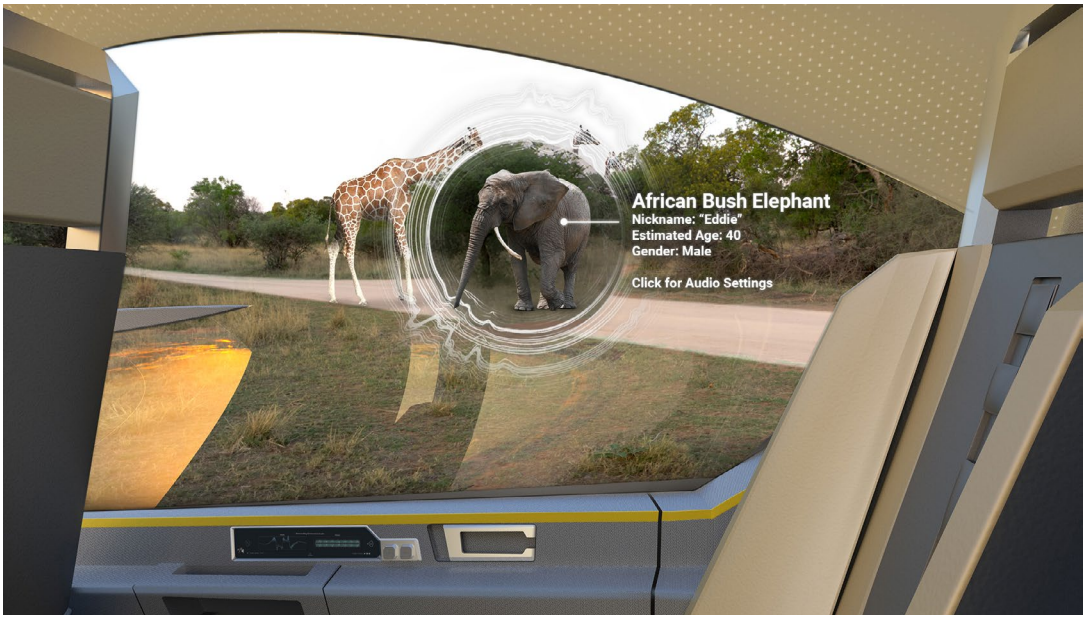
Autodesk teams up with Contechs and Coventry University to support the next generation of designers and engineers

COMPANY
Contechs

LOCATION
UK

SOFTWARE
Alias Concept
VRED



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> Course Director at Coventry University

With major changes in the automotive industry, such as the shift to EV technology and autonomous vehicles, designers are increasingly challenged with communicating ideas that are both exciting and relevant. The need to equip the next generation of concept specialists and engineers for the challenges of a changing socio-cultural landscape is the foundation behind a groundbreaking student project at Coventry University.

Second-year students on the three-year Automotive and Transport Design BA course recently took part in a vehicle design project supported by Autodesk, which mentored the students throughout the project, and Contechs, a world-leading provider of specialist services and recruitment in the automotive sector, and a valued Autodesk customer.

Empowering the future workforce

Investing in the next-generation workforce is a top priority for both Autodesk and Contechs. Autodesk has strong links within the education sector, while Contechs already sponsors an award for final-year students at Coventry. The idea behind the project is to bring industry experience into the course, and begin preparing the future workforce with essential industry skills, at a much earlier stage.

"The intention is to begin our involvement with students earlier so that we can give some input into their design thinking," explains Chris Hamilton, Design Director at Contechs. "The brief we set for the project was quite open but we wanted it to be experience-driven. And then from that experience we were able to help the students develop their themes and CAD models. Our goal was to uncover the next generation of designers and CAD modellers so that they can eventually come and work in the automotive environment."

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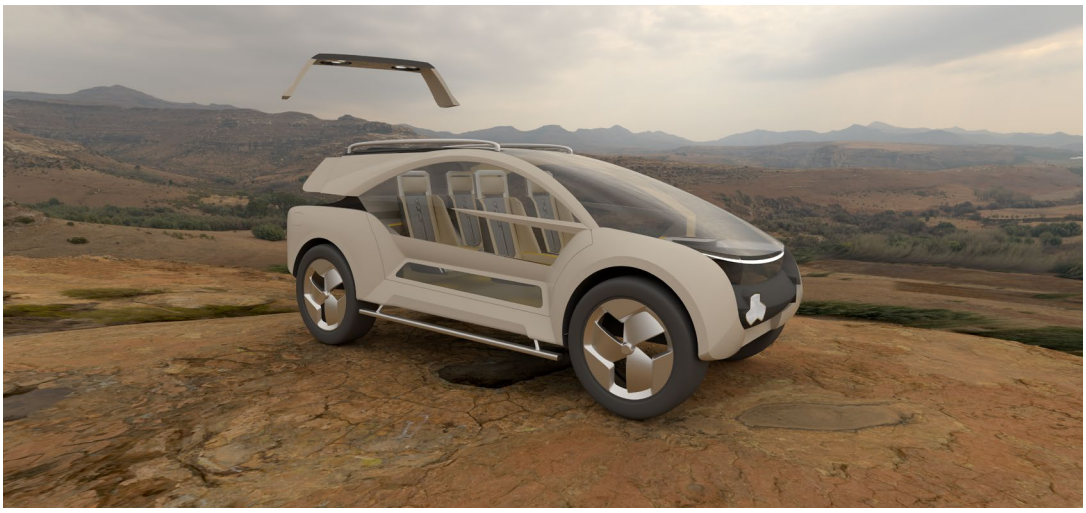
>
> **Pierre-Paul Andriani**
> Autodesk Design Studio Solution Specialist

By helping the students to understand how the industry is changing, the project aims to make them more employable. "Knowing how to communicate design ideas, both verbally and visually, is really key," says Chris.

Industry collaboration is essential for empowering the next generation of talent. "This was a valuable project for the students to find out about what's coming in the industry in terms of experience, design, and what they need to learn," says Alan Barrett, Course Director at Coventry University. "Projects like this are very much about employability, giving students the opportunity to look into specialisms. It's a great way for them to experience working with a client in a subject area they're interested in, and the specialism that they're aiming for in their career."



The project brief

Competing in three groups of five, students were tasked with conceptualising two vehicles per team showcasing exciting mobility experiences spanning a range of different scenarios. Developing interior, exterior, and UX concepts, students had to deliver a compelling vehicle for their chosen consumer demographic. Participants had to show how they developed their ideas using design thinking and creative tools – specifically Autodesk's Alias modelling software and VRED 3D visualisation package, among others.

The 10 week-project was assessed as part of the students' degree course, and included weekly presentations to familiarize them with the review and iteration process. What's more, students benefited from bi-weekly onsite check-ins from Contechs and Autodesk. During these visits, Autodesk Design Studio Solution Specialist Pierre-Paul Andriani acted as a student mentor and technical advisor for modelling and visualisation, with the project proving to be a steep learning curve for the students.

"We found that the students really had to focus on their vision to ensure their designs were mature enough for them to go into 3D right away," says Pierre-Paul. "I helped them to dial in their idea before they got to 3D. You're looking for a design, but you're also looking for your way in the software as well. If you do both at the same time, it's always a struggle. That's why it's critical to have a clear direction before you jump into 3D. So the initial focus was to execute the brief, and then provide students with more technical support during the last few weeks."

The project concluded in a final presentation in front of a panel comprising representatives from the university, Autodesk, and Contechs. Teams were judged on their ability to use the designated tools, along with the overall creativity of their designs.

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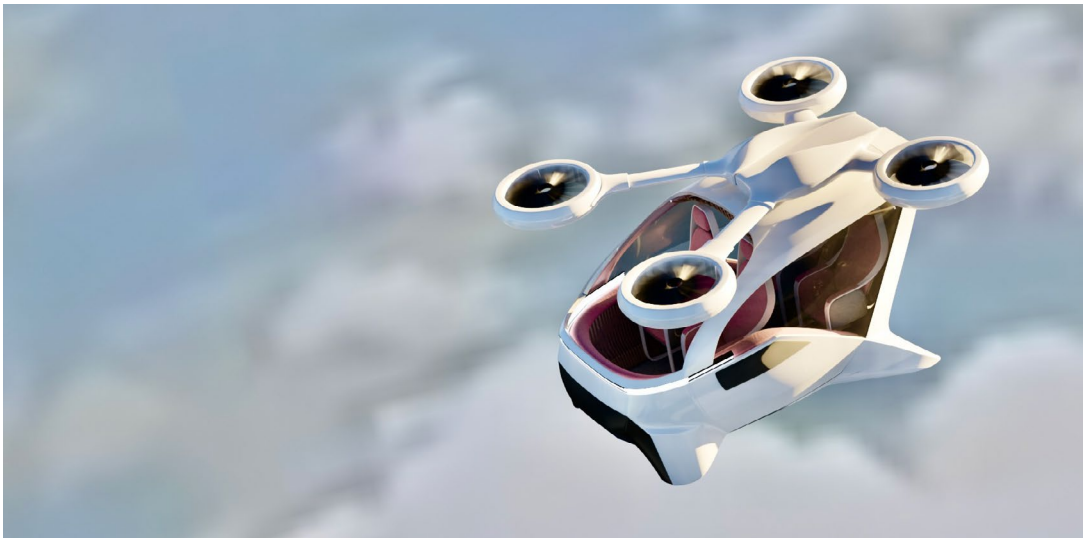
>
> **Dr Seán McCartan**
> Second year course tutor at Coventry University



The winning team

Each group produced a variety of exciting models, including everything from autonomous cars to VTOL (vertical take-off and landing) vehicles. "It's been great to see a range of outputs across the three groups, with some really distinctive concepts," says Dr Seán McCartan, second year course tutor at Coventry University. "In terms of mobility, the groups looked at aging demographics and the range of issues involved there".

The winning team, comprising students Theo Tucker, Raeon Park, Ben Kenward, Finn Lortan, and Charlie Jefferson, was presented with a £500 cash prize. The team's two winning designs included an AR-enabled 'Roam' 4x4 with an expansive windscreen and side windows. The car's largely transparent chassis gives occupants the perfect view for everything from safari to stargazing, while important information is overlaid on the inside of the windows. The winning group also designed a drone-like four-seater VTOL vehicle.

"My team and I cannot express enough our gratitude for the opportunity to work with Contechs and Autodesk," says Theo Tucker, team lead for the winning group. "We used the constructive feedback to develop two projects that we believe embody and highlight the value of user-focused design.

"Contechs' Chris Hamilton always made it clear we should prioritise the experience of the user, and we curated a story and crafted every element of the experience to align with our vision of the UX and the clients' specification. We were thrilled to win the design challenge, and for industry leaders to recognise the passion and dedication myself and the whole team put into the project. I am extremely proud of every single team member's contribution, resilience, and commitment to quality and self-improvement."

Next steps

The project has received positive feedback from all involved, and it is hoped that a similar initiative will run next year, with Autodesk once again acting as a mentor for the students. "Both our customers, and the education sector are really important to us at Autodesk," says Sam Beavan, Strategic Account Executive at Autodesk. "So this has been a really great project to not only engage with the students, but also to support one of our strategic customers."