



By appointment  
to H.M. The Queen  
motor car manufacturers  
Bentley Motors Limited  
Crewe Cheshire



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**BENTLEY**

Press Information

## THE FUTURE OF DIGITAL CRAFTSMANSHIP - BENTLEY'S INTELLIGENT CONFIGURATOR

- **New Bentayga now available on Bentley's advanced configurator**
- **Over 1.7 million single images used by the online configurator**
- **Direct visualisation of engineering data produces a life-like render for customer inspiration**
- **Up to 10 billion possible product configurations per model**
- **Collaboration between Bentley and Intel leads the future for digital craftsmanship**
- **Newly developed rendering software delivers significant efficiency and sustainability improvements**
- **Artificial intelligence system trained over-check of every image of an infinitely configurable vehicle to world class standards**
- **<https://www.bentleymotors.com/en/misc/car-configurator.html>**

**(Crewe, 8 July 2020)** The new Bentley Bentayga has joined the newest portfolio of any luxury car manufacturer with its launch on Bentley's online car configurator. With seemingly endless combinations of colours and features, the Bentley configurator is the perfect tool to inspire customers in specifying their new vehicle.

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The complete configurator uses over 1.7 million rendered images to deliver an almost infinite number of options to the customer for the full Bentley model range. Images of single components are taken directly from Bentley's digital warehouse, linked to engineering and manufacturing systems, displaying a life-like render of a customer's vehicle. To ensure the digital craftsmanship represents the high standards of Bentley's physical world, all 280,000 images

[Bentayga WLTP drive cycle: fuel consumption, mpg (l/100km) – Combined 21.1 (13.3). Combined CO<sub>2</sub> – 302g/km.]



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for the new Bentayga needed to be analysed and checked, including veneer and stitch alignment and even the flow of hand cross-stitch throughout the cabin. To guarantee perfection, the digital craftsmen are trained in the same processes and techniques by Bentleys own skilled colleagues in production.

Bentley's Virtual Media Manager, Paul Chapman, comments:

"My job is to unite technology and luxury in the production of digital Bentleys with the same fusion of craftsmanship, innovation and sustainability as our physical cars. I am often asked how many images are required to recreate a Bentley – which can have up to 10 billion possible configurations – in the digital space, and the new Bentayga required 280,000 images to display all the customer options.

"If I was to print them all out on A4 paper, the stack of paper would be 28 meters high."

Whilst vehicle complexity grows, the time expected to bring a product to market reduces, therefore a more agile and effective digital solution is required to deliver a new model within the configurator. After approaching a number of international suppliers in Europe and Hollywood, a collaboration with Intel was formed due to their knowledge and experience with advanced ray tracing via Intel® OSPRay, which is part of the Intel® oneAPI Rendering Toolkit. Ray tracing is a technique for generating images by tracing the path of light as a pixel, simulating the effects of its encounters with virtual objects. This produces a high degree of realism but requires a significant amount of computing power and time.

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Working together since 2017, Bentley and Intel® have realised significant improvements. Through Intel®'s integration of artificial intelligence (AI) into OSPRay and feedback and data provided by Bentley, it is now possible to render the images faster than ever before. The reduction in time to produce the configurator allows more time to focus on eliminating errors. A 33 per cent improvement for finding errors was made between the first and second generation configurator for Bentley despite a 600 per cent increase of content.

With the technical platform collaboration and software advancements, it is now possible to render significant amounts of data, delivering a digital dealership full of vehicles interactively in real-time producing a highly accurate visualisation. Authentic three dimensional engineering data can be displayed in stunning visual detail. Reductions in computing time and the amount of energy consumed also add to improvements in sustainability.

Bentley is now looking to expand the project further, by combining Intel's rendering performance and optimised AI toolkits with Bentley digital craftsmanship. Training the software to understand product correctness and quality standards continues to increase the efficiency and reduce the time required to deliver imagery, inspiring customers and providing future interactive luxury experiences.

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### Notes to editors

Bentley Motors is the most sought after luxury car brand in the world. The company's headquarters in Crewe is home to all of its operations including design, R&D, engineering and production of the company's three model lines, Continental, Flying Spur and Bentayga. The combination of fine craftsmanship, using skills that have been handed down through generations, alongside engineering expertise and cutting-edge technology is unique to UK luxury car brands such as Bentley. It is also an example of high-value British manufacturing at its best. Bentley employs around 4,000 people at Crewe.

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