

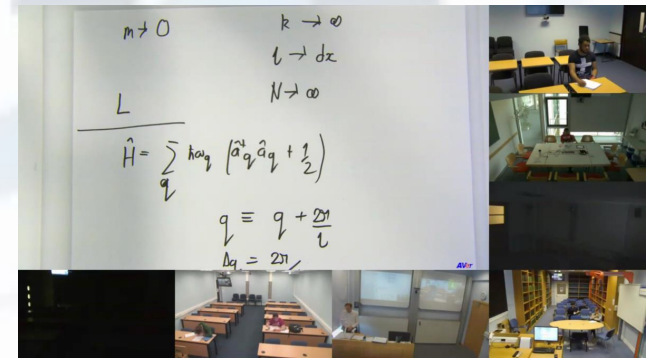
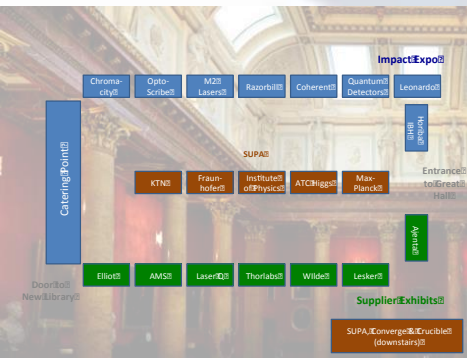


# SUPA “Knowledge Exchange”

Iain Ross  
Contractor

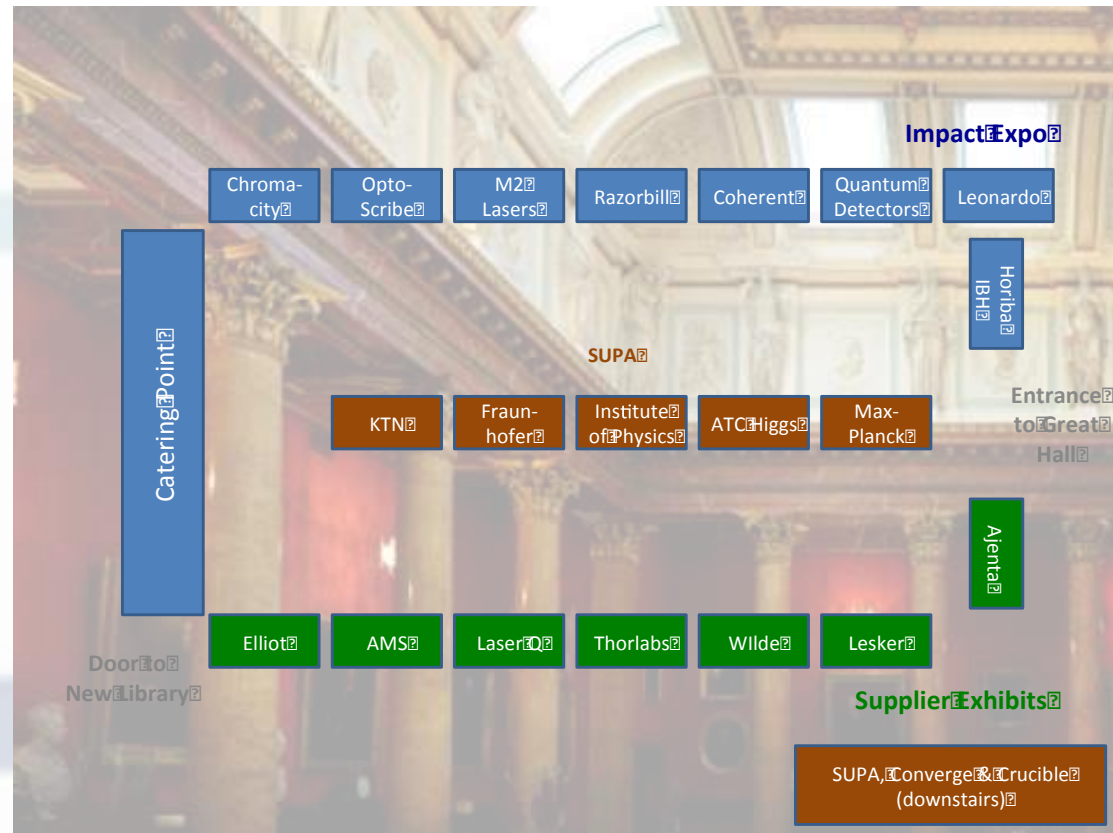
Annual Gathering  
Exhibition

VC Rooms – Outreach and  
Impact



# Annual Gathering Exhibition

- Organise Exhibition to:
  - Demonstrate SUPA Impact (8 company stands)
  - Pilot “paid for” exhibition spaces (7 company + 1 govt. stand)
  - Open way for fully paid exhibition in 2018

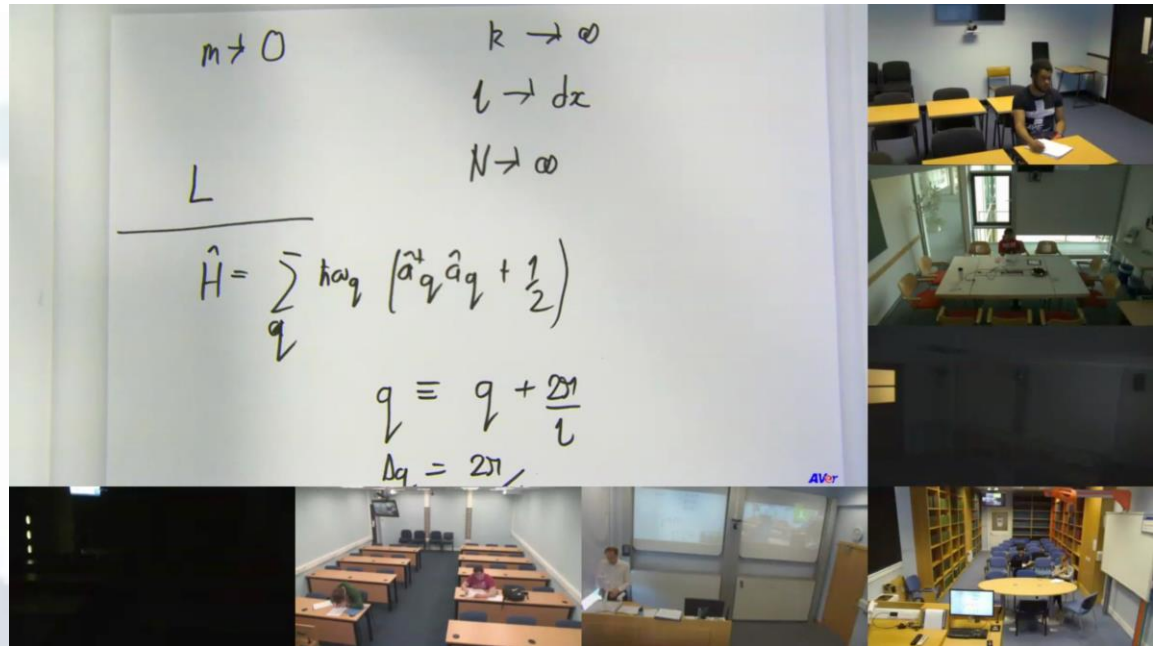




# Maximise Benefit to SUPA of VC facilities

## SUPA VC Rooms:

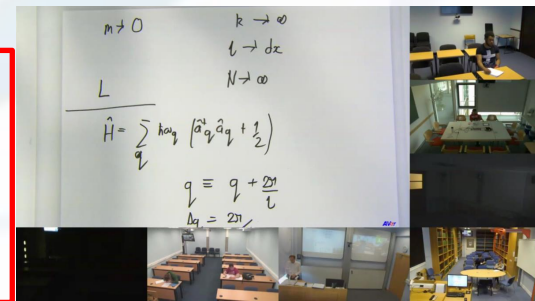
- 8 Physics Departments across 8 Universities
- Fully Interactive
- Many external users can connect (via laptop)
- Auto-Recording
- Webcasting
- Grad School - Priority



# VC Room Impact “SUPA Up-Skilling”

- Third Party Access to Courses
  - ISM CDT sharing content with NPL
  - Company interest in participating in Grad School Courses
    - Although concern over applicability of content
    - “Intro to Python” possible early win
    - “Physics for chemists/chemical engineers” requirement
  - Delivery to multiple remote sites
- Access Models
  - free (but controlled) access on line
  - some form of membership access
  - quid-pro-quo access in return for third party course delivery
  - **Freemium (paid tutorials)**
  - formalised paid CPD

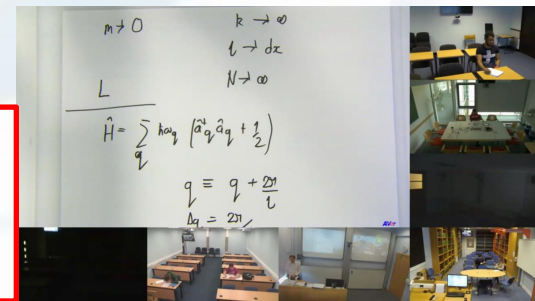
**Interim Recommendation: Pilot Industry access to course such as “Python” or “C++” or one of the “Photonics” courses. Consider setting up a course in “Physics for Chemists. Consider setting up a course in “Optics for imaging – in practice”**



# VC Room Impact “SUPA Up-Skilling”

- “Industry Course for PhDs”
  - Industry is looking for recruits that have more business/product knowledge. Pre results from **Technology Scotland** survey:
    - 85% said graduate soft skills were lacking
    - 59% said graduates lacked the skills to add immediate value to the company
    - 69% felt there was a disconnect between university graduates skills and company requirements.
  - Many SUPA students will not have the opportunity of an academic career
  - Potential to deliver parts of a course by industry
  - Significant industry interest
  - Aim to work with Technology Scotland (SOA) to work with industry to specify and potentially deliver a SUPA Grad School “industry” course
  - Potential first course in 2018

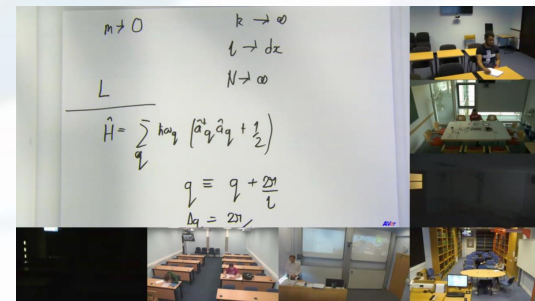
**Interim Recommendation: Next step is to hold an industry workshop with key players (and SOA/Tech Scotland) to identify the course content and get suggestions for module delivery.**





# VC Room Impact “SUPA Up-Skilling”

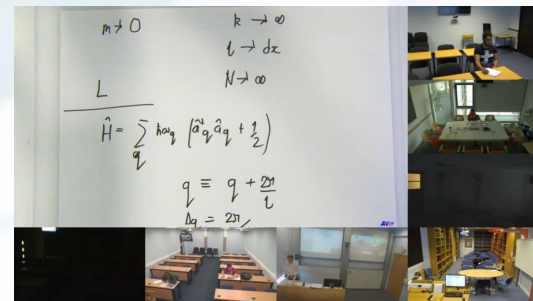
- “Industry Course for PhDs”
  - Content suggested by company discussions to date:
    - Systems Engineering
    - Risk Management
    - Six Sigma
    - IP
    - Business Model Canvas
    - Product Lifecycle
    - Product Management
    - Project Management
    - Quality and ISO standards
    - Design for Manufacture
    - TRIZ (Problem Solving Tool)
    - Rapid Manufacturing
    - Error Budgeting (tolerancing)
    - Basics:
      - Accounting in Industry
      - Marketing





# VC Room Outreach “SUPA TV”

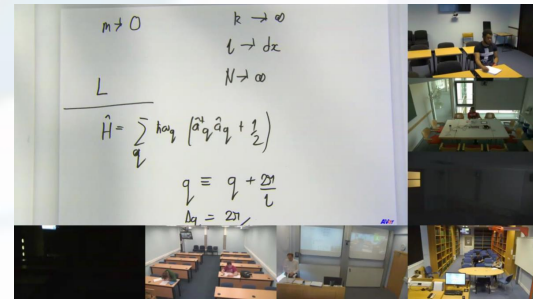
- SUPA Physicists do lots of outreach activities
- Scottish Teachers have a great need for up-skilling and CPD in physics
  - Aging physics teacher demographic
  - New content in Curriculum for Excellence
  - Non-physicists teaching physics at primary and lower secondary
  - The “Brian Cox” effect (not the Scottish actor!)
  - Emphasis on STEM
- Interest from
  - Education Scotland
  - Scottish Schools Education Research Centre
  - IoP Physics Teacher Network





# VC Room Outreach “SUPA TV”

- SUPA has an opportunity to:
  - Be a quality “brand” for teacher content
  - Collate content
  - Co-ordinate content (ensuring that on-line, webcasting and recording are used to maximise geography of participants)
  - Generate new content
    - Teacher requests: Cosmology, Particle Physics, Quantum Physics, Special Relativity, General Relativity
  - Resource to manage this is the key issue (Ogden Trust Fellowships?)







# VC Room Outreach “SUPA TV”

- Concept
  - 5-10 minute weekly “teacher briefings”
  - On-line and as podcasts
  - Leading academics
  - Young researchers and PhDs
  - Industry

**Interim Recommendation: Arrange round table with internal interest parties within SUPA (eg public engagement network) to determine how best to deliver content for Education Scotland (& SSERC, IoPhysics): Deliver new content and collate existing content onto Education Scotland “Glow” teacher sharepoint (with SUPA Quality branding)**

