Demand, Activity and Capacity Modelling

Higher Education applications

Service summary:

Fusion offers expertise and experience in the modelling and analysis of a higher educational activities, developing and quantifying the effects of growth and service change in terms of lecture theatre, seminar room and other key content provision. We have developed models to plan for short term need and imperatives through to longer term requirements including the effects of policy change and student numbers.

EXISTING LECTURE THEATRES

Theatre	Capacity	Start point hours required	start point frequency	cascaded hours required	cascaded frequency	Reallocated Frequency
Sher LT2	586	1092.5	111%	808.5	82%	82%
CTH-LTA	378	1001.5	102%	843.5	86%	86%
CHAD-MUSPRATT	313	878.5	89%	338.5	34%	69%
Dun-HCLT	305	839.5	85%	868.0	88%	
CHAD-CHAD	282	902.5	92%	843.5	86%	
CTH-LTB	252	717.0	73%	635.5	65%	65%
ERB-ERT	246	878.0	89%	608.0	62%	62%
ELEC-ELT	246	843.0	86%	507.0	52%	64%
SHER-LT1	238	705.5	72%	421.5	43%	
VGM-LEGGATE	230	521.5	53%	324.5	33%	
REN-LT7	216	802.5	82%	506.0	51%	71%
LIFS-LT3	211	638.5	65%	714.5	73%	
REN-LT6	198	805.0	82%	742.5	75%	
ENG-HSLT	186	646.5	66%	849.0	86%	
SCTH-MR	219	685.5	70%	305.0	31%	69%
MATH-027	168	791.5	80%	542.0	55%	
CTH-LTC	165	619.0	63%	363.0	37%	
DUN-LT3	162	481.0	49%	192.0	20%	
DUN-LT2	162	475.0	48%	640.5	65%	

Context:

Quantified, empirical information and analysis is a key component of any strategic development. It forms the backbone of the strategic case for change in identifying the current situation and how that will change as a result of a range of parameters, which include student and staff growth, changes in service delivery methodologies and pedagogy and associated technologies.

Higher Education modelling is provided by Fusion as a key supporting tool, but not just to quantify proposed changes in organisation and delivery. Used as part of engagement programmes within Universities and other educational establishments, models become interactive tools to test and challenge strategic thinking and core objectives, quantify the nature and scale of perceived issues and begin to explore potential solutions for sustainable provision of the number and type of facilities needed to support educational and research requirements now and in the future.

Our approach:

Fusion can utilise a range of modelling techniques covering key aspects of educational delivery and research requirements including lecture theatres, seminar rooms and other learning spaces, research accommodation requirements including laboratories and office spaces.

We establish with clients the questions that need to be answered to support strategic change and then specifically tailor a model to those requirements, drawing on our own experience to help to define the questions where required.

We mostly model higher educational delivery by utilising the greatest level of detail possible, often individual student detail, modules undertaken and future growth scenarios, to understand the consequences of changes on actual educational provision. This typically uses database modelling techniques rather than adopting a high level approach, which can often mask the full impact of changes to a service or a student/staff group.

We are happy to share our modelling with our clients and have often handed over models to be used after our specific commission has ended, ensuring that clients have the appropriate knowledge and skills to continue to use our models on their own.

The outcomes:

Fusion has delivered activity and capacity models which:

- Are used to identify short term needs and how space constraints can be best utilised to ensure lecture theatres are optimised in terms of frequency of use
- Develop short term needs by strategically modelling longer term strategy, particularly in terms of establishing how the estate may change based on adopting or rejecting principles regarding future teaching sizes and methodologies
- Identify where space is not being efficiently used and where it needs to change
- Identify key functional content as a result of strategic drivers that can then drive actual physical requirements and the development of schedules of accommodation

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