



Science and  
Technology  
Facilities Council

# **RAL ASIC Design Group**

## **Interest in future R&D**

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# RAL ASIC Design Group Interests in Future R & D.

- **28nm IP development**
  - Starting this year
  - Front End Development for LGAD
  - Common circuit blocks for future designs (BandGap, DACs, ADC, Serialiser...)
- **Other technologies?**
  - Not wedded to 28nm
  - Happy to explore other technologies better suited to solving specific challenges
  - FinFETs?
  - SiGe? – *High Speed, Low temp*
  - Silicon-Nitride (SiN)/Photonics? – *Communication, Quantum*
  - Graphene?...
- **New approaches**
  - Verification – *UVM (Started last year), Co-simulation...*
  - Front-End Data Suppression
  - Data Protocols
  - Front-End triggering
  - Intelligence?
  - Interconnect