NExT Institute uses Visionable to facilitate online classroom-to-classroom collaboration

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The NExT (New connections between Experiment and Theory) institute aims to further the goals of Particle Physics through the fostering and promotion of interactions between theory and experiment in an inter-disciplinary and multi-sited environment. To enable this to happen, the institute relies on virtual classroom-to-classroom collaboration and information sharing.

Visionable's multi-feed, multi-stream technology has been instrumental in facilitating this distinct form of collaboration by enabling close communication and improved relationships between the many physics departments involved in the institute.
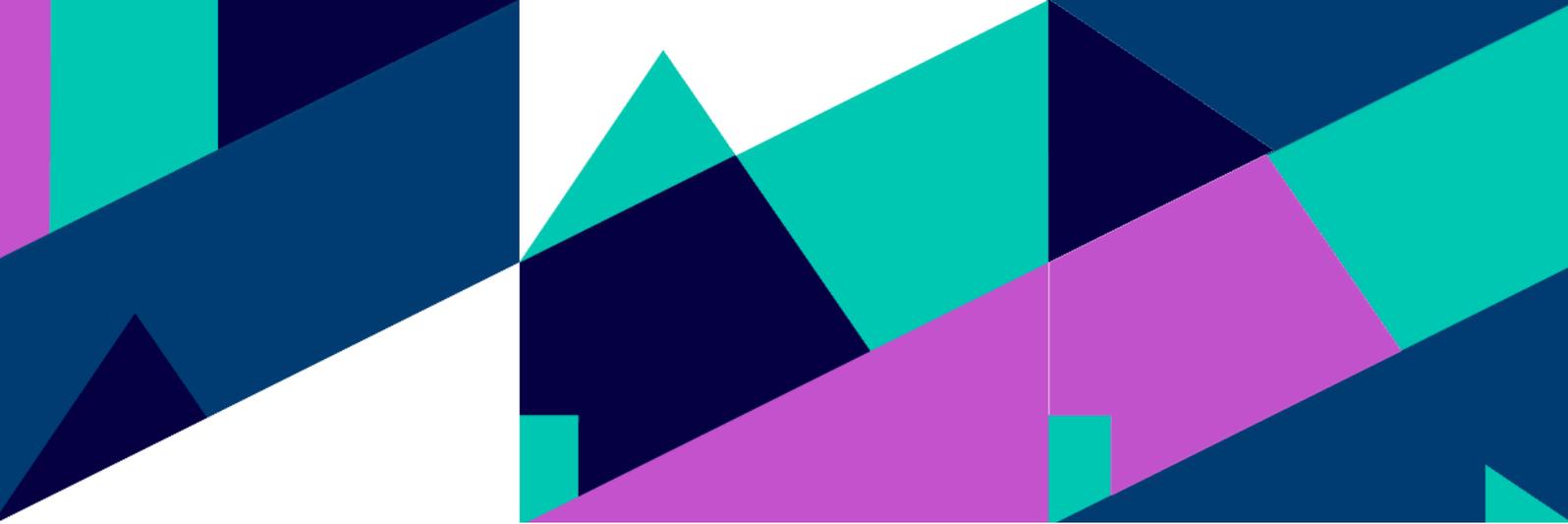
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The NExT Institute background

The NExT institute was formed in 2006 with the aim of enhancing the understanding of particle physics by promoting close interactions between experimentalist and theorist departments, including:

- High Energy Physics (SHEP) group at the School of Physics & Astronomy of University of Southampton
- Particle Physics Division (PPD) at the Rutherford Appleton Laboratory
- Particle Physics group at Royal Holloway (London)
- Both the theoretical and experimental Particle Physics groups at the University of Sussex
- Queen Mary University of London

We recently caught up with NExT Director, Prof Stefano Moretti, and NExT PhD School Director, Dr Andrea Banfi, to discover how Visionable facilitated this unique form of cross-institutional collaboration and education.

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The Challenge

Bringing together many different physics departments, each involving a substantial number of academics and students located across the country, was a challenge. Approaching cross-institutional learning with the use of popular online collaboration tools presented difficulties because of their limited flexibility in relation to classroom-to-classroom delivery.

"When we started delivering training at postgraduate and postdoctoral level, since inception in 2006, we had no choice but to look for suitable software… but at the time, the only provision as an online collaborative tool was Skype.

This was not suitable for classroom-to-classroom delivery because the way we organise our training is that we have a lecture and a few students in one group, and then that lecture is also delivered to other groups and students that are sitting in other rooms. So clearly Skype was not suitable for that." – Professor Stefano Moretti

As the institute grew and integrated additional physics departments, they trialled other popular collaboration platforms which were already in use in single departments.

"While in lockdown, when we were communicating from computer to computer, one individual to several individuals, each with their own computer, things were fine. But when we went back to classroom deliveries, we discovered that no other tool is as good as Visionable." – Dr Andrea Banfi

Although adequate to an extent during the pandemic, the institute leaders soon realised their shortfalls when returning to classroom-to-classroom collaboration.

NExT was introduced to Visionable's patented video technology. The benefits of the unique multi-stream, multi-feed technology appealed to the institute's requirements, and promised a new level of flexibility.

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The Solution

Having tested alternatives, the institute recognised Visionable's Collaborator solution as more suitable to their requirements than established market-leading video collaboration tools.

The NExT institute welcomed several standout features of Collaborator, including:

- Multi-stream, multi-feed technology:

"Visionable is great for the class-to-class, or classroom-to-classroom, experience. You can have every different classroom in different streams, moving each feed, changing the size. This is something you cannot possibly do with traditional video collaboration tools." – Dr Andrea Banfi

"It is very valuable to move each and every stream wherever you want in your room. So, in principle, with Visionable you can use all empty surfaces on the classroom walls to display feeds. Whereas in other video collaboration platforms, all the streams are within the main window. So, you're essentially locked to the largest white surface in your room, which is a completely different experience. You can minimise/maximise streams as you please. So, everybody is visible. Whereas with other platforms, you're locked to that stream. And you know, there's not much you can do really." – Professor Stefano Moretti

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- Dr Andrea Banfi

• Replicating the classroom environment better than popular video collaboration tools:

"On alternative platforms, there is a tendency for students to be anonymous and I feel like I'm teaching to a blank, black screen.

This is not possible, thank goodness, with Visionable. While it is possible to switch off your camera, the software still seems to encourage more connections. I think it is the point of the software, the point of staying together and interacting as you would in a real classroom environment.

So, one of the best things about Visionable is being able to see the students in the other classes and interact with them as if they were present and look at their faces while I am teaching." – Dr Andrea Banfi

• High-definition imagery:

"The high-definition of streams that Visionable offers is something that, particularly for some forms of delivery that we have, is important." – Professor Stefano Moretti

• Establishing a community:

"[Visionable] is particularly good for us for to teach across institutions. Class-to-class delivery is the best, as well as the sense of community that you can create across institutions." – Professor Stefano Moretti

• Revisiting past recordings with no expiry date:

"Initially, a key reason for acquiring the license was to enable students to revisit past recordings or lectures simply to reuse them. We could then just run question and answer sessions as an addition to the existing recording, so that has been very useful.

Now, we hold all past lecture recordings on Visionable. These are built and maintained over the years to have a repository for lectures which are given over and over again. So, there is really a sense of community, which grows over the years." – Dr Andrea Banfi

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The Impact

On implementing Visionable, NExT observed a clear improvement in collaboration across the departments involved with the institute. They recognised that this would not have been possible with other well-known collaboration platforms.

"For the purpose of delivering classroom-to-classroom, as opposed to online to in-person, then we reckon that Visionable offers the best possibilities" – Professor Stefano Moretti

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