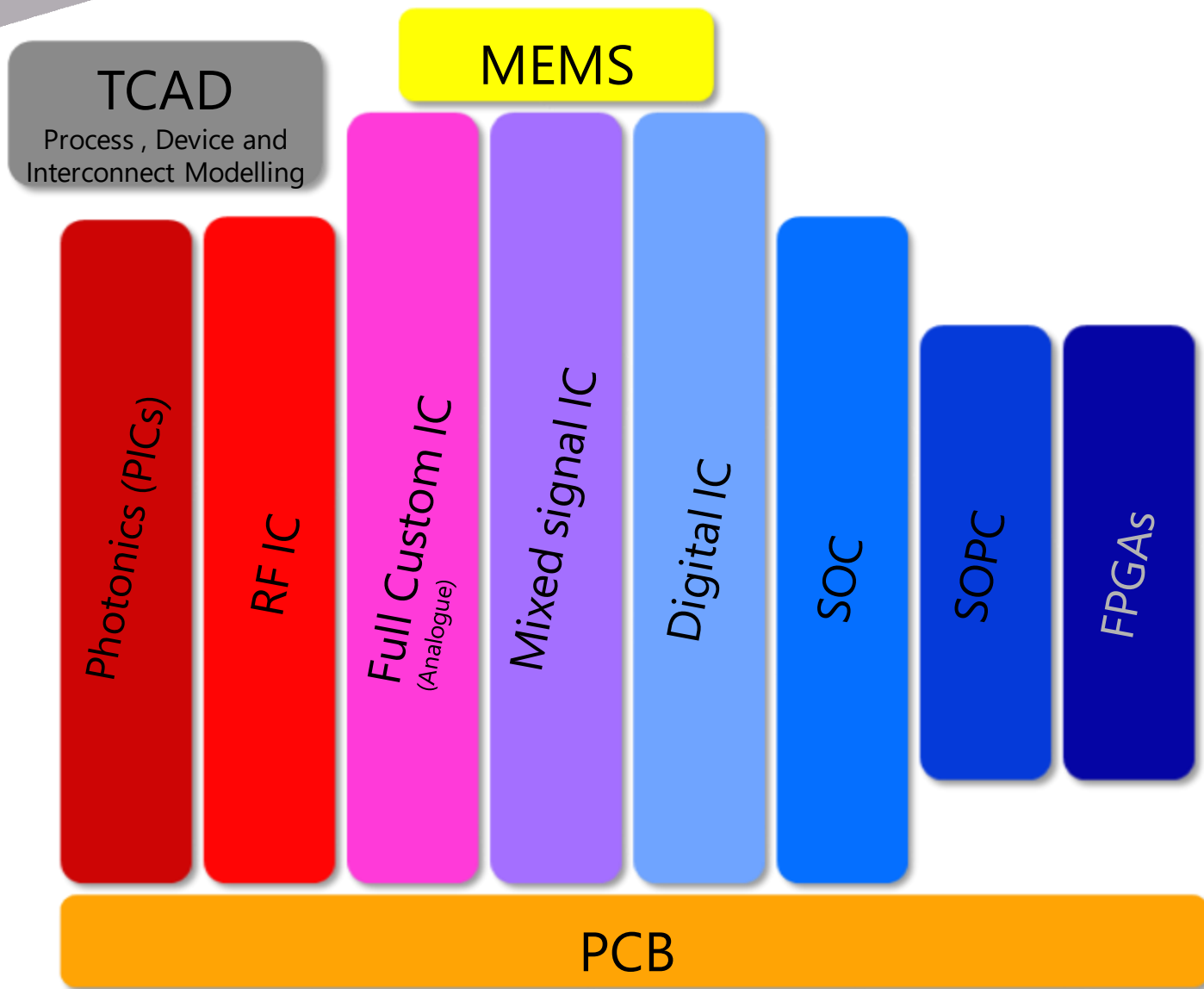
Europractice Customers

- More than 630 institutions access Europractice design tools
 - ~ 530 universities
 - ~ 100 research institutes
 - ~ 44 countries close to Europe
- Industry standard tools
 - Ideal basis for relevant projects
- Although it is an EC-funded project
 - 85% turnover is from end users!
 - Stability, long lifetime



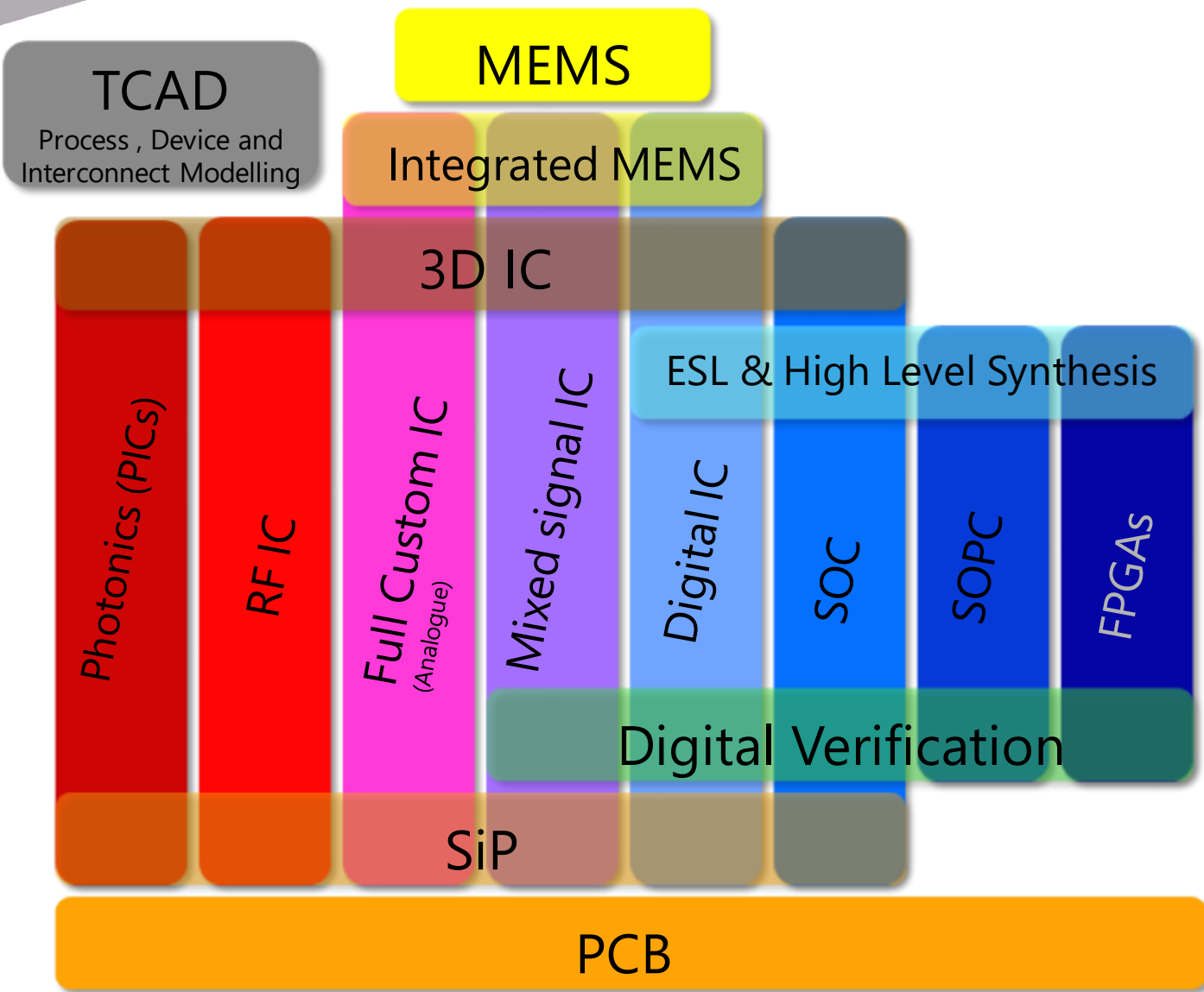


Comprehensive design tool portfolio





Comprehensive design tool portfolio





Design Tool Portfolio

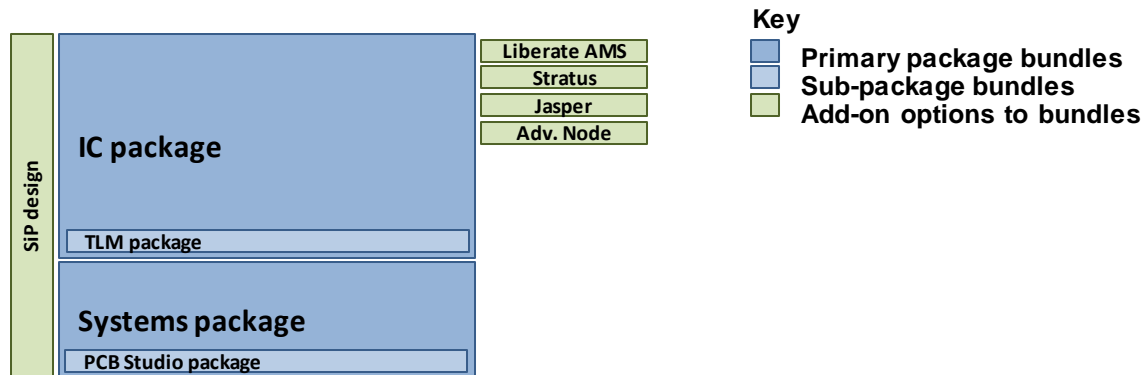
- Includes virtually all the Electronics Systems related design tools from the following vendors
 - Technical support, ordering and distribution provided by Europractice (STFC)





Design Tool Packages and Options

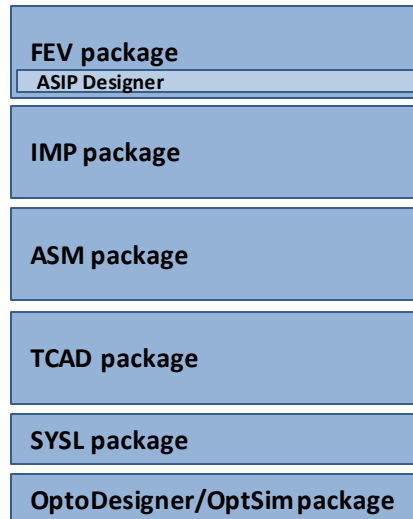
- Europractice Design tool suites are made available in affordable and manageable bundles (packages) which would otherwise have up to ~100 individually orderable products (on the EDA vendors “pricebook”)
- Cadence





Design Tool Packages and Options

- Europractice Design tool suites are made available in affordable and manageable bundles (packages) which would otherwise have up to ~100 individually orderable products (on the EDA vendors “pricebook”)
- Synopsys



Key
■ Primary package bundles
■ Sub-package bundles



Euromicropractice and Arm - History

- 1999
 - ARM7TDMI
 - Simulation Models
 - Routes to fabrication (layout abstract)
- Arm tools
 - System design tools
 - Software development tools



Europractice and Arm SoC Labs

- SoC Labs - A great offering from Arm
 - Better choice of processors
 - Better everything else
- Europractice will provide updated scripts for the processor builds, tuned to current Europractice versions
- Europractice will provide support on these flows.
- This will be for all Europractice members.