Tokyo, October 15, 2019 – Valeo, global automotive system and component supplier, will demonstrate Valeo Drive4U® Remote which operates autonomous vehicles remotely, during the 46th Tokyo Motorshow 2019, held in Tokyo Big Sight (Ariake, Koto-ku, Tokyo) from October 24 to November 4, 2019. Thanks to the high speed and low latency 5G connectivity, Valeo Drive4U® Remote allows an operator to control a vehicle safely and reliably from a remote location.

The different situations with which autonomous vehicles can find themselves confronted are virtually infinite and unpredictable even in their Operational Design Domain (ODD). Anything can happen on the road, from sudden severe weather conditions to traffic accidents and road constructions. To prepare for the largest number of possible scenarios, Valeo has designed a new solution, Valeo Drive4U® Remote, that allows operators to see what is happening inside and outside of the moving car and to take control of a vehicle remotely when the vehicle is unable to handle a given situation by itself. Valeo Drive4U® Remote opened the way for new solutions in fleet management, automatic valet systems and remote assistance for autonomous vehicles. In the near future, the teleoperation will be an important key enabler of Level 4 fully autonomous driving.

Valeo, world leader of driving assistance systems, has been conducting urban level 4 automated driving demonstration experiments on public roads using Valeo Drive4U demo car. This vehicle is unique because it uses only series sensors produced by Valeo. These include ultrasonic sensors, cameras, radars and, most importantly, Valeo SCALA® laser scanners, which is the first automotive grade laser scanner on the market. To date Valeo has shipped around one billion sensors of all types, including over 100,000 SCALA®. The automated driving car used for the demonstration of this teleoperation, was set up by Valeo team in Japan based on its accumulated expertise in Europe and the United States. The onboard artificial intelligence system interprets the data collected to enable the vehicle to operate in its environment, including complex situations. The Valeo Drive4U® perception system consists of the following Valeo software and sensors.

- Advanced software using AI algorithms
- 6 Valeo SCALA® Gen. 1 3D laser scanner
- 1 Valeo SCALA® Gen. 2 3D laser scanner
- 1 Valeo front camera
- 4 Valeo corner radars
- 4 Valeo surround cameras and 6 Valeo teleoperation cameras
- 12 Valeo ultrasonic sensors

The sensor data is fused to create a redundant 360° perception. The Drive4U® Remote also has an automatic emergency brake that safely stops the vehicle when there are obstacles that are not visible to the operator during teleoperation.
Valeo unveiled Valeo Drive4U® Remote for the first time at CES held in Las Vegas in January 2019 (photo). At this time, it was operated using a LTE (4G) connection. At the upcoming Tokyo Motor Show, Valeo works with its partner, DOCOMO and connect the system via the 5G next generation communication system. A tele-operator in DOCOMO booth will control remotely the Drive4U® in the DOCOMO R&D center in Yokosuka City, Kanagawa Prefecture.

In April 2018, Valeo agreed with DOCOMO, in the partnership, to jointly develop and offer next-generation connected-cars and mobility services. Since then, the two companies continue to develop advanced products and solutions together. In this framework, Valeo made the demonstration of Valeo XtraVue, a system based on a set of connected cameras that eliminates visual obstacles with DOCOMO 5G connection, in the Wireless Technology Park in May 2019.

The teleoperation demonstration of Valeo Drive4U® Remote connected by 5G network shows the new approach of the digital mobility developed jointly Valeo and DOCOMO. It will be an important key enabler of Level 4 fully autonomous driving.

**Valeo Drive4U® Remote: NTT DOCOMO booth (West hall W4114) in Tokyo Motorshow 2019**

Valeo is an automotive supplier, partner to all automakers worldwide. As a technology company, Valeo proposes innovative products and systems that contribute to the reduction of CO₂ emissions and to the development of intuitive driving. In 2018, the Group generated sales of 19.3 billion euros and invested 13% of its original equipment sales in Research and Development. At December 31, 2018, Valeo had 186 plants, 21 research centers, 38 development centers and 15 distribution platforms, and employed 113,600 people in 33 countries worldwide.