

**ASX RELEASE**

## VOLKSWAGEN FUTURE TECHNOLOGY FOR CAR DESIGN

Real-time software company Vection Technologies Ltd (**ASX:VR1**) (**Vection Technologies** or the **Company**) is pleased to advise on its participation at the exclusive "Future Technology for Car Design" April 2020 event organised by T-Systems for the Volkswagen Group (**Volkswagen**), showcasing the latest innovations in the automotive design industry.

**Highlights:**

- **Mindesk software selected for the April 2020 "Future Technology for Car Design" event organised by T-Systems for Volkswagen**
- **Volkswagen's preselected tier-1 partners included Vection Technologies, McNeel and Associates, T-Systems, Epic Games, Varjo and Logitech**
- **Vection Technologies presented its newly acquired software, Mindesk, a powerful real-time engine for virtual reality visualisation and interaction**
- **Vection Technologies partnered with global architect and computational designer Arturo Tedeschi to introduce an original electric car concept design**
- **Volkswagen's event aligned with Company's direct commercial initiatives strategy**

### Future Technology for Car Design: Overview

The Future Technology for Car Design is an exclusive event hosted by global IT services and consulting company T-Systems, for German multinational automotive manufacturing group Volkswagen.

For the event, Volkswagen selected key Tier-1 partners including Vection Technologies, McNeel and Associates, T-Systems, Epic Games, Varjo and Logitech to present their latest technological updates.

### Future Technology for Car Design: Iris Project Overview

During the workshop keynote, Vection Technologies' director Gabriele Sorrento and global computational designer Arturo Tedeschi presented the design process behind Iris, an original concept for an electric city car.

To watch the recording of the workshop keynote, please copy and paste the following youtube link on your browser:

[youtube.com/watch?v=cUH9JPakeCo](https://youtube.com/watch?v=cUH9JPakeCo)



3D



VIRTUAL  
REALITY



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REALITY



INDUSTRIAL  
IoT



CAD

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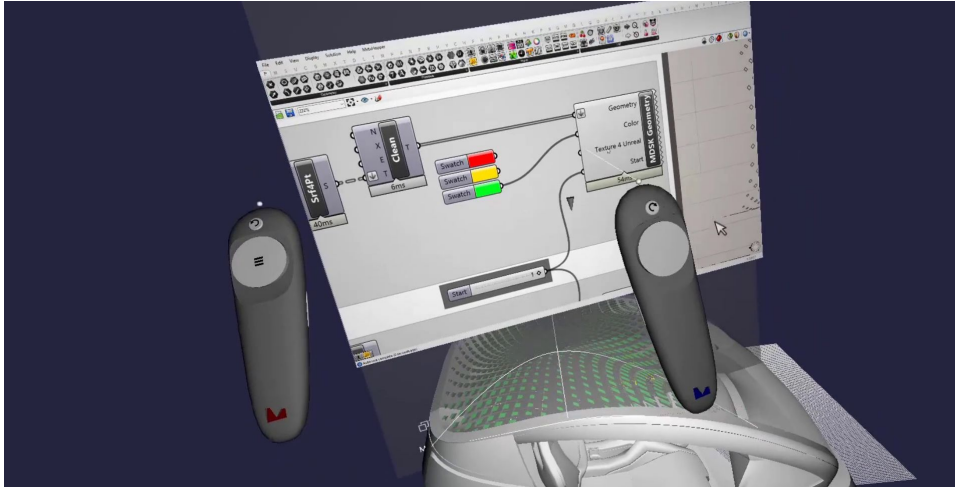
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## Future Technology for Car Design: Rhinoceros 6 and Grasshopper

The Iris project was designed commencing in the Rhinoceros 6 and Grasshopper computer aided design (CAD) software, by following a traditional bottom-up approach, with each surface defined via generative curves that defined the child non-uniform rational basis spline (NURBS) surfaces.



**Figure 1:** Mindesk for Grasshopper virtual reality interface

Arturo Tedeschi showcased how the Mindesk software enabled the exploration of the 3D model at 1:1 scale providing the great advantage of understanding the scale and proportions of the project.

The VR experience made possible by the Mindesk software, enabled Arturo Tedeschi to control the project's geometry directly in virtual reality, establishing a double interaction: on one side (Grasshopper), the algorithm reacts to numeric inputs, on the other side (Mindesk), manipulating 3D geometries feed the parametric model in real-time. For example, Arturo Tedeschi could interact with the curves that defined the shading system of the car roof while inside the car itself, further visualising and understanding how it would actually appear in real life.

## Future Technology for Car Design: Logitech VR Ink

As part of the Iris project design review process, Vection Technologies and Arturo Tedeschi showcased the Logitech VR Ink device integration, which provided superior input precision levels.

Specifically, the Logitech VR Ink device enabled the designers to draw studies of alternative bracing systems for the steering wheels, to establish a limit line for the shading system and to take accurate measures within the model itself.



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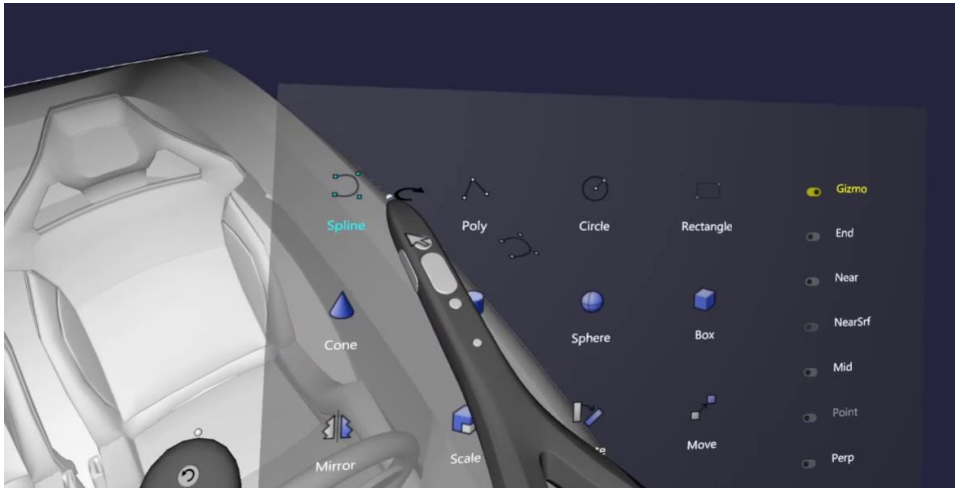
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**Figure 2:** Logitech VR Ink within the Mindesk interface

### Future Technology for Car Design: Epic Games' Unreal Engine 4

Unreal Engine 4 is a game engine that allows to simulate physical behaviour in photorealistic scenes on the computer's desktop, defining materials and lighting conditions.

Vection Technologies' Mindesk software enables the real-time connection between the Rhinoceros CAD software and Unreal Engine 4 (Live-Link).

During the workshop, Arturo Tedeschi showcased how Mindesk made it possible to define the appearance of the automotive materials including car paint and front lights, while controlling the geometries in Grasshopper.



**Figure 3:** Mindesk's live link between Rhinoceros and Unreal Engine 4



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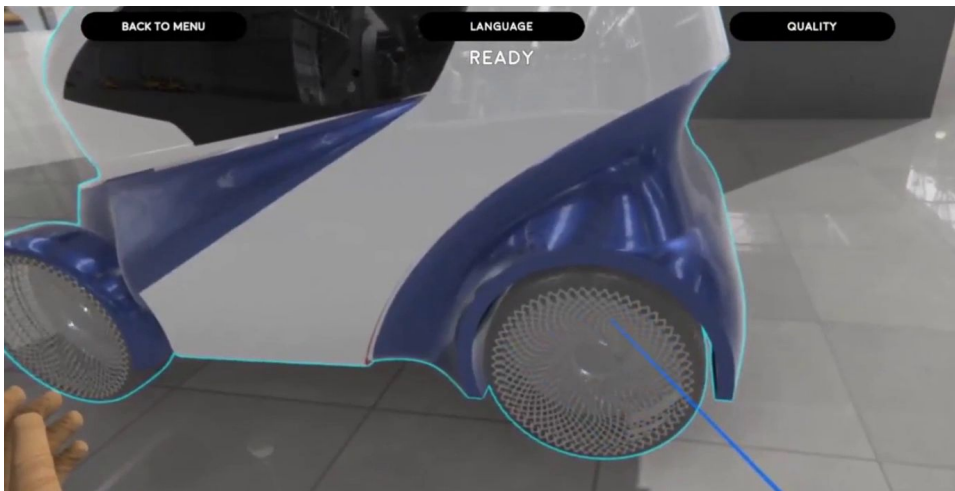
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### Future Technology for Car Design: FrameS software

The FrameS software is Vection Technologies’ virtual reality configurator enabling, when combined with the Mindesk software, to complete the journey from the early technical design and rendering to the car dealer.

Via its extremely intuitive virtual reality interface, FrameS represents the ideal software to explore, configure and customise a vehicle with all the specifications set by the manufacturer (colours, materials, etc).



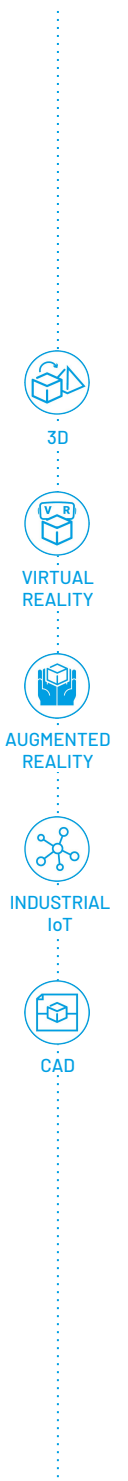
**Figure 4:** FrameS software virtual reality interface

Although the financial impact of potential agreements following the “Future Technology for Car Design” event are not determinable at this time, the participation at Volkswagen’s event is anticipated to be material for the Company. This view is based on the exclusive nature of the event and Volkswagen’s global exposure and brand notoriety.

#### **Gabriele Sorrento, Director of Vection Technologies, commented:**

“Volkswagen’s Future Technology for Car Design event represented a strategic exclusive platform to present our Mindesk and FrameS real-time software to the same car designers and engineers that constitute our end user base.

The positive feedback we received underpins our confidence in delivering on our stated growth plan within the automotive sector.”



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**Gianmarco Biagi, Managing Director of Vection Technologies, commented:**

“Being selected amid Volkswagen’s partners for the exclusive Future Technology for Car Design event is a significant endorsement of Vection Technologies’ software suite, underlying proprietary technology and overarching commercial strategy during this uncertain time.

We are pleased to have partnered with computational designer Arturo Tedeschi to bring to life the first automotive concept developed with our Mindesk software, further underpinning the validity of our strategy within the automotive sector.”

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**About Vection Technologies:**

Vection Technologies Ltd (ASX:VR1) is a multinational software company that focuses on real-time technologies for industrial companies’ digital transformation.

Through a combination of our 3D, Virtual Reality, Augmented Reality, Industrial IoT and CAD solutions, Vection Technologies helps companies and organisations to innovate, collaborate and create value.

For more information please visit the Company’s websites:

[vection.com.au](http://vection.com.au)

[mindeskvr.com](http://mindeskvr.com)

**About the Mindesk software:**

Vection Technologies’ Mindesk, is a real-time 3D design platform that integrates with existing commercial CAD software to extend their operations to the third-dimension: virtual reality, augmented reality, real-time rendering, and multi-user collaboration. Mindesk introduces the possibility to design a CAD project from scratch in Virtual Reality: while the majority of VR CAD software commercially available require time consuming project exportation, Mindesk enables users to switch from VR to desktop seamlessly, while editing the project in real-time on either platform. Mindesk provides the bi-directional, real-time live link across multiple commercial CAD and design software, including McNeel Rhinoceros 6, Dassault Solidworks 2018 and 2019 and Epic Games Unreal Editor.

**About the FrameS software:**

Vection Technologies’ FrameS is a real-time platform that allows its users to visualise and interact with products’ designs and concepts in one immersive space in virtual reality, resulting in tangible results for businesses globally, including cost reduction, faster decision making and increased understanding. FrameS is the end-to-end real-time software developed for the enterprise of the future, addressing the multiple challenges set by Industry 4.0, including remote collaboration and sales.

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**About Volkswagen Group:**

Volkswagen AG, known internationally as the Volkswagen Group, is a German multinational automotive manufacturing company headquartered in Germany. It designs, manufactures and distributes passenger and commercial vehicles, motorcycles, engines, and turbomachinery and offers related services. Volkswagen Group sells passenger cars under the Audi, Bentley, Bugatti, Lamborghini, Porsche, SEAT, Škoda and the flagship Volkswagen marques; motorcycles under the Ducati brand; and TRATON (commercial vehicles, trucks, and buses) under the marques MAN, Scania, and Volkswagen Commercial Vehicles. The company has operations in approximately 150 countries and operates 100 production facilities across 27 countries.

For more information please visit:

[volkswagenag.com](http://volkswagenag.com)

**About Arturo Tedeschi:**

Arturo Tedeschi is an architect and computational design specialist with more than ten years of experience in the avant-garde segment of architecture and industrial design (furniture, automotive, installations, products, footwear). He works as a consultant for leading companies, providing services and training related to algorithmic modeling, complex geometry, digital fabrication and data driven design. He is the author of Parametric Architecture with Grasshopper and AAD Algorithms-Aided Design. He taught and was an invited speaker at Architectural Association School (London), Politecnico di Milano, IUAV (Venice), The University of Sydney, Dubai Institute of Design and Innovation, University of Edinburgh, Universidad Europea (Madrid). His personal work has been featured on international magazines and exhibited worldwide. He has collaborated with major architecture and design firms, including Zaha Hadid Architects and Ross Lovegrove.

For more information please visit:

[arturotedeschi.com](http://arturotedeschi.com)

*ASX release authorised by the Board of Directors of Vection Technologies Ltd.*



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