



# Newcastle University - Urban Sustainability Building - The Key, Newcastle , 2017

**Integrator :** IBT Controls - <http://www.ibtcontrols.co.uk>

**Category :** Commercial





# Details

The £58million 12,500 sqm Urban Sciences Building at the University of Newcastle was conceived as an inspiring new place for world-leading interdisciplinary research and innovation. Facilities include a Decision Theatre, enabling advanced data visualisation so that policy makers and other stakeholders can plan and operate cities sustainably and the largest set of publicly available real time urban data in the UK Architects HawkinsBrown and consulting engineers Buro Happold have created a space to foster collaborative working, to develop and test new technologies that advance urban sciences. They turned to KNX to optimise environmental control and efficiency

KNX was identified as the only viable option because the project leaders wanted a common platform across all elements of building control, and to have flexibility to change their strategy within the space as users' needs changes or to further improve performance.

The system designed by intelligent control and monitoring solutions provider IBT Controls works alongside the BMS. It automates all elements within the building, including (via a gateway) DALI lighting. Over 3000 KNX-compatible devices deliver a totally holistic approach to energy usage, ensuring energy efficiency in line with BS EN 15232 rated A. Each point within the system is exposed to BACnet and trended to allow logging and provide a window on the effects of any changes in use of the HVAC system.

The building is an all-electric powered development, with future connections into a district heating plant possible. Integrated features such as rainwater harvesting, rainwater gardens, renewable energy generation, water source heat pumps and heat recovery and exchanging plant not only provide the environmental backbone, but have also been designed to act as infrastructure to catalyse collaborative research projects.

Embodied carbon calculations and environmental modelling were used from the outset to help determine the most efficient orientation of mass, internal organisation as well as selecting structural and facade solutions. A modular and pre-fabricated glazed facade system will act as the technical wrap that binds together the internal spaces whilst also allowing an open and engaging relationship with the large public square to the south of the site.

## KNX Features

- Control of large-building infrastructure, from atrium ventilation to beam heat exchange – and more.
- Automatic DALI Lighting control
- Combined HVAC & lighting control on one KNX user Interface
- Zone valve control & monitoring
- 3rd party / remote monitoring

## KNX UK

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