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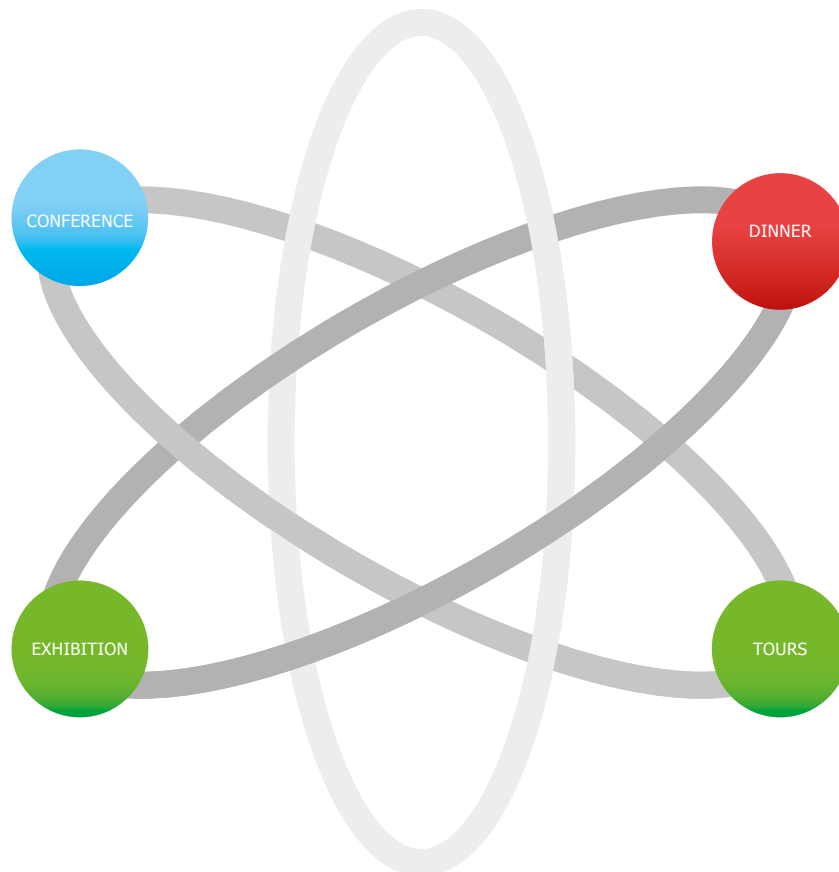
ENTERPRISE

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SCIENCE, INNOVATION AND COLLABORATION:

FUTURE PLACES, PEOPLE, SUPPORT AND TECHNOLOGIES

UNIVERSITY OF BIRMINGHAM, APRIL 2-3 2019



- Jointly organised by S-Lab and the UK Science Park Association (UKSPA).
- Almost 100 presentations relevant to the design, management and operation of teaching and learning, research, and innovation facilities (see more overleaf), with many by shortlisted applicants for the S-Lab Awards (whose winners will be announced at the event).
- Tours of the new Collaborative Teaching Laboratory (CTL) and other Birmingham facilities.
- Over 40 exhibition stands, and at least 400 delegates (the last such event had over 500).
- Low cost tickets for UKSPA, and S-Lab university and research institute network, members.

Booking and more details via www.ukspa.org.uk or www.effectivelab.org.uk

INFORMATION AND NETWORKING

- The 2017 S-Lab/UKSPA Conference, at York Racecourse - attracted over 500 operations and technical managers, estates and procurement staff, academics, architects, engineers, lab equipment vendors and specialists and other stakeholders in the design, management and operation of STEM facilities. Feedback was very positive, with delegates appreciating the quality and range of content, and the 'buzz' and unexpected interactions of diverse audiences.



CONFERENCE KEYNOTES AND 100+ PARALLEL SESSIONS/TOURS (SEE END PAGES) WILL COVER:

- Activities at the University of Birmingham, including the design and operation of the new Collaborative Teaching Laboratory (CTL); its Multi-Core Facilities, Sustainable Labs and Technical Academy initiatives; the Institute of Translational Medicine - all with tours.
- New and refurbished developments, many of which feature in the S-Lab Awards shortlist: the Australian Federal Police Forensics Facility; Birmingham City and Coventry Universities (both health-related); Cambridge's Chemical Engineering Building; Cardiff's Dementia facilities (taking advantage of flexibility features built into the Hadyn Ellis Building); the Maersk Tower at the University of Copenhagen (health/life science); IMEC's new clean room and nanotech facility; Imperial's Molecular Sciences Research Hub - two sessions on client overview, and installation of 337 fume cupboards); Liverpool's Materials Innovation Factory; STEMLab at Loughborough; the University of Otago's new STEM teaching labs; Oxford's Beecroft Building (physics); the Shirley Ryan Ability Lab, Chicago (rehabilitative medicine, translational); TV Science Park's Gateway Building and Vanderbilt University's Engineering and Science Building.
- The Salk Institute - lessons from 50 years use of its beautiful, and highly productive, design.
- Specialist streams on Lab Futures; Multi-Disciplinary STEM Teaching Labs; Multi-Core Facilities and Equipment Sharing and Designing for Low-Vibration facilities.
- Operations - autoclaves; biosafety; chemical storage; flow cytometry; freezers; fume cupboards; genome editing; imaging; LIMS; protein expression and sample management.
- Estates - a new Capital Projects Soft Landing Strategy at the University of Oxford and effective project management of STEM developments.
- Ventilation - 50% reductions in lab energy use through good design and continuous commissioning at Univ of California Irvine extract for high air quality and minimum noise in line with the WELL Building Standard®, and fume cupboard innovation. (There is also a half day training course, featuring Irvine, on Smart Ventilation at Birmingham on 1st April).
- Energy/Environment - Green Lab initiatives at Birmingham; University of California Irvine (see above); Sustainable Biomedical Labs at the London School of Hygiene and Tropical Medicine; sustainable labs and PhD credits at Strathclyde; minimising laboratory plastic consumption; and energy-efficient equipment.
- Lab management and careers - Birmingham's Technical Academy; Nottingham's implementation of the Science Council's Technician Commitment; apprenticeships at MMU; technical support at Birmingham's CTL; networking for lab staff; and discussion session.
- Sessions on design and operation of innovation and incubation spaces organised by UKSPA.

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ABOUT THE CONFERENCE PARTNERS

S-Lab is a not-for-profit initiative that works with university, research institute and other laboratory sectors and stakeholders to support good practice in laboratory design, operation and management. It particularly focuses on improvement in operational efficiency and effectiveness, and good laboratory design guidelines. It does so through experience sharing events, the S-Lab Awards scheme and projects and publications. See www.effectivelab.org.uk.



The United Kingdom Science Park Association supports the work of its Members to plan, develop and sustain vital environments for around 4,000 innovative, high tech, knowledge based businesses that are located on their sites. They choose to base their R&D and other activities in places that provide the right kind of facilities and services to help their growth. See www.ukspa.org.uk.

CONFERENCE SESSIONS AND TOURS INCLUDE:



The Collaborative Teaching Laboratory

The CTL is a £40 million, BREEAM Excellent, facility which incorporates a wet lab, dry lab and e-lab and has brought together teaching of a range of STEM courses. It has created more effective use of staff time and resources and practical teaching space, and enabled innovations in teaching delivery and the reinvention of practical classes. Presentations on, and tours of, the CTL will form part of a stream on innovations in science teaching facilities in the UK, and internationally.

Birmingham Research Park / Institute of Translational Medicine

BRP hosts research-led companies who benefit from access to the University's knowledge base and facilities, and the BioHub Birmingham®, which provides lab space for early stage life science companies. Both work closely with the ITM, a place where scientists, researchers, and clinicians from the Medical School and Queen Elizabeth Hospital collaborate with industry partners to create innovative patient and healthcare system applications.



S-LAB / CONFERENCE SUPPORTERS:

IOP Institute of Physics



UK Research and Innovation

2ND APRIL SESSIONS SUMMARY - 1

COLLABORATION, INNOVATION, INCUBATION & SCIENCE PARKS

	A. Cases and Keynote Follow-Ons	B. Cases and Keynote Follow-Ons	C. Innovation Clusters & Connections	D. Innovation: City, Town & Country	E. Innovation Places
11.50 - 12.30 Break Out 1	A1 Science and Innovation at the University of Birmingham - Keynote Follow-on <i>Dr. James Wilkie, University of Birmingham</i>	B1 The Changing Landscape for Science and Innovation: Securing the People and Technologies to Meet Future Challenges - Keynote Follow-on <i>Dr. Sarah Main, Campaign for Science and Engineering</i>	C1 The Connected Science Park <i>Speaker TBC</i>	D1 Innovation and the City: Liverpool Case study <i>Colin Sinclair, CKQ Liverpool & KQ Development Company</i>	E1 Collaboration and Place <i>Jonathan Burroughs Creative Places</i>
13.40 - 14.20 Break Out 2	A2 The Institute of Translational Medicine, Birmingham - The Hub of Birmingham's Healthcare Innovation Ecosystem <i>Dr. Richard Williams, University of Birmingham</i>	B2 Designing for Collaboration and Sharing in Research and Analysis: Australian Experience <i>Mark Roehrs, Hassell</i>	C2 Clusters as Relationships: Getting the Most Out of the Network <i>Professor Mat Hughes, Loughborough University</i>	D2 Science and Innovation in the City - The Impact of Innovation Districts on the National Innovation Ecosystem <i>David Hardman (MD, Innovation Birmingham) and Phil Kemp (CCO Bruntwood)</i>	E2 Developing Academic/Industry Collaboration: Lessons from the Centre for Advanced Low-Carbon Propulsion Systems <i>Speaker tbc, Willmott Dixon</i>
14.30 - 15.10 Break Out 3	A3 Coventry University's Alison Gingell Building: Learning Through Exploration and Simulation <i>Speaker Name</i>	B3 The University of Liverpool's Materials Innovation Factory Creates Flexible and Shared Space for Academic-Industry Collaboration <i>Speaker Name</i>	C3 Stimulating Knowledge Flow and Technology Adaptation: Plymouth case Study <i>Ian McFadzen, Plymouth Science Park</i>	D3 Science and Innovation in the City - The Impact of Innovation Districts on the National Innovation Ecosystem <i>Panellists: As D2 plus Tom Renn (MD, MSP) Chris Doherty (MD, Alderley Park)</i>	E3 No Session
15.50 - 16.20 Break Out 4	A4 The Shirley Ryan Ability Lab: World's First Translational Research Hospital for Physical Medicine/ Rehabilitation <i>Speaker tbc</i>	B4 The University of Oxford's Beecroft Building Deepens Physics Research <i>Rebecca Fode and Oliver Milton, Hawkins Brown</i>	C4 Ownership, Governance and Management of Science and Technology Parks <i>David Rowe, Warwick Enterprise</i>	D4 Innovation in Remote Places <i>Simon Coward, Hethel Innovation and Pryderi Ap Rhishart, Menai Science Park (M-SPARC)</i>	E4 Helping Scientists To Have More Ideas and Be More Productive Through Social Network Analysis <i>Paul Janssenswillen, Innovation Places, and Pierre Wassenaar, Stride Treglowan</i>
16.30 - 17.10 Break Out 5	A5 Mid-Century Masterpiece: The Salk Institute <i>Oliver Milton, HawkinsBrown, and Andy Parker, BuroHappold (in collaboration with the Designers for Science Group)</i>	B5 Laboratory 4.0 - Creating More Accurate Results, Regulatory Compliance, and Improved Efficiency by Integrating Lab Data <i>Simon Wood, Autoscribe</i>	C5 The Science Park Brand <i>Mervyn Watley, Catalyst Inc</i>	D5 UK Creative Regions: Changing City Profiles 2019 <i>Andrew Marston, CBRE</i>	E5 UKSPA/Willmott Dixon Panel Session: Overcoming Barriers for Innovation <i>Speakers tbc</i>

2ND APRIL SESSIONS SUMMARY - 2

SCIENCE FACILITIES DESIGN & OPERATION

F. Sectors: Taking Stock - Future Growth	G. STEM Building Cases	H. Estates, Services and Technical	J. Lab Ops, Services & Sustainability	K. Lab Ops & Sustainability	Tours – see details on p. XX
<p>F1 Tackling the Scale-up Challenge <i>Dr. Uday Phadke, CARTEZIA</i></p>	<p>G1 The University of Copenhagen's Maersk Laboratory Tower: Creating Scientific Communities within an Enhanced Public Realm <i>Teva Hess, C F Moller</i></p>	<p>H1 Researching the Research Process - Understanding What Drives Effective Collaboration, Creativity and Innovation <i>Dr. Becky Hayward, BuroHappold</i></p>	<p>J1 Procuring Autoclaves: Lessons from Imperial College <i>Allison Hunter, Imperial College</i></p>	<p>K1 A Systematic Laboratory Improvement Programme Creates Energy, Financial and Science Benefits at the University of California, Irvine <i>Matt Gudorf, UC Irvine</i></p>	<p>Campus Overview and Green Heart Initiative (at 0830)</p>
<p>F2 Future Trends and Opportunities for Collaboration and Partnerships Around Science Parks and Incubators, in Life Sciences and Healthcare <i>Martino Picardo, Discovery Park</i></p>	<p>G2 Imperial College's Molecular Sciences Research Hub: Delivering the Most Densely Packed Fume Cupboard Configuration in Europe <i>David Gray, ISG Engineering Services</i></p>	<p>H2 IMEC Fab3: Next Generation Nanoelectronics - A Vibration-free and Ultra-clean Environment Inside a Beautiful Building <i>Speaker tbc</i></p>	<p>J2 Continuous Commissioning of Laboratories and Smart Ventilation at the University of California, Irvine <i>Matt Gudorf, UC Irvine</i></p>	<p>K2 Autoclaves Gone Green – How to Minimise Energy, Space and Heat Output <i>John Jerger, Avidity Science</i></p>	
<p>F3 Capturing Potential Lessons from the UK and Competitors on Growing Life-Science Markets <i>David Lupson, CAM-SCI Knowledge Economy Development Ltd</i></p>	<p>G3 A Capital Projects Soft Landing Strategy, with Continuous and Seasonal Commissioning, at the University of Oxford: Laboratory Experience <i>Richard Jones, University of Oxford</i></p>	<p>H3 Laboratory Equipment Connectivity and Remote Monitoring in the Cloud: Smart Freezers are Here <i>Kim Hughes, Thermo Fisher Scientific</i></p>	<p>J3 A Synergistic Design Approach to Safely Reduce Lab Energy Use by Up To 75% with No Extra Cost <i>Gordon Sharp, Aircuity</i></p>	<p>K3 How Birmingham's SMARTLabs Programme is Saving Energy and Creating Environmental Benefits - Overview with Medical School and Examples <i>Dan Smith, University of Birmingham, and colleagues</i></p>	<p>Collaborative Teaching Laboratory Building Services & Plant</p>
<p>F4 The Industrial Strategy: Aiming to Address Productivity with an Emphasis on Place <i>Jim Hubbard, CBI</i></p>	<p>G4 Safe Storage of Hazardous Substances and Flammable Liquids in Laboratories <i>Les Day, Asecos</i></p>	<p>H4 Apprenticeships at Manchester Metropolitan University <i>Natalie Kennerley, Manchester Metropolitan University, and colleagues</i></p>	<p>J4 Enabling Low-Noise and High Air Quality Environments for User Well-Being and Productivity, and Staff and Tenant Recruitment and Retention <i>David Hamlyn and Aimée Smith, RWDI</i></p>	<p>K4 A Sustainable Labs Programme at the London School of Hygiene and Tropical Medicine Saves Cash and Carbon <i>Deborah Coles, LSHTM, and Ola Bankole, Bloomsbury Colleges</i></p>	<p>Collaborative Teaching Laboratory Building Services & Plant</p>
<p>F5 Addressing Innovation in WM Local Industrial Strategy <i>Dr Pam Waddell, Innovation Alliance for the West Midlands</i></p>	<p>G5 Designing and Building Low Vibration Laboratories <i>Panel discussion with inputs re the Beecroft Building, the new Cambridge Cavendish Lab and UCL's Sainsbury Wellcome Building</i></p>	<p>H5 The (Low) Plastic Laboratory: Changing Methods and More Reuse and Recycling <i>Richard Lapham, Environment Agency</i></p>	<p>J5 The (Easy) Art of Networking in Science Environments <i>Suhel Miah, HEaTED Programme Manager, National STEM Learning Network</i></p>	<p>K5 A Unique Course Highlights Lab Sustainability Issues to Postgrads at the University of Strathclyde <i>Dr Rabbab Oun and Alaine Martin, University of Strathclyde</i></p>	<p>Collaborative Teaching Laboratory General Core Facilities & Imaging Institute of Translational Medicine</p>

3RD APRIL SESSIONS SUMMARY - 1

COLLABORATION, INNOVATION, INCUBATION & SCIENCE PARKS

	L. Cases & Keynote Follow-Ons	M. Cases & Keynote Follow-Ons	N. Innovation Clusters	O. Growing Technology Companies	P. Innovation Places
11.20 - 12.00 Break Out 1	<p>L1 Science and Research - Delivering the Vision: Keynote Follow-on</p> <p><i>David Parfrey, Norwich Research Park</i></p>	<p>M1 Innovation in Science Teaching and Learning: The University of Birmingham's New Collaborative Teaching Laboratory</p> <p><i>Prof Jonathan Seville</i></p>	<p>N1 Silverstone Technology Cluster (STC) and the UK's High-Tech Supercluster</p> <p><i>Roz Bird, Silverstone Park</i></p>	<p>O1 Growing Tech Businesses: Belfast and Sci-Tech Daresbury Case Studies</p> <p><i>Sonya Kerr, Catalyst Inc and John Leake, Sci-Tech Daresbury</i></p>	<p>P1 Innovation Places: Shared Spaces</p> <p><i>Daniel McDonald-Junor, Nottingham Trent University and Nigel Babb, University of Wolverhampton Science Park</i></p>
12.10 - 12.50 Break Out 2	<p>L2 How Adaptable Design Can Provide Enhanced Facilities for Modern Laboratories and Innovation Spaces</p> <p><i>Ivan Carter, Romero UK/Premier Laboratory Systems</i></p>	<p>M2 The Digital Lab: Orientation, Health & Safety, Pre-Lab Videos and Electronic Notebooks at Birmingham's Collaborative Teaching Laboratory (CTL)</p> <p><i>Joseph Berry and Edwin Kye, University of Birmingham</i></p>	<p>N2 Innovation, Clusters, Culture and Cities</p> <p><i>Christine Doel (SQW)</i></p>	<p>O2 Tenant Collaboration and Investment - Case Study from Stevenage BioScience Catalyst</p> <p><i>Sally Ann Forsyth, Stevenage Bioscience Catalyst</i></p>	<p>P2 Delivering Flexible and Sustainable Science Space: The Thames Valley Science Park Gateway Building</p> <p><i>David Gillham, Thames Valley Science Park, and Iain Potter, AECOM</i></p>
14.00 - 14.40 Break Out 3	<p>L3 The Future of Labs: Key Trends that will Impact the Design, Operation and Experience of Research Facilities</p> <p><i>Jennifer Dimambro, Arup</i></p>	<p>M3 Vanderbilt University's Engineering and Science Building: Propelling Growth in Applied Research and Entrepreneurial Partnerships</p> <p><i>Speaker Name</i></p>	<p>N3 Life Science Clusters in Metropolitan Areas: Trends from the USA</p> <p><i>John Swift, Buro Hapold (Boston, MA)</i></p>	<p>O3 Scale-ups – A Genuine Stage of Business Growth, or Just the Latest Buzz Word?</p> <p><i>Panel of leading Innovation and Business Growth Experts, led by Oxford Innovation</i></p>	<p>P3 Science Parks and Innovation : What About Town and Country?</p> <p><i>Dr Malcolm Parry, Surrey Research Park and Richard Walters, Porton Science Park</i></p>
14.50 - 15.30 Break Out 4	<p>L4 Offices Become Imperial College's Molecular Sciences Research Hub for Discovery and Industry Collaboration</p> <p><i>Prof. Paul Lickiss and Tim Jefferson, Imperial College</i></p>	<p>M4 Multi-Disciplinary Science Teaching and Research Buildings in New Zealand</p> <p><i>Ken Collins, Lab-works Architecture</i></p>	<p>N4 The Right Place: Creating the Right Environment for Innovation</p> <p><i>Daryl Perry, Avison Young</i></p>	<p>O4 Incubation and Scale Ups</p> <p><i>Simon Bond, SETSquared</i></p>	<p>P4 Knowledge Economy Ecosystem Analysis</p> <p><i>Peter Baird, Perkins + Will</i></p>
16.05 - 16.45 Break Out 5	<p>L5 The Future of Labs - Panel Discussion</p> <p><i>Speakers from session L3, L4 and other sessions</i></p>	<p>M5 Designing and Operating Multi-Disciplinary Science Teaching and Research Buildings</p> <p><i>Panel discussion reflecting on the day's session, and other experience</i></p>	<p>N5 Panel Session - Innovation Clusters</p> <p><i>Speakers from Sessions N1, N2 and other sessions</i></p>	<p>O5 Panel Sessions - Innovation and Incubation</p> <p><i>Speakers from Sessions O3, O4 and other sessions</i></p>	<p>P5 Collaborative Places</p> <p><i>Speakers tbc</i></p>

3RD APRIL SESSIONS SUMMARY - 2

SCIENCE FACILITIES DESIGN & OPERATION

Q. Taking Stock: Case Studies & Opportunities	R. STEM Building Cases	S. Lab Ops, Services & Sustainability	T. Lab Technical Management & Careers	U. Equipment Sharing & Multi-Core Facilities	Tours – see details on p. XX
<p>Q1 Clinical Innovation Zone: A “Triple-Helix” Approach to Fostering Open Innovation. <i>Ruth McLaughlin, University of Glasgow</i></p>	<p>R1 The Chemical Engineering and Biotechnology Building at the University of Cambridge: Designing for Multi-Disciplinary Collaboration <i>Keith Papa, BDP</i></p>	<p>S1 Effective Project Management of STEM Developments <i>Panel discussion with inputs from Rachel Thomson, University of Loughborough, and other shortlisted Award applicants</i></p>	<p>T1 Technical Careers and Management at the University of Birmingham: The Technical Academy <i>Anthony Jones and Richard Marguerie, University of Birmingham</i></p>	<p>U1 Widening Access to Laboratory Equipment: Challenges and Solutions in Making it Available to Other Departments and External Users <i>Johannes Solzbach, Clustermarket</i></p>	Collaborative Teaching Laboratory (at 0830)
<p>Q2 UKSPA Awards: Case Study Session <i>Speaker TBC</i></p>	<p>R2 Loughborough University’s STEMLab Trains Scientists and Engineers in Tomorrow’s Disciplines <i>Prof. Rachel Thomson, Loughborough University</i></p>	<p>S2 How Sample Management Can Ensure Compliance, Save Money and Improve Research <i>University speaker tbc and Mark Walker, Pro-Curo</i></p>	<p>T2 Technical Careers and Management at the University of Birmingham: Career Pathways for 21st Century Technicians <i>Anthony Jones and Richard Marguerie, University of Birmingham</i></p>	<p>U2 A New Strategy for Sharing Equipment at the University of Birmingham <i>Andrew Lees, University of Birmingham</i></p>	
<p>Q3 Born of Rebellion – the NETPark Story <i>Catherine Johns, Business Durham</i></p>	<p>R3 Designing for Adaptability Pays Off in Cardiff University’s Conversion of Write-Up Space to Dementia Labs <i>Richard Golledge, IBI</i></p>	<p>S3 Designing Safe and Efficient Laboratory Extract Systems - Let the Wind Be Your Friend <i>Brad Cochran, CPP</i></p>	<p>T3 Making the University of Birmingham’s New Collaborative Teaching Laboratory Work: Technical Support <i>Mala Patel, University of Birmingham and colleagues</i></p>	<p>U3 Management and Delivery of Multi-Core Facilities at the University of Birmingham <i>Dr. Andrea Mitchell, University of Birmingham</i></p>	Collaborative Teaching Laboratory General
<p>Q4 Science Park Investment: An International Perspective <i>Steijn Ribbens, Kadans Science Partners</i></p>	<p>R4 How SMARTLabs is Saving Energy and Creating Environmental Benefits - CTL and the Molecular Sciences Research Building Case Studies <i>Dan Smith, University of Birmingham</i></p>	<p>S4 CL3 Biosafety: Regulations and Good Practice <i>John Saunders, Health and Safety Executive</i></p>	<p>T4 Vision for Technical Talent: The University of Nottingham’s Technician Commitment <i>Martin Dellar, Michelle Jackson, Susan Woodward and Kelly Vere, University of Nottingham</i></p>	<p>U4 Making Multi-Core Facilities and Shared Equipment Successful and Sustainable: Discussion Session based on Birmingham, Warwick and Other Experiences <i>Panel discussion Followed by tour</i></p>	Collaborative Teaching Laboratory General Collaborative Teaching Laboratory Building Services & Plant
<p>Q5 Session tbc <i>Speaker TBC</i></p>	<p>R5 Birmingham City University Uses Multi-Purpose Spaces to Maximise Collaboration and Space Utilisation <i>Speaker Name</i></p>	<p>S5 LEAF – A New Tool to Drive Sustainable Labs and Systemic Change <i>Martin Farley, UCL and King’s College London, and Cristina Azevedo, UCL</i></p>	<p>T5 Lab Technical Management & Careers - Discussion Session <i>A panel containing presenters from sessions T1-T4, chaired by Terry Croft, Director, National Technicians Centre University of Sheffield</i></p>	<p>U5 Session tbc <i>Speaker tbc</i></p>	Collaborative Teaching Laboratory General (also at 1700) Core Facilities & Imaging Institute of Translational Medicine