

Press release

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Sunrise and Huawei: Opening of the first European 5G Joint Innovation Center

- **In collaboration with its strategic partner Huawei, Sunrise is opening the first 5G Joint Innovation Center in Europe, so that the two companies can work together to research and develop 5G applications for both the private and business sectors.**
- **Live application scenarios in the areas of smart farming, smart manufacturing, cloud gaming as well as AR/VR will be shown in the showroom**
- **A world first: Sunrise announces the first cloud gaming service with 4K resolution via 5G.**

Working together with its strategic partner Huawei, Sunrise has built the leading 5G network in Europe. With the first 5G Joint Innovation Center in Europe, we want to work together to research and develop 5G applications for both the private and business sectors. The joint innovation center is helping to build a Swiss 5G ecosystem, with Sunrise and Huawei using Sunrise's headquarters in Opfikon to introduce live 5G application scenarios that have already been launched or are about to be commercialized.

"With the opening of the first 5G Joint Innovation Center in Europe, we as leading 5G provider are taking another important step. What we are presenting today showcase the huge potential of 5G applications for both the private and business sectors. I am particularly proud of the fact that we are the first provider in the world to launch a cloud gaming service with 4K resolution over 5G", said Olaf Swantee, CEO of Sunrise.

In the Joint Innovation Center, Huawei is also operating an OpenLab, which is equipped with state-of-the-art technology. In the OpenLab, developers of 5G applications can use a live end-to-end 5G network to test their applications/solutions under real-world conditions before launching them commercially. Huawei also provides components such as IoT sensors and end devices for test purposes.

"The center is very important for Huawei and for the industry", enthuses Haitao Wang, CEO of Huawei Switzerland. "The aim is to stimulate the 5G eco-system in Switzerland by showcasing real 5G-use cases for business customers and consumers and supporting third party companies to develop and test their 5G-based applications. With this center we can drive innovation on 5G, one of the core technologies for the next decade."

Smart farming: Environmentally-friendly technology for increased production

The Swiss agricultural sector is also witnessing the advent of digitization. Smart farming is being implemented at an ever-increasing rate, and is bringing about major changes in the way farms are regarded and managed. At Agroscope Tänikon (Thurgau), researchers are using the new 5G network to test the latest technologies, which are designed to help farmers optimize their cows' milk production and track their feeding behavior. The aim is to achieve the highest possible production under optimal animal welfare conditions. In this regard, the technology and methods being used by farmers is no different to the heart rate monitors and pedometers used by casual athletes every day.

Furthermore, 5G transmission enables high-resolution data transmission in real-time. This allows farmers to directly monitor the calving process of their cows, for example, using a high-resolution camera. This saves unnecessary physical check-ups in the stable and the farmers know how their cows are doing at all times. The sensors in their collars record the rhythmic ruminations and detect when a cow is in heat based on the animal's altered movement behavior. This is important because high-yield cows are very sensitive and quite often will not conceive. What is even more important is identifying the optimal time for insemination. This technology is still in development at the moment and is being subjected to real-life testing. The new

transmission options that come with 5G will allow these sort of sensors to be put into operation in the future without much effort in terms of installation. Once installed, farmers will be able to view the data recorded by the sensors directly from their smartphone. This technology has real potential for making animal husbandry more efficient and more species-appropriate.

On the field, drone data can be sent directly via 5G antennas to the cloud for processing, with the farmer following the results in real time. As an example, the drones could be used to measure the nitrogen content of plants, so that fertilizer can be applied in a more precise and resource-efficient manner. Thanks to this new technology, farmers always know how much fertilizer they need to use in their fields, and where exactly they need to use it.

Autonomous robots are on the verge of being used in practice. For example, the company Ecorobotix from Yverdon already has very well developed prototypes and is planning to enter the market. In the future, fast 5G transmission technologies will make it possible to transfer pictures of fields immediately to the cloud. The farmers can collect the images and process them for analysis.

Smart manufacturing: 5G - a key factor for industrial digitization

The international industrial company GF Machining Solutions focuses on high-precision manufacturing technologies. In this field, 5G supports the implementation of innovative solutions for the optimization of both the machinery and the production process.

With Sunrise's 5G network, GF Machining Solutions in Biel laid the foundations for the factory of the future. 5G makes the exact applications that are needed for the most interruption-free production process possible a reality. 5G gateways were installed and spread out across the entire factory floor. Machines can now be placed anywhere within the factory. Download speeds and transfer rates of well above 1.1 Gbps have been measured on the factory floor; this is about ten times faster than the speeds that were being recorded before the gateways were installed. All of this means that GF Machining Solutions is able to wirelessly and securely connect their machines to their cloud services and infrastructure while benefitting from minimal latency.

Thus, the 5G network enables the implementation of predictive maintenance in almost real time: This concept entails the system being able to predict or determine when a machine needs maintenance and intervention. Unplanned downtime can be reduced or avoided altogether, thus helping to extend machine uptime and reduce costs.

Sunrise Game Cloud 5G: Next-Gen Smartphone Gaming

As the first provider worldwide, Sunrise is introducing the next generation of smartphone gaming: For the first time ever, it is possible to offer 4K gaming over 5G for supported devices. Sunrise will launch in collaboration with its platform partner Gamestream, the Sunrise Game Cloud 5G app in November this year.

According to a recent [ZHAW \(Zurich University of Applied Sciences\) study](#), a third of people in Switzerland play a video game at least once a week, with 46% of those being played on a smartphone, making it the most popular gaming device. Thanks to the low latency of the Sunrise 5G network, cloud gaming with high-end graphics is now a reality on smartphones as well. The Sunrise 5G network enables a stable connection for lag-free gaming, along with high bandwidth for high resolution gaming up to 4K (with HTC Hub or PC).

The Sunrise Game Cloud app offers 50 high-end console games, including popular games such as Tomb Raider, DiRT Rally (in 4K) or Roland Garros Tennis World Tour 2019 Edition, and is offered as a flat rate for smartphones of CHF 9.90 per month. The app will be available in November for Sunrise 5G customers in the Android Play Store and on www.sunrise.ch for other supported multiscreen devices.

Sunrise 5G customers can already register in advance at www.sunrise.ch/en/gaming, and will receive a free smartphone gaming controller as our way of saying thanks.

5G makes lives broadcasting more creative

Sunrise is «First on 5G», and the St. Jakob-Park stadium in Basel and the Weisse Arena in Laax are also benefitting from this revolutionary technology.

In summer, the 5G smart stadium at St. Jakobs Park in Basel was announced. Speeds of up to 10 Gbit/s will be possible thanks to the new LAN and Wi-Fi infrastructure, which will be connected to ultra HD cameras, monitors, sensors and other devices. The internal infrastructure and Sunrise's 5G network combine to bring about smart stadium experiences in St. Jakob-Park in the future and provide audiences with instant replays, multi-camera functions and virtual stadium visits, along with further increased fan engagement possibilities for FC Basel's home games.

The digital transformation is of central importance when it comes to tourism. 5G offers the opportunity to drive digitization even further, and to offer guests a decisive added value in their digital «Customer Journey». In November 2019, Sunrise launched the world's first standardized 5G network in a ski resort, on the Crap Sogn Gion (2252 meters above sea level) in Laax. 5G in Laax offers superfast broadband mobile Internet connections, smooth live 360° videos in 8K quality, augmented reality on mountain bike tours and for other events, and 4K live streaming via drones for winter sports and events etc, with all these fantastic features offered across the entire resort.

First on 5G

Even today, Sunrise has the largest 5G network on offer, covering over 309 towns and cities with 5G. This only includes areas where 5G reaches at least 80% of the local population. Gradually, 5G coverage will extend to far more than over 309 cities/towns, including parts of major cities such as Zurich. These can be found on the [coverage map](#) by searching for cities and addresses.

All the details of the Sunrise 5G network: www.sunrise.ch/5G

[Spot Smart Farming](#)

[Spot Smart Manufacturing](#)

[Spot Smart Stadium](#)

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