

A close-up photograph of a car's interior, focusing on the orange leather seat and the black base of the seat adjustment lever. The background is blurred, showing various colored lights (green, blue, purple) and mechanical parts of the car's interior.

CONTECHS

Case Study

Challenge

Contechs, a UK automotive design and engineering services provider, needed agile design, visualization and data collection methods to bridge the gap with its OEM and supplier clients as they diversify production lines and develop new technology for the cars of the future.

Solution

Contechs now handles all its product design and engineering processes on the **3DEXPERIENCE** platform to safely exchange data and access all the tools necessary to collaborate seamlessly with automotive OEMs and suppliers.

Benefits

Users can securely access relevant data and easily collaborate with other team members and external clients. This has led to a reduction in converting and recreating data, allows design reuse and in the process is saving time, breaking down silos and enhancing productivity.



"The **3DEXPERIENCE platform allows us to organize ourselves with modular thinking and concepts delivering time compression in the design engineering phase."**

– Peter Jarvis, Managing Director, Contechs

SPEEDING AHEAD OF MOBILE DISRUPTION

Autonomous driving, connectivity, electrification and shared services are paving the way for entirely new forms of mobility, bringing rapid and fundamental change to the automotive industry.

"The future is not going to be driven by the car's engineering prowess," said Alan Yee, engineering director at Contechs, UK-based specialist design and engineering services to OEMs and Tier 1 and 2 suppliers in the automotive sector. "The capabilities of the batteries will be a given. The future of the car industry is going to be changed socially. We're going to get what I call a megacity concept, where vehicles will travel autonomously in a larger metropolis megacity within a geo ring-fenced area, connected to all the different systems in the city scape. And then we're going to have the other more traditional vehicles for people to buy or rent and use for longer distance traveling."

"Everything is going to be more electrically orientated," added Peter Jarvis, managing director of Contechs. "With that comes new platform engineering concepts, including skateboard platforms, which gives manufacturers the ability to scale skateboard platforms and put different top hats onto them to differentiate themselves."

Contechs works with some of the largest automotive manufacturers in the world to develop new, innovative products and services that help their vehicles stay ahead of an ever-changing market. This gives the company unparalleled insights into how the industry will develop.

"We have the ability to design the complete car right down to a single entity such as a seat system," Jarvis said. "We work with very prestigious clients; confidentiality is key. We work two to three years in advance of products going to market."

From Contechs' perspective, one of the key issues carmakers now face is to develop different vehicles and powertrains—internal combustion, hybrid, electric and autonomous—in parallel.

"OEMs start to produce one vehicle, and at the same time they've got to fund a completely different type of vehicle," Yee said. "And not only just a different powertrain, you've also got to contend with autonomy. It costs a huge amount of money and puts a real strain on their resources."

Contechs, like many others in the industry, believes the solution lies in the ability to adapt and reuse existing designs to suit multiple purposes.

"The key to solving this is not throwing away what they've done already," Yee said, about Contechs' clients. "When they redesign something, they've got to say this now has to suit two purposes."

To achieve this, Contechs and its partner OEMs and suppliers must develop new engineering concepts, which rely on the ability to standardize data and modularize everything they do. It's why they made the decision to work on a common product innovation platform—the **3DEXPERIENCE**® platform from Dassault Systèmes—to streamline collaboration between departments and gain total visibility of all product development activities and how they relate to one another.

"It is a very complex relationship being in the middle between the OEM and the Tier 1 supplier," Jarvis said. "The **3DEXPERIENCE** platform enables us, in terms of software, to bridge that gap and allows us to organize ourselves with modular thinking and concepts. It's the next big bang in terms of how we carry ourselves forward and should really deliver time compression in the design engineering phase, allowing us to work simultaneously with the first-tier supplier and the OEM, and drive cost out of the end product."

A SECURE DIGITAL ENVIRONMENT

Contechs' aim was to bring all of its disparate software packages onto one platform in order to better connect with their clients and suppliers.

"We have an awful lot of complex systems and what Dassault Systèmes has enabled us to do is to bring all of those systems onto a single platform," said Dan Moran, Group IT manager at Contechs. "This has given us the fluidity we need to connect to our clients and our suppliers, and obviously keep that data really secure."



"The **3DEXPERIENCE platform is absolutely perfect for us. It's what we've been waiting for. It gives us the opportunity to add extra dimensions into it and see the whole picture."**

– Alan Yee, Engineering Director, Contechs

The **3DEXPERIENCE** platform provides a highly secure, central location for Contechs and its clients to manage all data, instantly access it, compare it and identify what can be reused in new designs. Over time, Contechs hopes to transition all its clients to this new platform-based way of working.

"The current relationship between suppliers and OEMs is very varied," Moran said. "Some of our suppliers are fully integrated into our own systems so the fluidity of data in and out is easy."

Establishing trust with proven security is critical for Contechs' long-term relationship with clients, who regularly charge the company with highly confidential information.



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– Dan Moran, Group IT Manager, Contechs

"We must have a secure environment where we do our designs," Jarvis said. "Everything is key-locked down throughout everything we do. The process going from concept engineering all the way through to launch involves a lot of iterations with regards to how we do our design and software releases, and all of that is done through a very controlled process."

"We store a lot of sensitive data for our clients," Moran added. "There's a lot of security within the **3DEXPERIENCE** platform. So, we are able to give the users full access to that data, which creates trust between the two parties. We also allow them to create their own workspaces using the platform."

This approach puts far less of a burden on the IT department too.

"Our IT landscape historically used to be servers on sites, and backing up that data and storing it used to be a big headache," Moran said. "With the **3DEXPERIENCE** platform, we can now interact and connect with our suppliers' environments, which takes a huge amount of backup and data risk away from us."

AGILE COMMUNICATION

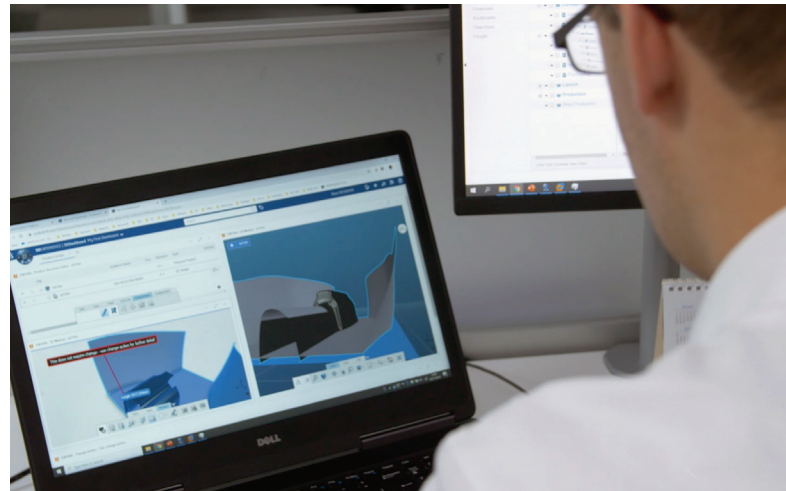
Before using the **3DEXPERIENCE** platform, Contechs' departments worked in siloes on a variety of different software, making it impossible to gain full visibility into the product development process.

"Now, we don't have huge amounts of spreadsheets everywhere, or plans, drawings and clippings from people's emails that we have to try and piece together in a design review," Yee said. "It all sits in one area. We've also brought in parts of the organization that aren't directly associated with engineering. It's about bringing everything onto one platform and digitalizing the whole process."

Running all operations from one platform opens up communication across the organization, helping employees to work together effectively with more awareness of one another, and improve collaboration with clients.

"People from all different areas now have an open channel of communication," Yee said. "The system records that communication, recalls what was said and done, allows users to load pictures and events, pull data from CATIA and other software, and present it in an intuitive manner, like an online blog, so it's much easier to understand. We now have multi-channel communication on one platform, bringing all disparate company organizations into one place."

Finding and sharing crucial data is now much easier too. "Our data management is really defined by our clients," Moran



Top image: The **3DEXPERIENCE** platform provides a highly secure, central location for Contechs to manage all data, instantly access it, compare it and identify reuse.

Bottom image: Backed by the **3DEXPERIENCE** platform, Contechs works closely with OEMs and suppliers to support their ever-growing needs as they redefine what the car of the future will be.

Focus on Contechs

Contechs provides specialist design and engineering services to OEMs and Tier 1 and Tier 2 suppliers in the automotive sector. The UK company has built up sector-leading experience in CAD and engineering services to deliver consistent, efficient services across the complete spectrum of vehicle program disciplines, from design concept origination to product launch and post-launch support.

Products: Technical resourcing, engineering services, materials handling and trimming

Employees: 1,000+

Headquarters: Warwick, UK

For more information: www.contechs.co.uk

Focus on Majenta Solutions

As an enabler of intelligent supply chains, Majenta brings its proprietary digital solutions to build knowledge, enhance efficiency and deepen integration between OEMs and their supplier community. Majenta supports complex, global supply chains in industries including automotive, construction, aerospace and manufacturing and works with best in class partners such as Dassault Systèmes, and as a Platinum reseller deploys, trains and supports tools which fully encompass the 3DEXPERIENCE platform.

For more information: <https://www.majentasolutions.com/>

majenta

said. "We are fully integrated into their systems and their data structures. What we've enabled with the 3DEXPERIENCE platform is to streamline that process. We're taking advantage of visualization tools that enable us to search for products more easily. Historically, you used to have to know the part numbers and suchlike, so [visualization] certainly improved the relationships between suppliers and clients."

Our 3DEXPERIENCE® platform powers our brand applications, serving 11 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the 3DEXPERIENCE Company, is a catalyst for human progress. We provide business and people with collaborative virtual environments to imagine sustainable innovations. By creating 'virtual experience twins' of the real world with our 3DEXPERIENCE platform and applications, our customers push the boundaries of innovation, learning and production.

Dassault Systèmes' 20,000 employees are bringing value to more than 270,000 customers of all sizes, in all industries, in more than 140 countries. For more information, visit www.3ds.com.

STRONG TECHNICAL SUPPORT

As Contechs continues to evolve with the automotive industry, it needed a technology partner it could rely on to support its ongoing digital transformation. Majenta Solutions, a certified Platinum Dassault Systèmes reseller, which specializes in delivering digital design, engineering and manufacturing technology solutions, proved the perfect candidate.

"Majenta is really embedded in everything we do now," Jarvis said. "It's a breath of fresh air because before we were stumbling along developing what we thought was a good IT strategy. Now, we can ask them what best practice in that field is, so we're not making mistakes along the way. We're actually aware of what to do and what not to do. It is really important for ensuring fast success."

Moran added that Majenta has not only helped the company run a more cost-efficient IT operation but has helped them unlock the true potential of the 3DEXPERIENCE platform.

"They've helped us explore features and capabilities within the 3DEXPERIENCE platform that we were previously unsure of," he said.

THE CAR REDEFINED

Backed by the 3DEXPERIENCE platform, Contechs has the confidence to support OEM and suppliers' ever-growing needs as they redefine what the car of the future will be. To keep up with the fast pace of change, Contechs is keen to harness the power of virtualization to speed up and scale production, backed by its new mantra: "virtual is vital."

"Without virtualization, we don't think that we're going to be able to develop vehicles to meet the demand in the future," Yee said. "It's not going to be possible; it would take too long. We're now going to go back to putting lots of different vehicle types on top of one platform, which is really speeding up production. And the only way we can do that is by doing everything virtually."

Contechs now has a long-term partner and reliable technology platform on which to scale its business.

"The 3DEXPERIENCE platform is absolutely perfect for us," Yee said. "It's what we've been waiting for. It gives us the opportunity to add extra dimensions into it and see the whole picture—not just bits and bobs from our CAD software package or finance software package, and manufacturing engineering sets of drawings. We can see where all of our resources sit, so we can perfectly scale our business to suit."



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