

COMPANY

RMIT University

LOCATION

Melbourne, Australia

SOFTWARE

Inventor Professional™**AutoCAD Electrical™****Autodesk 360™****Flow Design™****Project Ventus™**

Driving excitement for the future of sustainable engineering

Access to professional grade software encourages innovation and collaboration

Having the opportunity to use the same software that professional engineers use not only makes our team members more employable in the industry once we graduate, but also makes the whole experience more thrilling by opening us up to the possibilities that exist for the future of design and sustainable engineering.

—**Michael Butler**
Team Manager
RMIT Electric Racing



Image courtesy of RMIT Electric Racing

Giving student engineers and designers that competitive edge

Each year a team of outstanding student engineers from RMIT University compete against teams from a number of universities in the Formula SAE Australasia Competition to design, manufacture, build, test and race a prototype race car. RMIT Electric Racing debuted the first-ever electric vehicle in 2008 and each year has worked to improve the design and generate excitement about the future of electric cars and sustainable engineering.

The challenge

Realising they had to up their game and design a sophisticated vehicle to keep up with the growing competition, RMIT Electric Racing decided to make the full transition to using Autodesk software in order to bring their ideas to life. This included Inventor Professional, AutoCAD Electrical, Autodesk 360, as well as Flow Design and Project Ventus

The solution

Autodesk's commitment to education worldwide meant the team were able to access all the professional design solutions they needed, not just through the university facilities but also at home via the Autodesk Education Community. This had a significant impact on the team, which had struggled to access the right software in previous years and being able to share and back up files using Autodesk 360 was a crucial factor in helping them meet a set of tight deadlines throughout the year.

"The biggest benefit for us was that this year every student could download and use professional design products at home, so we were able to transition from the design phase to the manufacturing phase seamlessly" says Michael Butler, Team Manager. "That accessibility saved us so much valuable time, which allowed for more testing and gave us so much more confidence going into the competition."

With help from Autodesk Inventor and AutoCAD Electrical, the RMIT Electric Racing team produced a 100% accurate master assembly of the whole vehicle for the first time

The superior functionality of Autodesk Inventor, compared with tools that the team had used previously, helped to promote more innovative experimentation with the design and allowed the students to design faster and more accurately than ever before. Using Inventor and AutoCAD Electrical, RMIT Electric Racing produced a 100% accurate master assembly of the whole vehicle for the first time. Electrical designs could be integrated completely with the 3D models using Inventor Professional, which is key to designing the prototype.

“Time efficiency when designing is vital,” explains Butler. “Compared with previous CAD software we had used, Inventor was so intuitive to use and even new team members were able to learn all the different functions available quickly.”

Building confidence in students at every skill level

The RMIT team also received a two-day seminar at the university, which was organised by Autodesk, and was able to access product training available on the Autodesk Education Expert Community, including webinars, tutorials and other forums where they could exchange support and advice.

“That extra support from Autodesk was invaluable for us as students,” says Butler. “Everyone on our team is at a different level when it comes to engineering and design, so the training really helped to build our confidence in the products and hone our skills, meaning anyone who wanted to participate could be included.”

The result

In 2014, The RMIT Electric Racing team placed 1st Overall in the Formula SAE Australasia Electric Vehicle category and 1st in Efficiency (Combustion & Electric). They were also the top Electric Vehicle in Autocross and Endurance.

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To learn more about Autodesk’s Education Community, visit www.autodesk.com/edcommunity.

Like us at facebook.com/autodeskedcommunity.

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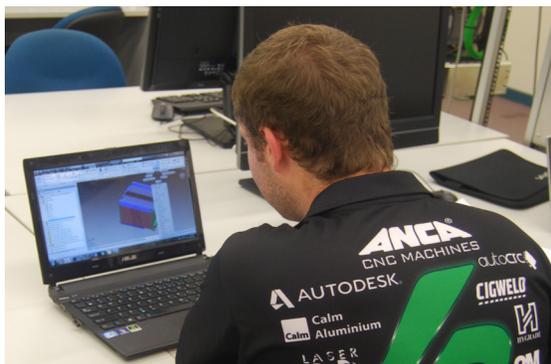


Image courtesy of RMIT Electric Racing, RMIT University