

## The Ryle Room, Kavli Institute for Cosmology: New audio-visual (AV) technology to facilitate improved research options, 2018

### Why was the project needed?

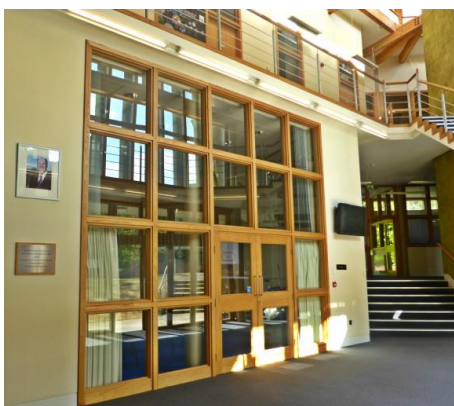
The Ryle Room is a key research space in the Kavli Institute used primarily for conferences, seminars and meetings. However, researchers were increasingly frustrated at the low-definition projection facilities provided in the room. Although only 7 years old, the previous AV technology was limiting options of what could be shown on the screen to an audience. Consisting of a large pane of frosted glass through which images were projected by a mounted device, the results were low definition and unclear. The old system supported only analogue images, ruling out the better-quality images transmitted through digital signals. Not only was the quality of the projection not fit for research purposes, it also restricted the numbers of those who could effectively use the room; the screen was not height-adjustable, so any participants seated at the back of the room were unable to see the screen as anyone seated in front of them blocked the view.



*1 The Kavli Institute of Cosmology, Cambridge*

Clearly there was a need for a new system that would be capable of meeting the needs of a world-class research institute. Any new system would need to provide clear, digital images onto a better quality screen. Internal consultations also identified the requirement for a fully-adjustable screen, one which could be lowered for more informal meetings and when fewer people were present, but one that could also be raised when the room was busier so as to stay fully-visible.

### How was the project run?

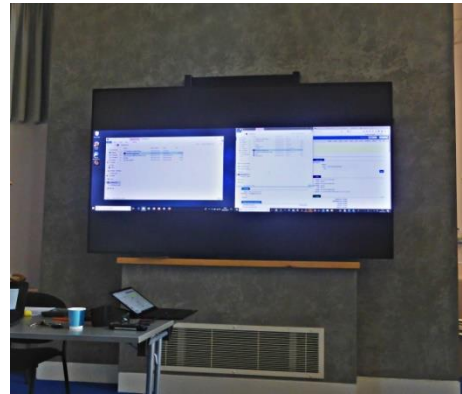


*2 The entrance to the Ryle Room*

The University tender process was run to determine potential companies who could meet the needs of the project. The project team already knew they wanted to purchase a Samsung 98-inch TV screen (commercial value of c.£17k), but the 80kg weight of the screen combined with the 40kg supports placed a considerable strain on the pre-existing wall. Therefore, it was agreed that the wall would be reinforced. The screen supports also needed to be custom-made in order to be high enough for when the screen was raised to its fullest extent. The Kavli Institute hired COEL who provided both the audio-visual and building services together and the project was completed after about four months, finishing in May 2018.

## What was achieved?

The Ryle Room is now more effective for research purposes with the screen height adjustable to suit the audience. A major new feature is ClickShare, a wireless presentation system which makes connecting laptops for presentations much easier. ClickShare consists of a ClickShare button which connects to devices through a USB port. The user then presses the button on the ClickShare device to connect their laptop to the screen. This is an easy system to use which requires minimal IT support, meaning researchers can quickly set up their work in the Ryle Room with minimal requests for IT aid.



*3 Split-screen ability of the new TV. It can be divided into further screens if necessary.*

Comments received on the technological upgrade have been principally impressed with the ability to show more than one screen at a time on the TV, for example, multiple computer screens (**pictured right**). For conferences and seminars, this allows for direct comparison which all the audience can view. The ClickShare presentation system (see above) facilitates this process with multiple laptops able to connect to the presentation screen, allowing for direct comparison of information. For example, an audience member can ask a question during a presentation and show a graph from their own computer onto the screen which the rest of the room can view alongside the original presentation material.



*4 The new screen in use for a conference, with live-streaming shown in the lower section.*

Reaction speeds have improved immensely with regard to streaming from the main lecture theatre into the Ryle Room, providing clear images and good audio, while also allowing for high-quality streaming live on the web. Moreover, this new technology is energy efficient, mindful of the University's Green Challenge. Although the TV screen has an Energy Efficiency Rating of B (with A being the most efficient band), this is actually measuring when the screen is at peak inefficiency. As the screen brightness can operate on less than 50% for most events, the result is significantly more energy effective than the previous system.

This new technology has vastly improved the usability and quality of the Ryle Room for research, and the Kavli Institute staff expect to utilise this new technology to support many other research functions of the building.

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