

Headline Notes for the DEGW SYMPOSIUM 'A LIVING ARCHIVE'

5 October 2017

By: Tony Branton Dip Arch RIBA FRSA*

Then and Now – the R&D work of the LIU

Then – why R&D in the 60's and 70's?

1. Government sponsored buildings related R&D in the 1950's and 1960's. Driven by the post war building programmes; need to build quickly (DES School Building Programmes); supporting the development of building systems (CLASP, NENK); the requirement for guidance on standards for design and specification; predicting/controlling capital costs.
2. Early approaches to assessing building users' needs; on site observation and discussion with users; recording and analysing the data; (MPBW's Activity Data Method; Relational Theory - The Atoms of Environmental Structure).
3. The establishment of the LIU to provide all Government Departments funding laboratory buildings with guidance on standards. The scientist's workplace; dealing with changing teaching and research needs; how much; effecting what? Future proofing (the original detailed accommodation brief is out of date by the time the building is ready for occupation).
4. The LIU's design approach to laboratory building paralleled DEGW's for office building; basic shell and supplementary scenery; 1960's university lab building precedents (Surrey; Birmingham; Loughborough)
5. Iterative R&D - the school development project ethos of DES's A&B Branch; from user studies to design guidance to building development projects to in-use project assessment to revised guidance and on---

The 00's & Teens

6. The archive as an information hub; a continuing and developing source of guidance; continuing R&D through project work and feedback in use.
7. The laboratory workplace now; project related research; strategic organisational issues:-
 - a) Planning lab buildings to encourage scientists' social interaction / informal/ formal meetings. Computer friendly social centres; tele-presencing meeting spaces to link with outstation lab centres.

- b) Grouping labs and their technical support spaces for flexible / interdisciplinary use to maximise day to day utilization and efficiently adapt to meet annual changes in work content
- c) The development of initially unassigned 'loft' or 'dance floor' research lab space. The company / institution is 'landlord'; department / research group is 'tenant'.
- d) The development of 'hub' or 'core' grouping of equipment labs to pool high cost scientific equipment resources, share their use and improve capability for high demand periods.
- e) Designing to anticipate the growth of ancillary equipment space; fluctuating boundaries between workstation labs and shared equipment space.
- f) New types of *shared* generic wet and dry lab space for the growing sophistication of high performance equipment and processes : -
 - g) Generic 'standard' lab
 - h) Generic 'containment' lab
 - i) Generic 'clean room' lab
 - j) Generic 'atomic manipulation / measurement' lab
 - k) Generic 'high-accuracy metrology' lab
- l) Development of 'lean' M&E lab servicing strategies. 'Landlord's' default provision 'tenants'' local additions including localised conversion / generation of services to meet precise but changing research needs.
- m) The development of Estates administered *performance specifications* for generic lab buildings and facilities including the adoption of sustainability criteria c.f. USA Labs 21 Federal initiative
- n) 'Kit of parts' fit out systems for labs / workshops ; mobile modular designs to enable relocation/ reuse.

* Tony Branton was Director of the DES / UGC sponsored Laboratories Investigation Unit (LIU) and DES Chief Architect before establishing LIU Ltd as a small consultancy in 1994. LIU Ltd became a division of LCE Architects Ltd in 2003.