



## Bentley Systems Announces Drummond Community High School Team as Winners in First Future Infrastructure Challenge: DEC Hyperloop

April 11, 2019

*Panel of distinguished judges select winning team at competitive event challenging students to conceptualize design for hyperloop transport system and stations*

LONDON – Bentley Systems, the leading global provider of comprehensive software solutions for advancing the design, construction, and operations of infrastructure, announced Drummond Community High School of Edinburgh, Scotland as the winning team of the first ever *Future Infrastructure Challenge: DEC Hyperloop*, which took place April 7 through 9. Hosted by Bentley Institute and Class of Your Own, the challenge included sixth form students, ages 16 to 18, from four schools in the UK whose assignment was to conceptualize a design of a hyperloop transport system and stations for Singapore.

Students from participating schools, The Cardinal Wiseman Catholic School from Greenford, London; Drummond Community High School from Edinburgh, Scotland; King Ecgbert School from Sheffield, South Yorkshire; and More House School from Farnham, Surrey, traveled to Bentley Systems' offices in London on April 7. They were tasked with creating the hyperloop concept and a presentation to convey their cohesive plan to a judging panel.

The overall winners of the challenge are students from Drummond Community High School, Faye Fulton, Ryan Gordon, Alizah Mughal, and Wiktor Rauba, led by DEC teacher, Mark Holden. The winning team members and their teacher were awarded a complimentary trip to Singapore from Bentley Systems to attend its annual Year in Infrastructure Conference, which will be held this year October 21 through 24 at the Marina Bay Sands Resort in Singapore.

The four participating schools were selected from 100 schools studying the Class of Your Own *Design Engineer Construct!* (DEC) learning program, which is intended to educate students about and encourage exploration of careers in architecture, engineering, and construction.

In the spring of 2018, following meetings with students studying DEC at a higher or advanced level, the four schools were invited to enter teams to take part in the first *Future Infrastructure Challenge* to mark the 10th anniversary of Class of Your Own. Delivered in partnership with Bentley Systems, the program will be released as a full curriculum for schools around the world later this year.

Mark Holden, teacher for the winning team, said, "Drummond High School is committed to nurturing big ambition in its students and equipping them for the world and workplace of tomorrow. The school became involved in the DEC curriculum after seeing its success – and the attributes of its students – from across England and recognizing how closely this fit our own aims. We have enjoyed several years of unparalleled opportunities and great successes and are delighted that this has led to this collaboration with Bentley and COYO. The development of our team has been incredible to watch, but also the effect on the school community as a whole has been palpable. Knowing that students from our school are taking part in such a huge project, working with such esteemed professionals on this scale is a constant reminder to all of our students of what they can achieve."

Over the two days prior to the presentation day, the students created their designs using laptops and software provided by Bentley Systems at the offices of four globally recognized companies: Arup, Rogers Stirk Harbour and Partners, Turner Townsend, and WSP.

On April 9, the teams presented their concepts to a distinguished panel of judges:

**Harj Dhaliwal** – Managing Director Middle East & India, Virgin Hyperloop One

**Chris Barron** – Chief Communications Officer, Bentley Systems, M. Arch., Harvard Univ., board member of the Zofnass Program for Sustainable Infrastructure

**Professor John Miles** – Arup/Royal Academy of Engineering Chair Transitional Energy Strategies, University of Cambridge

**Professor Cam Middleton** – Laing O'Rourke Professor of Construction Engineering, University of Cambridge

**Iain Blight** – Director of Station and Building Engineering at HS2

**Chris Preston** – President of Chartered Institution of Civil Engineering Surveyors (ICES), Bentley's Inaugural Professor at the National College for High Speed Rail

**Sadie Morgan** – Co-founder, dRMM Architects; board member National Infrastructure Commission / Chair of Independent Design Panel for HS2

**Andrew Tyley** – Partner, Rogers Stirk Harbour and Partners

**Ian Stilgoe** – Vice President Geopositioning Europe, Topcon Positioning Group

Harj Dhaliwal, managing director Middle East and India of Virgin Hyperloop One, said, "We can't solve 21st century challenges with 19th century technology. As the first new mode of transportation in over 100 years, hyperloop is changing the narrative for mass transportation. It's great to see the next generation of engineers and designers embracing this technology and the new type of thinking it requires. I have been overwhelmed by the approach to innovation and the out-of-the box thinking the young students have demonstrated. All of them are winners today."

The teams' concepts were judged according to feasibility and quality of design, social and economic impact, building efficiency, sustainability, originality, and quality of the presentation.

Chris Barron, chief communications officer for Bentley Systems, said, "It has been a pleasure hosting these talented students, seeing their hyperloop designs, and watching their excellent presentations. It was, in a word, inspiring, not only because of the depth of research they performed, and the thoughtfulness of their designs, but also because they demonstrated that the next generation of infrastructure professionals are ready to face the challenges of advancing our economy and sustaining our environment. Bentley is committed to supporting STEM learning programmes like Class of Your Own, which inspire and challenge students to think creatively about the future of infrastructure and to perhaps even pursue careers in infrastructure-related fields. We're looking forward to hosting more events like this around the world."

Additional awards of £350 to be donated in the name of the students and the school to a local, national, or international charity of their choice were given in the following categories:

**Best Definition of Requirements** – King Ecgbert School (Yuanhao Lei, Annabel Smith, Joe Toyne, with teacher Helen Vardy)

**Best Quality of Research** – Cardinal Wiseman Catholic School (Kieran Barton, Sanjiv Duelas, Kacper Kumor, Shakil Perrera, Julia Podlinska, with teacher Paul Foote)

**Best Quality of Design** – More House School (George Armytage, Finley Skinner, Uday Pal Trabelsi, with teacher Charles Stewart)

**Best for Energy Use and Environmental Impact** – Drummond Community High School (Faye Fulton, Ryan Gordon, Alizah Mughal, and Wiktor Rauba, with teacher Mark Holden)

**Best for Innovation** – Drummond Community High School

**Best Presentation, Communication, and Use of Technology** – Cardinal Wiseman Catholic School

Alison Watson, CEO and founder of Class of Your Own, said, "DEC has produced some incredible digital talent thanks to great teachers and support from industry. After 10 years, I felt it was time to ramp up the challenge and write a new curriculum that takes students, and their teachers, to another level of learning. I've watched these four teams grow in so many ways as they've developed their designs and in truth, all are champions. The students can now look forward to showing the world what young people can do when given the opportunity to learn in a real-life environment. I couldn't be more proud of these young role models and thank the Bentley team for their unwavering support of COYO and our schools to make this happen."

#### **Image and Caption:**

[Winners of the 2019 Future Infrastructure Challenge: DEC Hyperloop is the Drummond Community High School Team \(Alizah Mughal, Ryan Gordon, Wiktor Rauba, Faye Fulton\) with Harj Dhaliwal, Managing Director Middle East & India, Virgin Hyperloop One, who was a member of the judging panel for the event.](#)

#### **[About Class of Your Own](#)**

Class of Your Own Limited (COYO) is an award-winning consultancy specializing in education for the digital built environment. Established in 2009, COYO has been delivering the ground-breaking *Design Engineer Construct!* learning program in addition to workshops, challenges and other student engagement programs to schools and colleges across the United Kingdom. Class of Your Own develops innovative, contextualized approaches to teaching and learning that enable young people from all backgrounds to explore aspirational career pathways in architecture, engineering, surveying, and construction.

#### **[About Bentley Institute](#)**

Bentley Institute advances the infrastructure professions by encouraging and supporting Bentley users' ambitions in going digital. Its initiatives attract and advance infrastructure professionals, and future professionals, through continuous learning about technology solutions, as well as project delivery and asset performance best practices.

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