The new 5G testers

Testing 5G NR products requires new test and measurement approaches. Technologies such as massive MIMO, substantially higher bandwidths and data rates than in 4G, and the use of millimeterwaves have greatly increased the necessary computing power while making OTA measurements compulsory and creating challenging requirements for RF hardware. In the future, the following testers will be workhorses for 5G measurements in development, QM acceptance testing and production:

The R&S®CMX500 radio communication tester (bottom left) is the new test platform for signaling tests in all 5G frequency bands. It works together with the tried and tested R&S®CMW500 tester (top left) to provide support for mixed operation with LTE (5G NSA), which will be predominant worldwide in the first years.
Measurements in the FR2 range (mmWave) are performed in OTA test chambers such as the R&S®CMQ200. In combination with the new R&S®CMP200 non-signaling tester (top center), it provides a compact solution for production testing of 5G FR2 components. For production tests in the FR1 range (sub6 GHz spectrum), the R&S®CMW100 tester is the right choice (not shown). The R&S®CMX500 and R&S®CMP200 are operated via unified test software (right). The software provides access to the measurement functions via a browser-based user interface.