Timetable Modeling: The Innovative Space Planning Tool - Addressing the Need to Balance Benefits and Risks

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> *John pioneered the use of timetable modelling in Australia. He is also the author of the first set of benchmark measures for timetables, which enable institutions to assess the quality of a university timetable beyond the simple measure of space efficiency.*
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> *John is a graduate of Flinders University, and has worked in management roles at both of the other two main universities in South Australia. He still calls South Australia home, despite frequent national and international travel.*
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> *Tom Sankey* worked for fifteen years in the university sector as a lecturer and tutor before becoming involved in administrative aspects of higher education. He became involved in development and planning and was project director of one of the first automated timetabling implementations in Australia.
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> *Since founding Mosaic Software Development he has gone on to developing solutions for universities in Australia and New Zealand in the fields of space planning and timetable solutions. This has ranged from implementing space audit systems to the creation of specialised software to measure space utilisation, and most recently, to investigating space options through timetable modelling.*
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Traditional university space planning has used historic space ratios, and sometimes poorly-informed user estimates of space requirements, to develop detailed plans for new university buildings and campuses.

More recently the innovative use of timetable data, coupled with existing space, enrolment, staffing, curriculum and growth planning data, has enabled the construction of more accurate classroom space models that have resulted in significantly greater space efficiencies. Model construction has also permitted exploration of the possible effects of new approaches to teaching and learning.

This presentation reflects on experience gained through a dozen case studies at different institutions. Applications have encompassed planning or entire campuses, campus closures, new building construction and refurbishment of existing buildings. Benefits included not only cost savings but also a greater level of confidence in the resulting plans.

However the process also presents the challenges of:
- combining data from different systems,
- using information for purposes other than those first intended,
- getting accurate data,
- understanding the nature and extent of curriculum and teaching delivery change,
- allowing for innovative and flexible future space uses.