



## Computational Engineering

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### Abstract

Computation design in the built environment should be used to free up designer's precious time to think, sketch and create.

**Keywords:** Buildings, Spatial Structures, Digital Workflows, Computational Methods

### 1 Summary

The application of computational design and engineering for the built environment has never been more powerful or progressive. At the same time, Architecture and Engineering have not been closer together since the days of the Master Builder as an increasing flow of information between design disciplines is enabled through data exchange and information rich communication. Alongside technologies such as parametric design and building information modelling software, an increase in the knowledge and use of open source programming – visual and text based, is providing engineers with an unprecedented capability to simulate and test engineering solutions and concepts. As a result, there are huge opportunities to maximise the potential of the interdisciplinary and holistic digital design approaches that are shaping our cities, whilst avoiding mass-produced design, and to utilise technology to free up designers' precious time to think, sketch and create.



Figure 1. Quote